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LA TITULIZACIÓN: ORIGEN, EVOLUCIÓN Y REGULACIÓN ACTUAL EN LA U.E. Y EN ESPAÑA

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ABBREVIATIONS

ABCP	Asset-Backed Commercial Paper
ARM	Adjustable Rate Mortgage
ALJ	Administrative Law Judge
AMTPA	Alternative Mortgage Transaction Parity Act
BISTRO	Broad Index Secured Trust Offering
BMA	Bond Market Association
CAPL	Consolidated Association of Planters of Louisiana
CDO	Collaterized Debt Obligations
CDS	Crédit Default Swap
CEA	Commodity Exchange Act
CFMA	Commodity Futures Modernization Act of 2000
CFTC	Commodity Futures Trading Commission
CLN	Credit Linked Notes
CMO	Collateralised Mortgage Obligation
DIDMCA	Depositary Institutions Deregulation and Monetary Control Act
EBA/ABE	European Banking Authority/Autoridad Bancaria Europea

EBRD	European Bank for Reconstruction and Development
FASB	Financial Accounting Standards Board
FATF	Financial Action Task Force
FHA	Federal Housing Administration
FHEFSSA	Federal Housing Enterprises Financial Safety and Soundness Act
FHLMC	Federal Home Loan Mortgage Corporation (known as *Freddie Mac*)
FNMA	Federal National Mortgage Association (known colloq. as *Fannie Mae*)
GDP/PIB	Gross Domestic Product/Producto Interior Bruto
GFC/GCF	Great Financial Crisis/Gran Crisis Financiera
GLBA	Gramm – Leach – Bliley Act of 1999
GNMA	Government National Mortgage Association (known as *Ginnie Mae*)
GSE	Government Sponsored Enterprises
HOLC	Home Owners' Loan Corporation
HUD	Department of Housing and Urban Development
ISDA	International Swap Dealers Association
LTCM	Long Term Capital Management
LTV	Loan-to-value ratio
MBS	Mortgage Backed Securities

M.P.s.	Members of Parliament (of UK)
NAIC	National Association of Insurance Commissioners
NSMC/CNMV	National Securities Market Commission/Comisión Nacional del Mercado de Valores
OCIP	Orange County Investment Pool
OECD	Organization for Economic Co-operation and Development
OFHEO	Office of Federal Housing and Enterprises Oversight
OTC	Over the counter
OTS	Office of Thrift Supervision
PLMBS	Private Label Mortgage Backed Securities
REMIC	Real Estate Mortgage Conduit
RFC	Reconstruction Finance Corporation
SEC	Securities Exchange Commission
SIFMA	Securities Industry and Financial Markets Association
SIV	Structured Investment Vehicle
SPE	Special Purpose Entity
SPV	Special Purpose Vehicle
USHA	United States Housing Authority
VA	Veteran’s Administration

VaR	Value at Risk
WRMA	Weather Risk Management Association

INTRODUCTION AND OBJECTIVE

In 2014 the Spanish National Securities Market Commission (the Spanish acronym is the CNMV)[1] issued a report on the behaviour of the Securitisation Funds registered in Spain during the financial crisis[2]. It found that the non-payment rate on the worst performing Mortgage Backed Securities[3] (those registered in 2007, the year the crisis began) was only 0.4%[4], while at the end of December 2012 the total average non-payment rate on all MBS registered in Spain was a mere 0.084%[5]. The report went on to compare these Spanish figures to international rates of non-payment on MBS and commented that the rate of non-payment of mortgage securitisation bonds in Europe was 0.24% in 2012, while in The United States it was 19.2%, and in the world as a whole it had reached 11.4%. Despite the stellar performance of

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[1] In Spanish the organisation is known as the "Comisión Nacional del Mercado de Valores (CNMV)".

[2] Martín Martín, María del Rosario: *An analysis of Spanish securitisation funds: their characteristics in the moment of their constitution and their behaviour during the years of the crisis*, Published in 2014 by the CNMV. This document is available in Spanish at: https://www.cnmv.es/DocPortal/Publicaciones/MONOGRAFIAS/DT_57.pdf

[3] Residential Mortgage Backed Securities are generally referred to as RMBS.

[4] Ibid page 44.

[5] Ibid page 44.

European and Spanish registered residential mortgage backed securities throughout the financial crisis, the European Securitisation Regulation, in an attempt to revitalise the Securitisation market, created a special category of Simple, Transparent and Standardised securitisation, and introduced a series of strict requirements applicable to all EU securitisation products.

Objectives of the thesis

The thesis has two principal and interconnected objectives.

a) The first is to show that the convergence of securitisation and credit default swaps in the context of the U.S residential mortgage market was a catalyst for the great financial crisis (hereinafter the GFC), and that this was made possible by the political decision to radically reject a Common Law tradition of dealing with derivatives that has its roots in 18th century Britain. In order to make this argument the thesis traces the development of securitisation from its earliest European forms to its incorporation in highly complex derivative instruments in the U.S at the eve of the GFC. It also follows the cotemporaneous legal evolution of derivative instruments in the Common Law tradition and argues that it was political pressure on the part of the banking industry in the late twentieth century, supported by an economic philosophy that can broadly be described as neoliberal, that caused a radical

break in their treatment, and subsequently allowed them to play such a key role in the GFC. The thesis presents the case that mortgage securitisation was a catalyst rather than a primary cause of the GFC, and that its fundamental role was that of exposing structural weaknesses in the banking system, particularly the dependence on short-term funding through repurchase agreements and the sale of asset backed -commercial paper.

On this view, poor disclosure measures or a lack of "skin in the game" in the U.S Securitisation market were not responsible for the crisis. Rather it was primarily caused by a combination of the heavy investment of credit entities in integrated securitisation supply chains coupled with their dependence on the short-term debt markets for funding. The opaqueness of the bank sponsored SIV structures that traded in short-term debt meant that, when housing prices fell and subprime securities began to default in significant volumes, traders, unable to determine the content of the SIVs, refused to roll – over short term debt obligations. This caused a freeze in the supply of credit and meant that the integrated securitisation supply chains were unable to keep funding the derivative insured products they had been created to package and market, and were forced to absorb heavy losses on these highly leveraged products that they could no longer sell.

b) The second objective of the thesis, which follows on from the first, is to demonstrate that the main body of the European

Securitisation Regulation, with its heavy focus on disclosure and risk retention requirements and its promotion of simple, transparent and standardized securitisation, provides little of substance to Spanish residential mortgage securitisation that it has not already had since its origins. The thesis shall contend that the Regulation was conceived in reaction to some of the perceived causes of the crisis in the U.S, particularly the beliefs that the originate to distribute model was at the root of the crisis and that large numbers of buyers of securitisation notes were unable to decipher the complexity of the instruments they purchased and so did not fully appreciate the risks involved. These assumptions are challenged by the evidence accumulated in the text. Retaining large quantities of collateralized debt obligations on balance sheet, or having to absorb them from sponsored SIVs that were forced to be shut down, proved to be one of the greatest problems for credit entities during the GFC. While the complexity of the financial instruments used was not of itself an impediment for sophisticated professional investors to understand the possible risks involved in the products they purchased, but rather due diligence on the part of buyers was often suspended in a frantic attempt to close deals quickly so as to achieve the best possible price.

The thesis argues that European Residential Mortgage Securitisation in general, and specifically Spanish Residential

Mortgage Securitisation performed exceptionally well in the crisis. In the case of Spain this was largely due to the quality of the underlying mortgage assets, and the specific structures employed to securitise assets, which did not follow the heavily leveraged U.S model of manufacturing collateralized debt obligations, that were layered with subprime securities, wrapped with credit default swaps and funded by short term debt vehicles, but instead used traditional true sale structures with sound underlying assets.

The fine detail of this argument shall be developed over the course of 5 chapters. Chapter 1 shall examine the basic workings of Securitisation and its relationship with the phenomena of Financialisation and Shadow Banking. The chapter will argue that since the mid - 1970s Financialisation has led to wage stagnation and an increase in household debt, particularly through the use of refinancing mortgages for owners to obtain cash liquidity. It has also seen an increase in non-bank institutions, that were not subject to the same regulations as banks, and which did not have the same safeguards for the consumer or for society as a whole, taking on the task of credit intermediation. It will conclude with a brief description of the Shadow Banking activities associated with Securitisation and their intimate relation with regular banks.

Chapter 2 studies the history and development of Securitisation, from rudimentary methods of tax farming in the ancient world to the development of the first Private Label Mortgage Backed Security. An understanding of the development of Mortgage Backed Securitisation in the U.S will help to make clear both the enormous differences between the U.S and Spanish markets, and the origins of the problems that led to the GFC.

Chapter 3 details the development of derivatives in Common Law and the evolution of their regulation in the U.S. It examines the formation of derivative regulation, first in the United Kingdom and then in the United States. An understanding of how this regulatory system developed and why, will help the reader to appreciate the effect of its radical reconfiguration in the years immediately preceding the financial crisis.

Chapter 4 scrutinises the link between mortgage securitisation and the GFC. It tries to delineate the main factors that led to the reputational damage that securitisation suffered as a result of the crisis. The principal argument is that securitisation itself was not a cause of the financial crisis[6],but that a highly leveraged hybrid

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[6] In fact, the subprime market itself was small: the value of all outstanding US mortgages was US $12 trillion and the subprime sector accounted for just US $1 trillion. As the whole US stock market represented around US$18trillion, even if half of the subprime mortgages were lost—a higher rate than ultimately realized even in the worst of the crisis—this would account for no more than 3 percent of the stock market". Source: Ash, Michael & Louçã, Francisco: *Shadow Networks – Financial Disorder and the System that caused crisis*, Oxford University Press (2018), page 41.

of securitisation and derivatives, that was financed through the shadow banking system and driven by the economic logic of integrated production chains which packaged subprime mortgages into collateralised debt obligations and synthetic structures, acted as a catalyst to expose the weaknesses of the financial system, principally the reliance of financial institutions on short term funding markets, poorly capitalised derivative counterparties, and the widespread use of inadequate risk models.

Chapter 5 is dived into two sections. The first section examines the U.S and European responses to the crisis, and focuses on the creation of Simple, Standardised and Transparent Securitisations (STS) as an antidote to the faults identified in pre-crisis Securitisation products. I shall argue that these reforms were motivated principally by an inadequate diagnosis of the problems that occurred in the U.S market and were not the fruit of the European experience.

The second section analyses the Spanish securitisation market and its regulation. It makes the case that Spanish securitisation was very different from that which evolved in the U.S prior to the crisis and that given its robust performance throughout the crisis did not require all of the reforms contained in the European Securitisation Regulation, as it already exhibited the very qualities that the EU Regulation intends to foment to revitalise Securitisation.

In the final part of the thesis I shall present my conclusions.

NOTE ON METHODOLOGY

La tesis utiliza una metodología jurídica clásica basada en el razonamiento lógico y deductivo a partir del análisis de las fuentes legales, jurisprudenciales y doctrinales disponibles.

Habida cuenta del origen y desarrollo de la institución examinada, la titulización, la mayor parte de las fuentes utilizadas provienen del Derecho anglosajón. No obstante, lo cual no se han descuidado las procedentes del Derecho de la Unión Europea, en general, así como las del Derecho español.

La tesis parte de un enfoque histórico del análisis necesario para extraer las ideas clave de la evolución de la titulización a lo largo de la historia, que permiten entender su configuración en las últimas décadas destacando los factores que han conducido a las recientes iniciativas de regulación especialmente en el contexto de la Unión Europea y nacional.

El análisis se centra precisamente en los cambios que ha sufrido su regulación en el ámbito del Derecho comparado, y que han ido articulando sucesivas soluciones normativas tendentes, por una parte, a desarrollar la potencialidad de la figura como instrumento

de capitalización del ahorro y financiación empresarial alternativa y, por otra, a reprimir los efectos perjudiciales que el abuso de la figura puede causar a los inversores y a la economía en general.

El manejo de los textos normativos se jalona convenientemente con el de la jurisprudencia generada con motivo de su aplicación, todo ello a la luz de la interpretación de la doctrina.

El enfoque histórico del estudio ha hecho necesario manejar una buena cantidad de crónicas y material epistolar, reproducido en su mayor parte por la doctrina anterior.

En el análisis se ha conferido especial importancia al tratamiento económico de la figura, con uso de abundante documentación procedente de esta área del conocimiento que se ha plasmado en la consulta de literatura económica, tanto doctrinal como institucional, de la cual se ha aprovechado especialmente las figuras y gráficos que se han incluido en el texto, siempre con cita de la fuente.

El tratamiento histórico y económico ha permitido extraer el sentido el objeto de la regulación reciente de la figura, para extraer algunas conclusiones acerca de su aptitud para alcanzar la finalidad perseguida.

CAPÍTULO 1. LA TITULIZACIÓN: FUNCIÓN ECONÓMICA, VENTAJAS E INCONVENIENTES

1.1 ¿Qué es la titulización? 1.2 Las ventajas de la titulización. 1.2 (a) Aumento de la cantidad de fondos bancarios disponibles. 1.2 (b) Diversificación del riesgo crediticio. 1.3 Los problemas que plantea la titulización. 1.3(a) Asimetría informativa y necesidad de *due diligence*. 1.3 (b) Falta de alineación de los incentivos de las partes. 1.4 Financiarización, banca en la sombra y desintermediacion. 1.4 (a) Financiarización. 1.4 (b) Financiarización y neoliberalismo. 1.4 (c) Financiarización y aumento de la deuda en la adquisición de viviendas. 1.5 Banca en la sombra y disintermediacion. 1.5 (a) Uso de la titulización por los bancos. 1.5 (b) Emisiones respaldadas por activos (*Asset-Backed Commercial Paper*). 1.5 (c) Préstamos de valores. 1.5 (d) Acuerdos de recompra (*repos*). 1.6 Conclusiones.

1.1 ¿Qué es la titulización?

En esencia la titulización (*Securitisation* en inglés y *Securitization* en inglés norteamericano) comprende una serie de transacciones que permiten a un prestamista o acreedor, comúnmente una entidad de crédito o una sociedad mercantil,

refinanciar un grupo de préstamos, exposiciones o créditos frente a terceros. Entre los más comúnmente usados en la práctica figuran los préstamos hipotecarios residenciales, los préstamos a consumidores, los préstamos para la adquisición de vehículos, los préstamos a estudiantes o los créditos comerciales. El prestamista, normalmente con la ayuda de un banco comercial especializado reúne y empaqueta dichos préstamos en una cartera organizada por diferentes categorías de riesgo. Después se venden bonos a inversores de conformidad con sus apetencias de riesgo, de modo que, cuanto más elevado sea el riesgo calculado de incumplimiento, mayor será el retorno potencial para el inversor, y viceversa.

Las titulizaciones se clasifican en términos generales entre las de venta verdadera y las sintéticas. Las titulizaciones de venta verdadera se efectúan mediante la venta o cesión de activos del balance de un originador a un vehículo de propósito especial (*Special Purpose Vehicle* –SPV–), también llamado comúnmente entidad de propósito especial (*Special Purpose Entity* –SPE–[7]).

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[7] Véase la descripción de la función del SPV dada por Fligstein: "Un originador agrupa un conjunto de activos consistentes en préstamos que ha de pagarse por prestatarios. Coloca dichos activos en una entidad legal llamada vehículo de propósito especial (SPV) o entidad de propósito especial (SPE). Un SPV actúa como depositario para un grupo específico de activos, y, a cambio, emite valores que son suscritos por inversores. El SPV opera como una entidad completamente separada de sus creadores. Ellos están legalmente aislados, y sus activos no están ya disponibles para el vendedor o sus creadores. Los activos depositados se pueden utilizar solo para hacer pagos sobre los valores emitidos para los inversores y no pueden ser reclamados por el vendedor. El SPV puede adoptar diversas formas legales, como una compañía, un trust o una

Esta es una entidad escasamente capitalizada pero separada de la eventual situación de insolvencia del originador, que usa los fondos procedentes de la venta de los pagarés de titulización para adquirir de éste los activos subyacentes[8]. La operación es orquestada por el espónsor, una entidad que puede coincidir con el originador o puede ser otra sociedad de su grupo.

En cambio, la titulización sintética no comporta la transferencia de activos del balance del originador a un SPV, sino que usa normalmente pagarés de titulización que incorporan derivados de crédito (conocidos como pagarés vinculados al crédito *–credit linked notes–*) para transferir el riesgo de incumplimiento o bajo rendimiento de los activos subyacentes a los inversores. A los inversores se les paga con una prima que reproduce el rendimiento de los activos subyacentes, pero absorbe el riesgo de pérdida del principal y del pago de intereses en caso de que los

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sociedad de responsabilidad limitada. Al vender los activos al SPV, la institución financiera incumbida puede sacar de sus libros los préstamos que ella ha realizado". Sacado de: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, Harvard University Press (2021), pág. 130.

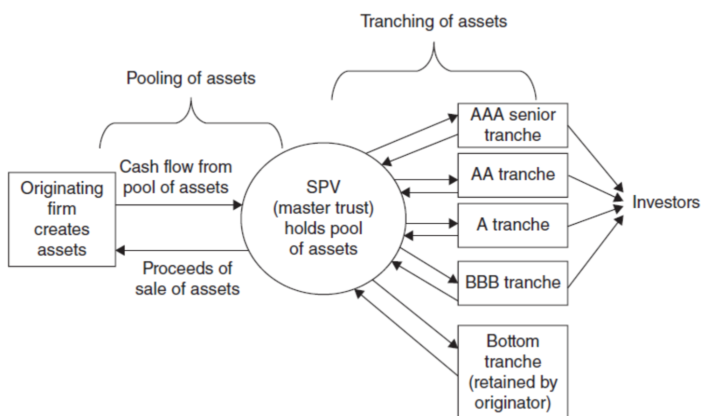
[8] "Por lo general estos SPV fuera de balance tienen las siguientes características: (1) están escasamente capitalizados, (2) no tienen una gestión ni unos empleados independientes, (3) sus funciones administrativas las realiza un fideicomisario que sigue las reglas especificadas en relación con la recepción y distribución del efectivo, y (4) no hay otras decisiones financieras adoptadas por los fideicomisarios. En resumen, los SPV son esencialmente firmas que no tienen empleados, no toman decisiones económicas sustanciales, no tienen una ubicación física y, si quiebran, la responsabilidad financiera se restringe a los activos del SPV." Ibid, pág. 130.

activos subyacentes resulten infructuosos o tengan un rendimiento inferior al previsto.

Deben cumplirse ciertas condiciones para que los activos sean aptos para su titulización: (i) los flujos de efectivo de los activos han de ser regulares y predecibles; (ii) los activos deben ser lo suficientemente homogéneos como para ser agrupados; (iii) se debe disponer de suficientes datos históricos de su comportamiento en el pasado para permitir la elaboración de modelos predictivos razonablemente fiables; y (iv) los activos han de representar un riesgo de crédito bajo (razón por la cual los préstamos hipotecarios residenciales, el último tipo de deuda que la gente generalmente deja de pagar, han demostrado ser tan populares como activo subyacente). El proceso de titulización que se acaba de describir aparece ilustrado en la Figura 1 de abajo. Esta muestra la venta y cesión de los activos al SPV (que en los países del *common law* normalmente toma la forma legal de *trust*) y la creación de diferentes tramos (*tranches*) de pagarés de titulización (la palabra *tranche* procede de la expresión usada en francés para denominar a una rebanada o porción). Estos diferentes tramos de pagarés están sujetos a un sistema de pagos en cascada en virtud del cual los tramos senior reciben el pago de los intereses y del principal del flujo de caja del conjunto de activos antes que aquellos tramos subordinados al mismo. Cada tramo de pagarés de titulización es calificado por agencias de

rating (normalmente por dos de ellas al menos) y la calificación crediticia indica el riesgo de falta de pago. Los inversores pueden elegir, en consecuencia, entre una mayor rentabilidad o una mejor seguridad, dependiendo de sus necesidades. En las transacciones de venta verdadera el originador retiene el tramo inferior como señal de buena fe en la calidad de los activos.

Figura 1: El proceso de titulización[9]



[9] Fuente: Ash, Michael y Louçã, Francisco: *Shadow Networks – Financial Disorder and the System that caused crisis,*Oxford University Press (2018), pág. 41.

Figura 2: Titulización sintética no constituida sobre activos

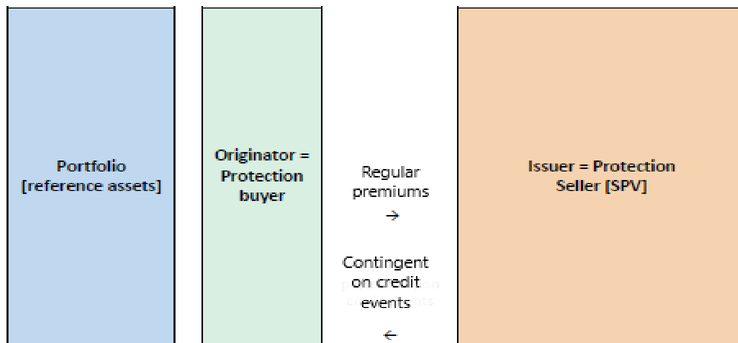
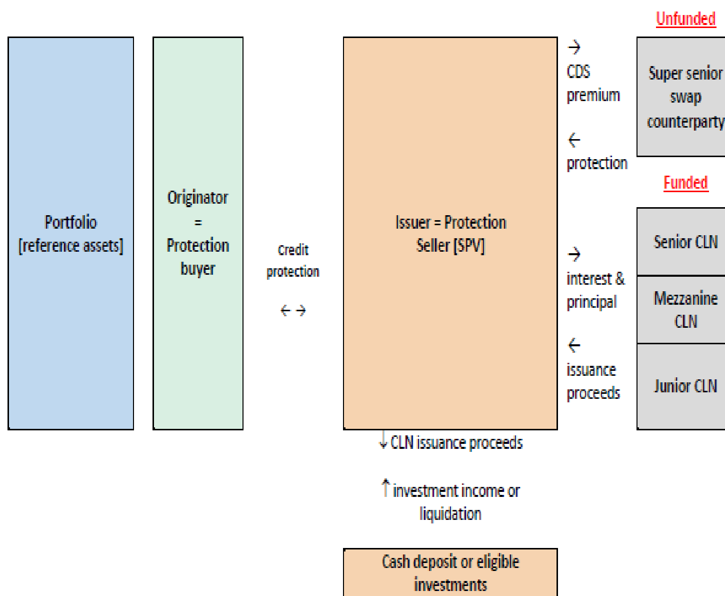


Figura 3: Titulización sintética parcialmente fundamentada en activos[10]

10 Las Figuras 2 y 3 se toman de: “The EBA Report on Synthetic Securitisation (EBA/Op/2015/26)”, pág. 59.



La **Figura 2** muestra una titulización sintética pura, sin ningún tipo de respaldo en activos subyacentes reales (*unfunded synthetic securitisation*). Las titulizaciones sintéticas son normalmente *collaterized debt obligations* (CDO)[11], que son las basadas en una cartera de diferentes exposiciones poseída por un originador (normalmente una entidad de crédito). Estas pueden incluir hipotecas o valores respaldados en hipotecas (con frecuencia préstamos corporativos, préstamos a pequeñas empresas, préstamos sobre bienes raíces y cesiones de créditos derivados de

[11] "Dado que los ABS-CDO emitidos por SPV son de naturaleza diversa, los inversores diversifican su riesgo. Es algo similar a invertir en un fondo mutualístico".

leasing)[12]. El originador o tenedor de estos activos de referencia compra protección frente al riesgo crediticio de un vendedor de protección, por la vía de un *credit default swap* (CDS)[13]. Este actúa de forma similar a un contrato de seguro[14] en el que el originador paga al vendedor de la protección (con frecuencia otro banco o una compañía de seguros) primas regulares a cambio del pago de una cantidad acordada en caso de producción del incumplimiento (*default*) u otros eventos de crédito especificados en relación con los activos incluidos en la cartera del originador[15]. Las transacciones sintéticas puras no requieren de la intervención de una entidad vehicular (SPV) pues no se venden pagarés a los

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[12] En el mercado europeo la Autoridad Bancaria Europea (ABE o EBA en las siglas inglesas) ha afirmado que: "Con respecto a los tipos de activos en titulizaciones sintéticas, los préstamos corporativos constituyen el tipo de colateral más extensamente usado: 31 transacciones, que representan el 45% del valor nocional, fue colateralizado mediante préstamos corporativos. Los otros tipos más comunes de colaterales, en términos de número de transacciones, eran inmuebles comerciales, préstamos a PYME, financiacion del comercio y otros tipos de activos (como préstamos a consumidores en 10 transacciones, hipotecas residenciales, vivienda social, cesiones de leasing y activos mixtos)." Fuente: "Draft Report on STS Framework for Synthetic Securitisation under Art. 45 of Regulation (EU) 2017/2402." de 24 de Septiembre de 2019, pág. 23.

[13] Sobre el uso de CDS en este contexto véase, en España, Galán López, Carmen: "La figura de los 'CDS' como instrumentos financieros derivados y contratos de cobertura de riesgos", en *La regulación del Shadow Banking en el contexto de la reforma del mercado financiero*, editado por Marimón Durá, Rafael, Thomson Reuters-Aranzadi (2015), págs. 213-243.

[14] La cuestión potencialmente espinosa de cuándo la titulización sintética podría colisionar con el derecho de seguros se analizará con cierto detalle en el Capítulo 4.

[15] Estos pueden incluir, por ejemplo, la quiebra de los deudores subyacentes de los activos mantenidos en el balance del originador o la reestructuración de la deuda de dichos obligados.

inversores y la cartera de activos permanece en el balance del originador. El mayor riesgo para el originador es la insolvencia de la contraparte (el vendedor de protección) en caso de producción del evento relativo a los activos.

La titulización sintética puede estar también total o parcialmente apoyada en activos reales (como se muestra en la Figura 3). En ambos casos los pagarés vinculados a créditos (pagarés de titulización con derivados incorporados) se emiten por un SPV (normalmente esponsorizado por el originador) y se compran por inversores. Estos pagarés vinculados a créditos (*credit linked notes* –CLN–) se referencian a una cartera de activos específica incluida en el balance del originador. El SPV invertirá los ingresos procedentes de la venta de los pagarés en valores de renta fija y bajo riesgo y usará los rendimientos producidos por dicha inversión junto con las primas de riesgo que reciba del originador para atender los pagos de intereses y capital a los tenedores de los pagarés. Al igual que ocurre con las estructuras de titulización regular los pagarés se dividen en tramos, de tal modo que, en caso de producción del evento de crédito, los primeros tramos cubren las primeras pérdidas. En orden a compensar a los tenedores de los tramos más inferiores, estos recibirán tipos de interés superiores. De este modo los tenedores soportan el riesgo de producción del evento de crédito, que, en casos extremos, podría eliminar todos los pagos de principal e intereses en favor de todos

los titulares de los pagarés. Normalmente, las titulizaciones sintéticas, basadas o no en activos, coexisten en una misma estructura, como se muestra en la **Figura 3**. Esto reduce la dependencia del originador de la solvencia de la contraparte y el precio de las primas que debe pagarle, así como el volumen de financiación que necesita encontrar en los mercados de los compradores de pagarés. El tramo no respaldado en activos se denomina generalmente tramo super-senior y se contrata por lo usual con una entidad crediticia de alta calificación[16].

La titulización hipotecaria se puede caracterizar mejor, como un proceso que comprende una variedad de participantes. Por ejemplo, en el caso de valores respaldados por hipotecas –*Mortgage Backed Securities* (MBS)– en Estados Unidos los bancos y las entidades crediticias actúan como originadores de los préstamos hipotecarios y comienzan el proceso suscribiendo, financiando y gestionando los préstamos a los hipotecantes. Luego, un organizador (*arranger*) compra una cartera de estos préstamos y los agrupa. En el mercado norteamericano este podría ser la *Government National Mortgage Association* (Ginnie Mae)

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[16] Para una explicación general del funcionamiento de la titulización sintética, me remito a: O'Flynn, Andrew: "La regulación de la titulización post-crisis: sencilla, transparente y normalizada", en *Shadow Banking y Financiación Empresarial Alternativa* (ed. Marimón Durá, Rafael), Thomson Reuters-Aranzadi (2017), págs. 51-90.

o una de las empresas esponsorizadas por el gobierno –*government sponsored enterprises* (GSE)–.

Es también posible que el organizador sea una compañía privada, que vende el paquete de préstamos hipotecarios a un vehículo de propósito especial, con frecuencia esponsorizado por una institución financiera. Dicho vehículo emite las MBS respaldadas por el paquete de préstamos y las vende a los inversores[17]. Antes de ser comercializados los valores son calificados por agencias de *rating*. Finalmente, las participaciones se colocan comúnmente entre inversores institucionales como compañías aseguradoras, gestoras de activos y fondos de pensiones.

El proceso de titulización hipotecaria y la titulización sintética serán examinados con mayor detalle a lo largo de la tesis.

1.2 Las ventajas de la titulización

La titulización se asocia con frecuencia a una serie de ventajas, tanto para los participantes en el propio proceso como para la economía y, en consecuencia, para la sociedad en general.

[17] Del vehículo se suele decir que es *bankruptcy remote*, en el sentido de que su interposición en la operación permite eludir el riesgo de la insolvencia del originador para los compradores de los pagarés, puesto que la devolución de su inversión depende de las condiciones de solvencia del vehículo y no de las del originador.

1.2 (a) Aumento de los fondos bancarios disponibles

Según Solomon Deku y Alepar Kara "*La titulización ha cambiado significativamente el papel de los bancos como intermediarios financieros, desde la actividad de préstamo tradicional hasta la banca transaccional. Por medio de la titulización, los bancos transforman préstamos ilíquidos en valores negociables, descargan parte de su exposición crediticia en inversores externos y recaudan nuevos fondos para seguir aumentando su actividad crediticia"*[18].

Esta capacidad para aumentar los fondos disponibles de los bancos para la economía real a menudo se ha anunciado como una de las mayores ventajas de la titulización[19]. El uso de la

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[18] Deku, Solomon y Kara, Alepar, *Securitization. Past, Present and Future*, Palagrave Macmillian (2017), pág. 1, Capítulo 1. Véase, también, Neil Fligstein, quien destaca la capacidad de la titulización para convertir las casas, que por su propia naturaleza son objetos muy difíciles de comparar, en valores que son fáciles de comercializar en mercados secundarios o utilizados como garantías en acuerdos de recompra (*repos*). Sobre esta cualidad innovadora de la titulación escribe: "En esencia, el resultado de proceso de titulización fue el de tomar lo que era inherente a un conjunto heterogéneo de objetos y convertirlo en un producto con una tasa de rendimiento homogénea para un tramo particular con una particular calificación crediticia. Teóricamente, cualquier tramo calificado como AAA y compuesto por hipotecas sobre todo tipo de viviendas era igual a cualquier otro tipo de tramo calificado como AAA" (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., pág. 129).

[19] Bonnie Buchanan escribe que: "Antes de la década de los 70, los bancos retenían los préstamos en sus propios libros y tenían que crecer por medio de fusiones o atrayendo nuevos depósitos. La titulización cambió esto y produjo una nueva vía para que los bancos aceleraran la prestación de crédito y generaran mas comisiones e ingresos. Esto equilibraría las necesidades de liquidez y las exigencias del capital regulatorio. Redistribuyendo los préstamos los bancos podrían cortar sus necesidades de capital, lo que les permitiría prestar más" (Buchanan, Bonnie G.: *Securitization and the Global*

titulización por los bancos significa que el nivel de capital necesario para satisfacer los controles de capital regulatorio se puede reducir y esto produce un ahorro para los bancos permitiéndoles de este modo redirigir su capital a la financiación de otros negocios[20]. Este aspecto de la titulización se elogia en el Reglamento (EU) 2017/2402 que declara que "*permite una distribución más amplia del riesgo para el sector financiero y puede ayudar a liberar los balances de las originadoras permitiéndoles así conceder más préstamos a la economía. En general, puede mejorar la eficiencia del sistema financiero y proporcionar nuevas oportunidades de inversión*"[21].

1.2 (b) Diversificación del riesgo crediticio

Otra ventaja de la titulización para la economía radica en que permite la diversificación geográfica del riesgo crediticio. Esta peculiaridad se ejemplifica mejor en el mercado hipotecario. Lo bancos que concentran el riesgo hipotecario en una localidad se

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Economy: History and Prospects for the Future, Palgrave Macmillan [2017], pág. 3 de la Introducción).

[20] Marimón, Rafael: "Delimitación y perspectivas de regulación del sector bancario en la sombra", en *La regulación del Shadow Banking en el contexto de la reforma del mercado financiero* (ed. R. Marimón), Thomson Reuters-Aranzadi (2015), pág. 38.

[21] Reglamento (EU) 2017/2402 del Parlamento Europeo y del Consejo, por el que se establece un marco general para la titulización y se crea un marco específico para la titulización simple, transparente y normalizada, y por el que se modifican las Directivas 2009/65/CE, 2009/138/CE y 2011/61/UE y los Reglamentos (CE) n.º 1060/2009 y (UE) n.º 648/2012. Considerando 4.

exponen a un evento de crédito que impacte negativamente en la región correspondiente como un colapso de la industria o un desastre natural. Bajo tales circunstancias, el banco entraría pronto en una situación de estrés y sería incapaz de prestar dinero precisamente en el momento en que ello se requiriera con mayor urgencia.

La titulización resuelve este problema permitiendo a los bancos liberarse de dicho riesgo de crédito o, en cambio, adquiriendo pagarés de titulización como una inversión de fondos hipotecarios mixtos con miles de hipotecas extraídas de diferentes localidades, que les permita diversificar el riesgo[22].

Esta diversificación del riesgo mejora técnicamente la estabilidad de todo el sistema financiero.

1.3 Los problemas que plantea la titulización

La titulización es un proceso complejo. En primer lugar, porque requiere una cadena de participantes (originadores, espónsores, organizadores, vehículos con propósito especial, proveedores de

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[22] Howard Hill argumenta que: "Cualquier titulización es fundamentalmente una forma de redistribución del riesgo; no reduce el riesgo total implícito en los préstamos o arrendamientos que forman la 'materia prima' del proceso de titulización. Sin embargo, el efecto de la cartera, de tener miles de deudores, y la liquidez introducida por la negociación en los mercados de capitales reduce el riesgo a corto plazo para un inversor que, de otro modo, solo podría estar invirtiendo en un reducido número de créditos no titulizados." (Hill, Howard B.: *Finance Monsters. How unregulated betting by a small group of financiers propelled the mortgage market collapse into a global financial crisis*, Merriam [2014], pág. 109).

mejora crediticia, gestores, *trustees* o compañías de gestión de SPV, contrapartes de derivados, agencias de calificación crediticia e inversores), unidos por medio de una serie de contratos diferentes, y, en segundo lugar, porque los pagarés han de estructurarse para atraer inversores con distintas apetencias de riesgo, y esto significa dividir el flujo de efectivo de los activos subyacentes en tramos, según la demanda de los inversores. Dada esta complejidad intrínseca, la titulización es, hablando en términos generales, una inversión inadecuada para la mayor parte de los inversores, con excepción de los institucionales, habida cuenta de que los inversores han de realizar el análisis de diligencia debida (*due diligence*) de la cartera de préstamos que respaldan los pagarés de titulización, de la solidez de la estructura del acuerdo y de los detalles de todos los contratos auxiliares que soportan la estructura.

1.3 (a) Asimetría informativa y necesidad de *due diligence*

Cada etapa del proceso de titulización aumenta el riesgo de asimetría informativa entre el originador de la deuda subyacente y el eventual inversor. Esto hace de especial importancia la *due diligence* por parte del inversor.

Sin embargo, las exigencias propias de una rigurosa *due diligence* pueden decaer o relajarse, víctimas de la presión por hacer dinero en periodos de altos retornos de los pagarés de titulización:

"En un mercado con demanda loca como la que vimos durante gran parte de 2004, 2005 y 2006, los inversores arriesgaban sin conocer tanto como hubieran querido sobre los bonos que estaban comprando, pero no por ignorancia. Más bien, la razón fue que no tenían tiempo. Los inversores que querían tomarse el tiempo necesario para examinar de cerca las garantías colaterales no pudieron invertir en ofertas porque a menudo se suscribían en exceso en pocos minutos después del anuncio, mucho antes de que hubiera tiempo para hacer el análisis que solía ser habitual. Simplemente no había tiempo para encontrar las gemas ocultas ni de evitar los baches ocultos"[23].

Las consecuencias de esta presión en el mercado de MBS en USA en los años inmediatamente precedentes a la Gran Crisis Financiera (en adelante, GCF o GFC) fueron que:

"*Se había introducido una nueva dimensión de riesgo en el negocio de la titulización. La abrumadora demanda de bonos de titulización forzó a los inversores que querían participar a tomar sus decisiones en base a un análisis limitado, y a confiar en las calificaciones crediticias como sustitutivo de la diligencia debida*."[24]

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[23] Hill, Howard B.: *Finance Monsters*…, op. cit., pág. 98.

[24] Ibid, pág. 98.

1.3 (b) Falta de alineación de los incentivos de las partes

Una de las críticas principales de la titulización en el periodo conducente a la GCF fue que se priorizó el volumen sobre el control de calidad. Los originadores se aprovecharon directamente de las ventas pero no afrontaron el riesgo de morosidad o incumplimiento una vez que los préstamos se habían vendido a un originador. Por su parte, los organizadores que habían confeccionado estos paquetes de préstamos no afrontaron el riesgo de crédito una vez que los préstamos se habían colocado en los SPV, quienes luego los vendían a su vez como pagarés de titulización para inversores. El efecto de este modelo de originar para distribuir fue que los mecanismos de disciplina del mercado se aplicaron de forma transitoria, dado que el riesgo de crédito se transfería rápidamente y era finalmente asumido por inversores a lo ancho y a lo largo del mundo. De este modo, quedaba diluido el daño reputacional que cada parte pudiera esperar afrontar[25].

La titulización ha permitido a los bancos con activos de riesgo en sus balances convertir dichos activos en valores negociables y

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[25] "En un mercado que opera de forma eficiente, los incentivos se alinean a través de la combinación de señales de mercado reales y previstas, tales como movimientos de precios o efectos reputacionales. En los mercados ABS, sin embargo, la naturaleza limitada de la información disponible para los inversores finales y la existencia de múltiples terceras partes a lo largo del proceso de titulización significa que es probable que daño reputacional potencial se diluya, lo cual limita la alineación de incentivos entre las partes en el proceso de titulización y los inversores finales." Fabozzi, Frank.: *The Handbook of Mortgage Backed Securities*, Oxford University Press, 7ª ed. (2016), capítulo 4, pág. 108.

descargar el riesgo que traían aparejado en los mercados de capitales, confiriendo a tales bancos un fácil acceso al capital, debido a que la calificación crediticia de la titulización puede ser superior a la de la propia entidad originadora.

Esas asimetrías informativas parecen haber sido especialmente agudas durante los años previos a la GCF en el marco del mercado de duda colateralizada –*Collateralised Debt Obligations* (CDO)–. Un CDO es "*un valor respaldado en un conjunto diversificado de activos compuesto por una o más clases de instrumentos de deuda (bonos corporativos o de mercados emergentes, valores respaldados en activos o en hipotecas, trusts de inversión inmobiliaria, deuda bancaria, etc.)*"[26]. Había dos razones principales acerca de por qué estos instrumentos eran especialmente susceptibles de generar situaciones de asimetría informativa:

(1) Los distribuidores de CDO entraron en el negocio de originar y gestionar los activos subyacentes mediante la adquisición de empresas de distribución y gestión de hipotecas, formando con ello una cadena de producción de CDO integrada verticalmente. Esto significa que tenían información privilegiada acerca de la

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[26] Fabozzi, Frank y Goodman Laurie, S.: *Collateralized Debt Obligations: Structures and Analysis*, John Wiley & Sons, Inc. (2002), pág. 1.

calidad y la morosidad de los préstamos, pudiendo deshacerse de los más débiles.

(2) La regla 144A de la *Securities Act* de 1933 permitía a las compañías privadas vender valores no registrados (incluidos los CDO) a inversores institucionales cualificados, a través de *brokers*. Esto les eximía de los requisitos de transparencia a que se sometía la comercialización de valores al público, permitiendo, además, que se agregaran o alteraran garantías colaterales después de la fecha de emisión[27].

1.4 Financiarización, banca en la sombra y desintermediación

Para situar la titulización en su propio contexto es útil examinar sucintamente dos tendencias que, durante las últimas décadas, han ayudado a formar la posición central que este instrumento adquirió en la economía global antes de la GCF.

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[27] Un estudio de tres prominentes miembros del Consejo de Gobernadores de la Reserva Federal de EE.UU. concluyó que: "Las reglas de titulización otorgaron a los vendedores de CDO una ventaja informativa implícita ya que se autorizó a colocar los valores después de su fecha de emisión. Además, muchos de los mayores distribuidores de CDO estaban completamente integrados (realizando originaciones, emisión de RMBS o de CDO y, finalmente, gestionando las hipotecas), lo cual les dió una ventaja informativa sobre los potenciales compradores. Mostramos cómo dicha información asimétrica entre compradores y vendedores podría haber amplificado las tensiones ya presentes en los mercados de CDO, haciendo que estos mercados no fueran líquidos y desplazando de los valores implícitos" (Beltran Daniel O.; Cordell, Larry y Thomas, Charles P.: "Asymmetric information and the death of ABS CDOs", *Journal of Banking and Finance*, Issue 76 [2017], págs. 1-14, esp. págs. 12-13).

1.4 (a) Financiarización

El término inglés de la "Financialisation" (*Financialization* en inglés norteamericano) describe la influencia creciente de los mercados, instrumentos e instituciones financieras sobre la política y los resultados económicos. El término, además, señala el movimiento vivido desde las economías industriales basadas en las manufacturas hasta las economías que están dominadas por el negocio financiero y el uso de instrumentos financieros complejos con finalidad especulativa. También comprende la tendencia por la cual las compañías han usado mercados abiertos en vez de préstamos bancarios para financiar sus proyectos de expansión, en tanto que los bancos han buscado aumentar las ganancias que podían obtener de sus clientes ofreciendo una gama creciente de servicios basados en el endeudamiento, tales como tarjetas de crédito, productos hipotecarios alternativos o refinanciaciones sobre viviendas, en definitiva activos que pueden luego vender o cubrir a través de productos financieros estructurados.

Figura 4– Beneficios del sector financiero en porcentaje sobre todos los beneficios empresariales norteamericanos (1947–2013). Los beneficios del sector financiero incluyen valores, contratos sobre mercancías, fondos, trusts, bancos y sociedades tenedoras de carteras[28].

La **Figura 4** ilustra el crecimiento de las finanzas como porcentaje de los beneficios empresariales en EE.UU. Desde apenas el 8% en 1947 el crecimiento de las finanzas fue modesto hasta finales de la década de los 80, cuando pasó de alrededor del 20% en 1986 a más del 45% en 2001[29].

El economista Thomas Palley ha indicado que el principal impacto de la financiarización ha sido: *"(1) elevar la significación del sector financiero en relación con el sector real,*

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[28] Fuente: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., pág. 150.

[29] Neil Fligstein apunta que en 2003 la industria financiera solo empleó el 6 por ciento de la fuerza de trabajo de EE.UU. Ibid, pág. 151.

(2) transferir rentas del sector real hacia el sector financiero, y (3) aumentar la desigualdad de ingresos y contribuir al estancamiento de los salarios"[30]. En opinión de Ozgur Orhangazi *"En general, financiarizacion se asocia con un aumento en la parte del ingreso nacional correspondiente a los titulares de activos financieros y con una disminución en la parte del trabajo, un aumento de la inestabilidad financiera, un crecimiento más lento y perspectivas más sombrías de prosperidad económica. Algunos de los efectos de la financiarización –junto con la tendencia hacia la globalización y el neoliberalismo que la acompañaron– han sido altamente perjudiciales para un porcentaje significativo de personas en todo el globo"*[31].

El crecimiento del sector financiero ha venido acompañado por significativos cambios en la distribución de los ingresos. Este patrón de cambio se ilustra en la **Figura 5**, en la que se muestra como se puede descomponer el Producto Interior Bruto (PIB o GDP, en inglés), en los Estados Unidos de los 70, entre la parte correspondiente al capital y la relativa al trabajo. La

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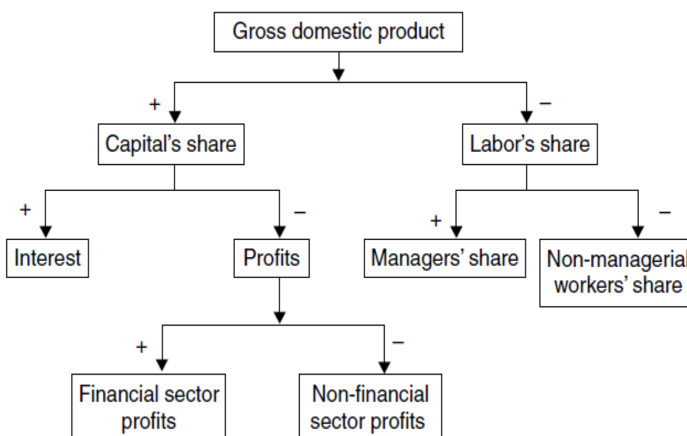
[30] Palley, Thomas I.: "The Levy Economics Institute of Bard College", Working Paper No. 525. *Financialization: What It Is and Why It Matters* (2007), pág. 2.

[31] Orhangazi, Özgür: *Financialization and the US Economy*, Edward Elgar Publishing (2008), Introducción, pág. 6.

financiarización ha visto aumentar la proporción del PIB en manos del capital, mientras que ha caído la parte en manos del trabajo (a través de salarios y otras formas de compensación para los trabajadores). La parte poseída por el capital se puede subdividir en intereses y beneficios, y los beneficios, a su vez, en beneficios del sector financiero (que han aumentado como porcentaje del PIB en las últimas décadas) y beneficios no financieros (que han decrecido). Mientras que el porcentaje del trabajo en el PIB ha disminuido en su conjunto, ha habido un incremento en la remuneración de los directivos y un correlativo descenso en lo pagado a los trabajadores.

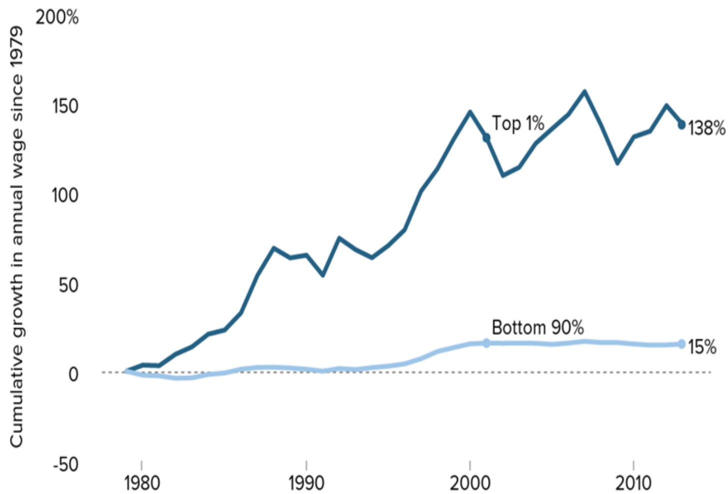
Figura 5. Financiarización y distribución de la renta[32]



[32] Tomado de Palley, Thomas I.: *Financialization: the economics of finance and capital domination*, Palgrave Macmillan (2013), pág. 5.

La **Figura 6** muestra el cambio acumulado de los salarios anuales reales entre 1979 y 2013, e ilustra la disparidad entre los modestos aumentos acumulados en el grupo inferior de la fuerza laboral, correspondiente al 90% de la misma (cuyos sueldos crecieron apenas un 15% a lo largo de tres décadas), respecto a los acumulados por el grupo superior del 1% (que los vio incrementados en un 138% en el mismo periodo). La Figura 6 permite ver cómo la compensación salarial subió en los Estados Unidos casi en línea con la productividad alcanzada hasta mediados de los 70, momento en el cual ambos parámetros comenzaron a divergir de forma acentuada, dado que los salarios permanecieron casi estáticos a partir de entonces a pesar de las grandes ganancias acumuladas por la mejora de la productividad.

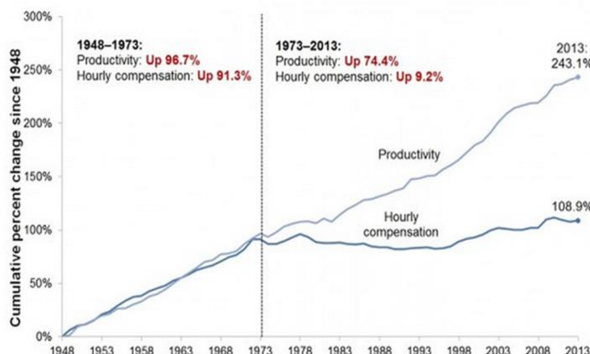
Figura 6. El cambio acumulado en salarios anuales reales, por grupos de salarios (1979-2013)[33].



33 Fuente: Economic Policy Institute. Disponible en: https://www.epi.org/publication/charting-wage-stagnation/

Figura 7. La desconexión entre productividad y compensación de los trabajadores típica entre 1948 y 2013[34]

Disconnect between productivity and typical worker's compensation, 1948–2013



1.4 (b) Financiarización y Neoliberalismo

El giro dramático del poder del trabajo hacia el capital está vinculado con la ideología política del neoliberalismo, que tuvo un efecto disruptivo en el modelo keynesiano de crecimiento seguido por muchos países democráticos del primer mundo en los treinta años siguientes a la Segunda Guerra Mundial[35]. Este

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[34] Fuente: Economic Policy Institute. Disponible en: https://www.epi.org/publication/charting-wage-stagnation/

[35] "En las tres décadas siguientes a la Segunda Guerra Mundial el liberalismo igualitario moderno proporcionó unas tasas de crecimiento económico espectaculares, salarios altos, baja inflación y niveles de bienestar material y seguridad social sin precedentes. Pero esta edad dorada de capitalismo controlado se detuvo con motivo de la grave crisis económica de los 70. En respuesta a calamidades sin precedentes, como las crisis del petróleo, que cuadruplicó el precio de la gasolina de la noche a la mañana, la simultánea aparición de una inflación galopante y el aumento del paro (*stagflation*),

modelo había promovido el pleno empleo y un sistema salarial que ligaba la productividad al crecimiento. La lógica subyacente al modelo era que, a medida que la productividad producía un crecimiento de los salarios, el aumento del gasto debía estimular la demanda y conducir al pleno empleo. Esto, a su vez, debía generar incentivos para la inversión que redundarían en una mejora de la productividad[36]. Por otra parte, el modelo de crecimiento neoliberal centró su atención en el incremento de los precios, cortando la conexión entre salarios y productividad y reemplazando el crecimiento del salario por la inflación del valor de los activos y el crédito, como los motores gemelos de la demanda[37].

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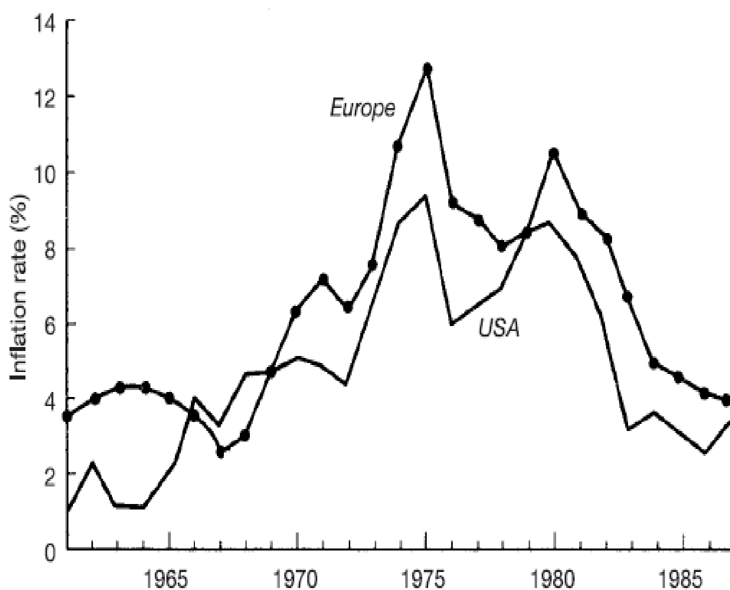
y la caída de los beneficios empresariales, una generación completamente nueva de liberales buscó un camino a seguir reviviendo la antigua doctrina del liberalismo clásico bajo las nuevas condiciones de la globalización". Fuente: Reich, Robert B.: *Supercapitalism: The transformation of Business, Democracy, and Everyday Life*, New York: Knopf (2008), pág. 17.

[36] "La economía se basaba en la producción en masa. La producción en masa era provechosa porque una gran clase media tenía suficiente dinero para comprar aquello que se podía producir en masa. La clase media tenía el dinero porque los beneficios e la producción en masa se dividían entre las compañías gigantes y sus proveedores, minoristas y empleados. El poder de negociación de este último grupo se mejoró y reforzó por la acción del gobierno. Casi una tercera parte de la fuerza de trabajo pertenecía a un sindicato. Los beneficios económicos también se extendieron por toda la nación –a agricultores, veteranos, pequeños pueblos y pequeñas empresas– a través de la regulación (de ferrocarriles teléfonos, servicios públicos, y pequeñas empresas) y subsidios (apoyos de precios, carreteras, préstamos federales)" Fuente: Reich, Robert B.: *Supercapitalism: The transformation of Business…*, op. cit., pág. 17.

[37] "El modelo neoliberal socavó el proceso de generación de ingresos y demanda al cambiar los ingresos de los salarios por las ganancias y al ampliar la desigualdad salarial. Esto creó una creciente brecha estructural de la demanda agregada (AD), y el papel de la financiación fue el de llenar esta brecha. La desregulación financiera, la innovación de las finanzas, la especulación y el fraude permitieron que el crédito llenara

En la Figura 8 se puede ver con claridad el aumento de la inflación tanto en Europa como en los Estados Unidos a lo largo de la primera parte de los 70.

Figura 8 : Inflación de Estados Unidos y Eurpa en el periodo 1960–1987[38]

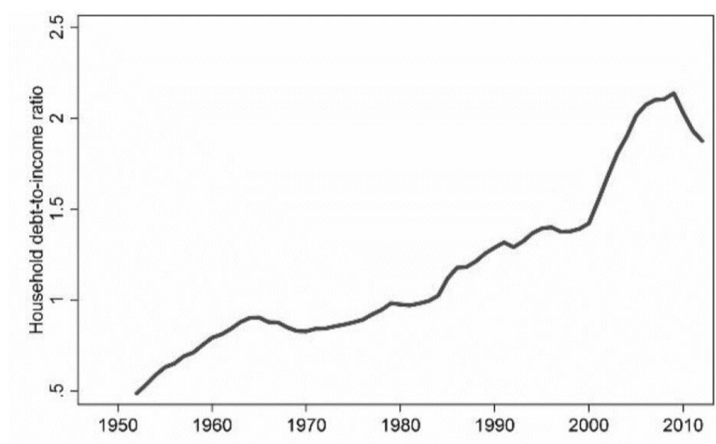


la brecha, prestando a los consumidores e inflando los precios de los activos" (Palley, Thomas I.: *Financialization: the economics of finance…*, op. cit., pág. 6).

[38] Fuente: Harvey, David.: *A Brief History of Neoliberalism*, Oxford University Press (2007), pág. 14.

1.4 (c) Financiarización y aumento de la deuda de los hogares de Estados Unidos

Figura 9: La relación deuda-ingreso de los hogares de Estados Unidos durante el periodo 1950-2010[39].



El estancamiento de los salarios condujo inevitablemente a un crecimiento en los niveles de la deuda de los hogares. La Figura 9 ilustra como dicho endeudamiento aumentó drásticamente en los Estados Unidos desde 1950 hasta 2009, duplicándose entre 2000 y 2007, los años inmediatamente anteriores a la crisis y

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[39] Fuente: Mian, Atif y Sufi, Amir: House of Debt, *How they, and you caused the Great Recession, and how we can prevent it from happening again*, The University of Chicago Press (2014), pág. 10.

coincidentes con el *boom* de la vivienda, antes del declive de 2009 en adelante. Se cree que los niveles elevados de endeudamiento de los hogares exacerbaron los efectos de la crisis bancaria. Jordà, Schularick y Taylor del *National Bureau of Economic Research* estudiaron las experiencias de 14 países desarrollados en el periodo de 140 años en un intento de identificar a los mejores predictores de la inestabilidad financiera. Tras comparar los desequilibrios de la cuenta corriente con el crecimiento del crédito, su estudio concluyó que los altos niveles de crecimiento combinados con la desigualdad en los salarios constituían una señal predictiva clara de inestabilidad financiera[40].

Además, se constata que la deuda hipotecaria afecta con mayor dureza a los sectores más pobres de la comunidad[41]. El efecto del declive nacional en el precio de la vivienda significa que los pobres se enfrentan a una disminución porcentual mayor en su patrimonio neto, dado que dicho patrimonio se concentra en la

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40 Véase: Jordà, Oscar; Schularick, Moritz y Taylor, Alan M.: "Financial Crises, Credit Booms, and External imbalances: 140 years of Lessons", National Bureau of Economic Research, Working Paper 16567 (2010), pág. 37.

41 Atif Mian y Sufi Amir dan un ejemplo numérico de esto en su libro "*House of Debt*": "Por ejemplo, si un propietario compra una casa valorada en $100,000 usando una hipoteca de $80,000, el *equity* del dueño en la casa es de $20,000. Si los precios de la vivienda caen un 20 por cien, el dueño pierde $20,000 –su completa inversión– en tanto que el acreedor hipotecario sale ileso. Si el propietario vende la casa por el nuevo precio de $80,000, debe utilizar la totalidad del ingreso para pagar la hipoteca. Se va sin nada. En la jerga de las finanzas, el acreedor hipotecario tiene un derecho *senior* sobre la casa y, por tanto, está protegido si el precio de la vivienda baja. Pero el propietario de la casa tiene un derecho *junior* y experimenta enormes pérdidas por la bajada del precio de la vivienda". Extraído de: Mian, Atif y Sufi, Amir: *House of Debt...*, op. cit., pág. 11.

propiedad que poseen[42]. Esto acentúa la desigualdad en la riqueza.

1.5 Banca en la sombra y desintermediación

Los bancos han actuado tradicionalmente como intermediarios, canalizando fondos desde las unidades económicas excendentarias hacia las unidades económicas deficitarias de liquidez. La desintermediación se refiere a la extracción de fondos de los intermediarios financieros por parte de los inversores para invertirlos directamente[43]. La desintermediación es un proceso en

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42 "Ahora demos un paso atrás y consideremos la completa economía de prestatarios y ahorradores. Cuando los precios de las viviendas colapsan en conjunto un 20 por cien, las pérdidas se concentran en los prestatarios en la economía. Dado que los prestatarios ya tenían un valor neto bajo antes del colapso (que es por lo que necesitaban tomar prestado), la concentración de pérdidas en ellos devasta su situación financiera. Si ya tenían un muy bajo valor neto, ahora tienen aún menos. En contraste, los ahorradores, que típicamente tienen muchos activos financieros y poca deuda hipotecaria, experimentan un declive mucho menos severo en su valor neto cuando los precios de las viviendas caen. Esto es debido a que, en última instancia, son propietarios –a través de sus depósitos, bonos y tenencia de acciones– de los principales derechos sobre las viviendas en la economía. Los precios de la vivienda pueden caer tanto que incluso las posiciones senior sufran pérdidas, pero estas son mucho menos graves que la devastación que se produce en los prestatarios" (Ibid pág. 22).

43 Steven Schwarcz es de la opinión de que: "La titulización personifica la desintermediación del crédito bancario que es característica del así llamado sistema bancario en la sombra. En la típica transacción de titulización un espónsor comprará un grupo de préstamos u otros derechos de pago (activos financieros) de empresas, tales como los prestamistas hipotecarios, que originan dichos activos (originadores) y los venden a una SPE (a veces llamada vehículo con propósito especial o SPV). La SPE emitirá valores para los inversores, reembolsables con los pagos periódicos de los activos financieros. La titulización permite a los originadores multiplicar sus fondos disponibles mediante la venta de sus préstamos por efectivo, con el cual pueden realizar nuevos préstamos." (Schwarcz, Steven: "A global perspective on securitized debt", *Capital Markets Union in Europe*. Oxford University Press [2018]. Capítulo 22. Kindle position 18091).

el que los inversores profesionales e institucionales se alejan de los bancos para invertir directamente en instrumentos financieros de mayor rentabilidad y en servicios prestados por los *shadow banks* emergentes[44].

Los *shadow banks* se han definido como entidades cuyas actividades "*consisten en la transformación de crédito, de vencimiento y de liquidez que tiene lugar sin acceso directo y explícito a fuentes públicas de liquidez o respaldo crediticio"*[45]. Usan una variedad de técnicas para realizar esas funciones, siendo la más común la titulización (comprensiva de la emisión de obligaciones de deuda colateralizada), el papel comercial respaldado en activos, el préstamo de valores y los acuerdos de recompra. Los propios bancos tradicionales han usado y

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[44] Uno de los primeros ejemplos de shadow bank fue el fondo del mercado monetario. Michael Ash y Francisco Louçã describe su origen en el siguiente párrafo: "En 1971, dos consultores de Nueva York que hasta entonces habían fracasado, Harry Brown y Bruce Bent, crearon el Fondo de Reserva, el real primer fondo mutual del mercado monetario. Cayendo fuera del ámbito de aplicación, libre de requisitos de capital, y no afectado ni protegido por el seguro de depósitos, el Fondo de Reserva –sin relación con la Reserva Federal de los EE.UU. a pesar de su nombre– invirtió en esencia en letras del tesoro especialmente a prueba de incumplimiento, más otro tipo de papel comercial y préstamos seguros, incluyendo hipotecas titulizadas, y ofreció un cóctel mixto como recompensa para los depositantes. Los rendimientos fueron más altos que la tasa de interés todavía regulada de los depósitos bancarios que la tasa de tipo de interés todavía regulada sobre las cuentas bancarias con un presumiblemente (y cierto en aquel tiempo) pequeño aumento del riesgo y una garantía de liquidez aparentemente (y realmente en quel tiempo) tan grande como una cuenta corriente". Ash, Michael y Louçã, Francisco: *Shadow Networks – Financial Disorder…,* op. cit., pág. 42.

[45] Adrian, Tobias, Ashcraft, Adam, Boesky, Hayley y Pozsar, Zoltan: "Shadow Banking", *Federal Reserve Bank of New York Policy Review* (December 2013), pág. 1. En términos similares, en España, Marimón, Rafael: "Delimitación y perspectivas de regulación del sector bancario en la sombra", op. cit., pág. 28.

continúan usando *shadow banks* para aprovisionarse de fondos, en orden a economizar el coste que les supondría tomarlos en préstamo. Puede resultar de ayuda una breve explicación de cada una de las técnicas mencionadas, para entender el papel desempeñado por la titulización en la GCF y la naturaleza de los cambios regulatorios que la han sucedido.

1.5 (a) Uso de la titulización por los bancos

Como se ha mencionado más arriba, las dos grandes ventajas que ha deparado la titulización a los bancos han sido la reducción de los requerimientos de capital y la consiguiente liberación de flujos de efectivo para su reinversión. La reducción de la presión del capital regulatorio se consiguió antes de la GCF transfiriendo activos a un SPV esponsorizado por el banco que fuera de "insolvencia remota". Bajo los acuerdos de Basilea I[46] se requería

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[46] En 1974 los países del G10 constituyeron el Comité de Basilea para la Supervisión Bancaria, un cuerpo de regulación financiera internacional. En 1988 publicaron un conjunto de recomendaciones conocido como los acuerdos de Basilea I, que introdujo el concepto de requerimientos de capital mínimo para los bancos. En orden a calcular el valor de esos requisitos de capital, los activos se distribuyeron en grupos y se ponderaron en correspondencia con su relación con el riesgo de crédito. El Comité de Basilea no fue envestido de ninguna autoridad legislativa o judicial, pero sus miembros estaban (y están) obligados a respetar sus recomendaciones. El acuerdo de capital de Basilea de 1988 estableció el requisito básico de que los bancos habían de mantener un volumen de capital nivel 1 –*Tier 1 capital*– (esencialmente capital social o *equity*) de, al menos, el 4 por cien del valor de sus activos ponderados por riesgo, y una cantidad combinada de capital de nivel 1 y nivel 2 (una mezcla de reservas, instrumentos híbridos y deuda subordinada) igual al 8 por cien de sus activos ponderados por riesgo. Las exposiciones frente a la misma clase de prestatarios (como los prestatarios corporativos) estaban sujetas al mismo requisito de capital, con independencia de las potenciales diferencias en la solvencia de los prestatarios en cuestión. El acuerdo se

a los bancos retener capital básico contra sus activos ponderados por riesgo. La ventaja para el banco consistía en que, mientras la cartera de hipotecas de la entidad atraía una ponderación de riesgo del 50%, independientemente de su calidad, los valores respaldados por hipotecas en poder del banco solo atraían el 20%. Esto significaba que mediante la esponsorización de un SPV, que emitía pagarés de titulización respaldados por MBS, manteniendo dichos pagarés en el balance propio, se producía un ahorro inmediato en términos de capital regulatorio. Si el banco tuviera que vender estos pagarés, necesitaría ofrecer una mejora crediticia, en particular en términos de apoyo de liquidez[47]. Sin embargo, en Basilea I, el soporte de liquidez otorgado a los SPV de menos de un año de duración estaba exento de cargas de capital, lo que permitía a los bancos estructurar sus apoyos de capital con final en 364 días, para renovarlos en el día de su vencimiento[48].

Las relaciones entre bancos y SPV permanecieron sin ser reguladas hasta que Basilea II adquirió plena vigencia en 2008.

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actualizó posteriormente en 2004 (Basilea II) y, de nuevo, tras la GCF en 2010 (Basilea III).

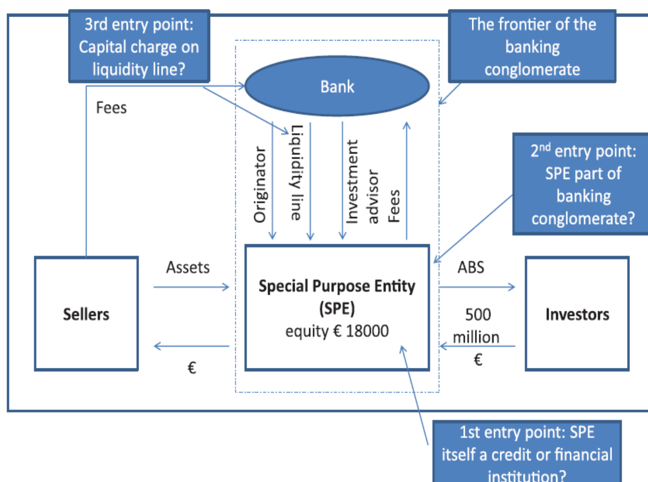
[47] El soporte de liquidez cubre los pagos a los tenedores de los pagarés cuando existe un decalaje entre los pagos recibidos de los obligados y los realizados por el SPV a los tenedores de los valores.

[48] Sobre este punto, véase Thiemann, Matthias: “In the Shadow of Basel: How Competitive Politics Bred the Crisis”, *Review of International Political Economy*, Vol. 21, Núm. 6, 2014, págs. 1203-1239.

Matthias Thiemann[49] ha señalado tres posibles vías de actuación en el plano regulatorio que habían sido ignorados o inadecuadamente atendidos; la primera fue la de tratar a los SPV que emitían pagarés de titulización como entidades de crédito o empresas de servicios de inversión; la segunda su consideración como entidades subsidiarias de conglomerados bancarios y, en consecuencia, sujetas a los requisitos de capital regulatorio; y la tercera, la posibilidad de condicionar las líneas de liquidez, y los otros tipos de mejora crediticia del banco al SPV, a la dotación de provisiones de capital básico o capital de calidad (*core capital*). La Figura 10 muestra estos tres posibles focos de regulación sobre la estructura de la titulización.

[49] Ibid. Pág. 1208.

Figura 10: Los tres posibles puntos de actuación de la regulación bancaria internacional en la titulización a través de SPE antes de la crisis financiera[50]**.**



Las razones para dicha supervisión regulatoria se explorarán con mayor detalle en el Capítulo 4.

1.5 (b) Emisiones respaldadas por activos (*Asset-Backed Commercial Paper*)

El papel comercial respaldado en activos (*Asset-Backed Commercial Paper* –ABCP–) es un tipo de titulización en el cual los pagarés emitidos tienen plazos de vencimiento muy cortos, de

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[50] Fuente: Ibid pág. 1208.

un máximo de 270 días, normalmente. La nota está respaldada por una garantía que puede incluir los pagos futuros de tarjetas de crédito, préstamos para la adquisición de vehículos o préstamos a estudiantes (denominados de forma colectiva como cuentas por cobrar) y los tramos de CDO o MBS de alta calificación. Los pagarés se emiten por un Vehículo de Inversión Estructurada (*Structured Investment Vehicle* –SIV–[51]) que desempeña las funciones de transformación de liquidez y de vencimientos, esto es, convierte activos ilíquidos en efectivo y transforma pagos futuros a largo plazo en rendimientos a corto plazo o casi inmediatos[52].

El SIV recauda dinero emitiendo papel comercial que se renueva continuamente (refinanciado), y se beneficia del diferencial (porcentaje de diferencia) entre los ingresos procedentes de los valores de mayor rendimiento, pero menor liquidez que posee y los pagos que realiza a los suscriptores del papel que emite. Los

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51 Un SIV es un SPV de insolvencia remota. Se establecen típicamente bajo el derecho estadounidense o británico y están domiciliados en paraísos fiscales.

52 "Normalmente, un vehículo ABCP mantenía una cartera de valores con vencimientos de entre tres y cinco años y financiaba dichos valores mediante la venta de papel comercial reembolsable entre tres meses y tan solo unos pocos días. Para los gestores de pools de efectivo, el papel comercial era más atractivo que los valores subyacentes, porque se emitía a muy corto plazo y estaba respaldado por un banco comercial de con la máxima calificación crediticia. Para los bancos matriz el diferencial entre el rendimiento del cóctel de activos de alto riesgo colocado en el SIV y los bajos tipos pagados en los ABCP de alta calificación era considerable". Extraído de: Tooze, Adam: *Crashed-How a Decade of Financial Crises Changed the World*, Viking (2018), págs. 76-77.

SIV están configurados para ser vehículos de inversión continuos y abiertos, generalmente patrocinados por bancos o empresas de inversión. El espónsor actúa como gestor de inversión, eligiendo los activos que adquiere el SIV y organizando las operaciones necesarias para cubrir los riesgos de liquidez, de crédito, de tipos de interés y, cuando sea relevante, de cambio de divisas[53], normalmente mediante la contratación de derivados con contrapartes profesionales.

Antes de la GCF los SIV se usaban por sus espónsores para adquirir MBS y CDO sin tenerlos directamente en sus balances. Los SIV pagaban al banco matriz las carteras de MBS y CDO, junto con la deuda titulizada de préstamos a estudiantes, de tarjetas de crédito o de préstamos para la adquisición de vehículos, con la financiación procedente de los ABCP. Como los SIV no estaban sujetos a las mismas normas sobre capital regulatorio que los bancos, podían estar respaldados por un porcentaje de capital mucho menor que si se hubieran mantenido

[53] El riesgo de liquidez es el riesgo de que se produzca un déficit temporal entre los importes procedentes de los pagos recibidos por el SIV y los relativos a sus obligaciones salientes. En cambio, el riesgo de crédito es el riesgo de incumplimiento por los emisores del instrumento de deuda estructurada en el que ha invertido del SIV. Por su parte, el riesgo de tipos de interés es el riesgo de que se produzca un cambio en tales tipos que podría aumentar el montante de los pagos salientes o bien reducir los flujos de los pagos entrantes al SIV (o ambos efectos), en tanto que el riesgo de divisa es el consistente en que se produzca un cambio en el valor de la moneda extranjera que pudiera producir un incremento relativo en las obligacioens o una disminución de los flujos de entrada (o ambos).

en el balance de aquellos[54]. Esto significa que el banco espónsor se beneficiaba tanto del diferencial entre el flujo de los ingresos obtenidos por los instrumentos en poder del SIV y los pagos por los ABCP, como por el ahorro en términos de capital regulatorio. Antes de la crisis los tres mayores emisores norteamericanos eran el Bank of America, Citigroup J.P. Morgan[55].

Tanto los ABCP como los SIV se analizarán con mayor detalle en el capítulo 4.

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[54] "En Julio de 2004, un consorcio de reguladores bancarios, a saber, la Office of the Comptroller of the Currency, el Federal Reserve Board, la Federal Deposit Insurance Corporation, y el Office of Thrift Supervision (en adelante, las agencias), emitió una nueva regla para calcular los requisitos de capital para vehículos. El comunicado oficial de las agencias establece que "la regla final permitirá de forma permanente a bancos patrocinadores, sociedades de cartera bancarias y cajas de ahorro (de forma colectiva, organizaciones bancarias patrocinadoras) excluir de su base de activos ponderados por riesgo aquellos activos de programas que se consoliden en los balances de los bancos patrocinadores como resultado de la Interpretación del Consejo de Normas de Contabilidad Financiera Nº 46, Consolidación de Entidades de Interés Variable, según la revisión (FIN 46 –R)." Por lo tanto, los activos en vehículos no se consideraron activos a los efectos del cálculo de los requisitos de capital. En vez de ello, los reguladores bancarios exigieron a los bancos que mantuvieran un capital con un factor de conversión del 10% contra el monto cubierto por las garantías de liquidez. Esto implicó que las cargas regulatorias por activos del vehículo cubiertos por garantías de liquidez fueran un 90% más bajas que las cargas regulatorias por la financiación en balance". Sacado de: Acharya, Viral V.; Schnabl, Philipp y Suárez, Gustavo: "Securitization without risk transfer", *Journal of Financial Economics*, 107 (2013), pág. 524.

[55] Véase: Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., págs. 85-86.

1.5 (c) Préstamo de valores

El préstamo de valores es una práctica llevada a cabo por una variedad de entidades tenedoras de activos, entre las que se incluyen los fondos de pensiones, los fondos del mercado monetario, los fondos de inversión libre (*hedge funds*) y las compañías de seguros. Los prestatarios son, con frecuencia, bancos, otros fondos de inversión libre, gestores de activos y comercializadores de opciones.

La finalidad de prestar los valores (incluidas las acciones) puede ser diversa. Algunos bancos tienen acuerdos para "generar mercado" en relación con ciertos tipos de valores y, por tanto, han de estar preparados para comprar y vender dichos valores a cualquiera de sus contrapartes que lo solicite. Si se les requiere que vendan unos valores de los que no disponen en un momento determinado, pueden optar por tomarlos en préstamo para completar la venta. En tal caso, el prestatario se comprometerá frente al prestamista a devolverle otros valores del mismo tipo, valor y denominación.

El préstamo de valores se usa también en las "ventas en corto". (*short selling*). Esta práctica implica que los inversores (como los fondos de inversión libre) realizan una serie de movimientos en relación con unos valores, en función de una expectativa de variación de su precio a corto plazo. Así, el inversor toma en préstamo los valores en cuestión (acordando devolver al

prestamista otros tantos del mismo tipo, valor nominal y denominación) y después los vende a un tercero, confiando en que su precio caiga en el mercado antes de que haya llegado la fecha límite para la liquidación del préstamo. En ese momento los vuelve a adquirir para para proceder a su devolución al prestamista, por un precio inferior al de adquisición, obteniendo con ello una ganancia derivada de la venta.

1.5 (d) Acuerdos de recompra (*repos*)

Las transacciones de recompra (*Repurchase agreements* o *repos*) son esencialmente acuerdos de financiación a corto plazo garantizados con unos valores. En un repo una entidad de crédito (normalmente un banco) compra un valor y paga la adquisición revendiéndolo inmediatamente, con el compromiso contractual de recomprar el valor por un precio ligeramente superior (en un marco temporal que varía con frecuencia entre una noche y un año). La diferencia en el precio es el interés cargado en el acuerdo. El valor se usa como garantía (collateral) para la obligación de recompra. Si el precio del valor permanece estable o aumenta, entonces el banco ha obtenido un préstamo por la adquisición del valor a un tipo de interés inferior que el que habría podido conseguir en otro caso a través de un préstamo no garantizado, ya que la garantía pignoraticia reduce el riesgo de la contraparte en el negocio (el comprador). Sin embargo, si el colateral cae por

debajo del precio acordado el banco que estableció el acuerdo de recompra (el vendedor) habrá perdido en la operación.

La contraparte del repo determina el valor del instrumento negociable y puede establecer una llamada al margen (*margin call*) por la diferencia entre el precio de mercado y el precio acordado para la recompra, si el valor de mercado del instrumento ha caído, debiendo el vendedor en tal caso cubrir dicha diferencia o margen.

Los acuerdos de recompra se renuevan frecuentemente, lo que permite un pago posterior al inicialmente acordado. También se pueden cubrir con el producto de otras operaciones idénticas de venta con compromiso de recompra concatenadas, que forman los que se denomina *cadenas de repos*[56].

Los repos no se califican como depósitos ni están, por tanto, cubiertos por los fondos de garantía de depósitos.

El papel de las actividades de repo en el marco del *shadow banking* en la fase previa a la GCF se analizará asimismo con mayor profundidad en el capítulo 4.

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[56] Vid. Marimón, Rafael: "Delimitación y perspectivas de regulación del sector bancario en la sombra", op. cit., págs. 35-36.

1.6 Conclusiones provisionales

La titulización es una técnica para difundir o compartir el riesgo, reducir la carga de capital regulatorio de los bancos, aumentar la liquidez de las entidades de crédito y ofrecer oportunidades de inversión a un rango variado de inversores con apetencias diversas en función del binomio riesgo-rentabilidad. Sin embargo, necesita ser examinado a la luz del proceso de financiarización, la manifestación de un enfoque neoliberal de política económica que ha desembocado en una baja inflación, estancamiento de los salarios, incremento de la deuda de los hogares y la proliferación de entidades no bancarias (conocidas colectivamente como como *shadow banks*) que proveen servicios de intermediación crediticia sin la red de seguridad pública establecida para las actividades bancarias regulares. Estas han sido las condiciones históricas en las que se produjo la GCF y que configuraron tanto el papel de la titulización en dicha crisis como la forma en la que se acometió su regulación posterior. Los capítulos siguientes ofrecen una breve reseña del desarrollo de las técnicas que condujeron a la titulización moderna y al uso de derivados que son parte integrante de su funcionamiento.

CHAPTER 2. FROM TAX FARMING TO THE PRIVATE LABEL MBS: A BRIEF HISTORY OF SECURITISATION BEFORE THE GREAT FINANCIAL CRISIS

2.0 Tax farming. 2.1 The "compera". 2.2 British sovereign debt in the 18th Century. 2.3 Dutch Plantation Loans in the 18th Century. 2.4 The Prussian Pfandbriefe. 2.5 The Consolidated Association of the Planters of Louisiana. 2.6 U.S. Farm mortgage debentures in the 1880s. 2.7 U. S Real Estate Bonds, guaranteed mortgages and participation certificates. 2.7 (a) Real Estate Bonds. 2.7 (b) Participation Certificates and guaranteed mortgages. 2.8 The Federal Land Banks. 2.9 Government Intervention in the U.S mortgage market. 2.10 The Birth of the Government Sponsored Enterprises in the U.S. 2.11 The use of securitisation by U.S GSEs. 2.11 (a) Pass –through structures. 2.11 (b) Bond-like structures. 2.12 The creation of Freddy Mac. 2.13 The growth of MBS guaranteed by the GSEs. 2.14 The development of the private MBS market. 2.15 The creation of the REMIC. 2.16 The development of modern derivatives. 2.17 Speculation and gambling within the Common Law Tradition 2.18 Summary.

2.0 Tax farming

The basic mechanism of securitisation is very simple, debt is purchased and sold on for profit. In this respect, one of the first pre-cursors of securitisation, tax-farming, exploited a very similar principle. The state (or one of its many antecedents) sold the right to collect taxes to individuals or groups who had sufficient resources to do so, and then these tax collectors kept part of the revenue obtained in payment for their services[57]. In the Hellenic World, taxes were auctioned to the highest bidder and tax farmers often formed themselves into groups headed by an *ἀρχώνης* who entered into a personal contract with the state for the purchase of the right to collect a particular tax. Payment to the tax collectors was not made until the tax had been collected, and the *ἀρχώνης* was liable in the case of default. Failure to make the agreed payment could also result in loss of citizenship[58].

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[57] The historian Michael Andreades remarks that: "Today the farming out of taxes is generally frowned upon, but this condemnation is formulated altogether too absolutely, for admittedly, where a numerous and trained body of public servants in the revenue service does not exist., this farming out of taxes meets a real need; for this reason, we find it existing in classical antiquity, in the Hellenistic period, in Roman times, and even in the countries of modern Europe right up to our own time" (Andreades, Michael: *A History of Greek Public Finance*, Vol. I, Harvard University Press [1933], page 159).

[58] Andocides includes defaulting tax farmers among a list of those that had been deprived of their civic rights: "Now who were the disfranchised, and what were their different disabilities? I will explain. First, state-debtors. All who had been condemned on their accounts when vacating a public office, all who had been condemned as judgement-debtors, all those fined in a public action or under the summary jurisdiction of a magistrate, all who farmed taxes and then defaulted or were liable to the state as sureties for a defaulter, had to pay within eight Prytanies; otherwise, the sum due was

2.1 The "compera"

Tax farming was practised with more sophistication in twelfth century Genoa. The *Compera* was a system by which wealthy individuals grouped together to subsidise state spending by advancing a loan for an agreed term. The loan gave the members of the *Compera* the right to collect a tax in the city, and this tax acted as both collateral for the repayment of the principal sum lent, and as an interest payment on the loan. If the state did not make payment on the maturity of the loan, the lenders were entitled to continue to collect tax revenue until they had been paid in full. The system had the additional advantage of avoiding the Church prohibition on fixed rates of interest, as tax revenue varied from year to year[59].

The *compera* had some strikingly modern characteristics: it retained its legal identity over time despite changes in personnel and members could cede their quota entitlement to the revenue

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doubled and the delinquent's property distrained upon" (Maidment, Kenneth John: *Minor Attic Orators*, Vol. I, Harvard University Press [1960], pages 395-397).

[59] "Given that it was a tax, the amount made by the creditors could vary from year to year depending on economic trends, sometimes exceeding but, more often than not, falling short of the sum initially expected. This brought an element of uncertainty to the capital/interest ratio, thereby avoiding the automatism of a fixed interest which the Church, in those times, would have condemned as unlawful earnings" Felloni, Giuseppe: "A Profile of Genoa's Casi di san Giorgio", pages 1-2. Quoted from the reproduction of a speech given by Professor Felloni in PDF which is available at http://www.giuseppefelloni.it/rassegnastampa/A%20Profile%20of%20Genoa's%20Casa%20di%20San%20Giorgio.pdf

raised through taxation to a third party. The funds it received were administrated by a group of directors (or patrons) called *protettori*, who were elected by the members of the *compera*. The capital of the *compera* was the loan that it made to the city –state, and this amount was divided into shares known as *luoghi* that were registered against the individual members. These shares could be transferred by a simple act of registration in the ledgers of the *compera*. The shares (whose value could rise and fall depending on the public perception of the tax revenues available) could themselves be traded (and used for speculation) or employed as collateral in commercial operations[60].

While there are obviously marked differences between modern-day securitisation and the *compera*, it is easy to see how it aided the development of some of the techniques that securitisation would come to rely upon. The separate legal identity of the *compera* marks it out as an ancestor of the SPV,

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60 “According to Heers (1961, pp. 147–62), by the fifteenth century the secondary market for luoghi had become active, liquid, and sophisticated. Not only were luoghi bought and sold, but they were used as collateral by bankers, borrowers and tax collectors (Sieveking 1906b, pp. 37–8)” (Fratianni, Michele and Spinelli, Franco.: “Italian City States and Financial Evolution”, *European Review of Economic History* [2006], Vol. 10, issue 3, page 264). In the paragraph quoted the authors reference the following works: Heers, J. (1961), *Gênes au XVe Siècle*, Paris, Sevpen; Sieveking, H. (1906b), “Studio sulle Finanze Genovesi nel Medioevo e in particolaresulla Casa di S. Giorgio”, *Atti della Societ`a Ligure di Storia Patria*, vol. 1. Genova, Tipografia della Giovent.

and the tradeable *luoghi,* are clear forbearers of bonds and securitisation notes.

2.2 British sovereign debt in the 18th century

A step closer to modern –day securitisation structures was taken by creditors of the Crown in 18th century Britain. Lenders to the Crown preferred to maintain rigid debt structures that discouraged re-negotiation (not trusting in their prospects of recouping their money in the case of default or re-structuring), but this left them with a liquidity problem. Their solution has been described by the economic historian Stephen Quinn as "*a process recognizable in a modern sense as securitization*"[61]. Creditors pooled sovereign debt into corporations, and sold stock to investors using this debt as collateral. Furthermore, this stock was divided into differently ranked claims (the equivalent of tranching), the senior claim being fixed-income debt, and riskier residual claims being stock equity. However, unlike Securitisation, which uses a bankruptcy remote SPV to separate the liabilities of the originator from the claims on the cash flows produced by the underlying assets, the Corporations into which

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61 Quinn, Stephen: "Securitization of Sovereign Debt: Corporations as a Sovereign Debt Restructuring Mechanism in Britain, 1694 to 1750" (2008), page 1. Research Gate: available at file:///C:/Users/Usuario/Downloads/Debt_Restructuring_Mechanism_in_Britain_1694_to_17%20(1).pdf

sovereign debt was pooled included the particular privileges (such as the concession of exclusive trading zones or exclusive rights to trading in certain commodities) that the Crown had granted to specific creditors. This caused a potential problem for investors, because the Crown could dilute the value of these privileges by granting the same privilege to other corporations or revoking those it had previously granted, and this would obviously have a negative impact on the value of the stock. Additionally, the fact that stock (or derivatives on the right to acquire stock) could be traded also opened up the possibility of speculative bubbles fuelled by rumours and exacerbated by the poor quality of the information available to many investors, as we shall examine later in chapter three in relation to the infamous South Sea Company[62].

2.3 Dutch Plantation Loans in the 18th Century

The Dutch Colonies in modern-day Surinam and Guyana contained slave-driven plantations that provided the European market with a host of valuable commodities such as coffee, sugar and cotton. However, these plantations required large capital investments and a means of funding in order to stimulate colonial

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62 "The South Sea Company never developed a trading operation, so pooling sovereign debt became the corporation's primary business. The South Sea Company sought to maintain its charter and expand its business by conducting new debt restructurings" (Ibid, page 8).

expansion. These requirements came to be met by the *negotiatie* system. This was a series of funds, headed by fund directors, that acted as intermediaries between the Dutch Republic and prospective planters that had settled in the colonies. The funds raised capital by selling bonds (offering between 5 and 6 % interest)[63], and would employ agents in the colonies tasked with finding creditworthy borrowers. A site for the prospective plantation would be appraised, together with the price required for buildings and slaves, and a mortgage would be arranged with the fund for up to 75% of the total cost. The normal arrangement was that the plantation owner would pay only interest on the loan for the first ten years, and then interest and principal for the next ten. The contract further stipulated that the plantation owner would sell all his produce through the fund, which would make a commission on each sale. The system had two built-in weaknesses, as the loans were calculated on the value of the estate rather than its projected productivity, and the local agents working for the funds were incentivised by their form of remuneration to find borrowers and make potentially lucrative mortgage loans. When commodity prices rose it produced a

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63 See the article by: Hoonbout, Bram: “The crisis of the subprime plantation mortgages in the Dutch West Indies, 1770-1775”, Leidschrift, Issue 28, Vol. 2. (2013), page 88.

bubble[64] that became unsustainable when the prices of slaves and coffee and other key commodities eventually slumped and the credit to plantation holders was frozen. When spiralling prices hampered the plantation owners' ability to make mortgage payments, the funds themselves collapsed[65].

The Dutch *negotiatie* bore a number of similarities to modern mortgage securitisation. Investors would buy bonds whose interest and principal was based on the incoming payments of a pool of mortgage obligors. It also featured the use of mortgages that initially required interest only re-payments in order to attract new plantation owners[66]. However, if the structure of the

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64 "As many dozens of new plantations were laid out, the production of cotton and especially coffee increased dramatically. However, the system became overheated. The boom had turned into a bubble as inexperienced planters were given 100 per cent mortgages, based on valuations that were pushed upwards solely by speculation. At the time, this upward trend seemed warranted by rising prices of both inputs and output: slave prices rose and peaked in 1769, while coffee prices also increased dramatically from 72 cents per kilo in 1761 to 104 cents in 1769.15 But this was really the top of the mania. At this point new entrants were balanced by retreats, as the shaky fundamentals of the system became increasingly apparent. External factors, such as a severe drought and renewed maroon attacks in Surinam, cast doubt on the allegedly bright future of the negotiatie system. Those who foresaw what was happening began to cash out. At least 59 plantations were sold before 1769, valued at more than 9.5 million guilders, over half of them in 1769 alone" Ibid, page 90.

65 "Most of the loans originated before 1776 and should have been repaid before the end of the century. However, at the end of the century, less than one-third of the original investment was returned to the creditors, while most of the rest was lost forever". Ibid, page 88.

66 A similar concept to the so -called balloon mortgage loans common before the GFC which deferred principal payments for an initial period then kicked in, causing the amount due each month to balloon.

negotiatie was a pre-cursor of modern securitization, then its collapse also foreshadowed the modern sub-prime crisis.

2.4 The Prussian *Pfandbriefe*

The covered mortgage bond, an instrument which has clear similarities with securitisation notes, was first developed in the Prussian Province of Silesa (an area now divided between the modern states of Germany and Poland) under the reign of Frederick II (who ruled from 1740-1786). The territory had been devastated by the effects of the Seven Years' War[67], and a plan to revitalise the trade and agriculture of the region was devised by a merchant from Berlin called Büring. His plan was to grant access to the credit that was desperately needed to rebuild the area by establishing a credit association that would provide liquidity to the local economy by using real estate as capital[68]. The essence

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67 The economic historian D.M Frederiksen provides the following description: "Buildings had been burned, cattle driven away, implements destroyed, and losses of all kinds suffered. Moreover, the prices of grain, which had been high during the war, now fell. Everybody needed money, and property was unsalable. The current rate of interest, was 6 per cent, but even on the safest mortgage loans it was 10 per cent; and the additional commission which was ½ per cent, rose from 2 to 3 per cent". Quoted from Frederiksen, D. M.: "Mortgage Banking in Germany", *The Quarterly Journal of Economics*, Volume 9, Number 1 (October 1894), pages 47-76, page 47.

68 Büring wrote: "The true capital of this country consists in cash and real estate. The latter is more than ten times in excess of the former; and, if only a small part of it could be made current, it would be abundantly sufficient to secure credit and welfare for the entire country". Ibid, page 47. The translation of Büring's plan was made by Frederiksen and is quoted in the text as being taken from a document published in Der Deutsche Oekonomist on the 3rd of June 1894.

of the scheme was to value the estates of those members of the nobility that wished to participate and then lend them between a half and two thirds of the value of their properties so that they could repay their creditors. Payment to these creditors would be made not in cash but with bonds, backed by the collateral of the estates of the participating debtors. These debtors would pay an annual rate of interest of between 4 ½ and 5 per cent to the *Casse*, the credit association that was to manage the scheme. The *Casse* in turn, would pay the bondholders 4 per cent annual interest, and retain the remaining ½ to 1 per cent to cover the costs of expenses and salaries. Under the proposal the initial capital to fund the scheme was to be drawn from the coffers of Frederick II.

Although it was initially rejected, a revised version of the plan was implemented and the credit association Die Schlesische Landschaft [69] was created on July the 9th 1770. Under the revised scheme landholders could request a loan from the Landschaft and a local assessor (also a member of the association) would estimate the value of the estate and determine a credit limit that was

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69 "This was an association formed by all the noble land-owners of the province, who became by this act jointly liable for the payment of principal and interest of bonds which were to be issued to any one member, not to exceed in amount one-half the value of his estate, and further specifically secured by mortgage thereon. The interest and principal were made payable by the association, the association even agreeing to pay the principal on demand, while the individual borrower was only bound to pay the interest.". Ibid, page 52.

founded on its last sale price or the net profit it generated. The landholder would receive the loan in the form of bonds (known as *Pfandbriefe*). These could be presented to the Landschaft by the estate owner after a period of six months in exchange for cash or sold directly in the open market. The bonds paid-out 5 per cent interest, the borrower paid 5 $\frac{1}{4}$ per cent to the credit association on the loan, and the association received $\frac{1}{4}$ per cent to cover its expenses. The Landschaft system made membership compulsory for the nobility and ensured that they were jointly and severally liable for each other's obligations[70]. This system of liability meant that purchasers of the *Pfandbriefe* were not dependent upon individual borrowers for interest and principal, and they were not obliged to negotiate the terms of individual loans as the bonds were standardised[71]. The *Pfandbriefe* introduced a type of dual recourse, which is a key characteristic of the modern covered

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70 "The association would guarantee principal and interest through this joint liability structure. From the beginning efforts were made to make sure the mortgages were in no way separated from other assets of the bank. Depending on the jurisdiction, mortgage bonds were never issued for more than 60-80 per cent of the value of the collateral. It was also essential that the banks had to keep the collateral on their own balance sheet. In other words, there was "skin in the game". Quoted from: Buchanan, Bonnie G.: *Securitization and the Global Economy…*, op. cit., page 58.

71 See: Wandschneider, Kirsten: "Lending to Lemons: Landschafts-Credit in 18th Century Prussia", National Bureau of Economic Research, Working Paper 19159 (2013).

mortgage bond[72], and one which distinguishes it from securitisation. In the case of non-payment, the bondholder had a claim against the land of the estate (although not on any other private assets of the owner) and the pooled assets of the Landschaft itself. The success of the Landschaft system prompted the founding of a number of other similar associations over the course of the latter eighteenth century and early nineteenth century[73], and laid the foundations of the modern covered mortgage bond, an instrument that shall be examined in more detail in Chapter 5.

2.5 The Consolidated Association of the Planters of Louisiana

Despite the failure of the *negotiatie* in the Dutch colonies, the model was largely resuscitated in the 1820s by American slave owners [74] in the cotton growing areas of the American South. The

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[72] In modern covered mortgage bonds the holder has recourse against the issuer of the bond and against the pool of mortgages which serve as collateral for the issue. In Securitisation the noteholder only has recourse against the assets of the SPV, and payment is only due when the payment waterfall has been respected and the interest and principal of more senior notes have been covered.

[73] For example: "Kur and Neumark, 1777; Pommern, 1780; Hamburg, 1782; Westpreussen, 1787; Ostpreussen, 1788; Liineburg, 1791; Schleswig-Holstein, 1811; Mecklen-burg, 1818 and 1840; Posen, 1822; Wuirtemberg, 1825; Calenberg, Grubenhagen, and Hildesheim, 1825; Bremen and Verden, 1826". Quoted from Frederiksen, D. M.: "Mortgage Banking in Germany", op. cit., page 55.

[74] The historian Edward E. Baptist credits the securitisation of slaves to a Louisiana enslaver named J.B. Moussier. He writes: "J. B. Moussier was facing a lawsuit by Rogers and Harrison, Virginia-based slave-trading partners to whom he owed $21,000 for seventy men, women, and children he had bought on a short-term, high-interest loan.

first U.S lending institution to apply proto –securitisation techniques to the slave trade was the Consolidated Association of Planters of Louisiana (C.A.P.L), which received its charter in 1827. Potential borrowers would apply for "*stock*" in the Association, and if their application was accepted they could then mortgage the land and slaves they held in order to pay for the stock they acquired. This stock gave its holders the right to borrow C.A.P.L bank notes to a maximum quantity of half the value of the mortgaged property. As the C.A.P.L bank notes needed to be supported by cash reserves so as to gain general acceptance, the association raised the funds by selling bonds on the financial markets[75]. The innovative work of the C.A.P.L was

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What if, Moussier wondered, planters used slaves as collateral to raise capital overseas, from people who needed American cotton and sugar, and then used the capital to build a lending institution that enslavers themselves could control? Moussier took his idea to New Orleans politician-entrepreneurs Edmund Forstall and Hugues Lavergne, who engineered it into the charter of the Consolidated Association of the Planters of Louisiana (C.A.P.L.), chartered by the state legislature in 1827" (Baptist, Edward E.: *The half has never been told. Slavery and the making of American Capitalism*, Basic Books [2014], Digital Edition, page 274).

75 "Each bond would be $500 in face value—about the average price, in the 1820s, of a young enslaved man. A bond would reach maturity in ten to fifteen years, and it would pay investors 5 percent in annual interest. Lenders always want security, though, so how would the C.A.P.L. assure potential investors that the bonds would be worth their face value plus interest? Thomas Baring of Baring Brothers helped Lavergne and Forstall to convince the state legislature to back the C.A.P.L.'s bonds with the "faith and credit" of Louisiana. If loan repayments from planters failed and the bank could not pay off the bonds, the taxpayers of Louisiana were now obligated to do so. The state's commitment convinced the European securities market. In 1828, the C.A.P.L. received from Baring Brothers, its European brokers, the first receipts from bond sales that would ultimately total $2.5 million in "sterling bills" redeemable for silver at the Bank of England. The bank started to lend out $3.5 million in new C.A.P.L. notes, printed by a London engraver, to planter-stockholders ". Ibid, pages 274-275.

quickly copied by other Southern States, with Mississippi, Alabama, Tennessee, Arkansas and Florida creating a series of new banks that operated in the same manner, using slaves as securitised collateral. The risk shifting properties of these bonds had clear parallels with modern securitisation notes[76], and there was a strong temptation among borrowers to use leverage to take full advantage of rising prices and readily available credit (as there was to be in the U.S housing market before the GFC) because planters could reap returns of over 30 per cent on slaves and buy them on borrowed money at 8 per cent interest[77]. The

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[76] The financial product that such banks as Baring Brothers were selling to investors in London, Hamburg, Amsterdam, Paris, Philadelphia, Boston, and New York was remarkably similar to the securitized bonds, backed by mortgages on US homes, that attracted investors from around the globe to US financial markets from the 1980s until the economic collapse of 2008. Like the C.A.P.L. bonds, mortgage-backed securities shifted risk away from the immediate originators of loans onto financial markets while promising to spread out and thus minimize the consequences of individual debtors' failures. Investors who purchased latter-day mortgage-backed securities planned to share in streams of income generated by homebuyers' mortgage payments. Likewise, the faith bonds of the 1830s generated revenue for investors from enslavers' repayments of mortgages on enslaved people. This meant that investors around the world would share in revenues made by hands in the field. Thus, in effect, even as Britain was liberating the slaves of its empire, a British bank could now sell an investor a completely commodified slave: not a particular individual who could die or run away, but a bond that was the right to a one-slave-sized slice of a pie made from the income of thousands of slaves"

[77] "The margin between anticipated returns on borrowed capital and its cost to borrow was thus huge. And the direct risk appeared to be negligible. State-guaranteed slave-mortgage bonds dispersed much of the immediate risk of borrowing to others—to bondholders, to taxpayers, and, above all, to the enslaved. In addition, entrepreneurs themselves—including judges, politicians, and state officials—controlled debt collection in their states, making it less likely that elite borrowers would be foreclosed, even if they fell behind on payments. Banking elites had the recourse of socializing the losses—making the whole population pay off the debts of failed enterprises—just as the old Plummer (pre-carriage) and the old Walker (pre–bank war) had once warned.

asset bubble that subsequently developed was further inflated by the lack of regulatory control over how much money banks could print and lend, the ease with which C.A.P.L type bonds allowed investors to speculate on the future revenues to be produced by cotton-picking slaves and the dogmatic belief that the price of cotton would continue to rise indefinitely. By 1837 the South – western banks found that they had lent much more money than they could cover with their reserves, and at the same time faced huge interest payments on the bonds they had sold on world-wide financial markets[78]. Their obligors, the cotton plantation owners, faced with a slump in cotton prices and with no other tangible assets outside of the cotton industry, were unable to make payments. While the system struggled through a series of such

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So as enslavers multiplied their leverage, they multiplied their revenue without increasing their individual risk". Ibid, page 286.

78 The economic downturn was also related to the financial situation of overseas banks and the anti-inflationary policies of the U.S government: "In 1836 the Bank of England, fearing a run on its deposits of specie (silver and gold), sharply contracted credit. British companies curtailed their business with America. Foreign demand for American cotton plummeted, cutting cotton prices nearly in half. Southern planters suffered, and many northern companies associated with the cotton trade failed. The Specie Circular, which mandated that speculators could purchase public land only with hard money, caused a drain of specie from eastern to western banks. In April 1837, world prices suddenly collapsed, creating a run on banks. On May 10, 1837, all banks in New York suspended specie payments; that is, they refused to redeem paper currency in silver or gold. Banks in New Orleans and other cities soon did the same. The specie suspensions caused panic, which in turn led to widespread bank failures". Quoted from: Reynolds, David S.: *Waking Giant. America in the Age of Jackson*, Harper Perennial, Reprint edition (2009), pages 310-311.

financial shocks[79] it was ultimately undone by the dismantling of slavery itself. The profitability of the whole system was predicated on the huge competitive advantage of mass production for low costs, and the destruction of the slave –based economy after the American Civil War (1861-1865) was disastrous for both this system and the prosperity of the region[80] .

79 "Most sectors of the economy slumped. Business failure brought unemployment. By the January 1838, half a million Americans were jobless. The economy then briefly rebounded, but another contraction abroad brought on a second panic in October 1839, leading to four more years of depression. Wholesale prices tumbled, and the nation's money supply shrank. Imports plummeted, as did property values. America would not again see such deep, prolonged economic malaise until the Great Depression of the 1930s.Ibid, page 311.

80 "First, neither African Americans nor anyone else would do hand labour at the breakneck, soul-scarring pace of the whipping-machine. Many white yeoman farmers, impoverished by war and unable to pay debts or taxes, lost their land and became tenants and sharecroppers themselves. The total number of bales produced in the United States didn't surpass 1859's peak until 1875, despite a significant increase in the number of people making cotton in the South after emancipation. Cotton productivity dropped significantly. Many enslaved cotton pickers in the late 1850s had peaked at well over 200 pounds per day. In the 1930s, after a half-century of massive scientific experimentation, all to make the cotton boll more pickable, the great-grandchildren of the enslaved often picked only 100 to 120 pounds per day. Second, both because productivity was now declining instead of rising, and because of the political-economic isolation that the South's white rulers inflicted upon their region in order to protect white power, the South sank into subordinate, colonial status within the national economy. Although many southerners wanted to develop a more diverse modern economy that went beyond cotton, for nearly a century after emancipation they failed to do so. Despite constant attempts to industrialize, the South could only offer natural resources and poverty-stricken labourers. It did not have enough local capital, whether of the financial or the well-educated human kind, and it could not develop it" (Baptist, Edward E.: *The half has never been told*, op. cit., page 439).

2.6 U. S Farm mortgage debentures in the 1880s

Before the introduction of farm mortgage debentures in the early 1880s, the U.S farm mortgage market had been dominated by mortgage loan brokers. These were men that acted as intermediaries between investors and obligors and provided a range of services. Loan agents were sent out to locate potential borrowers and put together loan applications, while office staff were tasked with screening applications and approving loans, as well as recording the relevant documents, receiving payments from obligors and forwarding to investors their percentage share of the payments. The payments made by borrowers were split into a mortgage that was assigned and paid to the investor and an additional lien that specified semi-annual interest payments to be made to the broker, as well as legal and recording fees that the broker shared with his loan agent[81].

However, this system had certain disadvantages. Investors had to be matched to specific borrowers (as the loans were not pooled as in a modern day securitisation), and imbalances between the supply and demand for loans generated inefficiencies and liquidity mismatches. There was also the potential for severe

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[81] See: Snowden, Kenneth A.: "Mortgage Companies and Mortgage Securitization in the Late Nineteenth Century" (2007), page 5. The full article is published by Research Gate and it is available at: https://www.researchgate.net/publication/228822552

information asymmetries, as the investor would have been required to trust the probity of both a loan agent who had located a property that may have been thousands of kilometres away, and the broker that acted as an intermediary. This problem was sometimes overcome by the contractual solution of a loan sale with recourse, by which mortgage brokers promised to buy back or replace non-performing loans and make up any shortfalls. However, this could be very costly for brokers. When obligors missed payments they had to cover both the principal and the interest payments. If the obligor could no longer keep up payments at all then the broker would be obliged to buy back the loan and initiate foreclosure proceedings. If this situation repeated itself in a number of obligors, the broker could be left with a collection of farm properties on his books for which he had to find buyers, and which he needed to maintain until suitable clients could be found for the properties. Sometimes this guarantee was not laid out explicitly in a legally binding contract but was implicit and relied on the reputation of the broker in question.

A more advanced and practical system, Mortgage debenture bonds, was essentially an application of the techniques of European covered mortgage bonds to the U.S farm mortgage market. While brokered loans were characterised by a senior claim on the farmland and an unsecured claim (whether contractual or implicit) on the assets of the broker, mortgage

debentures were debt contracts issued by mortgage companies that were secured by senior claims on a specified pool of mortgages.

The mechanics of the system were as follows: the mortgage company would place loans into a trust account and issue an equal amount of debenture bonds. These securities would be issued in series of $100,000, secured by between 100 and 200 loans. If the mortgage company defaulted on its debenture payments the trustee would take possession of the specific pools of loans behind the series and liquidate them on behalf of the investors[82]. Debentures pooled mortgages rather than trying to match individual loans to investors. The mortgage companies did not guarantee to replace them or refund the losses, but the investor shared the risk that the obligors would default.

There were substantial differences between these mortgage debentures and modern mortgage-backed securities. There was no bankruptcy proofing, so while the modern MBS is issued by an SPV, a separate legal entity whose assets are not affected by the bankruptcy of the mortgage loan originator, the mortgage debentures were direct claims against the mortgage company that

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[82] For a more detailed description of the process see: Ibid pages 9-10.

originated and serviced the mortgages[83]. The mortgage companies did not sell the loans into the trust account, but kept them on their balance sheets. There was no credit enhancing (either internally by the use of tranching or overcollateralization[84]) or externally through third-party agreements, and there was no maturity transformation, but rather a simple pass-through structure was employed.

The principal benefits of the debenture system over the broker system were the efficiencies that it brought to risk-sharing and marketing. No investor had to bear the lending risk of a particular loan (as was the case if a broker would not or could not honour his contractual or implicit guarantee), but was exposed instead to the average quality of the loans in the pool. The trustee had the job of certifying that the loans that made up the pool met the conditions stipulated in the trust agreement, which meant that investors did not have to inspect and approve individual loan documents. This meant that debentures were easier to market,

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83 Servicing is the industry term for functions of sending notifications to obligors, collecting payments, and sending the payments to the trust/SPV, among other necessary administrative tasks.

84 Overcollateralization refers to the practice of having more collateral than necessary in order to meet the obligations to noteholders, which provides them with firmer guarantees of full payment of interest and principal.

especially in the case of those mortgages that would have been difficult to broker[85].

The debenture system still relied on agents to make appraisals of farms, and mortgage companies initially limited loans to between a third and a half of a property's appraised value. The higher the appraisal the more money borrowers could obtain, and borrowers sought money not only to purchase property, but to carry out repairs, improvements or simply to obtain liquidity. Agents found themselves competing for borrowers, and this competition drove up the appraisals past the point at which they remained fair assessments of the quality of the collateral on offer[86]. West coast mortgage companies were often financed by East coast investors, and by 1893 Eastern investors had purchased

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85 "While any mortgage loan would have benefitted from the risk diversification and marketing advantages associated with being pooled, the greatest benefit would have accrued to mortgages with high idiosyncratic risk or with non-standard sizes, terms or legal forms - the same loans that would have been difficult to broker". Quoted from: Snowden, Kenneth A.: "Mortgage Companies and Mortgage Securitization…", op. cit., page 16.

86 "The older, established companies should have maintained loan quality in the face of these pressures because they had been building reputations for safety and conservatism for more than a decade. But their agents in the field found that they could not compete for borrowers if they based loan terms on accurate appraisals. So even experienced and reliable loan agents began to recommend marginal applications for approval. In order to retain their agents the mortgage companies felt pressured to approve loans that they knew were poorly secured." Quoted from Snowden, Kenneth, A.: *Coordination and Information: Historical Perspectives on the Organization of the Enterprise*, Chapter 7: "The Evolution of Interregional Mortgage Lending Channels. 1870-1940: The Life Insurance Mortgage Company Connection", University of Chicago Press (1995), pages 209-256, page 228.

$93 million dollars of mortgage debentures[87]. As the supply of Eastern credit increased, the competition among mortgage companies became even more intense, and agents, who were paid on a commission basis, were criticised in the press for their greed and incompetence. A New York Times journalist remarked in 1887 that:

"*The vital factor of security in these investments is the knowledge of the land examiner employed by the local companies, who passes judgement on the land offered as security. The unsafe factors are represented by his ignorance of the productive capacity of various lands and the eagerness of the company he represents to pocket the 10 per cent commission the farmer pays to get the loan. If the land examiner is honest and possesses the necessary knowledge to enable him to accurately judge the value of the land, and he accepts nothing but corn producing land as security, the investment is safe. I have seen a dozen of these land inspectors. The larger portion of them were callow and self-sufficient youths who were fair judges of cigarettes, but who knew nothing relative to the productive capacity of the soil or to the climate of the country they happened to be in –but they did know*

[87] Ibid, page 227.

that their employers greedily desired to pocket the 10 per cent commission the farmers would have to pay to obtain money"[88]

By 1895 almost all mortgage companies had gone into receivership[89].

2.7 U.S Real Estate Bonds, guaranteed mortgages and participation certificates

2.7 (a) Real Estate Bonds

S.W Straus & Co are credited with devising the first real estate bond in 1909 [90], a security that had a senior claim over a building with the express purpose of maximizing rents and generating a profit. A shortage of space in U.S cities after the First World War fuelled a rapid rise in rents and real estate values[91]. The potential

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88 Wilkeson, Frank. From an article titled "Unsafe Farm Mortgages", The New York Times, December 27, 1887. Available for download from the historical archive maintained by the New York Times at: https://www.nytimes.com/1887/12/27/archives/unsave-farm-mortgages-thickly-plastered-west-of-the-missouri-the.html

89 Snowden remarks that: "(…) the collapse of the western mortgage companies in the 1890s was directly attributable to high rates of default and foreclosure on mortgages they had made in the late 1880s" (Snowden, Kenneth, A.: *Coordination and Information: Historical Perspectives on the Organization of the Enterprise*, op. cit., pages 229).

90 See: Markham, Jerry W.: *A Financial History of the United States,* Vol. II: *From J.P Morgan to the Institutional Investor (1900 – 1970)* (2002), page 62.

91 "With the war over in the fall of 1918, a great shortage of space became evident. The average rents all over the country went up… 10% in 1918, 20 % in 1920, 10% in 1921, gradually increasing another 8% during 1922, 1923 and 1924, reaching 168% of

for profit was quickly exploited by firms that created bonds that placed senior claims over skyscrapers and other major construction projects, such as those underway in Manhattan and Chicago, yielding from 4-7 per cent interest bi-annually[92].

Real Estate mortgage bonds, valued at $ 50 million were issued in 1919, and this figure grew to $ 500 million in 1923 and had reached $ 1 billion by 1925 [93].

A study of 125 commercial bond prospectuses from the period conducted by scholars from the National Bureau of Economic Research[94] showed that the majority of the coupons were paid out in gold as a means of protecting investors from the effects of inflation. Maturity terms ranged from 2 to 47 years, although repayment of the principal was generally staggered over a number of years prior to maturity. The bonds in the sample were almost

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the pre-war base. During this same period everyone capitalized real estate values on the basis of the high rents and by 1926 the average value of Chicago improved city real estate reached 194% of the pre-war value". Quoted from: Boysen, Louis K.: "History of Real Estate Bonds", *Chicago Real Estate Magazine*, Issue 6 (1931), pages 12-13.

92 To put those figures into perspective, in the first two decades of the twentieth century in the U.S a six per cent yield was twice the rate paid on commercial bank saving deposits. See: Buchanan, Bonnie G.: *Securitization and the Global Economy…*, op. cit., page 68.

93 See: Markham, Jerry W.: *A Financial History of the United States*, op. cit., page 147.

94 See: Goetzmann, William N. & Newman, Frank: "Securitization in the 1920's", National Bureau of Economic Research, Working Paper 15650 (2010), pages 7-8.

all designed to be callable by the issuer[95], with only very low penalties in place. Some of the bonds showed more complex characteristics. Three of the sample were convertible, and gave the holder the right to convert the outstanding balance of the principal into shares of the issuing property developer at a contractually agreed upon price, while another of the bonds provided that if interest and principal payments had not been met within a specified time-frame, then the bondholder had a direct claim on the rentals generated by the building.

The market in Real-Estate bonds could not withstand the Great Depression, and **Figure 11** shows the devastating rise in defaults in the Real Estate bond market in the city of Chicago after the stock-market crash of 1929, which is illustrative of the general nationwide increase.

Figure 11: Defaults of Chicago Real –Estate bonds 1925 – 1934[96].

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[95] A callable bond means that the issuer can redeem the bond before it reaches its maturity date. Allowing the issuer to pay off the debt early (perhaps taking advantage of lower rates of borrowing). Normally these bonds offer more attractive rates of interest to investors in the time before they are called, and /or require the issuer to make penalty payments to the bondholder to compensate for the interest they have lost.

[96] Source: Gjerstad, Steven D. & Smith, Vernon L.: *Rethinking Housing Bubbles. The Role of Household and Bank Balance Sheets in Modeling Economic Cycles*, Cambridge University Press (2014), page 105.

Year	Number of defaults	Amount (Thousands)	Cumulative defaults (Thousands)	Percent defaulted
1925–28	7	$8,275	$8,275	1.66%
1929	22	$29,320	$37,595	7.55%
1930	50	$64,095	$101,690	20.42%
1931	104	$162,116	$263,806	52.97%
1932	67	$146,725	$410,531	82.54%
1933	20	$38,003	$448,534	90.17%
1934	5	$22,706	$471,241	94.74%

2.7 (b) Participation certificates and guaranteed mortgages

New York state legalised private mortgage insurance in 1904, and this permitted companies to insure against defects in land title and the non-payment of mortgages[97]. These companies initially offered policies to investors that had originated their own mortgages, but they quickly progressed from merely selling insurance to originating mortgages themselves and servicing them after sale (the integration of the securitisation supply chain was, many decades later, to be a characteristic of sub-prime mortgages) They funded their mortgage loans by issuing participation certificates that guaranteed investors default free income streams on the participation certificates that they purchased. By 1930, nearly $ 1 billion insured mortgages had

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[97] White, Eugene N.: "Lessons from the Great American Real Estate Boom and Bust of the 1920s", National Bureau of Economic Research, Working Paper 155573 (2009), page 30.

been placed in trust accounts, and pass-through collateral trust certificates of participation were issued, backed by the cash-flows generated by the payments of the mortgage obligors, against either single large mortgages or pools of mortgage loans[98].

Unfortunately, these mortgage guarantee companies failed to hedge the risk of default of the mortgages on their books, and state regulations only required them to maintain a reserve fund that represented a percentage of their capital and surplus, rather than of the volume of their insurance commitments. In the face of rising defaults, in 1933 New York State regulators ordered them to halt the sale of mortgage guarantees and to stop distributing participation payments. Some months later The Department of Insurance placed 18 mortgage guarantee companies in liquidation[99], and the guaranteed mortgage participation boom was over.

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[98] See: Snowden, Kenneth A.: "The Anatomy of a Residential Mortgage Crisis: A look back at the 1930s", National Bureau of Economic Research, Working Paper 16244 (2010), page 12.

[99] "These companies together had sold $ 1 billion of insured whole mortgage loans and $ 0.8 billion of participation certificates on loans that were held in trust accounts; these certificates were held by more than 200,000 investors. The Department of Insurance found that $1.1 billion of guaranteed mortgages were in default and that the default was highest among mortgages placed behind participation certificates". Quoted from: Ibid, page 18.

2.8 The Federal Land Banks

The Federal Land Banks in the U.S were created in order to subsidise farm mortgages and were the first example of what would come to be known as Government Sponsored Enterprises (GSEs); companies that are privately owned but which rely upon the explicit or implicit guarantee of the Federal Government should they default. The Federal Farm Loan Act of the 17th of July 1916 created twelve Federal Land Banks that were liable for the combined debts of the land banks in their region. These Federal Land Banks used their initial capital to make agricultural mortgage loans and then package them into a series of tax-exempt bonds, the sale of which would then provide funding for more loans. The bonds were issued in denominations of $25, $50, $100, $500 and $1,000, and had interest coupons attached that were payable semi-annually, the interest on which was limited to a maximum of 5% per annum[100].

The Act did not specify the degree of government backing that the Federal Land Banks would receive in regard to their debts and preferred instead to preserve a degree of ambiguity. However, it was reasonable for investors to believe that an implicit guarantee existed, given that only government held stock carried a vote in

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[100] See: The Federal Farm Loan Act. Approved July the 17th 1916.Section 20. Paragraph 1. Available as a PDF download from Cornell University Library at the following link: https://archive.org/details/cu31924014007326/page/n6

shareholder meetings[101], that the mortgages granted by the Federal Land Banks and the farm loan bonds issued were deemed to be instrumentalities of the Government of the United States[102], and that the Secretary of the Treasury had the power to designate all Federal Land Banks as depositaries of public money[103]. The capital that each bank received from the government was approximately $750,000, but successive capital had to come from the borrowers themselves[104].Borrowers were required to join a national farm loan association, these were cooperative groups that were meant to guarantee all mortgage loans from the Federal Land Banks to its members. When it received the money for a mortgage loan the association gave 5 per cent of the money back to the Federal Land Bank. In exchange the association received a corresponding amount of new stock or equity in the Federal Land Bank, from which the association and its members received dividends. However, this 5 per cent investment was retired and returned to the borrower when the borrower repaid the loan in full.

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101 Ibid, Section 5.

102 Ibid, Section 26.

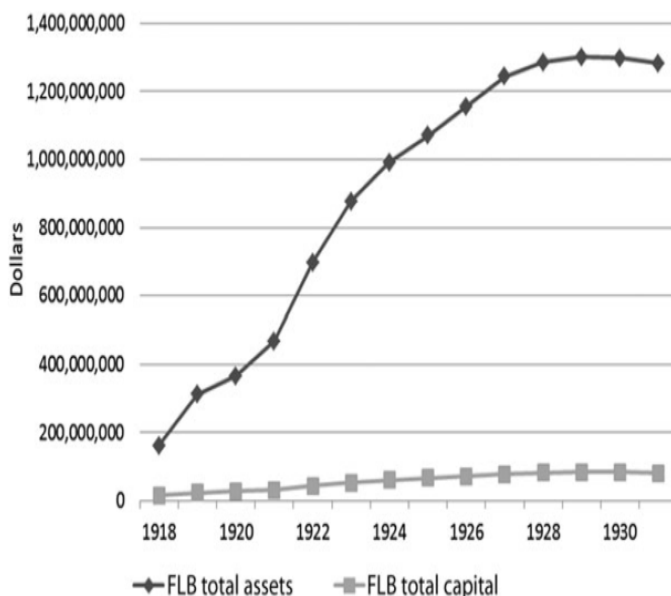
103 Ibid, Section 6.

104 See: Glock, Judge: "The Rise and Fall of the First Government-Sponsored Enterprise: The Federal Land Banks, 1916 -1932", *Business History Review*, Issue 90 (Winter 2016), page 627.

The consequence of this system was that the Federal Land Banks were undercapitalised, and could only generate more capital through the production of more loans. The extent of this undercapitalisation can be appreciated in **Figure 12**.

Figure 12: Federal Land Banks, assets and capital: 1918 – 1931[105].

[105] Source: Ibid, page 628.



In an attempt to safeguard their solvency, the Federal Land Banks were subject to a number of restrictions. They were only permitted to accept first mortgages on real estate, they were prohibited from carrying out any banking transactions that were not expressly authorised by the provisions of the Federal Farm Loan Act, and they could not obligate themselves for outstanding farm loans beyond twenty times the amount of their capital and surplus[106].

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106 The Federal Farm Loan Act. Approved July the 17th 1916. Section 14. Paragraphs 1-3. Available as a PDF download from Cornell University Library at the following link: https://archive.org/details/cu31924014007326/page/n6

However, there was also a restriction placed on the interest they could charge borrowers, which could only represent 1 per cent more than the interest on the sale of their last bonds, up to a maximum of six per cent [107]. This slim margin was intended to be sufficient to cover the banks' expenses, profits and mistakes. A further complication to the efficient running of the Federal Land Banks was the politicization of its administrators. The 1916 act permitted the government to vote for land bank directors using its original shares. This in turn led to some of their land appraisers being appointed as a result of political cronyism rather than competence[108]. When The Great Depression caused a sharp drop in the Federal Land Bank's bond prices, a recapitalization programme was passed by Congress in 1932 that raised $125 million and the Federal Reserve Bank started to acquire their bonds on the open market. The Federal Land Banks were then

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[107] Ibid, Section 12, Paragraph 3.

[108] The economic historian Judge Glock comments that: "The farm land appraisers, upon whom all agreed that safety and security of the system depended, were a particular subject of political envy and concern. Even those bank directors and presidents appointed through political favours worried that the politicization of these appointments could damage their banks. One FLB president complained- after a request from Senator Duncan Fletcher for the appointment of his brother – that "this bank is already in possession of one of Senator Fletcher's relatives as an appraiser" and asked that the board prevent having any more of "Senator Fletcher's kin forced on us". Another worried that all his current appraisers were "[m]en who have made no success of their own business" and were "hangers on looking for political patronage and a soft nap and no hard work" Quoted from: 108 Glock, Judge: "The Rise and Fall of the First Government-Sponsored Enterprise…", op. cit., page 631.

managed as "*explicitly nationalized banks*"[109] until they were privatised again in 1947.

2.9 Government Intervention in the U.S mortgage market

The Crash of the U.S stock exchange and the onset of the Great Depression necessitated a series of measures designed to combat the escalation of residential mortgage defaults. Rates of non – farm mortgage foreclosures had begun to rise from the late 1920s onwards (as can be appreciated in **Figure 13**) and by 1933 were to reach a thousand per day[110].

Figure 13: Non-farm Real Estate Mortgage Foreclosure Rate in the U.S.A from 1926-1941[111].

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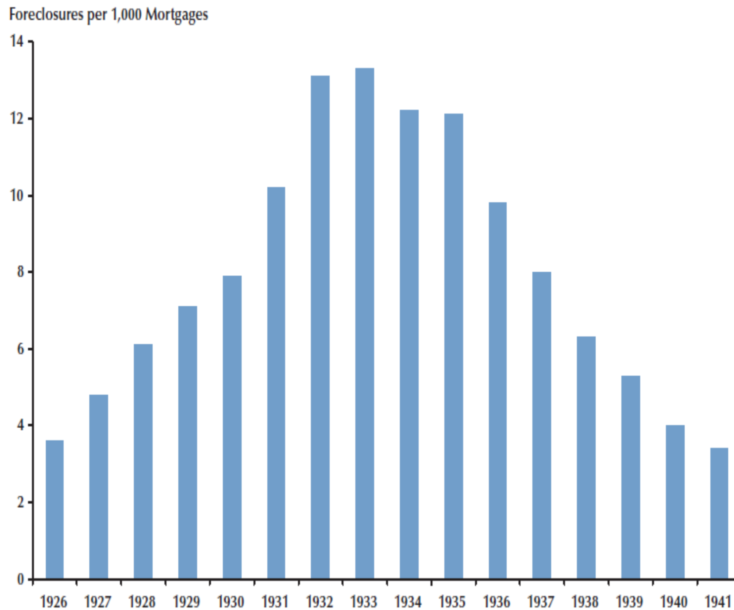
[109] Ibid, page 644.

[110] See: Snowden, Kenneth A.: "The Anatomy of a Residential Mortgage Crisis…", op. cit., page 15.

[111] Source: Wheelock, David C.: "The Federal Response to Home Mortgage Distress: Lessons from the Great Depression", *The Federal Reserve Bank of St. Louis Review*, May/ June 2008, page 139.



In 1932 the Federal Home Loan Bank Act created the Federal Home Loan Bank system. This consisted of twelve regional banks and a body designed to oversee and partially finance their operations called the Federal Loan Bank Board. The plan was for regional banks to lend money to private institutions to compensate for fluctuations in their capital reserves. The Board regulated these regional banks and worked to stabilise national markets by providing them with short term or long terms loans. However, as historian David Freund writes:

"(…) *the FHLB could not abate the deepening housing crisis. For while it insulated institutional lenders by stabilizing credit supplies, it did virtually nothing to encourage people to take out*

loans. Most important, the terms of most mortgages, the high interest rates and short repayment periods that concerned institute economists, made borrowing prohibitive if not impossible for most households, particularly in light of the devastation wrought on family budgets by the Depression"[112].

The effects of the Great Depression[113] meant that by 1993 almost half of the nation's home mortgages were in default and two million of the U.S's twelve million unemployed had previously been in the building trade.[114] Under such conditions the FHLB was not able to generate sufficient demand for new mortgages. The election of Franklin Delano Roosevelt in 1933

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112 Freund, David M. P.: *Colored Property: State Policy and White Racial Politics in Suburban America*, The University of Chicago Press (2007), Chapter Three, page 110.

113 The historian Kenneth T. Jackson writes: "Between 1928 and 1933, the construction of residential property fell by 95 percent, and the expenditures on home repairs fell by 90 per cent. In 1926, which may be taken as a typical year, about 68,000 homes were foreclosed in the United States. In 1930 about 150,000 non-farm households lost their property through foreclosure; in 1931, this increased to nearly 200,000; in 1932, to 250,000. In the spring of 1933, when fully half of all home mortgages in the United States were technically in default, and when foreclosures reached the astronomical rate of more than a thousand per day, the home-financing system was drifting toward complete collapse. Housing prices predictably declined –a typical $ 5,000 house in 1926 was worth about $3,300 in 1932– virtually wiping out vast holdings in second and third mortgages as values fell below even the primary claim. Moreover, the victims were often middle-class families who were experiencing impoverishment for the first time". Jackson, Kenneth T.: *Crabgrass Frontier: The Suburbanization of the United States*, Oxford University Press (1985), Digital Edition, page 227.

114 See: Freund, David M. P.: *Colored Property: State Policy and White Racial Politics…*, op. cit., page 110.

saw the implementation of the *New Deal*[115], and a series of measures designed to revive the ailing housing market. One such measure was the Home Owners' Loan Corporation Act of 1933. Its stated purpose was to: "(…) *provide emergency relief with respect to home mortgage indebtedness, to refinance home mortgages, to extend relief to the owners of homes occupied by them and who are unable to amortize their debt elsewhere, to amend the Federal Home Loan Bank Act, to increase the market for obligations of the United States and for other purposes*"[116]. The Act created the Home Owners' Loan Corporation (HOLC). This body was assigned the task of purchasing delinquent home loans from Saving and Loans Institutions and other lenders and to

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115 The phrase is taken from the final paragraph a speech Roosevelt delivered before the Democratic National Convention at the Stadium Chicago, Illinois on the 2nd of July 1932 on accepting the presidential nomination. Roosevelt stated: "Throughout the nation, men and women, forgotten in the political philosophy of the government of the last years look to us here for guidance and for more equitable opportunity to share in the distribution of national wealth. On the farms, in the large metropolitan areas, in the smaller cities and in the villages, millions of our citizens cherish the hope that their old standards of living and of thought have not gone forever. Those millions cannot and shall not hope in vain. I pledge you -- I pledge myself to a **new deal** for the American people. Let us all here assembled constitute ourselves prophets of a new order of competence and of courage. This is more than a political campaign; it is a call to arms. Give me your help, not to win votes alone, but to win in this crusade to restore America to its own people". Quoted from: Roosevelt, Franklin D.: "The Great Communicator". The Master Speech Files, 1898, 1910-1945, Series 1: Franklin D. Roosevelt's Political Ascension, File No.483a, 1932, July 2. Chicago IL – Acceptance Speech for Presidential Nomination. Available online at: http://www.fdrlibrary.marist.edu/archives/collections/franklin/index.php?p=collections/findingaid&id=582

116 The Home Owners' Loan Act of 1933. The text quoted is taken from the full title of the Act.

refinance them with long-term, low-interest and self-amortizing loans. Initial funding came from the money assigned by the U.S Treasury to the Reconstruction Finance Corporation which was instructed to provide a maximum capital of $200 million, interest free. Between 1933 and 1936 HOLC purchased more than one million loans from lenders[117], and then refinanced these loans. By doing so it replaced toxic assets on the books of mortgage lenders and helped prevent homeowners who were struggling to keep up mortgage payments from defaulting and losing their homes[118].

In order for a property to be eligible for refinancing it had to be a domicile of not more than four bedrooms, with a maximum value of $20,000. The graph in **Figure 14** puts this value into some historical perspective.

Figure 14: Housing Price Index – 1900 to 2010[119]

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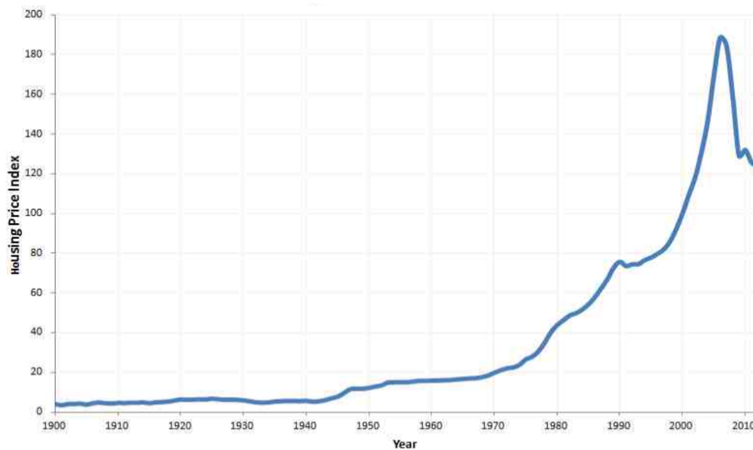
117 See: Fishback, Price V.; Flores-Lagunes, Alfonso; Horraca, William; Kantor, Shawn & Treber, Jaret: "The Influence of the Home Owners' Loan Corporation on Housing Markets During the 1930s", *The Review of Financial Studies*, Vol. 24, number 6 (2011), page 1800.

119 Source: http://observationsandnotes.blogspot.com/2011/06/us-housing-prices-since-1900.html



The maximum loan permitted was 80 per cent of the appraised value of the property or $14,000, whichever was smaller[120]. The HOLC replaced what were typically five-year interest only loans that had a balloon payment of principal at the end of the agreed term, and which normally required re-financing, with fifteen year amortised loans. These loans enabled the borrower to make equal payments throughout the life of the loan, while paying a rate of interest of 5%. The HOLC was initially authorised to sell up to $2 billion in bonds or exchange them with private lenders for mortgages[121]. This statute was amended on April the 27th 1934 so as to increase the authorised bond issue to $ 3 billion. From the start of the programme the Federal Government insured the interest on HOLC bonds, and from 1934 onwards it also insured

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[120] The Home Owners' Loan Act of 1933. Section 4 (d) 2.

[121] See: The Home Owners' Loan Act of 1933. Section 4 (d).

the principal. In its first four months of operations the HOLC received over 400,000 applications for refinancing and within two years some 40 per cent of the nation's eligible homeowners had applied for assistance[122].

The process of applying for a loan from HOLC was divided into several stages. The first stage centred on the eligibility of the applicant for the loan. This included ensuring that the property was residential (and not a farm), and whether the applicant was distressed rather than simply looking to refinance the loan. The next stage saw lenders contacted for documentation, credit agencies asked to provide reports on the borrowers, and a personal interview with applicants in which they would be questioned about the details they had provided in their applications. This interview was principally concerned with ascertaining the income and future prospects of the applicants. If the applicant passed the personal interview, then the HOLC district office would carry out an appraisal of the property, which would then be forwarded to the state office for approval. Once approved the lender would have to decide whether to accept whatever offer HOLC decided to make.

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122 See: Freund, David M. P.: *Colored Property: State Policy and White Racial Politics…*, op. cit., page 112.

The appraisers faced accusations of deliberately inflating property values so as to prevent a systemic collapse. A memo written by one of the Loan Review Examiners revealed the following concern:

"*There seems to be a deliberate effort made by the Connecticut officials to make high appraisals with the purpose of holding up real estate values. We have had this suspicion confirmed in a recent interview with the State Counsel, Mr Tierney. This gentleman, during a call in our office last month, stated that they believed it necessary to prevent depreciation of realty value as much as possible so as to maintain the soundness of the banks and other financial institutions which had made mortgage loans during the past five years, to make high appraisals. His opinion was that many of these financial institutions would be today in an unsound condition if their mortgage loans were appraised on a basis of today's realty values. This statement is illuminating when appraisals by our Connecticut offices are being analysed*"[123]

The economic historian Johnathan Rose identifies four main factors behind the tendency towards seemingly generous

[123] Source: Memo from RR. Wright, Examiner, Loan Review Division to Charles A. Jones, Re: New York Bond Loans; May 24, 1934: National Archives Microfilm Publication, Roll 23; Microfilm copy of general administrative correspondence, 1933-36; Records of the Home Owners' Loan Corporation, Record Group 195:3; National Archives II, College Park, MD. Quoted in: Rose, Johnathan: "The Incredible HOLC? Mortgage Relief during the Great Depression", *Journal of Money, Credit and Banking*, Vol. 43, No.6 (September 2011), page 1095, footnote 17.

appraisals[124]: i) The appraisal methodology practised by the HOLC officials was more sophisticated than that of their predecessors and thus more accurately reflected the true value of the properties, ii) the HOLC officials may well have decided that the market currently underestimated the value of the collateral, iii) there was some truth in the allegation that HOLC officials were consciously working to (indirectly) recapitalise mortgage lenders and so prevent a systemic collapse, iv) HOLC officials were endeavouring to boost lender participation in the programme and higher appraisals enabled lenders to participate at lower costs.

Regardless of the underlying reasons behind the value of these appraisals the programme was never intended to run indefinitely and had in fact been designed specifically to shut down once its objectives had been reached. HOLC lending was restricted to a three-year period beginning in 1933 and the total outstanding volume of loans was capped from the outset. Furthermore, HOLC was obliged to retire its outstanding bonds with the principal mortgage payments it received, rather than using the money to fund further activities. In 1940, although HOLC was still servicing some 850,000 active loans, it had been begun to reduce its staff, which fell from just under ten thousand to only two

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[124] Rose, Johnathan: "The Incredible HOLC? Mortgage Relief during the Great Depression", op. cit., page 1093.

thousand in 1945. This number had sunk to roughly one thousand in 1947, with only 320,000 loans remaining, until finally drawing to a close in 1951[125].

However, the poor state of housing in the U.S required more than a temporary solution. In a speech given in May 1934 Roosevelt acknowledged that many of the nation's homes were still unfit for purpose and needed replacing[126]. He recommended that Congress adopt legislation to address the issue, and this was

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125 The figures quoted here at taken from: Fishback, Price, V.; Rose, Johnathan; Snowden, Kenneth: Chapter 6 "An HOLC Primer" pages 54 -69 of the National Bureau of Economic Research Publication *Well Worth Saving: How the New Deal Safeguarded Home Ownership*, University of Chicago Press (2013), page 68.

126 In an address made to Congress on May the 14th 1934 President Roosevelt stated that: "Many of our homes are in decadent condition and not fit for human habitation. They need repairing and modernizing to bring them up to the standard of the times. Many new homes are needed to replace those not worth repairing. The protection of the health and safety of the people demands that this renovizing and building be done speedily. The Federal Government should take the initiative immediately to cooperate with private capital and industry in this real-property conservation. The purpose of the program is twofold: first, to return many of the unemployed to useful and gainful occupation; second, to produce tangible, useful wealth in a form for which there is great social and economic need. The program consists of four major, interrelated divisions:

(1) Modernization, repair, and new construction;

(2) Mortgage instruction;

(3) Mortgage associations, and

(4) Building and loan insurance."

The speech is taken from: "Recommendation for Legislation to Provide Assistance for Repairing and Construction of Homes. May 14, 1934". Contained in: *The Public Papers and Addresses of Franklin D. Roosevelt with a special introduction and explanatory notes by President Roosevelt*, Volume Three: "The Advance of Recovery and Reform 1934", compiled and collated by Samuel I. Rosenman, Random House (1938), pages 232-233.

to take the form of the National Housing Act of 1934. This Act created an administrative and regulatory body, the Federal Housing Administration (FHA), that was to permanently affect how housing credit was created and distributed in the U.S. The FHA was modelled on the HOLC, but rather than being a mere stop-gap measure it was intended to foster new lending activity and create a national market for mortgages by insuring institutional lenders that granted long-term, low interest mortgages against default on mortgage repayments. Unlike the HOLC the FHA was not a direct lender, but rather an insurer of private institutions, such as mortgage companies and savings banks. If an individual loan made to a borrower met the FHA's terms and conditions[127], then the lending institution was eligible for insurance cover. If the borrower defaulted, then the government indemnified the lender from the premiums it collected from participating institutions (and ultimately backed the whole scheme through the sale of U.S Treasury notes).

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127 Among other requirements this legislation imposed quantitative limits on mortgage insurance. "In no case shall the insurance granted by the Administrator under this section exceed 20 per cent of the total amount of the loans, advances of credit, and purchases made by such financial institution for such purpose; and the total liability incurred by the Administrator for such insurance shall in no case exceed the aggregate $200,000,000. No insurance shall be granted under this section to any such financial institution with respect to any obligation representing any such loan, advance of credit, or purchase by it the face amount of which exceeds $2,000; nor unless the obligation bears such interest, has such maturity, and contains other terms, conditions and restrictions, as the Administrator shall prescribe". The National Housing Act 1934. Section 2.

Government intervention in the mortgage market made a huge difference to the way in which mortgages were structured in the U.S. Historically, mortgagors had been required to place large down payments of up to 50 per cent of the value of the property, and mortgage repayments were commonly worked out over periods as short as five years, at the end of which they invariably required refinancing. The security afforded to lenders by the FHA programme allowed for much smaller down-payments and the extension of mortgage amortizations to periods of up to twenty years. The structural changes to mortgages can be appreciated in **Figure 15.**

Figure 15: The Properties of U.S Mortgage Contracts between 1920 and 1947 (yearly average).[128]

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[128] Source: Chambers, Matthew; Garriga, Carlos & Schlagenhauf, Don E.: "The Post–War Boom in Homeownership: An Exercise in Quantitative History" (2011), page 7. Working paper of the University of Florida which is available at the following website:

Period	Mortgage Duration			Loan-to-Value Ratio		
	Life Insurance Companies	Commercial Bank	S & L Associations	Life Insurance Companies	Commercial Bank	S & L Associations
1920-24	6.4	2.8	11.1	47	50	58
1925-29	6.4	3.2	11.2	51	52	59
1930-34	7.4	2.9	11.1	51	52	60
1935-39	16.4	11.4	11.4	63	63	62
1940-44	21.1	13.1	13.1	78	69	69
1945-47	19.5	12.3	14.8	73	75	75

The data shows the dramatic increase in both the average duration of mortgage contracts and the average loan to value ratio[129] of the loans offered by the three main types of mortgage lender in the U.S in the period between 1920 and 1947.

A further Government initiative that had an impact on the mortgage market was the Servicemen's Readjustment Act of 1944. This Act established the Veteran's Administration (VA), that offered help to ex-servicemen in four main areas, education and job-training, unemployment allowances, job-finding assistance and the guarantee of mortgage loans. The loan

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https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=mmm2011&paper_id=62

[129] For an explanation of Loan to Value Ratios see Fabozzi: "Loan-to-value ratios (LTVs) measure the requested loan amount as a percentage of the appraised value of the property. LTVs are used in a number of ways. They allow underwriters to estimate the likelihood that proceeds from the liquidation of the underlying property will cover the loan's outstanding principal balance, especially if the property's value declines. Recent experience also indicates that the relative size of a borrower's equity position is negatively correlated with their likelihood of defaulting on the loan, i.e., the larger the equity position the less likely they are to default and forfeit their equity." (Fabozzi, Frank: *The Handbook of Mortgage Backed Securities*, op. cit., page 9).

guarantee provisions of the Act guaranteed without security up to half the amount borrowed by ex-servicemen for the purchase or construction of homes, farms, farm equipment or business property, provided that the amount guaranteed did not exceed the sum of $2,000. The guaranteed loan had to be re-paid in full within a maximum period of 20 years[130]. Due to the post-war rise in housing prices the maximum guarantee offered to lenders was increased to $4,000 for home loans in 1945 and in 1950 to 60% of the amount of the loan with a cap of $7,500 in 1950, while the period for repayment was extended to 25 years[131]. The growing importance of government loan insurance programmes can be appreciated in **Figure 16.**

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130 See: The Servicemen's Readjustment Act of 1944. Sections 500 – 503.

131 See: Chambers, Matthew; Garriga, Carlos & Schlagenhauf, Don: "The New Deal, the GI Bill, and the Post-War Housing", Meeting Papers 1050, Society for Economic Dynamics (2012), pages 6-7.

Figure 16: The Role of Government Mortgage Debt Insurance Programmes in the U.S from 1936 to 1953.[132]

1936	203		203	15,615	1.3
1937	594		594	15,673	3.8
1938	967		967	15,852	6.1
1939	1755		1755	16,402	10.7
1940	2349		2349	17,400	13.5
1941	3030		3030	18,364	16.5
1942	3742		3742	18,254	20.5
1943	4060		4060	17,807	22.8
1944	4190		4190	17,983	23.3
1945	4078	$500	4578	18,534	24.7
1946	3692	2,600	6292	23,048	27.3
1947	3781	5,800	9581	28,179	34.0
1948	5269	7,200	12469	33,251	37.5
1949	6906	8,100	15006	37,515	40.0
1950	8563	10,300	18863	45,019	41.9
1951	9677	13,200	22877	51,875	44.1
1952	10770	14,600	25370	58,188	43.6
1953	11990	16,100	28090		

The column on the far right shows the percentage of residential mortgage loans guaranteed by the FHA.

While in 1936 FHA guaranteed loans represented only 1.3% of all residential mortgage loans outstanding in the U.S, by the end of 1952 FHA and VA guaranteed loans combined made up more than 40% of all residential mortgage loans.

132 Source: Blank, David M.; Grebler, Leo & Winnick, Louis: *Capital Formation in Residential Real Estate: Trends and Prospects*, Princeton University Press (1956), page 243, table 70.

2.10 The Birth of Government Sponsored Enterprises in the U.S

The scale and structure of Mortgage Securitisation in the U.S prior to the GFC are at least partly explained by the influence of Government Sponsored Enterprises on the market.

The Federal National Mortgage Association (FNMA) known as *Fannie Mae* was created in 1938 by an amendment to the National Housing Act. It was, as the FHA had been before it, part of Roosevelt's New Deal programme of measures to aid the economic recovery of the U.S. Fannie Mae had its origins in the Reconstruction Finance Corporation (RFC) which made loans to financial institutions. Under the Roosevelt administration the RFC began lending large amounts of money to various types of financial institutions, including banks, trust companies, thrift institutions[133] and mortgage companies. The FHA mortgage insurance scheme, while successful in helping to alter the general conditions of mortgages for home buyers, had been unable to ensure the supply of new FHA insured mortgages. Title III of the Federal Housing Act sought to help overcome this problem by creating a national secondary mortgage market through the formation of private national mortgage associations made up of

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133 A thrift institution is an organisation that acts fundamentally as a depositary for consumer savings.

private investors which would buy and sell FHA insured mortgages using funds raised by the sale of bonds. These mortgage associations were authorised to purchase and sell first mortgages, providing that the mortgage loans did not exceed 80 per cent of the appraised value of the property, and to issue debt obligations in order to finance their acquisitions[134].

While the Roosevelt Administration attempted to promote these national mortgage associations their proposed activity placed them in direct competition with Saving and Loans institutions, who lobbied Congress in order to protect their interests[135]. Congress partially obliged and eliminated the associations' proposed exemption from income taxes and lowered their borrowing capacity. Consequently, no private national mortgage associations were ever formed (even when subsequent legislation increased their borrowing capacity) and the RFC itself took on the role of buying FHA insured loans. In 1938, under the provisions of the National Housing Act, the RFC chartered the National Mortgage Association of Washington as a subsidiary, and then, in April of the same year, the name of this association was changed to the Federal National Mortgage Association. The

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134 See: Section 301 (a). Title III. National Housing Act 1934.

135 For more information regarding this point see: Hagerty, James R.: *The Fateful History of Fannie Mae: New Deal Birth to Mortgage Crisis Fall*, Chapter 2, History Press (2012).

role of Fannie Mae was to use the money it borrowed to buy FHA insured loans from mortgage lenders in order to create liquidity in the U.S mortgage market. By purchasing these FHA insured loans Fannie Mae provided banks and other types of mortgage originators with the funds necessary to make more mortgage loans and so finance the housing industry, contributing to the economic recovery in general.

In 1937 Congress approved the Wagner –Steagall Housing Act. Its declared purpose was to combat unsafe and insanitary housing conditions and to eradicate slums in order to provide: "*safe and sanitary dwellings for families of low income"*[136]. The Act created the United States Housing Authority (USHA was a forerunner of the modern Department of Housing and Urban Development[137]), which was authorised to make loans to local public housing agencies to assist the development, acquisition or administration of low-rent housing or slum clearance[138]. It further authorised the USHA to make loans to public housing agencies in order to ensure the low-rent character of the housing under

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[136] The United States Housing Act (Wagner-Steagall Act) of 1937. Section 1.

[137] In August 1965 Congress passed the "Housing and Urban Development Act of 1965", which led to the creation of the Department of Housing and Urban Development (HUD) in September of the same year, a successor to the USHA.

[138] The United States Housing Act (Wagner-Steagall Act) of 1937. Section 9.

development[139]. The loans were limited to 90 per cent of the development cost of the projects, and the balance of the cost was raised locally, generally through the sale of the bonds of the local housing authorities in the general market or to institutional investors. These housing projects were originated by local authorities and then presented to USHA for approval.

A main concern of the private housing sector was that it would now have to compete with the public sector and that any increase in housing supply sponsored by Federal programmes would eat directly into their profits and damage the interests of the middle class[140]. Walter Schmidt, the President of the National Association of Real Estate Boards, had been a significant opponent of the Act, and had argued before a Congressional Committee that such a programme would have grave effects on future generations of Americans:

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139 The United States Housing Act (Wagner-Steagall Act) of 1937. Section 10 (a).

140 "The influence which this activity has had upon the actual supply of better living conditions is insignificant compared to the total need of the country. If the government is really to have major influence through such direct building, the amount of money that must be spent runs into simply staggering figures. The ultimate result of such a policy will be that, since the great middle class ultimately pays the taxes, a goodly portion of the members of this class will be in the position of paying for better housing than they themselves are able to occupy. Again emerges the question, is this commutative justice or sound economics?" Quoted from: Schmidt, Walter S.: "Private versus Public Enterprise in Housing", *The Journal of Land & Public Utility Economics*, Vol. 11, Number 4 (1935), page 347.

"Very serious repercussions to our national life will follow if government continues its policy of direct action in becoming landlord to masses of its people, and the same may be said of its becoming the holder of mortgages on homes of its citizens. The ultimate result will be that we will find government supporting the citizen instead of the citizen supporting government."[141]

In fact, The Housing Act of 1937 was one of the last major new deal measures to be passed, as from 1938 the control of congress was held by the Republicans and southern democrats whose policy preferences were inclined toward the role of the private sector. Fannie Mae's growth was also severally affected by the entry of the U.S into World War II[142]. The value of mortgages owned by Fannie Mae fell from almost 211 million in 1942 to just $4.4 million five years later[143].

However, once the war ended it was clear that there would be a surge in demand in homes for the returning servicemen. In 1944 Congress enacted the Servicemen's Readjustment Act and in

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141 Slum and Low Rent Public Housing. Hearing Before the Committee on Education and Labor. United States Senate. 74th Congress June 1935 United States Government Printing Office 1935. Report concerning certain Federal and Private Activities in the field of Real Estate and Housing by Walter S. Schmidt. Page 217.

142 After the surprise attack on the American Naval Base at Pearl Harbour in Hawaii by the Japanese on the 7th of December 1941 the U.S declared war on Japan the following day. Italy and Germany declared war on the U.S on the 11th of December of the same year.

143 See: Hagerty, James R.: *The Fateful History of Fannie Mae…*, op. cit., page 27.

1948 Fannie Mae was given the authority to purchase VA mortgage loans along with FHA loans.

In 1934 the National Housing Act was amended[144] to provide what was effectively a charter for Fannie Mae. The stated purpose of this amendment was to establish in the Federal Government a secondary market facility for home mortgages that would provide liquidity for mortgage investments, finance selected types of home mortgages originated under special housing programs (especially for sections of the population that had been previously excluded from receiving mortgage finance), and to finance mortgage lending generally as a means of helping to stabilise the national economy. The law obliged Mortgage lenders that sold their loans to Fannie Mae to acquire a small amount of common stock in the agency[145], in the hope that they would eventually buy out the Treasury's holding and that Fannie Mae would become a fully private company. However, no deadline for this change was contained in the law, and there was no legal mechanism to guarantee that it would ever happen.

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[144] Section 201 of the Housing Act of 1954 amending Title III, section 301 of the National Housing Act of 1934

[145] See Section 201 of the Housing Act of 1954 amending Title III, section 303 of the National Housing Act of 1934.

2.11 The use of securitisation by the U.S GSEs

The middle to late 1960s was a tumultuous period in U.S history as the country was struggling to finance the war in Vietnam[146], there was widespread civil unrest[147], volatile currency markets and rising federal debt[148]. U.S bank deposits were facing liquidity and low capitalisation problems[149]. In this

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[146] U.S involvement in the Vietnam War lasted twenty years from 1955 to 1975. The years 1967 to 1969 saw the highest number of U.S casualties with 11, 153, 16,592 and 11,616 respectively. See: https://www.militaryfactory.com/vietnam/casualties.asp

According to edition of The New York Times published on May the 1st 1975 in the period 1967 to 1970, the United States spent successively $22.2 billion, $26.3-billion, $26.5-billion and $18.5 billion on the war. See: https://www.nytimes.com/1975/05/01/archives/us-spent-141billion-in-vietnam-in-14-years.html

[147] A partial list of civil disturbances in the U.S between 1967 and 1969 includes the Detroit Riot, the Buffalo Riot, the Newark riots and the Cambridge riot of 1967, the New York city riots, the Washington D.C riots, the Baltimore riot, the Pittsburgh riots, the Louisville riots, the Glenville Shootout and the Democratic National Convention Protests of 1968, and the Greensboro uprising, the Cairo disorders, and the Stonewall riots of 1969. See: Flamm, Michael W.: *Law and Order: Street Crime, Civil Unrest, and the Crisis of Liberalism in the 1960s*, Columbia University Press (2005); Mara, Wil: *Perspectives on Civil Unrest in the 1960s: Riots and their Aftermath*, Marshall Cavendish Benchmark (2010).

[148] An article published by the journal "Business Lawyer in 1970" stated that: "After 1965, the mortgage picture changed dramatically. The failure of our government to pay the cost of the Vietnam War by increasing taxes caused a rising rate of inflation. A continuous string of budget deficits necessitated increased borrowing by the Treasury which contracted the amount of available capital for housing. The ensuing inflation and inflationary expectations created such a rapid rise in the cost of labor, land and building materials, that moderate and low –income home buyers were simply priced out of the housing market". This extract is taken from: Brennan, William J.: "Securities Backed by Loan Packaging", *Business Lawyer*, Vol. 26, Num. 2, November 1970, page 401.

[149]One of the constraints placed on banks which were members of the Central Reserve System were the interest rate ceilings imposed by Regulation Q. Non-member banks also had interest rate ceilings imposed by regulations established by the Federal Deposit Insurance Corporation. Regulation Q was implemented by the Federal Reserve Board

climate Fannie Mae's attempts to generate funding by putting together pools of individual loans made by the government to finance housing and then selling certificates of loan participation to investors (a system under which investors were essentially lending money to the government and being repaid through the interest and principal payments of borrowers) came under acute scrutiny and it was alleged that Fannie Mae was proving to be too expensive to keep on the Federal Budget [150]. The solution proposed was to revive the original intent of the Housing Act of 1954 and transform Fannie Mae into a private company. Title VIII of the 1968 U.S Housing Act divided Fannie Mae into two

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on November the 1ST 1933. The Banking Acts of 1933 and 1935 prohibited the payment of interest on demand deposits and authorised the Federal Reserve to set interest rate ceilings on savings deposits paid by commercial banks. The introduction of interest rates ceilings was partly designed to prevent destructive interest rate competition between banks which the Senate Committee on Banking and Currency believed to have been one of factors behind the Great Depression. Competition for deposits, it was thought, would not only reduce profits but also encourage banks to acquire riskier assets in the hope of receiving higher returns. The Regulation was eventually phased out in March 1986 for all types of account except demand deposit accounts, and then for demand deposit accounts by the Dodd –Frank Act of 2010. See: Ruebling, Charlotte E.: "The Administration of Regulation Q", published by the Research Department of the Federal Reserve Bank of St. Louis, in "Review" February 1970, pages 29-40.

150 Economic historian James R. Hagerty writes: "The sale of these participations was treated as an offset to spending in the budget, lowering the reported deficit by billions of dollars. Republicans and other critics argued that the administration was using the sales of participations to conceal the true level of government spending and borrowing. In an attempt to stop the bickering, president Johnson formed the President's Commission on Budget Concepts to propose better ways to account for the government's spending and obligations. The commission recommended in 1967 that the debts of agencies such as Fannie be included in the federal budget under a new type of summary statement. In the case of Fannie, that would swell the budget by an estimated $ 2.5 billion, an alarming amount in those days" Hagerty, James R.: *The Fateful History of Fannie Mae…*, op. cit.

agencies[151], Fannie Mae would be a Government sponsored private corporation and would continue to conduct its operations in the secondary housing market, while the newly formed Government National Mortgage Association (which became known colloquially as *Ginnie Mae*), was granted the role of guaranteeing payments on Mortgage Backed Securities which would be backed by pools of FHA and VA mortgages.

Despite being converted into a private organisation Fannie Mae was granted enormous advantageous over regular private companies:

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[151] Section 801 of 1968 U.S Housing Act declared that: "The purposes of this title include the partition of the Federal National Mortgage Association as heretofore existing into two separate and distinct corporations, each of which shall have continuity and corporate succession as a separated portion of the previously existing corporation. One of such corporations, to be known as Federal National Mortgage Association, will be a Government – sponsored private corporation, will retain the assets and liabilities of the previously existing corporation accounted for under section 304 of the Federal National Mortgage Association Charter Act, and will continue to operate the secondary market operations authorized by such section 304. The other, to be known as Government National Mortgage Association, will remain in the Government, will retain the assets and liabilities of the previously existing corporation accounted for under sections 305 and 306 of such Act, and will continue to operate the special assistance functions and management and liquidating functions authorized by such sections 305 and 306". Concerning the decision to privatise Fannie Mae the authors of "Guaranteed to Fail" comment that: "It was primarily for accounting purposes. The Johnson administration wanted Fannie Mae privatized, so as to remove its debt from the federal government's books, thereby reducing the size of the national debt. In addition, a change in federal budgeting procedures at the time would have counted Fannie Mae's net purchases of mortgages as current government expenditures, which would have meant that those net purchases would have added to recorded federal budget deficits – something that any presidential administration would want to avoid during its own term" (Acharya, Viral V.; Nieuwerburgh, Stijn Van; Richardson, Matthew; White, Lawrence J.: *Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance*, Princeton University Press [2011], Chapter 1, page 17).

(i) It was exempted from State and local income taxes[152].

(ii) It was not required to pay registration fees to the Securities and Exchange Commission (SEC) when it issued securities, as other corporations were legally obliged to do, and was exempt from SEC financial reporting and disclosure rules[153].

(iii) The U.S Treasury was permitted to purchase up to $ 2.5 billion of its debt securities if the agency required financial support. This discretionary power of the U.S Treasury was not a direct result of the 1968 Act but had first been introduced in 1954 as a modification to section 304 of the National Housing Act[154].

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152 "The corporation, including its franchise, capital, reserves, surplus, mortgages or other security holdings, and income, shall be exempt from all taxation now or hereafter imposed by any State, territory, possession. Commonwealth, or dependency of the United States, or by the District of Columbia, or by any county, municipality, or local taxing authority, except that any real property of the corporation shall be subject to State, territorial, county, municipal, or local taxation to the same extent as other real property is taxed". Quoted from: The Housing and Urban Development Act of 1968. Title VIII Section 802 (z) (4).

153 Ibid. Section 804 (a). stated that: "Securities issued by the corporation under this subsection shall, to the same extent as securities which are direct obligations of or obligations guaranteed as to principal and interest by the United States, be deemed to be exempt securities within the meaning of laws administered by the Securities and Exchange Commission".

154 The amount had initially been set at a maximum of $1,000,000,000, then altered to $1,350,000,000, and finally to $2,250,000,000 in 1957. Section 304 (c) of the National Housing Act read: "The Secretary of the Treasury is authorized in the Secretary's discretion to purchase any obligations issued pursuant to subsection (b) of this section, as now or hereafter in force, and for such purpose the Secretary of the Treasury is authorized to use as a public debt transaction the proceeds of the sale of any securities hereafter issued under chapter 31 of title 31, and the purposes for which securities may be issued under chapter 31 of title 31 are extended to include such purchases. The Secretary of the Treasury shall not at any time purchase any obligations under this subsection if such purchase would increase the aggregate principal amount of the

(iv) Although the law did not state that Fannie Mae's debt would be met by Government Funds in the case of default[155], it was viewed by investors as an arm of the Government and so it was commonly believed that in the event of default the Government would have no choice but to cover its debts[156]. As a

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Secretary's then outstanding holdings of such obligations under this subsection to an amount greater than $2,250,000,000. Each purchase of obligations by the Secretary of the Treasury under this subsection shall be upon such terms and conditions as to yield a return at a rate determined by the Secretary of the Treasury, taking into consideration the current average rate on outstanding marketable obligations of the United States as of the last day of the month preceding the making of such purchase. The Secretary of the Treasury may, at any time, sell, upon such terms and conditions and at such price or prices as the Secretary shall determine, any of the obligations acquired by the Secretary under this subsection. All redemptions, purchases, and sales by the Secretary of the Treasury of such obligations under this subsection shall be treated as public debt transactions of the United States".

155 Fannie Mae was legally obliged to provide the following disclaimer in each of its obligations: "The corporation shall insert appropriate language in all of its obligations issued under this subsection clearly indicating that such obligations, together with the interest thereon, are not guaranteed by the United States and do not constitute a debt or obligation of the United States or of any agency or instrumentality thereof other than the corporation". Section 805 of The Housing and Urban Development Act of 1968 amending Section 304 (e) of the National Housing Act. Financial historian Thomas H. Stanton has commented that: "In a perverse sort of way, the disclaimer too can be seen as a hint at the perception of an implicit federal guarantee. The provision's technical language merely disavows an explicit guarantee and preserves the government's option not to make good on its moral obligation. Conversely a completely private company without government sponsorship does not need any such disclaimer in its obligations" (Stanton, Thomas H.: *Government-Sponsored Enterprises: Mercantilist Companies in the Modern World*, Aei Press [2002], Chapter 3, page 35).

156 "Officials in the Johnson administration were confident that, Fannie, as a GSE, would be seen as government backed. Although Treasury Departments ever since have bravely asserted that Fannie and Freddie were not and would not be backed by the government, the markets never believed it. To be sure, the Treasury did not tell foreign central banks – avid buyers of GSE securities – that GSE securities were not backed by the U.S government, and the FDIC encouraged banks to buy GSE securities, which were not subject to the usual limits on asset concentration because they were seen even within the government as essentially riskless" (Wallison, Peter J.: *Hidden in Plain Sight: What really caused the World's worst Financial Crisis and why it could happen again*, Encounter Books [2015], Chapter 4, page 107). Wallison has further commented

consequence of this perception it was able to borrow money at extremely low interest rates, almost as low as those charged to the U.S Treasury itself.

(v) Given this widespread confidence in the governmental guarantee, federally regulated banks had no limits placed on the amount of funds they could invest in Fannie Mae debt, as they were considered almost as safe as Treasury securities.

(vi) Reinforcing the perception of Fannie Mae as being explicitly government backed was the fact that the president of the U.S was entitled to appoint five board members to the Fannie Mae board of directors.

While Fannie Mae enjoyed this implicit guarantee, the obligations of the newly formed agency Ginnie Mae were explicitly backed by the full faith and credit of the U.S Government[157]. Initially, Ginnie Mae was licensed to buy FHA backed mortgage loans, Veterans Administration mortgages and Farmers Home Administration Mortgages. However, what is of

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that: "Almost certainly, the officials who devised the privatization idea knew that Fannie could not continue to buy mortgages if it had to raise funds like an ordinary corporation. Its capitalization and earning power would not have enabled it to attain AAA status, and without the low-interest rates that a AAA rating would confer, it would not be possible for it to carry on a profitable business of buying and selling mortgages". Ibid, Chapter 4. Page 107.

[157] "The full faith and credit of the United States is pledged to the payment of all amounts which may be required to be paid under any guaranty under this subsection". Section 804 of the Housing and Urban Development Act of 1968, amending Section 304 (g) of the National Housing Act.

particular interest here is that the law determined that the agency was to be funded in part by the sale of Mortgage Backed Securities[158].

The initial Mortgage Backed Securities (MBS) issued by Ginnie Mae were of two types, one had a pass-through structure while the other had a bond structure.

2.11 (a) Pass-through structures

In November 1969 the Department of Housing and Urban Development (HUD) released the first regulations to govern a pass-through structure offering principal and interest payments based on mortgage pools of at least $ 2 million dollars in size[159]. These were broadly similar to the participation certificates of the

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[158] Section 804 of the Housing and Urban Development Act of 1969 amended section 304 of the National Housing Act to state that:

"To provide a greater degree of liquidity to the mortgage investment market and as an additional means of financing its operations under this section, and, upon approval of the Secretary of the Treasury, to issue and sell securities based upon the mortgages so set aside. Securities issued under this subsection may be in the form of debt obligations or trust certificates of beneficial interest, or both. Securities issued under this subsection shall have such maturities and bear such rate or rates of interest as may be determined by the corporation with the approval of the Secretary of the Treasury. Securities issued by the corporation under this subsection shall, to the same extent as securities which are direct obligations of or obligations guaranteed as to principal and interest by the United States, be deemed to be exempt securities within the meaning of laws administered by the Securities and Exchange Commission."

[159]The information on the first GNMA certificates is taken from: Brennan, William J.: "Securities Backed by Loan Packaging", op. cit., pages 401-4104; and Strine, Walter M. Jr.: "New Commercial Devices: Mortgage Backed Securities", *Real Property, Probate and Trust Journal*, Vol. 13, Num. 4, Winter 1978, pages 1011-1054.

1920s and 1930s mentioned previously, however, rather than being aimed at private investors they were targeted at institutional investors, principally pension and retirements funds. The explicit government guarantee attached to them meant that they were attractive to state and municipal retirement funds, as the charters of these funds invariably specified that a certain percentage of their investment portfolios must consist of government guaranteed securities[160].

According to the HUD regulations the mortgage originator and issuer of the pass-through securities could be any state or local government instrumentality[161], an FHA mortgagee or joint group of mortgagees held to be in good standing with a net worth approximating a certain percentage value of the MBS to be issued. The pool of mortgages assembled had to have a total value of at least $2 million and be composed of mortgages originated no more than 12 months before the date of issue of the pass-

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[160] "The first issue of GNMA "pass-through" securities was placed with three New Jersey pension funds on February 19, 1970. The issuer was Associated Mortgage Companies of Washington, D.C. and New York City, and the purchasers were the New Jersey Police and Fireman's Retirement System; the State of New Jersey Public Employees Retirement System; and the State of New Jersey Teacher's Pension and Annuity Fund". Taken from: Brennan, William J.: "Securities Backed by Loan Packaging", op. cit., pages 401-410.

[161] For a definition of "instrumentality" see Stanton: "Instrumentalities are organizations that carry out public purposes but are not part of the government itself. Federal instrumentalities can be private companies, non-profit organizations, or parts of state government that carry out public purposes under federal law" (Stanton, Thomas H.: *Government-Sponsored Enterprises: Mercantilist Companies in the Modern World*, op. cit., Chapter 2, page 13).

through securities. The original regulations required the securities to be offered in minimum quantities: $50,000 initially with further securities to be offered in increments of $10,000. The interest rates on the mortgages were linked to VA and FHA mortgage rates, minus between 0.375 and 0.625 of a percentage point from each mortgage as a servicing fee. The mortgage originators serviced the mortgages in the pool and were responsible for passing on interest and principal payments to the investors. The structure was a simple pass-through one, so that payments were passed on to investors as they were received from the obligors. This meant that although these securities were backed by groups of 20 or 30 year mortgages, prepayments on the mortgages normally resulted in all principal and interest on the securities being settled well before they technically reached maturity.

The procedure for qualified originators who wished to participate in the programme was as follows:

(i) The originator sent an application (by post) to Ginnie Mae together with a non-refundable administration fee of $ 500

(ii) If accepted, Ginnie Mae would send a commitment letter to the originator assuring them that a guarantee for the mortgage payments would be provided as soon as a mortgage pool worth a minimum of $ 2 million had been accumulated.

(iii) Once this pool was in place the mortgages would be assigned to Ginnie Mae and a custodian bank would certify that the documentation of the mortgage pool was in order. The bank would receive a fee from the originator for providing this service.

The pass-through securities came in two types, straight pass-through certificates and fully modified pass-through certificates.

(i) The straight pass-through security passed amortised interest and principal payments directly from the obligors of the mortgages to the investors (subtracting a servicing fee of approximately 0.5 per cent) as and when they were received. Delinquent payments were not pursued by Ginnie Mae for the benefit of security holders and were therefore not passed on to the investors.

(ii) The fully modified security guaranteed a fixed monthly payment of principal and interest. The principal was determined by an amortization schedule worked out for the entire mortgage pool, with the interest being computed on the unpaid principal balance. Defaults by the obligors were processed by the mortgage originator and the investor was paid the principal balance, the established payment schedule was then modified accordingly. The mortgage originator and the issuer of the securities were reimbursed through the foreclosure procedures for FHA or VA mortgages.

2.11 (b) Bond-like structures

The Ginnie Mae bond[162] had a fixed term and a fixed rate of interest and principal repayments that were paid out at specified intervals. The GNMA regulations required the issuer have a minimum net worth of $100 million (which was quickly reduced to $50 million), and would issue a minimum offering of $200 (which was once again almost instantly reduced to the figure of $100 million). The issuer was obliged to maintain the set rate of interest regardless of defaults or pre-payments. This stipulation formed an obvious bar to entry, as only large institutions could face the risk of a drop in general interest rates and/or a rise in levels of pre-payment while maintaining the payments to investors in the securities constant. At the time, the only viable issuers were the FNMA and Federal Home Loan Banks[163].

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[162] See: Brennan, William J.: "Securities Backed by Loan Packaging", op. cit., pages 401-410; and Strine, Walter M. Jr.: "New Commercial Devices: Mortgage Backed Securities", op. cit., pages 1011-1054.

[163] "The first issue of the GNMA bond –type securities was offered on May 19,1970 by the Federal National Mortgage Association (FNMA)" (Brennan, William J.: "Securities Backed by Loan Packaging", op. cit.). It is interesting to note, given the subsequent involvement of both institutions in the GFC, that the underwriters of the first bonds to be issued were a syndicate that included Merrill Lynch and Salomon Brothers.

2.12 The creation of Freddy Mac

The Federal Home Loan Mortgage Corporation (Freddie Mac) was created by the Emergency Home Finance Act of 1970. From the beginning it was a privately owned agency whose primary function was to purchase mortgage loans from Savings and Loans Banks and securitise them with the aim of providing liquidity for the Savings and Loans Banks (the thrift institutions)[164] in the same way that Fannie Mae was providing liquidity for banks. Freddie Mac issued securities that were sold to investors and which were backed by the mortgages it held as collateral. Freddie

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164"Thrifts began as a way for working-class men and women to obtain affordable long-term home mortgages and simultaneously have access to a safe repository for savings. They were typically non-profit cooperatives which were owned by their members and often relied on word-of-mouth advertising to attract business. As neighbourhood businesses, civic leaders usually served in top leadership positions, and the close ties these managers maintained with the local community allowed thrift members to better monitor the association's lending activities. Finally, thrifts employed a variety of legal structures and lending practices that were tailor –made to meet member needs, they also made thrifts appear to be less prestigious than commercial banks. The thrift industry remained a small but important source of consumer finance for the first one hundred years of its existence, and although S& Ls used ore uniform practise, they remained member-owned institutions. This changed after World War II when the post-war housing boom produced an unprecedented demand for mortgages. To meet this demand, the industry developed innovative business procedures, and some thrifts even began to raise funds by selling stock on the open market. The growth that resulted from this period significantly enhanced the image of thrifts as financial institution, and gave the industry greater political and business clout. It also, however, caused the industry to become divided into a handful of large institutions capable of competing directly with commercial banks and thousands of smaller, traditional associations. Although competition between thrifts and banks for funds was especially high during the 1960s, in terms of lending S&Ls continued to be undiversified, with mortgages accounting for more than 80 per cent of industry assets". Extract taken from: Mason, David L.: *From Buildings and Loans to Bail-Outs: A History of the American Savings and Loans Industry, 1831-1995*, Cambridge University Press (2004), Introduction, pages 4-5.

Mac was authorised to purchase residential mortgages from any Federal home loan bank, the Federal Savings and Loan Insurance Corporation, or any other financial institution whose deposits or accounts were insured by an agency of the United States.

The law established a number of conditions for the purchase of mortgages by Freddie Mac:

(i) No conventional mortgage could be purchased if the outstanding principal balance of the mortgage at the time exceeded 75 per cent of the value of the property securing the mortgage, unless:

(ii) The seller retained a participation of at least 10 per cent of the mortgage, or,

(iii) The seller agreed to repurchase or replace the mortgage upon the demand of Freddie Mac, or,

(iv) The portion of the unpaid balance that was in excess of 75 per cent of the value of the property was guaranteed or insured by a qualified private insurer as determined by Freddie Mac[165].

The authorisation to purchase mortgages that were not specifically guaranteed by a government agency[166] has been seen

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165 The Emergency Home Finance Act of 1970. Section 305 (2).

166 "By 1973, Freddie Mac had purchased three times as many conventional mortgages as federally insured mortgages and was the third largest debt issuer in US capital

as a turning point by Peter Wallison, a leading critic of the GSE's role in the GFC, in the creation of a "*government mortgage complex*"[167], an alliance of GSEs thrifts, homebuilders and realtors that would work to prevent government intervention to alter a system which, while it made substantial profits, also took on substantial credit risks.

2.13 The growth of MBS guaranteed by the GSEs

The GSEs promoted the use of MBS in the U.S by providing the market with a series of advantages the scale of which no single European market could hope to match:

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markets" (Buchanan, Bonnie G.: *Securitization and the Global Economy…*, op. cit., page 71).

[167] "For the first time, both Fannie and the newly organized Freddie Mac were authorized to buy conventional mortgages –that is, mortgages not guaranteed by a government agency. This was a major turning point, and it is questionable whether Congress understood the importance of the step at this time. Fannie and Freddie were now companies with public shareholders and a different set of responsibilities and loyalties, interested in both profit and market share, and with access to the vast conventional market where it was possible to take substantial credit risks and make substantial profits. Although not immediately obvious, it was at this point that the government essentially lost control of the GSEs. Although control could, of course, be reasserted through legislation, the GSEs could now build constituencies that would protect them against government encroachment. All that was necessary was for the two GSEs to provide support for housing finance; that made them valuable allies of banks, S&Ls, homebuilders, realtors and others. Fannie and Freddie accomplished this easily, simply by creating the first active secondary market for conventional mortgages. This allowed banks and S&Ls to increase their mortgage activities without filling their balance sheets with mortgage assets. It also assisted realtors and home builders to sell homes by providing the necessary purchase funds. The foundations of what might be called the "government mortgage complex" – consisting of banks, realtors, and community activists – had been laid" (Wallison, Peter J.: *Hidden in Plain Sight: What really caused the World's worst Financial Crisis and why it could happen again*, op. cit., page 108).

(i) Both Fannie Mae and Freddie Mac developed uniform loan documents, and established purchasing and underwriting standards that were adopted nationwide by the Savings and Loans industry.

(ii) The purchase of MBS allowed banks to elude geographical and state boundary restrictions on mortgage lending, as they received the benefits of investment in mortgages without making those investments through direct lending.

(iii) The implicit guarantees of Fannie Mae and Freddie Mac, coupled with the explicit guarantee of Ginnie Mae made GSE MBSs enormously enticing for institutional investors.

2.14 The development of the private MBS market

The Savings and Loans Banks, the U. S's main mortgage lenders in the 1970s were especially vulnerable to any rise in interest rates because their assets were mostly long-term (thirty year), fixed-rate mortgages, while depositors were entitled to withdraw their money at any time. To make their situation even more precarious Regulation Q (which imposed a ceiling rate on the interest rates payable on deposit accounts) had been applied to thrift institutions since 1966, making it impossible for them to

raise interest rates to attract depositors[168]. Their increasingly outdated business model was jokingly referred to as the 3 -6 -2 model: "*pay depositors 3 per cent, lend their money at 6 per cent, and be on the golf course at 2 0'clock"*[169]. In 1979, Federal Reserve Chairmen Paul Volcker, in a bid to stop inflation, allowed interest rates to double[170]. The result was that: "*By mid-*

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168 "The fluctuations in interest rates affected thrifts in two ways. First, because of Regulation Q rate controls, S&Ls (and banks) had limited ability to offer market rates on savings accounts. Consequently, these institutions lost billions in deposits to unregulated investments like money-market mutual funds, which grew from $9.5 billion (U.S. billion) in assets in 1978 to more than $236 billion (US billion) by the end of 1982. Second, since the bulk of thrift assets were fixed-rate mortgages, the income they produced was usually insufficient to offset the rise in the cost of attracting deposits. Furthermore, rising rates caused the market value of these long-term assets to decline; if they were sold, the S&L would have to record a loss. The result was that industry profits fell from $3.6 billion (US billion) in 1979 to just $781 million in 1980". Quoted from: Mason, David L.: *From Buildings and Loans to Bail-Outs: A History of the American Savings and Loans Industry, 1831-1995*, op. cit., Chapter 9, page 214.

See also Tooze: "For home owners on fixed interest, long-term mortgages, the inflation of the post–Bretton Woods era was a windfall. The real value of their loans was eaten up while their interest rates remained fixed. For the banks that lent to them it was a disaster. In an era of inflation and fluctuating interest rates, at the capped interest rates inherited from the 1950s they could not retain their depositors, let alone attract new ones. To borrow from money markets or issue bonds, they now faced the withering interest rates set by the Fed. Meanwhile, their portfolios of fixed interest mortgages were devalued as rates on new loans soared. By the early 1980s the vast majority of the almost four thousand savings-and-loan banks still in operation were insolvent". Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., pages 59-60.

169 Quoted from: Morris, Edward: Wall Streeters: *The Creators and Corruptors of American Finance*, Columbia University Press (2015), Chapter 12, page 255.

170 In 1971 the Bretton Woods system, or dollar exchange standard, fell apart. Under the system the dollar had acted as the world's reserve currency, allowing foreign countries that held dollars to have the option of exchanging them for gold at a fixed rate. On August the 15th 1971 Richard Nixon made a televised speech to the nation in which he stated that: "I have directed Secretary Connally to suspend temporarily the convertibility of the dollar into gold or other reserve assets, except in amounts and conditions determined to be in the interest of monetary stability and in the best interests

1982, on a market value basis, the S&L industry was insolvent by $150 billion"[171]. In 1980 there were 4,002 saving and loan institutions operating in the U.S, but over the next three years 962 of these would be put out of business[172].

In order to save the thrift industry (and not hamper the growth of the burgeoning mortgage industry) Congress introduced a tax break in 1981 allowing thrifts to sell mortgages on their books and spread any loss from the sale over the remaining life of the loan. This meant that the thrifts could immediately sell their mortgages at a loss (due to the steep climb in interest rates that had eroded their worth), but recognize the loss on their books at

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of the United States". Quoted from *Richard Nixon, Speeches, Writings, Documents* edited and introduced by Richard Perlstei, Princeton University Press, 2008, page 219.

The system collapsed as the fiscal and current account deficits of the U.S soared as a result of expenditure on the Vietnam War, and the accumulation of dollar reserves by creditors of the U.S grew out of proportion to the gold reserves held by the U.S. As monetary authorities could now print money as and when they wished inflation and commodity prices rose sharply. Paul Volcker responded by raising interest rates: "The rate volatility began in August 1979 when Federal Reserve Board chairman Paul Volker announced that, in an effort to curb inflation associated with the near doubling of oil prices, monetary policy would no longer seek to control interest rates but instead focus on managing the money supply. While inflation eventually subsided, the decision to let interest rates float freely caused turmoil in the money markets. Between July 1979 and April 1980, the benchmark Federal Funds rate rose from 10.47 percent to 17.61 percent; it fell to 9.03 percent three months later, but then soared to 19.08 percent by January 1981". Quoted from: Mason, David L.: *From Buildings and Loans to Bail-Outs: A History of the American Savings and Loans Industry, 1831-1995*, op. cit., Chapter 9, page 214.

171 See, Lewis, Michael: *Liar's Poker*, W.W. Norton & Company (1989), page 92.

172 Quoted from Black, William K.: *The best way to rob a bank is to own one. How corporate executives and politicians looted the S& L industry*, University of Texas Press (2005), Chapter 1, page 25.

a rate of only 2% a year over a twenty year period[173]. Furthermore, these losses could be used to offset prior taxable income, meaning that the thrifts effectively received refunds of taxes they had paid previously. This legislation eased the way for the sale of non-GSE (commonly referred to as private label) mortgages to be used as collateral for securitisations, but it was not sufficient of itself. There were two main problems with creating a market for private label MBS.

The first was a structural problem. Mortgagors in the U.S generally had the right to pay off their mortgages at any time[174] without penalisation clauses. This made private label MBS unattractive for long term investors, because while mortgage securities themselves rose in comparative worth when general interest rates fell, a drop in interest rates meant that homeowners were more likely to repay their mortgages, and so shorten the life

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173 See: Morris, Edward: Wall Streeters: *The Creators and Corruptors of American Finance*, op. cit., Chapter 12, pages 254-255

174 One way of describing this is that the mortgage lender has given the mortgage borrower a call option, over the life of the mortgage loan, to pay back the loan early. "If a borrower had a 9% mortgage and rates fell to 7% two years later, the mortgage lender would still like to keep collecting the 9%. Since most of the risk to investors from early payment of mortgage loans comes when interest rates fall, the call option in mortgages is usually thought of as an interest rate option". Quoted from: Hill, Howard B.: *Finance Monsters…*, op. cit., page 86. In a survey of OECD countries, the authors of a 2005 paper concluded that: "The U.S. mortgage market is one of only three in which fee-free prepayment is widely available, and in only a few other countries, prepayment is of limited availability. Refinancing a mortgage is clearly much easier in the United States". See: Green, Richard K. & Wachter, Susan M.: "The American Mortgage in Historical and International Context", *Journal of Economic Perspectives*, Vol. 19, Num. 4, Fall 2005, pages 93-114, page 101.

of the security[175]. A rise in general interest rates was no more attractive a proposition for the investor, as it meant that they were stuck with a comparatively low-yielding financial instrument.

The second problem was a legal one. For many state regulated institutional investors such as pension funds, GSE backed MBS were the only MBS they were allowed to buy. The government guarantee, whether implicit or explicit, meant that GSE MBS were treated like government obligations, but private label MBS had no such guarantee and so were regarded as off-limits. Furthermore, U.S states had so called "*blue sky laws"*, these were regulations designed to prevent investment fraud which required the issuer of securities to register in each of the 50 states in order to sell their securities, and repeat the process for every subsequent issue. The MBS issued by the GSEs were exempt from this requirement.

A significant contribution to the solution to both of these problems was provided by the firm Salomon Brothers. Salomon Brothers had already underwritten Ginnie Mae Bonds and pioneered the first private label pass-through mortgage deal with

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[175] See Fligstein: "This made MBSs very uncertain as investments and undermined the argument that they were as safe as government or even corporate bonds. Since mortgagors were most likely to do this when interest rates were low and they could refinance their loans, investors would find themselves with money they could only invest at lower rates of return". (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 55).

Bank of America in 1977. They had also benefited from S&L's offloading their mortgages at a discount after the tax break of 1981, by acting as a middleman and profiting from the spread between those S&L's that sought to sell mortgage loans and those that wished to increase their mortgage portfolios. In 1983, under the guidance of Lewis Ranieri[176], they were credited with the development of a new type of MBS, the collateralised mortgage obligation (CMO)[177]. This new security sliced the mortgage payments into three or more tranches depending on their expected order of re-payment as calculated by statistical –historical models. Each tranche was matched to suit the maturity needs of the investor. The owners of the first tranche were those with short investment horizons that were happy to have their notes retired after a relatively brief period. Once the first tranche holders had

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[176] Lewis Raineri is often referred to as the "father" of MBS for his role in their development whilst working at Salomon Brothers. See: https://www.bloomberg.com/news/articles/2004-11-28/lewis-s-dot-ranieri-your-mortgage-was-his-bond, archived on the Bloomberg News website or this article on the Time magazine website titled "25 People to Blame for the Financial Crisis" http://content.time.com/time/specials/packages/article/0,28804,1877351_1877350_1877342,00.html

[177] See Tooze: "This was the origin of so-called structured finance. Those with the top-tier first claim on the revenue stream had low risk of both default and early repayment. Tranches lower down the pecking order could be sold off to investors looking for riskier investments. The top-tier senior tranches would pay out except in the highly unlikely event of massive, collective default. Those top tranches, even if they were based on a pool of high-yielding, high-risk debt, could be designated as low risk, and the ratings agencies obliged by classifying them as AAA (80 percent of most securitizations were designated as senior and given the AAA rating)" (Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., page 64).

been repaid, all payments were channelled to the second tranche holders, then to the third and so on successively for any remaining tranches. The tranching technique could be combined with subordination, creating a waterfall of payments that would be directed to satisfying the principal and interest repayments of each tranche according to their seniority. High risk tranches would receive a higher rate of interest, but would be the last to receive payments in the case of any temporary shortfalls, and, in the case of defaults, would be the first to lose their principal.

Tranching enabled Salomon Brothers to offer investors MBS product that was tailored to meet their liabilities. The firm were keen to push this potentially lucrative innovation and were instrumental in lobbying for changes to securities legislation to open up the private label MBS market. In September 1983, a hearing before the Subcommittee on Housing and Urban Affairs was held to discuss the proposed "*Second Mortgage Enhancement Ac*t". Lewis Ranieri, the then managing director of the investment bank, was called as a witness to speak in favour of the legislation that his bank had actively lobbied for. His written testimony painted a picture of a brilliant future for the mortgage industry, one in which the modern MBS would help provide

increased liquidity to the mortgage market and reduce the risks by sharing them among a greater number of investors[178].

The bill was passed and "*The Secondary Mortgage Enhancement Act of 1984"* exempted MBS from state laws restricting the issue of new financial products and which required prior registration in each state[179]. It also removed restrictions against state –chartered financial institutions, pension funds and insurance companies from investing in private-label MBS [180].

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178 "In the future, mortgage backed securities will provide the liquidity necessary for healthy mortgage asset management and will enable market risk of long-term fixed rate mortgage loans to be shared by a broader investment base. A new era of mortgage backed securities will be introduced when we target specific investors with specific types of issues of mortgage backed securities. We are now developing mortgage securities that will provide thrifts with the short maturities they need to match against their short-term liabilities; life insurance companies with the medium-term maturities they desire; and pension funds with the long and stable maturities they require. Senate Bill 1821 will address each of these investor categories, as well as others, and will open up important new sources of mortgage credit". The testimony of Lewis Ranieri, Managing Director of Salomon Brothers. Hearing before the Subcommittee on Housing and Urban Affairs of the Senate Committee on Banking, Housing and Urban Affairs, 98th Congress, September 21st and 22nd 1983, United States Government Printing Office 1983, page 248.

179 "Any securities that are offered and sold pursuant to section 4(5) of the Securities Act of 1933 or that are mortgage related securities (as the term is defined in section 3(a) (41) of the Securities Exchange Act of 1934 (15 USC 78c(a) (41)) shall be exempt from any law of any State with respect to or requiring registration or qualification of securities or real estate to the same extent as any obligation issued by or guaranteed as to principal and interest by the United States or any agency or instrumentality thereof". Section 106 (C) (c) of the Secondary Mortgage Market Enhancement Act of 1984.

180 "Any person, trust, corporation, partnership, association, business trust, or business entity created pursuant to or existing under the laws of the United States or any State shall be authorized to purchase, hold, and invest in securities that are—

(A) offered and sold pursuant to section 4(5) of the Securities Act of 1933, (B) mortgage related securities (as that term is defined in section 3(a) (41) of the Securities Exchange

Finally, it handed a key role to credit rating agencies by creating the legal category of a "*mortgage related security*" which it partly defined as: "*a security that is rated in one of the two highest rating categories by at least one nationally recognized statistical rating organization*".[181]

2.15 The creation of the REMIC

There remained two disadvantages with the CMOs. Firstly, as debt obligations they stayed on the balance sheet of the issuer as liabilities (while the mortgages remained as assets). This made it more difficult for the issuer to achieve the standards of capital adequacy required by both regulators and rating agencies. Secondly, the U.S Internal Revenue Service prevented issuers from creating tranches with a junior subordinated claim on revenue from the underlying mortgages, as legally they classified such a structure as a taxable multiclass trust, which would lead to

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Act of 1934 (15 U.S.C. 78c(a) (41))." SEC. 106. (a)(1) of the Secondary Mortgage Enhancement Act of 1984.

181 Section 101 of the Secondary Mortgage Enhancement Act. "The term "mortgage related security means a security that is rated in one of the two highest rating categories by at least one nationally recognized statistical rating organization (…)".

See Fligstein: "The law provided that if nationally recognized statistical rating organizations (NRSRO) rated MBSs AA or higher, these securities were legal investments equivalent to Treasury securities and other federal government bonds for federally chartered banks, state chartered financial institutions, and Department of Labor – regulated pension funds" (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 131).

issuers being taxed both on revenue streams from the mortgage obligors and from the sale of the securities to investors[182].

Lobbying from both Solomon Brothers and the GSEs resulted in the Tax Reform Act of 1986 [183] which presented a solution to both of these problems by creating the Real Estate Mortgage Conduit (REMIC). The REMIC was a separate legal entity (essentially what was to become known as a Special Purpose Vehicle) into which issuers could sell mortgage assets. The REMIC would then issue the MBS. It was not considered a taxable entity when used simply as a conduit for passing mortgage payments to MBS holders, even when these were tranched. The originator of the mortgages could therefore liberate them from their portfolios and issue multi-tranched MBS. The basic conditions were now in place for the prolific growth of MBS in the U.S.

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182 See Fligstein: “The tax situation for MBSs was also in question. Basically, MBSs were being taxed twice, once when they were issued and a second time when they paid interest to bondholders. As part of the Tax Reform Act of 1986, a new tax vehicle called Real Estate Mortgage Investment Conduits (REMIC) was created. These vehicles allowed investments to be treated like partnerships. Thus, they would be taxed only when they earned income” (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 57).

183 For a detailed discussion on the path of the Tax Reform Act to Congress see: McLean, Bethany & Nocera, Joe: *All the Devils are Here. The Hidden Story of the Financial Crisis*, Penguin (2010), Chapter 1, page 33.

CHAPTER 3. THE DEVELOPMENT OF DERIVATIVE REGULATION IN THE USA

3.0 The basic types of modern derivative contract. 3.1 A brief history of derivative contracts. 3.2 The growth of derivatives in England. 3.3 The rise of derivatives on stocks in England and the first English legislation on derivative trading. 3.4 The South Sea Company. 3.5 The Bubble Act. 3.6 The bursting of the South Sea Bubble and the stock-jobbing Act. 3.7 The influence of Barnard's Act in the UK. (i) The internal organisation of the London Stock Exchange (ii) The steady clarification and delimitation of the terms of the Act by case-law (iii) The repeal of Barnard's Act in 1860. 3.8 The effect of gaming laws on derivative contracts. 3.9 The influence of U.K statutes and case-law on the statutes and case-law of the U.S.A. 3.10 Problems with the intent to deliver rule. 3.11 Exchanges and Bucketshops. 3.12 The Christie case and the serious purpose test. 3.13 The Future Trading Act. 3.14 The Grains Futures Act. 3.15 The Commodity Exchange Act.

The securitisation market that developed prior to the GFC was dependent on the creation and growth of derivatives (contracts that derive their worth from the value of an underlying asset), and a whole class of securitisations, synthetic securitisations, owe their existence to a particular type of derivative, the credit default swap, while currency and interest rate swaps are often an integral part of true sale securitisation deals.

Combining derivatives with securitisation techniques allowed the effects of the crisis to spread more rapidly and to magnify the losses of subprime defaults. The lack of confidence in the ability of derivative counterparties to meet their contractual obligations lead to higher and more frequent margin calls. The difficulty of knowing the extent of the liabilities of entities that acted as counterparties contributed to the credit freeze, as credit institutions were wary of lending to already heavily indebted banks and insurance companies who had not adequately hedged their risks.

The development of modern derivatives has a long and complex history, but their regulation in the U.S, which was clearly one of the factors that led to the financial crisis, stemmed from a Common Law tradition that, over time, grew to be suspicious of granting enforceability to purely speculative contracts, which it equated to mere wagers. This tradition was to

be challenged by highly profitable applications of derivative technology and their melding with securitisation techniques.

3.0 The basic types of modern derivative contract

Before tracing the legislative developments in the U.S that made possible the crucial link between securitisation and derivatives it would be useful to provide a brief overview of the major classes of derivative contracts.

Modern derivative contracts are structured around four basic building blocks, forwards, futures, options and swaps.

(i) Forwards are contracts that stipulate the future delivery of an asset at a specific price, date and quantity agreed upon in the present. This asset may be a commodity (such as gold, oil or timber) or a currency or financial instrument. Take for example a contract for the purchase in Euros of 10 million U.S dollars in three months' time at the exchange rate of 0.89 Euros = $1, signed on the 20th of September 2020. This operation would be carried out in two separate steps. On the 20th of September a contract would be signed detailing the characteristics of the transaction (the forward purchase of U.S dollars), the amount ($10 million), the conversion rate (0.89€ = $1), and the time of delivery (3 months, or the 20th of December 2020). When the date for the execution of the contract arrived the corresponding quantities

would be exchanged between the parties (approximately € 8,886,394 for $ 10,000,000). The contract would be executed at the forward rate regardless of the rate of exchange on the actual day of delivery. In this sense it is a type of wager between the parties on whether the market rate of exchange will rise or fall. Forwards are bespoke contracts between counterparties and are therefore not traded on exchanges, as a consequence the parties are exposed to the risk that their counterparty will default on delivery (a risk known as counterparty risk).

(ii) Futures are essentially the same as forwards except that they are standardised contracts and the amount and delivery date are fixed by an organised exchange. This standardisation allows for the transferability (and hence liquidity) of the contract, and permits their trading on regulated exchanges (such as the Chicago Board of Trade or the New York Mercantile Exchange). Regulated exchanges mitigate counterparty risk as they require contract holders to post margin (collateral payments) to ensure that the terms of the contract are honoured.

(iii) Options are contracts that give a party the right (but not the obligation) to buy (a call option) or sell (a put option) an asset (which may be a commodity, a currency or a financial instrument). The temporal frame of this right may be between certain dates (an American option) or on a specific date (a European option). The future price (termed the strike price) is

agreed at the moment in which the contract is drawn up, and the interested party (the buyer of an asset for the call option and the seller of an asset for the put option) pays an agreed premium to the counterparty (the option writer) in advance. In both types of option, the premium, once paid, is not refunded if the option holder decides not to exercise his right. If the owner of the option does decide not to exercise his right, then it will expire at the end of the option period or on the pre-determined date. Options exist both as exchanged- traded standardised derivatives and bespoke, over-the-counter (OTC) agreements between counterparties. To give a simplified example of a call option let us imagine that shares in Company X are currently trading at €100 per share. A buyer of a call option contracts with an option writer the purchase of 100 shares at a premium of € 2 per share, within a six-month period. The total premium paid is €200. If within this period, the price of the shares rose to € 110 per share, and the option holder decided to exercise his option, then he could buy the shares at the agreed strike price, (€10,000 – 200 = € 9,800) and sell them on the market (100 X € 110 =€ 11,000), making a profit of € 1,200. Obviously if the share price were to fall below the strike price then the option holder would not exercise his option and would lose his premium.

(iv) Swaps are contractual agreements between two parties to exchange cash-flows over a set period. A common use of swaps

is to exchange interest rates, often swapping a fixed rate for a variable rate or vice-versa. The same can be done for currencies. An example of how a swap functions shall be given in my description of the creation of the first modern swaps, together with an explanation of the credit default swap.

3.1 A brief history of derivative contracts

Derivative contracts themselves are ancient. The first written derivative contracts recorded on clay tablets were discovered in Iraq and date from 4,000 BC[184]. A version of a derivative contract is contained in the 48th law of the Code of Hammurabi[185] (one of

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184 Clay tokens discovered in Sumer (Southern Mesopotamia) dating from 4,000 BC are thought to have been used to represent the quantity of goats promised for delivery, the equivalent of a modern future contract. See: *The United States Commodity Futures Trading Handbook. Strategic Information and Regulations*, International Business Publications U.S.A (1975), page 23. Others refer to the delivery of wood. "These derivatives were contracts for future delivery of goods that were often combined with a loan. Van de Mieroop (2005) reproduces a tablet in which a supplier of wood, whose name was Akshak –shemi, promised to deliver 30 wooden [planks?] to a client, called Damqanum, at a future date. The contract was written in the nineteenth century BC." Taken from: Weber, Ernst Juerg: "A Short History of Derivative Security Markets", in Hafner, Wolfgang & Zimmerman, Heinz (Editors): *Vinzenz Bronzin's Option Pricing Models. Exposition and Appraisal*, Springer (2009), page 434. An enormous number of such contracts have been found, suggesting that derivatives in the ancient world were common-place. "About half a million clay tablets have been found so far, with more than 200,000 being held by the British Museum. The cuneiform digital library initiative (cdli), which is a joint effort of the Vorderasiatisches Museum Berlin, the Max Planck Institute for the History of Science and the University of California at Los Angeles (UCLA), has digitalized about 225,000 tablets, making them available on the internet and supplying translations and comments". Ibid, page 43

185 "If any one owe a debt for a loan, and a storm prostrates the grain, or the harvest fail, or the grain does not grow for a lack of water, in that year he need not give his creditor any grain, he washes his debt- tablet in water and pays no rent for the year". (….) "In terms of contracts, one may recognise in this 48th law a kind of contract that

the earliest and best-preserved ancient legal codes which is named after the King who is thought to have ruled the kingdom of Babylon between 1792 and 1750 BC). While from Ancient Greece the *Politics* of Aristotle provides an example of what would probably be classified today as an example of a call option[186].

Roman Law distinguished between two types of derivatives contract, the *venditio re speratae* was a type of forward contract that was declared void if the seller did not have the goods at the date of delivery. The *vendito spei* was a forward contract that took

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once translated into more modern language would stipulate the following. A farmer who has a mortgage on his property is required to make annual interest payments in the form of grain, however, in the event of a crop failure, this farmer has the right not to pay anything and the creditor has no alternative but to forgive the interest due. Experts in the field of derivatives would classify such a contract as a put option. In other words: If the harvest is plentiful and the farmer has enough grain to pay his mortgage interest, the put option would expire worthless. If his harvest fell short, however, he would exercise his right to walk away from making the payment." These quotes are taken from the following speech: Kummer, Steve. "The History of Derivatives: A Few Milestones". EFTA Seminar on Regulation of Derivatives Markets, Zurich, which was given on the 3rd of May 2012. https://www.seco.admin.ch/dam/seco/it/dokumente/Aussenwirtschaft/Wirtschaftsbeziehungen/Handel%20mit%20Dienstleistungen/Artikel_Studien/History_of_Derivatives.pdf. Pages 1-2.

186 "Thales of Miletus used a money-spinning device which, though it was ascribed to his prowess as a philosopher, is in principle open to anybody. The story is as follows: people had been saying reproachfully to him that philosophy was useless, as it had left him a poor man. But he, deducing from his knowledge of the stars that there would be a good crop of olives, while it was still winter and he had a little money to spare, used it to pay deposits on all the oil-presses in Miletus and Chios, thus securing their hire. This cost him only a small sum, as there were no other bidders. Then the time of the olive-harvest came, and as there was a sudden and simultaneous demand for oil-presses he hired them out at any price he liked to ask. He made a lot of money, and so demonstrated that it is easy for philosophers to become rich, if they want to; but that is not their object in life" (Aristotle, *The Politics*, translated by T.A Sinclair, Penguin Books [1962], page 90).

a step further towards ensuring compliance, as it obliged the seller to pay the price to the buyer if he did not have the goods at the time specified for delivery. Roman Law also contributed to the development of derivatives by recognising consensual contracts (*nudo consensu*) which allowed the content of contracts to be based purely on the will of the contracting parties, without the need for such traditional formalities as deeds, a list of witnesses, and most importantly, without requiring delivery of any actual commodity or asset. This, in effect, legally sanctioned purely speculative contracts. The 3rd book of the *Institutes of Gaius* contains a brief description of such contracts[187].

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[187] Sections 135-138 of the III Book of the Institutes of Gaius describe the consensual contract in the following terms:

135. Simple consent creates a contract in purchase and sale, letting and hiring, partnership, agency.

136. In these contracts consent is said to create the obligation, because no form of words or of writing is required, but the mere consent of the parties is sufficient. Absent parties, therefore, can form these contracts; as, by letter or messenger; whereas Verbal obligations cannot be contracted between absent parties.

137. Further, these contracts are bilateral and bonae fidei, that is, both parties incur a reciprocal obligation to perform whatever is fair and equal; whereas Verbal and Literal contracts are unilateral, that is, one party stipulates and the other promises, or one party makes an entry of the other's debit, and the other party is bound thereby.

138. But absence is no impediment to Literal contracts, though it is to Verbal.

The English translation of the Latin text is available at: https://droitromain.univ-grenoble-alpes. Sections 135 – 138 of the III Book of the Institutes of Gaius describe the consensual contract in the following terms:

135. Simple consent creates a contract in purchase and sale, letting and hiring, partnership, agency.

Financial writer Olivier Coispeau describes the spread of derivative contracts throughout Europe after the fall of the Roman Empire:

"*After the collapse of the Roman Empire in 476, contracts for future delivery continued to be used in the Byzantine Empire in the eastern Mediterranean and they survived in canon law in Western Europe. Byzantine traders and Sephardic Jews carried derivative trading from Mesopotamia to Spain during Roman times in the first millennium AD, and, it is probable that Jewish*

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The English translation of the Latin text is available at: https://droitromain.univ-grenoble-alpes.fr/Anglica/gai3_Poste.htm#130fr/Anglica/gai3_Poste.htm#130

The late Oxford Professor Peter Birks commented on the possibility of enforcing such contracts in the following terms: "Suppose the res on which the parties focused their attention never comes into existence: 'The yield of this olive tree's next harvest', 'This girl's baby when it's born', 'the next catch of fish'. There is no fixed answer. It depends on the right construction of the deal. Did they mean 'the yield if there is one' or 'the hope of a yield'? If the former, emptio rei speratae, the sale is conditional on there being some res; if the latter, emptio spei, the spes (the hope, or gamble) is the res, so that the contract binds even if no yield ever happens". Birks, Peter: *The Collected Papers of Peter Birks. The Roman Law of Obligations*, Oxford University Press (2014), page 72.

merchants carried derivative know-how to the Low Countries after being expelled from Spain in the 16th century".[188]

The renowned Belgian historian Herman Van der Wee gives an account of the speculative atmosphere of the Antwerp exchange in the sixteenth century, and the bets linked to commercial contracts that foreshadowed modern derivative usage:

"*Betting and lotteries were every-day affairs. People bet on everything: on the return of ships from the East or West Indies on the next journey by Philip II to the Netherlands, on the armistice between the king and the rebels, and even on the sex of unborn children or the date of the death of certain people. These bets were often linked with commercial contracts. Bets were made on exchange rates also, but an ordinance of 31 October 1541 forbade this sort of escomesse"*[189].

When Antwerp was sacked by Spanish troops in 1576[190] the centre of European trade moved to Amsterdam. Here stock

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188 Coispeau, Olivier: *Finance Masters: A Brief History of International Financial Centers in the Last Millennium*, World Scientific Publishing Company (2017), Chapter 5, page 213.

189 Van Der Wee, Herman: *The Growth of the Antwerp Market and the European Economy*, Springer (1963), Chapter III, pages 364-365.

190 Spanish troops fighting in the Eighty Years War (1566-1648) went on the rampage over unpaid wages: "the Spanish government declared a bankruptcy in 1575 and was unable to pay its soldiers in northern Europe. As a result the troops mutinied and in November 1576 sacked the great commercial city of Antwerp at a cost of some 8,000

derivative trading and particularly the forward trading of shares became common-place. An illustration of the sophistication of these practices is provided by the book-keeping records of Joseph Deutz, who kept a detailed list of the operations he carried out. His records show how traders would use options and forward contracts as leveraged instruments for speculation[191]. Other modern day techniques were also employed. Isaac le Maire, an Antwerp merchant, formed a syndicate in 1608 to sell shares in the Dutch East India Company[192] using shares that it had

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lives and a great amount of property" (Kamen, Henry: *Spain 1469-1714. A Society of Conflict*, Longman [1983], page 139).

191 Legal historian Lodewijk Petram writes that traders: "were interested above all in the leverage they could bring about through their trading in derivatives. Leverage means that a trader increases his risk without having to invest more of his own money. All the derivatives that were available in seventeenth-century Amsterdam— options, forward contracts, and repos—could be used for this.We saw in Joseph Deutz's case how this was done with options. In March 1675 he had a position of 36,000 guilders in the VOC and wanted to enlarge it. He bought five call options in order to do so. This enabled him to profit from price rises on the basis of a total nominal position of 51,000 guilders. The advantage of using options was that during the term of the transactions Deutz was "only" running the risk of a price drop on his position of 36,000 guilders. Forward contracts were also an excellent way to increase the leverage of an investment portfolio. A dealer could use a simple contract to conclude an agreement to buy a share forward and in so doing increase his position on the forward market. There was no immediate requirement to spend any of his own money, because that was not due until he settled up with the counterparty on the completion date. In principle a trader could buy as many forward contracts as he wanted. With every additional contract, his investment portfolio became more exposed to share price risk. In other words, he continued to increase the leverage". Quoted from: Petram, Lodewijk – Translated by Lynne Richards: *The World's First Stock Exchange*, Columbia Business School Publishing (2014).

192 The Dutch East India Company or VOC (Vereenigde Oost- Indische Compaignie) was established in 1602 as a chartered company, initially to trade in cotton and silk with the Mughal Empire. It quickly expanded both in size and the diversity of activities: "The first great global corporation, the VOC, was by the late seventeenth century the most powerful and richest company in the world. Its private fleet boasted nearly 150 merchant ships and 40 giant warships. At the height of its power, it employed nearly

“borrowed” with the expectation of returning them to their original owners in the near future after having purchased them at a lower price, and so making a profit, a practice now known as short selling.[193].

50,000 people worldwide – seamen, artisans, stevedores, labourers, clerks and builders. The company was involved in a multitude of commercial activities, such as construction, sugar refining, cloth manufacturing, tobacco curing, weaving, glass making, distilling, brewing and other industries related to its global business enterprises. The payroll also included a 10,000- man private army” (Brown, Stephen R.: *Merchant Kings. When Companies Ruled the World 1600-1900*, Douglas & McIntyre [2009], page 20).

193 However, the actions of the syndicate involved more than a bet on downward prices, as its members were also involved in acts of market manipulation, embezzlement and insider trading, and Le Maire and several others were both shareholders in the Dutch East India Company and connected with the establishment of a rival French company.

“Only a few days after the original subscription had been completed, the shares of the Dutch East India Company were being traded in so actively that they rose to 14 or 15 per cent above par; and the tendency to rise continued until by 1607 the price had almost doubled. However, in the following year the market value fell to 130 per cent of par, as a consequence of manipulations by a group of speculators organized by one Isaac Le Maire, who ultimately were concerned with the founding of a rival French company. These early stock-market "operators" sold large blocks of shares and, in addition, sought to depress the price both by selling "short" and by spreading rumours that were unfavourable to the Dutch Company. Consequently, on the 27th of February 1610, the first edict was published prohibiting activities of this sort, especially the "windhandel," that is, the dealing in shares that were not in the possession of the seller. The sale of shares of the Company by bona fide owners for future delivery was allowed”. (Kellenbenz, Hermann: *Introduction to “Confusion de Confusiones”*, Baker Library, Harvard Graduate School of Business Administration [1957], page 23).

For an in-depth examination of the scheme see: Van Dillen, J.G.; Majithia, Asha & Poitras, Geoffrey: “Isaac Le Maire and the early trading in Dutch East India Company shares”, from *Pioneers of financial economics*, Vol. I: Contributions prior to Irving Fishes”, Edited by Geoffrey Poitras, Edward Elgar Publishing (2006), pages 45-63.

A description of the workings of the Amsterdam stock exchange was provided by Joseph de la Vega[194] in "*Confusion de Confusiones*". The author describes how a trader would use derivatives not just to speculate on rising share prices[195] but also to hedge against losses if share prices fell[196].This use of complex

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[194] Joseph Penso de la Vega Passarinho belonged to a "New Christian" family of Jewish – Portuguese descent who is thought to have been born about 1650, although the exact place and year of his birth are unknown. "Confusion de Confusiones" was published in 1688: "Joseph de la Vega's Confusion de Confusiones, appears to be a highly florid elaboration of an earlier technical manual that he had prepared on the various techniques and regulations employed in the Effectenbeurs. The purpose of this manual most likely was to inform his countrymen who had gone to London and wished to participate in the speculation that was beginning there". Quoted from: Neal, Larry: *The Rise of Financial Capitalism. International Capital Markets in the Age of Reason*, Cambridge University Press (1990), page 142, footnote 2.

[195] "The price of the shares is now 580, [and let us assume that] it seems to me that they will climb to a much higher price because of the extensive cargoes that are expected from India, because of the good business of the Company, of the reputation of its goods, of the prospective dividends, and of the peace in Europe. Nevertheless, I decide not to buy shares through fear that I might encounter a loss and might meet with embarrassment if my calculations should prove erroneous. I therefore turn to those persons who are willing to take options and ask them how much [premium] they demand for the obligation to deliver shares at 600 each at a certain later date. I come to an agreement about the premium, have it transferred [to the taker of the options] immediately at the Bank, and then I am sure that it is impossible to lose more than the price of the premium. And I shall gain the entire amount by which the price [of the stock] shall surpass the figure of 600". (De La Vega, Joseph: *Confusión de Confusiones*, translated by Professor Hermann Kellenbenz, Baker Library. Harvard Graduate School of Business Administration [1957], page 8).

[196] "In case of a decline, however, I need not be afraid and disturbed about my honour nor suffer fright which could upset my equanimity. If the price of the shares hangs around 600, I [may well] change my mind and realize that the prospects are not as favourable as I had presumed. [Now I can do one of two things.] Without danger I [can] sell shares [against time], and then every amount by which they fall means a profit. [Or I can enter into another option contract. In the earlier case] the receiver of the premium was obliged to deliver the stock at an agreed price, and with a rise in the price I could lose only the bonus, so now I can do the same business (in reverse), if I reckon upon a decline in the price of the stock. I now pay premiums for the right to deliver stock at a given price . . .; or I may cover myself during this period, and often I make a number of

derivatives is heralded by the financial historian Ranald Michie as the major innovation of the Amsterdam securities market.[197]. The Amsterdam market suffered a severe crisis in 1672 when a plunge in the price of VOC shares left a string of speculators unable to honour their financial obligations[198], and its primacy was soon to be challenged by the rise of trading in London.

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successful turns instead of waiting for my luck to come up. But the receiver of the premiums acquires that payment wholly at the determined future date, even if he also runs a risk and pockets the money with fear in his heart." Ibid, page 8.

197 These techniques, he writes: "permitted investors to buy and sell securities in such a way as allowed them to employ short-term funds remuneratively, without exposing themselves to undue risk of either absolute loss or inability to realize their investment when required. The existence of a securities market where exit and entry was virtually guaranteed and where simultaneous but reverse spot and future sales could be made represented a huge advance". Quoted from: Michie, Ranald C.: *The Global Securities Market: A History*, Oxford University Press (2006), page 28.

198 Financial historian Lodewijk Petram explains how the crisis came about: "The price drop would have caused no more than a few problems on the forward market if all the traders had entered into only one contract. Had that been the case, the forward vendor would not have made the profit he was entitled to contractually, but on the other hand he would also not suffer an immediate loss if the contract was not fulfilled. After all, forward contracts were entered into by signing a piece of paper. All profit or loss during the term was only hypothetical. If the contracts were not fulfilled, it did not have major financial implications for either of the two parties. All that happened was that the hypothetical profit evaporated. The problem was that traders rarely held only one contract. Many forward dealers tried to keep their portfolio as balanced as possible by having roughly equal positions in forward sales and purchases because this limited the price risk". (…) "At the end of each month their portfolios consisted of a whole series of purchased forward contracts on the one hand and a string of sold contracts on the other. If a trader failed to honour his forward bargains, he unbalanced the portfolios of his counterparties. This in turn significantly magnified the chance that these counterparties would encounter financial difficulties and have to go back on their contracts. This is how a few defaulting buyers in 1672 caused an avalanche of unfulfilled contracts. The confidence that underpinned forward trading had been severely dented, and this disrupted the market. Traders were very wary about doing new deals because they did not have a clear picture of other dealers' debts, and so they had no idea whether potential counterparties would fulfil their side of the bargain". Quoted from: Petram, Lodewijk – Translated by Lynne Richards: *The World's First Stock Exchange*, op. cit., pages 205-209.

3.2 The growth of derivatives in England

The ascension to the throne of William III, a protestant Dutch prince, in 1689, meant that England had a monarch whose retinue was familiar with the financing techniques of his native land[199]. The new King also had a powerful incentive to encourage a liquid market in the trading of stocks. While previous monarchs had enjoyed lifetime revenues and had refrained from summoning Parliament while they could afford not to[200], the Bill of Rights,

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199 "A crucial element in the set of financial practices brought to England by William III and his retinue was the resale of shares in joint-stock corporations, in other words, the modern stock exchanges. Although chartered joint-stock companies existed in England prior to the arrival of William, it appears that trade in their shares increased considerably in the early 1690s, and certainly the number of companies increased markedly in that decade. That growth of activity followed a very active period of stock trading in the Amsterdam Beurs in the 1680s. To aid him in raising money for his participation in the War of the League of Augsburg against Catholic France, William brought with him numerous financial advisors and military contractors from Holland. Many were Jews and Huguenots who were eager to apply in a relatively backward England the financial techniques and institutions that had been developed over the preceding century in Amsterdam (…)". Taken from: Neal, Larry: *The Rise of Financial Capitalism…*, op. cit., page 142.

It should be noted that the importance of Dutch techniques for English financial innovation is challenged by Anne L. Murphy who writes that "The notion that the secret for funding a modern state was brought to England "in William III's baggage" is still common in spite of the work of Roseveare and others, which shows quite clearly the legacy of changes made to the country's financial system during the period between 1660 and 1688 and the limited impact of Dutch innovation on the English public funds". Quoted from Murphy, Anne L.: *The Origins of English Financial Markets: Investment and Speculation before the South Sea Bubble*, Cambridge University Press (2009), page 4.

200 "(…) the power of the Commons was limited because it was the monarch that summoned Parliament and this was only necessary if Charles II needed money. So, when an upturn in trade in 1681 brought a dramatic increase in those revenues voted to him for his lifetime, for the last four years of his reign he was able to rule without summoning Parliament. On succession in 1685, James II insisted on collecting revenues enjoyed by his brother, in spite of the doubtful legality of this action, and the continued

the very settlement that established King William's claim to the throne[201], made all financial concessions to the Crown temporary and dependent upon the will of Parliament[202], guaranteeing that William (and his successors) would call Parliament annually. In the face of mounting costs[203], occasioned in part by the various military operations England was involved in[204], the Crown was

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growth of commerce together with improvements in the efficiency of tax administration meant he too was able to dispense with Parliament". Quoted from: Rawlings, Phillip: "A Compleat System of Knavery: Folk Devils, Moral Panics and the Origins of Financial Regulation", *Current Legal Problems*, Vol. 61, Issue 1 (2008), page 327.

201 The Bill of Rights declared: "And whereas the said late King James the Second having Abdicated the Government and the Throne being thereby Vacant His Highness the Prince of Orange (whom it hath pleased Almighty God to make the glorious Instrument of Delivering this Kingdome from Popery and Arbitrary Power) did (by the Advice of the Lords Spiritual and Temporal and diverse principal Persons of the Commons) cause Letters to be written to the Lords Spiritual and Temporal being Protestants and other Letters to the several Counties Cities Universities Burroughs and Cinque Ports for the Choosing of such Persons to represent them as were of right to be sent to Parliament to meet and sit at Westminster upon the two and twentieth day of January in this Year one thousand six hundred eighty and eight in order to such an Establishment as that their Religion Laws and Liberties might not again be in danger of being Subverted, Upon which Letters Elections having been accordingly made" (The Bill of Rights 1689).

202 The Bill of Rights stated: "That levying Money for or to the use of the Crown by pretence of prerogative without grant of Parliament for longer time or in other manner than the same is or shall be granted is illegal" (The Bill of Rights 1689).

203 "Before 1688, annual public spending had rarely been above £2 million, but by 1714 it had reached £6.2 million a year, rising to £17.7 million in 1763 and £23.5 million by the end of the American War of Independence in 1783. Revenues failed to keep pace: in 1714 they stood at £5.4 million, increasing to £9.8 million in 1763 and £12.7 million in 1783. As a result, debt rose inexorably: £36 million by 1714, £129 million by 1763 and £232 million by 1783." Quoted from: Rawlings, Phillip: "A Compleat System of Knavery…", op cit., page 327.

204 "The cardinal context was indeed war – specifically, the Nine Years' War against France that followed on from William and Mary's accession to the throne in 1688, a war that resulted in public expenditure during the 1690s running at well over twice the level it had in the 1680s. Taxation naturally increased, up to around £4 million a year

understandably anxious to boost its finances. One of the solutions was through the promotion of large joint-stock companies, whose formation had to be sanctioned by the Crown, and whose stock could be exchanged for government debt[205].

The state borrowed money through annuities, contracts that promised the lender a set rate of interest over a period of years and sometimes (but not always) included the repayment of the principal. Annuities could be either redeemable or irredeemable. A redeemable annuity could be called in by the government when general interest rates fell, allowing for new, lower yielding annuities to be issued. However, if interest rates rose and the

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by the mid-1690s, but that still left an annual shortfall of some £2 million. Given that the King had no intention of making what he saw as a premature peace – and given the underlying truth of the political economist Charles Davenant's contemporary observation that 'the whole Art of War is in a manner reduced to Money', so that 'that Prince, who can best find Money to feed, cloath, and pay his Army, not he that has the most Valiant Troops, is surest of Success and Conquest' – the need to fill the gap was, to put it mildly, urgent". Quoted from: Kynaston, Phillip: *Til Time's Last Sand: A history of the Bank of England 1694-2013*, Bloomsbury (2017), page 18.

[205] Phillip Rawlings remarks that: "In simple terms, in exchange for the government's agreement to the creation of a company, part of the funds raised through the sale of stock (shares) to investors was invested in government debt. The effect was that, although the stock held by investors was not repayable, it was easy to transfer so its value could be realized through sale. The company enjoyed a predictable future income from the interest paid by government and it had no obligation to repay capital to investors. In other words, the strategy allowed government to borrow long-term, while permitting investors to hold their stocks short-term. At the same time, government's long-term debt was funded by a large number of stockholders, who had not directly invested in that debt, and this appeared to enable its escape from dependence on a few rich financiers. It was also a less contentious method of raising funds than taxation because, while taxpayers might be a reluctant source, investors chose to buy stock". Quoted from: Rawlings, Phillip: "A Compleat System of Knavery…", op cit., page 333.

principal had not been paid off, they would have to be rolled over at the new higher rate of interest. Irredeemable annuities could obviously not be redeemed in this way, but they were often very long-term debt contracts that could last over ninety years, and were highly illiquid instruments as transferring them was a long and difficult process.

The state had an interest in consolidating its debt, as that made it easier and therefore less costly to administer than a series of heterogeneous obligations. The mechanism favoured by the state to do this was to allow for the creation of joint stock companies that would offer the creditors of the state stock in the new company in exchange for their redeemable or irredeemable annuities. The joint –stock company would receive money streams from the annuities (normally at a collectively reduced rate of interest than the individual annuities had been paying out, (what in modern parlance would be referred to as a hair-cut) and be granted a monopoly over a trade or industry in a particular territory.

However, a successful conversion depended on convincing the holders of the annuities of the benefits of such an exchange, and this would itself depend on the general perception of the trading prospects of the new joint-stock company, and the risk profile that the annuity holders were seeking.

From the perspective of prospective investors stocks had certain advantages over both annuities and land, which had traditionally been the focus of investment for the wealthy. They offered regular returns through dividend payments (which land did not always reliably provide), they could be liquidated quickly when necessary, and they were not subject to specific taxes[206]. Furthermore, information about stocks was relatively easy to obtain as daily prices were now published in a number of newspapers[207].

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206 Land was also harder to hide than property. In reference to Land Tax the historian Roy Douglas writes: "Taking William's reign as a whole (1689 -1702), it produced about £ 19 million, against about £ 13 million each for customs and excise and about another £ 13 million for all other taxes. It was also gradually changing in character. To appreciate what was happening, it is necessary to consider the manner of assessment and collection of the "Aid". The Commissioners set up for each County or Borough were charged to deliver precepts on property owners. Assessors were appointed, who were required to determine the true value of the property and to charge accordingly. As oaths were taken very seriously indeed, statements about the value of assessments were not normally required to be on oath. In practice, personal property could be easily concealed, while landed estates could not be concealed. Thus, from the start, land assessments were made much more strictly than assessments on personal property." Quoted from: Douglas, Roy: *Taxation in Britain since 1660*, Palgrave Macmillan (1999), page 16.

207 "Market prices were first published in the 1680s. Whiston's The Merchants Remembrancer started with weekly information, noting when shares were selling at their highest and lowest prices. John Houghton's A Collection for Improvement of Husbandry and Trade appeared twice weekly and provided actual share prices starting in 1681. This publication was joined by John Castaing's The Course of the Exchange, and eventually by a number of others, all primarily serving a business audience." Quoted from: Carruthers, Bruce G.: *City of Capital: Politics and Markets in the English Financial Revolution*, Princeton University Press (1996), pages 168-169.

However, stocks were only an attractive investment as long as they remained liquid, and this required an active stock market and brokers to trade them.

3.3 The rise of derivatives on stocks in England and the first English legislation on derivative trading

By the end of the seventeenth century, growing international trade, and an increasing number of joint stock companies[208] had

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[208] Depending on the definition used joint stock companies can be traced back to as early as the Tang Dynasty in China (608 – 907 A.D). However, the earliest English joint-stock company was called the Russia Company and it was formed in 1553. Three ships sailed through the Arctic Circle to Russia (although only one made it through the pack-ice) under the leadership of Richard Chanceler, and from there travelled overland to Moscow where the company secured a trade agreement with the Czar Ivan the Terrible. The venture was described by the contemporary historian Richard Hakluyt in the following terms: "whereas many things seemed necessary to be regarded in this so hard and difficult a matter, they first made choice of certain grave and wise persons in manner of a Senate or company, which should lay their heads together, and give their judgements and provide things requisite and profitable for all occasions: by this company it was thought expedient that a certain sum of money should publicly be collected to serve for the furnishing of so many ships. And lest any private man should be too much oppressed or charged, a course was taken, that every man willing to be of the society, should disburse the portion of twenty and five pounds apiece: so that in short time, by this means, the sum of five thousand pounds being gathered, the three ships were bought, the most part whereof they provided to be newly built and trimmed". Quoted from: Hakluyt, Richard: *The principal navigations, voyages, traffics and discoveries of the English Nation*, printed by George Bishop, Ralph Newberie and Robert Barker (1599).

Historian William Dalrymple writes that: "The idea of a joint stock company was one of Tudor England's most brilliant and revolutionary innovations. The spark of the idea sprang from the flint of the medieval craft guilds, where merchants and manufacturers could pool their resources to undertake ventures none could afford to make individually. But the crucial difference in a joint stock company was that the latter could bring in passive investors who had the cash to subscribe to a project but were not themselves involved in the running of it. Such shares could be bought and sold by anyone, and their price could rise or fall depending on demand and the success of the venture". Quoted

transformed London into a centre of financial activity[209]. Investors in the seventeenth century London stock market[210] were able to perform five different types of transaction[211]. "*Spot transactions*", were for the immediate delivery of shares, "*time bargains*"[212] were the equivalent of the modern-day forward

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from: Dalrymple, William: *The Anarchy. The East India Company, Corporate Violence, and the Pillage of an Empire*, Bloomsbury Publishing (2019), page 49.

209 "Before 1689 there were only around 15 major joint-stock companies in Britain, with a capital of £0.9 million, and their activities were focused on overseas trade, as with the Hudson's Bay Company or the Royal African Company. In contrast, by 1695 the number had risen to around 150 with a capital of £4.3 million" (Michie, Ranald C.: *The Global Securities Market: A History*, op. cit., page 15).

210 "There was no specific location in London for the buying and selling of securities. Transactions were carried out not only in the Royal Exchange but also in adjacent streets and coffee houses. Nevertheless, a small number of stockbrokers were soon active in the market, arranging trades on behalf of investors among the general business they continued to conduct". Quoted from Michie, Ranald C.: *The Global Securities Market: A History*, op. cit., page 30.

However, despite this lack of a concrete location for exchanges to take place, trading in London was highly centralised. Carruthers relates that: "It was located in the coffee houses in Exchange Alley, a small area near Lombard Street in central London. Two were of particular importance: Jonathan's Coffeehouse and Garroway's Coffeehouse. According to one contemporary, it was possible to circumambulate Exchange Alley in its entirety in about one and a half minutes. Nearby shopkeepers and residents complained of the crowds and bustle which attended the stock market and there is no evidence of significant amounts of trading going on elsewhere". Quoted from: Carruthers, Bruce G.: *City of Capital: Politics and Markets in the English Financial Revolution*, op. cit., page 169.

211 See: Dale, Richard: *The First Crash. Lessons from the South Sea Bubble*, Princeton University Press (2004), Chapter 2, page 28.

212An example of a time bargain purchased in the London market is this contract between two Dutch traders dated the 4th of April 1730:

"I the undersigned acknowledge to have bought from Heer David Leew One Thousnad Pounds Sterling Capital Shares of the Bank of England at London, at a price of a Hundred and Forty-Five and a Quarter per Cent remaining after the Dividend paid last October, for settlement on next 15 May, the which £1,000 I oblige myself to receive in London at the stated price. And in case in the interim any Dividend is paid, it shall be

contract and were for the future delivery and settlement of shares, "*refusals*" were call options, allowing the buyer to purchase (or decline to purchase) stock at a fixed price in return for the payment of a premium, "*put options"* permitted purchases to sell stock in a similar manner, and both types of option were habitually used in conjunction with each other in *buy/sell* or *sell/buy transactions*, which were essentially the same as modern repurchase agreements.

Deferred contracts were normally settled on the basis of differences in value rather than the actual physical delivery of shares, so that a *time bargain* could be settled on the difference between the going market price on the contract's maturity date and the forward price that the parties had agreed to. This form of settlement allowed investors to speculate without the need for the ownership or transfer of any documentation and might therefore be purely synthetic in nature. The London stock market also permitted investors to purchase stock on margin by pledging the shares to the lender[213].

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to my profit and to reduction of the above Price. Contrary wise all Supplementations and Calls shall be at my expense, in the usual way".

Taken from: Dickson, P.G.M.: *The Financial Revolution in England. A Study in the Development of Pubic Credit*, *1688-1756*, Routledge (1967), pages 335-336.

213 The money subscriptions to the South Sea Company are an example of this: "The terms of purchase for the money subscriptions were very generous and amounted to buying on margin, albeit with fixed margin calls at regular intervals. Only one-tenth to one-fifth of the sale price was paid at the time of subscription, and the remaining payments were stretched up to three years. So these subscriptions would have been most

Traders in stocks and derivatives on stock were known as *stockjobbers*, and their activities were often fiercely criticised as pure gambling. An anonymous pamphlet dated the 1st of January 1691, that took the form of a dialogue between a client and his stock-jobber, makes it clear that the possibility of a dissonance between the profitability of the business ventures of joint-stock companies and the value of their stocks in the market, was well understood. Asked how it was that stocks of companies blighted by the high costs of freight, taxation, mounting risks and increasing competition should nevertheless be on the rise, the stockjobber replies:

"*You are in the right sir, but profit or loss made or sustained by these trades, or the advantages and difficulties that attend them, are not at present the motives which govern their actions, but they rise and fall as the humours of the buyers increase or abate, or from a necessity some are under of buying or selling to answer policies and contracts they are unwittingly drawn into by subtle and designing men"*[214].

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attractive to speculators anticipating further rises in the price of South Sea stock and wanting to leverage their purchases as much as possible" (Neal, Larry: *The Rise of Financial Capitalism…*, op. cit., page 100).

214 Quoted from: "Plain dealing: in a dialogue between Mr Johnson and Mr Wary his friend, a stock-jobber, and a Petitioner against the East India Company, about stock-jobbing and said Company". Anonymous, published on the 1st of January 1691.

John Houghton, an English apothecary who edited a periodical called "*A collection of Letters for the improvement of Husbandry and Trade",* described in an issue in 1694 a scheme used for the manipulation of stock prices through derivatives[215]. A group of traders would secretly agree to buy up stock options "*or refuses*" on a particular stock. The sellers of these contracts often did not actually hold the stock themselves and were gambling on a decline in its value, in which case the purchasers would not exercise their options. If the price were to rise then, under normal circumstances, the sellers fully expected to be able to buy the stock they required on the market. However, in the case of collusion between the option purchasers, these would purchase more *refuses* for shares than there were shares in existence, and this would artificially push up their price, so that, when they exercised their options the sellers of the refuses would have to buy shares for exorbitant prices in order to honour their obligations, and they would have to purchase them from the very people that they were obliged to deliver them to.

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215 "But the great Mystery of all is, That some Rich Men will join together, and give money for REFUSE, or by Friendship, or some other way, strive to secure all the Shares in a Stock, and also give Guinea's for Refuse of as many Shares more as Folk will sell, that have no Stock: and a great many such they are, that believe the Stock will not rise so high as the then Price, and Guinea's receiv'd or they shall buy before it does rise, which they are mistaken in; and then such takers of Guinea's for Refuse as have no Stock, must buy of the other that have so many Shares as they have taken Guinea's for the Refuse of, at such Rates as they or their Friends will sell for; tho' Ten or Twenty times the former Price". Quoted from: Houghton, John: "A collection of Letters for the improvement of Husbandry and Trade", Number 102, July the 13th, 1694.

Another anonymous pamphlet from the year 1695 [216], criticised stock-jobbers for colluding in scams, by which mining joint-stock companies were constituted on the pretence of finding a great seam of gold, copper or silver, and their shares, bolstered by fabricated rumours of the great profits to be made, were sold on the exchanges for inflated prices until the schemes' inevitable collapse[217]. The pamphlet warned that: "*Nothing thrives, where ever they admit stock-jobbing, it has spoiled more good and really useful designs and inventions, than all ill accidents that have attended them besides"*[218].

In 1701, Daniel Defoe (the celebrated writer of works of literature such as *Robinson Crusoe* and *Moll Flanders*) published a vitriolic attack on their business, calling stock-jobbers "*needy mercenaries, who can turn all trade into a lottery, and make the*

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216 "Angliae Tutamen, or the Safety of England", an anonymous pamphlet dated 1695.

217 "(…) they have made use of several tricks and stratagems; first they pretend a mighty vein of gold, silver or copper, to be discovered in a piece of ground of their knowledge, then they agree with the Lord or Patentees, for a small yearly rent, or a part reserved (about a fifteenth) to him, or them, to grant them a lease for twenty one years to dig that land; which they immediately fall to, and give out tis a very rich mine; then they settle a Company under articles, divide it into shares, usually 400, choose a committee, a clerk, and transfer book, and pretend to carry on this work to the benefit of all the proprietors; who at the beginning, purchase shares at a low rate, viz. ten shillings, twenty or a guinea, then all of a sudden, they whip up shares to three, five, ten, nay, fifteen pounds a share; then they fall to stock-jobbing, which inevitably ruins these and all other projects; those principally concerned sell their interest, draw off, and wholly quit the affair, which by this and other means of underhand dealing, tricking and sharping one another, falls to the ground and is abandoned by everybody". Ibid, pages 18 and 19.

218 Ibid, page 19.

Exchange a gaming table. A thing, which like the imaginary coins of foreign nations, have no reality in themselves"[219].

Some evidence of the extent of the use of derivatives in London during this period is provided by the ledgers of the stock-jobber Charles Blunt. Financial historian Anne L. Murphy writes that: *"Blunt's ledgers provide a unique insight into the workings of London's first derivatives market. They cover the period from January mid-1695 and contain details of just under 1,500 transactions relating to joint-stock companies. More than one-third of the transactions were derivatives"*[220]. She goes on to comment that: "*Although Blunt did not record precise details of all his clients' trades, in cases where the nature of the trade can be identified, it is possible to discern a certain uniformity of structure. More than 80 per cent of the derivatives recorded in the ledgers appear to have been options. The remainder were either loans on stock or time bargains. Both put and calls (known as refusals in the late seventeenth century) were used, but calls (that is, contracts that gave their buyer the right to purchase stock) were traded far more frequently. Of the contracts in Blunt's*

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[219] Quoted from: Defoe, Daniel: "The free-holders' plea against stock-jobbing. Elections of Parliament Men" (1701), contained in the William P. Trent Collection of Works relating to Daniel Defoe and his time, Boston Public Library digital archives.

[220] Quoted from: Murphy, Anne L.: "Trading options before Black-Scholes: a study of the market in late seventeenth-century London", *Economic History Review*, N° 62, 2009, page 8.

ledgers that can be identified as options, 79 per cent were calls”[221].

In 1696 the Commissioners of Trade presented a strongly-worded report before the House of Commons which alleged that the initial backers of joint stock companies often abused the privileges granted to them by selling off their stock for great profit to ignorant men who had been attracted to investing in them by false claims and rumours, and then abandoned these companies to their fate at the hands of their new, unskilled and inexperienced owners[222].

In early 1697, the newly established bank of England (founded as a joint-stock company in 1694) demanded regulation to control the actions of stock-jobbers and their use of derivatives before agreeing to incorporate a considerable chunk of the government’s

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[221] Ibid page 12.

[222] “The pernicious art of stock jobbing hath of late so perverted the end and design of companies and corporations erected for the introducing or carrying on of manufactures to the private profit of the first projectors, that the privileges granted to them have commonly been made no other use of by the first procurers and subscribers but to sell them with advantage to ignorant men, drawn in by the reputation, falsely raised and artfully spread, concerning the thriving state of their stock. Thus, the first undertakers getting quit of the company by selling their shares for much more than they are really worth to men allured by the noise of great profit, the management of that trade and stock comes to fall into unskilful hands. whereby the Manufactures, intended to be promoted by such Grants, and put into the Management of Companies, for their better Improvement, come, from very promising Beginnings, to dwindle away to nothing, and be in a worse Condition than if they were perfectly left free, and unassisted with such Laws, or Patents;” Quoted from *The House of Commons Journal*, Volume 11, 1693-1697”, November 25th 1696, page 593, Published by his Majesty’s Stationery Office, London, 1803.

short-term debt into its capital[223]. The first statute designed to regulate the activities of stock-jobbers was introduced later that year. Entitled "*An Act to restrain the number and ill practice of brokers and stock-jobbers"*[224], the statute stated that it was concerned to put a stop to possible stock manipulation that could threaten the finances of the Crown and destabilise the government[225]. The statute limited trading to licensed practitioners[226], it restricted the number of stock-jobbers

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223 "The actions of speculators and stock-jobbers were viewed as so damaging that, in 1697, when the Bank of England agreed to engraft a considerable proportion of the government's short-term debt into its capital, one of the concessions it demanded in exchange was the enactment of legislation to restrain speculators and limit their use of derivative instruments". Quoted from: Murphy, Anne L.: "Trading options before Black-Scholes…", op. cit., page 27.

Edward J. Swan writes that: "In England, at the end of the seventeenth century, the government was concerned with the effect of "short" options on shares, particularly shares of the Bank of England. It drew a distinction between short sales of stock and short sales of future commodities by passing "An Act to restrain the Number and ill Practice of Brokers and Stock Jobbers (…)". Quoted from: Swan, Edward J.: *Building the Global Market: A 4,000 Year History of Derivatives*, Kluwer Law International (1999), page 180.

224 Taken from: "The Statutes of the Realm: Printed by Command of his Majesty King George the Third in pursuance of an address of the House of Commons of Great Britain. Volume VII" (1820), pages 285-287.

225 "And whereas diverse brokers and stock-jobbers have lately set up and carried on most unjust practices and designs in selling and discounting of Talleys Bank Stock and Bank Bills as may be most convenient for their own private interest and advantage which is a very great abuse of said ancient trade and employment and is extremely prejudicial to the public credit of his kingdom and to the trade and commerce thereof and if not timely prevented may ruin the credit of the Nation and endanger the government itself" (Ibid page 285).

226 No trading was permitted "until such person or persons shall be first admitted, licensed, approved and allowed of by the Lord Mayor and Court of Alderman of the said City of London for the first time being upon such certificate of their ability, honesty and good fame". Ibid, page 285. In order to be approved the licensed stock-jobbers had

operating in the City of London to 100 [227], and made it an offence to employ unlicensed stock-jobbers or to operate as one[228]. It also sought to lessen the negative impact of speculation by voiding contracts designed to be performed more than three days from the date on which they were agreed[229], and to prevent moral hazard

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to take an oath: "I do sincerely promise and swear that I will truly and faithfully execute and perform the office and employment of a broker between party and party in all things, appertaining to the duty of the said office and employment without or collusion to the best of my skill and knowledge and according to the tenor and support of the act entitled "An act to restrain the number and ill practice of brokers and stock-jobbers", so help me god" (Ibid page 285).

[227] The statute determined that the number of stock-jobbers "shall not at any one time exceed the number of one hundred" (Ibid page 286).

[228] It was an offence to "knowingly make use of or employ any person or persons to act or deal for him or them as a broker or stock-jobber not being admitted, sworn or approved of as aforesaid such person", the penalty for which was a fifty pound fine. The penalty for acting as an authorised stockjobber was, naturally, even more severe, as the law decreed that "such person or persons so offending shall forfeit the sum of five hundred pounds and likewise being legally convicted thereof, shall for such offence stand in the pillory in some public place or places within the said City of London several days for the space of one hour in the morning of each of said three days" (Ibid page 286).

[229] "Except such policies, contracts, bargains or agreements of the nature aforesaid as are to be performed within the space of three days (to be accounted from the time of making the same), is and shall be utterly null and void to all intents and purposes as if the same had never been made and every such premium and premiums shall be paid back and restored to such person or persons who did give or pay the same his executors, administrators, or assignees". Ibid page 287. This three – day rule made time bargains effectively useless, as there was scarcely time for the stock to change price over such a short period. However, there is little evidence that the statute was effective, and one of the few recorded cases of it being cited in court is that of Smith v. Westall from 1697. The case concerned a time-bargain that had been entered into in February of that year before the statute had come into force in May. Smith (the plaintiff) was required to transfer stock to Westall (the defendant) when requested to do so, but Westall wished to avoid performance of the contract and so pleaded in his defence that as the new statute voided time-bargains that were for a period greater than 72 hours, he should be released from his obligation. Chief Justice John Holt ruled in favour of the defendant. His judgement rested on the fact that Westall had not made the request for transfer before the statute had come into effect: "if the request had been before the first of May,

by limiting the commission of stockjobbers to ten per cent of each transaction[230]. The Statute did not apply to derivative contracts on commodities, as commodity traders were specifically excluded from its scope of application[231]. The statue was initially intended to apply for a term of three years[232], it was extended a further four and then was not renewed[233].

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and the contract performed, it had been good; but if no request was made before the first of May, the contract being performable afterwards, was within the intent of the Act. And in fact no request appeared to have been made before the first of May. And therefore judgment was for the defendant, who had pleaded the Act of Parliament". Quoted from English Reports, Full Reprint, King's Bench, Volume 91, W. Green & Son, Limited, Edinburgh, page 1107.

The case of Mitchell v. Broughton in 1702 also concerned a broken time bargain. Mitchell, the plaintiff in the case, requested the transfer of shares from Broughton, the defendant, who pleaded the 1697 Act in order to be released from the contract. However, the court decided in favour of Mitchell because he had requested the transfer of the shares in writing within the three days stipulated by the Act. The case created a precedent as it allowed time bargains to be upheld as long as shares were formally requested within three days, even if the actual transfer occurred at a later date. Quoted from English Reports, Full Reprint, King's Bench, Volume 91, W. Green & Son, Limited, Edinburgh, page 1349.

[230] The statute warned stock-jobbers that if they: "directly receive or take any sum exceeding ten shilling per cent for brokerage he or they shall for every offence forfeit the sum of ten pounds". Taken from: "The Statutes of the Realm: Printed by Command of his Majesty King George the Third in pursuance of an address of the House of Commons of Great Britain. Volume VII" (1820), page 286.

[231] The act determined that "Provided always that no person for buying or selling of cattle, corn, or any other provisions or coal shall be esteemed a broker within the meaning of this Act anything herein contained to the contrary notwithstanding" (Ibid, page 287).

[232] "Provided always That this Aft shall continue from the said First Day of May One thousand six hundred ninety-seven for the space of three years and from thence to the end of the next Session of Parliament and no longer" (Ibid page 287).

[233] Phillip Rawlings observes that "As was usual at this time, the Act had a limited lifespan. It was continued in 1700 for seven years, but controversy soon arose over the restriction on the number of sworn brokers. Petitions were presented to the Commons in 1704 alleging that a shortage of brokers was inhibiting general trade outside the stock

A later statute, passed in 1708[234], decreed that admission to trade as a broker in London should be decided by the mayor and aldermen of the city, according to criteria established by the same. No limit was placed on the number of brokers, but those that were admitted were obliged to pay a fee of forty shillings to the City Chamberlain, as well as a yearly fee of forty shillings. The statute stipulated a fine of £25 for the offences of acting as a broker without authorisation or employing an authorised broker[235]. However, the statute, unlike its predecessor, did not contain any material regulation of derivative contracts.

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market. It was suggested that the City of London authorities should be allowed to revert to its former practice of not imposing a limit and permitting any freeman of the City to be sworn, who had a good character and was suitably qualified". Quoted from: Rawlings, Phillip: "A Compleat System of Knavery…", op cit., page 344.

234 The Act contained dispositions on both official spice mixers and brokers in the City of London and was entitled "An act for the well garbling of spices; and for granting an equivalent to the City of London by admitting brokers". It is contained in "The Statutes at Large: from the second to the eighth year of Queen Anne", complied by Danby Pickering, Volume XI, printed by Joseph Bentham, London 1764, pages 336-338.

235 "That if any person or persons from and after the determination of this present sessions of Parliament, shall take upon him to act as a broker, or employ any other under him to act as such, within the said city and liberties, not being admitted as aforesaid, every such person so offending shall forfeit and pay to the use of the said mayor and commonalty and citizens of the said city, for every such offence, the sum of five and twenty pounds, to be recovered by action of debt (…)" (Ibid page 338).

3.4 The South Sea Company

The events of the *South Sea Bubble* in 1720 were to have a lasting effect on the way derivatives were treated in the Common Law tradition. Not because of the effective enforcement of the statute[236] (St Barnard's Act of 1734), that was passed by Parliament as an indirect result of the financial losses that the collapse of share prices in the South Sea Company occasioned, but because this statute would eventually be replicated in the legislation of a large number of U.S States. This in turn would lead to a case law interpretation of the validity of derivative contracts that would distinguish between those classed as wagers, and which were therefore unenforceable through the courts, and those which could be upheld in court, and then, in the late twentieth and early twenty-first centuries, mark the difference between those derivatives governed by the provisions of pre-crisis regulation and supervision, and those which fell outside it. As unregulated derivatives were crucial to the role of securitised products during the GFC, and as the consequences of the GFC have directly moulded both the provisions of Regulation (EU) 2017/2402, and the ongoing attempts to incorporate synthetic

[236] "There is abundant evidence, both from contemporary writings and from attempts to reinforce the Act by further legislation, that it was quite ineffective. Bills were introduced in the House of Commons in 1745, 1756, 1771, and 1773; only the last, however, succeeded in passing the Commons and that was rejected by the Lords". Quoted from: Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, Elek Books (1962), page 63.

securitisation into the STS model that this regulation has established[237], it would be useful to examine this chain of events in some detail.

The South Sea Company was created in 1711 (by John Blunt and other partners of the Sword Blade Company[238]) at a time when the authorities had recently begun the policy of chartering state sponsored companies. As mentioned previously, these companies would make loans to the government[239] and in return would receive trading monopolies or other special commercial privileges. The investors in these companies would acquire shares that they could then trade on secondary markets.

The primary driving force behind the creation of the South Sea Company was the idea of converting government debt obligations

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237 See: The European Banking Authority: "Draft Report on STS framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402". Published on the 24th of September 2019.

238 For many years the Sword Blade Company, which had been founded in 1689, had manufactured blades in Durham, but from 1703 onwards it appears registered as a banking company with offices in Birchin Lane, London, with John Blunt acting as secretary.

239 "The principal economic problem that faced the state at the beginning of the eighteenth century was the national debt, an outcome of spending incurred during the War of the Spanish Succession. At the end of the war in 1713 the British national debt amounted to £ 53.3 million" (Bilginsoy, Cihan: *A History of Financial Crises. Dreams and Follies of Expectations*, Routledge [2015], page 87). The financial historian Larry Neal writes that: "The motivation for the South Sea scheme in England was essentially the same as for the Mississippi Bubble in France that began in 1719: to refinance the immense debts accumulated by the governments during the War of the Spanish Succession (1702 – 13). That war increased the British national debt from £ 16.4 million to £ 53.7 million", (Neal, Larry: *The Rise of Financial Capitalism…*, op. cit., page 90).

into equity in the new company in order to stabilise the structure of government debt and so strengthen its credit standing and lower its borrowing costs[240]. The government wished to consolidate the irredeemable annuities it had issued and deal with the large number of short-term debt obligations[241] that would have to be rolled over at higher rates of interest if it could not find a long-term re-financing solution. The South Sea Company would therefore purchase both long-term and short-term debt from the government's creditors and consolidate it at terms that would be favourable to the government[242].

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240 "In today's terminology, the government's sovereign credit rating was being damaged by the overhang of short-term debt, thereby jeopardising its investment grade status" (Dale, Richard: *The First Crash. Lessons from the South Sea Bubble*, op. cit., Chapter 3, page 41).

241 "At the time, there was over £ 9 million worth of short-term debt floating in the financial markets. These instruments were selling at a heavy discount, reflecting their rather pessimistic expectations about how soon and how completely they would be paid off". Quoted from Carruthers, Bruce G.: *City of Capital: Politics and Markets in the English Financial Revolution*, op. cit., page 78.

242 "Debt conversions of this type had the advantage of bringing all the debts together into one holding. The state still had to pay interest on its debts but it paid a lower rate and to only one creditor, the company. Debts became cheaper to service and consolidation cut down on some bureaucratic costs too". Quoted from: Paul, Helen J.: *The South Sea Bubble: An economic history of its origins and consequences*, Routledge (2011), page 45.

At the time of the incorporation of the South Sea Company, interest on government borrowing was using up a large proportion of government income. Roseveare writes that: "The total interest burden, of £ 3 million per annum, was eating up half the government's reduced revenues, although interest rates in the private sector had fallen to 5% or less. Clearly something had to be done to convert the high-interest debts to lower rates and, if possible, pay off some of the debts." Quoted from Roseveare, Henry: *The Financial Revolution 1660-1760*, The Longman Group (1991), page 53.

"The terms of the debt conversion were simple: £100 worth of stock was to be exchanged for £100 worth of government debt, both at par value. The company restructured the debt by converting it to a long-term perpetual annuity (which implies that the principal would not be repaid) at a 6 per cent interest rate, substantially lower than the 9 per cent that the government was paying on the short-term debt. For the privilege of the debt-equity conversion the company also made a lump-sum payment to the government"[243].

In return the South Sea Company was to have a trading monopoly on the East Coast of South America extending from the River Orinoco to the south of Tierra de Fuego, and along the entire West coast, excluding Portuguese and Dutch possessions[244]. The capital of the company was effectively the claims it held against the British government, and any trading capital would have to be borrowed on the security provided by its guaranteed income stream.

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243 Bilginsoy, Cihan: *A History of Financial Crises…*, op. cit., page 56.

244 "Many considered that the South American trade would prove particularly profitable, as the region was considered to be an inexhaustible fountain of treasure. The trading monopoly to South America expressly excluded all Dutch and Portuguese colonies. Therefore, much depended upon a successful conclusion to the war with Spain". Quoted from: Watzlaff, R. H.: "The Bubble Act of 1720", *Abacus*, Vol. 7, Issue 1, June 1971, pages 8-28, page 10.

As represented in **Figure 17**, government debt holders could therefore swap government debt for equity in the South Sea Company, converting themselves into shareholders[245]. The Company then held the government debt, for which it received interest payments from the State. The restructuring of the debt meant that principal payments were cancelled and the government paid an annuity[246] to the South Sea Company at six percent interest (rather than the nine per cent it had been previously obliged to pay). The terms of the debt – stock conversion allowed the South Sea Company to issue new stock equal to the amount of debt it took on. As the price of Stock in the South Sea Company rose, out-pacing the price of government debt, the conversions of public debt into South Sea stock meant that a smaller quantity of stock had to be offered in exchange each

[245] Roseveare writes that the scheme envisaged "nothing less than the incorporation of the entire English National Debt into the capital of their company. Holders of redeemable and irredeemable debt would, in effect, be bought out or bribed into becoming shareholders, voluntarily surrendering their fixed annuities for the less certain prospects of company dividends. Furthermore, the company would pay the Treasury for the privilege offering over £ 3 million at first, and then more as the Bank of England tried to intervene with a rival bid. By February 1720, with the help of massive bribes, the South Sea Company had won the auction with a bid of £7.5 million and by April the scheme had given parliamentary sanction in an elaborate measure". Quoted from Roseveare, Henry: *The Financial Revolution 1660-1760*, op. cit., page 54.

[246] The annual payment was for the sum of £ 568, 279. "This represented a 6 per cent return on £9.5 million of outstanding short-term government debt whose holders were expected to convert into stock of the South –Sea Company – the Company acquiring claims to the same value against the government in what amounted to a large scale debt – equity swap" (Dale, Richard: *The First Crash. Lessons from the South Sea Bubble*, op. cit., Chapter 3, page 40).

time, creating a surplus of South Sea stock that the directors could sell or distribute as they pleased.

In February 1720 the South Sea Company outbid the recently constituted Bank of England for the privilege of taking over the national debt of £ 31 million[247]. If the whole £ 31 million of subscribable debt were able to be exchanged for equity, then the South Sea Company would be entitled to increase its nominal capital by £ 31 million. If South Sea Stock were valued at £200 then for every £100 of stock assigned to the public creditors in exchange for public debt the Company would be free to sell the other £100 of surplus stock at the highest price possible, (a total of £15.5 million of stock)[248]. If the price rose to £400 then its surplus stock would rise correspondingly to £23.45 million[249].

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247 See Watzlaff, R. H.: "The Bubble Act of 1720", op. cit., pages 8-28.

248 Roseveare explains the scheme in the following manner, the Company's success, he writes: "rested on the possibility that the Company might be profitable and that its share price might rise, coupled with the certainty that for every £ 100 of debt taken over the Company could issue shares of an equivalent amount. Thus, potentially, if all the redeemable and irredeemables were subscribed, the Company could create £ 31 million of stock. But suppose the Company's shares did rise – say double in value overnight? A £100 share, now worth £200, would cancel £200 of debt; £15.5 million-worth of stock would therefore clear the whole National Debt, leaving the Company free to sell as it pleased the remaining £15.5 million of stock which it was entitled to create". Quoted from Roseveare, Henry: *The Financial Revolution 1660-1760*, op. cit., page 55.

249 As Roseveare points out: "In the event the shares did not double – they tripled in value. On 14 April, within a fortnight of the scheme's launch and before any debts were taken over, the Company was able to presume upon its virtual licence to print money by starting to sell £2.25 million of its anticipated surplus of stock at a price of 300 per cent. A fortnight later it sold £1.5 million more at 400 per cent and seven weeks after that £ 5 million at 1000 per cent (that is, for £ 50 million). After ten more feverish

However, if Stock prices were to fall then the government's creditors would not agree to the exchange and the whole scheme would fall apart. The directors therefore had an unusually powerful incentive to promote rising prices[250].

To facilitate purchases the South Sea Company made loans to investors who wished to purchase stock in cash via the Sword Blade Company[251]. A lump sum payment was made to the government in return for the South-Sea Company's trading monopoly, as were various bribes in order to curry favour with government officials.

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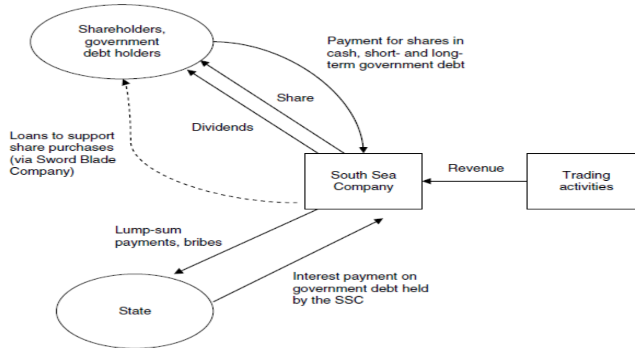
weeks, on 24 August, a fourth issue of £ 1.25 million was made at 1,000 per cent amid scenes of frenzied public demand" (Ibid page 55).

250 Morgan and Thomas comment on the methods the directors used to raise the stock price: "Their technique included carefully staged offers of stock for cash at a little above the current price; the use of this cash together with the Exchequer bills which the Company had undertaken to "circulate" and its credit at the Sword Blade to support the market; the making of loans against the Company's own stock, so enabling holders to buy still more; the promise of lavish dividend securing the interest of prominent people by thinly veiled bribes; and extracting the utmost propaganda value out of current events from the peace negotiations with Spain to a carefully contrived reconciliation between the King and the Prince of Wales". Quoted from: Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 32.

251 "It is important to note here that the South Sea Company was forbidden by its charter from engaging in banking activities; so these loans had to be financed somehow by the South Sea Company. The Sword Blade Company had been taken over by Elias Turner, George Caswall, and Jacob Sawbridge in 1712. The latter two were directors of the South Sea Company during the bubble. Sword Blade became the major stockbrokerage firm of the period, issuing its own notes and bonds, which were accepted by the South Sea Company as cash payment" (Neal, Larry: *The Rise of Financial Capitalism…*, op. cit., pages 105-106).

Figure 17: The South Sea- Company debt conversion scheme[252]



As a result of this restructuring the new shareholders expected to receive a number of advantages from the deal.

i) The market value of government debt was discounted by almost 40 per cent[253], and by converting debt to equity at par, the shareholders were being offered a capital gain as long as the share price of the South Sea Company did not fall.

ii) Consolidation of individual debts into a giant company would give the individual creditors more leverage over the government and would increase their chances of receiving payment.

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[252] Taken from: Bilginsoy, Cihan: *A History of Financial Crises…*, op. cit., page 57.

[253] Ibid, page 57.

iii) The shareholders were promised a return on the trading activities of the South Sea Company as well as dividends from the annuity payments paid by the British Government.

iv) Neither long nor short-term government paper were liquid assets,[254] but private shares were highly tradeable and offered the prospect of generating a quick, cash-in-hand profit if their market value rose.

Potential cash investors were offered a payment scheme which allowed them to pay in instalments by purchasing subscription shares. This gave them not just the possibility of paying in instalments but also the option to either continue their purchase or halt it (should the share price fall). At the subscription date buyers were obliged to pay between 10 to 20% of the issue price. If the share price fell below a certain value, the subscriber could refuse to make the next payment and so lose the option on

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[254] "A high proportion of total debt outstanding in the early eighteenth century was held by individuals - some £12.5 million, relative to a total of £40 million in 1714. For these private investors, the situation could be inconvenient. Selling debt was either difficult (for lottery tickets and term annuities) or impossible (in the case of life-annuities). Consequently, these bonds typically traded at steep discounts. Part of this discount compensated bondholders for illiquidity, the possibility that in the case of a future sale, few buyers might be forthcoming" Quoted from: Hans-Joachim Voth, Peter: *Prometheus Shackled: Goldsmith Banks and England's Financial Revolution after 1700*, Oxford University Press (2013), page 22.

the share (as well as the instalment payments he had made up to that point)[255].

Subscription shares amounted to a compound call-option purchased for a series of premiums. Each instalment payment was recognised with a subscription receipt, and these, unlike the shares themselves[256], could be transferred through a simple process of endorsement. This paved the way for an active market

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255 According to Richard Dale: “Legally, subscribers were contractually bound to meet all scheduled calls on their subscriptions even if the stock price collapsed, leaving them exposed to losses in excess of the price paid. However, it was improbable that the South Sea Company would take thousands of investors through the courts to enforce contractual calls; arguably, the worst that could happen to subscribers who failed to meet calls would be the cancellation of their subscriptions and their related entitlement to stock” (Dale, Richard: *The First Crash. Lessons from the South Sea Bubble*, op. cit., page 169). However, this is disputed by Legal Historian Gary Shea who contends that the provisions relating to the sale of subscriptions contained in the 1719 Statute that authorised them was “the language of options and sanctioned default. Subscribers were not told that they would be forced to comply with their subscriptions, nor were they told that their personal estates would be liable for the missed calls and costs of enforcement. They were handed an option to default and the act tried to make clear only what would be the costs of exercising that option. Most importantly, the act stated explicitly that a defaulter's liability to the Company was limited to his holding of stock in the Company. Not only were subscribers handed an option to default, they were also told that the consequences of default were not necessarily permanent. As long as they complied within three months, their position as members of the Company could be restored. This handed additionally to the subscribers what we might call an option 'to wait and see”. Quoted from: Shea, Gary S.: “Financial market analysis can go mad (in the search for irrational behaviour during the South Sea Bubble)”, *Economic History Review*, 60, 4, (2007), page 746.

256 “Ownership of joint-stock company shares was proven by registration with the company. Each of the three major companies kept a stock ledger which detailed the accounts of all shareholders, as well as any transfers of shares among them. Ownership was evidenced by an entry in the ledger, not by a piece of paper held by the shareholder. This is why all share transfers had to be registered with the company, for otherwise the purchaser would not have a legally secure title.” Quoted from: Bruce G.: *City of Capital: Politics and Markets in the English Financial Revolution*, op. cit., page 133.

in these compound call-options, which helped inflate the market price of subscription shares and contributed to the formation of a bubble[257].While subscription shares co-existed with normal shares, they quickly began to diverge in price as the ability to call or decline the option and their ease of transfer made them more valuable[258]. Economic historian Richard Dale notes that:

"*The subscription receipts representing an initial down payment of £60, were a highly leveraged instrument and while the underlying stock price virtually doubled to £600 by the end of May, the quoted value of the subscription rose almost sevenfold to £400."*[259]

Desperate to ensure rising prices the directors of the South Sea Company were concerned about the negative effect of competing

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257 The great interest in obtaining shares was spurred by financial gossip. "Leaks and rumours concerning South American silver mine discoveries and "informed speculation" related to easing in Spain's trade policies attracted additional share buyers who assumed that England's cotton, woollen, and industrial goods would be profitably traded for Mexican silver and gold (even though the company actually "had barely traded in its life" and had owned barely a ship)." Quote taken from Vogel, Harold L.: *Market Bubbles and Crashes. Features, Causes and Effects*, Palgrave Macmillan (2018), Chapter 2, page 49.

258 "Thus when South Sea share values had reached low levels in the autumn of 1720, the value of subscription contracts relative to fully-paid shares actually rose. The figures strongly suggest that subscription share values, relative to fully-paid share values, followed a nonlinear function of the level of fully-paid shares. This is the hallmark of an option value" (Shea, Gary S.: "Understanding financial derivatives during the South Sea Bubble: the case of the South Sea subscription shares", *Oxford Economic Papers*, 59, 2007, page 78).

259 Dale, Richard: *The First Crash. Lessons from the South Sea Bubble*, op. cit., Chapter 6, page 103.

investments that could draw investors' money away from their company[260]. Commenting on the growth of rival joint-stock companies in this period Morgan and Thomas observe that:

"*One of the favourite fields was the expanding business of insurance, and there were a number of promotions for life, marine and fire insurance, a company for insurance against "house-breakings and robberies on the high-way" and "A society to insure all masters and mistresses whatever loss they may sustain by theft from any servant that is ticketed and registered with this society*"[261]. There was also an expansion of joint-stock companies in the field of manufactured goods: "*In manufacturing, companies were formed for the production of wool, cotton, iron and steel, tinplates, dyes, salt, sugar, paper, starch, and alum, and*

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260 "The most reliable list compiled by W.R. Scott, identifies 190 new issues between September 1719 and August 1720, with a total capital of over £ 220 million". Quoted from: Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 43.

The contemporary economist Adam Anderson (1692 – 1765), provides a list of over 200 companies formed around 1720, including: "An engine to bring fresh water into the town of Deal in Kent", "For trading in human hair", "For a more inoffensive method of emptying or cleaning necessary houses", "For building ships against pirates", and "For a wheel for perpetual motion". He observes that: "Many of the before-mentioned bubbles were indeed nonsensical and absurd, appearing even from their very titles, as it might be imagined could only draw in the more ignorant part of the people; yet even those had a very considerable run, much money being got and lost by them: and as for the great bulk of them, there were almost incredible numbers of transactions in them daily and hourly, for ready money, and mostly at very advanced prices (…)". Quoted from: Anderson, Adam: *An historical and chronological deduction of the Origin of Commerce from the Earliest Accounts*, Vol. III, Printed by the Logographic Press (1787), page 112.

261 Ibid page 43.

drainage, building and land improvement companies of various kinds".[262]

A newspaper report from the 11th of June of 1720 observed that: "*This week there has been a great stroke in the Alley; a multitude of new Bubbles*[263]*, Projects, subscriptions, etc., have been set a foot, and every single one has been publicly advertised to exceed the rest. The several sums proposed to be raised in this manner, amount to, since last Saturday, about £ 224,000,000 Sterling, but we hear that as soon as the Bill for the restraining of these extravagant and unwarrantable practices has passed the House of Lords, and his Majesty's assent given to it, a proclamation will be published for suppressing that traffic so vigorously carried on in Exchange Alley (..)".*[264]

The Bill referred to in this contemporary newspaper report was to become "*An Act for better securing certain powers and privileges to be granted by his Majesty by two charters for assurance of ships and merchandises at sea and for lending money upon bottomry; and for restraining several extravagant*

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262 Ibid page 43.

263 The word "bubbles" was used from the mid-seventeenth century onwards to refer to speculative businesses.

264 This report is taken from "The Weekly Journal or Saturday's Post" dated Saturday the 11th of June 1720.

and unwarrantable practices therein mentioned"[265], which in later years would be better known as the Bubble Act.

3.5 The Bubble Act

The government and Parliament were anxious for the South-Sea scheme to be a success, as it presented a solution to the pressing problem of the national debt[266], while on a more personal level, a total of twelve current or former directors of the South Sea Company were M.P.s in 1720, and a total of 578 M.P.s had taken part in at least one of the share subscriptions, to a value of £ 3,500,000 pounds, a number that included nine government ministers[267]. On February the 22nd 1720, the House of Commons had set up a committee under the Chairmanship of Thomas Hungerford. The committee was constituted in response to: "*A*

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265 The full text of the Act can be found in "The Statutes at Large of England and of Great Britain. From Magna Carta to the Union of the Kingdoms of Great Britain and Ireland. Volume VIII", rinted by George Eyre and Andrew Straham (1811), pages 322-338.

266 "The scheme offered to solve the problem of pressing irredeemable debt, from which the government had no other creditable way to disengage itself. It also promised payments by the company to the treasury of over 4 million, a sum that could reach as much as 7.5 million if the conversion offer turned out to be well received by the public creditors. And it would substantially reduce the interest paid by the state. The ministry and the nation as a whole had a lot at stake when the South Sea scheme unfolded, and every reason to contribute to its success. No other issue was as high on the public's list of priorities in the first half of 1720 as the national debt and the scheme to reduce it, and no measure would have been taken to endanger its solution". Quoted from: Harris, Ron: "The Bubble Act: Its Passage and its Effects on Business Organization", *The Journal of Economic History*, Vol. 54, Num. 3, pages 610-627, page 616.

267 Ibid page 616.

complaint being made to the House of several public and private subscriptions, in and about the Cities of London and Westminster, for several unjustifiable Projects and Undertakings, whereby great mischiefs may accrue to the public"[268]. As a consequence, the Committee was tasked with investigating: "*the several subscriptions for Fisheries, Insurances, Annuities for lives, and all other projects carried on by subscription in and about the cities of London and Westminster; and to inquire into all undertakings for purchasing Joint-Stocks, or obsolete charters"*[269]. The Committee reported back to Parliament on the 27th of April 1720 that: "*for some time, several large subscriptions having been made by great numbers of persons in the City of London, to carry on public undertakings; upon which the subscribers have paid in small proportions of their respective subscriptions, though amounting in the whole to great sums of money; and that the subscribers having acted as corporate bodies, without any legal authority for their doing so, and thereby drawn in several unwary persons into unwarrantable undertakings; the said practices manifestly tend to the prejudice of the public trade and commerce of the Kingdom"*[270]. The order

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268 Quoted from: "The Journals of the House of Commons, Vol. 19, From November 11th 1718 to March 7th 1721" (1803), page 274.

269 Ibid pages 274.275.

270 Ibid page 351.

of the House upon receiving the report was that leave be given for a bill to be brought before the House to "*restrain the extravagant and unwarrantable practice of raising money by voluntary subscriptions, for carrying on projects dangerous to the trade and subjects of this Kingdom"*[271].

Incorporation was not a right freely available to all subjects but was granted by Parliamentary or Royal Charter, normally in return for a loan on favourable terms[272]. However joint stock companies were being set up in large numbers with no charters at all, or using expired charters originally designed for a completely different purpose. The Bubble Act sought to clamp down on the competition for investment by enacting that all companies formed without a charter, or which operated under a charter that had expired or had been granted for another purpose, should be illegal,

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271 Ibid page 351.

272 "Typically, a quid pro quo was extracted for a royal charter or Parliamentary Act of Incorporation. Successful petitioners had usually offered a direct profit interest or loans on favourable terms, or had assumed responsibility for government debt by persuading holders of this debt to surrender it in exchange for shares of the newly created corporation". Quoted from Patterson, Margaret & Reiffen, David: "The Effect of the Bubble Act on the Market for Joint Stock Shares", *The Journal of Economic History*, Vol. 50, Num. 1, March, 1990, page 164.

Carruthers comments that: "There were no general laws of incorporation and so the establishment of a joint-stock company required either a royal charter or a parliamentary statute. Joint-stock companies were therefore exceptional entities. Royal charters were most common before the Revolution of 1688 but parliamentary statutes became necessary after. Such charters and statutes typically granted the right of perpetual succession, the right to sue and be sued, to have a common seal, and to own property". Quoted from: Quoted from: Bruce G.: *City of Capital: Politics and Markets in the English Financial Revolution*, op. cit., page 132.

and that all transactions in their shares should be void[273]. The Act was, in the words of legal historian Ron Harris: "*special interest legislation for the SSC, which controlled its framing and its passage*"[274].

3.6 The bursting of the South Sea Bubble and the stock-jobbing Act

Shortly before the Bubble burst the scheme had appeared to be a great success. The holders of government annuities had "*sold out to the company in droves: 85 per cent of the government's*

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[273] The text made illegal and void: "the acting or presuming to act as a Corporate Body or bodies, the raising or pretending to raise transferable stock or stocks, the transferring or pretending to transfer or assign share or shares in such stock or stocks, without legal authority either by Act of Parliament or by any charter from the Crown, to warrant such acting as a body corporate or to raise such transferable stock or stocks, or to transfer shares therein, and all acting or pretending to act under any charter formerly granted from the Crown, for particular or special purposes therein expressed, by persons who do or shall use or endeavour to use the same charters for raising a capital stock or for making transfers or assignments or pretended transfers of such stock, not intended or designed by such charter to be raised or transferred, and all acting or pretending to act under any obsolete charter". The text of the Act is quoted from: "The Statutes at Large of England and of Great Britain. From Magna Carta to the Union of the Kingdoms of Great Britain and Ireland", Vol. VIII, printed by George Eyre and Andrew Straham (1811), page 334.

[274] Quoted from Harris, Ron: "The Bubble Act: Its Passage and its Effects on Business Organization", op. cit., page 623. Harris argues that the legal effect of the Act was negligible, firstly because: "Unincorporated undertakings were not recognized as corporations in common law. Thus, they could not enjoy the capacities and privileges that corporations embodied as legal entities, including perpetual succession, to sue and be sued in the corporate name, and the ability to purchase land. It was not the act that deprived the bubbles of these privileges, but rather common law" (Ibid page 623). Secondly, it was ineffective due to a "weak enforcement mechanism". Ibid page 623. This is supported by the fact there was "only one reported case of criminal prosecution based on the act in the eighteenth century, that of Rex v. Caywood in 1722" (Ibid page 623).

irredeemable debt was disgorged in exchange for South Sea stock, as well as a further 85 per cent of redeemable stock"[275]. In 1720, there were four money subscriptions, two in April, one in June and another in August. As shown in **Figure 18** in 1720 South Sea Stock was worth £128 in January, but over a five-week period between May the 16th and June 22 it rose by 117 percent (from £ 352 to £ 765) before finally reaching a peak of £1,058 at the end of June[276]. Demand for shares was boosted by the system of instalment sales and the increasingly generous loans made by the Sword Blade Company[277]. However, unfortunately for the scheme, the expected trade with the Spanish Empire did not materialise[278] and such a rise in price was ultimately

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[275] Quoted from Brewer, John: *The Sinews of Power. War, money and the English state 1688-1783*, Unwin Hyman (1989), page 101.

[276] One of the reasons for this rise in the price of stock was undoubtedly the fact that at the beginning of 1720 the South Sea Company had outbid the Bank of England for the right to take over the national debt of £ 31 million pounds. This right was enacted by the statute "An Act to enable the South Sea company to engraft part of their capital stock and fund into the stock and fund of the bank of England, and another part thereof into the stock and fund of the East – India company, and for giving further time for payments to be made by the said South-Sea Company to the use of the public". The statute can be found in: "The Statutes at Large: from the fifth to the ninth year of King George I", compiled by Danby Pickering, Vol. XIV, printed by Joseph Bentham, London 1762, pages 303-317.

[277] "Loans became more generous: £400 for every £100 of collateral stock deposited in the Sword Blade Company. Lending against share deposits raised the share price in two ways: it raised the demand for and restricted the supply of stocks in the market. The total amount of loans made by the Sword Blade Company was £11.2m by the end of August" (Bilginsoy, Cihan: *A History of Financial Crises…*, op. cit., page 62).

[278] "Trade did not begin until 1714 and was severely restricted in the years 1714-16 by Spanish officials in the New World. By mid-1716, negotiations with Spain directly

unsustainable when the only real source of income was the government annuity. An anonymous pamphlet that circulated at the time described the South Sea Company in terms of a pyramid scheme[279].

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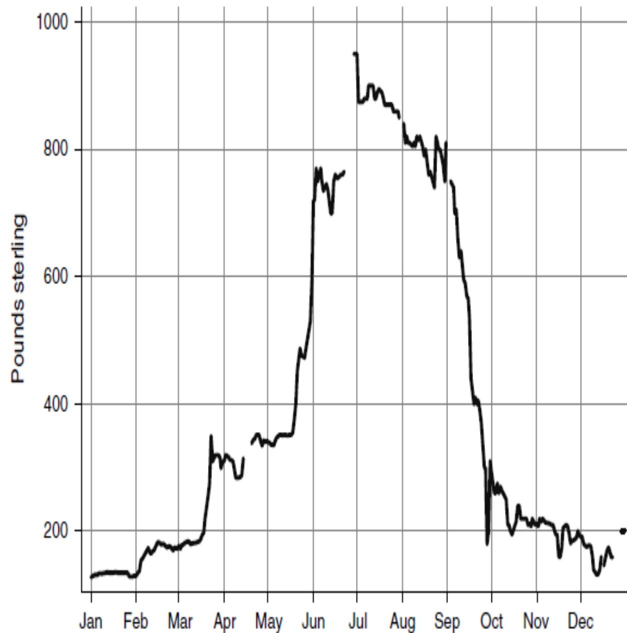
had resolved most issues in favor of the company, but hostilities quickly arose between the English and Spanish governments. Although these culminated in a decisive English naval victory in the battle of Cape Passero in late 1718, some of the South Sea Company's ships and assets were seized by Spain. The directors subsequently turned their attention fully to the further conversion of government debt, the one thing they could do well" (Neal, Larry: *The Rise of Financial Capitalism…*, op. cit., page 92). R.H. Watzlaff notes that: "The Company was given further privileges by the Treaty of Utrecht in 1713 which concluded the war with France. The Company acquired the contract for the transportation to the Spanish colonies of 4,800 negro slaves per year for a period of 30 years. Thereafter the company persisted in the slave trade but it was never to prove profitable. Thirteen ships sailed in 1716, twenty in 1717 and twelve in 1718 carrying more than 13,000 negroes altogether. The mortality rate of the Company's slaves was higher than that of the Royal African Company which had a bad reputation for cruel and inhuman treatment of its slaves. The Treaty also permitted the South Sea Company to send each year one ship of not more than 500 tons laden with European goods to the Spanish West Indies although one quarter of the profits were reserved for the King of Spain. This trade did not prove profitable partly because of the hostility of the Spanish colonists to the Company's traders and the harsh terms imposed by the King of Spain. The renewal of the war with Spain in 1718 put a damper on the South Sea trade, so that during the first eight years of the Company's history its trade was almost infinitesimal in comparison with the great capital it could raise". Quoted from: Watzlaff, R. H.: "The Bubble Act of 1720", op. cit., pages 10-11.

279 "Everybody knows, that if what they have lost by their Spanish Trade should be made good to them upon the Peace, their capital can be but 100, that is not at present in any way of improvement that gives more than £ 5 per annum, to be divided in an equal proportion among all the proprietors: Tis true indeed that they make a show of dividing 20 per cent, but this must either draw 15 per cent of the capital or (which is the pretence) it must arise out of the gain, which is made by the advance of the subscriptions, which, when it is well considered, will appear to be a mere juggle, for if all subscriptions were completed, and the whole sum were paid in (which I adventure to say will never be, if the high subscribers come to see what a case they are in) it would be far from raising any gain to those who came in at the highest prices, that they would only be made the dupes to contribute to the extravagant gains of such who purchased at the lowest, even with the loss of more than their whole principal (…)". Quoted from: "A letter to a conscientious man concerning the use and abuse of riches and the right and wrong ways of acquiring them: showing that Stock Jobbing is an unfair way of dealing; and particularly demonstrating the fallaciousness of the South-Sea scheme", anonymous author, printed for W. Boreham, London (1720), page 15.

Figure 18: Daily stock prices of the South Sea Company in 1720[280]



Despite the fact that the fourth stock flotation was fully subscribed on the 24th of August, the share price began to fall. By September the 1st it had declined to £775, it had slumped to £520 by September the 16th and by the 1st of October it had sunk to £290.

280 Taken from: Bilginsoy, Cihan: *A History of Financial Crises…*, op. cit., page 60.

In February 1721 the Directors of the Company presented Parliament with a summary of the Company's liabilities for the coming year. It calculated them at a total of £14.5 million, a figure that included debts of £7 million to the Exchequer, £5 million to bondholders, and £1 .5 million for dividends and interest already due. In terms of its assets John Carswell writes: "*In hard reality the only asset, apart from problematic trading prospects, that it could put against obligations of £ 14.5 million was its income of £ 2 million a year from the Exchequer. In other words, the Company was hopelessly insolvent"*[281].

Morgan and Thomas note that: "*Holders of the National Debt had accepted South Sea Stock by way of conversion at prices ranging from 375 to 800, and money subscribers had contracted to buy at from 300 to 1,000, though they had not yet paid all their calls. The Company had promised to pay the state £7 million that it had no funds to meet, and many individuals (including 138 members of the House of Commons) had debts outstanding for loans on stock*"[282].

In the settlement that followed the liability of the South Sea Company to the state was cancelled, as were all outstanding calls

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281 Quoted from Carswell, John: *The South Sea Bubble*, Sutton Publishing (2001), page 202.

282 Quoted from: Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 39.

on money subscriptions. Any borrowers against stock were obliged to pay 10% of their loan and had any stock that they had deposited against the loan cancelled[283].

A Parliamentary Committee was established into the causes of the crash (called the Committee of Secrecy as its proceedings were held behind closed doors). The Committee produced several reports that attempted to identify malpractices in the Company, and it discovered that options to buy stock to the value of £574,500 had been given to people of influence at no cost in order to support the transition of the South Sea Company through Parliament[284]. A large number of influential people were found to

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[283] According to Roseveare: "The real losers were the annuitants –those owners of irredeemable and redeemable government securities who had voluntarily surrendered them for South Sea Company stock. By the time of the crash they had got little in return and it seemed possible that they would get little in the future. They had no remaining claim on the government's purse, and any claims they might feel they had on its conscience were prejudiced by certain ministers' deep implication in the Company's frauds". Quoted from Roseveare, Henry: *The Financial Revolution 1660-1760*, op. cit., page 58.

[284] "And the Examiner added, that he believed the Reason of entering the 574,500 Lib. Stock fold in the Cafli-book, was to give Persons Opportunity of having Stock at low Prices, and that the great Part of the Stock sold was disposed of for forwarding the Bill". Taken from: "The Several Reports of the Committee of Secrecy to the Honourable House of Commons Relating to the late South Sea Directors", printed by A. Moore (1721), Report Number 1, page 4. Also: "There is a considerable quantity of stock on which money is said to be lent, where no stock is transferred and the Examiner apprehends that great part of that deficiency will be found among the 574,500 l. fictitious stock said to be sold" (Ibid. Report Number 4 Page 42).

Morgan and Thomas write that: "While the bill was still before Parliament, the Company began the practice of interesting prominent "friends" by giving them fictitious allocations of stock. Though bargains were recorded in a special book kept by Robert Knight, the cashier to the Company, the stock was never paid for and, indeed, did not exist. Allocations were made at or under the current market price, and recipients

have received either stock or stock options, including Lord Sunderland, the Prime Minister, John Aislabie, the Chancellor of the Exchequer, Charles Stanhope, the Secretary of the Treasury, and the King's Mistress and his two illegitimate daughters[285].

One of Cato's letters, (a series of 144 essays attacking corruption in the British political system written by John Trenchard and Thomas Gordon between 1720 and 1723) raged against the directors of the Company:

"The ruin is general, and every man has the miserable consolation to see his neighbour undone; for as to that class of Ravens, whose wealth has cost the nation its all, as they were manifest enemies to God and Man, no Man can call them his neighbours; they are rogues of prey, they are stock-jobbers, they are a conspiracy of stock-jobbers! A name which carries along

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could "sell" the stock back to the Company when the price rose, and collect the difference between their supposed buying and selling prices in cash" (Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 33).

285 Ibid, page 33.

Edward J. Swan comments that: "A long investigation ensued, in which it came out that, among many abuses, options on the South Sea Company stock had been granted to influential nobles and members of the government, including the Chancellor of the Exchequer, Mr John Aislabie (without payment of cash consideration) so that if South Sea proposals were accepted by the government and stock rose, these worthies were credited with profits at no risk" (Swan, Edward J.: *Building the Global Market: A 4,000 Year History of Derivatives*, op. cit., page 182).

with it such a detestable deadly image, that it exceeds all human invention to aggravate it (...)"[286].

An anonymous pamphlet, published in 1721, accused the directors of the South Sea Company of insider trading, using derivatives to manipulate naïve investors both on the upward and downward curve of the bubble, buying up refusals (call options) to acquire stock for low prices before the spike in stock prices, inflating stock prices through the sale of time bargains (futures) and subscriptions (compound stock options) and then entering into put option contracts with hapless investors to sell stock at high prices just before the bubble burst[287].

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286 Quoted from: *Cato's Letters*, Vol. I, printed for W. Wilkin's, T. Woodward, J. Walthoe and J. Peele, London (1724), page 11.

287 "The late South-Sea directors, either by themselves, their agents or confederates, before they pushed on the rise, bought for inconsiderable premiums the liberty of refusal, and when they had drained their unhappy fellow subjects of all their ready money, they then drew them into several contracts, whereby they unwarily bought South-Sea stock, or subscriptions, at a certain distant time, at most exorbitant and usurious prices; and when they had raised the notional value of their stock to the utmost height, they reversed their scheme, and bought for small premiums the liberty to put the stock on the gamesters for distant time at prices equally exorbitant". Quoted from an anonymous pamphlet printed in 1721 entitled: "Further reasons offered and fresh occasions given for making void and annulling fraudulent and usurious contracts, especially those time –contracts for putting or refusal of stock (formerly declared illegal) into which, multitudes of unhappy persons have been drawn, to the utter ruin of themselves and families by the vile arts and practices of the late directors of the South-Sea Company, their agents and confederates". Quoted from page 3 of the pamphlet.

A number of pamphlets were published after the South Sea Bubble burst which argued that holders of derivative contracts should be released from their contractual obligations to pay for South Sea stock. Among them were: "Reasons for making void and annulling those fraudulent and usurious contracts, into which multitudes of unhappy persons have been drawn to the utter ruin of themselves and families by the late directors of the South-Sea Company ", anonymous (1720), Budgell, Eustace: "A letter to a friend in the

In 1720, Sir David Dalrymple a Scottish lawyer and Member of the House of Commons, had published a pamphlet entitled "*Time Bargains tried by the Rules of Equity and Principles of Civil Law* [288]*"* The text addressed the predicament of those who had contracted to purchase South-Sea Company stock or subscriptions at high market prices through derivative instruments and which were now worth only a fraction of the price promised for them. His tract distinguished among three possible scenarios: those time bargains purchased from Directors or Managers of the South-Sea Company who had knowingly employed underhand methods to inflate the value of the stock, those purchased from Directors or Mangers who were presumed to have not behaved in this manner, and those purchased from third parties who were unconnected with the company.

i) In the case of the derivative instrument for stock contracted from a third party, and even presuming that the Managers and Directors were innocent of the charge of using deceitful practices to bolster the price of their own stock, Dalrymple believed that the contract ought to be void because, it was based on an error on the part of the buyer. His error consisted in imagining that: "*the Company, that is, the Directors had a scheme of trade, which*

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country, occasioned by a report that there is a design still forming by the late directors of the South Sea Company" (1721).

288 Dalrymple, David: "Time Bargains tried by the Rules of Equity and Principles of Civil Law", pamphlet printed in 1720.

would make great yearly returns to them, and so enable them to divide fifty per cent. But now he finds he was in a mistake, they never had such a thought"[289]. It had been commonly believed that: "*the profits of the Company were to proceed from some scheme of Trade, which would have made a great and lasting dividend, whereas all the profits the directors ever had in view, was what they made by the new subscriptions, which could make but a short temporary dividend"*[290]. It therefore followed that, given that the buyer's promise to pay was based on false premises, it was itself void, and so the buyer was free of any contractual obligations[291]. There was, Dalrymple believed: "*a latent deceit in the thing sold, which if the buyer had known, he would never have promised so much for it"*[292].

ii) When the derivative instruments had been contracted with Directors or Mangers of the South-Sea Company itself, and supposing them to be innocent of any dishonest tactics to bolster the price of shares, Dalrymple argued that the buyers should not only be set free from their contractual obligations, but also

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289 Ibid, page 12.

290 Ibid, page 12.

291 "His promise therefore being founded in presumptions facti quod non ita se habet, is in itself void, and by the Civil Law, the buyer is certainly free, because the lesion or loss he sustains by the bargain, is ultra dimidium valoris rei vendite".

292 Ibid, page 12.

compensated for any losses that they had incurred as a result of entering into the contract. This was because: "*the Directors and all those concerned in the management of the stock, ought to know the value of the stock they have under their care as well as any artist ought to know what sort of work he deals in"*[293]*;* and if they were ignorant of the true worth of the stock "*it was a supine ignorance, and does not execute them from an action ad id quod interest"*[294].

iii) In the case that the Directors or Mangers of the Company had acted in bad faith in order to boost the share price and had entered into the derivative contract with the buyer then "*the buyer was brought into this bargain by the dolus of the seller, and induced to give a great deal more for the thing he bought than it was really worth; and consequently the bargain is not only void, but the seller, the committer of the fraud, is obliged to make up to the buyer whatever he lost by making such a bargain"*[295].

Dalrymple concluded his pamphlet by arguing in favour of an Act of Parliament to resolve the question:

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293 Ibid, page 13.

294 Ibid, pages 13 and 14.

295 Ibid, pages 15 and 16.

"I humbly think that the Members of Parliament are in duty obliged to put an end to a dispute, which if left to the ordinary Courts may produce thousands of vexatious law – suits, and abstract people's thoughts from their ordinary business for many years to come"[296]. He went on to comment that the business of reviving credit in the City of London was hampered by the uncertainty created by the number of unresolved derivative contracts, noting that: "*it's impossible to revive credit as long as these time bargains hang over people's heads, for no man will trust another because he knows not but he is engaged in some time bargain for more than he is worth"*[297].

In order to bring relief to some of those still trapped in onerous time bargains Parliament passed, on the 31st of July 1721 "*An Act for making several provisions to restore the public credit, which suffers by the frauds and mismanagements of the late directors of the South-Sea Company and others"*[298].Although it fell way short of Darlymple's recommendations, it did represent a direct intervention by Parliament into private derivative transactions, as it stipulated that all contracts for the transfer of South-Sea

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[296] Ibid, page 41.

[297] Ibid, page 42.

[298] The act can be found in: "The Statutes at Large: from the first year of George the first year of the reign of King George the First to the ninth year of the reign of King George the Second. Volume the Fifth", printed by Charles Eyre and Andrew Strahan (1786),pages 246-250.

Company stock had to be registered with the company by the 29th of September 1721, and those which were unregistered and unperformed by that date would be declared null and void. It also voided those contracts in which seller was not, either at the time of making the contract, or within six days of the contract being made, in possession of or entitled to the stock in question[299]. Furthermore, it prevented courts from enforcing any judgement for the sale or purchase of South- Sea stock until the end of the Parliamentary session on the 29th of September 1721[300].

In 1722 the House of Lords was called upon to settle the case of *Thomson v. Harcourt*. At the peak of the price rise (in June 1720) Henry Thomson had contracted to sell to Richard Harcourt South Sea Stock with a nominal value of £1,000 at a future date for the price of £ 9,200. When the time bargain became due the

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299 "And it is hereby enacted, that all contracts for the sale or purchase of any subscription or stock of the said South-Sea Company, or any other company or corporation, which shall be unperformed in whole or in part, and not compounded on or before the said twenty-ninth day of September in the year of our Lord one thousand seven hundred and twenty-one, where the seller, or the person on whose behalf such contract was made, was not at the time of such contract, or within six days after, actually possessed of, or entitled, in his, her, or their own right, to such subscription or stock, shall be, and is hereby declared null and void, with respect to so much only of the said stock or subscription as the seller, or the person upon whose account such sale was made, was not possessed of, or entitled to as aforesaid" (Ibid, page 250).

300 "(…) no execution shall be awarded upon any judgement or decree, obtained or to be obtained, in any action or suit brought or to brought upon any contract for the sale or purchase of any subscription or stock of the said South-Sea Company, or any other company or corporation, or pretended company, or corporation, until the end of the session of Parliament, which shall be next after the said twenty-ninth day of September in the year of our Lord one thousand and twenty-one" (Ibid, page 250).

price of South Sea Stock had plummeted to a quarter of its former value. Harcourt's legal counsel echoed the arguments previously espoused by Dalrymple and contested the validity of the contract by claiming that:

"*This contract or agreement is very unreasonable, therefore ought not to be favoured in Court of Equity, especially since the Parliament have relieved against these hard bargains, having eased the borrowers of money of the South-Sea Company upon stock: and by the Civil or Roman Laws, all such exorbitant contracts, were null and void, as carrying in themselves an evidence of Fraud; and the House of Lords have very lately reversed a Decree of Court, for the specific performance of a contract, because the thing contracted for was sold at an exorbitant price"*[301].

Thomson's counsel replied by observing that:

"*No contract is unreasonable, where the thing contracted for is sold at the usual or common price; and by Roman or Civil Laws, no contracts or agreements were made null and void, but such only where the price of the thing contracted for, was very exorbitant at the time of making such contracts; for if contracts were to be set aside only because the thing contracted for is fallen*

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301 "A report of a case argued and adjudged in the Court of the Exchequer and affirmed in the House of Lords relating to a contract about South Sea Stock", Henry Thomson, printed for J. Roberts, at the Oxford Arms in Warwick Lane (1724), age 4.

in price or value, there must be an end to all contracts or agreements, and consequently of Trade and Commerce, for no man will contract to sell anything, if such contract be not to be performed, if the price of the thing contracted for should happen to fall after the making and before the time for performance thereof".[302]

The Lords supported Thomson: Lord Chief Baron Montagu reasoned that:

"*By our Laws every man may sell as dear as he can; but it appears that this Stock was sold at the usual or common price at the time of making the contract, and perhaps cheaper than it was bought; therefore, I can see no pretence for calling it an unreasonable bargain, unless it be unreasonable to sell things at the market price; neither can I see any colour to say that the Parliament intended to relieve against all contracts whatsoever, when it plainly appears they intended to relieve only against such , where the sellers of the stock sold without having any to make good their contracts, and who, if the price of stock had risen, perhaps could not have performed them; for it cannot be supposed that the Parliament intended to relieve one man, where it cannot be done without oppressing another"*[303].

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302 Ibid, page 5.

303 Ibid, page 7.

He concluded by stating that:

"For my part I must confess, that I can see nothing more in this cause, only that the price of stock is fallen, and it is not for the benefit of the purchaser to perform his agreement. But is that a reason for us to let it aside, and lay the burthen upon the seller, who not only had stock, but kept it for the purchaser, and thereby lost the opportunity of selling it to another, which he might otherwise have done? The purchaser has run no hazard, for if the price of stock had risen, he must have had the benefit of this contract or agreement; by what rule of justice then can we, now the price is fallen, lay the loss upon the seller?

In accordance with the recently passed statute, the Lords ruled that Harcourt would be required to pay for only the number of shares that Thomson had actually held on the date of the contract (a lesser number than Harcourt had agreed to buy).

Despite this robust defence of a derivative contract in England's highest court the strength of feeling against derivative instruments and stock-jobbing after the crash led to the British Parliament debating a new statute against these practices[304],

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[304] "The subject of control of Exchange Alley was taken up again by Parliament in December 1720 in the first glow of righteous (if self-interested) indignation against the speculation during the South Sea Bubble, in which a majority of the Commons and a minority of the Lords had participated. On 20 December 1720 the Commons ordered a Bill "for the better Establishment of publick Credit by preventing, for the future, the infamous Practise of Stock –Jobbing". It was shelved in the Lords, however, and after

which was eventually passed as "*An Act to prevent the infamous practice of stock-jobbing*"[305]. The preamble to the act, known as "*Sir John Barnard's Act*", after the member of Parliament who had proposed it, decried the *"wicked, pernicious and destructive*

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this nothing was done until 1733 (…)" (Dickson, P.G.M.: *The Financial Revolution in England. A Study in the Development of Pubic Credit, 1688-1756*, op. cit., page 518).

On April the 30th 1733 the new Bill was debated in Parliament. The proposed ban on futures and options contracts for the purchase of stock was vigorously opposed by the Member of Parliament Mr Glanville who protested that: "It often happens Sir, that a gentleman, who foresees that he shall have use for his money in three or four months' time, is well satisfied with the price his stock then bears: he cannot then sell out his stock for ready money, because he does not know what to do with his money in the meantime, but as the law now stands, he may take advantage of the then current price of stock, he may sell it out at that price, or perhaps at an advanced price, to be delivered only when he has occasion for the money; this he acquaints his broker of, and the broker may probably find him out a man who likes the then current price, and expects money to be thrown into his hands in three or four months, which he resolves to employ in that fund." Taken from: "The History and Proceedings of the House of Commons from the Restoration to the Present Time (1727 – 1733)". Printed for Richard Chandler, London (1742). "Debate concerning a Bill to prevent the infamous practice of Stock-jobbing". Pages 375 – 392. Pages 376 – 377. During the same debate Sir John Bernard defended his Bill virulently by stating that "The many bad consequences of Stock-jobbing are, I believe, well known; and that it is high time to put an end to that infamous practice, is, what I hope, most gentlemen in this House are convinced of. It is a lottery, or rather a gaming –house, publicly set up in the middle of the City of London, by which the Heads of our Merchants and Tradesmen are turned from getting a livelihood or an Estate, by the honest means of industry and frugality; and are enticed to become gamesters by the hopes of getting an estate at once. It is, Sir, not only a lottery but a lottery of the very worst sort: because it is always in the power of the principal managers to bestow the benefit tickets as they have a mind. It is but lately since, the East – India stock run up to £200 per cent and in a little time after it tumbled down again below £ 150 several millions were lost and won by this single job, and many poor men were undone, so bare-faced were some men, at that time, in the infamous practice of stock-jobbing, that, after that stock began to fall, they sold it cheaper for time than for ready money; which no man would have done unless he had been made acquainted with the Secret which came afterwards to be unfolded, but was then known to very few". Ibid. pages 380 – 381.

305 An Act to prevent the infamous practice of stock jobbing" (1734). As collected in "The Statutes at Large from the Second to the 9th Year of King George II, Volume XVI, by Danby Pickering Esq". Printed by Joseph Bentham (1765). Pages 443 – 448

practice of stock-jobbing, whereby many of his Majesty's good subjects have been and are diverted from pursuing and exercising their lawful trades and vocations, to the utter ruin of themselves and families, and to the manifest detriment of trade and commerce"[306].

The Act was unequivocal in its language, equating derivatives on stocks to wagers and making them null and void (and therefore unenforceable in the Courts). It decreed:

"*That all contracts and agreements whatsoever, which shall, from and after the first day of June, one thousand seven hundred and thirty-four, be made or entered into, by or between any person or persons whatsoever, upon which any premium or consideration in the nature of a premium shall be given or paid for liberty to put upon, or to deliver, receive, accept or refuse any public or joint stock, or other public securities whatsoever, or any part, share or interest therein, and also all contracts in the nature of wagers, and all contracts in the nature of puts and refusals, relating to the then present or future price or value of any such stock or securities, as aforesaid, shall be null and void to all intent and purposes whatsoever, and all premiums, sum or sums of money whatsoever, which shall be given, received, paid or delivered, upon all such contracts in the nature of wagers, as*

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[306] Ibid pages 443 - 444

aforesaid, shall be restored and repaid to the person or persons who shall give, pay, or deliver the same (….)"[307].

The Act made premiums paid for puts and refusals void, and those who paid or received them were subject to a fine of £500. Time-bargains sold by those who did not possess the stock at the moment the contract was made were also void and the parties to them were to be fined £500.In 1737 the act was made perpetual.[308]However, the text only applied to derivatives on securities and not to those on commodities[309], and this helped to

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307 Ibid page 444.

308 "Whereas an act was passed in the seventh year of his present Majesty's reign, entitled, "An Act to prevent the infamous practice of stock-jobbing", which act was to continue and be in force from the first day of June one thousand seven hundred and thirty four, for the term of three years, and from thence to the end of the next session of Parliament, and no longer: and whereas the said act hath been found useful and beneficial, and will in short time expire, be it therefore enacted by the King's most excellent majesty, by and with the advice and consent of the lords(spiritual and temporary, and commons, in this present parliament assembled, and by authority of the same, that the said act shall be, and is hereby made perpetual". Taken from: "The Statutes at Large from the Second to the 9th Year of King George II, Vol. XVII, by Danby Pickering Esq", printed by Joseph Bentham (1765), page 93.

309 During the reading of the Act in Parliament there were various interventions intended to limit the scope of the act. Stamp Brooksbank (who would later become Governor of the Bank of England from 1741-1743) defended the importance of derivative contracts to commodity trading: "It is certain, Sir, that the merchants may sell goods to be delivered at any time the contractors shall agree on: I know that in the Russian trade it is usual for the merchants concerned in that trade, to enter into contracts to deliver hemp at a certain price, at a certain future time, though perhaps, at the time of making the contract, the hemp is not so much as purchased or contracted for in Russia: This is a privilege which is enjoyed by all the merchants with respect to the goods they deal in, and I can see no reason why the proprietors of our public funds should not enjoy the same privilege". Quoted from: Chandler, Richard: "The History and Proceedings of the House of Commons, from the Restoration to the Present Time. Volume VII" (1742), pages 385-386.

ensure that London did not lose the lucrative trade in commodity markets to its main rival of the period, Amsterdam. It also did not prevent time bargains in which the seller had the stock at the time of sale and transferred it on settling day, but it did, at least

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Sir George Casswall was concerned that the wording of the Act would make Navy Bills, a financial instrument issued by the Admiralty for the future payment of provisions, unenforceable through the courts and therefore untenable. He stated: "It is evident, that this Bill will be extremely inconvenient to all proprietors or dealers in any of our public securities: the words of it are so general, that I do not know but that even Navy bills, and contracts for furnishing the Navy with provisions, will be comprehended; and if they are, the usual way of dealing in such affairs will be entirely prevented, which may be of dangerous consequence to the nation, for it is well known, that those who contract for furnishing the Navy with provisions, seldom or never have as much money of their own, as is sufficient for making good contracts they enter into. It is usual for a man who has not perhaps £10,000 of his own, to contract for furnishing the Navy with £ 40,000 worth of provisions; and in such cases the method always hitherto observed is, for the contractor, as soon as he has made such contract, to go to some monied man, who furnishes him with what money he stands in need of, upon his becoming bound for the money advanced with interest from the date; and obliging himself to deliver Navy bills, at the price they agreed on, equal to the principal money then advanced, and the interest that shall in the meantime grow due". Quoted from "Cobbett's Parliamentary History of England. From the Norman Conquest in 1066 to the year 1803. Volume IX (1733-1737)", published by T.C. Hansard (1811), pages 52-53.

Despite not including derivatives on commodities, such as future contracts for commodities, in the text of the Law, these were still sometimes challenged in the British courts. For example; the decision taken in Bryan v. Lewis in 1826. The case concerned a contract in which the defendant had sold nutmegs to be delivered on the following 6th of May (1823), but it was shown that he was not the owner of any nutmegs at the time of making the contract and had subsequently bought them on the 9th of March the following year. The judge ruled that the contract was not actionable (rather than void) stating: "I have always thought, and shall continue to think until I am told by the House of Lords that I am wrong, that if a man sells goods to be delivered on a future day, and neither has the goods at the time, nor has entered into any prior contract to buy them, nor has any reasonable expectation of receiving them by consignment, but means to go into the market and to buy the goods which he has contracted to deliver, he cannot maintain an action upon such a contract". Quoted from: Petersdorff, Charles: *A practical and elementary abridgement of the Common Law as altered and established by the recent statutes, rules of court and modern decisions; comprising a full abstract of all the cases agued and determined in the Courts of Common Law, & on Appeal with the Rules of Court, from M.T 1824, to M.T 1840*, Inclusive Vol. III, V.&R Stevens and G.S Norton (1843).

theoretically, outlaw both speculative time-bargains and options. Despite these provisions the Act appears to have been ineffective in stopping the use of derivatives in trading among stockjobbers[310], (and seems to have done nothing to discourage

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310 In relation to the ineffectiveness of Barnard's Act Stuart Banner notes that: "On paper, the law made it impossible to wager on stock prices, except by simply buying stock and holding it in the hope that the price would rise. In practice, options and futures remained common, as did the settlement of contracts by the payment of price differentials. Such contracts were no longer enforceable in court, but they could still be enforced by exclusion from the informal community of brokers, and later, with the creation of a formal stock exchange, by expulsion from the exchange" (Banner, Stuart: *Anglo-American Securities Regulation: Cultural and Political Roots*, *1690-1860*, Cambridge University Press [1998], page 62).

The renowned economist Adam Smith remarked that:"This practice of buying stocks by time is prohibited by the government, and accordingly, though they should not deliver up the stocks they have engaged for, the law gives no redress. There is no natural reason why £ 1,000 in stocks should not be delivered or the delivery of it be enforced, as well as £ 1,000 worth of goods. But after the South Sea scheme this was thought upon as an expedient to prevent such practices, though it proved ineffectual. In the same manner all laws against gaming never hinder it, and though no redress for a sum above £ 5, yet all sums that are lost are punctually paid. Persons who game must keep their credit; else nobody will deal with them. It is quite the same in stock jobbing. They who do not keep their credit will be soon turned out, and in the language of Change Alley be called a lame duck" (Smith, Adam: *Lectures on Jurisprudence*, Oxford, Clarendon Press [1978], page 538).

The Barrister Henry Keyser wrote in 1850 "That this Act has utterly failed to effect its object is well known, for it is alike anomalous as notorious that a numerous and highly-respectable body of men earn their livelihood by the daily and hourly violation of the clauses of the statute" (Keyser, Henry: *The Law relating to transactions on the Stock Exchange*, printed by Henry Butterworth [1850], page 152).

Morgan and Thomas comment that: "There is abundant evidence, both from contemporary writings and from attempts to reinforce the Act by further legislation, that it was quite ineffective. Bills were introduced in the House of Commons in 1745, 1756, 1771, and 1773; only the last, however, succeeded in passing the Commons and that was rejected by the Lords". Quoted from: Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 63.

public participation in the stock market[311]) but its existence meant that brokers had no means of compelling their clients to honour their obligations through the courts. In 1761 Thomas Mortimer published a guide to the English Stock Exchange[312] in which he lamented the ineffectiveness of the law in bringing an end to stock-jobbing, and commented approvingly on the negative effect on stock-jobbing of the actions of merchants that had pleaded the act in court in order to evade their financial obligations: *"Some tradesmen, or rather merchants, of great eminence, have lately given a terrible blow to Stock-Jobbing, by refusing to pay the losses on their Jobbing account, artfully pleading the act against*

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[311] Stuart Banner writes that: "Approximately 40,000 people owned shares of the national debt at the time of the Bubble. By the 1750s, despite all the rhetoric condemning stock-jobbing, that number had grown to around 60,000. By 1815, it was probably over half a million" (Banner, Stuart: *Anglo-American Securities Regulation: Cultural and Political Roots*, *1690-1860*, ob. cit., page 94).

[312] The book was entitled "Every Man His Own Broker: or, a Guide to Exchange Alley. In which the nature of several funds, vulgarly called the stocks, is clearly explained, and, the mystery and iniquity of stock jobbing laid before the Public in a new and impartial light" Mortimer makes it clear that the 1734 Act had been ineffective in preventing derivative use. In reference to both the South Sea Bubble scandal and St Barnard's Act he writes: "Among all the various productions of the press, it is amazing that this important subject has never been touched, except in a few satirical pieces on the fatal year of 1720; which, though they severely lash the diabolical iniquity of the period, yet have left no solid instructions to the public, how to avoid being the dupes of such sort of schemes, which though carried on in a less conspicuous manner, are yet in practice to this day. The legislature, indeed, since that time, have taken every prudent measure to put a stop to Stock-Jobbing (Vid, an act of Parliament entitled, An Act for the better preventing the infamous practice of Stock Jobbing, made in the year 1734); but notwithstanding all the wise precautions hitherto taken, only the most palpable and glaring frauds have been entirely suppressed". Quoted from Mortimer, Thomas: *Every Man His Own Broker*, printed by S. Hooper London, 5th ed. (1762), Preface, pages vii-viii.

Jobbing, mentioned in the former part of this work, which declares all Stock-Jobbing bargains to be illegal, null and void. A few more instances of this kind will answer the end of extirpating this infamous practice, more effectually than twenty acts of parliament"[313].

3.7 The influence of Barnard's Act in the U.K

3.7 (a) The internal organisation of the London Stock Exchange

The fact that stockjobbers were unable to enforce derivative contracts in the British Law Courts was one of the factors that led to the establishment of the Stock Exchange[314]. The Stock

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313 Mortimer, Thomas: *Every Man His Own Broker*, op. cit., page 50.

314 Ranald Michie writes that traders required "a system of control which guaranteed that sales and purchases would be honoured when they became due. This could not be done in law as Barnard's Act, passed in 1734, had made time bargains illegal, regarding them as a form of gambling. It was thus left to market participants themselves to create a code of conduct that enforced the conditions necessary for trade" (Michie, Ranald C.: *The London Stock Exchange. A History*, Oxford University Press [1999], page 31).

As mentioned previously, brokers and jobbers had congregated around the coffee houses of Exchange Alley in central London since the beginning of the eighteenth century. In 1761 some 150 brokers attempted to establish an exclusive exchange in Jonathan's coffee house. According to Morgan and Thomas: they "formed a club and entered into an agreement with the proprietor of Jonathan's for the exclusive use of his establishment in return for a rent of £1,200 a year, which they raised by a subscription of £8 a head" (Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 68). This exclusive access was soon denied to them as a result of a Court ruling. "A cause was tried at Guildhall before the Right Hon. Lord Chief Justice Mansfield, wherein Mr. Isaac Renoux was plaintiff, and Mr Ferres, master of Jonathan's Coffee – House, defendant, for an assault. It being proved upon trial that that house had been a market (time out of mind) for buying and selling government

Exchange had acquired its own premises in 1773, and initially its governing Committee (the Committee for General Purposes) decided (in 1799) to charge 5 shillings each to those who frequented the building. However, in order to increase both its income and to better enforce compliance with its internal regulations the Committee of Proprietors of the Exchange building suggested that it be converted into a subscription only institution. This idea was approved by the Committee for General Purposes on the 12th of January 1801, and a notice was posted in the building informing brokers of the coming change[315].

securities, the jury brought in their verdict for the plaintiff, with one-shilling damage". Quoted from "The Gentleman's and London Magazine and Monthly Chronologer", Vol. XXXI, printed by John Exshaw (1741), page 363.

As a consequence of this a number of brokers purchased their own premises: "Denied the exclusive use of Jonathan's a group of brokers acquired in 1773, a building of their own in Threadneedle Street, which, for the first time, was called the Stock Exchange" (Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 68).

315 "The Proprietors of the Stock Exchange, at the solicitation of a very considerable number of the Gentlemen frequenting it, and with the unanimous concurrence of the Committee appointed for General Purposes, who were requested to assist them in forming such regulations as may be deemed necessary, have resolved unanimously, that after 27 February next this House shall be finally shut as a Stock Exchange, and opened as a Subscription Room on Tuesday 3 March at ten guineas per Annum ending 1 March in each succeeding year. All persons desirous of becoming subscribers are requested to signify the same in writing to E. Whitford, Secretary to the joint committees on or before 31 inst. in order to their being balloted for by the said committees". Quoted from Stringham, Edward Peter: *Private Governance. Creating order in Economic and Social Life*, Oxford University Press (2015), page 70.

Traders who failed to honour their losses were branded "*lame ducks*" and their names were exhibited in the hall of the Stock Exchange[316]. Morgan and Thomas observe that:

"*The less the sanction of the law in commercial dealings, the more important it is to rely upon honour. The peculiar legal position in which the brokers were placed at a crucial time in the evolution of the market helps to explain the very strict code of honour which grew up among them; their insistence on settling disputes by arbitration or by reference to their own Committee rather than by recourse to law, and the practice of treating all members as principals vis a vis one another, although they are agents in relation to their clients. It was in ways like this that Sir John Barnard's Act had its greatest influence*"[317].

Thus it was understood that members were personally answerable for all the contracts that they entered into, whether they were acting for a client or not. The Committee of the Stock

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316 "Although this practice is not sanctioned by law, yet it is carried on to a great extent; and though neither party can be compelled by law, to fulfil these bargains, their sense of honour, and the disgrace attached to a breach of contract, are the principles by which such transactions are supported. In the language of the Stock Exchange, the buyer is called a Bull, and the seller a Bear, and the person who refuses to pay his loss, is called a Lame Duck; and the names of the defaulters is exhibited in the hall of the Stock Exchange, where they dare not appear afterwards". Quoted from Carey, George G: *Every Man his own Stock-Broker: or, a complete guide to the Public Funds with the manner of transferring stock*, printed by J Johnston (1820), page 63.

317 Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, op. cit., page 64.

Exchange enforced agreements between members, regardless of whether they were formally illegal, except those procured by fraud or deliberate misrepresentation. The testimony of Mr Samuel Herman de Zoete, the Chairman of the Committee of the Stock Exchange before a Parliamentary Committee in 1875 reveals the prevailing attitude of brokers in the nineteenth century towards Barnard's Act:

"(Q.) Do you mean to say that it is a policy of the Stock Exchange to set at defiance an Act of Parliament which affects to restrict your dealings?

(A.) We consider as the fundamental policy of the Stock Exchange, that all bargains are indefeasible in themselves.

(Q.) Even if there is an Act of Parliament to prevent them?

(A.) Yes, I have said so…" (….) "There is not a gentleman on the Stock Exchange who could not stand on the boards one day who refused to carry out the contracts he had made, even in spite of Sir John Barnard's Act…he would be obliged to walk out, he would be expelled, simply because it would be dishonourable"[318].

[318] Quoted from: Ferguson R.B.: "Commercial Expectations and the guarantee of the Law: Sales Transactions in Mid-Nineteenth Century England", contained in *Law, Economy and Society, 1750-1914: Essays in the History of English Law*, edited by G.R Rubin, David Sugarman, London, Professional Books (1984), pages 192-208, pages 196-197.

3.7 (b) The steady clarification and delimitation of the terms of the Act by case law

Although brokers generally relied upon the internal mechanisms of the Stock Exchange to resolve their differences, there were still a number of cases which came to Court in order to determine the extent of the application of the terms of the Act to peripheral issues, or because the losing party in a derivative transaction (often a client) attempted to void the contract (and so escape the obligation to make payment) by having it declared contrary to Barnard's Act. These cases resulted in a gradual elucidation of the reach of the Act and steadily narrowed its possible field of application.

(i) A bond used to secure the payment of losses on a derivative contract was not void under St Barnard's Act, as a payment made by one partner to reimburse the other for covering his part of the losses on a derivative transaction was not prohibited by the act. However, money lent to make direct payment to the beneficiary of such a contract could not be lawfully recovered by the lender.

In the case of *Faikney v Reynous* (1767) Faikney (the plaintiff) was a broker, who, together with his partner Richardson, had lost money on a contract for differences (an illegal speculative derivative contract on the difference between stock prices in which no actual delivery of stock had been made or had been

intended)[319]. Faikney had paid both his own losses and those of his partner, and Richardson had presented a bond to Faikney, as security for the payment for his half of the losses. However when Faikney requested payment from the issuers of the bond (Reynous and others, the defendants) they refused to make it, claiming that the bond was void according to Section V of Barnard's Act[320].

In granting judgement for the plaintiff the judges noted that: "*This is not a bond for payment of the composition-money to the persons Faikney and Richardson had contracted with; but a bond for Richardson's paying to Faikney a debt of honour, and*

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319 "The defendant insists that the bond is void, as being entered into for securing the repayment of money paid illegally and contrary to this Act of Parliament. The question rises upon § 5of that Act, which is calculated for preventing the compounding or making up of differences for stocks or other public securities; without specifically executing the contract, and actually delivering the stock, &c. The offence constituted by this Act, is the compounding differences, instead of actual performance of the contract; and a penalty or forfeiture of £100 is inflicted upon the offender". Quoted from Faikney v. Reynous, *English Reports Full Reprint*, King's Bench, Vol. 98, pages 79-81, page 80.

320 Section V of "An Act to prevent the infamous practice of stock-jobbing" states that: "And for preventing the evil practice of compounding or making up differences for stocks or other securities bought sold, or at any time hereafter to be agreed so to be, be it further enacted by the authority aforesaid, that no money or other consideration whatsoever (except as herein after is provided) shall, from and after the said first day of June, one thousand seven hundred and thirty four, be voluntarily given, paid, had, or received, for the compounding, satisfying, or making up any difference for the not delivering, transferring, having or receiving any public or joint stock, or other public securities, or for the not performing of any contract or agreement so stipulated and agreed to be performed; but that all and every such contract and agreement shall be specifically performed and executed on all sides, and the stock or security thereby agreed to be assigned, transferred, or delivered, shall be actually done, and the money, or other consideration thereby agreed to be given and paid for the same, shall also be actually and really given and paid (…)". Taken from "The Statutes at Large from the Second to the 9th Year of King George II, Volume XVI, by Danby Pickering Esq", printed by Joseph Bentham (1765), pages 445-446.

reimbursing to Faikney the money that Faikney had paid upon Richardson's account, to compound the differences of contracts wherein they had been jointly concerned; and therefore it is a good bond; and the plaintiff's ought to recover upon it"[321].

An almost identical judgement was made in the case of *Petrie v. Hannay* (1789), this time involving a Bill of Exchange[322], rather than a bond. Keeble, Petrie (the plaintiff, acting as executor of Keeble's will) and Hannay (the defendant in the case) lost money on derivative transactions banned by Bernard's Act. Their losses were initially met by their broker, Potris. Keeble repaid Portris the full sum except for the losses incurred by Hannay, for which part he drew up a Bill of Exchange in favour of Potris which Hannay accepted. As the Bill of Exchange was not repaid when it became due, Potris took an action for payment against the late Keeble's executors, who then repeated the action against Hannay. Hannay's counsel claimed that the payment formed part

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321 Quoted from: Faikney v. Reynous, *English Reports Full Reprint*, cit., page 81.

322 In this respect see also the 1828 King's Bench case of Greenland v. Dyer. This case distinguished between the validity of a Bill of Exchange, which was initially drawn to pay the outstanding amount on a contract for differences and the validity of a contract for differences itself. Lord Tenterden determined that: "The contract upon which this action is brought is not the contract for doing the illegal act. The contract mentioned in the statute is that by which the parties agree to pay and receive differences. The broker himself, who has made the illegal contract, cannot recover; but when the bill passes into the hands of an innocent person, no case has said, nor is there any principle to show, that such a party cannot recover". Quoted from: Greenland v. Dyer, "Reports of Cases Argued and Determined in The Court of the King's Bench, during Easter and Trinity Terms, Ninth Geo IV. Volume II", printed by C. Roworth (1829), page 422.

of a transaction that was illegal under Section V of Barnard's Act and was therefore void.

The judges decided the case on the basis of *Faikney v Reynous.* Judge Grose stated that: "*On the part of the defendant, there is neither honour or honesty in the defence; and the plaintiffs ought to recover as much as the law can give them, without interfering with one of the most politic and beneficial statutes that was ever passed. But if we see clearly that the plaintiffs are so involved in the illegal transaction, that it was intended that the statute should extend to them, they cannot recover. However, it is to be considered that this action is not founded on a promise arising by implication of law out of the illegal transaction, but from an express one made subsequently, and which the defendant was under no necessity of making: and I agree in the distinction which my brother Buller has made between promise founded on illegal and legal contracts. And although I have entertained doubts on this question, I cannot distinguish this case from that of Faikney v. Reynous; upon which I give my judgement"*[323].

In both cases a distinction was made between payments made directly to the beneficiary of the speculative contract in order to settle an account for losses, which was considered to be illicit

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[323] Quoted from: Petrie v. Hannay, *English Reports Full Reprint*, King's Bench, Vol. 100, pages 652-656, page 656.

under the terms of the Act, and payments made from one associate to another for money owed after one had made a payment to cover the losses on a speculative derivative contract, which was not. However, this rather fine appreciation was not accepted unanimously by the judges in the case of Petrie v. Hannay[324].

This line of reasoning was upheld to the detriment of a third-party lender in the case of *Cannan v. Bryce* (1819), in which the judges ruled that money lent for the direct payment of losses to the beneficiary of a contract for differences, prohibited under Section V of Barnard's Act, could not be recuperated through the Courts. Judge Abbott asked rhetorically: "*Then as the statute in question has absolutely prohibited the payment of money for compounding differences; it is impossible to say that the making of such payment is not an unlawful act; and if it will be unlawful in one man to pay, how can it be lawful for another to furnish him with the means of payment?"*[325].

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[324] Lord Kenyon complained that "I cannot distinguish this case from that of smuggling, put at the Bar, where if one of two partners advance money in a smuggling transaction, he cannot recover his proportion of it against his partner because the transaction is prohibited; and yet smuggling is not malum in se, as contradistinguished from malum prohibitum. If this transaction had been disclosed in the former action, Portis could not have recovered: now supposing the bill of exchange puts the plaintiffs in his situation, they are not assisted by it; or considering them, on the other hand, standing in their own situation, unconnected with Portis, they then appear as partners in a matter prohibited by the laws of the country, and cannot therefore have recourse to those laws to enforce their contract" (Ibid, page 654).

[325] Quoted from Cannan v. Bryce, *English Reports Full Reprint*, Vol. 106, King's Bench, ages 628-630, page 630.

(ii) The Act did not prevent agreements by which shares were lent for sale on the condition that the same number of shares would be returned at a future date.

Section 8 of Barnard's Act contained provisions which prohibited the practice of selling stocks which the seller did not possess or have a legal title to at the moment in which the sales contract was made.[326] However, Section 11 of the Act stated that the Act did not prevent stock being lent as security for a loan and then re-assigned to the original owner upon repayment of the quantity lent (providing that the rate of interest on the loan did not exceed legal interest)[327]. The related question of whether stock

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326 "And whereas it is a frequent and mischievous practice for persons to sell and dispose of stocks, or other securities, of which they are not possessed: be it therefore further enacted by the authority aforesaid. That all contracts and agreements whatsoever, which shall, from and after the said first day of June, one thousand seven hundred and thirty four, be made or entered into for the buying, selling, assigning, or transferring of any public or joint stock or stocks, or other public securities whatsoever, or of any part, share, or interest therein, whereof the person or persons contracting or agreeing, or on whose behalf the contract or agreement shall be made, to sell, assign, and transfer the same, shall not, at the time of making such contract or agreement, be actually possessed of, or entitled unto, in his, her, or their own right, or in his, her, or their own name or names, or in the name or names of a trustee or trustees to their use, shall be null and void to all intents and purposes whatsoever, (…)". Taken from "The Statutes at Large from the Second to the 9th Year of King George II, Volume XVI, by Danby Pickering Esq", printed by Joseph Bentham (1765), pages 446-447.

327 " (…) nothing in this act contained shall extend, or be construed to extend, to hinder or prevent any person or persons from lending any sum or sums of money on any public or joint stock, or other public securities whatsoever, or any part, share or interest therein, or to prevent or hinder any defeasance, contract, or agreement, being made and entered into for the re-delivering, assigning or transferring such public or joint stock, or other public securities, or any part, share, or interest therein, upon the repayment of the sum

itself could be lent out by means of a contract by which one party agreed to assign stock to another in exchange for the promise to receive the same quantity of stock at a given date in the future was decided by the case of *Sanders v. Kentish* (1799). This is of course the mechanism which allows for short selling. If **A** suspects that the price of stock in Company X is going to fall in the near future, he can enter into a contract with **B** (normally for an agreed consideration) to transfer the stock to him with the promise of returning the same quantity of stock at a future date (for example in three months' time). He may then sell the stock to **C** and when the expected slump in the price of the stock occurs buy it cheaply on the market in order to comply with his contractual obligation to B. Obviously B runs the risk that the price of stock may not fall or may even rise, in which case no sale is made (or worse for B the stock is sold at a loss if there is a contractual obligation to sell) and he has lost the consideration paid to **A**. This type of speculative contract was what Section 8 of the Stock Jobber's Act was attempting to put a stop to, by prohibiting the sale of stock by those who had no legal title to it at the moment of sale. However, these were not the circumstances

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or sums of money, which shall have been lent or borrowed thereupon, with interest for the same, so as no premium or other consideration whatsoever be paid to, or received by the person or persons lending such money, for or in consideration of such loan, more than legal interest" (Ibid, page 448).

of *Sanders v. Kentish* which were actually quite peculiar and are best captured by the words of Chief Justice Lord Kenyon:

"The case shortly is this: - The defendant Kentish, who is a stock-broker, and was therefore most probably acquainted with the statute on which his counsel has now relied, applied to the plaintiff, a clergyman, who was probably ignorant of that law, and obtained from him a loan of £3,000 stock, on an understanding to replace the same stock on a given day: from this transaction the plaintiff was to derive no advantage whatever. The plaintiff gave him a letter of attorney, empowering him to sell the stock: he then put the money into his pocket; and when the day of payment arrived, refused to pay the plaintiff, insisting that the Statute of Geo. 2 rendered the contract void; and that therefore the plaintiff cannot enforce the contract in a Court of Law"[328].

Lord Kenyon, after expressing his indignation with the stockbroker Kentish[329], ruled that the agreement to lend stock was

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328 This is quoted from: Sanders v. Kentish, *English Reports Full Reprint*, Vol. 101. King's Bench, pages 1323-1325, page 1325.

329 Lord Kenyon opined that: "The Act is entitled "An Act to Prevent the Infamous Practice of Stock-Jobbing:" but if the defendant's objection were to prevail, the title of the Act ought to be altered; and it should run thus: "An Act to Encourage the Wickedness of Stock – Jobbers, and to give them the Exclusive Privilege of Cheating the Rest of Mankind" (Ibid, page 1325).

not prohibited by the Act, but was covered by the exception of Section 11[330].

(iii) A broker could sell stock that he did not personally possess on behalf of his principal, provided that his principal possessed the stock at the moment that the contract for sale was drawn up, even if the broker did not reveal the name of his principal to the other purchasing party.

In the normal course of their business brokers bought and sold stock on behalf of principals who had no involvement in the transactions themselves[331] beyond collecting the gains or paying the losses on their accounts, and with derivative contracts for differences, the question of whether either party actually possessed the stock was irrelevant, as there was no delivery of stock but only a cash settlement made. Brokers bought and sold

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330 "On considering the whole of the Act together, I am clearly of opinion, that its object was only to prevent gambling in the funds; but the Legislature did not mean to prohibit a loan of stock and an undertaking to replace it. I do not think that this case comes within the meaning of the prohibitory clauses in the Act; but it is within the exception in the last section" (Ibid, page 1325).

331 "It is the common course of business on the Stock Exchange for the brokers to make engagements in their own names for the transfer of stock, without disclosing their principals, and credit is in those cases given to themselves personally (…)". Quoted from: Child v. Morley, *English Reports Full Reprint*, Vol. 101, King's Bench, pages 1574-1577, page 1575.

"We know that it is common practice on the Stock Exchange for the broker who is employed to sell stock, not to disclose the name of his principal at the time of making the bargain; and the buyer deals with him upon the confidence of his character". Chief Justice Lord Kenyon (Ibid, page 1576).

in their own name, thus protecting the anonymity of their clients. In the case of *Child v. Morley* (1800), Mr. Child, a broker, acting on the instructions of his client Mr Morley, who held stock in a company, negotiated to sell the stock at a certain price on a future date. However, before the date for delivery the price of the stock rose, and Morley refused to transfer the stock to the buyers. Child, who had acted under his own name in the negotiations with the buyers, felt obliged to honour the sales contract by paying the buyers the difference between the value of the stock on the day of the purchase contract, and its value on the expected date of delivery. However, he took legal action against Morley to claim both the difference he had paid and his broker's fee. Morley responded by claiming the action was void under Barnard's Act, as Child did not have the stock in his possession when it was sold and so (Morley alleged) had effectively carried out an illegal contract for differences.

The judges were not unanimous in their interpretation of Barnard's Act. Judge Wood argued that Section 11, which allowed for the re-assignment of stock that had been used as a security for a loan once the loan had been re-paid "*does not apply to a case where the stock has actually been sold, and the money paid to the borrower, who undertakes, without having any stock*

in possession, to replace a certain quantity at a given time"[332]. Judge Wood's understanding of the transaction was that it was "(…) *in effect a mere wager, the quantum of which depends on the fluctuations of the price of stock"*[333].

However, Lord Kenyon and the remaining judges were satisfied that the loan of stock with an undertaking to replace it was not prohibited by the statute and that preserving the anonymity of the seller was no impediment to the legality of such a loan.

This judgement, while not endorsing the illegal use of derivatives, sanctioned the anonymity of principals (and without knowledge of their identity it would be impossible to prove whether they ever really possessed the stock in question), and confirmed the legality of lending stock. This gave a veneer of legitimacy to the hundreds of operations performed on the Exchange which were contrary to the terms of the statute.

(iv) Foreign stocks were not covered by the terms of Barnard's Act

The case of *Wells v. Porter* (1836) confirmed the judgement given in *Henderson v. Bise* (1822) that transactions on stock in

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[332] Judge Wood, ibid page 1324.

[333] Judge Wood, ibid page 1325.

foreign companies were not covered by Barnard's Act (as they were not specifically contemplated by the statute). In *Henderson v. Bise* the defendant had entered into a contract with the plaintiff to transfer two Colombian bonds for a certain price at a particular date in the future, but the worth of the bonds rose before the delivery date and the defendant refused to deliver one of the bonds. The plaintiff demanded compensation under Section 7 of the Act[334], but the defendant claimed that the case was not actionable under the terms of Barnard's Act, as the plaintiff had not actually purchased the bond before bringing the action. This defence was dismissed on the grounds that Barnard's Act did not apply to foreign stock.

Chief Justice Abbott: "*was of opinion that the words 'public or joint stock' relate merely to stock of this country, and was made to prevent jobbing in the British public funds. It did not appear what the nature of Columbian bonds was: it was probable that the trafficking in such instruments might be attended with as much mischief as jobbing in the funds of this country; and it might*

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[334] "That it shall and may be lawful and for any person or persons, who shall buy any public or joint stock, or other public securities, to be accepted and paid for on a future day, and which shall be refused or neglected to be transferred, to buy the like quantity of such stock, or other public securities, of any other person or persons at the current market price, and to recover and receive, after such purchase and acceptance (if the parties can agree) from the person or persons who first contracted to sell or deliver the same, the damage which shall be sustained by reason of the not delivering or not transferring such stock or other securities (…)". Taken from "The Statutes at Large from the Second to the 9th Year of King George II, Vol. XVI, by Danby Pickering Esq", printed by Joseph Bentham (1765), pages 446-447, page 446.

be desirable that a statute should be passed to restrain such practices; but as they did not fall within the statute referred to, the plaintiff was entitled to recover"[335].

In *Wells v. Porter*, Wells, a broker, had arranged for the defendant to receive stock in certain Spanish and Portuguese companies, which once procured, Porter, the defendant, had refused to pay for. The defendant claimed the contract was void under Barnard's Act because at the moment that the sales contract had been drawn up, Wells neither possessed nor had any legal claim to the stock, and nor was he acting on behalf of any principal who had the stock in his possession.

In giving their opinions Judge Bosanquet, Judge Vaughan and Chief Justice Tindal all remarked that particular care had to be taken when interpreting the language of the Act because of its penal nature[336], and that there was no mention of foreign stocks in the text. Judge Park agreed that "*There is nothing relating to aliens in the statute, and public stock must mean the public stock*

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335 Quoted from: Henderson v. Bise, *English Reports Full Reprint*, Vol. 171, Nisi Prius, page 807.

336 Judge Bosanquet: "We ought not to extend the language of an act so penal, and there is no express mention of foreign stocks". Judge Vaughan: "The statute is penal and, therefore, we should be unwilling to extend it by intendment, in its language there is nothing that can apply to foreign stocks". Chief Justice Tindal: "I cannot think that a statute so penal is to be enlarged beyond the strict subject-matter to which it relates. We ought not, therefore, to enlarge it by any intendment" Quoted from: Wells v. Porter, *English Reports Full Reprint*, Vol. 132, Common Pleas (1486-1865), ages 278-282, page 281.

of this country, unless we find exceptions to the contrary"[337].Judgement was made for the plaintiff and this confirmed that no foreign stocks could be affected by the terms of the act.

(v) Derivatives on the stocks of private joint stock companies were not covered by the terms of Barnard's Act

Historically, public joint stock companies were those in which the payment of the dividends or capital was guaranteed by the government (as a result, for example, of an equity swap for government debt annuities of the type carried out by the South Sea Company). The case of *Williams v. Trye* (1854) determined that the scope of Barnard's Act was limited to public joint stock companies. This case involved a dispute between a client (Williams, the plaintiff) and his broker (Trye, the defendant). Trye alleged that a series of unsuccessful transactions in stock, executed by Trye, had left Williams owing money on his account. Williams replied that he believed the transactions to have been fictitious and demanded discovery of the details of each of the transactions, to which Trye replied that such discovery would result in compelling him to testify against himself and incurring the penalties contained in Barnard's Act. The Master of the Rolls, in this case, Sir John Romilly, had to decide whether the shares in

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337 Ibid, page 281.

question, which were in private joint stock companies, were covered by Barnard's Act. His decision was that: "*In my opinion, the statute of the 7 Geo.2, intended those stocks and securities only which are ordinarily considered public stocks and securities, and the payment of the dividends or capital of which is guaranteed by the Government. In the absence of any authority, none having been cited, I think that it does not apply to stocks and securities of a different nature*[338]*"*. Given that the stocks in question were not governed by the statute he ordered the defendant to make full disclosure of the transactions he had made on the plaintiff's account.

(vi) A contract for the sale of stock to be delivered in the future was not invalidated by the fact that the seller neither possessed the stock in question, nor had a contract to buy the stock, nor any other reasonable expectation of acquiring the stock other than purchasing it after the contract had been made.

Although the case examined in this section did not involve Barnard's Act directly, it did advance the legal standing of short sales of stock by recognising the possibility of a mere sale of promises.

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[338] Quoted from: Williams v. Trye, *English Reports Full Reprint*, Vol. 52, Rolls Court, pages 145-147, page 146.

Hibblewhite v. M' Morine (1840) concerned a contract for the future sale of 50 shares in the Brighton railroad company. On the 10th of September 1838 the plaintiff had agreed to deliver to the defendant 50 shares in the Brighton railway company, on or before the 1st of March 1839. At the time of entering into the contract the plaintiff was not the proprietor of any shares, but on the 12th of September he purchased them through a broker. When the time for delivery came, the defendant refused to take possession of the shares, so the plaintiff resold them at a loss at the going market price. The plaintiff then brought an action against the defendant to recover his loss, plus interest. The defence claimed that the initial contract for sale was invalid, because at the time of making the agreement the plaintiff was neither possessed of nor entitled to the shares, nor had any reasonable expectation of acquiring them, other than by purchasing them. This defence followed the judgement of Lord Tenterden in the 1826 case of *Bryan v. Lewis* (see footnote 297).

The judgement in favour of the plaintiff acknowledged the validity of a sale of promises to provide assets, rather than requiring either their possession or a reasonable expectation of acquiring them at the time the contract was made. It thus contradicted the earlier decision of Lord Tenterden. Judge Parke commented that: "*I have always doubted the correctness of Lord Tenterden's dictum in Bryan v. Lewis, and I recollect entertaining*

a suspicion of its unsoundness on the first occasion of reading it. It is not tenable in point of law. No legal principle is endangered by allowing parties to sell goods of which they are not possessed. A transaction of this sort cannot be considered a wager, because both parties are not cognisant of it, nor has it any tendency to injure the public. Indeed, the fewer the restraints imposed upon contracts the better"[339].

Judge Alderson went even further in his criticism of Lord Tenterden's position: *"If this dictum of Lord Tenterden were upheld, it would put an end to half the contracts that are made. It matters not, that a vendor is not in possession of goods, provided he is ready to deliver goods of the same quality. With regard to*

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[339] Hibblewhite v. M' Morine, The Exchequer of Pleas (1840): The quotation is taken from: "The Law Journal Reports for the year 1839. Volume XVII. Part II. Cases at Common Law. Reports or Cases argued and determined in the Court of the Exchequer of Pleas", published by E.B.Ince (1839), ages 272-273.

Only 17 years later District Judge Drummond of the Circuit Court of the Northern District of Illinois was able to state that: "Whatever doubts may have formerly existed, it must now be considered the settled law, both in England and in this country, that the mere fact that a man may not have in his possession, and has not attempted to acquire possession of, a particular commodity, which he undertakes to sell, deliverable at a future time, will not render illegal a contract made by him to sell and deliver the article. He is bound by his contract, nevertheless, and must deliver the property or be subject to the consequences of a non-delivery. It is an agreement to sell and deliver at a future day, and to release a party from such a contract, because he did not at the time possess the property, would interfere too much with commercial contracts". Quoted from: Porter v. Viets, United States Circuit Court for the Northern District of Illinois (1857), available at: https://cite.case.law/f-cas/19/1077/

public policy, it is sufficient to observe, that the policy of one man is not the policy of another"[340].

3.7 (c) The repeal of Barnard's Act in 1860

The repeal of Barnard's Act was motivated by the Government's desire to impose a penny duty on contracts for the transfer of stock, including through derivative contracts. In 1860 The Stock Exchange was requested to appoint a subcommittee and produce a report[341] to seek the repeal of the Act. When it came later that same year, the Bill to repeal the Act met with some opposition in the House of Commons[342], but the Chancellor of the Exchequer was naturally keen to press ahead with its proposed abolition, and Hansard reports him as stating that: *"Sir John Barnard's Act, considered along with other legislation, placed members of the Stock Exchange under a peculiar law, exclusively applicable to them. In the opinion of those gentlemen the effect of*

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340 Ibid, page 274.

341 The report was entitled "Strictures on the evidence in the Report of the Royal Commission of Inquiry into the Corporation into the City of London on the Regulation of Brokers and Stock Brokers and the Proposed Repeal of Sir John Barnard's Act". Published by Houlston and Wright (1860).

342 For example, Hansard records the concern of John Ayshford Wise, the Liberal M.P for Stafford. "There could be no objection urged against the buying and selling of stock and public and other securities; but 'stock-jobbing' was a thing which he hoped every hon. Gentleman in the House would endeavour to do all in his power to prevent. He was anxious to have an assurance from the Chancellor of the Exchequer that the effect of repealing this Act would not be to promote the injurious practice of 'stock-jobbing'" Quoted from: Hansard, the 31st of March 1860, Vol. 157.

the Act was to proscribe and render penal, not only what were called and understood to be wagering transactions, but likewise the regular and ordinary form under which the whole of that vast and beneficial business of dealing in the funds was conducted. He, therefore, now intended to repeal the Act treating in an exceptional manner this particular class of pecuniary transactions leaving them subject to the general provisions of the law as determined by the Wagering Act (...)"[343].

The repeal of the Act meant that defaults on derivative contracts on stocks could now be legally pursued through the Courts; unless, that is, they could be characterised as wagers under gaming legislation.

3.8 The effect of gaming laws on derivative contracts

From medieval times onwards, a number of English statutes had been directed against gaming, however, they had not been motivated by a desire to ban gaming *per se*, but rather to prevent disturbances to public order or interferences with military discipline and preparedness[344]. A statute of Richard II for

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[343] Ibid.

[344] England was involved almost continually in military conflicts from the 13th to the 18th centuries (and beyond). A non-exhaustive list includes: The Anglo-French War (1213 – 1214) and (1294 – 1303), The Second War of Scottish Independence (1332 – 1357), The Hundred Years' War (1337 – 1453), The Anglo Scottish Wars (1377 – 1575), The War of the Roses (1455 – 1485), the Italian War (1521 – 1526), The Rough

example, which was enacted in 1388 during the course of the Hundred Years' War[345], had banned servants from wearing swords and daggers to prevent lethal brawling, and from taking part in games of skill and chance so as to prevent disputes and to encourage them to use their time more productively in honing their archery skills[346]. In 1477, in the course of the final years of the Wars of the Roses[347], Edward IV had introduced a statute to

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Wooing 1543 – 1550, The Italian War (1551 – 1559), The French Wars of Religion (1562 – 1598), The Eighty Years' War (1566 – 1648), The War of the Portuguese Succession (1580 – 1583), The Anglo Spanish War (1585 – 1604), The Nine Years' War (1594 – 1603), The Dutch – Portuguese War (1602 – 1661), The Anglo Spanish War (1625 – 1630), The Anglo French War (1627 – 1629), The Portuguese Restoration War (1640 – 1668), The Irish Confederate Wars (1641 – 1653), The English Civil War (1642 – 1651), The First Anglo Dutch War (1652 – 1654), The Anglo Spanish War (1665 – 1657), The Nine Years' War (1688 – 1697), The War of the Spanish Succession (1701 – 1714), The Seven Years' War (1756 – 1763), The American Revolutionary War (1775 – 1783), The War of the French Revolution (1793 – 1802). Given England's bellicose history it is not surprising that English Statutes throughout this period should concern themselves with trying to ensure that men of fighting age were prepared for battle.

345 The Hundred Years' War (1337 – 1453) was a series on conflicts fought between the English and French crowns over the right to rule France.

346 The relevant part of the text states that: (….) "it is accorded and assented, that no servant of husbandry, nor servant, or artificer, nor of victualler, shall from henceforth bear any buckler, sword nor dagger, upon forfeiture of the same, but in the time of war for defence of the realm of England, and that by the surveying of the arrears for the time being, or travailing by the country with their master, or in their master's message, shall have bows and arrows, and use the same the Sundays, and holydays, and leave all playing at tennis or football, and other games called coits, dice, casting of the stone, kails, and other such importune games". Quoted from: "The Statutes at Large: from the fifteenth year of King Edward III to the thirteenth year of King Henry IV inclusive", compiled by Danby Pickering, Vol. II, printed by Joseph Bentham. London (1762), page 302.

347 The Wars of the Roses (1455 – 1487) is the name given to the series of battles fought between two branches of the House of Plantagenet over their rival claims to the

prevent games of chance that provoked "*murders, robberies and other heinous felonies"*[348]. The statute also stressed the need for bow practice rather than idle gaming, lamenting the fact that "*every person strong and able of body should use his bow, because that the defence of this land was much by archers, contrary to which laws the games aforesaid and many new imagined games, called closh, kailes, half-bowl, hand –in and hand-out, and queckboard, be daily used in divers parts of this land (...)"*[349]. These same concerns are repeated in a statute issued in the reign of Henry VIII in 1541 entitled "*The bill for the maintaining artillery, and the debarring of unlawful games"*[350]. This statute was drawn up "*for the avoiding of divers and many unlawful games and plays, occupied and practised within this realm, to the great hurt and lett of shooting and archery"*. It made

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throne of England. The name derives from the fact that the House of Lancaster was represented by a red rose and the House of York by a white rose.

348 Quoted from "The Statutes at Large: from the first year of King Henry V to the twenty – second year of Edward IV inclusive", compiled by Danby Pickering, Vol. III, printed by Joseph Bentham, London (1762), pages 445-446.

349 Ibid page 446.

350 "The Statutes at Large: from the thirty-second year of King Henry VIII to the seventh year of King Edward VI inclusive", complied by Danby Pickering, Vol. V. printed by Joseph Bentham, London (1762), pages 79-87.

archery practice mandatory[351], and banned both the keeping of and frequenting of gambling dens[352].

In 1603, the case of Darcy v Allen[353] (known as the monopolies case), confirmed that gambling was not prohibited by Common Law: "*the playing at dice and cards is **not** prohibited by the Common Law, (if not that some be deceived by false dice and cards, and there he who is deceived shall have an action upon this case for the deceit), and playing at dice and cards is not*

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351 "(…) every man being the King's subject, not lame, decrepit nor maimed, nor having any other lawful or reasonable cause or impediment, being within the age of sixty years (except spiritual men, justices of one bench and of the other, justices of the assise and baron of the exchequer) shall from the feast of the Pentecost next coming, use and exercise shooting in long-bows, and also have a bow and arrows ready continually in his house, to use himself, and do use himself in shooting" (Ibid page 80).

352 With regard to the keeping of gambling dens the statute stipulated that: "no matter of person or persons, of what degree, quality or condition soever he or they be, from the feast of St. John the Baptist now next coming, by himself, factor, deputy, servant, or other person, shall for his gain, lucre or living, keep, have, hold, occupy, exercise or maintain any common house, alley or place of bowling, cloysh – cayls, half bowl, tennis, dicing table or carding (…)". The consequence of frequenting one of these places or playing any of the prohibited games was a fine: "and also every person using and haunting any of the said houses and plays, and there playing, to forfeit for every time so doing, six shillings eight pence" (Ibid page 78).

353 Darcy v. Allen. In this case, heard before the Queen's Bench in 1602, the plaintiff had received a patent from Queen Elizabeth I, which gave him the exclusive right to manufacture playing cards for a period of 21 years. The defendant had infringed this right and was being sued for damages. As part of his defence the defendant claimed that the Common Law permitted gambling and that the monopoly constituted an effective restriction of this right. The Queen's Bench delivered judgement for the defendant and determined that the Queen's grant of the monopoly had been invalid.

malum in se, for then the Queen should not suffer, nor license the same to be done[354]*"*.

However, after the judgement in Darcy v. Allen, the focus of subsequent English statutes seems to have switched from being purely a concern for the collateral effects of gaming on social order and military readiness to an attempt to limit its potentially destructive effect on individuals. During the Interregnum[355] a 1657 statute was passed[356] which made all securities given for the payment of gambling debts null and void[357] (and therefore

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354 Written judgements were still not regularly issued in the early 17th century, and our knowledge of the details of the case comes from the reports of Sir Edward Coke (1552-1634), who served as Chief Justice of the King's Bench, Attorney General for England and Wales and Solicitor General for England and Wales. The line quoted is taken from: Sir Edward Coke: *The Selected Writings of Sir Edward Coke*, Vol. I, edited by Steve Sheppard, Liberty Fund, Indianapolis (2003), pages 1164-1165.

355 The Interregnum is the name given to the period in English history from the execution of King Charles I in 1649 to the restoration of Charles II in 1660. The legislature of this period was dominated by the Puritan views of Parliament.

356 The act was dated June the 26th 1657 and entitled "An Act for punishing of such persons as live at high rate and have no visible estate, profession or calling answerable thereunto". The Puritan's opposition to gambling stemmed from their conception of the "calling" of man, according to which people were selected by God in order to perform particular vocations, and the dedication they showed in their work was evidence that they had been elected to paradise. Gambling was associated with idleness and therefore a sign that the gambler was straying from the path of salvation, something that Puritan society felt it had a moral duty to correct.

357 "And be it further Enacted by the Authority aforesaid, that all Judgements, Statutes, Recognizances, Mortgages, Bonds, Bills, Promises, Covenants, Decrees and other Assurances and Engagements whatsoever, that any time, since the four and twentieth day of June, in the year One thousand six hundred forty seven, have been, or shall hereafter knowingly be obtained by, or otherwise, made, given, acknowledged or entered into, to any Scrivener or Scriveners, or to any other person or persons, for security, or in satisfaction of money, or other things, since the time aforesaid, plaid for, or hereafter to be plaid for, or lost at Cards, Dice, Tables, Tennis, Bowles, Shovel-

unenforceable in Court) and obliged those who won money gambling to forfeit the double of their winnings[358]. The Preamble to the Act attacked those who "*having no visible estate, profession, or calling (answerable thereunto) to maintain themselves in their licentious, loose, and ungodly practices, do make it their trade and livelihood to cheat, deboyst* [359]*, cozen, and deceive the young gentry, and other good people of this Commonwealth"*[360].

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board, or by Cock-fighting, or by Horseraces, or by any Game or Games, or by bearing any part in the Adventure, or by betting on the sides or hands of such as do or shall play as aforesaid, shall be utterly void and of none effect". Quoted from: "An Act for punishing of such Persons as live at High Rate and have no visible Estate, Profession or Calling answerable thereunto". Contained in "Acts and Ordinances of the Interregnum, 1642-1660", Vol. II, edited by CH Firth and R S Rait, printed by Wyman and Sons (1911), page 1249.

358 "And be it further Enacted by the authority aforesaid, That if any person or persons, at any time after the first day of August, which shall be in the year of our Lord, One thousand six hundred fifty seven, shall, (by playing at Cards, Dice, Tables, Tennis, Bowles or Shovel-board, Cock-fighting, or by Horse-races, or any Game or Games, or by bearing any part in the Adventure, or by betting on the sides or hands of such as do or shall play as aforesaid) directly or indirectly, win or gain unto him or themselves, any sum or sums of money, or other thing valuable whatsoever, that then every person and persons, so winning or gaining as aforesaid, shall forfeit double the sum or value so won or gained; one Moyety thereof to the Protector, the other Moyety unto the person or persons who shall lose the same, so as such loser do or shall prosecute or sue for the same within three moneths next after such Forfeiture; and in default of such prosecution, the said other moyety to such other person or persons who shall or will prosecute or sue for the same at any time within six months next after the said three moneths expired" (Ibid, page 1249).

359 The word "deboyst" has fallen out of use but was the equivalent of the modern term "debauch".

360 Ibid, page 1249.

The moral tone of anti-gambling legislation was retained even after the Restoration of the monarchy[361]. The Statute of Charles II of 1664 was entitled "*An act against deceitful, disorderly, and excessive gaming"*[362] and it decried the immoderate practice of gambling for the "*encouraging of sundry idle, loose and disorderly persons in their dishonest, lewd and dissolute course of life"*[363]. As a remedy to these ills the Statute sought to limit the amount of money that could be lost at any one session through gambling on credit to a maximum of £100. Such debts could not be enforced in the law courts[364] and any securities given for more than this amount were void[365]. In 1710, the statute of Queen Anne

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[361] This despite the Monarch's own predilection for gambling: "The new king, Charles II, had spent the Interregnum in France, where he developed a taste for luxurious living and a passion for horses and gambling. The king instituted the office of groom-porter, a powerful position that controlled all English gambling, including arbitration of disputes. In keeping with his love of horse racing, Charles II also established the first official track at Newmarket in 1667. Following Charles's lead, the English aristocracy began to indulge freely in gaming, which became a recognized entertainment of the court, along with dancing and theatre". Quoted from: Blakely, Robert: "Gaming, Lotteries and Wagering: The Pre-Revolutionary Roots of the law of Gambling", *Rutgers Law Journal*, Vol. 16, Num. 2, Winter 1985, pages 211-267, page 219.

[362] This statute is contained in "The Statutes at Large: from the twelfth year of King Charles II to the last year of King James II inclusive", complied by Danby Pickering, Vol. VIII, printed by Joseph Bentham, London (1762), pages 208-210.

[363] The statue also criticised gambling for the effect it appeared to be having on the economies of the gentry, holding it responsible for "the utter ruin of their estates and fortunes" (Ibid page 208).

[364] The statute determines that "no essoin, protection or wager of law shall be allowed" (…) "in any of his Majesty's courts of record at Westminster" (Ibid page 210).

[365] The text states that any "statutes, recognizances, mortgages, conveyances, assurances, bonds, bills, specialities, promises, covenants, agreements and other acts,

entitled "*An Act for the better preventing excessive and deceitful gaming"*[366], went even further. The statute declared void any security for all amounts made for the consideration of gambling debts[367]. The maximum loss reclaimable through the courts at any one sitting or session was limited to £10[368], and any excess

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deeds and securities whatsoever, which shall be obtained, made, given, acknowledged or entered into for security or satisfaction of or for the same or any part thereof, shall be utterly void and of none effect". The penalty for infringing the statute was: "that the said person or persons so winning the said monies or other things, shall forfeit and lose treble the value of all such sum and sums of money, or other thing or things which he shall to win, gain, obtain or acquire, above the said sum of one hundred pounds" (Ibid page 210).

366 Taken from: "The Statutes at Large: from the eighth to the twelfth year of Queen Anne", complied by Danby Pickering, Vol. XII, printed by Joseph Bentham, London 1764, pages 177-181.

367 The statute declared that "all notes, bills, bonds, judgements, mortgages or other securities or conveyances whatsoever, given, granted, drawn or entered into, or executed by any person or persons whatsoever, where the whole or any part of the consideration of such conveyances or securities shall be for any money or other valuable thing whatsoever won by gaming or playing at cards, dice, tables, tennis, bowls, or other game or games whatsoever, or by betting on the sides of hands of such as do game at any of the games aforesaid, or for the reimbursing or repaying any money knowingly lent or advanced for such gaming or betting, as aforesaid, or lent or advanced at the time and place of such play, to play or bett, shall be utterly void, frustrate, and of one effect, to all intents and purposes whatsoever" (Ibid pages 178-179).

368 By limiting the enforceability of gambling debts to such a paltry amount it protected the aristocracy (and hence social stability) from their own impetuousness (or stupidity) as they could not lose their estates on the gaming table.

An example of the application of this statute is provided by the case of Daintree v. Hutchinson, tried before the Cambridgeshire Assizes in 1842. The case concerned an agreement between two greyhound owners for their dogs to run a series of three races. The winner of the best of three would win £ 100 from the loser. The plaintiff claimed the money in forfeiture from the defendant, as he had failed to honour the agreement and had refused to let his animal run. In his judgement for the defendant Lord Abinger determined that: "This being a game, therefore, within the provisions of that statute, and the stake depending upon its issue exceeding £10, the question arises whether this was not a contract binding a party to do an act which the 2nd section of the 9 Anne renders penal. The very object of the contract was to make the defendant pay that bet which, being for a sum of above £10, the act intended to prohibit, and consequently

amount paid could be reclaimed by the loser together with the costs of the legal action within a three-month period[369]. The statute also contained a rather perverse incentive for third parties to ensure that this rule was respected, allowing them to make the claim against the winner of the wager for treble the amount that had been won, plus legal costs, if the loser of the wager had not made the claim within the three-month period set. The money reclaimed would be split evenly between the plaintiff and the poor of the parish in which the offence had been committed[370].

Contemporary newspaper reports often contained lurid stories of suicides provoked by gambling debts[371], and there was a

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rendered illegal. That being so, it is a contract which cannot be enforced; and this rule must therefore be made absolute".

369 "(…) any person or persons whatsoever, who shall at any time or sitting, by playing at cards, dice, tables or other game or games whatsoever, or by on the sides or hands of such as do play at any of the games aforesaid, lose to any one or more person or persons, so playing or betting, in the whole, the sum of value of ten pounds, and shall pay or deliver the same, or any part thereof, the person or persons so losing or, and paying or delivering the same, shall be at liberty, within three months then next, to sue and recover the money or goods so lost, and paid and delivered, or any part thereof, with costs of suit (…)" (Ibid page 178).

370 (…) and in case the person or persons who shall lose such money, or other thing, as aforesaid, shall not, within the time aforesaid, really and bona fide, and without covin or collusion, sue, and with effect prosecute for the money, or other thing so by him or them lost, and paid or delivered, as aforesaid, it shall and may be lawful to and for any person or persons, by any action or suit, as aforesaid, to sue for and recover the same, and treble the value thereof, with costs of suit against such winner or winners as aforesaid; the one moiety thereof to the use of the person or persons that will sue for the same, and the other moiety to the use of the poor of the parish where the offence shall be committed" (Ibid pages 178-179).

371 For example, the edition of The Public Advertiser of the 9th of January 1782 reported that "Last Thursday a young gentleman shot himself at his apartments near Hatton Gardens. A note was found in his pocket giving his reasons for committing the

famous treatise published by Charles Moore that made a direct connection between suicide and gambling[372].

The Gaming Act of 1845, was presented as a statute designed to remove "*all cognizance of wagers from the courts of law"*[373], as it made any contract or agreement that could be classified as a wager null and void[374]. Until this legislation, wagers had been enforceable contracts outside of the exceptions stipulated by the statutes cited previously. In 1851 the Gaming Act was interpreted

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rash action, viz his having been enticed to gaming-tables, where he lost his whole fortune, which was sufficient to have supported him, and was reduced to the last shilling. He concludes the note with wishing that the Magistrates would use their authority to supress all gaming-houses, as it would be a means of saving many a person from destruction".

372 The treatise, published in 1790, by Charles Moore, a clergyman, used the exaggerated language of the polemic to describe the pernicious effects of gambling: "The gambling citizen not only forfeits the satisfactory fruits and enjoyments of honest industry, but the rage of ill-success either turns his brain or enlists him under the banners of fraud and villainy; so that he spends the remainder of his crazy days amid lunatics and madmen, or ends them in the ignominy of immediate suicide, or the indirect self-murder of the gallows". Quoted from: Moore, Charles: *A full inquiry into the subject of suicide to which are added (as being closely connected with the subject) two treatises on duelling and gaming*, Vol. II, printed for J. F and C. Rivington (1790), page 381.

373 These remarks were made during the Second Reading of the Games and Wager Bill on the 21st of July 1845 by Sir James Graham. The report by Hansard is available at: https://api.parliament.uk/historic-hansard/commons/1845/jul/21/games-and-wagers#column_794

374 "And be it enacted, that all contracts or agreements, whether by parole or in writing, by way of gaming or wagering, shall be null and void; and that no suit shall be brought or maintained in any court of law or equity for recovering any sum of money or valuable thing alleged to be won upon any wager, or which shall have been deposited in the hands of any person to abide the event on which any wager shall have been made". Section XVIII, the Gaming Act of 1845. The Gaming Act was to remain an impediment to derivative trading in the UK until as late as 1986, when the Financial Services Act created an exemption to section 18 of the Gaming Act allowing for "any contract entered into by either party by way of business".

with respect to a derivative contract in the case of *Grizewood v. Blane*. The case concerned a contract to pay the difference between the price of railway company shares on a date in the future with respect to a notional price. The plaintiff[375] sought to enforce the contract while the defendant (the loser of the wager) wished to have the contract voided on the basis of the Gaming Act. The resolution of the case rested on establishing whether the intention of the parties had been to purchase and take delivery of the shares, or simply bet upon the change in price[376]. The evidence presented showed that:

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375 It appeared, that the plaintiff was a stock and share jobber in London; that the defendant, Colonel Blane, had, through his broker, contracted to sell and to re-purchase the shares in the declaration mentioned; and that there had been former dealings between the parties, of the same character, no shares passing, but merely settlements of differences, according to the usual course of speculators upon the Stock Exchange. Quotation taken from: Grizewood v Blane, Common Bench Reports 526, 20th of November 1851. Also: "In the leading case of Grizewood v. Blane, the plaintiff was a stock and share jobber in London, and the defendant had, through the broker, made contracts with the plaintiff for the purchase and sale of shares. The method pursued seems to have been, that the defendant sold at a given price, and subsequently purchased a like amount of the same shares. As a necessary consequence of this there would be nothing but the difference to settle between the parties, and no shares passed between them. There had been former dealings of the same character between the parties". Quoted from Dewey, Henry: *A treatise on contracts for future delivery and commercial including options, futures and short sales*, Baker Voorhis & Co. (1886), pages 31-32.

376 The Lord Chief Justice directed the jury in the following manner: "The question here is, whether there was any contract of sale at all, and whether the transaction was not a mere bet upon the future prices of the commodity". Quoted from Dewey, Henry: *A treatise on contracts for future delivery*..., op. cit., pages 31.

"The Lord Chief Justice left it to the jury to say what was the plaintiff's intention, and what was the defendant's intention, at the time of making the contracts – whether either party really meant to purchase or sell the shares in question: telling them, that if they did not, the contract was in his opinion a gambling transaction, and void "Quotation taken from: Grizewood v Blane, Common Bench Reports 526, 20th of November 1851.

"there had been former dealings between the parties, of the same character, no shares passing, but merely settlements of differences, according to the usual course of speculators upon the Stock Exchange"[377].

Judge Creswell, commenting on the jury's decision to find for the defendant, stated that:

"As to the evidence, I think it abundantly warranted the jury in coming to the conclusion that there was no real contract of sale, but the whole thing was to be settled by the payment of differences. It clearly was a gaming transaction within the meaning of the statute"[378].

This interpretation of the statute removed derivative transactions in which there was no intent to effect the actual delivery of a commodity or a security from the protection and enforcement of the U.K courts[379].

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377 Ibid.

378 Ibid.

379 "The effect of this case was to classify a category of derivative contracts, common in English trade, which were settled by future payment of differences rather than by actual delivery of assets, as unenforceable gambling contracts. However, the apparent statutory unenforceability of such contracts did not stop them from continuing to be common in English trade" (Swan, Edward J.: *Building the Global Market: A 4,000 Year History of Derivatives*, op. cit., page 213).

3.9 The influence of UK statutes and case-law on the statutes and case-law of the U.S.

U.S law developed under the influence of law from the United Kingdom, and this influence exerted itself particularly through statutes and case-law.

3.9 (a) Statutes

The tough conditions of colonial life added an extra dimension to the Puritan aversion to idleness. The historian, Foster Rhea Dulles noted that:

"It was the paramount need of a primitive pioneer society for the whole hearted cooperation of the entire community that fastened upon the first Americans a tradition of work which still weighs heavily upon their descendants. The common welfare in those difficult and perilous days could not permit any "mispense of time". Those who would not work of their own volition had to be driven to it under the lash of compulsion….in all the colonies there was this basic fact: if the settlers did not direct all their energy to their work, they could not hope to survive"[380].

In 1712, two years after it had been passed by the British Parliament, the Statute of Anne was adopted by the Colonial legislature (The Commons House of Assembly).

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[380] Quoted from: Dulles, Foster Rhea: *America Learns to Play. A History of popular recreation. 1607-1940*, Appleton Century Company (1941), page 5.

When the Continental Congress voted that the thirteen colonies would no longer be subordinate to the rule of King George III on July the 2nd 1776, and went on to declare U.S independence on July the 4th, they did not sever all ties with the U.K. The Common Law remained U.S law after the declaration of independence[381], and many statutes that had been incorporated into or copied by the legislatures of the colonies remained in force[382]. The States would also continue to use U.K statutes as a model for their own legislation after independence had been achieved.

The legislation against derivatives in both securities and commodities borrowed a great deal from past English legislation

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381 Edward J. Swan comments that: "After the American Revolution, the overall regulation of trade and commercial law provided by Britain was gone. It was replaced by the individual regulation of each of the states. All followed English common law, but were left to regulate their own commerce – each state evolved futures regulation at its own pace" (Swan, Edward J.: *Building the Global Market: A 4,000 Year History of Derivatives*, op. cit., page 213).

Lawrence M. Friedman writes that: "After all, the Revolution was a political but not a legal revolution. The common law was American law both before and after. Courts heard ordinary cases before, during, and after the war, with no lack of continuity". Quoted from Friedman, Lawrence M.: *A history of American Law*, Simon Schuster (1974), page 2.

382 This is not to claim that the laws of the colonies were essentially identical to U.K laws. As Professor Haskins states: "The conditions of settlement and development within each colony meant that each evolved its own individual legal system, just as each evolved its individual social and political system. Geographical isolation, the date and character of the several settlements, the degree of absence of outside supervision or control – all had their effect in ultimately developing thirteen separate legal systems". Quoted from Haskins, George L.: *Law and Authority in Early Massachusetts-A Study in Tradition and Design*, Mac Millan Company (1960), page 6.

and case-law, particularly Barnard's Act, and the interpretation of the Gaming Act of 1845 made by the case of *Grizewood v Blane* which classified contracts for the transfer of securities or commodities as mere wagers when there was no intent to make actual delivery.

In 1792 the State of New York passed "*An Act to prevent the pernicious Practice of Stock-Jobbing*". Stuart Banner notes that the section which voided all contracts for the sale of stocks and other securities which were not the property of the seller at the moment in which the contract was agreed upon[383] was almost a direct copy of Barnard's Act[384] (and like Barnard's Act it did not affect derivatives on commodities).

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383 Chapter XVII of the Act reads: "And be it further enacted, that all contracts written or verbal, hereafter to be made for the sale or transfer, and all wagers concerning the prices present or future of any certificate or evidence of debt due by or from the United States or any separate state, or any share or shares of the stock of the Bank of the United States or any other bank, or any share or shares of the stock of any company established or to be established by any law of the United States or any individual state, shall be and all such contracts are hereby declared to be absolutely void, and both parties are hereby discharged from the lien and obligation of such contract or wager, unless the party contracting to sell and transfer the same shall at the time of making such contract be in the actual possession of the certificate or other evidence of such debt or debts, share or shares, or be otherwise entitled in his own right or duly authorised and empowered by some persons so entitled, to transfer the said certificate, evidence, debt or debts, share or shares, so to be contracted for; and the party or parties who may have paid any premium, differences or sums of money in pursuance of any contract hereby declared to be void, shall and may recover all such sums of money together with damages and costs, by action on the case in assumpsit for money had and received to the use of the plaintiff, to be brought in any court of record". Quoted from: "The Laws of the State of New York: Volume 1", printed by Charles R. and George Webster (1802), page 413.

384 "This provision was copied from a 1734 English Statute that had likewise been intended to curb speculative trading. The idea was to put a stop to a common form of speculation, in which two parties would agree to sell stock at a particular price on a

Over the course of the next 100 years, a large number of other U.S. states introduced similar legislation against derivatives on stocks and other securities as well as on commodity derivatives. In 1836 Massachusetts passed an act forbidding sales of stocks and bonds[385], in which the seller was not the owner or assignee of the security at the time the contract was made[386]. The report commissioned by the Committee appointed to consider the expediency of introducing regulation to govern the sales of stock and bonds, explained the rationale behind the ban. It decried the practice of time-bargains (which it referred to as a contracts for *stock upon time*) declaring that: "*This is essentially a wager*

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particular date in the future. When that date arrived, the seller would not in fact transfer the stock to the buyer. Rather, one would simply pay to the other the difference between the contract price and the stock's actual price. New York's statute remained in force until 1858". Quoted from Banner, Stuart: *Speculation. A History of the Fine Line between Gambling and Investing*, Oxford University Press (2017), page 45.

[385] "Report of the committee including An Act relating to Contracts for the sale of stocks", The Commonwealth of Massachusetts 1836, available from archives of the State Library of Massachusetts at: https://archives.lib.state.ma.us/bitstream/handle/2452/749857/ocm39986872-1836-HB 0038.pdf?sequence=1&isAllowed=y

[386] Section 1 of the Act declared: "That all contracts, written or oral for the sale or transfer of any certificate, or other evidence of debt due by or from the United States, or any separate state, or of any stocks, or of any share or interest in the stock of any bank, or of any company, city or village, incorporated under any law of the United States, or of any individual State, shall be absolutely void, unless, one half at least, of the capital stock of any such corporation, shall have been, in good faith, paid in; and unless the part or parties contracting to sell or transfer the same, shall, at the time of making such contract, be the owner or assignee thereof, or shall be duly authorized by some person who is the owner or assignee, or by the legally authorised agent of such owner or assignee, to sell or transfer the said certificate or other evidence of debt, share or interest, so contracted for, and be in the actual possession of the certificate or other evidence of such debt, share or interest" (Ibid, pages 7 and 8).

between the parties, that a certain stock will be at a greater or less price at a period more or less remote. It is of course a mere gambling transaction, and so prohibited by our common law. The facility which it affords for the most extravagant, perilous, and fraudulent speculation, seems to make it the proper object of some special statute provision"[387].

It went on to claim that allowing this practice would be even more dangerous than permitting gambling, arguing that, while "*games of chance are usually ventured on the actual or apparent property of the parties interested",* stock upon time transactions made: "*all the stock-holders suffer; if they are unacquainted with the management and mysteries of the brokers' board, and unaware of the agencies which produce the fluctuations in the market value of their property. Their stock is rendered insecure, unstable, and they can neither know nor approximate to its actual and intrinsic value; not certainly from any fault or mismanagement on their own part, or any real depreciation, but because it made the interest of adventurers, who have chosen it for the object of their operations, to depress their property in the market"*[388].

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[387] Ibid page 5.

[388] Ibid pages 5 and 6.

These type of derivative transactions were hence seen by the Massachusetts legislature of the time as disruptive instruments that would enable speculators to provoke economic instability.

In 1898, the legislature of the State of Mississippi would send a request (termed *a memorial*) to the U.S Congress, asking for futures in agricultural commodities to be prohibited nation-wide. They feared that futures would fuel speculation that could cause price instability and severely harm the agricultural – based economy of the region[389].

Legislation against speculation with derivatives was passed in a number of U.S States (though never in the nineteenth century by the U.S Congress), including: the State of Georgia[390] (which

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389 The text of the memorial read: "Whereas, The People of the State of Mississippi are engaged chiefly in agricultural pursuits and are dependent for sustenance and support upon the products of the farm; and whereas, there has grown up in the large cities of the United States a pernicious and immoral system of gambling in these products, thereby defeating the law of supply and demand in fixing the price of said products, much to the injury of the producer ; therefore be it resolved by the Senate, the House concurring. that the Congress of the United States is hereby respectfully memorialized and requested to enact a law or laws abolishing what is known as "future dealing," and the members of Congress from Mississippi are earnestly requested to use their efforts to have such a law enacted". Quoted from: "New Legislation Concerning Crimes, Misdemeanours and Penalties, compiled from the Laws of the fifty-fifth Congress and from the Session Laws of the States and Territories for 1897 and 1898", printed by the Washington Government Printing Office (1900).

390 "A bare contingency or possibility cannot be the subject of sale, unless there exists a present right in the person selling, to a future benefit ; so a contract for the sale of goods to be delivered at a future day, where both parties are aware that the seller expects to purchase himself to fulfill his contract, and no skill and labor or expense enters into the consideration, but the same is a pure speculation upon chances, is contrary to the policy of the law, and can be enforced by neither party". § 4117 of the Georgia Civil

applied to the sale of commodities as well as to securities), Illinois[391](which applied to both commodities and securities), Louisiana[392] (which prohibited futures on agricultural commodities), Mississippi[393] (which banned commodity futures),

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Code of Georgia of August 1910. Quoted from "The Code of the State of Georgia Volume I", published by Foote and Davies Company (1911), page 1014.

391 Article 130 of the Criminal Code of Illinois stated: "Whoever contracts to have or give to himself or another the option to sell or buy, at a future time, any grain, or other commodity, stock of any railroad or other company, or gold, or forestalls the market by spreading false rumours to influence the price of commodities therein, or corners the market, or attempts to do so in relation to any of such commodities, shall be fined not less than $10 nor more than $1000, or confined in the county jail not exceeding one year, or both; and all contracts made in violation of this section shall be considered gambling contracts, and shall be void". Quoted from: "The Revised Statutes of the State of Illinois 1908: containing all the general statutes of the state in force January 1, 1909", published by the Chicago Legal News Company (1908), page 319.

392 The Act of 1898 to prohibit gambling in futures determined in Section 1 the following: "Be it enacted by the General Assembly of the State of Louisiana, that it shall be unlawful for any person to deal or gamble in futures on agricultural products or articles of necessity, where the intention of the parties is not to make an honest and bona fide delivery of said agricultural products or articles of necessity". Quoted from *Constitution and Revised Laws of Louisiana*, Vol. I, printed by Hansell & Bro Ltd (1904), page 406.

393 The legislature of the State of Mississippi passed both Civil and Criminal Statutes against futures. The Civil Statute decreed that: "A contract for the purchase and sale of a commodity of any kind, to be delivered at a future day, the parties not intending that the commodity is to be actually delivered in kind and the price paid, shall not be enforced by any court; nor shall any contract of the kind commonly called 'futures' be enforced, nor shall a contract in this section mentioned be a valid consideration, in whole or in part, for any promise or undertaking." Once again, the intention to deliver the commodities was the determining factor in separating valid from void contracts. The Criminal statute declared that: "If any person shall deal in contracts commonly called 'futures', or shall, by himself or his agent, directly or indirectly buy or sell any 'future' contract, he shall be guilty of a misdemeanour, and, on conviction, shall be fined not less than fifty dollars nor more than five hundred dollars, and be imprisoned in the county jail not more than three months. If any person shall buy or sell commodities of any kind, to be delivered at a future day, without agreeing or intending that the commodities are to be actually delivered in kind, and the price paid, he shall be guilty of a misdemeanour, and, on conviction, shall be punished as prescribed in the last section". The content of these statutes are quoted from: Dewey, Henry T.:

North Carolina[394] (which outlawed futures on both securities and commodities),and Texas[395] (which made trade in both commodity and security futures illegal).

Legislation against speculation and gambling in the forms of trade: including futures, options and short sales, Published by, Baker, Voorhis & Company (1905), pages 29-30.

394 In 1889 The General Assembly of North Carolina passed: “An Act to suppress and prevent certain kinds of vicious contracts”. Section 1 of the Act declared: “That every contract, whether in writing or not, whereby any person, corporation or corporations shall agree to sell and deliver any cotton, Indian corn, wheat, rye, oats, tobacco, meal lard, bacon, salt, pork, salt fish, beef cattle, sugar, coffee, stocks, bonds, and choses in action, at a place or places and at a time or times specified and agreed upon therein, to any other person or persons, corporation or corporations, whether the person to whom such article is so agreed to be sold and delivered shall be a party to such contract or not, when, in fact, and notwithstanding the terms expressed of such contract, it is not intended by the parties thereto that the articles or things so agreed to be sold and delivered shall be actually delivered, or the value thereof paid, but it is intended and understood by them that money or other thing of value shall be paid to the one party by the other, or to a third party, the party to whom such payment of money or other thing of value shall be made to depend, and the amount of such money or other thing of value so to be paid to depend upon whether the market price or value of the article so agreed to be sold and delivered is greater or less at the time and place so specified than the price stipulated to be paid and received for the articles so to be sold and delivered; and every contract commonly called ‘futures’ as to the several articles and things hereinbefore specified, or any of them, by whatever name called, and every contract as to the said several articles and things, or any of them, whereby the parties thereto contemplate and intend no real transaction as to the article or thing agreed to be delivered, but only the payment of a sum of money to whom the same is to be paid to depend on whether or not the market price or value is greater or less than the price so agreed to be paid for the said article or thing at the time and place specified in such contract, shall be utterly null and void and of no effect in law or equity; and no action shall be maintained in any court in this State to enforce any such contract (…..)”. Quoted from: “Laws and Resolutions of the State of North Carolina: passed by The General Assembly at its Session of 1889”, published by Joseph Daniels (1889), pages 233-232.

395 Article 377 of the Texas Penal Code of 1895 made it illegal to trade in futures in both commodities and securities, it proclaimed that: “If any person shall, directly or through an agent or agents, manage or superintend for himself, or shall as agent or representative of any other person firm or corporation, conduct, carry on or transact any business which is commonly known as dealing in futures, in cotton, grain, lard, any kinds of meats or agricultural products, or corporation stocks, or shall keep any house, or manage, conduct, carry on or transact any business commonly known as a produce

3.9 (b) Case-Law

An early distinction between gaming contracts and a contract with similar features was in the field of marine insurance. As Stuart Banner notes:

"*It looked a lot like gambling: the insured would pay a small sum, and if the ship went down, he would receive a large payoff from the insurer"*[396].

The case of Amory v. Gillman in 1806, required that the Massachusetts Supreme Court distinguished between an insurance contract and a gaming contract. This distinction had previously been made in an English Statute dating from 1746[397],

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or stock exchange, or bucket shop, where future contracts are bought and sold with no intention of an actual bona fide delivery of the article or thing so bought or sold, such person, whether acting for himself or for another, as aforesaid, shall be deemed guilty of a misdemeanour, and shall be fined in any sum not less than one hundred nor more than five hundred dollars, and in addition thereto shall be imprisoned in the county jail not less than thirty days nor more than six months; provided, that each day that such business or house is carried on or kept shall constitute a separate offense. "Quoted from: "Penal Code of the State of Texas. Adopted at the regular session of the twenty-fourth legislature", published by Eugene Von Boeckmann (1895), page 67.

396 Quoted from Banner, Stuart: *Speculation. A History of the Fine Line between Gambling and Investing*, op. cit., page 47.

397 "An Act to regulate insurance on ships belonging to the subjects of Great Britain, and on merchandises or effects laden thereon". Section 1 of the Act determined "That from and after the first day of August, one thousand seven hundred and forty six, no assurances or assurances shall be made by any person or persons, bodies corporate or politick, on any ship, or ships belonging to his Majesty, or any of his subjects, or on any goods, merchandises, or effects, laden or to be laden on board of any such ship or ships, interest or no interest, or without further proof of interest than the policy, or by way of gaming or wagering, or without benefit or salvage to the assurer; and that every such assurance shall be null and void to all intents and purposes". Quoted from: "The Statutes at Large from the 15th to the 20th year of King George II: by Danby Pickering, Volume XVIII", printed by Joseph Bentham (1765), page 511.

which voided insurance contracts in which the policy holder had no insurable interest to protect. In the case in question, Thomas Amory had acquired two distinct insurance policies from different insurers for the same cargo. The ship and its cargo were captured by British forces and Amory recovered from the first insurance policy, but the second company refused to make payment on the grounds that Amory had already received full compensation for his loss, and further alleged that this second policy was simply a wager on whether the cargo would be delivered. The wording of the decision by the Massachusetts Supreme Court (which prevented Amory from claiming on the second policy) is illustrative of the distaste felt for gambling (at least in the exercise of their official duties) by the judiciary, Judge Sedgwick declared that:

Sir James Allan Park, in his "A System of the Law of Marine Insurances" (first published in 1787) explained the need for the statute in the following terms: "For instead of confining the business of insurances to real risks, and considering them merely as an indemnity to the fair dealer against any loss which he might sustain in the course of a trading voyage, which, as we have seen, was the original design of them; that practice, which only prevailed since the Revolution, of insuring ideal risks, under the names of interest or no interest, or without further proof of interest than the policy, or without benefit of salvage to the underwriters, was increasing to an alarming degree, and by such rapid strides so as to threaten the speedy annihilation of that lucrative and beneficial branch of trade. All these various kinds of insurance just enumerated (and many others, which the ingenuity of bad men found no difficulty in devising), having no reference whatever to actual trade or commerce, were very justly considered as mere gaming or wager – policies: and therefore the Legislature thought it necessary to give them an effectual check, and by positive rules, to fix and ascertain what property or interest a merchant should be permitted to insure". Quoted from: Park, James Allan: *A System of the Law of Marine Insurances*, Vol. II, 8th ed., printed by Rayner and Hodges (1842), pages 554-555.

"The practice of gaming, by nourishing a constant hope of gain, excites in the mind an interest which engrosses the attention, and withdraws the exertions of men from useful pursuits. By pointing out a speedy, though hazardous, mode of accumulating wealth, it produces a contempt for the moderate, but certain, profits of sober industry. It perverts the activity of the mind, taints the heart, and depraves the affections. By frequent and great reverses of fortune, it becomes not only the source of great private misery, but suggests constant temptations to fraud, and the perpetration of atrocious crimes"[398].

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398 Amory v. Gilman. The comments of Judge Sedgwick. Quoted from: "Cases argued and determined in the Supreme Judicial Court in the County of Suffolk, March term, 1806, at Boston". Page 11. The opinion of Judge Sedgwick was shared by Judge Dana who remarked that: "wager policies are injurious to the morals of the citizens, tend to encourage an extravagant and peculiarly hazardous species of gaming, and to expose their property, which ought to be reserved for the benefit of real commerce, they ought not to receive the countenance of this Court" (Ibid, pages 12-13).

The hostility to gambling is evident in a number of other judgements of the period. In 1867, the Pennsylvania Supreme Court heard a case concerning the short sale of 200 shares of Harlem Railroad stock. The beneficiary of the short sale contract (Mr Kauffman) had died bankrupt, and his creditors attempted to recover the money gained on the contract that they believed was owed to the estate. The auditors' report stated that: "doubtless the contract and the four notes, were the component parts of a stock-gambling transaction, in which Kauffman in effect, betted that in twenty-five days Harlem stock would sell at less than $60 per share; but viewed in the light of legal principles and precedents, the contract was one which the parties were free to make, and the obligations created by it and the subsequent notes, are in law untainted by any deceit or want of consideration". However, the Pennsylvania Supreme Court disagreed with this analysis, and Chief Justice James Thompson remarked that: "Betting and gambling contracts have in this commonwealth been uniformly held to be contra bonos mores, and incapable of enforcement at law". He went on to declare that: "All gambling is immoral. I apprehend that the losses incident to the practice disclosed in this very case, within the past five years, have contributed more to the failures and embezzlements by public officers, clerks, agents and others acting in fiduciary relations, public and private, than any other known, or perhaps all other causes; and the worst of

However, the prejudice against derivatives was not solely based on a moral aversion to gambling, but also on the suspicion that they could result in bubbles that could threaten the stability of the financial system itself. The judgement of Judge Agnew in the case of *Kirkpatrick v. Lyons versus Bonsall,* given by the Supreme Court of Pennsylvania in 1872, contained the following stern warning of the possible consequences of legitimising such transactions:

"*when ventures are made upon the turn of prices alone, with no bona fide intent to deal in the article, but merely to risk the difference between the rise and fall of the price at a given time, the case is changed. The purpose then is not to deal in the article, but to stake upon the rise or fall of its price. No money or capital is invested in the purchase, but so much only is required as will cover the difference—a margin, as it is figuratively termed. Then the bargain represents not a transfer of property, but a mere stake or wager upon its future price.*

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it is, that in the train of its evils, there is a vast amount of misery and suffering by persons entirely guiltless of any partition in the cause of it".

The Chief Justice then concluded his comments with a reference to the South Sea Bubble: "That the transaction in this case assumed the form of a contract about a matter lawful in itself, was not conclusive as to its real motive, as the finding shows. That was the form which the South Sea bubble took in England, the tulip speculation in Holland, and the morus multicaulis in this country; and the form served only as a thin covering of the most frightful systems of gambling ever known".

Quoted from: Brua's Appeal, The Supreme Court of Pennsylvania (1867): available at:https://cite.case.law/pa/55/294/

The difference requires the ownership of only a few hundreds or thousands of dollars, while the capital to complete an actual purchase or sale may be hundreds of thousands or millions. Hence ventures upon prices invite men of small means to enter into transactions far beyond their capital, which they do not intend to fulfil, and thus the apparent business in the particular trade is inflated and unreal, and like a bubble needs only to be pricked to disappear; often carrying down the boná fide dealer in its collapse"[399].

To distinguish contracts for the sale of goods at a date in the future from derivative contracts for differences, which were treated as gaming contracts, the American Courts used the intent test contained in *Grizewood v. Blane*[400]. The first use of the intent test by the U.S Supreme Court[401] was that of Irwin v. Willar in

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[399] Quoted from: Kirkpatrick v. Lyons versus Bonsall, The Supreme Court of Pennsylvania, October 21 1872: available at :https://cite.case.law/pa/72/155/

[400] "Possibly no rule of law has ever met with such immediate and unanimous approval as did the "intent test". Common law courts without exception have always declared it to be the true and only criterion of the validity of future contracts, and it has been written into the statute law of almost every state". Quoted from: Taylor, Telford: "Trading in Commodity Futures: A New Standard of Legality?", *The Yale Law Journal*, Vol. 34, Num. 1, November 1993, pages 63-106, page 67.

[401] This was not the first use of the intent test in the U.S: there are a number of earlier judgements: the earliest perhaps being the case of Cassard v. Hinmann (1856), only five years after the judgement in Grizewood v. Blane. The case involved a contract to purchase barrels on pork in which there was no intent to make delivery of the product but rather to settle the difference between the market price on the maturity of the contract and the contract price. After referencing both the English Gaming Act of 1845 and the case of Grizewood v. Blane the Court remarked that: "If this can be sustained, if there is neither common law to reach, nor statute to condemn it, the unbridled and

1884. The case concerned a dispute over the balance of orders placed through commission merchants at the Baltimore Corn and Flour Exchange. Commission merchants bought or sold grain and other commodities for future delivery, and became personally responsible to the party with whom they contracted, however, they regularly settled such contracts among themselves. For example, commission merchant A, acting upon the order of customer X, might sell grain for a designated future delivery to commission merchant B. Commission merchant B, might then receive an order to purchase a similar quantity of grain from customer Y, so merchants A and B would cancel their previous contracts, adjust for the difference in price, and A would substitute Y for B, so that the grain he had sold on the order of customer X would be delivered to customer Y. This mechanism

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defiant spirit of speculation, which daily scorns and violates the stock-jobbing act, will be extended to all articles of trade, and gambling in these become as common as legitimate dealing. I rejoice that a court of justice is able to do this at least – to condemn the offence – to annul the contract; and to clear the law from the stain of enduring a practie teeming with temptation and disgrace to those engaged with it, and with baneful influences upon the efforts of the honest and just". Quoted from Cassard v. Hinmann, New York Superior Court, November 1856, available at: https://cite.case.law/how-pr/14/84/

In another early case, Rumsey v. Berry (1876) the Court declared that: "A contract for the sale and purchase of wheat to be delivered in good faith at a future time is one thing, and is not inconsistent with the law. But such a contract entered into without an intention of having any wheat pass from one party to the other, but with an understanding that at the appointed time the purchaser is merely to receive or pay the difference between the contract and the market price, is another thing, and such as the law will not sustain. This is what is called a settling of differences, and as such is clearly only a betting upon the price of wheat, against public policy, and not only void, but deserving of the severest censure". Quoted from: Rumsey v. Berry, The Maine Supreme Judicial Court, July 1, 1876, available at: https://cite.case.law/me/65/570/

could be expanded for more complex, multiple transactions involving a ring of clients and commission merchants (and it could also be used to disguise speculation, as merchants generally did not disclose the identity of their principals and it was therefore very difficult to ascertain to whom grain was actually delivered). In the case of Irwin v. Williar, Irwin claimed that his deceased partner had entered into the transactions with Williar without his knowledge, and that they were purely speculative and therefore void, and so he could not be held liable for the balance of any payments. Although the judgement of the Supreme Court did not resolve the case itself, as it was ordered to be retried on a question of evidence admitted in error, both the District and the Supreme Court sanctioned the use of the intent test.

The Circuit Court of the United States for the District of Indiana gave the following instructions to the jury:

"A person may make a contract for the sale of personal property for future delivery which he has not got. Merchants and traders often do this. A contract for the sale of personal property which the vendor does not own or possess, but expects to obtain by purchase or otherwise, is binding if an actual transfer of property is contemplated. A transaction which on its face is legitimate cannot be held void as a wagering contract by showing that one party only so understood and meant it to be. The proof must go further, and show that this understanding was mutual –

that both parties so understood the transaction. If, however, at the time of entering into a contract for a sale of personal property for future delivery it be contemplated by both parties that at the time fixed for delivery the purchaser shall merely receive or pay the difference between the contract and the market price, the transaction is a wager, and nothing more"[402].

The U.S Supreme Court concurred with this view, stating that: *"a contract for the sale of goods to be delivered at a future day is valid, even though the seller has not the goods, nor any other means of getting them than to go into the market and buy them; but such a contract is only valid when the parties really intend and agree that the goods are to be delivered by the seller and the price to be paid by the buyer; and, if under guise of such a contract, the real intent be merely to speculate in the rise or fall of prices, and the goods are not to be delivered, but one party is to pay to the other the difference between the contract price and the market price of the goods at the date fixed for executing the contract, then the whole transaction constitutes nothing more than a wager, and is null and void. And this is now the law in*

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[402] Quoted from: Quoted from. Irwin v. Williar& Another. The Opinion of the Court. U. S Supreme Court, March 3, 1884, available at: https://cite.case.law/us/110/499/

England by force of the statute of 8&9 Vict, c 109, s 18, altering the common law in that respect"[403].

3.10 Problems with the intent to deliver rule

Despite the spread of the intent to deliver rule through both case-law and statute law, it posed problems of interpretation for judges and was difficult to reconcile with certain common law principles.

3.10 (a) The problem of interpretation

Although the Courts insisted that the intent to deliver was an essential element for the validity of a contract for future sale, in reality, the majority of trade that took place on commodity exchanges was not in physical assets[404]. **Figure 19** shows that the volume of futures trading in wheat, corn, oats, barley and rye in

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[403] Quoted from. Irwin v. Williar& Another. The Opinion of the Court. U. S Supreme Court, March 3, 1884, available at: https://cite.case.law/us/110/499/

The reference in the text made to English law refers to the Gaming Act of 1845.

[404] "The courts uniformly insisted that delivery had to take place to have a legitimate contract. However, it was common knowledge and Board officials openly admitted that there was no actual delivery of grain in more than ninety percent of contracts". Quoted from: Lurie, Jonathan: T*he Chicago Board of Trade: 1859-1905. The Dynamics of Self-Regulation*, University of Illinois Press (1979), page 59.

the period between 1884 and 1889 far exceeded actual production[405]. Jonathan Ira Levy observed that:

"*In 1888, for instance, American farmers harvested 415 million bushels of wheat. That year, one contemporary estimated, there were some 25,000 trillion bushels of wheat sold in futures contracts in the United States that were 'set off', never delivered"*[406].

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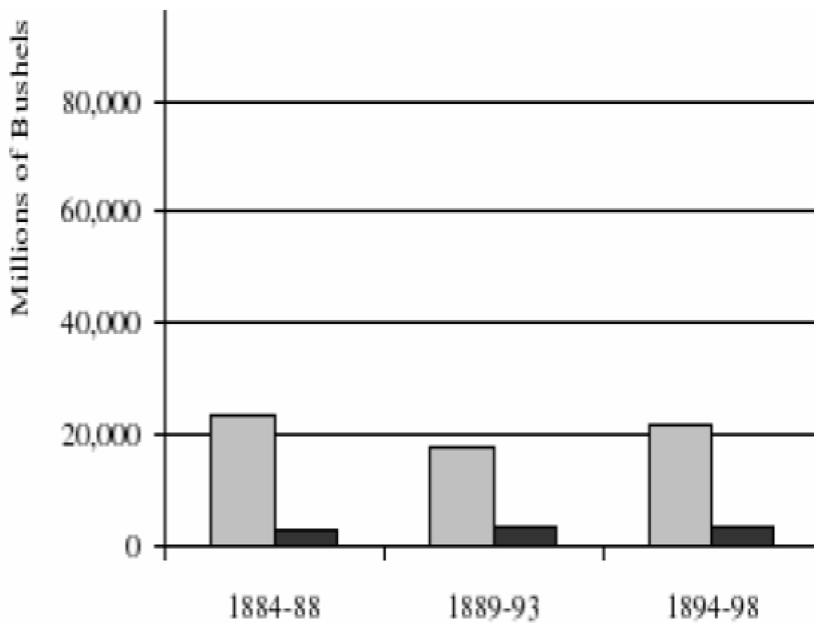
405 "On the Chicago Board of Trade, or the New York Stock Exchange, or any of the many other commercial exchanges in cities all over the country, most of what was bought and sold lacked any physical existence. Contracts on the board of trade were denominated in bushels of grain, but few of the buyers and sellers ever saw any actual grain. Members of the stock exchange traded what were nominally shares of the ownership of large corporations, but in many, perhaps most, of these transactions neither party ever saw any physical share certificates. Contracts were settled not by the conveyance of items from one party to another but rather by the payment of money representing the difference in the prices of those items at two different times". Quoted from Banner, Stuart: *Speculation. A History of the Fine Line between Gambling and Investing*, op. cit., page 60.

406 Quoted from Jonathan, Ira Levy: "Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905", *The American Historical Review*, Vol. 111, Num. 2, April, 2006, pages 307-335, page 313.

Figure 19: Volume of Futures Trading on U.S Exchanges and Crop Production in Wheat, Corn, Oats, Barley and Rye from 1884 to 1898[407].



407 Source: adapted from: Santos, Joseph: "A History of Futures Trading in the United States", EH.Net Encyclopaedia, edited by Robert Whaples, available at:http://eh.net/encyclopedia/a-history-of-futures-trading-in-the-united-states/

□ Futures Volume ■ Crop (year marketed)

So it was already probable that any given contract traded on an exchange was not intended to be executed by the delivery of a commodity. Furthermore, basing the enforceability of the contract on the intention of the parties was complicated by the fact that the party who wished to enforce the terms of the contract would naturally feel compelled to claim that he had intended to make a delivery all along, while the party who wished to escape from the terms of the contract (generally the loser in a contract for differences) would state that it had been a wager from the start. This problem was compounded by the wording of the contracts, which were carefully drawn up so as to comply with the law of whichever state they were to intended to be enforced in (and so the settlement of differences was implied but not specifically stated). A common technique used to ascertain the true intentions of the parties was to examine their past conduct, but even this could lead to an erroneous conclusion, as it was necessary to show that both parties had had the intention of making a wager, for the contract to be classified as one[408].

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[408] See for example the judgement in the case of Gregory v. Wendell before the Michigan Supreme Court on April the 8th, 1879. Judge Cooley stated that: "If either party meant it as a lawful and legitimate transaction, it must be held to be lawful and legitimate. If the purposes of defendants were to engage in genuine dealings in this

3.10 (b) The conflict with Common Law principles

The meaning of written contracts could not be altered by an implicit understanding of their *true* purpose, but determining this purpose was exactly the objective of the intent test in those states in which contracts for differences were either illegal or unenforceable through the courts, because, as noted above, they were specifically written to seem to comply with the law[409]. The second Common Law principle that was at odds with the intent test was that the traditional remedy for the breach of a contract for goods was for the defaulting party to pay the difference between the contract price and the market price at the time the breach was committed, which, perversely, was the result that the implicit (but hidden) purpose of the contract sought to achieve. The development and consolidation of commodity exchanges[410]

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instance, the right of Wendell & Co. to enforce the contract would be complete, even though they had never engaged in a like transaction before; for gamblers may make lawful contracts as well as others". Quoted from: Gregory v. Wendell, Michigan Supreme Court, April 8, 1879, available at: https://cite.case.law/mich/40/432/

[409] "The problem was that speculators typically did not wager on prices explicitly, in contracts spelling out that the loser of the bet would pay the difference in prices to the winner. Contracts were normally worded as if the parties contemplated that a seller would transfer something to a buyer; the parties' intent to pay differences was merely implicit" (Banner, Stuart: *Speculation. A History of the Fine Line between Gambling and Investing*, op. cit., page 79).

[410] Professor Stout observed that: "By the end of the nineteenth century, more than twenty different futures trading markets had emerged in the United States. Speculators could trade futures not only on the prices of wheat and corn, but also on those of horses, mules, sheep, swine, lard, beef, hops, rye, cheese, coffee, oil, gas, and a host of other commodities. Despite this explosion in apparently speculative derivatives activity, the futures exchanges proved themselves to be remarkably stable, long-lived organizations. Many exchanges created in the nineteenth century, such as the Chicago Mercantile

was eventually to generate greater acceptance of derivatives and to lead to the creation of a new test based on the *serious purpose* of the parties operating on the exchange, a development that shall be explored in the next section.

3.11 Exchanges and Bucket Shops

Despite the wide-spread use of both Civil and Penal prohibitions against derivatives, trading with them continued and increased. This is perhaps best exemplified by the growth of commodity exchanges[411] in the U.S, particularly that of Chicago,

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Exchange (CME) and the Chicago Board of Trade (CBOT), are still in business today. Nor does history suggest that these exchange-based futures added to systemic risk. Several banking crises took place during the nineteenth century, but none of them involved futures exchanges. Similarly, commodity futures exchanges played no discernible role in the Crash of 1929 or the ensuing Great Depression". Quoted from: Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Financial Crisis", *Harvard Business Law Review*, Vol. 1, 2011, page 17.

411 "Exchange markets – physical locations where buyers and sellers of commodities meet to exchange their wares- have existed for millennia. But in the second half of the nineteenth century, commodity exchanges came to be dominated not by buyers and sellers exchanging physical corn, wheat or cotton, but instead by traders exchanging abstract contracts based on the market prices of corn, wheat, and cotton. The shift began with the practice of exchanging not physical commodities but "elevator receipts" that supposedly represented a given quantity of a physical commodity being stored elsewhere (e.g., in a grain elevator). Soon traders abandoned the exchange of elevator receipts in favour of "futures" contracts. Futures contracts formally called for the future delivery of a given quantity of a physical commodity a today's price. As a practical matter, however, they were routinely performed not by actual delivery but by "set – off" (purchasing a second, offsetting futures contract for the delivery of the same quantity of goods on the same delivery date). Thus, in economic reality, futures contracts performed through set-off were simply difference contracts by another name". Quoted from Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Financial Crisis", op. cit., page 16.

Between the years 1875 and 1905 organised commodities future exchanges were set-up throughout the United States. Among those created were: New York produce

Illinois. Chicago, a port on Lake Michigan, became crucial to the distribution of commodities after the completion of the Eire canal in 1825 which linked the Great Lakes to the Atlantic Ocean. On the Chicago Board of Trade (founded in 1848)[412], futures contracts[413] became an important tool for both buyers and sellers, as they helped to regulate prices over the year and so avoid drastic

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Exchange, New York Cotton Exchange, San Francisco Chamber of Commerce, Philadelphia Grain Exchange, Milwaukee Chamber of Commerce, Omaha Grain Exchange, Seattle Grain Exchange, St Louis Merchant's Exchange and Baltimore Corn and Flour Exchange.

412 "Founded in 1848, the Chicago Board of Trade initially served as an exchange for all types of commodity trading, including grain, beef and pork, lumber, salt, hides, high wines, alcohol, fish, coal, wood, lead, wool, stone, brick and various kinds of produce. The Board of Trade provided a market place for farmers to transport their crops to sell and grading facilities for the grain upon delivery" Quoted from Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, Praeger (1987), page 4.

Section 1 of "An Act to Incorporate the Board of Trade Chicago" stated "That the persons now composing the Board of Trade of the City of Chicago, are hereby created a body politic and corporate, under the name and style of the "BOARD OF TRADE OF THE CITY OF CHICAGO, "and by that name may sue and be sued; implead and be impleaded, receive and hold property and effects, real and personal, by gift, devise or purchase, and dispose of the same by sale, lease or otherwise (…)". Quoted from "An Act to Incorporate the Board of Trade, Chicago. Act of Incorporation, Rules, By-Laws and Inspection Regulations of the Board of Trade of the City of Chicago. As adopted September 25, 1875", published by Knight & Leonard Printers (1877).

413 "Futures trading, like banking, is an institution that developed a contribution to the efficiency of a relatively free competitive economy. A primitive form of futures trading emerged spontaneously in various market centers at least as early as 1850. Only in the grain trade at Chicago, however, was the demand for a means of hedging commercial risks then strong and persistent enough to permit this unconventional form of trade to survive the fluctuations in speculative interest, overcome conservative opposition, and live through the stormy period of experimentation necessary to put it on a firm footing". Quoted from: Working, Holbrook: "Futures Trading and Hedging", in *The Economics of Futures Trading*, Reading Selected and Edited by B.A Goss and B.S Yamey, published by John Wiley & Sons (1976), page 68.

seasonal fluctuations and waste[414]. The growth of the futures market was met with opposition in Congress, most significantly by William H Hatch[415], the chairmen of the Committee on Agriculture, who attempted to pass an "Anti-Options Bill" through Congress [416]. This legislation was backed by farmers who felt that futures trading was itself responsible for price instability [417].

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414 "At the end of the crop year, farmers would flood the market with grain, and prices would drop drastically. Grain would then be left to rot, or simply be dumped, as prices became so low that transporting it to market became a losing proposition. Later in the year, shortages would develop and prices would rise as dramatically as they had fallen. Consequently, buyers and sellers sought to provide for their needs by contracting for the delivery of quantities and grades of grain at an agreed-upon price and delivery date in the future, depending on when the grain would be needed, and when it was available. This was accomplished through "to arrive" or forward contracts" (Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 4).

415 William Henry Hatch (1833 – 1896) was a member of the U.S House of Representatives (standing for the Democratic Party in the State of Missouri) and Chairmen of the Committee on Agriculture (from 1883 – 1889 and then again from 1891 – 1895).

See: https://web.archive.org/web/20090129231321/http://agriculture.house.gov/inside/history/chairmen.html

416 "The Anti-Options Bill actually passed both Houses of Congress (in different versions) - the Senate, in the waning hours of the Fifty – Second Congress. With adjournment imminent, House rules required a two-thirds vote to bring Senate – imposed amendments up for House approval. By a mere twenty-five votes, the sponsors failed to achieve the two-thirds required for final House consideration". Quoted from Stassen, John H.: "The Commodity Exchange Act in Perspective. A short and not so reverent history of futures trading legislation in the United States", *Washington and Lee Law Review*, Vol. 39, Issue 3, page 828.

417 An example of many farmers' opposition to futures trading is provided by this joint letter from the Farm Mortgage Bankers Association and the Winnebago County Assembly that was submitted as written testimony to the Committee on Agriculture in 1892 during a consideration of bills restricting and taxing dealers in futures and options in agricultural products.

However, in spite of such opposition, one of the key advantages of the exchanges, and one that ensured their growth and popularity, was that they guaranteed that speculative futures contracts, which were unenforceable through the Courts in many States, could be enforced by the exchanges themselves. The only means of trading on exchanges was through dealing with a member of the exchange, and they were obliged to guarantee the performance of all the contracts they made[418]. Another factor to

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"Dear Sir:

We farmers of this section as well as a great many, in fact the most of the people of other callings, that I have heard express themselves, are heartily in favor of some bill to regulate 'dealing in futures'. There is no question in our minds but what the evils resulting from it largely outweigh any of the advantages. We are fully convinced that the whole tendency is to destroy confidence, unsettle prices, and lower values; in other words, manipulation of the markets makes the price largely, and not the supply and demand. In asking this we do not ask it as class legislation, but simply as an act of justice and in the interest of public morals as well as of our business interests. Very few of the option dealers but will acknowledge it to be gambling, and, as practiced largely on the boards of trade, differing only in amount and environments from the dealing in the 'bucket shops' that they themselves so unqualifiedly condemn. Will you please send this to the committee, and if the question comes up in the House, as we hope it will, we have no question where we will see your vote go. Respectfully yours, W.L Frisbie."

Quoted from: "Fictitious dealing in Agricultural Products. Testimony taken from the Committee on Agriculture during a consideration of Bills Nos 392, 2699 and 3870, restricting and taxing dealers in 'futures' and 'options' in agricultural products, and for other purposes", Washington Government Printing Office (1892), page 312.

The historian Ann Fabian writes that: "Whether speculators actually manipulated prices was less important than the simple fact that prices could be manipulated. The farmers attacked a system that marketed agricultural produce less with the producer in mind than with the speculator". Quoted from: Fabian, Ann: *Cardsharps and Bucket shops. Gambling in Nineteenth Century America*, Routledge (2013), Kindle Edition, Kindle position 155-156.

[418] On the Chicago Board of Trade, the failure to settle contracts was configured as a cause of suspension or expulsion. Section 7 of Rule IV of the by-laws decreed that: "When any member of the Association has failed to comply promptly with the terms of

their success was the invention of the telegraph and the ticker tape[419], which enabled speculators to buy and sell derivative contracts through the commodity exchanges from anywhere in the country. However, this new technology also enabled the rise of an unwelcome rival to the official commodity exchanges, bucket shops[420].

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any business contract or obligation, and has to failed to equitably and satisfactorily adjust and settle the same (…) he shall, upon admission of proof of such delinquency, before the Board of Directors, be by them suspended". While Section 8 of the same rule determined that: "when any member shall be guilty of a wilful violation of any business contract or obligation, and shall neglect or refuse to equitably and satisfactorily adjust and settle the same (…); he shall be censured, suspended or expelled by the Board of Directors, as they may determine, from the nature and gravity of the offense committed". Quoted from: "Act of Incorporation, Rules, By-Laws and Inspection Regulations of the Board of Trade of the City of Chicago. As adopted September 25, 1875", published by Knight & Leonard Printers (1877).

419 "Modern American financial markets grew out of speculation in government – issued bonds and paper currency during and immediately after the Civil War. To facilitate this speculation, Edward Calahan invented the ticker in 1867. This printing telegraph broadcast quotations to brokers' offices, allowing them to monitor transactions on exchange floors from a distance". Quoted from Hochfelder, David: "'Where the Common People Could Speculate': The Ticker, Bucket Shops, and the Origins of Popular Participation in Financial Markets, 1886-1920", *Journal of American History*, Vol. 93, Num. 20 (2006), page 338.

420 "The term "bucket shop" was first used in the United States in the 1870s to describe brokerage houses that had no real connection either to stock markets or commodities exchanges. Customers "bought" shares from proprietors or "sold" produce to them and calculated their profits or their losses simply on the basis of changing prices. Exchanges in bucket shops, like all gambling exchanges, were confined to the margins of markets. Customers neither intended to deliver nor to receive the grain they pretended to buy". Quoted from: Fabian, Ann: *Cardsharps and Bucket shops…*, op. cit., Kindle position 189.

According to the legal historian Jonathan Levy: "Bucket shops flourished in the 1880s and 1890s, grafting themselves onto the network of organized futures markets. There were hundreds, if not thousands, of bucket shops in the United States, present in even the smallest of American rural communities". Quoted from: Levy, Jonathan: *Freaks of Fortune. The Emerging World of Capitalism and Risk in America*, Harvard University Press (2012), pages 232-233.

The legal historian Jeremy Markham described bucket shops in the following terms: "*Essentially, a bucket shop is an establishment where bets can be made on current prices for commodities. The bets are not executed as contracts on any exchange, but rather are placed on the bucket shop's books, just as would be done by any bookie, who offsets his bets by his own resources"*[421].

Bucket shops used the telegraph to wire market quotations from Stock and Commodity Exchanges to their offices[422], where customers would make small bets on the price fluctuations of shares or commodities[423]. They were loathed by legitimate

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421 Quoted from: Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 9.

422 Some bucket shops were simply a scam and used fake wires and fake prices to deceive their clients. Ann Fabian writes that: "They equipped themselves with ticker tapes and telegraph wires (supposedly running directly to the floor of the exchange), and they set up blackboards for posing prices and a few chairs for customers. There were honest establishments where people played with a pretence of speculation and mocked the pretensions of big-city speculators. But in some cases the wire ran only as far as the end of the rug, and, in a popular variation, prices, which had been written by clerks the night before, were unwound from a box". Quoted from: Fabian, Ann: *Cardsharps and Bucket shops…*, op. cit., Kindle position 191.

423 "Bucket shops made their money from two related tactics, low margins and so-called wash sales. Low margins allowed bucket shops to collect customers' wagers after only small declines in a stock's price. A speculator placing a margin trade on the New York Stock Exchange lost the margin if the stock declined by 10 per cent. However, a patron of Haight and Freese lost the $15 margin on a stock purchase of $500 if the stock dropped only 3 percent to a share price of $48.50. At that point a patron could either deposit more money to "protect the margin" and keep the transaction open or could simply walk away having lost the $15 wager. Furthermore, bucket shops rigged the game by placing wash sales to wipe out customers' margins. Bucket shop patrons tended to be "bulls", that is, to bet that stocks would rise. When bucket shop proprietors saw that many of their customers wagered on a certain stock, they placed orders on

Commodity Exchanges, not only because of the competition they presented, but also due to the fact that their fraudulent practices and tendency to close down and flee from their creditors when bets turned against them[424], caused reputational damage to the exchange industry at a time when Congress was debating whether to prohibit futures contracts altogether[425].

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legitimate exchanges to sell minimum lots of the stock at a price sufficiently below its current quotation to "wash down" the price. When the low quotation came through on the ticker, the bucket shop closed out its customers' margins". Quoted from Hochfelder, David: "'Where the Common People Could Speculate'…", 1886-1920", op. cit., page 344.

Jonathan Levy describes the advantages of bucket shop speculation for the ordinary working class citizen: "Anyone could buy and sell futures at a bucket shop. One did not have to pay for a membership or act through a broker who was a member, as in the pits. Transactions were between the proprietor of the shop and his or her customer, and one could deal in far less volume. Prices –mostly from commodity futures markets but also from stock markets– were continually wired to the shops over the telegraph and marked on a giant blackboard. At a typical bucket shop, customers placed a margin with the proprietor of the shop to secure the transaction. If the market price moved in the shop's favour, the transaction was closed out as soon as the fluctuation equalled the margin. If the market price went in the customer's favour, he or she could close the transaction at will and collect the difference". Quoted from: Levy, Jonathan: *Freaks of Fortune…*, op. cit., page 241.

424 "If the bucket shop ended up too much on the wrong side of a trade – i.e. short when the market had a large up move – it could always close up shop and run". Quoted from Saleuddin, Rasheed: *The Government of Markets. How Interwar Collaborations between the CBOT and the State Created Modern Futures Trading*, Palgrave Macmillan (2018), page 70.

425 The prospect of a national ban on futures was not the only concern of the Exchanges, Saleuddin writes that: "gambling in bucket shops attracted the attention of the States which, during this crucial period, were deeply involved in social regulation using police powers. For instance, anti-gambling legislation was frequently used by failed speculators to renege on bets made in bucket shops, but also on the legitimate exchanges" (Ibid page 70).

3.12 The Christie case and the serious purpose test

The Commodity Exchanges responded to the threat posed to them by bucket shops by trying to cut off their access to market quotations[426].

The 1905 U.S Supreme Court Case of *Board of Trade of the City of Chicago v. Christie Grain & Stock Company* was the consequence of just such an attempt by the Chicago Board of Trade, which had taken legal action to prevent the Christie Grain & Stock Company (a bucketshop) from using its price quotations without permission.

The Christie Company defended themselves by claiming that the quotations related to transactions for the pretended buying and selling of grain that were made without any intention of performing its actual delivery, in violation of the Illinois bucket shop statute, and that there were therefore no legitimate property rights for the Board of Trade to protect[427]. This meant that when

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426 "The Chicago Board of Trade led the fight against the bucket shops. For access to the board's prices (and thus their existence) bucket shops were wholly dependent on telegraph corporations. The board's legal strategy was to block companies from distributing prices to shops by claiming, as a corporate legal actor, an individual property right in its prices". Quoted from Levy, Jonathan: *Freaks of Fortune…*, op. cit., page 254.

427 U.S. Supreme Court Justice Oliver Wendell Holmes described the principal defence employed by Christie in the following terms: "It is said that the plaintiff keeps the greatest of bucket shops, in the sense of an Illinois statute of June 6, 1887, that is, places wherein is permitted the pretended buying and selling of grain, etc., without any intention of delivering the property so sold. On this ground it is contended that if under other circumstances there could be property in the quotations, which hardly is admitted,

deciding the case, the Supreme Court entered into a consideration of the legitimacy of the practice of set-off for futures contracts.

U.S Supreme Court Justice Oliver Wendell Holmes reasoned that the ring settlement used in futures transactions on the Chicago Board of Trade was a natural progression from the simpler two party contracts made in good faith, that were intended for actual future delivery. He stated:

"*We suppose that from the beginning as now, if a member had a contract with another member to buy a certain amount of wheat at a certain time and another to sell the same amount at the same time, it would be deemed unnecessary to exchange warehouse receipts. We must suppose that then as now, a settlement would be made by the payment of differences, after the analogy of a clearing house. This naturally would take place no less that the contracts were made in good faith for actual delivery, since the result of actual delivery would be to leave the parties just where they were before. Set-off has all the effects of delivery. The ring settlement is simply a more complex case of the same kind"*[428].

But what ultimately legitimised these contracts, according to Wendell Holmes, was the serious business purpose underlying

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the subject matter is so infected with the plaintiff's own illegal conduct that it is caput lupinum, and may be carried off by any one at will". Quoted from: Board of Trade of the City of Chicago v. Christie Grain and Stock Company, U.S. Supreme Court, May 8, 1905, available at: https://cite.case.law/us/198/236/

[428] Ibid.

them: "*The fact that contracts are satisfied in this way by set-off and the payment of differences detracts in no degree from the good faith of the parties, and if the parties knew when they make such contracts that they are very unlikely to have a chance to satisfy them in that way and intend to make use of it, that fact is perfectly consistent with a serious business purpose and an intent that the contract shall mean what it says. There is no doubt, from the rules of the Board of Trade or the evidence, that the contracts made between members are intended and supposed to be binding in manner and form as they are made. There is no doubt that a large part of those contracts is made for serious business purposes"*[429].

Wendell Holmes harboured no doubts in his judgement about the serious business purpose of the Chicago Board of Trade:

"*As has appeared, the plaintiff's chamber of commerce is, in the first place, a great market, where, through its eighteen hundred members, is transacted a large part of the grain and provision business of the world. Of course, in a modern market contracts are not confined to sales for immediate delivery. People will endeavour to forecast the future and to make agreements according to their prophecy. Speculation of this kind by competent men is the self-adjustment of society to the probable.*

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[429] Ibid.

Its value is well known as a means of avoiding or mitigating catastrophes, equalizing prices and providing for periods of want"[430].

He dismissed out of hand the idea, furthered by the defendant, that the futures market was simply another type of bucket shop, albeit on a much grander scale:

"*It seems to us an extraordinary and unlikely proposition that the dealings which give its character to the great market for future sales in this country are to be regarded as mere wagers or as "pretended" buying and selling, without any intention of receiving and paying for the property bought, or of delivering the property sold, within the meaning of the Illinois Act. Such a view seems to us hardly consistent with the admitted fact that the quotations of prices from the market are of the utmost importance to the business world, and not least to the farmers"*[431].

In regard to the right of the Chicago Board of Trade to safeguard its quotations, Wendell Holmes compared them to a trade secret, and declared that even if the quotations provided data on illegal acts, they would not cease to be entitled to legal

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430 Ibid.

431 Ibid.

protection[432]. This judgement was a serious setback for the bucket shops, as it starved them of the information they traded on: and the Exchanges were quick to capitalise on the decision. In 1905, the year the judgement was made, the annual report of the Chicago Board of Trade related that: "*permanent injunctions have already been issued in favour of the Board against 179 persons, and temporary injunctions, in cases still pending, against 18 persons, restraining them, either as principal or agent, or as an officer of any corporation, from obtaining or using our quotations (...)"*[433].

The effect of the Christie case was to change the test for the legitimacy of a futures contract from the intention of making delivery of the commodity in question to whether the contract was

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432 "If then the plaintiff's collection of information is otherwise entitled to protection, it does not cease to be so, even if it is information concerning illegal acts. The statistics of crime are property to the same extent as any other statistics, even if collected by a criminal who furnishes some of the data" (Ibid).

In its annual report for the year ending 1905, the Board of Trade described the Supreme Court's judgement in the following manner: "Its decision last May was a sweeping and far-reaching one in our favour. It established not only the legality of our future or time-trading, our clearing house, and our system of settlement by off-set or "ringing", but also decided that our quotations were a species of property which should be protected by injunctions. It also affirmed the legality of our contracts with the telegraph companies respecting the quotations which had been attacked as an illegal restraint upon trade" Quoted from: "The forty-eighth annual report of the Trade and Commerce of Chicago for the year ended December 31, 1905", printed by The J.M.W. Jones Stationery and Printing Co. (1906), pages 48-49.

433 Quoted from: "The forty-eighth annual report of the Trade and Commerce of Chicago for the year ended December 31, 1905", printed by The J.M.W. Jones Stationery and Printing Co. (1906), page 49.

entered into for a serious business purpose, and it was implicit in Wendell Holmes judgement that this criterion was satisfied by official Commodity Exchanges, but not by the bucket shops. It thus established the Exchanges as the only traders of legitimate, and therefore judicially enforceable, derivative contracts[434].

3.13 The Future Trading Act

Figure 20 shows that U.S grain prices more than halved between the period immediately following the First World War to the first years of the 1920s. Wheat prices fell 55.8% between 1920 and 1923, Corn 50.1% between 1919 and 1923, Oat 51% between 1920 and 1923, Rye 55.4% between 1919 and 1923 and Barley 58% between 1920 and 1923.

Figure 20: The yearly average of U.S market prices for grains in cents per bushel: 1909 – 1923[435].

[434] "Holmes thus handed the organized commodities exchanges a stunning legal victory that assured their future. Speculative difference contracts entered into off the exchanges in the "over the counter" (OTC) market remained void under the common law and possibly criminal under state anti-bucketshop laws. On the exchanges, however, speculative trading in futures was not only permitted; futures contracts were legally enforceable because set-off was deemed a "delivery"." Quoted from Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Financial Crisis", op. cit., page 17.

[435] Adapted from: "The Federal Reserve Bulletin. October 1924", page 790.

	Wheat	Corn	Oats	Rye	Barley
Average 1909-1913	88.8	62.9	39.6	72.1	61.1
1918-19	207.8	152.1	69.4	152.0	95.9
1919-20	222.3	150.6	78.5	142.9	123.8
1920-21	184.5	64.1	53.8	143.6	79.1
1921-22	102.9	52.2	33.5	81.5	46.1
1922-23	98.3	75.6	38.5	67.8	52.1

Critics of the futures market linked the fall in agricultural commodity prices directly to speculation. One of the most fervent critics of futures trading was the Republican Senator Arthur Capper (1865 – 1951), a publisher, newspaper and radio station proprietor from Kansas whose list of publications included *Missouri Valley Farmer, Oklahoma Farmer, and Nebraska Farm Journal.* In an address to Congress on the 9th of August 1921, Senator Capper stated that:

"*During the past year the price of wheat and corn has been determined to a large extent not by the demand and supply of the commodity itself but by the fabulous quantities sold on the exchange that never had any existence, that no grain farmer in the world ever planted, ever toiled over its cultivation and harvest, or offered for sale*"[436].

436 The remarks of Senator Capper are quoted from: "Congressional Record. Proceedings and Debates of the first session of the sixty-seventh congress of the United

Later in his address, Senator Capper made a virulent attack on the Chicago Board of Trade:

"Mr President, it is against the law to run a gambling house anywhere within the United States. But today, under the cloak of business respectability, we are permitting the biggest gambling hall in the world to be operated on the Chicago Board of Trade. The grain gamblers have made the exchange building in Chicago the world's greatest gambling house. Monte Carlo or the Casino at Habana are not to be compared with it"[437].

The occasion for his speech was the consideration by Congress of "*The Bill taxing contracts for the sale of grain for future delivery, and options for such contracts, and providing for the regulation of boards of trade, and for other purposes",* a prospective piece of legislation whose short title was simply "*The Future Trading Act*".

Senator Capper was one of the sponsors of the act, the essence of which was to authorise the Secretary of Agriculture to designate those exchanges that complied with certain requisites as "*contract markets*". The idea was to codify the criteria established by Wendell Holmes, by levying a tax on transactions

States of America. Volume 61, part 5, July 25 to August 20, 1921", printed by the Washington Government Printing Office (1921), page 4761.

[437] Ibid, page 4763.

carried out on any unrecognised futures exchange (thereby discouraging their operations).

The tax would not only be on contracts for the future delivery of grain[438], but also on puts and options on grain[439]. Exemption from the tax would apply to:

i) Transactions in which the seller was the owner of the physical commodity or the land upon which the commodity was cultivated[440].

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438 According to Section 2 of the Act the word grain "shall be construed to mean wheat, corn, oats, barley, rye, flax, and sorghum". While future delivery "shall not include any sale of cash grain for deferred shipment or delivery". Quoted from Section 2 of "An Act Taxing contracts for the sale of grain for future delivery, and options for such contracts, and providing for the regulation of boards of trade, and for other persons". Section 4 (a) of the act stated: "That in addition to the taxes now imposed by law there is hereby levied a tax of 20 cents a bushel on every bushel involved therein, upon each contract of sale of grain for future delivery".

439 Section 3 of the act declared "That in addition to the taxes now imposed by law there is hereby levied a tax amounting to 20 cents per bushel on each bushel involved therein, whether the actual commodity is intended to be delivered or only nominally referred to, upon each and every privilege or option for a contract either of purchase or sale of grain, intending hereby to tax only the transactions known to the trade as "privileges", "bids", "offers", "puts and calls", "indemnities", or "ups and downs".

In his statement to Congress Senator Capper noted that this provision had the purpose of: "The taxing out of existence of indemnities or puts and calls". Quoted from: "Congressional Record. Proceedings and Debates of the first session of the sixty-seventh congress of the United States of America. Volume 61, part 5, July 25 to August 20, 1921", printed by the Washington Government Printing Office (1921), page 4762.

440 Section 4 (a) of the act made an exception "Where the seller is at the time of making of such contract the owner of the actual physical property covered thereby, or is the grower thereof, or in case either party to the contract is the owner or renter of land on which the same is to be grown, or is an association of such owners or renters of land".

ii) Transactions carried out through a designated contract market. The act authorised the Secretary of Agriculture to make this designation when a board of trade complied with the following requirements:

a) It sold a sufficient quantity of grain under conditions which reflected its fair value[441].

b) The board of trade and its members kept a permanent record of all their transactions and agreed to show the details of any transactions to the Secretary of Agriculture upon request. These details would include the parties, the terms of the transactions and the manner in which the transactions were completed[442].

c) The governing body of the board of trade acted to prevent the dissemination of false or misleading reports that could affect the price of commodities[443].

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[441] Section 5 (a) of the act allowed the Secretary of Agriculture to designate a board of trade as a contract market "When located at a terminal market upon which cash grain is sold in sufficient volumes and under such conditions as fairly to reflect the general value of the grain and the difference in value between the various grades of grain, and having recognized official weighing and inspection to service".

[442] Section 5 (b) determined that the Secretary of Agriculture must have access to "the details and terms of all transactions entered into by the board, or the members thereof, either in cash transactions consummated at, on, or in a board of trade, or transactions for future delivery (…)". These records had to be kept "in permanent form, showing the parties to all such transactions, any assignments or transfers thereof, with the parties thereto, and the manner in which said transactions are fulfilled, discharged or terminated."

[443] Section 5 (c) of the act made designation as a contract market conditional upon the governing body of the board of trade preventing "(…) the dissemination by the board

(d) The governing body of the board acted to prevent the manipulation of prices[444]. In connection with this requisite the Act provided for the expulsion from all contract markets of those shown to be attempting to manipulate prices[445].

(e) The governing body agreed to admit as members, the official representatives of lawfully formed cooperative associations[446]. This requisite would swiftly lead to a court case that resulted in the act being declared unconstitutional.

(f) The board of trade provided for making effective the orders or decisions of the supervisory commission composed of the Secretary of Agriculture, the Secretary of Commerce and the Attorney General[447].

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or any member thereof, of false, misleading, or inaccurate reports, concerning crop or market information or conditions that affect or tend to affect the price of commodities".

444 Section 5 (d) of the act made designation as a contract market dependent upon the governing body of the board providing for: "(…) the prevention of manipulation of prices, or the cornering of any grain, by the dealers or operators upon such board".

445 "Upon evidence received the said commission may require all contract markets to refuse such person all trading privileges thereon for such period as may be specified in said order. Notice of such order shall be sent forthwith by registered mail or delivered to the offending person and to the governing boards of said contract markets". Section 6 (b) of the Future Trading Act (1921).

446 Section 5 (e) determined that designation as a contract market required that: "the governing body thereof admits to membership thereof and all privileges thereon on such boards of trade any duly authorised representative of any lawfully formed and conducted cooperative associations of producers having adequate financial responsibility".

447 Section 6 of the act required designated contract markets provide: "for making effective the final orders or decisions entered pursuant to the provisions of paragraph (b) section 6 of this act".

The Future Trading Act was almost immediately declared unconstitutional by the U.S Supreme Court in the case of Hill v. Wallace (1922)[448]. The case was brought by eight members of the Chicago Board of Trade against the Secretary of Agriculture. Their concern was that the membership of the board of trade could not afford to allow representatives of cooperative societies to become fellow members (as the board of trade was required to accede to in order to qualify as a designated contract market), as this would destroy the business of its current membership and cheapen the worth of membership generally. Furthermore, rescinding their membership and trading outside of a designated contract market was not a viable option for traders, as no member could afford to pay the 20 cent per bushel tax placed on futures contracts for grain. Their legal approach centred on attacking the tax provisions in the act as an illegal exercise of congressional taxing power.

The U.S Supreme Court noted that the act "*was enacted for the purpose of regulating the conduct of business of boards of trade through supervision of the Secretary of Agriculture and the use of*

[448] Hill v. Wallace, U.S Supreme Court, May 15, 1922. The full text of the judgment in Hill v. Wallace is available at:https://tile.loc.gov/storage-services/service/ll/usrep/usrep259/usrep259044/usrep259044.pdf

an administrative tribunal consisting of that Secretary, the Secretary of Commerce, and the Attorney General"[449].

However, the tax element was purely an instrument for guaranteeing adherence to the act: "*The manifest purpose of the tax is to compel boards of trade to comply with regulations, many of which have no relevancy to the collection of the tax at all",* and that "*The act is in essence and on its face a complete regulation of boards of trade, with a penalty of 20 cents a bushel on all "futures" to coerce boards of trade and their members into compliance"*[450].

This was considered by the Supreme Court to be an improper use of Congressional taxation powers, and the sentence cited the recent decision in *Child Labor Tax case, ante, 20*, which had stated:

"Grant the validity of this law, and all that Congress would need to do, hereafter, in seeking to take over to its control any one of a great number of subjects of public interest, jurisdiction of which the States have never parted with, and which are reserved to them by the tenth Amendment, would be to enact a detailed measure of complete regulation of the subject and enforce it by a so called tax upon departures from it. To give such magic to the

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[449] Ibid.

[450] Ibid.

word 'tax' would be to break down all constitutional limitation of the powers of Congress and completely wipe out the sovereignty of the States"[451].

The conclusion of the Court was therefore that it was necessary to declare "*Section 4 and those parts of the act which are regulations affected by the so-called tax imposed by section 4, to be unenforceable"*[452].

However, Section 3, which introduced a tax on puts and options was not declared unconstitutional. The Chief Justice wrote that: "*This is the imposition of an excise tax in grain markets which approximate gambling or offer full opportunity for and does not seem to be associated with Section4. Such a tax without more would seem to be within the congressional power"*[453].

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451 In the reference to the case cited the Court affirmed that: "This has complete application to the act before us, and requires us to hold that the provisions of the act we have been discussing cannot be sustained as an exercise of the taxing power of Congress conferred by Section 8, Article I" (Ibid).

452 Ibid.

453 Ibid.

It was only some years later, in the case 1926 of *Trusler v.* Crooks[454] that Section 3 was also declared unconstitutional[455].

The Supreme Court considered that the purely regulatory part of the Act also exceeded the bounds of Congressional legislative authority, as there was no indication of any effect on interstate commerce which would justify Congressional intervention:

"(…) *sales for future delivery on the Board of Trade are not in and of themselves interstate commerce. They cannot come within the regulatory power of Congress as such, unless regarded by Congress, from the evidence before it, as directly interfering with interstate commerce so as to be an obstruction or burden thereon"*[456].

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[454] Trusler v. Crooks, U.S Supreme Court, January 11, 1926. The full case is available at: https://cite.case.law/us/269/475/

[455] The plaintiff in the case sought to recover two hundred dollars paid in tax on options. His argument was that the tax was not intended to produce revenue but was simply regulation under the cover of taxation, thus exceeding the legislative powers of Congress. Mr Justice Reynolds agreed with the plaintiff, stating that: "This conclusion seems inevitable when consideration is given to the title of the Act, the price usually paid for such options, the size of the prescribed tax (20 cents per bushel), the practical inhibition of all transactions within the terms of section 3, the consequent impossibility of raising any revenue thereby, and the intimate relation of that section to the unlawful scheme for regulation under guise of taxation. The imposition is a penalty, and in no proper sense a tax" (Ibid).

[456] Hill v. Wallace, U.S Supreme Court, May 15, 1922.

The judgement, written by Chief Justice Taft[457] contains a clear indication of how Congress should reframe the act:

"*Can these regulations of boards of trade by Congress be sustained under the Commerce clause of the Constitution? Such regulations are held to be within the police powers of the State. House v. Mayes, 219 U.S 270; Brodnax v. Missouri, 219 U.S. 285. There is not a word in the act from which it can be gathered that it is confined in its operation to interstate commerce. The words "interstate commerce" are not to be found in any part of the act from the title to the closing section*"[458].

The sentence furnished Congress with an example of a case in which the Supreme Court had ruled that Federal regulation was justified. In *Stafford v. Wallace* the Court had held that Congress had legitimately regulated the business of the stockyards because: "*Congress had concluded that through exorbitant charges, dishonest practises and collusion they were likely, unless regulated, to impose a direct burden on interstate commerce passing through*".

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457 William Howard Taft (1857 – 1930) was the 27th President of the United States (1909 – 1913) and held the position of Chief Justice of the United States from 1921 to 1930.

458 Hill v. Wallace, U.S Supreme Court, May 15, 1922.

The solution, was therefore to make use of the Commerce clause of the U.S Constitution[459].

3.14 The Grains Futures Act

Congress approved the Grains Futures Act on the 21st of September 1922. Its full title: "*An Act for the prevention and removal of obstructions and burdens upon interstate commerce in grain, by regulating transactions on grain future exchanges, and for other purposes"*: illustrates how Congress had followed the indications of Chief Justice Taft to the letter.

The tax on futures was eliminated and the justification for the act was firmly centred on the need to remove obstructions and burdens from interstate commerce[460]. Section 4 of the act made it

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459 Article 1, Section 8, Clause 3 of the U.S Constitution gives Congress the power to "To regulate Commerce with foreign Nations, and among the several States, and with the Indian Tribes".

Jeremy Markham writes: "Only two weeks after the Supreme Court declared the act unconstitutional, new legislation was introduced. This legislation was based on Congress's ability to regulate interstate commerce. Otherwise, it was substantially identical to the 1921 legislation that was held unconstitutional". Quoted from: Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 13.

John Stassen adds that: "Congress willingly and promptly used the commerce clause to regulate futures trading in time for the November 1922 elections. With cut and paste, the 1921 Future Trading Act became the Grain Futures Act of 1922.". Quoted from Stassen, John H.: "The Commodity Exchange Act in Perspective", op. cit., pages 830-831.

460 Section 3 of the Act states that "Transactions in grain involving the sale thereof for future delivery as commonly conducted on boards of trade and known as 'futures' are affected with a national public interest"; and that "the transactions and prices of grain

illegal to: "*deliver for transmission through the mails or in interstate commerce by telegraph, telephone, wireless or other means of communication, any offer to make or execute, or any confirmation of the execution of, or any quotation or report of the price of, any contract of sale of grain for future delivery on or subject to the rules of any board of trade in the United States".*

The exceptions to this rule were the same as those that had been previously contained in the Future Trading Act, that is, the owner or grower of the physical commodity and members of a contract market designated by the Secretary of Agriculture. The Act was to be administered by the Grains Futures Administration, a division of the department of Agriculture[461].

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on such boards of trade are susceptible to speculation, manipulation, and control, and sudden or unreasonable fluctuations in the prices thereof frequently occur as a result of such speculation, manipulation, or control, which are detrimental to the producer or the consumer and the persons handling grain and products and by-products thereof in interstate commerce, and that such fluctuations in prices are an obstruction to and burden upon interstate commerce in grain and by-products thereof and render regulation imperative for the protection of such commerce and the national public interest therein".

461 "To carry out the provisions of the act, the Secretary of Agriculture established the Grains Futures Administration within the Department of Agriculture. The Grains Futures Administration was responsible for day-to-day regulation under the Grains Futures Act. It initially maintained only a small staff in Washington. Its field headquarters was in Chicago, where it maintained a "considerable force" for the purpose of gathering daily reports from traders. Officers with a small staff were also maintained in Minneapolis and Kansas City". Quoted from: Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 15.

The constitutional soundness of the new act was quickly put to the test in the case of the Chicago Board of Trade v. Olsen[462]. The case was brought by the Chicago Board of Trade against the United States District Attorney at Chicago and the Secretary of Agriculture, for taking steps to enforce the provisions of the Grain Futures Act which it believed violated their rights under the Federal Constitution. The central argument of the Chicago Board of Trade was that Future trading on commodity exchanges did not impose any burden upon interstate commerce, and that if this were true, the whole act was unconstitutional because it could not be justified by the commerce clause of the U.S Constitution. Once again, Chief Justice Taft provided the opinion of the Court:

"*In the act we are considering, Congress has expressly declared that transactions and prices of grain in dealing in futures are susceptible to speculation, manipulation and control which are detrimental to the producer and consumer and persons handling grain in interstate commerce, and render regulation imperative for the protection of such commerce and the national public interest therein*".

(…) "*But it is contended that it is too remote in its effect on interstate commerce, and that it is not like the direct additions to*

462 Board of Trade of the City of Chicago et al v. Olsen, United States Attorney for the District of Illinois. Supreme Court of the United States, April 16, 1923. The full text of the judgement is available at: https://cite.case.law/us/262/1/

the cost of the producer of marketing cattle by exorbitant charges and discrimination of commission men and dealers, as in Stafford v. Wallace. It is said that there is no relation between prices on the futures market and in the cash sales".

In disputing this contention, Chief Justice Taft pointed to the possibility of cornering the market using grain futures:

"*The fact that a corner in grain is brought about by trading in futures shows the direct relation between cash prices and actual commerce on the one hand, and dealing in futures on the other, because a corner is not a monopoly of contracts only, it is a monopoly in the actual supply of grain in commerce".*

Futures, Taft reasoned, could be used to manipulate actual commodity prices upwards or downwards:

"If a corner and the enhancement of prices produced by buying futures directly burden interstate commerce in the article whose price is enhanced, it would seem to follow that manipulations of futures which unduly depress prices of grain in interstate commerce and directly influence consignment in that commerce are equally direct".

Given this direct connection, the Court had to conclude that the act was a legitimate use of Congressional powers:

"(…) *we are prevented from questioning the conclusion of Congress that manipulation of the market for futures on the*

Chicago Board of Trade may, and from time to time does, directly burden and obstruct commerce between the States in grain, and that it recurs and is a constantly possible danger. For this reason, Congress has the power to provide the appropriate means adopted in this act by which this abuse may be restrained and avoided".

The Constitutional approval granted to the Grains Futures act bestowed, despite the legal protests of the members of the Chicago Board of Trade, a number of advantages upon those organised exchanges that were denominated contract markets. It protected them from competition from bucket shops, it excluded them from State anti-gambling laws and it ensured the legal enforceability of the derivatives trading carried out by their members.

3.15 The Commodity Exchange Act

Despite the sanctions for price manipulation contained in the Grain Futures Act[463], the problem persisted.

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[463] Section 6 (b) of the Grain Futures Act determined that in connection with market manipulation "Upon evidence received the said commission may require all contract markets to refuse such person all trading privileges thereon for such period as may be specified in said order".

Figure 21 shows how wheat prices collapsed to just 42 cents a bushel on June the 19th 1932[464]. The Grains Futures Administration conducted an investigation into the causes of the fall[465]. Jeremy Markham remarks that:

"*It was found that the debacle resulted principally from activities of not more than ten traders who controlled fifteen speculative accounts. A large portion of their tremendous holdings were suddenly dumped on the market. At first this was for the purpose of taking profits, but it compelled the liquidation of large accounts that were gradually margined"*[466].

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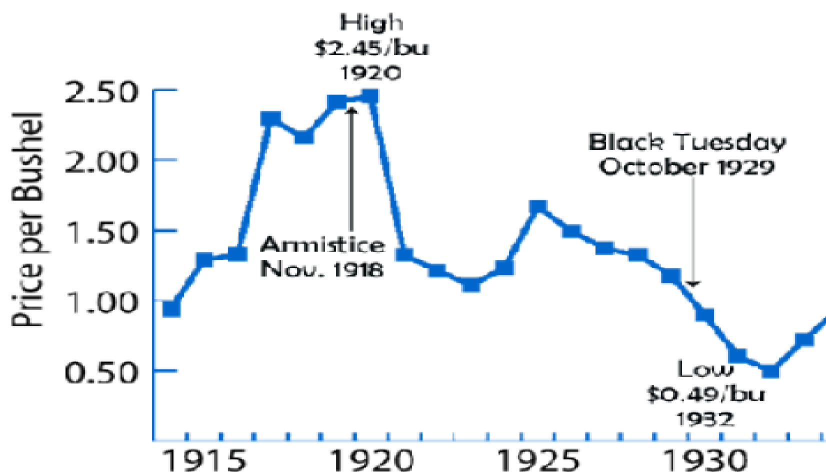
464 Markham writes that "By 1932, wheat prices were at a three-hundred –year low, and a bushel of corn cost less than a pack of chewing gum" (Markham, Jeremy W.: "Super Regulator: A comparative analysis of Securities and Derivatives Regulation in the United States, The United Kingdom, and Japan", *Brooklyn Journal of International Law*, Vol. 28, Issue 2, 2003, pages 319-410, page 339, footnote 95).

465 The Report of the Chief of the Grain Futures Administration stated that: "Following the sensational collapse in the grains-futures market on July 19 and 20 1932, during which Chicago wheat futures recorded an extreme decline of $24\frac{7}{8}$ to $27\frac{1}{2}$ cents, and corn futures an extreme decline of $17\frac{7}{8}$ to $18\frac{3}{4}$ cents, the Administration conducted an investigation to ascertain the factors responsible for the collapse (….)." "It was found that the debacle resulted principally from the activities of not more than 10 traders, who controlled 15 large speculative accounts and gradually accumulated inordinately large holdings of both wheat and corn futures during the weeks preceding the collapse, that a large portion of these tremendous holding was suddenly dumped upon the market, and that while this large –scale liquidation in its early stages was for the taking of profits by large operators, it quickly compelled the liquidation of large accounts that were inadequately margined". Quoted from: "Annual Report of the Chief of the Grain Futures Administration", United States Department of Agriculture 1934, page 3.

466 Quoted from Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 24.

Figure 21. Wholesale Wheat prices in dollars per bushel from the First World War to the Great Depression.[467]



This prompted the newly elected President Roosevelt[468] to make a speech calling for legislation to further regulate future markets[469].

"It is my belief that exchanges for dealing in securities and commodities are necessary and of definite value to our commercial and agricultural life. Nevertheless, it should be our

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[467] Source: Adapted from U. S History .com available at: https://u-s-history.com/pages/h1532.html

[468] President Roosevelt in was elected in November 1932 and was inaugurated on March the 4th 1933.

[469] Address by President Roosevelt to Congress on February the 9th 1934.

national policy to restrict, as far as possible, the use of these exchanges for purely speculative operations.

I therefore recommend to the Congress the enactment of legislation providing for the regulation by the Federal Government of the operations of exchanges dealing in securities and commodities for the protection of investors, for the safeguarding of values, and, so far as it may be possible, for the elimination of unnecessary, unwise, and destructive speculation"[470].

One of the concerns of Congress was that recent moves to curb speculation on the stock exchange would provoke a surge of speculative transactions on commodity exchanges unless new legislation was brought in to further regulate them[471]. The

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470 This speech is quoted from: "Commodity Exchange Act, Report to Accompany H.R.677.", Report no 421. March 18, 1935, page 2. In a letter to the Chairman of the House Committee in Interstate and Foreign Commerce dated the 26th dated the 26th of March 1934, the President commented on the need to expand regulation to both securities and commodities other than grain. He wrote: "The people of this country are, in overwhelming majority, fully aware of the fact that unregulated speculation in securities and commodities was one of the most important contributing factors in the artificial and unwarranted "boom" which had so much to do with the terrible conditions of the years following 1929. I have been definitely committed to definite regulation of exchanges which deal in securities and commodities. In my message I stated, "It should be our national policy to restrict, as far as possible, the use of these exchanges for purely speculative operations" (Ibid, page 2).

471 In the U.S, securities and commodities exchanges were regulated by different Congressional committees. Agricultural committees had jurisdiction over commodity exchanges, and banking committees had jurisdiction over security trading. Transactions in securities were governed by the Securities and Exchange Commission (SEC), initially under the terms of the Securities Act of 1933 and the Securities Exchange Act of 1934.

proposed new legislation, which would become the Commodity Exchange Act (CEA)[472], sought to impose limits on the amount of trading that could be conducted by large speculators[473], as a

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Congressman Clifford Ragsdale Hope, a member of the Committee on Agriculture, commented before a hearing on the Commodity Exchange Bill, which was drafted to amend the Grain Futures Act that:

"The attention of the committee has been called to a very important consideration, namely, if the stock exchange bill is enacted and no further regulations are placed upon the commodity exchanges, there will undoubtedly be a rush on the part of those who are interested in speculation to the grain exchanges, which would be very detrimental to the producers of agriculture products traded on in these exchanges."

Quoted from: "Hearings before the Committee on Rules. House of Representatives. Seventy Third Congress. Second Session on H.R. 9623: "A Bill to amend the Grain Futures Act to prevent and remove obstructions and burdens upon interstate commerce in grains and other commodities by regulating transactions therein on commodity futures exchanges, by providing means for limiting short selling and speculation in such commodities on such exchanges, by licensing commission merchants dealing in such commodities for future delivery on such exchanges, and for other purposes". May the 16th, 1934, page 12.

472 The Grain Futures Act was amended in 1936 by: "An act to amend the Grain Futures Act to prevent and remove obstructions and burdens from interstate commerce in grain and other commodities by regulating transactions therein on commodity futures exchanges, to limit or abolish short selling, to curb manipulation, and for other purposes". In order to carry out the regulatory functions required by the Commodity Exchange Act the Secretary of Agriculture created the Commodity Exchange Administration (which replaced the Grains Futures Commission). The Commodity Exchange Administration was later renamed the Commodity Exchange Authority.

473 Section 4 of the Grains Futures Act was amended to add the following: "Excessive speculation in any commodity under contracts of sale of such commodity for future delivery made on or subject to the rules of contract markets causing sudden or unreasonable fluctuations or unwarranted changes in the price of such commodity, is an undue and unnecessary burden on interstate commerce in such commodity. For the purpose of diminishing, eliminating or preventing such burden, the commission shall, from time to time, after due notice and opportunity for hearing, by order, proclaim and fix such limits on the amount of trading under contracts of sale of such commodity for future delivery on or subject to the rules of any contract market which may be done by any person as the commission finds is necessary to diminish, eliminate, or prevent such burden". Quoted from section 5, ibid. The positions that could be held by individual traders were also

means of impeding price manipulation, and to expand the list of commodities to those that were commonly traded on future markets[474]. The CEA banned put and call options on commodities[475], futures traders were obliged to register with the Secretary of Agriculture as futures commission merchants[476], and all traders were obliged to keep money received from customers for margins or guarantees in separate accounts[477].

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474 According to the revised act: "The word "commodity" shall mean wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain sorghums, mill, feeds, butter, eggs and Solanum tuberosum (Irish potatoes)". Quoted from Section 2 (a), ibid.

Together, these commodities constituted between 90 – 95% of all futures trading. See: Saleuddin, Rasheed: *The Government of Markets…*, op. cit., page 268.

However, no provision was made in the act for adding new commodities that could become subject to futures trading, which meant that in order to include any new commodities, the statute would have to be revised by Congress.

475 "It shall be unlawful for any person to offer to enter into, enter into, or confirm the execution of, any transaction involving any commodity (…) if such transaction is of the character of, or is commonly known to the trade as "privilege", "indemnity", "bid", "offer", "put", "call", "advance guaranty", or "decline guaranty". Section 4(c.) "An act to amend the Grain Futures Act to prevent and remove obstructions and burdens from interstate commerce in grain and other commodities by regulating transactions therein on commodity futures exchanges, to limit or abolish short selling, to curb manipulation, and for other purposes".

476 Section 4 (d) of the Act determined that: "It shall be unlawful for any person to engage as futures commission merchant in soliciting orders for the purchase or sale of any commodity for future delivery, or involving any contracts for sale of any commodity for future delivery, on or subject to the rules of any contract market unless - (1) such person shall have registered, under this Act, with the Secretary of Agriculture as such futures commission merchant and such registration shall not have expired or been suspended not revoked" (Ibid).

477 Section 4 (d) 2 of the Act required that commission merchants ensure that: "money, securities, and property shall be separately accounted for and shall not be comingled with the funds of such commission merchant or be used to margin or guarantee the trades or contracts, or to secure or extend the credit, of any customer or person other than the one for whom the same are held" (Ibid).

Commodity futures (at least in the regulated commodities), were strictly forbidden outside of contract markets, which meant that over the counter dealings were prohibited[478]. In relation to this ban on OTC derivatives Professor Lynn Stout has remarked that:

"*Whatever the disadvantages of this somewhat heavy-handed regulatory approach, it had at least one advantage: it kept speculative trading in futures and other derivative contracts from causing significant problems for other parts of the economy. Indeed, it might be said that the federal version of the common law rule against difference contracts regulated derivative speculation so well that both the rule itself, and the problems of speculation that it was designed to address, faded from public memory*"[479].

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478 Section 4 (h) of the act stated that: "It shall be unlawful for any person (1) to conduct any office or place of business anywhere in the United States or its territories for the purpose of soliciting or accepting any orders for the purchase or sale of any commodity for future delivery, or for making or offering to make any contracts for the purchase or sale of any commodity for future delivery, or for conducting any dealings in commodities for future delivery, that may be used for (A) hedging any transaction in interstate commerce in such commodity or by products thereof, or (B) determining the price basis of any such transaction in interstate commerce, or (C) delivery any such commodity sold, shipped, or received in interstate commerce for the fulfilment thereof, if such orders, contracts, or dealings are executed or consummated otherwise than by or through a member of a contract market" (Ibid).

Stout observes that: "The CEA's new "exchange trading requirement" meant that federal law, like anti-bucketshop statutes, went beyond the common law by making off-exchange futures illegal as well as judicially unenforceable". Quoted from: Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Financial Crisis", op. cit., page 17.

479 Ibid, page 17.

The next chapter will examine how this regulatory system, which took an extremely cautious approach to derivatives, was deliberately dismantled in the service of political and economic interests, and how this in turn enabled the union of securitisation techniques with derivative technology.

CHAPTER 4. THE ROLE OF MORTGAGE BACKED SECURITISATION, DERIVATIVES, SHORT TERM FUNDING AND RISK MODELS IN THE GREAT FINANCIAL CRISIS

This chapter explores the link between securitisation and the Great Financial Crisis of 2007 (GFC)[480]. It is divided into four sections. The first examines the connection between derivatives regulation and securitisation. It argues that a process of deregulation driven by the lobbying of financial institutions enabled credit default swaps to avoid the regulatory oversight of the Commodity Futures Trading Commission, the Securities Exchange Commission and Insurance Regulators. Credit default swaps were then used extensively to provide credit enhancement for the senior tranches of collateralised debt obligations and to create synthetic securitisations. The protection sellers of these derivatives were thinly capitalised and ill prepared to face the margin calls which assailed them when housing prices in the U.S dropped precipitously from 2007 onwards.

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[480]The effect of GFC in the United States was devastating "The Great American Recession swept away 8 million jobs between 2007 and 2009. More than 4 million homes were foreclosed. If it weren't for the Great Recession, the income of the United States in 2012 would have been higher by $2 trillion, around $17,000 per household" (Mian, Atif & Sufi, Amir: *House of Debt...*, op. cit., pages 8-9).

The second section charts the rise of the private label securitisation market and suggests that the move towards subprime mortgage securitisation and collateralised debt obligations was driven by the economics behind integrated securitisation chains that saw mortgage originators, mortgage servicers and SPV sponsors come under common ownership. The integrated chain of securitised products was too profitable and had been too heavily invested in for the financial institutions involved to withdraw from as prime securitisations and home refinancings began to slow down, and this obliged them to push subprime mortgages into collateralised debt obligations and synthetic structures in order to maintain profitably. The risk of these products was kept on bank balance sheets rather than distributed among investors as is commonly believed.

The third section focuses on the use of short term funding through repurchase agreements and asset backed commercial paper issuance to finance the holding of securitisation positions. A practice which became untenable as the slump in the mortgage sector meant that the collateral held by bank sponsored structured investment vehicles and conduits was treated with suspicion and the pool of investors in short term paper dried up, forcing banks to absorb large losses.

The fourth section examines the shortcomings of the mathematical models used to calculate both the cash flows of

securitisation structures and the capital requirements for holders of securitisation positions. These models underestimated the degree of correlation between broadly similar tranches in securitisation structures and the effect that a lack of liquidity could have on bank losses on these positions.

The thread running through this chapter is that securitisation structures were not of themselves responsible for the financial crisis, rather there were a plethora of interconnected causes which combined to promote a highly leveraged and ultimately unsustainable hybrid of securitisation and derivatives which exposed weaknesses in both the regulatory and theoretical foundations of the markets, and provoked the regulatory responses examined in Chapter 5.

PART 1: THE ROLE OF CREDIT DEFAULT SWAPS AND COLLATERALISED DEBT OBLIGATIONS

4.1 The development of new types of derivatives and the steady erosion of the U.S regulatory framework

The U.S regulatory framework came under pressure from

4.1 (a) The extension of the term commodity

Under the Commodity Exchange Act (CEA), regulated exchanges ensured the public and transparent pricing of futures and options on futures, the disclosure of the transacting parties to

a federal agency, prohibitions against market manipulation and excessive speculation, and the clearing of derivative contracts. This last requirement meant that a regulated intermediary institution was required to stand between the counterparties of a futures contract and ensure that the commitments that they undertook to perform were adequately capitalised through the collection of margin. Contractual failures to perform were guaranteed by the clearing facility. The capital adequacy of traders was controlled through the collection of initial margin upon the execution of the trade, and variation margin if the price moved against one of the counterparties. Futures trading outside of designated contract markets was prohibited.

However, the CEA only prohibited futures trading outside designated contract markets for those commodities contained in the act, "unregulated" commodities could be traded outside contract markets, even though they could fall foul of State bucketshop laws and so be judicially unenforceable. The same was true of put and call options. This loophole was exploited by Harold Goldstein, a trader who established an office in Los Angeles California in 1971. Goldstein sold options on unregulated commodity futures, claiming this his options were backed by a computerized program that purchased futures contracts for every option. While this was initially true, after a few months of trading he stopped covering his obligations by

matching the positions he took on the futures market (selling so-called *naked options*[481]). Increasing commodity prices resulted in gains that Goldstein was unable to cover with his company's own credit and the firm collapsed[482]. This and other similar cases resulted in a push to expand the scope of the legislation covering commodity derivatives. A report from the Department of Agriculture commented that *"There is no reason why a person trading in one of the currently unregulated futures markets should not receive the same protection afforded to those trading in the regulated markets. It was once thought that protection was needed only for producers of a commodity. It is now recognized, however, that all persons along the merchandising chain and consumers are entitled to the full protection of the law. Whether a commodity is grown or mined, or whether it is produced in the United States or outside, makes little difference to those in this country who buy, sell and process the commodity or to U.S*

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481 A naked option is an option sold by someone who does not own the underlying futures contract on the commodity in question.

482 "Customer losses were estimated at some $85 million. Before his firm failed, however, numerous other firms followed his example, leaving thousands of defrauded customers who had been collectively fleeced of millions of dollars" Quoted from Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 57.

consumers whose prices are affected by the futures market in that commodity"[483].

In 1974, amendments to the Commodity Exchange Act[484] contained a much expanded definition of the term "commodity", which could now include almost anything that was or could be traded on the futures market[485]. It also granted the Commission

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483 Quoted from: Hearings before the Committee on Agriculture and Forestry. United States Senate. Ninety Third Congress. Second Session on S.2485. A Bill to Establish an Independent Commodity Exchange Commission. S.2578. A Bill to Strengthen the Regulation of Commodity Exchanges. S.2837. A Bill to Regulate the Interstate and Foreign Commerce Trading on Futures Contracts in Order to Prevent Unfair and Deceptive Acts and Practices. H.R.13113. A Bill to Amend the Commodity Exchange Act to Strengthen the Regulation of Futures Trading, to bring all Agricultural and other Commodities Traded on Exchanges under Regulation, and for other purposes". Part 2, May 16, 17, and 20, 1974. U.S Government Printing Office (1974), pages 441-442.

484 The amendments were contained in the Commodity Futures Trading Commission Act of 1974.

485 "The word 'commodity' shall mean wheat, cotton, rice, corn, oats, barley, rye, flaxseed, grain, sorghums, mil feeds, butter, eggs, Solanum tuberosum (Irish potatoes), wool, wool tops, fats and oils (including lard, tallow, cottonseed oil, peanut oil, soybean oil and all other fats and oils), cottonseed meal, cottonseed, peanuts, soybeans, soybean meal, cottonseed, peanuts, soybeans, soybean meal, livestock, livestock products, and frozen concentrated orange juice, and all other goods and articles except onions as provided in section 13-1 of this title, and all services, rights, and interests in which contracts for future delivery are presently or in the future dealt in". Title 7, Section 2 of the U.S Civil Code of 1975 as amended by the Commodity Futures Trading Commission Act of 1974.

In connection was this expanded definition of the term "commodity", Professor Stassen writes: "Thus, in a few words, Congress expanded the Commodity Exchange Act to embrace not only all agricultural futures (including previously unregulated agricultural commodities such as coffee, cocoa and sugar), but also silver and gold, petroleum products, Government National Mortgage Association certificates, and U.S Treasury bonds, bills, and notes". Quoted from Stassen, John H.: "The Commodity Exchange Act in Perspective", op. cit., pages 830-833.

486 exclusive jurisdiction over options involving contracts of sale of a commodity for future delivery[487]. The act created the Commodity Futures Trading Commission (CFTC), an independent Government agency composed of a Chairman and four other Commissioners appointed by the U.S President. Within a few months of its creation the CFTC designated the Chicago Board of Trade as a contract market for the sale of futures in National Mortgage Association certificates.

4.1 (a) The conflict of jurisdiction with the SEC

Until this expansion of the legal definition of the term "commodities", trading in derivatives had been largely confined to certain agricultural products. This was to change radically. The authorisation by the CFTC for the Chicago Board of Trade to conduct trading in futures contracts on mortgage backed certificates guaranteed by the GNMA initiated a conflict of

486 The Commodities Futures Trading Commission (CFTC) was created by the 1974 act.

487 Title 7, Section 2 of the U.S Civil Code of 1975 as amended by the Commodity Futures Trading Commission Act of 1974 stated that "(…) the Commission shall have exclusive jurisdiction with respect to accounts, agreements (including any transaction which is of the character of, or is commonly known to the trade as, an 'option', 'privilege', 'indemnity', 'bid', 'offer', 'put', 'call', 'advance guaranty', or 'decline guaranty'), and transactions involving contracts of sale of a commodity for future delivery, traded or executed on a contract market (…)". However, this was tempered by section 4 (c) of the CFTC act of 1974 which provided that commodities that were previously subject to regulation under the Commodities Exchange Act would continue to be subject to the ban on options trading. The CFTC was given the authority to permit options trading in all other commodities.

jurisdiction between the Securities Exchange Commission (SEC) and the newly formed CFTC. The SEC argued that it ought to have jurisdiction over futures on securities, and that the GNMA certificates were securities488.

This conflict was temporarily settled by the Shad-Johnson Accord, an agreement reached between the then heads of the two agencies, John S.R. Shad (chairmen of the SEC) and Phillip Johnson (chairmen of the CFTC). This agreement determined the regulatory responsibility of the two agencies for a variety of financial instruments, authorising the SEC to regulate options on individual securities (including GNMAs) and the CFTC the authority to regulate futures contracts on stock indexes and government securities. The, agreement, which passed into law as the Futures Trading Act of 1982, gave the CFTC exclusive jurisdiction over all commodity futures trading on any instrument, except for single stock futures. Futures contracts could now only be traded legally on designated contract markets 489. However,

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[488] "Specifically, the director of its Division of Enforcement, Stanley Sporkin, advised Thomas Russo, the first director of the CFTC'S Division of Trading and Markets, that the CFTC had no jurisdiction over GNMA'S (Ginnie Maes) because they were, in the view of the SEC, securities". Quoted from: Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, op. cit., page 81.

[489] The Futures Trading Act of 1982 amended Section 4 of the Commodity Exchange Act to read: "(a) It shall be unlawful for any person to offer or enter into, to enter into, to execute, to confirm the execution of, or to conduct any office or business anywhere in the United States, its territories or possessions, for the purpose of soliciting or accepting any order for, or otherwise dealing in, any transaction in, or in connection with, a contract for the purchase or sale of a commodity for future delivery (other than

the limits of this prohibition were quickly tested by the creation of a new type of financial derivative contract, the swap.

4.1 (b) The creation of swaps

Salomon Brothers, the pioneer of Private Label Securitisation and one of the underwriters of the first GSE mortgage backed security was also the bank behind the very first swap derivative between IBM and the World Bank in 1981[490]. This swap was simultaneously a currency rate swap and an interest rate swap, as it swapped the revenue streams on bonds that were paid out in Swiss Francs and German Marks with bonds held by the World Bank that paid out in dollars.

The swap had been engineered to solve the following problem: The World Bank wished to borrow money, and at the time the U.S rate of interest on loans was 17%, while the rate of interest on loans in West Germany was 11% and in Switzerland 8%.

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a contract which is made on or subject to the rules of trade, exchange, or market located outside the United States, its territories or possessions) unless- (1) such transaction is conducted on or subject to the rules of a board of trade which has been designated by the Commission as a "contract market" for such commodity, (2) such contract is executed or consummated by or through a member of such contract market (3) such contract is evidenced by a record in writing which shows the date, the parties to such contract and their addresses, the property covered and its price, and the terms of delivery:" Quoted from Section 204 of the Futures Trading Act of 1982.

[490] For more information on this swap see: Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream, shattered global markets and unleashed a catastrophe*, Hachette Digital (2009), pages 23 ff.

Naturally the World Bank preferred to borrow in Marks and Franks in order to take advantage of this lower rate of interest, however both the Swiss and West German governments had imposed a limit on borrowing in their currencies, which the World Bank had already reached. At the same time, IBM had payments to make in Swiss Francs and German Marks on bonds that it had issued in those countries in order to raise capital, but it wished to convert the excess it held in these currencies back into dollars, without losing value by paying market prices for a strong dollar. By issuing bonds to match those of IBM and swapping the income streams and obligations, the World Bank could effectively borrow in Swiss Francs and German Marks, while IBM could convert these currencies into dollars at a lower than market rate.

Swaps were not limited to interest rate and currency swaps. Commodity swaps exchanged a series of payments based on the price of a commodity. Some commodity swaps employed caps or floors. In a capped commodity exchange the seller of the cap would agree to pay the buyer the price differential between the maximum fixed price of a certain quantity of a commodity (the cap) and the floating price, in exchange for the payment of a fee. In a floored commodity swap the seller of the floor agreed to pay the buyer the price differential between the floating price and a minimum agreed price (the floor) in exchange for the fee payment. Some commodity swaps would employ a collar, a

transaction by which the purchaser of a cap simultaneously sold a floor to the seller of the cap, thereby defraying the cost of the cap.

The other great innovation in derivatives came a decade later with the creation of the Credit Default Swap. This was the work of the merchant bank J.P Morgan, and it came about indirectly as a result of the Exxon Valdez oil tanker spill[491]. In 1993 the Exxon oil company were facing a $ 5 billion award for punitive damages [492]. Exxon had been a long standing client of J.P Morgan, so when Exxon asked them and Barclays bank to extend the company a $4.8 billion line of credit to cover possible losses, J.P Morgan was reluctant to refuse them for fear of losing such a prestigious and profitable client. However, the request came at a time when the bank was operating under twin financial constraints. Firstly, the Basel Accords[493] stipulated that banks were required to hold

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[491] The Exxon super- tanker grounded on a reef of Alaska in 1989 spilling millions of gallons of crude oil. The accident occurred after the tanker's captain, Joseph Hazelwood, a man with a history of alcohol abuse and who was found to have a high content of alcohol in his bloodstream some 11 hours after the accident, left the bridge to allow unlicensed subordinates to navigate. "The cost of the clean-up and rescue operations was $2 billion. The company paid out $300 million to fishermen and Native Americans for the loss of the 1989 fishing season. Exxon also paid $100 million in a criminal fine to the government and another $900 million to restoration projects over a 10-year period". Quoted from: Leacock, Elspeth: *The Exxon Valdez Oil Spill*, Facts on File Incorporated (2005), page 82.

[492] This was reduced to $507.5 by the U.S Supreme Court. See the U.S Supreme Court Ruling in "Exxon Shipping Co et al v. Baker et al", decided on June the 25th 2008.

[493] In 1974 the G10 countries established the Basel Committee on Banking Supervision, an international financial regulatory body. In 1988 they produced a group

capital reserves that were equivalent to 8 per cent of the corporate loans on their books (as these carried a 100% risk weight[494]). This rule was applicable to all corporate loans for all banks which were deemed to be investment grade by ratings agencies, regardless of the specific risk of re-payment. Secondly, the bank imposed internal credit limits on their departments, which the banks derivatives group was already close to surpassing[495]. Exxon's request would therefore require a large capital reserve and use up a vast quantity of J.P Morgan's internal credit limit, while producing relatively little profit in comparison. Selling the loan on to a third party would be counterproductive, as the objective was to retain Exxon as a client.

of recommendations known as the Basel I accords which introduced the concept of minimum capital requirements for banks. In order to calculate the value of these capital requirements financial assets were grouped and weighted according to their perceived credit risk. The Basel Committee was not created with any legislative or judicial authority but participating members were (and are) bound to respect its recommendations.

494 Annex 2, the Basle (it was originally spelt this way in English) Committee on Banking Supervision, International Convergence of Capital Measurement and Capital Standards, Basle, July 1988.

495 Gillian Tett writes that the Derivatives Group had: "(…) expanded so fast that the net exposure it had incurred via swaps amounted to approximately $ 30 billion, and it was bumping up against the limit, finding itself hemmed in" (Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 58).

The solution the bank devised was the first Credit Default Swap [496] ,the bank approached officials at the European Bank for Reconstruction and Development (EBRD) and persuaded them to cover the risk of the default of the loan to Exxon in exchange for a yearly fee. If Exxon defaulted, then the ERBD would be contractually obliged to compensate J.P Morgan for the loss, but if they made all their payments then ERBD would make a substantial profit in fees. The loan to Exxon would remain on the books of J.P Morgan, but it would not affect the internal credit limit of the department, as a default by Exxon was thought to be highly unlikely [497].

However, the Credit Default Swap (CDS) did not alter the capital requirement regulations. It had been invented after the Basel I accords had been drawn up, and was not covered by any U.S Financial Regulations. There were therefore two key questions regarding swaps, firstly, what was their legal nature, and secondly, could a Credit Default Swap (CDS), used as a

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[496] The theoretical invention of the Credit Default Swap is also attributed to Bankers Trust as part of a transaction which was never realized. See: Whittall, Christopher: "The birth (and troubled life) of CDS", *International Financing Review*, 2000, issue supplement which is available at http://www.ifre.com/the-birth-and-troubled-life-of-cds/21104482.fullarticle

[497] "Why was the EBRD willing to assume that credit risk? In truth, the reason was that the risk was minimal. Potential fine or no, Exxon was one of the strongest companies in the world, with 1994 revenues of close to $100 billion. It ranked third on the Fortune 500". Quoted from: McLean, Bethany & Mc Nocera, Joe: *All the Devils are Here…*, op. cit., Chapter 4, page 79.

mechanism for transferring the risk of default, allow banks to reduce their capital reserves accordingly?

4.1(c) The legal nature of commodity futures

As mentioned previously, Section 4 of the CEA precluded anyone from executing any transactions in contracts for the purchase or sale of any commodity for future delivery except through a contract market and its members. However, according to the act, future delivery did not include sales of cash commodities for deferred shipment or delivery. This exception was a legacy of the Grains Futures Act of 1922, and it had been included to make clear that the regulation governing futures was not intended to interfere with actual grain sales. The exception was important from a legal standpoint, because it could lend apparent legitimacy to firms that were actually selling OTC derivatives, and so suspect cases were investigated by the CFTC. One such case led to the CFTC providing a broad description of the central characteristics of a futures contract, a definition which would be pertinent to their decision concerning the legal nature of swaps.

Rawlin.L. Stovall, the sole proprietor of Stovall Commodities, was the subject of a complaint by the CFTC which alleged that Stovall Commodities had engaged in the unauthorised trading of

commodity futures. In determining the nature of a commodity futures contract the CFTC identified four key characteristics:

(i) They were standardised contracts for the purchase or sale of commodities that provided for future, rather than immediate delivery.

(ii) They were directly or indirectly offered to the general public.

(iii) They were secured by margins.

(iv) They were entered into primarily for the purpose of shifting or assuming the risk of change in the value of the commodity, rather than for the purpose of transferring ownership, and as such the legal obligation to make or take actual delivery was offset by making an equal and opposite transaction, and accepting a loss or profit in the price difference between the initial and subsequent value of the commodity in question 498.

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498 The CFTC wrote that: “Commodity futures transactions involve standardized contracts for the purchase or sale of commodities which provide for future, as opposed to immediate, delivery, and which are directly or indirectly offered to the general public and generally secured by earnest money, or "margin." They are entered into primarily for the purpose of assuming or shifting the risk of change in value of commodities, rather than for transferring ownership of the actual commodities. Thus, while a party to a commodity futures contract may eventually perform on the contract, that is, make or take delivery, at the maturation of the contract, thereby using the futures market to make or take delivery of actual commodities in exchange for money, he need have no expectation that performance will occur. Indeed, most parties to commodity futures contracts extinguish their legal obligations to make or take delivery by offsetting their contracts with equal and opposite transactions prior to the date on which delivery is called for, accepting a profit or loss for any differences in price between the initial and offsetting transactions”. Quoted from the Transfer Binder of the case: Rawlin L. Stovall

In reference to the activities of Stovall Commodities the CFTC decided that: "*Upon consideration of the record, the CFTC has determined that the instant operation did not involve the sale of cash commodities for deferred delivery, but in fact involved the contracts for sale of commodities for future delivery, commonly known as commodity futures contracts, which are lawfully effected only on or subject to the rules of a board of trade designated as a contract market. Commodity futures contracts are entered into primarily for the purpose of assuming or shifting the risk of change in value of commodities, rather than for transferring ownership of the actual commodities. The activities of the merchant here were directed to the general public, and not to those specific individuals interested in acquiring or disposing commodities. The facts show that the majority of clients were not interested in the delivery aspects of the contracts. The CFTC agreed with the findings of the ALJ that the transactions resembled futures contracts in the standardisation of their terms,*

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and Stovall & Stovall Inc., Docket number 75-7, (CCH) P20, 941, December 6, 1979, page 4.

However, the CFTC also made it clear that the general characteristics described were not definitive and nor was it necessary for them all to be present in order for a contract to be classified as a futures contract: "Thus, here it is clear that Stovall's transactions have all of the classic elements of a contract of sale of a commodity for future delivery. We do not mean that all commodity futures contracts must have all of these elements, nor are the elements we have described here an exhaustive catalogue of factors to which we will look in every case to determine whether an instrument is a cash contract for deferred shipment or delivery or is a commodity futures contract. Rather, we will look at each operation in context and will not hesitate to look behind whatever label the parties may give to the instrument" (Ibid, page 7).

the purpose for which they were traded, and the methods by which they were traded"[499].

The CFTC opined that: "*The statutory requirement that all commodity futures trading be conducted on designated markets is the centrepiece of the pervasive regulatory scheme embodied in the Act. Therefore, we view Stovall's wilful violation of that requirement, through a deliberate scheme, a most serious offense, deserving of serious remedial sanctions"*[500].

4.1 (d) The legal nature of swaps and hybrid instruments

Section 4 (a) of the CEA, which made it mandatory for futures contracts to be traded on designated contract markets, was a codification of Chief Justice Holmes' decision in the Christie case (which had stated that contracts made on a recognised exchange were assumed to be for a serious business purpose), and had been federal law since the Grains Future Act of 1922.

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[499] Quoted from Transfer Binder of the case: Rawlin L. Stovall and Stovall & Stovall Inc., Docket number 75-7, (CCH) P20, 941. December 6, 1979, page 1. The acronym ALJ stands for Administrative Law Judge.

[500] Ibid, page 15.

However, the firm stance taken by the CFTC in the case of Stovall in 1979, came under attack as swaps grew in popularity and profitability[501]. Professor Stout writes:

"Not surprisingly, Wall Street eventually stumbled upon the idea of using derivatives contracts to bet on financial events, and began to offer its clients just such financial derivatives betting opportunities. One of the most prominent examples was the rise of the market for interest rate swaps. By the mid-1980s, a number of banks and businesses were trading in interest rate swaps, essentially betting with each other on whether interest rates were going to rise or fall. At first, financial firms accustomed to thinking of futures in terms of corn or wheat may not have realized that OTC interest swaps might qualify as "difference contracts" void under the common law, or "off-exchange futures" of the sort banned by the CEA. By the end of the 1980s, however, the derivatives industry was well aware of the problem. Industry representatives mounted an organized campaign to give "legal certainty" to interest rate swaps"[502].

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501 "(…) from 1987 (the first year for which this information was gathered in a systematic manner) to 1993, outstanding principal in the entire swap industry increased from less than $1 trillion to more than $7 trillion. This growth is especially striking given that the volume prior to 1982 was, effectively zero". Quoted from Brown, Keith & Smith, Donald J.: "Interest Rate and Currency Swaps: A Tutorial", The Research Foundation of the Institute of Chartered Financial Analysis (1995), page 2.

502 Quoted from Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Financial Crisis", op. cit., pages 17-18. The authors of the Financial Crisis Inquiry Report commented that: "Outside of this regulated market, an over-the-counter market

U.S Financial institutions were worried that the highly profitable swaps market would simply move overseas if the CFTC were to classify them as futures. There were clear differences between interest and currency rate swaps and futures contracts. Swap transactions were individually negotiated for a specified term and amount (although standardized terms might be used for elements of the contract), most swap transactions did not involve margin payments, they were not offered directly or indirectly to the public but were conducted between large private firms that were sophisticated investors, and there was no secondary market in these transactions that allowed individuals to speculate on them as one might on the prices in a commodity exchange. However, there were also similarities, the parties exchanged future cash flows, and the transactions were entered into for the purpose of assuming or shifting a risk in the change of value (of a currency, a commodity or an interest rate).

The CFTC, headed by Wendy Gramm[503], a conservative economist and the wife of Republican Senator Phil Gramm,

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began to develop and grow rapidly in the 1980s. The large financial institutions acting as OTC derivatives dealers worried that the Commodity Exchange Act's requirement that trading occur on a regulated exchange might be applied to the products they were buying and selling". Quoted from: "The Financial Crisis Inquiry Report", submitted by the Financial Crisis Inquiry Commission, U.S Government Printing Office (2011), page 46.

[503] Wendy Gramm was head of the CFTC from 1988 to 1993. A few months before stepping down from her position the CFTC exempted Enron from regulation in energy

moved to resolve the question in 1989, by issuing its "*Policy Statement Concerning Swap Transactions*"[504]. The policy statement reaffirmed the key characteristics of futures contracts 505 it had mentioned in the Stovall case, and then observed that:

"*In addition to these necessary elements, the CFTC and the courts also recognize certain additional elements common to exchange-traded futures contracts, including standardized commodity units, margin requirements related to price movements, clearing organizations which guarantee counterparty performance, open and competitive trading in centralized markets, and public price dissemination*."

It went on to describe a swap transaction as:

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derivatives. She then took a seat on the Enron board of directors. Enron filed for bankruptcy in December 2001 after the discovery of an accounting scandal in which billions of dollars of debt, much of it stemming from failed derivatives deals, had been hidden behind a complex web of special purpose vehicles.

"Just after Wendy Gramm stepped down from the CFTC, that agency approved an exemption that limited the regulatory scrutiny of Enron's energy-derivatives trading business, a process she had set in motion. (At the time, both Enron and Gramm denied any kind of mutual back-scratching.)". Quoted from: McLean, Bethany & Elkind, Peter: *The smartest guys in the room. The amazing rise and scandalous fall of Enron*, Penguin. Digital Edition (2013), page 152.

[504] CFTC. Policy statement concerning swap transactions, Federal Register, Vol. 54, Num. 139, Friday July 31, 1989, pages 30694-30697.

[505] "Futures contracts are contracts for the purchase or sale of a commodity for delivery in the future at a price that is established when the contract is initiated, with both parties to the transaction obligated to fulfil the contract at the specified price. In addition, futures contracts are undertaken principally to assume or shift price risk without transferring the underlying commodity. As a result, futures contracts providing for delivery may be satisfied either by delivery or offset" (Ibid, page 30695).

"an agreement between two parties to exchange a series of cash flows measured by different interest rates, exchange rates, or prices with payments calculated by reference to a principal base (notional) amount".

The CFTC recognized that: "*swaps generally have characteristics, such as individually-tailored terms, predominantly commercial and institutional participants, and expectation of being held to maturity rather than offset during the term of the agreement, that may warrant distinguishing them from futures contracts".*

It therefore decided to establish a series of "safe-harbour" guidelines, which would exempt swaps from any action being taken against the parties under the terms of the CEA. The CFTC declared that:

"*Swaps satisfying the requirements set forth below will not be subject to regulation as futures or commodity option transactions under the Act and regulations."*

At the same time the CFTC published rules concerning hybrid instruments. Hybrid instruments are depository instruments or securities that have one or more components with payment features similar to swaps, forwards, options or futures contracts. Essentially, the Commission determined that the commodity component of these instruments was *de minimis* and that they would be deemed to be excluded from Commission regulation

506. However, when the hybrid instrument had a securities feature, it had to be subject to the relevant securities or banking laws and sold only to those eligible to purchase the instrument under those laws.

4.1 (e) The terms of the CFTC's swap exemption

The criteria established by the CFTC in order for swap agreements to qualify for an exemption were.

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506 Commodity Futures Trading Commission. Regulation of Hybrid Instruments. Federal Register. Volume 54. Number 139. Friday, July 21. 1989. Pages 30684 – 30693. A hybrid instrument was exempted as long as certain conditions were met. These included:(1) A requirement that the issuer received full payment of the hybrid's purchase price. (2) A prohibition on additional payments to the issuer during the life of the instrument or at its maturity. These first two conditions sought to limit the possible losses on the instrument due to its commodity dependent components. The reasoning was that an instrument which permitted losses to accrue was more akin to a straight commodity derivative than a debt, equity or depository instrument. (3) A prohibition on marketing the instrument as a futures contract or commodity option. This prohibition was set to prevent sellers of hybrid instruments from misleading investors as to the legal nature and regulatory provisions applicable to them. The Commission did not wish investors to mistakenly believe that hybrid instruments benefited from the full protections of the CEA. (4) A prohibition on settlement by delivery of an instrument specified as a delivery instrument in the rules of a contract market. This prohibition was designed to guard against interference with deliverable supplies for settlement of exchange traded futures or options contracts. (5) A requirement that the hybrid be sold or issued subject to federal or state securities or banking laws to persons permitted to purchase them. This condition addressed customer protection concerns, as well as complying with the condition in Section 4(c) 2 (B) (i) of the CEA which only permitted exemptions of the terms of the CEA between appropriate persons. (6) The sum of the values of the commodity dependent components of a hybrid instrument were less than the value of the commodity independent component. This was designed to ensure the predominance of the non-commodity dependent nature of the instrument (allowing for the de minimis exemption).

(a) That the swaps had to be negotiated by the parties and contain at least partly unstandardized terms. This excluded fungible instruments from the exception.

(b) The obligations of the parties could not be terminated by offsetting contracts, but, absent default, could only be terminated upon the consent of the counterparty. The CFTC explained that this requirement was intended to: "*confine safe harbour treatment to instruments that are not readily used as trading vehicles, that are entered into with the expectation of performance and that are terminated as well as entered into based upon private negotiation".*

(c) That they were not supported by the credit of a clearing organization. This criterion, the CFTC believed, was consistent with the concept of swaps as being dependent upon private negotiation and the individualised determination of the capacity of the counterparties to perform.

(d) That the transaction was undertaken in conjunction with a line of business. As swap counterparties were essentially all institutional or commercial entities, this criterion was intended to preclude public participation in qualifying swap transactions.

(e) The transaction could not be marketed to the public.

These criteria overturned what had been the basis of futures regulation in the U.S for over 80 years. Professor Swan writes:

"On that day, the CFTC, in effect, declared regulated exchange futures trading (the touchstone of U.S regulation) the wrong business to be in. With its strict registration requirements, its limited markets and intense government scrutiny, the CEA regulated futures business was far more fraught with perils and expenses (to the merchants) than the new world of officially condoned, off-exchange futures trade. In the new safe harbour, the Christie philosophy of Holmes J walked the plank. No more was exchange trading considered the futures business of the most laudably serious purpose. On the contrary, the CFTC now took the view that off-exchange trading was generally, of such a serious commercial nature that regulation was unnecessary"507.

However, the CFTC declared that it proposed "*to continue to review on a case-by-case basis transactions that do not meet the above criteria and that are not otherwise excluded from Commission regulation"*. This was far from being a clear guarantee of exemption for all swap transactions. Furthermore, the U.S Courts had traditionally recognised a private right of action, by which private claimants were entitled to bring damages caused by violations of the CEA 508. There was also the

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[507] Quoted from Swan, Edward J.: *Building the Global Market: A 4,000 Year History of Derivatives*, op. cit., page 266.

[508] Section 236 of the Futures Trading Act of 1982 had introduced a new section 22 to the CEA formally establishing a private right of action: "Any person (other than a contract market, clearing organization of a contract market, licensedboard of trade, or

possibility that transactions could be considered to contravene state anti-bucketing legislation.

4.1 (f) Cementing the exemptions in federal law

Legislation was swiftly proposed to grant the CFTC the statutory authority to exempt swap transactions and hybrid instruments from CEA regulation, providing that to do so was not contrary to the public interest. During the Hearings before the Senate of the Futures Trading Practices Act 509, the Chairman of the International Swap Dealers Association (ISDA 510) submitted written testimony in which he urged: "*(...) this Committee to support this provision which will permit further development of the swap business, enhance the competiveness of U.S financial institutions and eliminate certain legal risks which pose a threat to the financial markets in general and to the*

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registered futures association) who violates this Act or who willfully aids, abets, counsels, induces, or procures the commission of a violation of this Act shall be liable for actual damages resulting from one or more of the transactions referred to in clauses (A) through (D) of this paragraph and caused by such violation to any other person (…)".

509 See: "Hearings before the Committee on Agriculture, Nutrition, and Forestry United States Senate. One Hundred Second Congress. First Session on S.207. The Future Trading Practices Act of 1991. February 7 and 20, 1991".U.S Government Printing Office. Washington (1991).

510 ISDA was created in 1985. It subsequently changed its name to the International Swaps and Derivatives Association. It operates as a trade organization for participants in OTC derivative contracts.

banking industry in particular"[511]. Legislation was required, according to ISDA because: "*The legal uncertainties and confusion about the applicability of the Commodity Exchange Act, and particularly the exchange-trading requirement of the Act, to swap transactions has had serious consequences for the swap market. At various times in the past several years, a significant volume of swap dealing activity has moved off-shore as a result of the uncertainty and confusion. The U.S market operates with the continuing risk of an unfavourable judicial decision, arising from private litigation, which might be at odds with the CFTC Policy Statement concerning Swap Transactions"*[512].

The resulting Futures Trading Practices Act of 1992 gave the CFTC the legal authority to make exemptions, rather than simply resolve not to act[513]. This insulated the parties to a swap from civil

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[511] Letter from Mark C. Briskell, Chairman International Swap Dealers Association. Dated February 20, 1991. Submitted as written testimony in the "Hearings before the Committee on Agriculture, Nutrition, and Forestry United States Senate. One Hundred Second Congress. First Session on S.207. The Future Trading Practices Act of 1991. February 7 and 20, 1991.U.S Government Printing Office. Washington (1991)". Pages 448 – 456. Quoted from page 448.

[512] Ibid, page 452.

[513] Section 502 of the CEA was amended by the Future Trading Practices Act of 1992 to state that: "the Commission by rule, regulation, or order, after notice and opportunity for hearing, may (on its own initiative or on application of any person, including any board of trade designated as a contract market for transactions for future delivery in any commodity under section 5 of this Act) exempt any agreement, contract, or transaction (or class thereof) that is otherwise subject to subsection (a) (including any person or class of persons offering, entering into, rendering advice or rendering other services

actions based on infractions of the terms of the CEA and from the terms of state bucket shop laws[514]. In 1993 the CFTC adopted part 35 of the Code of Federal Regulations, which contained a non-exhaustive list of the swap agreements that were to benefit from the exemption:

"*a rate swap agreement, basis swap, forward rate agreement, commodity swap, interest rate option, forward foreign exchange agreement, rate cap agreement, rate floor agreement, rate collar agreement, currency swap agreement, cross-currency rate swap agreement, currency option, any other similar agreement (including any option to enter into any of the foregoing), any combination of the foregoing, or a master agreement for any of the foregoing*"[515].

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with respect to, the agreement, contract, or transaction), either unconditionally or on stated terms or conditions or for stated periods and either retroactively or prospectively, or both, from any of the requirements of subsection (a), or from any other provision of this Act (except section 2(a)(B), if the Commission determines that the exemption would be consistent with the public interest".

514 The Future Trading Practices Act determined that: "Nothing in this chapter shall supersede or pre-empt: the application of any Federal or State statute, including any rule or regulation thereunder, to any transaction in or involving any commodity, product, right, service, or interest(A) that is not conducted on or subject to the rules of a contract market, or, in the case of any State or local law that prohibits or regulates gaming or the operation of 'bucket shops' (other than antifraud provisions of general applicability), **that is not a transaction** or class of transactions that has received or is covered by the terms of any exemption previously granted by the Commission under subsection (c) of section 6 of this title (..)". Section 16 (e) of the Futures Trading Practices Act 1992.

515 Code of Federal Regulations, Section 35.1 (b 1 (i)). Exemption of bilateral agreements, issued 1993.

These exemptions could only apply to eligible swap participants[516], a broad range of subjects including: government

[516] These included a very wide range of subjects: (i) A bank or trust company (acting on its own behalf or on behalf of another eligible swap participant); (ii) A savings association or credit union; (iii) An insurance company; (iv) An investment company subject to regulation under the Investment Company Act of 1940 (15 U.S.C. 80a-1 et seq.) or a foreign person performing a similar role or function subject as such to foreign regulation, Provided That such investment company or foreign person is not formed solely for the specific purpose of constituting an eligible swap participant; (v) A commodity pool formed and operated by a person subject to regulation under the Act or a foreign person performing a similar role or function subject as such to foreign regulation, provided that such commodity pool or foreign person is not formed solely for the specific purpose of constituting an eligible swap participant and has total assets exceeding $5,000,000; (vi) A corporation, partnership, proprietorship, organization, trust, or other entity not formed solely for the specific purpose of constituting an eligible swap participant (A) which has total assets exceeding $10,000,000, or (B) the obligations of which under the swap agreement are guaranteed or otherwise supported by a letter of credit or keep well, support, or other agreement by any such entity referenced in this paragraph (b)(2)(vi)(A) of this section or by an entity referred to in paragraph (b)(2) (i), (ii), (iii), (iv), (v), (vi) or (viii) of this section; or (C) which has a net worth of $1,000,000 and enters into the swap agreement in connection with the conduct of its business; or which has a net worth of $1,000,000 and enters into the swap agreement to manage the risk of an asset or liability owned or incurred in the conduct of its business or reasonably likely to be owned or incurred in the conduct of its business; (vii) An employee benefit plan subject to the Employee Retirement Income Security Act of 1974 or a foreign person performing a similar role or function subject as such to foreign regulation with total assets exceeding $5,000,000, or whose investment decisions are made by a bank, trust company, insurance company, investment adviser subject to regulation under the Investment Advisers Act of 1940 (15 U.S.C. 80a-1 et seq.), or a commodity trading adviser subject to regulation under the Act; (viii) Any governmental entity (including the United States, any state, or any foreign government) or political subdivision thereof, or any multinational or supranational entity or any instrumentality, agency, or department of any of the foregoing; (ix) A broker-dealer subject to regulation under the Securities Exchange Act of 1934 (15 U.S.C. 78a et seq.) or a foreign person performing a similar role or function subject as such to foreign regulation, acting on its own behalf or on behalf of another eligible swap participant: Provided, however, That if such broker-dealer is a natural person or proprietorship, the broker-dealer must also meet the requirements of either paragraph (b)(2) (vi) or (xi) of this section;(x) A futures commission merchant, floor broker, or floor trader subject to regulation under the Act or a foreign person performing a similar role or function subject as such to foreign regulation, acting on its own behalf or on behalf of another eligible swap participant:

Provided, however, that if such futures commission merchant, floor broker, or floor trader is a natural person or proprietorship, the futures commission merchant, floor

entities, insurance companies, investment companies, corporations and even natural persons with a net worth in excess of $10,000,000.

4.1 (g) Warnings of the dangers of deregulation

The new types of OTC derivatives posed a number of risks for the counterparties. Credit risk was the risk that the counterparty was unable to meet its financial obligations, market risk was the risk that an adverse movement in the price of an asset or a commodity resulted in a loss, legal risk was the risk that a court or a regulatory body invalidated a contract, while operations risk was the risk that some type of human error (through a miscalculation, a lack of judgement, a lack of understanding, fraud or deficient procedures) would result in a loss. These risks were quickly realised as derivative use grew.

In December 1994 Orange County California declared bankruptcy after announcing a loss of $ 1.65 billion. Its losses stemmed from the use of a hybrid swap based derivative instrument known as inverse floating rate notes.

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broker, or floor trader must also meet the requirements of paragraph (b)(2) (vi) or (xi) of this section; or (xi) Any natural person with total assets exceeding at least $10,000,000".

Ibid, Section 35.1 (2).

The Orange County Investment Pool (OCIP), a collection of 189 different public entities within the County, pooled their finances to the County Treasurer. This had resulted in a $7.5 billion fund that was managed centrally. A key component of the investment portfolio were the inverse floating notes. These were essentially leveraged bets on interest rates. Interest payments on floating notes are a function of a benchmark interest rate (such as LIBOR), plus a spread to reflect the credit risk of the issuer. The interest rate can move upwards or downwards depending on the movement of the benchmark rate. Inverse floating notes are generally leveraged, and multiply the floating rate of the coupon by a factor of 2, 3 or 4. The leverage magnifies the coupon paid, or reduces it to nothing. OCIP invested heavily in inverse floating rate notes, betting on stable or decreasing interest rates. This meant that a small decrease in the interest rate triggered a large increase in coupon payments. However, a small increase in the interest rate had the reverse effect, wiping out the coupon. The principal of the note was not affected, and would be returned if held to maturity, but its market value was zero if it paid no coupon. The OCIP had purchased the notes on margin, using its collective assets as collateral to borrow an additional $12.5 billion in an attempt to boost its income through speculation. This borrowing had been done through the mechanism of repurchase agreements, pledging assets for short term loans repayable at 4% interest that had to be rolled over periodically. A sizeable part of

the assets it pledged were the inverse floating notes that it had acquired, which, when they lost their market value due to a rise in interest rates, meant it had to post more collateral on its repurchase agreements in order to roll over the loans, a situation that eventually forced Orange County into bankruptcy[517]. In the same year, sizeable OTC derivative losses were faced by Sears Roebuck 518 and Procter Gamble [519].

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517 For a far more extensive account see: Jacque, Laurent L.: *Global Derivative Debacles. From Theory to Malpractice*, World Scientific Publishing Company (2010), Chapter 14: "Orange County", pages 221-244.

518 "The biggest derivatives loss by an American company came last year and it came as no surprise to the loser, Sears, Roebuck & Company. The company took a pretax charge of $237 million in 1994. The Sears loss shows that for a huge borrower there can be a sizable risk, and cost, even for pursuing what it regarded as a conservative strategy. The Chicago-based retailer was able to raise money cheaply by selling what grew to be $11 billion in commercial paper, a short-term debt instrument with rates that fluctuate with the market. To protect itself against any sudden increases in interest rates, Sears decided in the 1980's to buy swap contracts that essentially converted the obligations into fixed rates, ranging from 7 percent to 12.5 percent. In its swap arrangements, typically made with a bank or broker, Sears would make regular payments at a fixed interest rate to the dealer and would receive in return -- the swap -- a payment that would fluctuate with the rate it owed on its commercial paper. If rates rose, the swap would cover the cost of the higher payments. But what happened was that rates fell sharply, so the swap obligated the company to pay much more every month than it would have if it had kept the floating rate. The real reckoning for Sears came last year, when its management decided to sell off assets and use the proceeds to pay off billions of dollars' worth of debt. When the company took that step, it took a loss both on the swaps and also on bonds, since it had to make prepayment penalties for retiring the bonds before they matured". Quoted from: "Derivatives as the Fall Guy, Excuses, Excuses", The New York Times, October 2, 1994. Available at:https://www.nytimes.com/1994/10/02/business/derivatives-as-the-fall-guy-excuses-excuses.html?

519 "Late Tuesday, Edwin L. Artz, the chairman of Procter & Gamble, disclosed that liquidating two contracts for interest rate swaps cost the company $157 million, $102 million of which would be charged, after tax, against third-quarter profit."

The problem of large derivative losses was the subject of a hearing before the Committee on Banking, Finance and Urban Affairs on October the 5th 1994[520]. The Chairman of the Committee, Henry B Gonzalez, began his opening statement by commenting on the banking industries' exposure to derivatives: "*When I recited the figures on the House floor in a special order and showed that 15 banks of the United States' leading banks had an exposure ranging from as much as about, oh, some 550 percent to 1,750 percent on its off-balance sheet activities, against which they don't have to have reserves, I thought that was a very, very-well, it was an alarm bell, but nobody cares much until you have the whole thing crumbling around your ears"*[521].

The Chairman continued by warning that: "*The most worrisome aspect of the derivatives market is the fact that much of the underpinnings of the $1 trillion-a-day global derivatives market is rampant speculation. It is a monstrously global sized, electronic Ponzi scheme, to a larger extent than not. It is an*

520Recent Derivative Losses. Hearing Before the Committee on Banking, Finance and Urban Affairs. House of Representatives. One Hundred Third Congress. October 5, 1994."

521 Ibid. Comments of Henry B. Gonzalez, Chairman of the Committee on Banking, Finance and Urban Affairs, page 2.

inverted pyramid. And how long can you hold a pyramid on its apex?"[522]

Among the written testimony to the hearings was an extensive list of 10 banking and 42 non-banking institutions[523] that had suffered derivative losses, all of which had taken place in 1994 alone. The list included: Bank America Corporation announcing the injection of an additional $ 50.5 million into its money market funds to cover derivative losses, Barnet Banks purchasing $100 million from one of its own funds to cover derivatives losses, Northern Trust Corporation agreeing to buy $111 million worth of derivatives from three of its funds in order to cover losses, the German firm Metallgesellschaft announcing derivative losses of over $ 1 billion from its American subsidiary[524], and Askin Capital Management, three hedge funds under collective management worth $2 billion, being liquidated because of massive derivatives losses.

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522 Ibid.Comments of Henry B. Gonzalez, Chairman of the Committee on Banking, Finance and Urban Affairs, page 2.

523 Ibid, pages 139-145.

524 The German company had committed to delivering millions of barrels of oil to independent U.S distributors at fixed prices over a ten-year period as a way of breaking into the American market. It used futures oil contracts with short, one month maturities which matched the amount (but not the maturity) of its long term oil liabilities to its clients. When these futures contracts reached maturity they were rolled over, after having been cash settled. The new futures positions were then reduced by the amount of delivery that had actually taken place in the intervening period. However, an unexpected and continuous decline in oil prices meant that it began to lose money as it rolled over the futures contracts. The total losses eventually came to nearly $1.3 billion.

In May 1994 the United States General Accounting Office published a report entitled: "*Financial Derivatives. Actions Needed to Protect the Financial System"*[525]. The report reviewed the capital and reporting requirements of banks that were counterparties in OTC derivative operations. For banks the capital requirement was that they: "*hold capital against their derivative positions equal to 8 percent of the adjusted value of their positions"*[526]. The adjustment reduced the capital held against these positions depending on the type of counterparty and the maturity of the contract. The reporting requirements were that they provide quarterly information on their derivatives notional amounts[527] by product type, and the total gross replacement cost of these positions[528]. However, they were not required to report on individual counterparty credit exposures. Securities firm affiliates and Insurance firm affiliates had no capital requirements

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[525] "Financial Derivatives. Actions Needed to Protect the Financial System", United States General Accounting Office, May 18 (1994).

[526] Ibid, page 11.

[527] The notional amount of a swap agreement is a contractual term used to calculate the amount of payments under the swap agreement. It is the principal base used as a reference point for the cash flows and is not actually exchanged between the parties to the agreement.

[528] The calculation of the replacement cost is based on the assumption that a defaulted transaction is closed out by entering into a replacement transaction with a different counterparty. This includes the recovery amount that will be received from the defaulting counterparty. There is also the assumption that there is a sufficiently liquid market in the derivative instrument so that a replacement can be found.

for derivatives. Insurance firm affiliates had no reporting requirements at all, while securities firm affiliates, were obliged to make a quarterly report on their total derivative notional amounts by product type and the total gross replacement cost of those positions, but no information on individual counterparty credit exposures had to be reported unless they exceeded a certain threshold. The report showed some concern at this situation:

"The largely unregulated activities of the U.S OTC derivatives dealers that are affiliates of securities and insurance companies have been growing rapidly. As of their fiscal year-end 1992, the five major securities firms and three insurance companies whose affiliates had the highest dollar amount in derivatives outstanding accounted for about 30 percent of the U.S OTC dealers' total volume, while banks accounted for about 70 percent. However, the growth rate of OTC and exchange –traded derivatives from 1990 through 1992 was 100 percent for insurance firms and 77 percent for securities firms, compared with 41 percent for banks. If one of these OTC dealers failed, the failure could pose risks to other firms – including federally insured depository institutions – and the financial system as a whole"[529].

It went on to warn that:

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[529] Financial Derivatives. Actions Needed to Protect the Financial System". United States General Accounting Office. May 18 (1994). Page 11.

"The concentration of OTC derivatives among a very few dealers could also heighten the risk of liquidity problems in the OTC derivatives markets, which in turn could pose risks to the financial system. Because the same relatively few major OTC derivatives dealers now account for a large portion of trading in a number of markets, the abrupt failure or withdrawal from trading of one of these dealers could undermine stability in several markets simultaneously, which could lead to a chain of market withdrawals, possible firm failures, and a systemic crisis"[530].

1994 also saw two unsuccessful bills brought before Congress in an attempt to reform derivative regulation. One before the House of Representatives and the other before the Senate.

The "*Derivatives Safety and Soundness Supervision Act of 1994*", presented in the House of Representatives, would have obliged the "*appropriate Federal regulatory agencies*" to have established uniform principles and standards over a wide group of issues concerning derivative use by financial institutions, including[531]:

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530 "Financial Derivatives. Actions Needed to Protect the Financial System". United States General Accounting Office. May 18 (1994). Page 12.

531 See: "Derivatives. Safety and Soundness Supervision Act of 1994", H.R.4503, In the House of Representatives, May 26.1994, pages 6-9.

(a) Strong capital requirements to guard against risks at financial institutions, paying particular attention to leverage ratios.

(b) Comprehensive risk management systems that would have included limits and controls with respect to counterparty risk and concentration risk.

(c) Ensure the prudent use of collateral by counterparties to derivative contracts.

(d) Oblige derivative users to maintain appropriate credit risk reserves in connection with their derivative activities.

(e) Guarantee effective senior management supervision and oversight by the board of directors of financial institutions to ensure that derivative activities were conducted in a safe manner that was consistent with the overall risk strategy of the company.

The act would also have introduced obligatory disclosure of information to the "*appropriate federal banking agency",* that would have featured:

(a) The gross national value of each class of derivative financial instrument

(b) All revenue gains and losses of the institution attributable to each class of derivative instrument.

(c) The net credit exposure of the institution under legally enforceable bilateral agreements.

The "*Derivatives Supervision Act of 1994*" was presented to the Senate on July 18, 1994. Its stated purpose was to "*separate certain activities involving derivative financial instruments from the insured deposits of insured depository institutions, to provide for regulatory coordination in the establishment of principles related to such activities",* and "*to provide enhanced regulatory oversight"*[532].

The act would have prevented regulated entities[533] from purchasing, selling, or engaging in any transaction involving a derivative financial instrument for the account of that entity, except:

(a) Hedging transactions for regulated entities approved by the appropriate financial regulatory agency.

(b) Purchasing, selling or engaging in derivatives by insured depository institutions provided they were considered well-capitalized or adequately capitalized and the instrument in

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532 "Derivatives Supervision Act of 1994", S.2291, 1994. In the Senate of the United States, July 18, 1994.

533 The term regulated entity was defined by Section 2 (9) of the proposed legislation as: "(A) an insured depository institution (B) a Federal Home Loan Bank, as defined in section 2 of the Federal Home Loan Bank Act (C) the Federal National Mortgage Association and any affiliate thereof; and (D) the Federal Home Loan Mortgage Corporation and any affiliate thereof".

question was approved by the appropriate Federal financial regulatory agency.

However, these exceptions did not extend to permitting regulated entities or their subsidiaries from purchasing, selling or engaging in derivative transactions for their own account for any speculative purpose[534].

A different regime was planned for Bank Holding Companies, which in general would have been permitted to purchase, sell or engage in any transaction involving derivative financial instruments (providing that it was neither an insured depository institution or a subsidiary of one)[535].

Neither of these bills was enacted.

Brooksley Born took over as Chairman of the CFTC when Lesley Gramm left to join the board of Enron. Under her stewardship the CFTC issued a concept paper on May the 7th 1998. The paper observed that:

"*While OTC derivatives serve important economic functions, these products, like any complex financial instrument, can present significant risks if misused or misunderstood by market*

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[534] See: "Derivatives Supervision Act of 1994", S.2291, 1994. In the Senate of the United States, July 18, 1994. Section 3 "Limitations on Derivative Activities".

[535] See: "Derivatives Supervision Act of 1994", S.2291, 1994. In the Senate of the United States, July 18, 1994. Section 9. "Bank Holding Companies".

participants. A number of large, well-publicized, financial losses over the last few years have focused the attention of the financial services industry, its regulators, derivatives end-users, and the general public on potential problems and abuses in the OTC derivatives markets. Many of these losses have come to light since the last major regulatory actions by the CFTC involving OTC derivatives, the swaps and hybrid exemptions issued in January 1993"[536].

The paper went on to note that: "The *Commission has been engaged in a comprehensive regulatory reform effort designed to update the agency's oversight of both exchange and off-exchange markets. As part of this process, the Commission believes that it is appropriate to re-examine its regulatory approach to the OTC derivatives market taking into account developments since 1993"*[537].

The concept release contained a number of suggestions for future regulatory changes, and invited comments from market participants about these potential measures, the most important of which were.

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[536] Commodity Futures Trading Commission. Concept Release. May 7th, 1998, page 3.

[537] Ibid, page 3.

(1) The introduction of OTC derivative cleating facilities for those swaps in which there was a sufficient degree of standardization of terms and for which prices could be most easily established. This would have required the Commission to have exercised its powers of exemption (or a revision of the CEA).

(2) The introduction of capital requirements for participants in the OTC market. The report commented that " *(...) regulatory capital might provide an OTC derivatives dealer's counterparties with independent assurance of the creditworthiness of the dealer or might prevent the dealer from assuming excessive leverage. Capital requirements might also serve the function of providing early warning of financial difficulties"*[538].

(3) Introducing risk disclosure requirements for OTC instruments.

(4) Reporting requirements for participants in the OTC derivatives markets. The concept release stated that: "*The Commission currently does not impose reporting requirements on OTC derivatives markets participants. The Commission requests comment on whether specific reporting requirements for*

538 Ibid, page 18.

participants in OTC derivatives markets are needed and, if so, what reports should be made and by whom"[539].

The concept release was instantly met with a joint statement issued by U.S Treasury Secretary Robert E. Rubin, Federal Reserve Chairman Alan Greenspan and Securities and Exchange Commission Chairman Arthur Levitt 540. It read:

"On May 7, the Commodity Futures Trading Commission ("CFTC") issued a concept release on over-the-counter derivatives. We have grave concerns about this action and its possible consequences. The OTC derivatives market is a large and important global market. We seriously question the scope of the CFTC's jurisdiction in this area, and we are very concerned

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539 Ibid, page 21.

540 The journalist Michael Hirsh describes a meeting of the President's Working Group on Financial Markets that took place on the 21st of April 1998, before the concept release had been issued. It was attended by Robert E Rubin (The Secretary of the Treasury), Arthur Levitt (Chairman of the SEC), Alan Greenspan (the Chairman of the Federal Reserve Board) and Brooksley Born. Robert Rubin tried hard to convince Born not to press ahead with the concept release: "Rubin insisted that Born could not go forward with the proposal. He also said the CFTC had no jurisdiction whatsoever over OTC swaps or options – though of course the commission had initially granted all those exemptions from its own rules. Rubin didn't bother to explain why, but he was channelling the same fears on Wall Street that Summers had conveyed in his phone call: just by virtue of putting out a concept release, Born could upset the markets. Rubin was afraid she might be signalling to market players that the CFTC had jurisdiction over derivatives bets. Giving the CFTC jurisdiction, in turn, would, Rubin thought, lead everyone to assume these contracts were "futures". Since futures were required, by law, to be traded on exchanges, all OTC derivatives bets could be thrown into a legal limbo. Traders on the losing side might decide they didn't want to pay off. Trillions of dollars were at stake.". Quoted from Hirsch, Michael: *Capital Offense. How Washington's Wise Men Turned America's Future Over to Wall Street*, John Wiley & Sons, Inc. (2010), page 22.

about reports that the CFTC's action may increase the legal uncertainty concerning certain types of OTC derivatives.

The concept release raises important public policy issues that should be dealt with by the entire regulatory community working with Congress, and we are prepared to pursue, as appropriate, legislation that would provide greater certainty concerning the legal status of OTC derivatives"[541].

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[541]"Joint Statement by Treasury Secretary Robert E. Rubin, Federal Reserve Board Chairman Alan Greenspan and Securities and Exchange Commission Chairman Arthur Levitt". Issued on the 7th of May 1998. Available at: https://www.treasury.gov/press-center/press-releases/Pages/rr2426.aspx

Arthur Levitt the chairman of the SEC was publicly very critical of the concept release. He stated: "The recent concept release on OTC derivative instruments issued by the Commodities Futures Trading ("CFTC") represents a significant departure from the careful approach taken by the SEC and other regulators to the OTC derivatives market. In its concept release, the CFTC raises the possibility of applying a comprehensive regulatory regime to transactions involving swaps and hybrids as a condition for exempting such products from the requirements of the Commodity Exchange Act ("CEA"). Such a regulatory regime would necessarily be based on the CFTC'S conclusion that swaps and hybrids are futures contracts or commodity options and, as such, are subject to CFTC jurisdiction under the CEA". He went on to add that: "questions relating to what kind of regulation, if any, is appropriate for this market are ones that should not be addressed by an agency acting under a statute intended to govern only exchange trading in futures and commodity options". Quoted from the testimony of Arthur Levitt before the U.S House of Representatives Committee on Banking and Financial Services. Hearing July the 24th 1998. Page 118.

4.1(h) The movement to exclude all OTC derivatives from CFTC regulation

On July the 24th 1998, Alan Greenspan, the Chairman of the Federal Reserve, gave testimony before the Committee on Banking and Financial Services of the U.S House of Representatives to present his view on the regulation of OTC derivatives in light of the proposed "*Supervisory Improvement Financial Derivatives Act of 1998*"[542]. The bill, proposed by the U.S Treasury, called for the establishment of a special working group on financial derivatives[543], to be chaired by the Secretary of the Treasury. The group would be charged with the responsibility of conducting a study on the regulation of derivatives markets, including OTC derivatives, and developing recommendations for modernizing and harmonizing statutes.

It suggested suspending the autonomy of the CFTC to "*promulgate any rule, regulation, or order, or issue any*

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[542] Financial Derivatives Supervisory Improvement Act of 1998 (H.R.4062). The Bill was never enacted. It was sponsored by James Albert Smith Leach, a Republican Congressman who was later to sponsor and co-author the Gramm – Leach – Bliley Financial Services Modernization Act, which repealed part of the Glass Steagall Act of 1933, allowing for competition between banks, insurance companies and securities companies.

[543] This group was to consist of, among others: the Secretary of the Treasury, the Chairman of the Board of Governors of the Federal Reserve, the Chairman of the Securities and Exchange Commission, the Chairman of the Commodities Futures Trading Commission and the Comptroller of the Currency. See: Section 3 of Bill H.R.4062.

interpretative or policy statement, that restricts or regulates activity in a hybrid instrument or a swap agreement"[544] without the approval of the Secretary of the Treasury until such time as specific legislation authorising the CFTC to do so had been passed. Greenspan, perhaps the epitome of a neo-liberal economist, began his statement to the Committee by remarking that the fundamental issue to be addressed was not whether the series of exemptions afforded to certain classes of derivative should be expanded, but rather: "*whether it is appropriate to apply the Commodity Exchange Act (CEA) to over the counter-derivatives (and indeed to financial derivatives generally) in order to achieve the CEA's objectives – deterring market manipulation and protecting investors"*[545].

Greenspan went back to the origins of commodity futures regulation in the U.S, arguing that early legislation had been designed to discourage speculation that could harm farmers by provoking price volatility. However, he believed that now: "*the prices established in privately negotiated transactions are not widely disseminated or used directly or indiscriminately as the basis for pricing other transactions. Counterparties in the OTC*

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544 Quoted from Section 6 of Bill H.R.4062.

545 The testimony of Alan Greenspan, Chairman of the Federal Reserve Board, The regulation of OTC derivatives, before the U.S House of Representatives Committee on Banking and Financial Services. July the 24th, 1998.

markets can easily recognise the risks to which they would be exposed by failing to make their own independent valuations of their transactions, whose economic and credit terms may differ in significant respects. Moreover, they usually have access to other, often more reliable or more relevant sources of information. Hence, any price distortions in particular transactions could not affect other buyers or sellers of the underlying asset"[546].

According to Greenspan, the widening of the scope of the term commodity that had been effected by the Commodity Futures Trading Act of 1974, combined with a broad interpretation of what constituted a futures contract, had potentially brought an enormous range of contracts under the regulatory supervision of the CFTC, and Greenspan believed that the professional counterparties that operated in the OTC market, simply did not need the protections that were offered by organised exchanges. He stated:

"*They have managed credit risks quite effectively through careful evaluation of counterparties, the setting of internal credit limits, and judicious use of netting and collateral agreements. In particular, they have insisted that dealers have financial strength sufficient to warrant a credit rating of A or higher*"[547].

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546 Ibid.

547 Ibid.

Greenspan's conclusion was that, while the key elements of derivatives regulation had originally been put in place to regulate the trading of agricultural commodities and other commodity futures to the general public, the modern reality of the OTC market was one dominated by competent professionals who had no need of consumer protection measures, and whose trades were no longer susceptible to the type of manipulation observed in the pre –depression agricultural markets. He warned that.

"Regulation that serves no useful purpose hinders the efficiency of markets to enlarge standards of living"[548].

The comments of Brooksley Born on the "*Supervisory Improvement Financial Derivatives Act*" contrast with those of Greenspan. She expressed concern over the proposed moratorium on the CFTC's regulatory authority, stating that:

"The Treasury proposal would prevent the Commission from taking action in market or other emergencies arising in that portion of the OTC derivatives market within its statutory authority, would forbid the Commission from enforcing its existing laws and regulations relating to certain transactions in

[548] Ibid.

that market, and would bar the Commission from addressing new developments in that market".[549]

She went on to note that:

"Losses resulting from misuse of OTC derivatives instruments or from sales practice abuses in the OTC derivatives market can affect many Americans and their savings -- many of us have interests in the corporations, mutual funds, pension funds, insurance companies, municipalities and other entities trading in these instruments. Obviously, regulation cannot and should not seek to eliminate market losses, but under the circumstances it is appropriate to request information regarding industry practices to assess whether they merit a regulatory response"[550].

She also criticised Greenspan's view on the utility of derivative regulation, accusing him of ignoring the repeated amendments to the CEA over the years and of having too narrow a conception of the functions of the act:

"(...) the CEA is intended to do far more than prohibit price manipulation. Its provisions and regulations adopted thereunder are designed to control systemic risk and to ensure the financial

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549 The testimony of Brooksley Born. Chairman of the CFTC. The regulation of OTC derivatives, before the U.S House of Representatives Committee on Banking and Financial Services. July the 24th, 1998.

550 Ibid.

integrity of futures market intermediaries, exchanges and clearinghouses, to foster price discovery and transparency, to protect market participants from fraud and other abuses, to assure fair access to the markets and to impose fitness standards on intermediaries. These provisions serve to protect market participants regardless of the nature of the underlying commodity from which a given contract is derived"[551].

On the 30th of July 1998 a hearing on OTC derivatives was held before the Committee on Agriculture, Nutrition and Forestry in the U.S Senate. Senator Phil Gramm (whose wife had previously chaired the CFTC before joining the board at Enron) expressed his concern that swaps might still eventually be classified as futures contracts[552]. Lawrence H. Summers, the

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551 Ibid.

552 "If swaps are defined as futures, and they are being traded outside the exchanges, then they would be considered as being traded illegally, and illegal transactions may not be enforceable contracts. So I think there is a very significant issue here that has to do with the enforceability of literally hundreds of billions of dollars' worth of transactions". Quoted from the statement of Phil Gram, U.S Senator for Texas. "Over the Counter Derivatives. Hearing Before the Committee on Agriculture, Nutrition, and Forestry. United States Senate. Second Session. July 30, 1998". U.S Government Printing Office. Washington. "1999). Page 3. There were other senators who were equally alarmed at the prospect of increased regulation for swaps. Richard G. Lugar, the Chairman of the Committee on Agriculture, Nutrition and Forestry and Senator for Indiana remarked with faux naivety that:" It is unusual for three agencies of the executive branch to propose legislation that would restrict the activities of a fourth. That has happened in this case because the Federal Reserve System, the Securities and Exchange Commission, and apparently, the Clinton administration acting through the Treasury Department, all feel a sufficient degree of alarm over a "Concept Release" issued by the Commodity Futures Trading Commission. The other agencies, along with many involved in the swaps business have asserted that this Concept Release could create new uncertainty about the legal status of swaps, perhaps driving some business

Deputy Secretary of the U.S Treasury, remarked that there had been a broad consensus that the swaps market should be allowed to grow and develop without applying the restrictions of the CEA to these transactions. In his view: "*The CFTC concept release, even though it purports to do no more than pose questions, upsets this fragile consensus because it suggests that the CFTC is at least considering imposing significant new regulatory requirements on the OTC derivatives market. This in turn can only be based on a belief that many swaps are subject to CFTC regulation as future contracts and might be appropriately regulated as such".*[553]

A number of important industry figures protested against the policy statement at the hearing, including the representative of

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overseas". Quoted from the statement of Richard G. Lugar. Ibid, page1. Financial journalist Robert Weismann revealed the true state of the Senator's involvement with the issue: "Senator Richard Lugar, R-Indiana, chair of the Senate Agricultural Committee, stepped into the fray, Lugar, who received nearly $ 250,000 in campaign contributions from securities and investment firms in 1998, extended an ultimatum to Born; cease the campaign or Congress would pass a Treasury- backed bill that would put a moratorium on any further CFTC action"**.** Quoted from Donahue, James & Weisman, Robert: *Sold Out. How Wall Street and Washington Betrayed America*, Consumer Education Foundation (2009), page 44.

The reference in Senator Lugar´s testimony to the hostility of the Clinton Administration to the CFTC's policy is the subject of an extensive article on the website of the Project for Government Oversight (POGO). It claims that "Clinton officials lobbied to keep the CFTC on the sidelines of derivatives oversight". See: Smallberg, Michael: "How the Clinton Team Thwarted Effort to Regulate Derivatives". Available at: https://www.pogo.org/investigation/2014/04/how-clinton-team-thwarted-effort-to-regulate-derivatives/

[553] Quoted from the statement of Lawrence H. Summers, Deputy Secretary, U.S Department of the Treasury, Washington. Ibid, page 9.

ISDA[554], and, Alan Greenspan, the Chairman of the Federal Reserve, repeated his earlier arguments, both in a written statement and in person.

On September the 23rd 1998, an agreement brokered by the Federal Reserve Bank of New York was reached between fourteen major Wall Street firms[555] to provide a bailout package worth $ 3.6 billion dollars for the hedge fund Long Term Capital Management (LTCM). Hedge funds are private investment pools that use a number of strategies (such as taking long and short positions on commodities and securities, and leveraged derivative investments), to gain high returns for sophisticated investors. As the firms do not offer securities to the public they are exempt from

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554 "Mr. Chairman, neither the Congress nor the CFTC has ever determined that swaps are futures. Consequently, when the CFTC seeks to assert jurisdiction over swaps, which the Commission can be said to have done implicitly by issuing the Concept Release, the inevitable message to market participants such as ourselves is that the CFTC considers some categories of swaps to be futures contracts. If so, the enforceability of many existing swaps could be jeopardized, because under the CEA, as has been discussed, off-exchange futures contracts generally are illegal and unenforceable". Quoted from: The Statement of Thomas W. Jasper. Managing Director and Treasurer, Salmon Smith Barney, New York, on behalf of the International Swaps and Derivatives Association. "Over the Counter Derivatives. Hearing Before the Committee on Agriculture, Nutrition, and Forestry. United States Senate. Second Session. July 30, 1998". U.S Government Printing Office. Washington. "1999). Page 40.

555 The 14 firms were. Bankers Trust, Barclays, Chase Manhattan Bank, Crédit Agricole, Credit Suisse First Boston, Deutsche Bank, Morgan Stanley, Paribas, Goldman Sachs, JP Morgan,, Société Générale, UBS, Salomon Smith Barney and Merill Lynch. All of these firms were creditors of LTCM.

having to register with the SEC[556], and rely on Sections 3(c) (1) and 3(c)7 of the Investment Company Act of 1940 to avoid having to register as Investment Companies[557].

LTCM was caught on the wrong side of a number of swap deals after recession hit some of the major Asian economies and spread to Russia, and held short positions in long dated options on stock indices which, as the crisis spread, became out of the money and required large margin calls. Their position was furthered jeopardised by a change of ownership of the firm Salomon Brothers, whose new management decided to sell off a number of convergence trades[558] in which LTCM held the same positions. Their exit from these trades meant that spreads began to increase rather than move towards convergence. When Russia decided to devalue the rouble on August the 17th 1998 and announced a moratorium on its government debt Russian banks and government financed Russian companies claimed "*force majeure*" and defaulted on their derivative contracts. LTCM had invested in Russian government bonds, and had hedged against

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556 Section 4(2) and Rule 506 of Regulation D of the Securities Act of 1933 exempt hedge funds from registering with the Securities Exchange Commission.

557 These articles exclude hedge funds from the definition of an Investment Company.

558 With a convergence trade the hedge funds hopes to buy low and sell high. It will buy what it considers an undervalued asset with a forward contract and sell a similar asset forward at a higher price, expecting that when delivery is due the prices will have converged and they will profit from the convergence.

default on these bonds by selling forward contracts on the rouble, the reasoning being that the drop in the value of the bond would be compensated by the devaluation of the rouble. However, the Russian banks, damaged by the crisis, defaulted on their forward contracts, leaving LTCM in even deeper trouble. As their troubles grew so their derivative counterparties increased their margin calls, pushing the hedge fund to breaking point.

The meeting to rescue LTCM, held at the New York Federal Reserve Bank on Wednesday the 23rd, 1998 and chaired by its then president, William J. McDonough, is described by financial journalist Roger Lowenstein:

"The fund had already asked Warren Buffett for money. It had gone to George Soros. It had gone to Merrill Lynch. One by one, it had asked every bank it could think of. Now it had no place left to go. That was why, like a godfather summoning rival and potentially warring families, McDonough had invited the bankers. If each one moved to unload bonds individually, the result could be a worldwide panic. If they acted in concert, perhaps a catastrophe could be avoided. Although McDonough didn't say so, he wanted the banks to invest $ 4 billion and rescue

the fund. He wanted them to do it right then-tomorrow would be too late"[559].

On October the 15th 1998, Brooksley Born addressed the Chicago Kent – IIT Commodities Law Institute. Her speech was titled: "*The Lesson of Long –Term Capital Management L.P."* Her remarks centred on the dangers and the weaknesses in the regulation of OTC derivatives markets, lack of transparency, excessive leverage, and insufficient prudential controls.

(a) Lack of transparency. Born noted that while the CFTC had been fully informed of LTCM's exchange traded futures positions, no federal regulator had received reports regarding its OTC derivatives positions. Born observed that:

"*Notably, no reporting requirements are imposed on most OTC derivatives market participants. This lack of basic information about the positions held by OTC derivatives users and about the nature and extent of their exposures potentially allows OTC derivatives market participants to take positions that may threaten our regulated markets or, indeed, our economy without the knowledge of any federal regulatory authority"*[560].

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[559] Quoted from: Lowenstein, Roger: *When Genius Failed. The Rise and Fall of Long-Term Capital Management*, Random House (2001), Introduction, page xx.

[560] Quoted from: "The Lessons of Long-Term Capital Management L.P". Remarks of Brooksley Born, Chairperson Commodity Futures Trading Commission. Chicago Kent – Illinois Institute of Technology, Commodities Law Institute. Chicago, Illinois.

Born went on to remark that hedge funds were not legally required to provide their counterparties or investors with disclosure documents revealing their current positions, exposures or investment strategies. Furthermore, the OTC markets suffered from price transparency, as, unlike futures exchanges, bids and offers were not made public, and traders could have trouble accurately gauging the worth of their positions, especially in moments of high volatility.

(b) Excessive leverage. Born commented that while organised exchanges required traders to post margins and have their positions marked market to market on a daily basis[561], the OTC derivatives market had no such requirements. She observed that LTCM was said to have borrowed approximately 100 times its capital, and held derivative positions with a notional value of 1,000 times its capital. Given that counterparties did not have full information on all the positions LTCM held, nor the extent of the money it had borrowed, many of them extended enormous credit to it. Born stated that "*I believe that it is essential for federal financial regulators to consider how to reduce the high level of*

October 15, 1998. Page 1. Available at: https://www.cftc.gov/sites/default/files/opa/speeches/opaborn-37.htm

561 A market to market valuation of the value of a position is an assessment of its worth in the market at a given moment.

leverage in the OTC derivatives market and its attendant risks"[562].

(c) Insufficient Prudential controls. Born pointed out the insufficiency of the internal risk management mechanisms employed by LTCM (and other OTC derivative users), particularly value at risk 563. She stated: "*LTCM now stands as a cautionary tale of the fallibility of even the most sophisticated VaR models"*[564].

The gravity of the situation provoked by the collapse of LTCM and the repeated warnings of the CFTC under the direction of Brooksley Born were not sufficient to persuade Congress of the importance of introducing tougher controls over OTC derivatives, and on the 19th of October 1998, Congress introduced a six – month moratorium on the rule making authority of the CFTC over derivatives and swaps[565].

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562 Ibid., page 2.

563 Value at Risk (VaR) is a statistical modelling technique used to calculate the risk of maximum daily losses on a firm's investments. It will be considered in more detail in chapter 4.

564 Ibid, pages 2-3.

565 Congress passed a lengthy agricultural appropriations Bill, section 760 of which stated: "The conferees include language that places a moratorium on the rule – making authority of the Commodity Futures Commission (CFTC) over swaps and derivatives until March 30, 1999". Congressional Record. October 19, 1998. Section 760. H11302. Journalist Michael Hirsch comments:

The following year Brooksley Born resigned as the Chairman of the CFTC and was replaced by William J. Rainer. It was Rainer who signed the report of the President's Working Group on Financial Markets (together with Lawrence H. Summers of the Treasury, Arthur Levitt of the SEC, and Alan Greenspan of the Federal Reserve) in November 1999 entitled: "*Over the Counter Derivatives Markets and the Commodity Exchange Act"*[566].

The first page of the report made clear the concerns of the agencies involved:

"A cloud of legal uncertainty has hung over the OTC derivatives markets in the United States in recent years, which, if not addressed, could discourage innovation and growth of these important markets and damage U.S leadership in these arenas by driving transactions off-shore"[567].

"Ultimately Brooksley Born was driven from office. In the fall of 1998, in the conference committee on that year's agricultural appropriations bill—which settled the CFTC's budget—a provision was mysteriously added, one that had never been discussed before or hadn't been in any of the bills before. No one knew exactly who introduced it, but the language was clear: the CFTC could take no action in the OTC derivatives market for six months. It just so happened that Born's term was up in six months. It had all been orchestrated to quash the concept release and ensure that Born no longer had any say. She was replaced by Bill Rainer, the cofounder of Greenwich Capital Markets and an old Clinton crony from Arkansas". Quoted from: Hirsch, Michael: *Capital Offense…*, op. cit., page 29.

[566] "Over the Counter Derivatives Markets and the Commodity Exchange Act". Report of the President's Working Group on Financial Markets. November 1999.

[567] Ibid, page 1.

According to the authors of the report the CEA required amendments in order to: *"(...) promote innovation, competition, efficiency, and transparency in OTC derivatives markets, to reduce systemic risk, and to allow the United States to maintain leadership in these rapidly developing markets"*[568].

Among the unanimous recommendations of the Working Group were:

(i) The exclusion from the CEA of bilateral transactions between sophisticated counterparties. The reasoning behind this proposed exclusion was that: "*sophisticated counterparties that use OTC derivatives simply do not require the same protections under the CEA as those required by retail investors. In addition, most of the dealers in the swaps market are either affiliated with broker-dealers or FCMs that are regulated by the SEC or the CFTC or are financial institutions that are subject to supervision by bank regulatory agencies"*[569].

The exemption from the terms of the CEA would only apply to transactions between eligible participants, such as regulated financial institutions, enterprises with a certain net worth, pension

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568 Ibid, Introduction, page 1.

569 Ibid, page 15.

funds, state and local governments and individual with significant assets.

(ii) A modification of the exclusive jurisdiction clause of the CEA over hybrid instruments. The concern of the industry, fuelled by the CFTC concept release (which had questioned whether the CFTC's jurisdiction should be extended to exempted instruments) was that, if hybrid instruments were legally determined to be futures contracts or commodity options, then the exclusive jurisdiction clause in the CEA would mean that only the CFTC could regulate these instruments, even if it were a security or a bank product.

(iii) The introduction of clearing systems for OTC derivatives. Clearing systems generally function by having a central counterparty that assumes the role of counterparty to each participant in the system (thus neutralising counterparty risk). As clearing systems were already an integral part of futures, and commodity options trading, the Working Group suggested introducing a regulatory framework that would authorise these clearing organizations to clear OTC derivatives.

(iv) A modification of the exclusive jurisdiction clause in the CEA, which granted the CFTC sole authority over commodity futures and options on commodity futures. The Working Group recommended that this exclusive jurisdiction clause should apply only to transactions in futures contracts or options on futures

contracts effected on designated contract markets, and that the clause should be modified to allow other agencies to have this authority, when another federal statute explicitly granted it.

These modifications would of course allow for derivative contracts to be traded off-exchanges, even if they could be legally characterised as futures contracts.

4.1 (i) The Commodities Futures Modernization Act of 2000

On the 21st of June 2000 a Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry and the Committee on Banking, Housing and Urban Affairs was held to discuss Senate Bill 2697[570], "*legislation to provide legal certainty to the over-the-counter derivatives market and to reauthorize and to reform the Commodity Exchange Act"*. The Act was largely based on the recommendations made by the President's Working Group.

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570 "S. 2697 – The Commodity Futures Modernization Act of 2000 - Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate and the Committee on Banking, Housing and Urban Affairs. One Hundred Sixth Congress". June 21, 2000. U.S Government Printing Office. Washington (2000).

One of the co-sponsors of the Bill was Phil Gramm, whose wife had been Chairman of the CFTC before taking a seat on the board of Enron. According to the website opensecrets.org the top single contributors to the Senator's electoral campaigns between 1989 and 2002 were Enron $105,100, JP Morgan Chase $96,650, Bank of America $78,350, Citigroup Inc. $78,350 and AFLAC Inc. $76,625. Securities and Investment firms donated a total of $1,567,455 to the Senator's campaign fund over this period.

See:https://www.opensecrets.org/members-of-congress/phil-gramm/summary?cid=N00005709&cycle=CAREER

The two committees heard testimony from the members of the President's Working Group[571]. Treasury Secretary Lawrence Summers warned that: "*Unless our laws and regulations relating to derivatives are modernized, we run the risk that innovation will be stifled by the absence of legal certainty, depriving the American economy of the benefits that the derivatives markets can provide, and hampering the efforts of our OTC and exchange-traded markets and businesses to compete globally"*[572]. Alan Greenspan, the Chairman of the Board of Governors of the Federal Reserve System stressed that: "*These provisions are vitally important to the soundness and competitiveness of our derivatives markets in what is an increasingly integrated and intensely competitive global economy"*[573].

William J Rainer, the replacement of Brooksley Born as Chairman of the CFTC was generally positive about the proposed legislation, stating that: "*The Commission welcomes your proposal to enhance legal certainty for over-the-counter*

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[571] At that time the group consisted of Lawrence Summers (the Secretary of the United States Department of the Treasury), Alan Greenspan (Chairman of the Federal Reserve System), Arthur Levitt (Chairman of the SEC), and the freshly appointed William J. Rainer (Chairman of the CFTC).

[572] Quoted from: "S. 2697 – The Commodity Futures Modernization Act of 2000 - Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate and the Committee on Banking, Housing and Urban Affairs. One Hundred Sixth Congress", June 21, 2000, U.S Government Printing Office, Washington (2000), page 61.

[573] Ibid, page 72.

derivatives by excluding from the CEA certain bilateral transactions entered into on a principal – to – principal basis by eligible parties"[574]. However, he was critical of the exclusion of energy derivatives from CFTC oversight (which was prescient given the collapse of Enron in November 2001, largely due to the fraudulent use of energy derivatives). He noted that: "*Most dealers in the swaps market are either financial institutions subject to supervision by bank regulatory agencies, or affiliates of brokers-dealers regulated by the SEC, or affiliates of FCMs subject to CFTC oversight. "Accordingly the activities of most derivatives dealers are already subject to direct or indirect federal insight" (PWG at 16). The same cannot be said of trading in energy derivatives".*[575]

Arthur Levitt, Chairman of the Securities and Exchange Commission was also critical of parts of the proposed legislation, particularly the definition it gave of swaps. He commented that:

"*The bill's language in Section 23 on what products are defined as swaps and therefore excluded from the securities laws is expansive and vague. OTC options on securities could be characterized as swaps. Indeed, any exchange of cash for a security could be drawn up as a swap and therefore arguably*

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574 Ibid, page 86.

575 Ibid, page 87.

excluded from the securities laws. Therefore, the provision of this bill would result in a wholesale removal of SEC oversight over a wide array of securities products. The risks to this approach could not be more clear. Those seeking to avoid long-established investor and market integrity protections of the securities laws could do so merely be labelling transactions as 'swaps'. The potential consequences of this gaping loophole in application of our long established securities laws protections could be significant"[576]. The Bill received endorsements in written testimony given by a number of Senators, including Richard G. Lugar[577], the Senator from Indiana, Peter G. Fitzgerald[578], the

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576 Ibid, page 77.

577 Richard G. Lugar stated that: "The goal of this legislation is to ensure that the United States remains a global leader in the derivatives marketplace. Already the United States has lost its leadership role in the exchange-traded futures market to Europe, and the over-the-counter market may not be too far behind. Congress has a good opportunity to reverse this tide by enacting sound legislation this year". Quoted from: "S. 2697 – The Commodity Futures Modernization Act of 2000 - Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate and the Committee on Banking, Housing and Urban Affairs. One Hundred Sixth Congress". June 21, 2000, U.S Government Printing Office, Washington (2000), page 49.

Between 1999 and 2004 Senator Lugar received campaigns contributions of $192,500 from Securities and Investment firms and $169,712 from Commercial Banks.

See:https://www.opensecrets.org/members-of-congress/summary?cid=N00001764&cycle=2004&type=I

578 Senator Peter G. Fitzgerald, one of the co-sponsors of the bill along with Senator Gramm, commented that: "This legislation is long overdue and is vital for the modernization of the regulatory framework. The urgency of this legislation cannot be overly stressed. It is imperative that the United States financial markets be given broad flexibility to respond to the rapid changes in technology and product innovation occurring in the world derivatives markets. United States leadership in the derivatives markets must be maintained and regulatory burdens must not prevent our markets from

Senator for Pennsylvania, and Larry E. Craig, the U.S Senator for Idaho[579].

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keeping pace with the technological changes occurring in global markets". Quoted from: "S. 2697 – The Commodity Futures Modernization Act of 2000 - Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate and the Committee on Banking, Housing and Urban Affairs. One Hundred Sixth Congress", June 21, 2000, U.S Government Printing Office, Washington (2000), page 50.

He further observed that: "Federal Regulation has not adapted to the rapid growth of the financial markets and today serves as a substantial restriction on market competitiveness and modernization. In order for the United States to maintain the most efficient markets in the world, regulatory barriers to fair competition must be removed to give the United States derivatives markets the regulatory flexibility to compete with global markets. Thus there is an urgent need to reduce the inefficiencies of the CEA by removing the constraints on innovation and competitiveness and by transforming the CFTC into an oversight agency with less front-line regulatory functions" (Ibid, page 52).

Between 1999 and 2004 Senator Fitzgerald received $208,750 in campaign contributions from Securities and Investment firms and $ 96,665 from Commercial Banks.

See: https://www.opensecrets.org/members-of-congress/summary?cid=N00004690&cycle=2004&type=C

579 Larry E Craig remarked that: "As futures exchanges continue to grow, we must assure that the United States exchanges remain competitive or we could lose business overseas. I am pleased to see that S.2697 modernizes the regulation of exchange traded futures, and establishes legal certainty for over – the- counter derivatives transactions". Quoted from: "S. 2697 – The Commodity Futures Modernization Act of 2000 - Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate and the Committee on Banking, Housing and Urban Affairs. One Hundred Sixth Congress". June 21, 2000. U.S Government Printing Office. Washington (2000). Page 59.

Between 1997 and 2002 Senator Craig received $79,062 in campaign contributions from Securities and Investment firms.

See: https://www.opensecrets.org/members-of-congress/larry-craig/industries?cid=N00002091&cycle=2002

Between 1999 and 2000 Securities and Investment firms contributed heavily to the campaign funds of political candidates to the U.S Congress. The top five for that year were: Goldman Sachs - $4,275,097, Morgan Stanley - $ 2,721,697, Credit Suisse $ 2, 651,705, UBS AG - $2,224,597, Merrill Lynch - $1,937,347.

See:https://www.opensecrets.org/industries/indus.php?ind=F07&cycle=2000

The bill was passed without amendments as the Commodity Futures Modernization Act of 2000 (CFMA 2000).

4.1(j) The provisions of the CFMA 2000 and its link to the GFC

The CFMA 2000 was arguably the key legislative reform that permitted the subprime crisis to become the great final crisis[580]. This is because it exempted OTC swap transactions that were entered into on a principal to principal basis between eligible

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Commercial Banks were also big contributors, and the top five over the same period were: Citigroup Inc. - $2,666,554, American Bankers Association - $1,893,982, Bank of America - $1,608,447, JP Morgan Chase - $1,481,083, Bank One Corp - $1,132,750.

See: https://www.opensecrets.org/industries/indus.php?ind=F03&cycle=2000

[580]"Accordingly, all of the 'fail safes' that apply to the regulated equities market and that had applied to the regulated futures market were, by virtue of the CFMA, turned off at the time of meltdown. There were no clearing requirements to ensure that CDS commitments were adequately capitalized. There were no clearing requirements to ensure that CDS commitments were adequately capitalized. There were no exchange trading requirements, which would have allowed the market to regularly and transparently price these assets; rather than leaving such pricing to highly contentious mathematical algorithms that constitute the disputatious mark to model system of pricing. There were also no recordkeeping and reporting requirements, , the latter of which might have, in and of themselves, sent signals to prudential and market regulators that systematically risky institutions were without adequate capital underwriting trillions of dollars of insurance while under-pricing the risk of underwriting". Quoted from: "Testimony of Michael Greenberger, Law School Professor, University of Maryland School of Law", Financial Crisis Inquiry Commission Hearing, Wednesday, June 30th, 2010, page 14.

contract participants[581] from both the terms of the CEA[582] and the Securities Act of 1933[583].The Securities and Exchange

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581 Section 101 (11) of the CEA was modified by the CFMA 2000 to read: "The term eligible contract participant means (A) acting for its own account – (i) a financial institution (ii) an insurance company that is regulated by a State, or that is regulated by a foreign government and is subject to comparable regulation as determined by the Commission, including a regulated subsidiary or affiliate of such an insurance company (iii) an investment company subject to regulation under the Investment Company Act of 1940 or a foreign person performing a similar role or function subject as such to foreign regulation (regardless of whether each investor in the investment company or the foreign person is itself an eligible contract participant); (iv) a commodity pool that (I) has total assets exceeding $5,000,000; and (II) is formed and operated by a person subject to regulation under this Act or a foreign person performing a similar role or function subject as such to foreign regulation (regardless of whether each investor in the commodity pool or the foreign person is itself an eligible contract participant); (v) a corporation, partnership, proprietorship, organization, trust or other entity – (I) that has total assets exceeding $10,000,000; (II) the obligations of which under an agreement, contract or transaction are guaranteed or otherwise supported by a letter of credit or keepwell, support or other agreement by an entity described in subclause (I), in clause (i), (ii), (iii), (iv) or (viii), or in paragraph (C); or (III) that (aa) has a net worth exceeding $1,000,000; and (bb) enters into an agreement, contract or transaction in connection with the conduct of the entity's business or to manage the risk associated with an asset or liability owned or incurred or reasonably likely to be owned or incurred by the entity in the conduct of the entity's business; (vi) an employee benefit plan subject to the Employee Retirement Income Security Act of 1974, a governmental employee benefit plan, or a foreign person performing a similar role or function subject as such to foreign regulation – (I) that has total assets exceeding $5,000,000; or (II) the investment decisions of which are made by (aa) an investment adviser or commodity trading advisor subject to regulation under the Investment Advisers Act of 1940 or this Act (bb) a foreign person performing a similar role or function subject as such to foreign regulation (cc) a financial institution or (dd) an insurance company described in clause (ii), or a regulated subsidiary or affiliate of such an insurance company (vii) (I) a governmental entity (including the United States, a State, or a foreign government) or political subdivision of a governmental entity; (II) a multinational or supranational government entity; (III) an instrumentality, agency or department of an entity described in subclause (I) or (II); except that such term does not include an entity, instrumentality, agency or department referred to in subclause (I) or (III) of this clause unless (aa) the entity, agency or department is a person (i), (ii), or (iii) of section 1a (11) (A); (bb) the entity, instrumentality, agency or department owns and invests on a discretionary basis $25,000,000 or more in investments; or (cc) the agreement, contract or transaction is offered by, and entered into with, an entity that is listed in any of subclauses (I) through (VI) of section 2 (c) (2) (B) (ii). (viii) (I) a broker or dealer subject to regulation under the Securities Exchange Act of 1934 or a foreign person performing a similar role or function subject as such to foreign regulation, except that, if the broker or dealer or

foreign person is a natural person or proprietorship, the broker or dealer or foreign person shall not be considered to be an eligible contract participant unless the broker or dealer also meets the requirements of clause (v) or (xi); (II) an associated person of a registered broker or dealer concerning the financial or securities activities of which the registered person makes and keeps records under section 15(b) or 17(h) of the Securities Exchange Act of 1934. (III) an investment bank holding company (as defined in section 17(i) of the Securities Exchange Act of 1934. (ix) a futures commission merchant subject to regulation under this Act or a foreign person performing a similar role or function subject as such to foreign regulation, except that, if the futures commission merchant or foreign person is a natural person or proprietorship, the futures commission merchant or foreign person shall not be considered an eligible contract participant unless the futures commission merchant or foreign person also meets the requirements of clause (v) or (xi); (x) a floor banker or floor trader subject to regulation under this Act in connection with any transaction that takes place on or through the facilities of a registered entity or an exempt board of trade, or any affiliate thereof, on which such person regularly trades; or (xi) an individual who has total assets in an amount in excess of – (I) $10,000,000; or (II) $5,000,000 and who enters into the agreement, contract, or transaction in order to manage the risk associated with an asset owned or liability incurred, or reasonably likely to be owned or incurred, by the individual; (B) (i) a person described in clause (i), (ii), (iv), (v), (viii), (ix), or (x) of subparagraph (A) or (C); or (ii) an investment adviser subject to regulation under the Investment Advisers Act of 1940, a commodity trading advisor subject to regulation under this Act, a foreign person performing a similar role or function subject as such to foreign regulation, or a person described in clause (i), (ii), (iv), (v), (vii), (ix), or (x) of subparagraph (A) or in subparagraph (C), in any such case acting as investment manager or fiduciary (but excluding a person acting as broker or performing an equivalent agency function) for another person described in subparagraph (A) or (C) and who is authorised by such person to commit such person to the transaction or; (C) any other person that the Commission determines to be eligible in light of financial or other qualifications of the person".

582 If credit default swaps were excluded from regulation by the SEC and the CFTC on the understanding that they were swaps it seems pertinent for academics such as Oskari Juurikkala to question the basis for this characterisation and ask "where is the swap in a credit default swap?" (see: Juurikkala, Oskari: "Financial Engineering Meets Legal Alchemy: Decoding the Mystery of Credit Default Swaps", *Fordham Journal of Corporate & Financial Law*, Vol. XIX, Num. 3 [2014], page 453). If a swap can be defined as "a private agreement between two parties to exchange cash flows at certain times according to a prearranged formula" (see: Partnoy, Frank: "Financial Derivatives and the Costs of Regulatory Arbitrage", *The Journal of Corporation Law*, Winter 1997, pages 211-256, page 219) then, Oskari contends: "a CDS is not an exchange of cash flows and definitely is not an exchange of credit defaults. CDS bear no functional resemblance to genuine swap agreements because the transaction is unilateral so it does not take the form of a standard OTC swap contract, which is always bilateral. Also, unlike other types of derivative such as interest rate swaps, the risks assumed by the protection buyer and the protection seller in a CDS transaction are not symmetrical. It is hard to avoid the conclusion that the emperor has no clothes: there is no swap in a

Commission regulated securities[584] pursuant to the 1933 Securities Act and the 1934 Securities Exchange Act, while the

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CDS" (Oskari, ibid, page 454). In 2002, Norman M Feder wrote that: "Perhaps because the protection buyer's payment obligations can be periodic, or perhaps because credit default swaps sometimes refer to notional amounts for the purpose of calculating the protection buyer's payment obligations or the protection seller's credit default payment amount, the transactions are considered swaps. Nevertheless, the protection seller's payment obligations are contingent; thus it may be more accurate to think of credit default swaps as options. Certainly, a credit default swap in which the protection buyer must deliver the reference asset to the protection seller to obtain the credit default payment resembles a physically-settled put option". Quoted from: Feder, Norman Menachem: "Deconstructing over-the-counter derivatives", *Columbia Business Law Review*, Num. 3 (2002), page 711.

See also the statement of Eric Dinallo on naked credit default swaps: "This second type of swap is little more than a gamble on the value of a particular reference obligation. Institutions that did not own the obligation bought and sold credit default swaps to place a directional bet on a company's credit worthiness. In early May, we began to use the term "naked credit default swaps" to describe swaps bought by speculators because in that case the swap purchasers do not own the underlying obligation. The protection becomes more valuable as the company becomes less creditworthy. This is similar to the shorting of stocks. I have argued that these naked credit default swaps should not be called swaps because there is no transfer or swap of risk. Instead, risk is created by the transaction". Quoted from: Statement of Superintendent Eric Dinallo, New York State Insurance Department. Hearing on "The Role of Financial Derivatives in the current Financial Crisis", Tuesday, October 14th, 2008, page 75.

583 "The exclusion of credit default swaps from the Securities Act of 1933, as well as the Exchange Act of 1936, effectively meant that credit default swaps and other OTC derivatives were largely unregulated and unsupervised by the federal authorities. As the subcommittee revealed in its report, this meant that there effectively existed a multi-trillion dollar swaps market in the United States with little or "no disclosure requirements, no restrictions, and no oversight by any federal agency, including the market for credit default swaps which played a prominent role in the financial crisis". Quoted from: Ciro, Tony: *The Global Financial Crisis-Triggers, Responses and Aftermath*, Ashgate (2012), page 154.

584 According to the 1933 Securities Act, a security was: "any note, stock, treasury stock, bond, debenture, evidence of indebtedness, certificate of interest or participation in any profit-sharing agreement, collateral-trust certificate, preorganization certificate or subscription, transferable share, investment contract, voting-trust certificate, certificate of deposit for a security, fractional undivided interest in oil, gas, or other mineral rights, any put, call, straddle, option, or privilege on any security, certificate of deposit, or group or index of securities (including any interest therein or based on the value thereof), or any put, call, straddle, option, or privilege entered into on a national securities exchange relating to foreign currency, or, in general, arty interest or

Commodity Futures Trading Commission regulated futures[585]. Both had claimed regulatory authority over the credit default swap market. Credit default swaps could be classified as derivatives because they entailed the future delivery of an asset or an exchange of cash flows on a future date. However, the underlying asset or reference asset could be a debt security rather than a commodity.

As Professor Kristin Johnson explains:

"*The CFTC asserted regulatory authority over the credit default swap market on the basis that it exercises regulatory authority over "contracts of sale of a commodity for future delivery" under the Commodity Exchange Act. The definition of the CFTC's regulatory authority indisputably indicates its authority over futures contracts involving commodities. Futures contracts, by definition, involve contracts for the future delivery of a commodity. The CFTC's claim, however, failed to address regulatory authority over swaps that list securities as the underlying asset or reference asset. After two decades of*

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instrument commonly known as a 'security', or any certificate of interest or participation in, temporary or interim certificate for, receipt for, guarantee of, or warrant or right to subscribe to or purchase, any of the foregoing". **15** U.S.C. § 77b (1). The definition given in the 1934 Securities Exchange Act was practically identical.

[585] Which, as we have seen, since the amendment of 1974 which established the CFTC included exclusive jurisdiction over "accounts, agreements (including any transaction which is of the character of an option) and transactions involving contracts of sale of a commodity for future delivery, traded or executed on a contract market, or any other board of trade, exchange or market". U.S.C. § 2(a)(i)

impassioned debate between the SEC and the CFTC, Congress elected to exempt OTC derivatives from federal regulation"[586].

The CFMA 2000 introduced into the CEA new statutory exclusions and exemptions for a swathe of OTC derivatives. It contained an extensive list of excluded commodities[587], and a greatly expanded definition of a swap agreement (compared to that contained in the wording of Section 35 of the Code of Federal Regulations), which included credit default swaps[588].

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586 Quoted from: Johnson, Kristin N.: "Things Fall Apart: Regulating the Credit Default Swap Commons", *University of Colorado Review*, Vol. 82, Issue 1 (2008), pages 167-258, page 225.

587 Section 101 of the CEA was modified by CFMA 2000 to read: "The term excluded commodity means (i) an interest rate, exchange rate, currency, security index, credit risk or measure, debt or equity instrument, index or measure of inflation, or other macroeconomic index or measure. (ii) any other rate, differential, index or measure of economic or commercial risk, return, or value that – (I) not based in substantial part in the value of a narrow group of commodities not described in clause (i); or (II) based solely on one or more commodities that have no cash market (iii) any economic or commercial index based on prices, rates, values, or levels that are not within the control of any party to the relevant contract, agreement or transaction; or (iv) an occurrence, extent of an occurrence, or contingency (other than a change in the price, rate, value, or level of a commodity not described in clause (i) that is – (I) beyond the control of the parties to the relevant contract, agreement or transaction; and (II) is associated with a financial, commercial or economic consequence" (The Commodities Futures Modernization Act of 2000).

Section 206 A of the CEA was modified by the CFMA 2000 to read: "In general – except as provided in subsection (b), as used in this section, the term "swap agreement" means any agreement, contract, or transaction between eligible contract participants (as defined in section 1a (12) of the Commodity Exchange Act as in effect on the date of the enactment of this section), other than a person that is an eligible contract participant under section 1a (12) (C) of the Commodity Exchange Act, the material terms of which (other than price and quantity) are subject to individual negotiation, and that – (1) "is a put, call, cap, floor, collar, or similar option of any kind for the purchase or sale of, or based on the value of, one or more interest or other rates, currencies, commodities, indices, quantitative measures, or other financial or economic interests or property of any kind; (2) provides for any purchase, sale, payment or delivery (other than a dividend

or an equity security) that is dependent on the occurrence, non-occurrence, or the extent of the occurrence of an event or contingency associated with a potential financial, economic, or commercial consequence. (3) provides an executory basis for the exchange, on a fixed or contingent basis, of one or more payments based on the value or level of one or more interest or other rates, currencies, commodities, securities, instruments of indebtedness, indices, quantitative measures, or other financial or economic interests or property of any kind, or any interest therein or based on the value thereof, and that transfers, as between the parties to the transaction, in whole or in part, the financial risk associated with a future change in any such value or level without also conveying a current or future direct ot indirect ownership interest in an asset (including any enterprise or investment pool) or liability that incorporates the financial risk so transferred, including any such agreement, contract, or transaction commonly known as an interest rate swap, including a rate floor, rate cap, rate collar, cross – currency rate swap, basis swap, currency swap, equity index swap, equity swap, debt index swap, debt swap, credit spread, credit default swap, credit swap, weather swap, or commodity swap. (4) provides for the purchase or sale, on a fixed or contingent basis, of any commodity, currency, instrument, interest, right, service, good, article, or property of any kind; or (5) is any combination or permutation of, or option on, any agreement, contract, or transaction described in any of the paragraphs (1) through (4)".

[588] Section 206 A of the CEA was modified by the CFMA 2000 to read: "In general – except as provided in subsection (b), as used in this section, the term "swap agreement" means any agreement, contract, or transaction between eligible contract participants (as defined in section 1a (12) of the Commodity Exchange Act as in effect on the date of the enactment of this section), other than a person that is an eligible contract participant under section 1a (12) (C) of the Commodity Exchange Act, the material terms of which (other than price and quantity) are subject to individual negotiation, and that – (1) "is a put, call, cap, floor, collar, or similar option of any kind for the purchase or sale of, or based on the value of, one or more interest or other rates, currencies, commodities, indices, quantitative measures, or other financial or economic interests or property of any kind; (2) provides for any purchase, sale, payment or delivery (other than a dividend or an equity security) that is dependent on the occurrence, non-occurrence, or the extent of the occurrence of an event or contingency associated with a potential financial, economic, or commercial consequence. (3) provides an executory basis for the exchange, on a fixed or contingent basis, of one or more payments based on the value or level of one or more interest or other rates, currencies, commodities, securities, instruments of indebtedness, indices, quantitative measures, or other financial or economic interests or property of any kind, or any interest therein or based on the value thereof, and that transfers, as between the parties to the transaction, in whole or in part, the financial risk associated with a future change in any such value or level without also conveying a current or future direct ot indirect ownership interest in an asset (including any enterprise or investment pool) or liability that incorporates the financial risk so transferred, including any such agreement, contract, or transaction commonly known as an interest rate swap, including a rate floor, rate cap, rate collar, cross – currency rate swap, basis swap, currency swap, equity index swap, equity swap, debt index swap, debt swap, credit spread, credit default swap, credit swap, weather swap, or commodity swap. (4) provides for the purchase or sale, on a fixed or contingent basis, of any

This exemption allowed for the proliferation of credit default swaps on subprime mortgage securitizations and collateralised debt obligations (which often consisted of subprime securitization notes), either directly or through synthetic securitisations[589] which incorporated credit default swaps. These amplified losses on subprime securitizations, and more importantly, due to the lack of information available as to which credit institutions held derivative positions on subprime products, was one of the principal factors behind the credit freeze, which saw the drying up of interbank lending and the collapse of one of the central forms of funding for credit institutions, asset backed commercial paper. This chain of events, it can be argued, led to the current EU Securitisation Regulation, which impinges directly on Spanish MBS, principally by creating the STS securitisation label which is promoted as a guarantee of superior quality but which requires a series of stringent conditions in order to qualify for inclusion. Conditions which, in my opinion, would have been deemed unnecessary, given the pre-existing regulation of Spanish MBS, if the GFC, had not occurred.

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commodity, currency, instrument, interest, right, service, good, article, or property of any kind; or (5) is any combination or permutation of, or option on, any agreement, contract, or transaction described in any of the paragraphs (1) through (4)".

[589] The key point is that CDS market had no mechanism to demand delivery of the underlying asset, which allowed them to be contracted on assets that were not owned by the protection buyer, which enabled synthetic securities.

The CFMA 2000 put an end to any further investigation of whether tighter regulation of OTC derivatives was necessary by codifying the idea that experienced professionals understood risk management and that the interests of the industry were best served by a hands-off approach[590].

4.2 Credit Default Swaps were not considered to be insurance contracts

In this section I shall not attempt to provide an analysis of the ongoing debate over whether credit default swaps should be

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[590] As Professor Susan M. Wachter has commented: "This dearth of regulation is not an accident, but the result of lobbying by investment banks that profited from the lack of transparency of CDS. Senator Phil Gramm, at the urging of investment banks, pushed through amendments to the Commodities Exchange Act in 2000 that gave CDS a blanket exemption from commodities regulation. Previously, Wendy Gramm, the Senator's wife, had adopted rules in 1989 and 1993, while she was head of the Commodity Futures Trading Commission, exempting some swaps from commodities regulation. In November 1999, Treasury Secretary Larry Summers, Alan Greenspan, and SEC Chairman Arthur Levitt, Jr., gave Senator Gramm the green light when they issued a report recommending further deregulation of swaps. The following year, the Senator finished the job that his wife had begun. Gramm also engineered a broad exemption for CDS from securities regulation. In the eponymous Gramm-Leach-Bliley Act of 1999, Gramm inserted an exclusion from the definition of a regulated security for all security-based and non-security-based swap agreements. As a result of this provision and the fact that most CDS are not traded on an exchange, those instruments are exempt from most aspects of securities law. Similarly, New York State —the most likely would-be insurance regulator for CDS— amended its insurance code in 2004 to exclude CDS from oversight". Quoted from McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: "Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure", *Connecticut Law Review*, Vol. 41, Num. 4, May 2009, page 528.

characterised as insurance contracts[591], but rather to argue that the decision not to classify them as insurance contracts had consequences for the role of securitisation in the financial crisis.

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591 In the U.S the Dodd – Frank Act specifically excludes the characterisation of credit default swaps as insurance. Section 722 (b), which amended the Commodity Exchange Act, reads: "A swap shall not be considered to be insurance; and, may not be regulated as an insurance contract under the law of any State", while Section 767 (4) of the act states that: "A security based swap may not be regulated as an insurance contract under any provision of state law". However, the National Conference of Insurance Legislators (an organisation founded in 1969 which works to assert the prerogative of state legislators in matters of insurance regulations) have drafted model legislation entitled "Credit Default Model Legislation". This model law, (available at: http://ncoil.org/wp-content/uploads/2018/08/Credit-Default-Model-2017-2018.pdf), was approved by the NCOIL Executive Committee on July the 8th 2010, and re-adopted on the 19th of November 2017. Section 4 (b) 1 of the model states that: "The superintendent shall not permit the writing of credit default insurance except where the insured or beneficiary under the policy, bond or contract has, or is expected to have at the time of the default or other failure of the obligor under the debt instrument or other monetary obligation, a material interest in such default or other failure;".In July 2009 the NCOIL wrote to the Chairs of the Senate Committee on Banking, Housing & Urban Affairs, the House Committee on Financial Services, the Senate Committee on Agriculture, Nutrition & Forestry and the House Committee on Agriculture to explain the main provisions of the model legislation:

"the draft model would regulate certain "covered" CDS – those that maintain a material interest in an underlying asset – as a new form of insurance, credit default insurance (CDI), and would prohibit so – called "naked" CDS, or swaps, in which a party has no material interest in the underlying asset. It would mandate licensing of credit default insurers, and impose solvency standards, such as minimum capital and surplus, as well as contingency, loss and unearned premium reserve requirements in such insurers. The draft model bill would require strict limitations permissible credit insurance (restricting writing of the product to purchasers with a material interest in the asset); set single and aggregate risk limits; and authorize minimum policy and rate standards, among other things. We also included a section that would impose civil and criminal penalties for impermissible credit default insurance.". (Quoted from the letter dated the 22nd of July 2009 sent by the President and Committee Chair of the NCOIL to the Senate Committee on Agriculture, Nutrition & Forestry, the Senate Committee on Banking, Housing & Urban Affairs, the House Committee on Agriculture, and, the House Committee on Financial Services. The letter is available on the NCOIL website at: http://ncoil.org/wp-content/uploads/2016/04/09172009CDSLetter.pdf).

Under insurance law the indemnity principle prevents an insurance policy holder from receiving more than his interest in the object of the contract is worth, and the insurable interest requirement invalidates insurance contracts in which buyers have no interest in the object insured. These principles were developed by Common Law to distinguish insurance contracts from gambling and speculation and to prevent fraudulent practices. The Marine Insurance Act of 1745, the first time the insurable interest requirement was codified in Common Law jurisdictions, described the circumstances which necessitated the introduction of the Act:

"*WHEREAS it hath been found by experience that the making assurances, interest or no interest, or without further proof of interest than the policy, hath been productive of many pernicious practices, whereby great numbers of ships, with their cargoes, have either been fraudulently lost and destroyed, or taken by the enemy in time of war; and such assurances have encouraged the exportation of wool, and the carrying on many other prohibited a:nd clandestine trades, which by means of such assurances have been concealed, and the parties concerned secured from loss, as well to the diminution of the public revenue as to the great detriment of £air traders; and:, by introducing a mischievous kind of gaming or wagering under the pretence of assuring the risk on shipping and fair trade, the institution and laudable*

design of making assurances hath been perverted, and that which was intended for the encouragement of trade and navigation has, in many instances, become hurtful of and destructive to the same"[592].

CDS contracts, it was argued, did not serve the explicit purpose of indemnifying the holder for a loss as the holder of the contract was not legally required to have an insurable interest in the object of the contract. The fact that the buyer of a CDS contract did not need to have any relationship with the reference entity's obligation allowed them to be used for speculation and arbitrage.

In 2000 the CFMA would exclude credit default swaps from the provisions of bucket shop laws, which prevented them from being characterised as illegal gambling under statute law[593]. It

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592 Quoted from: "An Act to regulate insurance on ships belonging to the subjects of Great Britain, and on the merchandizes or effects laden thereon" Quoted from: "The Statutes at Large, from the 15th to the 20th year of King George II", Vol. XVIII, Edited by Danby Pickering, Printed by Joseph Bentham (1765), pages 510-511.

593 Eric Dinallo in his testimony before the: "Thus, the various bucket shop laws essentially prohibit the making or offering of a purchase or sale of security, commodity, debt, property, options, bonds, etc., upon credit or margin, without intending a bona fide purchase or sale of the security, commodity, debt, property, options, bonds, etc. If you think this sounds exactly like a naked credit default swap, you are right".Quoted from: "Hearing before the Committee on Agriculture, Nutrition, and Forestry, United States Senate, October 14, 2008, Testimony by Superintendent Eric Dinallo of the New York Insurance Department, Tuesday, October 14, 2008, page 76.

The exemption of naked credit default swaps (those in which the protection buyer of the credit default swap has no material interest in the underlying asset) from state bucket laws, was harshly criticised in the testimony of Professor Greenberger before the

also, as we have seen, excluded them from the oversight of both the SEC and the CFTC[594]. However, even after the passing of CFMA[595] the question of whether they might be characterised as insurance contracts was of real concern to the industry. Treating

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Financial Crisis Inquiry Commission: "The fact that 'naked' CDS and 'synthetic' CDOs were nothing more than 'bets' on the viability of the subprime market also demonstrates the importance of the CFMA expressly pre-empting state gaming and anti-bucket shop laws. Had those laws not been pre-empted, it is almost certain that at least some states would have banned these investments as unlicensed gambling or illegal bucket shops. An action of this sort by even a single state would have disrupted the "naked" CDS market throughout the country." Quoted from: "Testimony of Michael Greenberger, Law School Professor, University of Maryland School of Law", Financial Crisis Inquiry Commission Hearing, Wednesday, June 30th, 2010, page 17.

594 Once again see the testimony of Eric Dinallo before the Agriculture Committee: "With the growth of various kinds of derivatives in the late 20th century, there was legal uncertainty as to whether certain derivatives, including credit default swaps, violated state bucket shop and gambling laws. The Commodity Futures Modernization Act of 2000 ('CFMA'), signed by President Clinton on December 21, 2000, therefore created a 'safe harbour' by (1) pre-empting state and local gaming and bucket shop laws except for general antifraud provisions, and (2) exempting certain derivative transactions on commodities and swap agreements, including credit default swaps, from CFTC regulation. Thus the CFMA stated 'This Act shall supersede and pre-empt the application of any state or local law that prohibits or regulates gaming or the operation of bucket shops'. CFMA also amended the Securities and Exchange Acts of 1933 and 1934 to make it clear that the definition of 'security' does not include certain swap agreements, including credit default swaps, and that the SEC is prohibited from regulating those swap agreements, except for its anti-fraud enforcement authority. Therefore, by ruling that credit default swaps were not gaming and not a security, the way was cleared for the growth of the market." Quoted from: "Hearing before the Committee on Agriculture, Nutrition, and Forestry", United States Senate, October 14, 2008, Testimony by Superintendent Eric Dinallo of the New York Insurance Department. Tuesday, October 14, 2008, page 77.

595 "In 2000 the Commodity Futures Modernization Act ('CFMA'), the first piece of U.S legislation explicitly addressing CDSs, removed the potential of characterizing CDSs as securities by determining that swap agreements, including CDSs, are not securities under the federal securities laws. The act also excluded the regulation of CDSs as commodity derivatives, treating them as exempted swap transactions. However, CFMA did not exclude the application of insurance laws to transactions that resemble insurance". Quoted from, Juurikkala, Oskari: "Financial Engineering Meets Legal Alchemy…", op. cit., page 436.

CDS contracts as insurance would have entailed a number of consequences. Sellers of CDS contracts would have been obliged to have an insurance licence and would have been overseen by insurance regulators, as well as being required to meet reserve requirements, (and as we have seen, before the passing of the CFMA characterising CDS contracts as wagers would have meant that they would have been banned outright by state bucket shop laws).

In 1997 ISDA contracted the English barrister Robin Potts QC to give an opinion on whether credit default swaps (which are referred to a credit default options throughout his written response) could be characterised as insurance or as gaming contracts under common law in the United Kingdom[596] (such a characterisation could have led to a similar result in the U.S courts).

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596 In the "Instructions to Counsel" document, dated the 19th of May, 1997, Potts writes: "The market for credit derivatives is growing rapidly both in London and New York. ISDA would like Counsel to address certain questions regarding which there is currently some uncertainty in the market, particularly in relation to potential insurance law implications. Accordingly, Counsel is instructed to advise whether entering into credit derivatives could be characterised as 'insurance business' under the Insurance Companies Act 1982 ('ICA 1982'), whether a credit derivative could be characterised as an insurance contract for purposes of the ICA 1982 or otherwise as a matter of common law and on whether credit derivatives could be void under the wagering or gaming laws". Quoted from: "Instructions to Counsel, Robin Potts, QC, Erskine Chambers, reference EHM/DMB, 19th of May, 1997", page 1, available at: https://www.isda.org/a/BNEDE/edcreditderivatives.pdf

Potts considered three related credit derivative contracts, the credit default swap[597], the credit linked note[598] and the credit spread/total return swap[599]. In determining whether these types of credit derivatives could be characterised as insurance contracts Potts' instructing solicitors listed the main distinguishing characteristics of credit derivatives as follows:

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597 Potts give the following definition of a credit default swap: "A credit default option gives one party to a transaction the right to dispose of an asset (or a group of assets), or the right to receive a payment from the other party, upon the occurrence of one of a number of specified credit events" (Ibid page 2).

598 Potts described a credit linked note in the following terms: "Under a credit-linked note the amount payable by one of the parties (normally the redemption amount payable by the issuer) is determined or varied by reference to the credit performance of one or more selected reference entities and /or debt obligations, or by reference to country or convertibility risk. Cashflows are contingent on specified credit – related events occurring (or not occurring). Although credit-linked notes can be distinguished from OTC credit default options, their effect is economically similar. They are sometimes characterised as "collateralised" credit default options. A typical example of a credit-linked note is a note that is redeemable on maturity at par unless a credit event occurs with respect to a reference entity or a reference obligation. Note that the same issues arise concerning the definition of a credit event as in the case of a credit default option. If a credit event occurs, the holder receives the redemption amount at less than par, being typically either an amount linked to a reduction in the value of the reference entity's debt obligations or zero" (Ibid, page 3).

599 Potts described these two similar instruments in the following manner: "A credit spread is an instrument based on the relevant credit standings of two or more entities. The return is linked to the performance of the credit of one entity or a group of entities when measured against another over a period of time. Under a credit spread derivative, payment is not directly linked to the occurrence of a credit related event, but is based on the yield of an asset (in the case of a credit spread swap the movement of the value of one reference credit against the other). (….) Total return swaps transfer the entire economic benefit of the reference obligations (including the credit risk) to the counterparty. For example, a holder of securities or a lender under a syndicated loan may agree to pass on all the payments it receives in respect of the securities or loan in return for one or more fixed or floating rate payments from the counterparty" (Ibid, page 4).

"Instructing solicitors consider that that credit derivatives may be distinguished from insurance contracts in a number of important respects, including:

(i) the nature of the contingency triggering a payment obligation

(ii) the lack of an insurable interest in the underlying risk

(iii) the fact that the payment obligation under a credit derivative transaction is not conditional on a loss to the protection buyer

(iv) the lack of a duty of utmost good faith (uberrimae fidei) requiring the protection buyer (analogous to the insured under an insurance contract) to disclose all material facts to the buyer,

(v) the form and structure of credit derivative transactions and the nature of the documentation; and

(vi) the intentions of the parties, there being a market consensus that credit derivatives are not intended to constitute contracts of insurance."[600]

Potts opined that: "*while the cumulative effect of these various distinctions is to emphasise the difference in nature between a credit derivative and an insurance contract, the key reason why a*

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600 Ibid, pages 6-7.

credit derivate is not an insurance contract is that a credit derivative is not a contract against the risk of loss"[601].

Potts cited the case of Wilson vs Jones[602] from 1867, which defined an insurance policy as: "*a contract to indemnify the insured in respect of some interest which he has against the perils which he contemplates it will be liable to"*.

Potts continued by stating that: *"I conclude that a contract is only a contract of insurance if it provides for payment to meet a loss or detriment to which the payee is exposed. In the case of credit default options the payment falls to be made quite irrespective of whether the payee has suffered loss or even been exposed to actual risk of loss"*.[603]

Potts therefore distinguished credit default swaps from insurance in two "*critical*" and interconnected respects:

"(a) the payment obligation is not conditional on the payee's sustaining a loss or having a risk of loss

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601 Ibid, page 7.

602 Wilson v Jones, Exchequer Division (1867).

603 Ibid, page 6 of the "opinion" section of the text.

(b) the contract is thus not one which seeks to protect an insurable interest on the part of the payee. His rights do not depend on the existence of any insurable interest."[604]

If there is no insurable interest to protect, and so credit default swaps could not be characterised as insurance contracts then what, in Potts legal opinion, differentiated a credit default swap from a wager under common law? The answer Potts provided was grounded in three English cases.

(i) Potts first cited *Carill v. Carbolic Smoke Ball Company*[605] heard before the Queen's Bench in 1892. He noted that the

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[604] Ibid, page 7 of the "opinion" section of the text.

[605] In this case the defendants, the makers of a medical preparation called "The Carbolic Smoke Ball" issued an advertisement in the Pall Mall Gazette on the 13th of November 1891, offering 100 pounds to anyone who fell sick with influenza after having used one of their smoke balls in the manner indicated in its accompanying instructions. The plaintiff had used the smoke ball in the prescribed manner, but had subsequently caught the flu. The counsel for the defendant argued that there was no binding contract between the parties because (i) the act required by the plaintiff to establish her claim (catching influenza) was an event over which she had no control (ii) the terms of the advertisement were too vague to be regarded as the basis of a contract given that there was no stated limit of time and no means of checking the use of the medicinal ball (iii) if any contract could be said to exist then it would be a wager, and therefore void under the Gaming Act 1845.

The relevance of this case is the judgement given by Judge Hawkins concerning the claim that the contract could be characterised as a wager and was therefore void. Judge Hawkins declared that: "It is not easy to define with precision what amounts to a wagering contract, nor the narrow line of demarcation which separates a wagering from an ordinary contract; but, according to my view, a wagering contract is one by which two persons, professing to hold opposite views touching the issue of a future uncertain event, mutually agree that, dependent upon the determination of that event, one shall win from the other, and that other shall pay or hand over to him, a sum of money or other stake; neither of the contracting parties having any other interest in that contract than the sum or stake he will so win or lose, there being no other real consideration for the

presiding Judge Hawkins had defined a wagering contract: "*as one by which two persons, professing to hold opposite views touching the issue of a future uncertain event mutually agree that dependent upon the determination of that event one shall win from the other. The definition would not cover credit default options because the party coming under the obligation to pay on the occurrence of the relevant event does not profess to hold any view differing from that of the payee as to the likelihood or otherwise of the relevant event occurring. No doubt the risk of the event*

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making of such contract by either of the parties. It is essential to a wagering contract that each party may under it either win or lose, whether he will win or lose being dependent on the issue of the event, and, therefore, remaining uncertain until that issue is known. If either of the parties may win but cannot lose, or may lose but cannot win, it is not a wagering contract.

It is also essential that there should be mutuality in the contract. For instance, if the evidence of the contract is such as to make the intentions of the parties material in the consideration of the question whether it is a wagering one or not, and those intentions are at variance, those of one party being such as if agreed in by the other would make the contract a wagering one, whilst those of the other would prevent it from becoming so, this want of mutuality would destroy the wagering element of the contract and leave it enforceable by law as an ordinary one". (……) "In the present case an essential element of a wagering contract is absent. The event upon which the defendants promised to pay the 100l. depended upon the plaintiff's contracting the epidemic influenza after using the ball; but, on the happening of that event, the plaintiff alone could derive benefit. On the other hand, if that event did not happen, the defendants could gain nothing, for there was no promise on the plaintiff's part to pay or do anything if the ball had the desired effect. When the contract first of all came into existence (i.e., when the plaintiff had performed the consideration for the defendants' promise), in no event could the plaintiff lose anything, nor could the defendants win anything. At the trial it was not even suggested that any evidence could be offered to alter the character of the contract or the facts as deposed to by the plaintiff. I am clearly of opinion that, if those facts established a contract, as I think they did, it was not of a wagering character." Quoted from: Carlill vs. The Carbolic Smoke Ball Company, Queen's Bench Division 1892.

occurring is taken into account in determining the sums demanded for going on risk but that is a different matter".[606]

(ii) In Morgan Grenfell vs Welwyn Hatfield District Council[607], heard before the Queen's Bench Division in 1993, and

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[606] Quoted from: The opinion section of the document. "Instructions to Counsel, Robin Potts, QC, Erskine Chambers, reference EHM/DMB, 19th of May, 1997". Page 9.

[607] Morgan Grenfell & Co Ltd vs Welwyn Hatfield District Council (Islington London Borough Council third party), Queen's Bench Division (Commercial Court), April 1993. In this case Morgan Grenfell & Co (a London based investment bank, now defunct) had entered into a ten-year interest rate swap contract with Welwyn Hatfield District Council on the basis that Morgan Grenfell would be the fixed rate payer and Welwyn the floating rate payer. At the same time Welwyn District Council entered into a parallel contract as the fixed rate payer and Islington Council the floating rate payer. The contract was based on a notional sum of £25 million. Payments were to be made twice a year and netted off so that only the balance would be paid. However, in January 1991 the House of Lords rendered its decision in Hazelll vs Council of the London Borough of Hammersmith and Fulham and others. The House of Lords unanimously held that swap transactions were ultra vives of local councils' authority and thus contrary to the law. Following this decision Morgan Grenfell brought an action against Welwyn claiming restitution of the sums it had paid under the swap contract, and Welwyn issued third party proceedings against Islington claiming the same. Islington defended itself against the claim for payment by alleging that the swap agreement was a wagering contract under the terms of the Gaming Acts of 1845 and/or 1892 and that such a contract was not removed from the ambit of the Financial Services Act of 1986. Section 18 of the Gaming Act of 1845 held that: "All contracts or agreements by way of gaming or wagering shall be null and void; and no suit shall be brought or maintained in any court of law and equity for recovering any sum of money or valuable thing alleged to be won upon any wager, or which shall have been deposited in the hands of any person to abide the event on which any wager shall have been made…". Section 1 of the Gaming Act 1892 stated that "Any promise, express or implied, to pay any person any sum of money paid by him under or in respect of any contract or agreement rendered null and void by the Gaming Act of 1845 or to pay any sum of money by way of commission, fee, reward, or otherwise in respect of any such contract, or of any services in relation thereto or in connection therewith, shall be null and void, and no action shall be brought or maintained to recover any such sum of money". Islington Borough Council maintained that by virtue of the netting off provisions, the swap contract was a contract for differences and therefore an illegal gaming contract. Sir John Hobhouse, the presiding judge dismissed this argument by declaring that: "Provisions for the payment of differences are commonplace in certain types of financial contract. The mere fact that there is a provision for the payment of differences does not mean that the contract must be a wagering contract. It merely raises that possibility or justifies

in City Index vs Leslie[608] heard before the Supreme Court of Judicature on Appeal from the Queen's Bench Division in 1992,

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an inference…. In the context of interest rate swap contracts entered into by parties or institutions involved in the capital market and the making or receiving of loans, the normal inference will be that contracts are not gaming or wagering but are commercial or financial transactions to which the law will, in the absence of some other consideration, give full recognition and effect". Sir John Hobhouse maintained that even if the contract could be characterised as a gaming contract, it would have fallen under the terms of Section 63 of the Financial Services Act of 1986 which stated that: "(1) No contract to which this section applies shall be void or unenforceable by reason of – (a) section 18 of the Gaming Act of 1845, section 1 of the Gaming Act 1892 (2) This section applies to any contract entered into by either or each party by way of business and the making or performance of which by either party constitutes an activity which fall within paragraph 12 of Schedule1 to this Act…". Schedule 1 of the Financial Services Act included contracts for differences, defined as "any other contract the purpose or pretended purpose of which is to secure a profit or avoid a loss by reference to fluctuations in the value or price of property of any description in an index or other factor designated for that purpose in the contract". Islington Council argued that the word "business" could not be interpreted to cover the activities of a local authority and that even if it were to it could not be extended to a one off transaction or ultra vires activities. Sir John Hobhouse rejected these arguments, taking the view that the word business should not be given such a restrictive interpretation and that despite being ultra vires: "the transaction still has a factual existence and factual characteristics. It is possible to answer the question whether it was entered into by way of business. The uncontroverted facts lead to the conclusion that the transaction, whatever its validity, was entered into by way of business". With regard to the frequency of the transaction Sir John indicated that this could be no more than a guide, and that in any case both parties had entered into swap transactions on other occasions.

608 The case of City Index Limited vs Mr. S.A. Leslie heard in the Supreme Court of Judicature Court of Appeal, on appeal from the high Court of Justice, Queen's Bench Division concerned a man who had been placing money on market positions through the firm City Index Ltd. The firm enabled clients to place money on the change or anticipated change in indices. City Index would form their own view of what the change would be and quoted a spread consisting of two figures, the higher being at or above and the lower being at or below its own undisclosed forecast. If the client thought that the higher figure underestimated the level which the index would reach at the close of business he could place an "up" or "buy" bet on the basis of the higher figure, placing a sum of money on each point by which he believed this figure would be surpassed, or, if he believed City Index to have overestimated the position of the index, he could place a "down" or "sell" bet. If City Index quoted a spread of x and y, x being the lower figure and y the higher, and the client had placed a buy bet, he would be paid the amount he had bet for every point by which the index had exceeded y at the close of trading. However, he would be liable for the same amount for each point by which the index fell short of y if his bet was incorrect. If the client made a sell bet, then the client would

Potts indicated that credit derivatives fell within paragraph 9 of Schedule I of the Financial Services Act of 1986 as being contracts the purpose or pretended purpose of which is to secure a profit or avoid a loss by reference to a factor designated for that purpose in the contract, and that "*such contracts are excepted from the provisions of Section 18 of the Gaming Act 1845 by Section 63 of the Financial Services Act"*[609].

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make money on every point by which the index fell short of x and would be liable for the same amount for every point by which the actual figure exceeded x. Having amassed a total debt of £43,080, of which he could only pay £ 8,500, Mr Leslie alleged that this sum was irrecoverable due to the provisions of the Gaming Act of 1845 and 1892. The judges dismissed the argument that the contract constituted an illegal wager and cited section 63 of the Financial Services Act of 1986 that specified that no act to which that section applied could be declared void or unenforceable by virtue of section 18 of the Gaming Act of 1845, in conjunction with paragraph 9 of Schedule 1 of the same act which protected under the exclusion "Rights under a contract for differences or under any other contract the purpose of which is to secure a profit or avoid a loss by reference to fluctuations in the value or price of property of any description or in an index or other factor designated for that purpose in the contract".

Lord Justice McCowan gave his verdict on the basis of his interpretation of these dispositions: "In the end, accordingly, this case boils itself down to the question whether the contract made between the parties had as its purpose either the making of a profit or the avoidance of a loss 'by reference to fluctuations in the value or price of property of any description or in an index or other factor designated for that purpose in the contract'. The purpose of the contract was, I have no doubt, the making of a profit. Whether a profit was made and by whom was to be determined by reference to fluctuations in the value or price of property in an index designated for that purpose in the contract. Hence, in my judgement, the transactions between the appellant and the respondent were not bare wagering transactions and void". Lord Justice Leggatt agreed, stating that: "In my judgement the contracts sued on were contracts for differences within the meaning of paragraph 9 of schedule 1. If they were not, because (contrary to my view) a contract for differences can be made only in relation to property capable of being, though not intended to be, delivered, then they would be within the description of 'any other contract' in the alternative part of paragraph 9. I therefore agree that the appeal should be dismissed".

[609] Quoted from: The opinion section of the document. "Instructions to Counsel, Robin Potts, QC, Erskine Chambers, reference EHM/DMB, 19th of May, 1997", page 10.

In their article "*Market Shaping as an answer to Ambiguities: The Case of Credit Derivatives*", the academics Isabelle Huault and Hélène Rainelli –Le Montagner describe the Potts opinion as being "*unanimously acknowledged as one of the great successes of the organization"*[610], and quote an anonymous ISDA representative who declared that:

"*This point is essential as a bank cannot sell insurance. Without this "Potts opinion", there would have been no market at all. This clarification was essential"*.[611]

However, while Potts opined that there was no strong legal argument based on U.K case law for characterising credit default swaps as insurance, this obviously did not mean that the U.S legislators might not decide to regulate them as such. In the U.S insurance firms are subject to regulation by both the Federal Government and the State insurance department in which they are domiciled. The McCarran Ferguson Act of 1945 guaranteed that the states would have the primary role in the regulation of insurance[612], and the New York State Insurance Law (where Wall

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610 Quoted from: Huault, Isabelle & Rainelli-Le Montagner, Hélène: "Market Shaping as an Answer to Ambiguities: The Case of Credit Derivatives", *Organization Studies*, Vol. 30, Issue 5, (2009), pages 549-575, page 560.

611 Ibid, page 560.

612 Section 1 of the Act stated: "Be it enacted by the Senate and House of Representatives of the United States of America in Congress assembled, That the Congress hereby declares that the continued regulation and taxation by the several

Street financial firms are domiciled) stipulated that all insurance firms doing business in that state had to be licensed by the New York State[613].

In June 2000, the State of New York Insurance Department wrote a letter in answer to the following question posed to them by the Law Firm Skadden, Arps, Slate, Meagher & Flom: *"Does a credit default swap transaction, wherein the counterparty ("seller") will make payment to the buyer upon the happening of a negative credit event and such payment is not dependent upon*

States of the business of insurance is in the public interest, and that silence on the part of Congress shall not be construed to impose any barrier to the regulation or taxation of such business by the several States.". While Section 2 declared: "(a) The business of insurance, and every person engaged therein, shall be subject to the laws of the several States which relate to the regulation or taxation of such business. (b) No Act of Congress shall be construed to invalidate, impair, or supersede any law enacted by any State for the purpose of regulating the business of insurance, or which imposes a fee or tax upon such business, unless such Act specifically relates to the business of insurance: Provided, That after June 30, 1948, the Act of July 2, 1890, as amended, known as the Sherman Act, and the Act of October 15, 1914, as amended, known as the Clayton Act, and the Act of September 26, 1914, known as the Federal Trade Commission Act, as amended, shall be applicable to the business of insurance to the extent that such business is not regulated by State law" (The McCarran – Ferguson Act, 1945).

613 "No person, firm, association, corporation or joint-stock company shall do an insurance business in this state unless authorized by a license in force pursuant to the provisions of this chapter, or exempted by the provisions of this chapter from such requirement. Any person, firm, association, corporation or joint-stock company which transacts any insurance business in this state while not authorized to do so by a license issued and in force pursuant to this chapter, or exempted by this chapter from the requirement of having such license, shall, in addition to any other penalty provided by law, forfeit to the people of this state the sum of one thousand dollars for the first violation and two thousand five hundred dollars for each subsequent violation" (New York Consolidated Laws, Insurance Law - ISC § 1102).

the buyer having suffered a loss, constitute a contract of insurance under the insurance law?"[614]

The answer echoed Potts' opinion: "*The credit default swap which you have described does not meet the definition insurance contract in N.Y. Ins Law Section 1101 (a) (1) (McKinney 1985) because, under the terms of the transaction, the seller will make payment to the buyer upon the happening of a negative credit event and such payment is not dependent upon the buyer having suffered a loss".*

The letter quoted an earlier decision by the Department, taken in May 1998, concerning whether an index swap transaction constituted an insurance contract. On that occasion the Department had stated that:

"*In order for an Index Swap (or other derivative) to constitute an insurance contract, it must obligate the index payer (as insurer) to indemnify the fixed rate payment payer (as insured) to indemnify the fixed rate payment payer. Indemnification of loss is an essential indicia of an insurance contract which courts have relied upon in the analysis of whether a particular agreement is*

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614 Quoted from the letter from the State of New York Insurance Department dated the 16th of June 2000, to Bertil Lundqvist of the firm Skadden, Arps, Slate, Meagher & Flom, LLP. The letter was signed on behalf of the Department by Associate Attorney Rochelle Katz. The letter is available through the Standford University website at: https://fcic-static.law.stanford.edu/cdn_media/fcic-docs/2000-06-16%20NYSID%20Credit%20Default%20Option%20Facility.pdf

an insurance contract under New York Law. Absent such a contractual provision the instrument is not an insurance contract"[615].

In 2004 Article 69 of the New York Insurance Law (on financial guaranty insurance corporations) was altered to define, and seemingly exclude from regulatory oversight, Credit Default Swaps. The text declared that:

"*Credit default swap" means an agreement referencing the credit derivative definitions published from time to time by the International Swap and Derivatives Association, Inc. or otherwise acceptable to the superintendent, pursuant to which a party agrees to compensate another party in the event of a payment default by, insolvency of, or other adverse credit event in respect of, an issuer of a specified security or other obligation; provided that such agreement does not constitute an insurance contract and the making of such credit default swap does not constitute the doing of an insurance business".*[616]

The wording of the 2004 legislation would appear to indicate that credit default contracts could be characterised as insurance if they were written in such a way as to encroach on the legal territory of insurance contracts, which, judging from the

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615 Ibid.

616 New York Insurance Law § 6901 (j-l).

department's own past analysis, could only happen if payment were structured to be dependent on the protection buyer being compensated exclusively in the case of having suffered a loss.

The idea that certain types of derivatives might be insurance contracts in disguise was explored by the National Association of Insurance Commissioners (NAIC)[617] in its 2003 White Paper "*Weather Financial Instruments (Temperature). Insurance or Capital Markets Products?"*[618].

The NAIC review of weather financial instruments came three years after an opinion issued by the Office of General Counsel representing the position of the New York State Insurance Department[619] which had reiterated their previous argument with

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617 The NAIC was founded in 1871. Its members are the insurance commissioners of the U.S states and its mandate is to promote uniform insurance laws and regulations. The NAIC's mission "is to assist state insurance regulators, individually and collectively, in serving the public interest and achieving the following fundamental insurance regulatory goals in a responsive, efficient and cost effective manner, consistent with the wishes of its members: protect the public interest; promote competitive markets; facilitate the fair and equitable treatment of insurance consumers; promote reliability, solvency and financial solidity of insurance institutions; and support and improve state regulation of insurance." The NAIC Mission, Statement is available at: www.naic.org/index_about.htm

618 National Association of Insurance Commissioners. "Weather Financial Instruments (Temperature): Insurance or Capital Markets Products?" Property and Casualty Insurance Committee, draft White Paper, September 9, 2003.

619 "Weather derivatives do not constitute insurance contracts under Section 1101 (a) of the New York Insurance Law because the terms of the instrument do not provide that, in addition to or as part of the triggering event, payment to the purchaser is dependent upon that party suffering a loss. Under such instruments, the issuer is obliged to pay the purchaser whether or not the purchaser suffers a loss. Neither the amount of the payment nor the trigger itself in the weather derivative bears a relationship to the

regard to index swaps and credit default swaps and had concluded that weather derivatives did not constitute insurance under New York insurance law. The principal object of the NAIC study was the market for weather financial instruments that hedged for losses to energy providers caused by temperature changes. Traders in natural gas and heating oil would see a fall in demand (and hence revenues) under mild weather conditions, while extreme cold could see demand rise beyond their capacity to provide consumers at the rate at which they were contractually obliged to do so, forcing them to purchase additional supplies at high market prices (thus losing revenue). To protect themselves against loss, energy providers entered into contracts that provided a financial hedge against temperatures that were too mild or too cold.

NAIC alleged that: "*The energy traders have gone to great lengths to train those providing the energy contracts to use terminology that distinguishes them from weather insurance products. There is evidence that entire conferences have been devoted to helping those providing the derivative products with ways to avoid findings that that the weather derivatives are simply weather insurance products masquerading as something else.*

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purchaser's loss. Absent such obligations, the instrument is not an insurance contract.". Quoted from the opinion of the Office of the General Counsel representing the position of the New York Insurance Department, given on the 15th of February 2000. The opinion is available at: https://www.dfs.ny.gov/insurance/ogco2000/rg000205.htm

Nevertheless, it is clear that when carefully analysed, a weather insurance product and a weather derivative apply the same seven common elements"[620].

The common elements identified by NAIC included: (i) the subject covered by the contract (ii) the period for which coverage applied (iii) the event that triggered a loss (iv) the neutral source of trigger coverage (iv) the threshold for determining that a loss had occurred (v) the settlement provisions.

The disadvantages of classifying these contracts as derivatives rather than insurance contracts were spelt out by the report:

"*The insuring public is missing out on many solvency and market regulatory benefits that state insurance regulation provides. States are missing out on premium tax revenues and the purchaser does not have the benefit of knowing that adequate reserves are maintained and monitored for solvency purposes"*[621].

The report ended by stating: *"This paper concludes that these weather financial instruments are and should be classified and*

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[620] Quoted from: National Association of Insurance Commissioners: "Weather Financial Instruments (Temperature): Insurance or Capital Markets Products?", Property and Casualty Insurance Committee, draft White Paper, September 9, 2003, page 6.

[621] Ibid, page 8.

regulated as insurance products for the benefit of the buying public."[622]

The NAIC white paper drew immediate criticism from ISDA, who contended that the; "*Draft White Paper's logic could extend to a broad array of derivatives and would create substantial and disruptive regulatory uncertainty"*[623].

ISDA insisted on their previous line of argument, that insurance contracts require the key elements of an insurable interest and a loss indemnification, and NAIC dropped the proposal following similar criticisms[624] from ISDA, the WRMA[625] and the BMA[626].

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622 Ibid, page 8.

623 Letter from Robert G. Pickel, Executive Director & CEO, ISDA, to Ernst N. Csiszar, President, NAIC & Robert Esson, Senior Manager, Global Insurance Markets, NAIC (Feb. 23, 2004).

624 "Following submissions by the WRMA, ISDA, and others, the NAIC decided not to proceed with the formal publication of this paper". Quoted from: Ali, Paul U.: "The Legal Characterization of Weather Derivatives", *The Journal of Alternative Investments*, Fall 2004, page 76.

625 The Weather Risk Management Association was formed in 1999. It represents weather derivative sellers and end users. See: https://wrma.org/page/about-wrma

626 The Bond Market Association was an association of securities firms and Banks that underwrote, traded and sold debt securities. In 2007 it merged with the Securities Industry Association to form SIFMA (Securities Industry and Financial Markets Association), which represents broker-dealers, banks and assets managers. See: https://www.sifma.org/wp-content/uploads/2016/12/sifma-history-2017.pdf

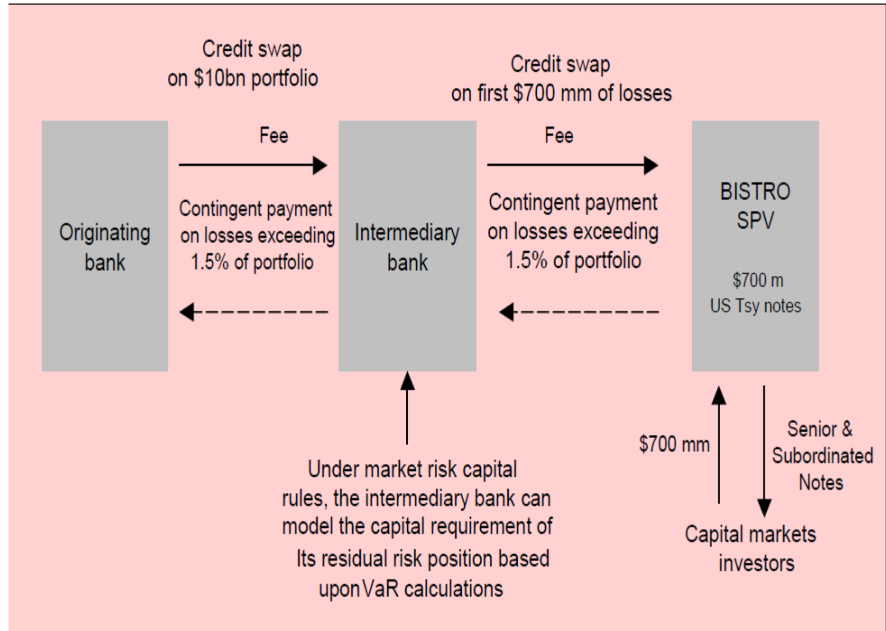
4.3 Collateralised Debt Obligations and Credit Default Swaps

The significance of distinguishing credit default swaps from insurance law was to be seen most clearly in their application to collateralised debt obligations.

4.3 (a) Credit derivatives applied to securitisation structures

The fusion of securitisation techniques with credit derivatives allowed for the creation of more complex structured products such as collateralised debt obligations (whose super-senior tranches were "wrapped", or insured by credit default swaps) and synthetic collateralised debt obligations. A collateralised debt obligation used the basic structure of a tranched securitisation, but its underlying assets were generally not homogenous, often being a mixture of mortgages, auto loans, student loans and notes from lower rated tranches of other securitisation structures. Synthetic structures used credit default swaps to replicate the risk from the assets of a portfolio of loans or securities.

Figure 22: The Bistro synthetic CDO [627].



J.P Morgan pioneered the first synthetic collateralised debt obligation before the CFMA had bestowed legal certainty on credit default swaps. The Broad Index Secured Trust Offering (or "BISTRO" transaction) was structured around a special purpose

627 Source: The J.P. Morgan Guide to Derivatives (with contributions from the Risk Metrics Group). The document is undated and the pages are unnumbered, however, the website at which it is available states that it was published in 1999 (which is probable given that this is the latest date mentioned in the text itself). The full text is at: http://www.defaultrisk.com/pp_crdrv121.htm

vehicle sponsored by J.P Morgan. J.P Morgan entered into a portfolio return swap with a notional value of almost $10 billion referencing a portfolio of 307 commercial loans, corporate and municipal bonds with an originating bank [628]. J.P Morgan acted as an intermediary, receiving premiums from the originating bank to offer protection on the portfolio and paying premiums to the SPV (that it had sponsored) with which it had contracted a credit default swap on the same portfolio, but only to cover the first $700 m in losses (7% of the notional value of the portfolio swap). The BISTRO SPV used the proceeds of tranched notes sold to investors to purchase government securities, which it held as collateral should payment have to be made in the case of defaults on the loan portfolio[629]. The U.S Federal Reserve permitted J.P

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628 See: Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover and the next financial meltdown*, Knopf Doubleday Publishing Group (2010), pages 158-159.

629 The J.P Morgan guide to derivatives explained the structure in the following terms: "In this structure, an originating bank buys protection from J.P. Morgan on a portfolio of corporate credit exposures via a portfolio credit swap. Morgan, in turn, purchases protection on the same portfolio from an SPV. The credit protection may be subject to a "threshold" relating to the aggregate level of losses which must be experienced on the reference portfolio before any payments become due to the originating bank under the portfolio credit swap. Since the threshold represents economic risk retained by the originating bank, it is analogous to the credit enhancement or equity stake that a bank would provide in a traditional securitisation using a CLO. The BISTRO SPV is collateralised with government securities or repurchase agreements on government securities which it funds through the issuance of notes which are credit-tranched and sold into the capital markets. In a critical departure from the traditional securitisation model, the BISTRO SPV issues a substantially smaller note notional, and has substantially less collateral, than the notional amount of the reference portfolio. Typically, the BISTRO collateral will amount to only 5 – 15% of the portfolio notional. Thus only the first 5% - 15% of losses (after the threshold, if any) in a particular

Morgan to use VaR to calculate the risk capital required to cover the risk of the original loan portfolio on its trading book[630]. As the diagram indicates, payment from the SPV to J.P Morgan, and from J.P Morgan to the originating bank was only triggered when losses on the loan portfolio exceeded 1.5%. The collateral held by the SPV was sufficient to cover $ 700 million in losses, on the loan portfolio, however, it was considered highly unlikely that that level of losses would ever be reached: "*The transactions are structured so that, assuming the portfolio has a reasonable amount of diversification and investment grade – average credit quality, the risk of loss exceeding the amount of BISTRO securities sold is, at most, remote, or in rating agency vernacular, better than triple A".*[631]

This synthetic CDO meant that J.P Morgan would receive a steady stream of CDS premiums which it could use, together with the coupons it received on the collateral it held, to pay the

portfolio are funded by the vehicle, leaving the most senior risk position unfunded". The J.P. Morgan Guide to Derivatives (with contributions from the Risk Metrics Group).

630 "To achieve regulatory capital relief, it is necessary for the originating bank to make use of a third party bank (J.P. Morgan in this example) to intermediate between the BISTRO SPV and itself because of the large notional mismatch between the underlying portfolio and the hedge afforded by the SPV. Provided that the third party bank is able to apply internal models to its residual risk position in a trading book, this risk will not consume a disproportionate amount of regulatory capital for the intermediating bank" (Ibid).

631 Ibid.

investors in its synthetic notes[632], and it could turn a profit on the difference between the payments to the noteholders and the credit protection premiums it received. It could also reduce its regulatory capital, as the risk of default on the loans in the portfolio swap was held by the investors in the notes issued by the SPV (at least, up to the $70 million limit), rather than J.P. Morgan itself, while the capital that had to be held in virtue of the portfolio swap[633], was low, given that the VaR models sanctioned by the U.S federal reserve showed that the likelihood of a default on the loan portfolio exceeding the 7% of its value held in collateral by the SPV, was negligible. The originating bank could also hold lower capital requirements because it had purchased credit protection. The advantage for the investor in the synthetic notes was that there was no repayment risk. Investors in the synthetic notes were only liable up to the full value of their investment, but the portfolio swap meant that J.P Morgan was liable for the unfunded portion of the swap, some $ 9.3 billion,

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[632] The income for the coupon paid to the synthetic CDO investors was obtained in the following manner: "The ongoing fee paid by MGT under the portfolio credit swap is the source of the spread component on the BISTRO notes, while the underlying Treasury collateral is the source of the majority coupon: e.g., a 6.00% coupon might result from 5.40% paid from Treasuries and .60% paid by MGT". Ibid.

[633] Under the terms of the portfolio credit swap Morgan Guaranty Trust Company of New York paid a fee to the BISTRO Trust in return for which the trust was obligated to make a contingent payment to MGT at maturity if a credit event occurred.

even if VaR models calculated that it was highly improbable that this could ever happen.

J.P Morgan were fully aware that this basic structure could be applied to virtually any asset class, including residential mortgages[634]:

"*synthetic securitisation technology can be applied to any asset class to which securitisation can be applied, for example commercial and residential mortgages, car loans, personal loans, and unrated middle-market corporate loans. The wider universe of credit available via a credit derivative structure means a larger, more diverse portfolio can be executed with clear benefits in terms of cost, regulatory capital, and economic risk"*[635].

Collateralised debt obligations rapidly grew in popularity (**see figure 23**) and came to be used for two main reasons, balance sheet management (lowering capital requirements through synthetic risk transfer or by securitising high risk weighted assets and holding them as lower rated securitisations insured by credit default swaps) or arbitrage, by which firms purchased under-

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634 "This meant that a bank could create a CDO based on the housing market without having to buy a pool of mortgages or mortgage – backed securities; instead, it only needed to find someone who would buy insurance (using credit default swaps) on securities that already existed in the market. No one, in other words, had to go to the trouble of lending new money". Quoted from: Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover…*, op. cit., page 159.

635 The J.P. Morgan Guide to Derivatives (with contributions from the Risk Metrics Group).

priced assets, securitised them and exploited the difference between the yield on the assets and the cost of funding the CDO debt tranches.

4.3 (b) Super senior tranches

Super senior tranches of CDOs were created by breaking up the AAA portion of the structure into smaller AAA rated tiers, with the result these subordinate AAA tiers were higher yielding, while the super senior tranches would carry very low levels of credit risk according to the models they were built to. The composition of CDOs changed over time, as from 2003 onwards mortgage products started to predominate, the lion's share of which consisted of home equity loans, followed by residential mortgage loans and then commercial MBS tranches[636].

Collateralised debt obligations permitted financial institutions to repackage lower rated but higher yielding BBB mortgage backed securities into higher rated tranches of CDOs[637]. These

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636 See: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., pages 162-163.

637 "What must be understood now is the manner in which the CDS market heightened substantially risks posed by securitization. In brief, the securitization of subprime mortgage loans evolved to embed simple mortgage backed securities ("MBS") within highly complex collateralized debt obligations ("CDOs"). As this Commission well knows, these CDOs constituted the pulling together and dissection into "tranches" of huge numbers of MBS, theoretically designed to diversify and offer graduations of risk to those who wished to invest in subprime mortgages". Quoted from: "Testimony of

higher ratings were guaranteed in two ways, firstly because the CDOs were designed to make it statistically unlikely, given the presumptions of the modellers, that sufficient numbers of these BBB rated securities would enter into default to affect the payment waterfalls of the senior rated tranches, and secondly because the super–senior tranches were guaranteed through credit default swaps. The purchase of credit default swaps enabled the super-senior tranches to have AAA ratings[638], and given that their risk was hedged, financial institutions had to hold little capital in

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Michael Greenberger, Law School Professor, University of Maryland School of Law", Financial Crisis Inquiry Commission Hearing, Wednesday, June 30th, 2010, page 14.

"By building CDOs out of junior, high-yielding MBS tranches, banks were able to engineer new securities that offered high returns with relatively little risk—at least according to their models. It was possible to combine low-rated MBS tranches, mix them together, and create a new CDO, 60 percent or even 80 percent of which was rated AAA; even though the MBS (the inputs) had low ratings, it was unlikely that many of them would default at the same time—at least according to the models". Quoted from: Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover…*, op. cit., page 155.

"Banks repackaged mortgage-based bonds in ever more creative ways. The best known product was a CDO of asset-backed securities, or CDO of ABS. This was usually (but not always) filled with mortgage-linked bonds. In a sense, then, CDO of ABS were like CDOs of CDOs. They had an added layer of complexity to add more leverage. Within that field, another popular product was known as a 'mezzanine CDO of ABS,' which took pools of subprime mortgage loans and used them as the basis for issuing bonds carrying different degrees of risk. The bankers would then take just the risky bonds, say those rated BBB, not A or AAA, and create a new CDO composed entirely from those BBB bonds. That CDO would then issue more notes which were also ranked according to different levels of risk. The scheme looked fiendishly complex on paper, but it essentially involved bankers repeatedly skimming off the riskiest portions of bundles, mixing them with yet more risk, and then skimming it yet again - all in the hope of high returns". Quoted from: Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 104.

638 "Despite the fact that the CDO was based on lower rated tranches of MBS, 80 percent of the CDO market received a triple A rating". Quoted from: Buchanan, Bonnie G.: *Securitization and the Global Economy…*, op. cit., page 257.

reserve to cover the purchase[639], allowing them to retain highly leveraged positions.

One of the problems resulting from the reliance on credit default swaps was that, given that they were OTC derivatives, and therefore the result of a private negotiation between the parties, the protection buyer had no way of knowing the total exposure the protection seller was liable for, and, in the absence of statutory reserves, if they could meet the payment in the case of default. Furthermore, the lack of a central exchange or clearing mechanism meant that CDS lacked transparent pricing[640], that

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639 See: Testimony of Dr.. William Black The Role of Financial Derivatives. Hearing before the Committee on Agriculture, Nutrition and Forestry. United States Senate. October 14th, 2008. "CDS permitted banks to reduce their capital requirements regardless of whether they actually effectively protected against credit risk, i.e., CDS provided by non-creditworthy counterparties were used to reduce banks' capital requirements. (The non-creditworthy counterparties may have had high ratings, but it is clear that the rating agencies' ratings of large financial institutions were grossly inflated. Deeply insolvent counterparties had investment grade ratings). Page 122.

640 See: Testimony of Terence A. Duffy - Executive Chairman, CME Group INC – Before the Senate Committee on Agriculture, Nutrition and Forestry. October 14th, 2008. "For years, exchanges trading derivatives, such as futures and options, have used procedures that promote careful risk management. Every day the market determines and discloses settlement prices based on the forces of public supply and demand. These prices may not always fit the ideal predicted by a computer model, but they do reflect real market conditions. Using public prices every day avoids the pitfalls of internally derived price evaluations", (….) "The CDS market has grown because credit derivatives permit dispersion and realignment of credit risks. These instruments are a tremendously valuable financial tool in the right hands and used properly. However, the individual and systemic risks created by the exponential growth of such contracts has not been properly managed - in some cases it appears not to have been understood by the managers who were highly compensated for promoting these instruments. The lack of transparent pricing, standardized contract terms, multilateral netting and all of the other advantages that flow from an integrated trading and central counterparty clearing system have compounded risk and uncertainty in this market" (page 83).

there was no ready-made forum for trading, and no organisation in place to mutualise the risk of default. This affected both the liquidity of CDS contracts[641] and the possibility of settling claims in the case that the protection seller defaulted. There was also the possibility that the due diligence[642] in the acquisition of insured CDO tranches might suffer because they were covered by a CDS.

The full text of the speech is available at: https://www.agriculture.senate.gov/imo/media/doc/Duffy.pdf

[641] See: Testimony of Dr. Richard R. Lindsey –President Callcott Group LLC– Before the Committee on Agriculture – Nutrition and Forestry, United States Senate, October 14, 2008. "A mechanism which would alleviate much of the potential stress associated with the failure of a major counterparty would be centralized clearing for credit default swaps. This would place a clearing organization on each side of a credit default swap; thereby replacing the counterparty risk with risk of the clearing organization.

(…..) In addition to reducing counterparty risk, other significant benefits would flow from the use of a centralized clearing mechanism: (1) a clearing organization would require capital in the form of clearing deposits for each of the participants, and that capital requirement would increase with the level of activity of each participant; (2) participants in the market, the public, and regulators would have a precise understanding of the size and location of exposures; and (3) centralized clearing is likely to force the market to standardized terms and conditions, which would reduce operational complexity, improve liquidity, and make swap contracts more fungible".

The full text is available here: https://www.agriculture.senate.gov/imo/media/doc/Lindsey.pdf

[642] "Research demonstrates that some drivers speed or drive more recklessly when wearing seatbelts because the seatbelt creates the misperception of protection against any possible driving-related injuries. In the recent crisis, some market participants began to perceive credit default swap agreements as an absolute guarantee against risk of loss, and they consequently adopted less disciplined risk management processes and exposed themselves to excessive levels of risk". Quoted from: Johnson, Kristin N.: "Things Fall Apart: Regulating the Credit Default Swap Commons", op. cit., page 207.

The testimony of Dr William Black before the Committee on Agriculture, Nutrition and Forestry, revealed the lack of due diligence that was sometimes performed on the assets packaged into CDO structures that were "wrapped" by a CDS. In his written testimony Dr Black reported an email from a senior manager at Standard &Poor's Credit Rating Agency to one of its professional credit raters: "Any request for loan level tapes is

As we shall see in the next section of this chapter, demand for material with which to make CDOs forced banks to originate mortgage loans with increasingly worse credit, moving from prime mortgages to alternative types of subprime mortgage loans and re-packaging lower rated tranches into the CDOs[643].

TOTALLY UNREASONABLE!!! Most investors don't have it and can't provide it. [W] e MUST produce a credit estimate. It is your responsibility to provide those credit estimates and your responsibility to devise some method for doing So".

The e mail is from a senior S& P manager. The "all caps" and triple exclamation point are in the original. It is an e mail message to a senior professional rater at $& P. The rating official has requested the loan level tapes so that he can evaluate the credit risk, particularly the fraud risk , of a mortgage derivative (CDO). It must be stressed that it is impossible, not merely difficult, to discover mortgage loan frauds without reviewing a sample of the loan files. The demonstration that the rating agencies did not evaluate the principal credit risk in nonprime loans -fraud- yet gave AAA ratings is obviously of immense importance. It guaranteed a devastating financial crisis. What is even more critical is that the e mail message reveals that the "investors" did not have information on the contents of the loan files. The "investors" the S & P manager is referring to are the entities that purchased the nonprime loans, pooled them, and created the collateralized debt obligations (CDOs). The investors were typically the largest investment banking firms. The investment banking firms purchased the nonprime loans without having even the capability of evaluating the primary credit risk in nonprime loans. Like the rating agencies, they engaged in no meaningful due diligence. Like the rating agencies, this means that their allegedly sophisticated financial models were fictions designed to overstate substantially "market" values by understating substantially credit risk". Note that it also means that the sellers of CDS protection to purportedly protect CDO holders from credit risk also could not possibly have known the risk they were undertaking because the entity that held the CDO had no means of evaluating the fraud losses in the underlying nonprime mortgage loans. Again, it needs to be stressed that undertaking credit risk when one cannot evaluate fraud risk guarantees that there will eventually be catastrophic losses. Testimony of Dr. William Black The Role of Financial Derivatives. Hearing before the Committee on Agriculture, Nutrition and Forestry, United States Senate, October 14th, 2008, pages 124-125.

643 "During Greenspan's refinancing boom of 2000–2003, it wasn't just the GSEs that were busy. The huge surge in issuance meant that there was plenty of unconventional, "nonconforming" business to go around too. But the decisive thing was what happened in early 2004 when interest rates had reached rock bottom, the refinancing boom had run its course and the GSEs were stopped in their tracks. With the pipeline ready and waiting, it was at this point that the private mortgage industry took over. Leaving behind the GSE-centred model of the 1990s, they deprioritized conforming mortgages in favour of private label "unconventional" lending-subprime, slightly better Alt-A and

The issuance of synthetic CDOs increased just as the demand for new mortgages and home equity loans slowed down.

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oversized jumbo loans. What the private issuers discovered was that if scrutinizing conventional mortgages was profitable, subprime was even more so. The financial engineering was more elaborate and one could charge more money for the services. The techniques of the fixed-income investment bankers were now brought fully into play. A surprisingly large share even of nonconforming private label MBS could still attract an AAA rating once combined in structured products. To manage the risks, the production of credit default swaps (CDS), once the preserve of bespoke investment banks, was industrialized. Mainline insurers like AIG offered CDS insurance on exotic securitized products. Given the quality of the underlying mortgages, not all the tranches were good. But that stimulated the investment banks to expand the collateralized debt obligation (CDO) business. CDOs were derivatives based on repackaged middle-ranking "mezzanine" tiers of other securitized mortgage deals. By combining them together and tranching, you could make a large pool of BBB assets yield further tranches of AAA securities". Quoted from: Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., page 72.

Figure 23: Issuance of CDOs in the U.S from 1996 – 2017[644]. Prices are shown in millions of dollars.

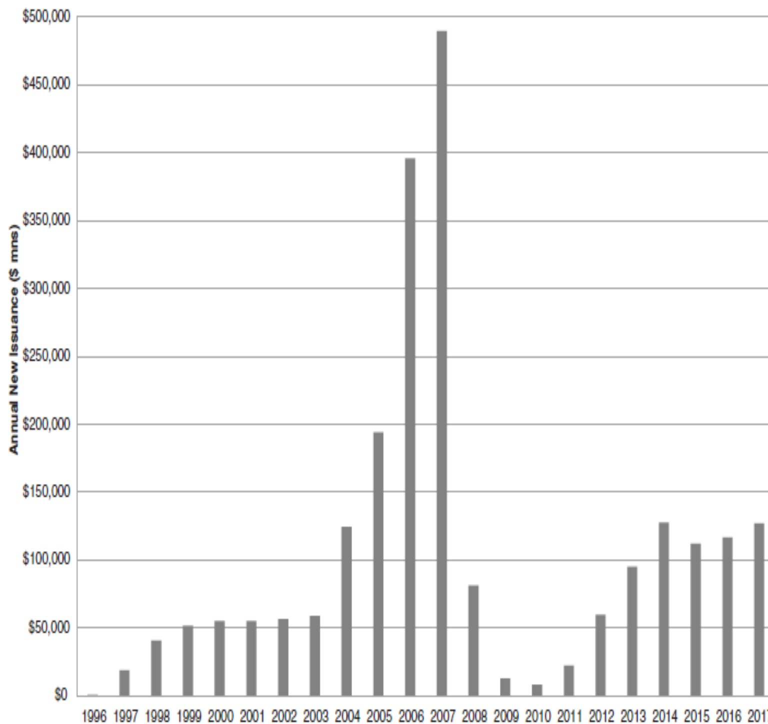

Figure 23 shows the enormous increase in CDO issuance between 2004 and 2007, with the amount more than doubling between 2005 and 2007[645]. **Figure 24** illustrates how the

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644 Source: Culp, Christopher L.; Stärkle, Bettina J. & Van Der Merwe, Andria: *Credit Default Swaps. Mechanics and Empirical Evidence on Benefits, Costs, and Inter Market Relations*, Palgrave Macmillan (2018), page 112.

645 "Between October and December 2006 alone, banks issued a record $130 billion worth of CDOs, double the level a year before, and 40 per cent of those were created from asset-backed securities consisting primarily of subprime mortgages. That brought

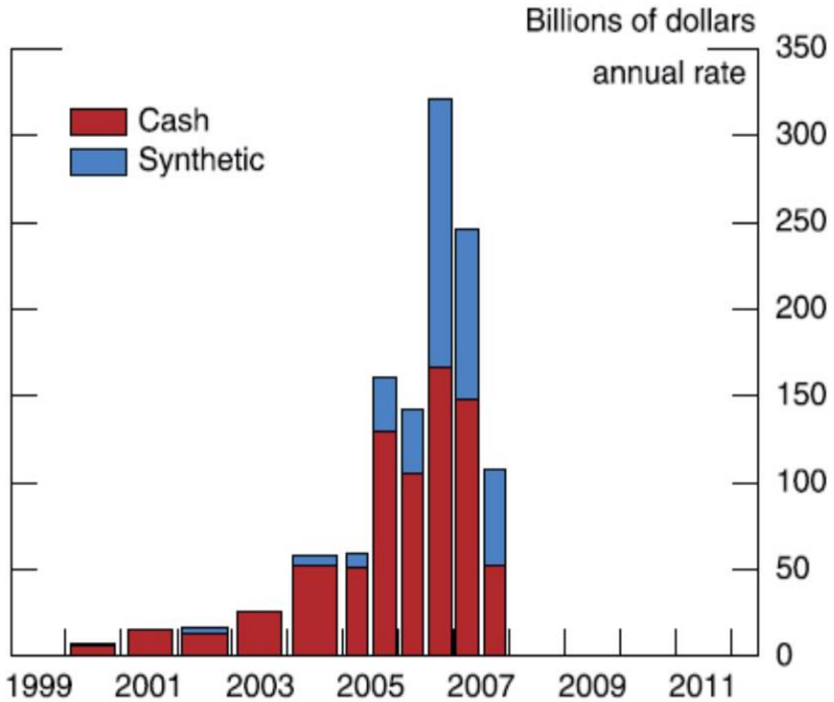
proportion of synthetic CDOs to cash CDOs increased dramatically in the years directly preceding the GFC, before both types of issuance virtually disappeared. **Figure 25** depicts the fall in residential mortgage, refinance and home equity loans from its peak of over 4,500 billion U.S dollars in the first quarter of 2005 to some 2,000 billion dollars less by the third quarter of 2007. The rise in synthetic CDOs just as demand for mortgage loans and home equity loans diminished was not coincidental. As Economist Pablo Triana notes.

"*While a real loan can only generate a single cash flow stream, and thus can only be securitized into a single structure, credit default swaps on that loan can generate potentially infinite cash-flow streams, one for each swap linked to that loan that is transacted, each feeding a different new security. In theory, a single pile of RMBS could now sustain an infinite number of synthetic CDOs. There was no longer a need to find actual human beings to whom to lend subprime mortgages. After June 2005, the CDO machine could feed itself, purportedly in perpetuity*"[646].

the total sales of cash CDOs to $470 billion for the year. Issuance of derivatives-based CDOs was even higher. One particularly fast area of growth was so-called 'mezzanine structured finance' CDOs, or instruments created from the riskiest pieces of risky ABS. Some $32.5 billion of those were sold in 2006, four times higher than in 2005". Quoted from Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 150.

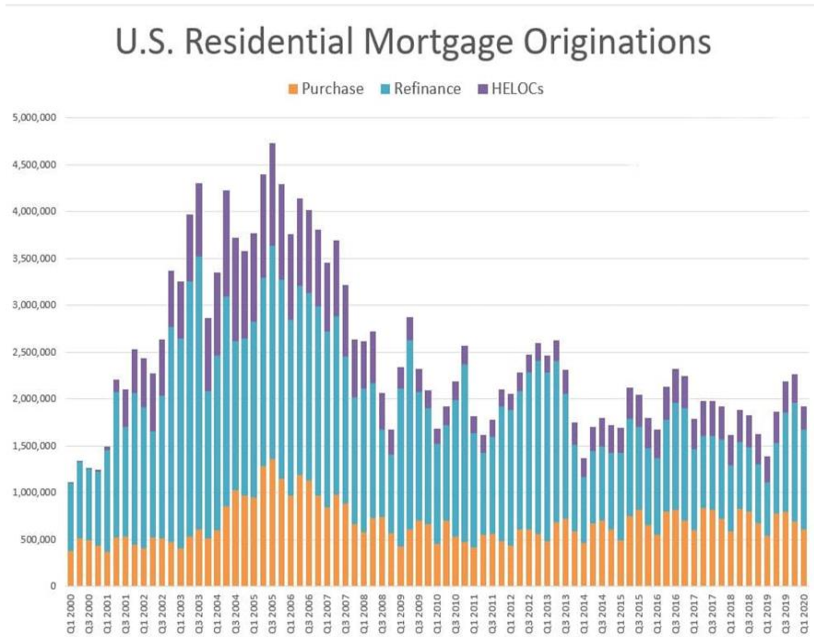
646 Triana, Pablo: *The number that killed us. A story of modern banking, flawed mathematics and a big financial crisis*, Wiley (2015), page 117.

Figure 24: The issuance of cash and synthetic CDOs in the U.S between 1999 and 2011[647]



647 Source: Beltran, Daniel O.; Cordell, Larry & Thomas, Charles P.: "Asymmetric information and the death of ABS CDOs", op. cit., page 8.

Figure 25: The issuance of U.S Residential mortgage, refinance and home equity loans in millions of U.S dollars[648]



648 Source: https://www.attomdata.com/news/market-trends/mortgage-origination/attom-data-solutions-q1-2020-u-s-residential-property-mortgage-origination-report/

Figure 26: The changing composition of CDOs 2000 – 2007[649]

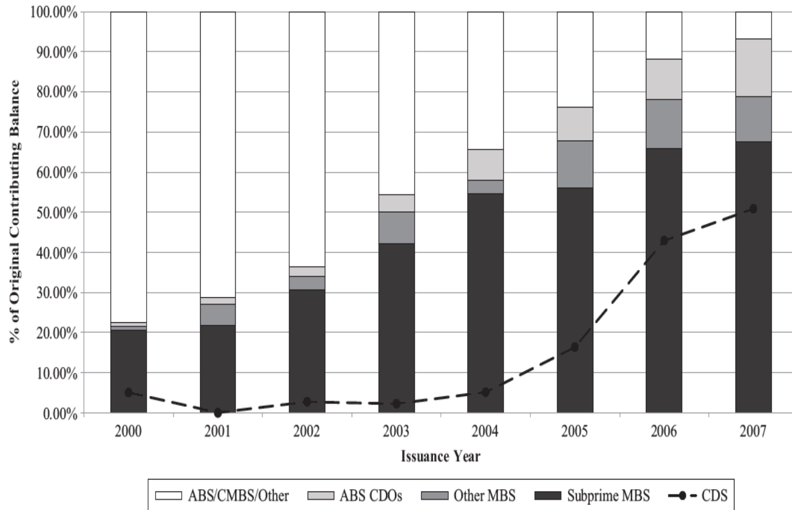


Figure 26 shows the changing composition of CDOs issued in the U.S from 2000 to 2007. The black dotted line indicates the share of synthetic CDOs created through Credit Default Swaps (CDS). The graph shows clearly how subprime RMBS and synthetic positions took up an increasingly large proportion of the CDOs over the period (coinciding with the fall in house prices, mortgage originations and home equity loans)[650].

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649 Source: Cordell, Larry; Feldberg, Greg & Sass Danielle: "The Role of ABS CDOs in the Financial Crisis", *The Journal of Structured Finance*, Summer 2019, pages 10-27, page 13.

650 Gillian Tett describes how the fall in housing prices and mortgage originations did not halt the issuance of CDOs: "Troublesome as they were, these signs of housing strain did nothing to stop the mortgage-based CDO machine. Between October and December

Importantly, the credit quality of CDOs was different from the Private Label Mortgage Backed Securities from which they were increasingly composed:

"*Unlike PLMBS, however, the ABS CDOs were not collateralized by underlying mortgage loans with substantial potential recovery values. Rather, they were collateralised by lower-rated PLMBS securities vulnerable to catastrophic loss because their low position in the payment waterfall meant they would absorb losses at low mortgage default rates. For example, BBB subprime PLMBS on average covered losses on their underlying mortgage pools starting at 4% and became worthless when pool losses reached 8%; on average, A rated subprime PLMBS became worthless when losses reached 13%"*[651].

2006 alone, banks issued a record $130 billion worth of CDOs, double the level a year before, and 40 per cent of those were created from asset-backed securities consisting primarily of subprime mortgages. That brought the total sales of cash CDOs to $470 billion for the year. Issuance of derivatives-based CDOs was even higher. One particularly fast area of growth was so-called 'mezzanine structured finance' CDOs, or instruments created from the riskiest pieces of risky ABS. Some $32.5 billion of those were sold in 2006, four times higher than in 2005" (Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 149).

651 Cordell, Larry; Feldberg, Greg & Sass Danielle: "The Role of ABS CDOs in the Financial Crisis", op. cit., page 13.

See. Schwarcz: "Securitization's abuses centred around certain highly leveraged securitization transactions, usually called 'ABS CDO' transactions. Repayment of the highly rated securities issued in these transactions was so 'extremely sensitive to cash-flow variations' that, when 'the cash-flow assumptions turned out to be wrong, many of these [securities] defaulted or were downgraded'. That, in turn, sparked a loss of confidence not only in securitization generally but also in the value of credit ratings and of all highly rated debt securities" (Schwarcz, Steven: "A global perspective on securitized debt", op. cit., Kindle position 18097).

4.3 (c) Performing due diligence on CDOs

If one assumes that due diligence can only be applied by checking the documentation of the mortgages contained in the securitisation structure, then carrying out due diligence on a CDO which is itself constructed of tranches of CDOs (a CDO^2), could be next to impossible. A CDO^2 might hold 100 CDOs, each of which held 100 RMBS, which in turn comprised of 5000 mortgages, which gives us a figure of 50 million mortgages. Just a summary reading of each RMBS prospectus (which might contain 200 pages of data on the 5000 mortgages in the RMBS) would require reading 2 million pages of text.

4.3 (d) The risk weights of Super–Senior tranches

The Basel Committee on Banking Supervision had established a set 8% capital charge for risk weighted assets under Basel I and Basel II regulations. This meant that if a type of asset was given a 100% risk weight (as was the case of commercial loans) then 8% capital should be retained on the books of the supervised entity to cover the possibility that it was not fully recovered. As can be appreciated in **Figure 27** Residential Mortgage loans carried a 50% risk weighting (meaning that 4% of their worth had to be kept aside as capital.). However, from 2001 onwards AA and AAA rated securities carried a 20% risk weight, and Basel II regulations granted the super – senior tranches of CDOs a risk

weight of only 0.56 %. Another way of expressing this is that for every $179 dollars of CDO securities held on their balance sheets, banks only needed to retain a single dollar of capital[652]. This was because these tranches were insured by Credit Default Swaps.

As super-senior tranches were not high yielding, it could be difficult to place them with investors and easier to keep them on balance sheet:

"The original business model was to distribute all CDO risk. However, management found that it was unable to distribute the super senior tranches at favourable prices. As management felt comfortable with the credit risk of these tranches it began to retain large positions on balance sheet"[653].

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652 See: Cordell, Larry; Feldberg, Greg & Sass Danielle: "The Role of ABS CDOs in the Financial Crisis", op. cit., page 19.

653 Quoted from: Triana, Pablo: *The number that killed us…*, op. cit., page 150.

Figure 27. Risk – Weighted Assets and Leverage – U.S Federal Reserve[654]

Asset Type	Risk Weight	Tier 1 Capital	Leverage (Assets/ Tier 1)
Commercial, CRE, unsecured credits	100%	8.00%	12.5
Residential mortgages	50%	4.00%	25.0
AA, AAA MBS, CDOs Under Basel I	20%	1.60%	62.5
AA, AAA MBS, CDOs Under Basel II	8%	0.64%	156.3
"Super Senior" CDS or CDOs	7%	0.56%	178.6
BBB Securities	100%	8.00%	12.5
Off balance sheet liquidity puts	10%	0.80%	125.0
Cash, Treasuries, Sovereign Bonds	0%	0.00%	Infinite
GSE Credit Guarantees	NA	0.45%	222

4.3 (e) "*Insuring*" CDOs

CDOs were "wrapped" or insured by CDS counterparties. The most notorious of these was AIG's Financial Products Subsidiary AIGFP. As Credit Default Swaps were not considered insurance,

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[654] Ibid, page 19.

insurance regulators did not oblige AIG to hold any capital reserves against potential losses[655].

Historian Adam Tooze writes that:

"*In a dramatic burst of expansion from the 1990s onward, the Financial Products division of AIG had developed into a major player in the derivatives markets. In total in 2007 it had a book of $2.7 trillion in derivatives contracts. Of this total, credit default swaps accounted for $527 billion. Of these, $70 billion were on mortgage-backed securities, and of those, $55 billion had exposure to dangerous subprime. Given its inside knowledge of the property market, AIG had stopped writing new CDS already in 2005. But given the relatively small size of the portfolio and the AAA rating of the assets it had written CDS on, it had not thought it necessary to insulate itself against losses*"[656].

The key problem for AIG was not its exposure to subprime, nor actual losses on the CDO structures insured (which continued paying principal and interest) but that its CDS contracts[657]

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655 See: Blinder, Alan: *After the Music Stopped. The Financial Crisis, The Response, and the Work Ahead*, The Penguin Press (2013), pages 133-134.

656 Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., page 174.

657 **"**In the case of the multi-sector CDOs, the risk was on the super-senior tranches of CDOs that contained a variety of debt – mostly residential mortgage-backed securities (with both prime and subprime collateral), but also commercial –real –estate loans, corporate loans, consumer loans and auto-loan receivables". (….) "The underlying loans in the CDOs were diversified, and we insured only the super-senior tranche, which

always had a AAA layer of loans below it. I did not expect actual, economic losses on the portfolio".

Quoted from the Testimony of Joseph J. Cassano. Chief Executive Officer of AIGFP. Before the Financial Crisis Inquiry Commission – June 30, 2010. Page 1. The testimony is available from the Stanford University website at:

https://fcic-static.law.stanford.edu/cdn_media/fcic-testimony/2010-0630-Cassano.pdf

"AIGFP did not hedge these CDS transactions by entering into offsetting transactions, but relied instead on the expectation that the underlying securities would never incur losses high enough to trigger a payout by AIFGP. AIGGP's plan was to collect its counterparties' periodic payments and retain its CDS positions until the underlying CDOs matured, without having to make any payouts. If losses on the underlying portfolio reached the attachment point – the point at which losses are allocated to the super-senior tranche – AIGFP would have to purchase the underlying super-senior securities at par". Quoted from: Hester, Pierce: "Securities Lending and the Untold Story of AIG", Working Paper, Mercatus Center, George Washington University, May (2014), page 11.

arranged to post collateral[658] on a mark to model basis[659], and these liquidity demands were not properly reserved against[660].

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658 "Beginning in or around July 2007, various CDS counterparties made, or stated that they intended to make collateral calls against AIGFP on the basis of the counterparty's belief that the value of the reference obligations (i.e, the super senior tranches of the CDOs) had declined in value. The largest collateral call, and the collateral call which AIFGP spent the greatest amount of effort attempting to resolve, was made by Goldman Sachs. Over the next few months, additional collateral calls were received from the Bank of Montreal, Barclays, Calyon, CIBC, HSBC, Merrill Lynch, the Royal Bank of Scotland, Societe Generale, UBS and others". Quoted from the Testimony of Andrew Forester before the Financial Crisis Inquiry Commission. June the 30th 2010. Page 3. Available at: https://fraser.stlouisfed.org/files/docs/historical/fct/fcic/fcic_testimony_forster_20100701.pdf

"By Lehman Weekend, AIG had been forced to post about $19 billion worth of collateral to its CDS counterparties, $7.6 billion to Goldman Sachs alone, and both Moody's and S&P were warning about a potential downgrade of AIG's cherished AAA credit rating. Such a downgrade would trigger automatic calls for more collateral—collateral that AIG did not have". Quoted from: Blinder, Alan: *After the Music Stopped…*, op. cit., page 135.

See: "As the crisis progressed, AIG was subject to calls for increasing amounts of collateral. By 28 February 2008, it had $5.3 billion posted. By 10 November 2008, that amount had risen to $37.3 billion" (Saleuddin, Rasheed: *Regulating Securitized Products. A Post Crisis Guide*, Palgrave Macmillan [2015], page 93).

659 "Under the terms of the CDS that AIG sold to European banks and other buyers. AIG did not have to post collateral against that exposure so long as AIG stayed highly rated and the value of the bonds that it insured did not decline. Starting in 2007, however, many of the underlying subprime bonds and CDOs that AIG guaranteed fell in value, due both to defaults and the breakdown in secondary trading. In the first half of 2008, AIG sustained net losses of $13.2 billion, much of that on mortgage-backed securities, CDOs and CDS. Despite those write-downs, analysts kept questioning whether AIG's valuations of those bonds and CDS were still overvalued, an inquiry that gathered steam after Merrill Lynch slashed the value of its own CDS to thirteen cents on the dollar in July 2008. By September 15, 2008, rating agencies downgraded AIG, forcing it to raise about $15 billion in assets, those assets were illiquid and could not be readily converted to cash". Quoted from McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: "Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure", op. cit., page 530.

See also:" In the case of AIG, the wrong way risk was mitigated through the use of marked-to-model collateral agreements. In some ways this was worse. AIG got into trouble not only because it insured tail risk, but also because it had to find the cash to

In his testimony before the Financial Crisis Inquiry Commission, Andrew Forester, the executive vice – president of AIGFP, explained the basic outline of the model which governed the CDSs on the CDOs:

"*In simple terms, the Gorton Model evaluated the risk of losses on the super senior portion of the CDO bonds; the Gorton model did not measure the market value of the super senior portion of the CDO bonds, only the risk or likelihood of a default of each of the underlying reference obligations. The Gorton Model used the ratings of the underlying bonds from the three major rating*

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post against the declining mark to model of the positions. Ironically, the situation might have been easier to resolve if those mark-to market triggers didn't exist". Quoted from: Saleuddin, Rasheed: *Regulating Securitized Products*, op. cit., page 86.

Furthermore, see: "We bought credit protection from AIG against the value of financial instruments on which we, acting as an intermediary, had provided protection to other clients. As the housing market deteriorated, Goldman Sachs began to mark down the value of some of these positions. We believe that our marks reflected the realistic value that the market was placing on these securities and the price at which we and others were willing to trade. The mark downs resulted in collateral calls to AIG, consistent with our mutual agreements. We did not call for collateral because we anticipated the eventual scale of AIG's problems. We simply stuck to our risk management protocols". Quoted from the Testimony of Gary D. Cohn, the President of Goldman Sachs, before the Financial Crisis Inquiry Commission. June the 30th, 2010, page 3. Available at :https://www.goldmansachs.com/media-relations/in-the-news/archive/response-to-fcic-folder/cohn-testimony.pdf

660 "AIG's liquidity was thus depleted notwithstanding that credit losses to AIG were not actually occurring and, given more time, the values would have been expected to come back. As the credit crisis reached its peak, AIG's ability to maintain its liquidity declined precipitously as credit markets froze, other liquidity issues developed, and FP could not make good on all collateral call demands. It was at this point that the federal government stepped in with taxpayer assistance". Testimony of Robert E Lewis, Chief Risk Officer of AIG, before the Financial Crisis Inquiry Commission. June the 30th, 2010, page 4. Available at: https://fcic-static.law.stanford.edu/cdn_media/fcic-testimony/2010-0630-Lewis.pdf

agencies: Moody's, Standard & Poor's and Fitch Ratings as inputs, to which a number of conservative assumptions were made (for example, reducing certain of these ratings and employing significantly lower recovery rates). The default rates in the Gorton Model were based upon severe recessionary market scenarios that were modelled to be worse than the worst post World War II recession"[661].

When AIG lost its AAA credit rating as a company on the 15th of September 2008 calls to post collateral were coming not only from anxious CDO counterparties (who made up a comparatively tiny part of the company's business) but from the counterparties to AIG's insurance contracts[662].

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661 Quoted from the Testimony of Andrew Forester, Vice – President of AIGFP, before the Financial Crisis Inquiry Commission. Page 2. The full testimony of Mr Forester before the Commission can be obtained at: https://fraser.stlouisfed.org/files/docs/historical/fct/fcic/fcic_testimony_forster_20100701.pdf

662 See: "Out of a total of 44,000 derivatives contracts on the books of AIGFP, there were, it turned out, a cluster of 125 CDS on mortgage-backed securities that were about to go bad in a spectacular way. Those 125 contracts would inflict book value losses on AIG of $11.5 billion, twice what the ill-fated AIGFP unit had earned between 1994 and 2006. This was a heavy blow, but given its enormous global business, AIG could absorb portfolio losses on this scale. In due course the market would bounce back. Nor was AIG facing demands to pay out on MBS that had actually defaulted. As at Bear and Lehman, it was not the slow-moving crisis in real estate markets that threatened AIG. An avalanche of defaults and foreclosures would in due course grind its way through the system. But that would take years. The first credit default event on which AIG had to pay out did not occur until December 2008. The problem was the anticipatory reaction of financial markets and the fast-moving revaluation of securitized mortgages and the derivatives based on them. In the case of AIG, as it lost its top-tier credit rating, this triggered immediate margin calls from the counterparties to AIG's insurance contracts. They wanted collateral to prove that AIG could meet its obligations if the mortgages did go bad. It was these collateral calls, running into tens of billions, that

AIG was eventually granted a $182 billion loan from the Federal Reserve as part of The Troubled Asset Relief Program[663].

However, not only AIGFP had been "wrapping" CDOs.

4.3 (f) Monoline Insurance Companies

Monoline insurance companies originally had the exclusive function of guaranteeing municipal bond issuance in the U.S. Bond insurance in the U.S began in 1971 with the insurance of an obligation bond for the Greater Juneau Borough Medical Arts Building in Alaska. It grew steadily over the next three decades, and by 2003 almost half of all municipal bonds issued in the U.S were insured[664].

Bond insurers became known as monoline insurers, because they were limited by state chartering laws to providing only

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threatened to tip AIG over the edge" (Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., pages 174-175).

See also: "If AIG became insolvent, its inability to satisfy its obligations would impact its counterparties. AIG's counterparties included cities, states, public and private pension funds, retirement funds, and other significant institutions". Quoted from: Johnson, Kristin N.: "Things Fall Apart: Regulating the Credit Default Swap Commons", op. cit., page 151.

663 An initiative run by the U.S Treasury after the GFC which purchased troubled companies' assets and stock. It was signed into law on the 3rd of October 2008 as part of the Emergency Economy Stabilization Act.

664 See: Dulani, Jayasuriya: "The Rise and Fall of the Monoline Bond Insurers. Icarus of the 21ST Century", Paper Presented at the National University of Singapore at the 4th National Business and Management Conference (2016), pages 640-657.

financial guaranty insurance[665]. Each bond insurance firm is subject to regulation by the insurance department of the state in which it is domiciled, but the New York Insurance Department became the *de facto* regulator due to the Appleton Rule, which determined that any firm wishing to carry out business in the State of New York had to be licensed in that state, and would lose the license if it wrote financial insurance outside of the state[666]. The attraction of New York was that its insurance code changed over time to allow the monoline insurers to guarantee an expanding list of Wall Street products.

In 2004 the New York Insurance Code was revised to allow monolines to insure CDOs² (collateralised debt obligations containing tranches of other collateralised debt obligations as part of their underlying assets) through credit default swaps [667]. The New York Department of Insurance allowed the monoline

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665 See: Bond Insurers: Issues for the 110th Congress. Congress Research Service. RL34364. March the 10th 2008. Available at :https://crsreports.congress.gov/product/pdf/RL/RL34364/5

666 See: Moldogaziev, Tima T.: "The Collapse of the Municipal Bond Insurance Market: How did we get here and is there life for the monoline industry beyond the great recession", *Pennsylvania State University Journal of Public Budgeting, Accounting and Financial Management*, Spring, pages 176-210, page 186.

Section 6904 (a) of the New York Insurance Code stated that: "Financial guaranty insurance may be transacted in this state only by a corporation licensed for such purpose pursuant to section six thousand nine hundred two of this article".

667 Bond Insurers: Issues for the 110th Congress. Congress Research Service. RL34364. March the 10th 2008. Available at :https://crsreports.congress.gov/product/pdf/RL/RL34364/5

insurers to sell CDS as long as they could not be characterised as insurance contracts (as we have seen in the previous section of this chapter), and to establish SPVs in order to do so[668].

Figure 28 shows that the statutory capital held by the monolines decreased as a percentage of their overall exposures as their structured finance insurance business grew. Paragraph 4, subsection 4 of Section 6903 of the New York Insurance Code set contingency levels for structured finance products in the range of 0.55 to 2.5% depending on their risk category[669].

The exact level of capital that had to be held by Monoline insurers depended in practice on the credit rating of the financial instruments they *insured* as determined by the Credit Rating Agencies[670]. Securities expert and academic Rasheed Saleuddin has indicated:

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668 See: Dulani, Jayasuriya. "The Rise and Fall of the Monoline Bond Insurers. Icarus of the 21ST Century", op. cit., page 644.

669 See the New York Insurance Code, Article 69, Section 6903, contingency reserves. The 2010 version of the code is available here: https://law.justia.com/codes/new-york/2010/isc/article-69/6903/

670 "Since monolines do not post collateral, they will adhere to the strict operating guidelines summarised below which in theory justify the triple-A rating. The basic aim is to require that once the monoline no longer justifies triple-A credit quality, as measured dynamically via the capital model, it may be required to post collateral to mitigate the increased counterparty risk: (i) Normal state. The monoline will typically be rated triple-A partly because of a (ratings-based) capital model which is run daily for the exposures it faces. As long as the required capital does not exceed the actual available equity capital (unexpected loss) then the company can operate within its normal operating guidelines. (ii) Restricted state. This typically is invoked if a capital breach has occurred and will result in restrictions on investments and funding. After a

“*Under rating agency models, a monoline required 0.1% to 0.5% basis points of capital (under 1%) for every dollar of notional exposure to AAA securities, allowing for 200 to 1,000 times leverage*”.[671]

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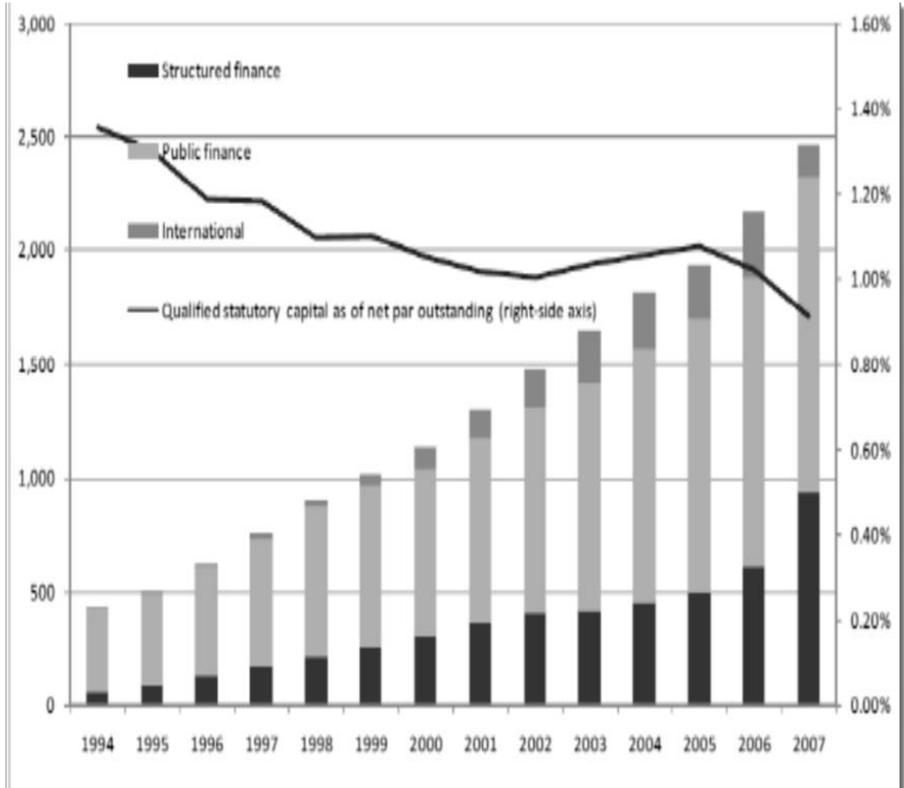
certain period, their triple-A rating may be withdrawn at the discretion of the rating agency and this in turn may trigger contractual clauses requiring the posting of collateral. In theory, a monoline can return to a normal state and regain their triple-A rating by raising new capital or restructuring/unwinding existing trades. (iii) Run-off. This corresponds to a hibernation state where the monoline will be essentially static, trades will gradually mature and any default losses will be settled as and when they occur (assuming there is equity capital to cover them). There is no recovery from this state and, whilst it is not the same as a bankruptcy, in practice the result is similar”. Quoted from: Gregory, Jon: *Counterparty Credit Risk. The New Challenge for Global Financial Markets*, Wiley (2010), page 236.

[671] Saleuddin, Rasheed: *Regulating Securitized Products*, op. cit., page 54.

Figure 28 – The net exposure of the monolines by line of business in U.S in billions of dollars 1994 - 2007[672]



The CDS issued by the monolines had a vital difference with respect to traditional insurance policies. As a Congressional paper published in 2008 explained:

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672 Source: Dulani, Jayasuriya. "The Rise and Fall of the Monoline Bond Insurers. Icarus of the 21ST Century", op. cit., page 654.

"*As a tradeable instrument, a CDS must be assigned a current value, or "marked to market," on a company's financial statements under standards put forth by the Financial Accounting Standards Board (FASB). Changes in the value of the contract must generally be reported as current income during each reporting period. An insurance policy, however, is not marked to market in a similar manner." (...) "Even if default has not occurred, as the probability of default on a security covered by a CDS increases, the insurers offering the protection must show a loss on their books, even if the immediate cash flow has not changed"*[673].

This led to the situation in which the thinly capitalised monoline insurance firms, whose credit ratings depended on the quality of the capital they insured through Credit Default Swaps, had to post losses, when the ratings of the CDOs they covered began to fall. As the ratings of the collateral the monolines insured fell, and their declared losses mounted, the Credit Agencies lowered their credit ratings, and as the credit ratings of the monolines tumbled, the risk mitigation effect of the CDOs they were counterparties to, declined sharply as well, so that:

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673 Quoted from: Bond Insurers: Issues for the 110th Congress, Congress Research Service, RL34364, March the 10th 2008, page 3.

"*Banks that had bought super senior insurance from monolines had to realise substantial losses due to the increased counterparty risk"*[674].

In 2007 the two top monoline firms posted combined losses of almost 4.5 billion U.S dollars and by 2008, of the nine major monoline firms, only two were left in the business. The failure of the monolines negatively affected the U.S economy as whole:

"The separation and level of capital required for the structured business led to rating agencies such as S&P, Moody's and Fitch downgrading the monoline sector. The loss of their coveted AAA status limited the ability of the monolines to write further business. This led to their suffering multi-billion write-downs, causing a ripple effect on the CDS, equity and bond markets. The bond market, in particular, saw previously high-rated bonds down-graded as a consequence of downgrades in the monoline sector. This series of events transmitted systemic shocks through the global markets, further illustrating the growing links between insurers and banks"[675].

The shadow banking system of ABCP and repo markets froze as counterparties refused to roll over their loans. Mark to market

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674 Quoted from: Gregory, Jon: *Counterparty Credit Risk…*, op. cit., page 236.

675 Quoted from: Baluch, Faisal; Mutenga, Stanley & Parsons, Chris: "Insurance, Systemic Risk and the Financial Crisis", *The Geneva Papers on Risk and Insurance, Issues and Practice*, January 2011, Vol. 36, Num. 1, page 147.

accounting practices forced financial entities to declare losses due to the declining value of structured instruments even if they were still paying out to investors. The collapse of SIVs meant that banks had to reclaim huge amounts of securitised instruments on their books, while the counterparties that had insured their super-senior tranches could no longer do so. As financial institutions tried to raise money to cover collateral calls on their highly leveraged positions there was nowhere to raise it, except through tax payer funded bailouts.

PART 2: FROM THE HOUSING BOOM TO SUBPRIME

4.4 The securitization of Subprime mortgages

The most infamous practice associated with securitisation has been the mass securitisation of subprime mortgages in the U.S in the years directly preceding the financial crisis.

4.4 (a) Subprime

Regular securitisation structures, even those which consisted of subprime mortgage loans, were designed to be robust. As finance writer Howard Hill observes: *"In early 2008, actual credit losses in securitized subprime mortgage pools were below 3%. About 75% to 80% of all subprime mortgages were paying on time, a decline from the historical average of 85% to 90%, but not nearly as bad as the market prices of subprime mortgage bonds implied"*.[676]

However, even though subprime securitisation would not of its own have caused the crisis, it is inarguable that the failure of the subprime mortgages embedded in securitisation structures was one of its catalysts, and this section examines some of the

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[676] Quoted from: Hill, Howard B.: *Finance Monsters*…, op. cit., page 10.

circumstances, legal changes and economic motivations that led to mass subprime securitisation.

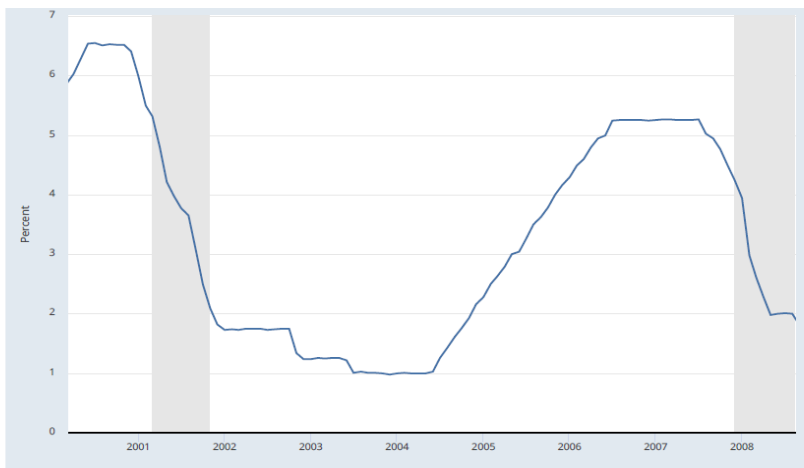

Figure 29: The Federal Funds Interest Rate from 2001 to 2008 [677]

The Federal Funds Interest rate is the rate at which U.S banks lend money to one another[678]. **Figure 29** shows the fluctuations of the rate between 2001 and 2008. The Federal Reserve dropped

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677 Source: Board of Governors of the Federal Reserve available at: :https://fred.stlouisfed.org/series/FEDFUNDS

678 "The federal funds rate is the interest rate at which depository institutions trade federal funds (balances held at Federal Reserve Banks) with each other overnight. When a depository institution has surplus balances in its reserve account, it lends to other banks in need of larger balances. In simpler terms, a bank with excess cash, which is often referred to as liquidity, will lend to another bank that needs to quickly raise liquidity". Quoted from the website of the Federal Reserve Fund of St. Louis available at: https://fred.stlouisfed.org/series/FEDFUNDS

interest rates after the dot.com bubble[679] and the attacks of 9/11[680]. This prolonged period of low interest rates had important consequences for the rise in housing prices and the growth of securitisation. Low interest rates allowed people to take on bigger mortgages or refinance their homes. For investors, the low interest on Treasury bonds made higher rates of securitisation notes significantly more attractive[681].

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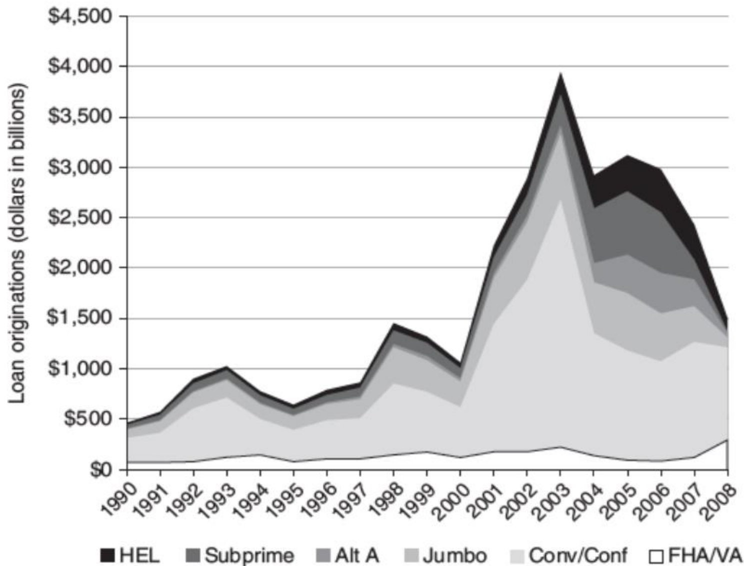
679 The dotcom bubble is a stock market bubble that was caused by speculation in dotcom or internet-based businesses from 1995 to 2000. The companies were largely those with a ".com" domain on their internet address. For more information, see: https://corporatefinanceinstitute.com/resources/knowledge/trading-investing/dotcom-bubble/

680 "The federal funds rate (the rate at which banks borrow money from each other overnight) stood at 6.5 percent for most of 2000, before a recession and the terrorist attacks of September 11, 2001, prompted the Fed to cut it to 1.75 percent by the end of 2001. It fell as low as 1.0 percent in 2003 and only began climbing again in June 2004, by which point real housing prices were 58 percent above their levels of January 2000. The federal funds rate didn't reach 3.0 percent—the lowest level of the entire 1990s—until May 2005, when real housing prices were 77 percent above their levels at the beginning of the decade.". Quoted from: Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover…*, op. cit., page 181.

681 See Fligstein: "Many homeowners had mortgages purchased in the 1990s that had 7 – 8 percent interest rates. As interest rates for mortgages dropped to 4-5 percent, originators aggressively sought out customers. The low interest rates had a huge effect on the demand for MBSs as well. Treasury bonds, the safest investments, now had very low yields (1-2 percent). For investors who needed safe investments but wanted higher returns, MBSs that paid 4-5 percent interest and were AAA rated seemed like a godsend". Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 146.

Figure 30: Loan originations in the U.S from 1990 to 2008 by type. [682]



682 Source: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 146. HEL represents Home Equity Loans. Subprime loans were those in which the borrower had a credit score that did not qualify her for a prime rate loan (the rate at which banks charge interest to their most creditworthy customers) usually because of a chequered credit history or employment history. These loans did not qualify for purchase by the GSEs. An Alt A loan (alternative A-paper, "A" paper being considered prime) was considered riskier than prime but safer than subprime. It was not eligible for purchase by the GSEs. The borrower could have excellent credit but lack other elements of the underwriting criteria (for example the documentation necessary for income verification). Jumbo loans exceeded the limits set by the Federal Housing Agency (and so could not be purchased, guaranteed or securitised by the GSEs). Conventional or Conforming loans met the criteria set by the GSEs. An FHA loan was guaranteed by the Federal Housing Association and a VA loan was lent to military personnel and veterans as part of the Veterans Affairs program. All of these loan originations responded to the stimulus of low interest rates.

Figure 30 illustrates the changes in the number of loan originations over nearly three decades in the U.S. The rise in Home Equity Loans from the year 2000 onwards is particularly notable, and it coincided with the general trend towards rising house prices. The Tax Reform Act of 1986 had allowed taxpayers to deduct the interest they paid on mortgage loans secured by a principal residence (though not the interest on consumer loans)[683]. This reform incentivised homeowners to cash in on the equity in their homes (especially in a period of rapidly rising prices) and use the money to finance consumer debts.

The increase in loan originations was matched by the growth of securitisation. In 1995 only 50% of conventional mortgages

683 "Prior to the Tax Reform Act of 1986, interest paid on all types of household debt was deductible from income before the payment of taxes. In 1986, Congress changed the law to phase out the deductibility of consumer interest over a five-year period.' Congress believed deductibility of interest "provided an incentive to invest in consumer durables rather than assets which produce taxable income and, therefore, an incentive to consume rather than save.... By phasing out the present deductibility of personal interest, Congress intended to eliminate from the prior tax law a significant disincentive to saving" (Joint Committee on Taxation [JCT], 1987 p. 263). The other goal of the provision was to raise $9.6 billion per year in tax revenue by 1991. Because Congress "determined that encouraging home ownership is an important policy goal, achieved in part by providing a deduction for residential mortgage interest," it chose to retain the residential mortgage interest deduction (JCT, 1987 pp. 263-64). Thus, mortgage interest was fully deductible for interest paid on debt secured by a taxpayer's first or second residence up to his basis in the residence". Quoted from: Maki, Dean M.: "Household Debt and Tax Reform Act of 1986", *The American Economic Review*, March 2001, Vol. 91, Num. 1, page 305.

were securitised, but by 2007 95% of conventional mortgages were securitised and nearly 90 % of all mortgages[684].

In part, the spread of securitisation was due to technological innovations, especially computers and programming, which allowed for the data collection and number crunching that made standardised credit scores [685], automated underwriting[686] and the

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684 See Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 67.

685 "A mathematician named Earl Isaac and his engineer friend, Bill Fair, devised a model they called FICO to evaluate the risk that an individual would default on a loan. This FICO score was fed by a formula that looked only at a borrower's finances—mostly her debt load and bill-paying record. The score was color blind. And it turned out to be great for the banking industry, because it predicted risk far more accurately while opening the door to millions of new customers". Quoted from: O'Neil, Cathy: *Weapons of Math Destruction. How Big Data Increases Inequality and Threatens Democracy*, Crown Publishing Group (2016), page 125.

"A borrower's credit score is a number that quantifies a potential borrower's creditworthiness using a variety of factors. As of 2014, FICO scores are determined by five factors: (1) payment history (35%); (2) amounts owed (30%); (3) lengths of credit history (15%); (4) types of credit in use (10%); and (5) new lines of credit (10%). A higher score indicates a better credit profile and implies that an applicant is more likely to make timely payments on his/her debt obligations. The three credit bureaus that provide credit scores as well as detailed credit reports are Experian, Equifax, and TransUnion. These credit reporting agencies (CRAs) rely on the data and metrics listed above to calculate credit scores using models provided by FICO (formerly Fair Isaacs Corporation)". Quoted from: Fabozzi, Frank: *The Handbook of Mortgage Backed Securities*, op. cit., page 8.

"The genius of the product was that it turned the more descriptive credit reports into a single number that any user could plug into their decision – making. Now it was the use of a single number that generically provided lenders with information about potential customers". Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 128.

686 "In 1994, Freddie Mac announced a successful pilot of its automated underwriting system, Loan Prospector. Shortly thereafter, Fannie Mae introduced its system, called Desktop Underwriter. These automated underwriting systems were not just computer programs. Using them involved credit data collected by and from a variety of

design of cash-flow models for millions of mortgages feasible. However, there were also a number of economic changes and legal developments that cleared the path to the mass securitisation of prime and eventually subprime mortgages.

4.4 (b) The change in housing prices, and the increase of mortgage originations and refinancing

Two things had characterised the U.S Housing market throughout most of the decade before the millennium. Relative house prices were stable and bank losses on mortgage loans were extremely low [687]. However, prices increased rapidly from 1997 onwards[688].

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organizations, credit scores, data on properties and loan terms, information about local market conditions, and help with managing these systems. The basic models used to decide whether to give a person a mortgage involved two stages. First, a general model of prepayment was created given historical data from mortgages. This model might be fit on hundreds of thousands of cases and was updated each year as new information became available. The model gave a set of parameters that could be applied to a particular application. Then a probability could be generated about the likelihood of a particular mortgage being repaid." Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 124.

687 See: Blinder "On balance, the relative prices of houses in America barely changed over more than a century! To be precise, the average annual relative price increase from 1890 to 1997 was just 0.09 of 1 percent". (….) "Over the period from 1991 through 2001, banks lost only 0.15 percent (15 basis points) on home mortgages. Think about what that means: For every million dollars in outstanding mortgage balances, banks lost an average of $1,500!" (Blinder, Alan: *After the Music Stopped…*, op. cit., page 41).

688 "According to the Case-Shiller index, real house prices soared by an astounding 85 percent between 1997 and 2006 — and then came crashing down to earth from 2006 to 2012" (Ibid, page 41).

Mortgage originations also increased, for both prime and subprime mortgages. The period 2000 – 2003[689] saw the total volume of prime mortgages (those that conformed to the purchasing criteria of Fannie Mae) rise from just below $ 900 billion to 3.5 trillion U.S dollars. From 2000 to 2006 subprime mortgage loans increased from $140 billion to nearly $ 600 billion[690].

There is a distinction to be drawn between Alt – A mortgages and subprime mortgages. Alt – A mortgages mean that the borrower has either an impaired credit history and/or a lack of verifiable income [691]. A subprime mortgage means that the borrower has a far worse credit history[692], and might even have been declared bankrupt within the past five years. In contrast a jumbo loan does not reference the creditworthiness of the

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689 See Fligstein: "During 2003, the peak year for mortgage originations, refinancing comprised almost 75 percent of all new mortgages" (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 147).

690 See: MacDonald, Roderick: *Genesis of the Financial Crisis*, Palgrave Macmillan (2012), page 80.

691 "An impaired credit history would include less than two late payments on a mortgage; instalment, or revolving credit debt in the past twenty-four months; no bankruptcy for the past five years; a credit score in the 620 – 660 range; and a down payment that is less than 20 percent and as little as 3 percent". Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 113.

692 "This could include more than two late payments in the last twenty – four months; a judgement, foreclosure, or repossession in the prior twenty – four months; bankruptcy in the past five years; a FICO score of less than 620; and a down payment less than 10 percent and as low as 3 percent" (Ibid, page 113).

borrower but refers to a loan that surpasses in quantity the limits that the GSEs set for "*conforming loans*".

4.4 (c) The rapid decline of the housing market

From January 2003 onwards the Federal Reserve began to increase interest rates, and they moved from just below 1% in 2003 to a peak of 6.25 % in January 2007. The rise in interest rates affected not only the demand for mortgages and refinancing, but also delinquency rates. From 2002 to 2005 the proportion of subprime borrowers who were delinquent had fallen from 15% to 9% [693],but by the first quarter of 2009 15% of subprime borrowers were in foreclosure, while another 30% were over 90 days delinquent[694].

House prices fell, and by the end of 2008: "*every sixth borrower owed more than his or her home was worth"*[695].

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693 See: Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 130.

694 See: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 173.

695 Quoted from McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: "Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure", op. cit., page 498.

Figure 31 captures the collapse of U.S house prices according to the Standard & Poor's Case/Schiller housing price index[696]. The index is normalised to a value of 100 (in January 2000) and shows price fluctuations with respect to this normalised value.

Figure: 31. U.S House prices from 2000 – 2013[697].

696 The S&P CoreLogic Case-Shiller Home Price Indices measure the price level of existing single family homes in the U.S.The S&P CoreLogic Case-Shiller U.S. National Home Price Index ("the U.S. national index") measures the value of single-family housing within the United States. The index is a composite of single-family home price indices for the nine U.S. Census divisions and is calculated monthly. Percentage changes in the indices measure percentage changes in housing market prices given a constant level of quality. Changes in the types and sizes of houses or changes in the physical characteristics of houses are specifically excluded from the calculations to avoid incorrectly affecting the index value. See the document: S&P Core Logic Case-Shiller Home Price Indices Methodology, which is available at:

https://www.spglobal.com/spdji/en/documents/methodologies/methodology-sp-corelogic-cs-home-price-indices.pdf

697 Source: https://journalistsresource.org/economics/new-construction-renovation/

4.4 (d) Legal developments and alternative mortgages

The Depositary Institutions Deregulation and Monetary Control Act (DIDMCA) of 1980 repealed all usury caps on first – lien regulated mortgages[698], while in 1982, the Alternative Mortgage Transaction Parity Act (contained within the St Germain Depository Institutions Act of 1982) removed any prohibitions against "*alternative mortgages*"[699]. AMTPA justified alternative mortgages by citing the volatility of interest rates: "(1) *increasingly volatile and dynamic changes in interest rates have seriously impaired the ability of housing creditors to*

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[698] Section 501 (a) (1) of the act: "The provisions of the constitution or the laws of any State expressly limiting the rate or amount of interest, discount points, finance charges, or any other charges which may be charged, taken, received, or reserved shall not apply to any loan, mortgage, credit sale, or advance which is - (A) secured by a first lien on residential real property, by a first lien on stock in a residential cooperative housing corporation where the loan, mortgage, or advance is used to finance the acquisition of such stock, or by the first lien on a residential manufactured home; (…)" (The Depository Institutions Deregulation and Monetary Control Act of 1980).

See: Fligstein: "By deregulating loan rates through the pre-emption of state interest rate caps for first lien loans on a borrower's house, the law allowed banks to create whatever mortgage products they wished" (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 115).

[699] Section 803 of the Act provided a definition of an alternative mortgage transaction, which it determined was: "a loan or credit sale secured by an interest in residential real property, a dwelling, all stock allocated to a dwelling unit in a residential cooperative housing corporation, or a residential manufactured home (as that term is defined in section 603(6) of the National Manufactured Home Construction and Safety Standards Act of 1974) – (A) in which the interest rate or finance charge may be adjusted or renegotiated (B) involving a fixed-rate, but which implicitly permits rate adjustments by having the debt mature at the end of an interval shorter than the term of the amortization schedule; or (C) involving any similar type of rate, method of determining return, term, repayment, or other variation not common to traditional fixed-rate, fixed-term transactions, including without limitation, transactions that involve the sharing of equity or appreciation".

provide consumers with fixed-term, fixed-rate credit secured by interests in real property, cooperative housing, manufactured homes, and other dwellings (2) alternative mortgage transactions are essential to the provision of an adequate supply of credit secured by residential property necessary to meet the demand expected during the 1980's"[700].

Between them, these two acts permitted the development and subsequent growth of the distinctive characteristics of subprime mortgages, such as negative amortization mortgages, option adjustable rate mortgages and interest only loans.

Alternative mortgages became particularly important for the securitisation industry when prime mortgage lending and refinancing began to dry up[701]. The switch from prime to

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700 Section 802 (a) Ibid.

See MacDonald: "The Garn-St Germaine Depository Institutions Act of 1982 included Title VIII which may be cited as the 'Alternative Mortgage Transaction Parity Act of 1982'. Around this time, interest rates had suddenly approached 20 per cent. The volatility of the market had made it difficult for lenders to provide anything but prohibitive fixed-rate mortgages until federally chartered depository institutions had been authorized to engage in alternative mortgage financing. This new act allowed other lenders to offer alternative (non-fixed-rate) mortgages. Thus, the intent of this act was to make a greater variety of mortgages available to more people; the most notorious effect was to make predatory mortgage lending possible" (MacDonald, Roderick: *Genesis of the Financial Crisis*, Palgrave Macmillan [2012], pages 71-72).

701 "The timing of the explosion of non-traditional mortgage loans is also of interest. The major take-off in these products coincided with the winding down of the huge increase in demand for mortgage securities through the refinance process. Coming out of the recession of 2001, interest rates fell and a massive securitization boom occurred through refinancing that was fuelled by low interest rates. The private-label securitization business had grown in capacity and profits. But in 2003, rising interest

alternative mortgage origination was dramatic. Between the years 1999 and 2003 70 % of new mortgages originated were GSE conforming loans and in 2001 non–traditional lending instruments such as option ARMs[702] made up less than 5% of all subprime originations [703], but by 2006 70 % of new mortgages were either subprime or other types of nonconventional loan.[704].

4.4 (e) The decline in U.S underwriting standards

U.S Subprime mortgage originations rose from $ 35 billion in 1994 (less than 5% of the total) to $625 billion in 2005 (20% of the total), as economist Alan Blinder has observed:

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rates ended the potential for refinancing at ever-lower interest rates, leading to an increased need for another source of mortgages to maintain and grow the rate of securitization and the fees it guaranteed. The "solution" was the expansion of the market through non-traditional mortgages". Quoted from: McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: "Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure", op. cit., page 508.

702 Many Adjustable Rate Mortgages (ARMs) were structured over a thirty-year period. For the first two years, borrowers paid a teaser rate, a low fixed rate, after which the loan was reset against a floating rate (such as LIBOR) plus a premium. An option ARM gave the mortgage obligor the right to pay less than their mortgage payment in any given month by subtracting the interest due and adding it to the principal. This was termed negative amortization, as the principal sum would grow rather than diminish over time. A combination of falling housing prices and rising interest rates could mean that the total principal could grow above the value of the home.

703 Quoted from McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: "Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure", op. cit., page 504.

704 See: Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., page 79.

"*Two possible explanations for this explosive growth suggest themselves: Either a huge number of creditworthy subprime borrowers suddenly appeared out of nowhere, or underwriting standards dropped like a stone*"[705].

A 2005 survey by the Office of Comptroller of the Currency [706] on underwriting standards noted that:

"*While underwriting standards for retail credit traditionally have been more stable, examiners noted easing of retail underwriting standards in over one-quarter of the banks surveyed. Specifically, 28 percent of the banks eased standards, 10 percent tightened, and 62 percent made no change. This is up considerably from 2004 when the number of banks easing retail credit standards (13 percent) equalled the number of banks tightening (13 percent). Notably, this is the first time in the survey's 11-year history that examiners reported net easing of retail underwriting standards.*

The easing of retail credit standards is primarily concentrated in home equity products and residential real estate lending. Indirect consumer loans and affordable housing loans also

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[705] Quoted from: Blinder, Alan: *After the Music Stopped…*, op. cit., page 77.

[706] "The Office of the Comptroller of the Currency (OCC) is an independent bureau of the U.S. Department of the Treasury. The OCC charters, regulates, and supervises all national banks, federal savings associations, and federal branches and agencies of foreign banks". Source:https://www.occ.treas.gov/about/who-we-are/index-who-we-are.html

experienced some easing. Among the retail products, only credit cards and other direct consumer loans (e.g., auto loans or personal loans) exhibited net tightening"[707].

The following year's survey discovered that: "*In 2006, the trend toward easing commercial credit standards continued, with significantly more banks easing than tightening standards. Examiners reported that 31 percent of banks eased overall commercial underwriting standards, compared to 34 percent in 2005. In 2006, only 6 percent tightened standards compared to 12 percent in 2005. The remaining 63 percent made no change to commercial underwriting standards. Notably, 43 percent of the banks eased standards in at least one of the past two years, with 18 percent of the banks easing standards in both years"*[708].

Ironically it was the Office of the Comptroller of the Currency, the state regulator for national banks and federal savings associations that in 2004 had ruled that "*state laws that attempt to confine or restrain national banks' real estate lending activities are inconsistent with national banks' real estate lending*

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707 Survey of Credit Underwriting Practices 2005. Office of the Comptroller of the Currency National Credit Committee. June 2005. Page 5. The document can be accessed at: https://www.occ.treas.gov/publications-and-resources/publications/survey-of-credit-underwriting-practices/index-survey-of-credit-underwriting-practices.html

708 Survey of Credit Underwriting Practices 2006, Office of the Comptroller of the Currency, October 2006, page 5.

powers under 12 U.S.C.”[709]. This ruling prevented state laws from passing legislation (including ant-predatory lending laws or the enforcement of tighter underwriting standards) that could impinge upon the real estate lending activities of national banks and their subsidiaries[710].

Some years previously (in 1996) the federal regulator for thrift institutions (the Office of Thrift Supervision) had promulgated a rule pre-empting state legislative intervention in lending practices. Subsequently the OTS did almost nothing to improve underwriting quality in the housing market:

“*During the housing bubble, OTS issued no binding rules to halt the proliferation by its largest regulated thrifts of option ARMs, subprime loans, and low and no-documentation mortgages. Instead, OTS relied on recommendations issued in the form of guidances*.[711]”

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[709]Final rule of the OCC, Federal Register, Vol. 69, Num. 8, Tuesday the 13th January 2004, Rules and Regulations, page 1909.

[710] See: McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: “Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure”, op. cit., page 515. The same article points out that the OCC, which depends upon fees from the entities it regulates for funding, did not want to see national banks migrate to the thrift institutions charter, whose governing body, the Office of Thrift Supervision (OTS) had in 1996, promulgated a pre-emption rule exempting thrift institutions from state lending laws.

[711] Ibid, page 519.

The result was that: "*the three largest depository institution failures in 2007 and 2008 that stemmed from the subprime crisis resulted from high concentrations of poorly underwritten loans, including low and no documentation ARMs (in the case of IndyMac) and option ARMs (in the case of WaMu and Downey) that were often only underwritten to the introductory rate instead of the fully indexed rate*"[712].

4.4 (f) Government sponsored enterprises

As discussed in the previous chapter, the Government Sponsored Enterprises played a fundamental role in furthering the use of securitisation as a funding instrument in the U.S[713]. Commercial banks sold mortgages to the GSEs, who, with the help of an underwriter, turned them into government backed bonds which the banks could either sell in the markets or buy back, effectively allowing the U.S government to soak up the risk of any declines in value in the mortgage market while profiting

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712 Ibid, page 518.

713 See Fligstein: "The GSEs essentially served two purposes. First, because they bought the mortgages and packaged them into MBSs, the eventual buyers of the bonds felt that at the end of the day, the federal government stood behind the integrity of the bonds. (Ranieri, 1996). This meant the bonds could get high bond ratings (often AAA) because it was assumed that if some problem ever arose, the federal government would bail out the GSEs. Second, the commercial banks and other entities who bought these bonds were able to borrow cheaply because of the high quality of the bonds. Buying mortgaged securities that were issued by the GSEs also meant that their asset portfolios looked much less risky". Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 22.

from the sale of the securitisation notes or lowering their capital charges by holding AAA rated tranches that earned higher rates of return than U.S Treasury bonds.

The GSEs were initially cautious about involving themselves in the subprime mortgage market. In 1990 Fannie Mae incorporated the Community Homebuyer Program, which allowed homebuyers who completed a program of homeownership counselling, to have higher than normal payment to income qualifying ratios, and to provide less than a 5 % mortgage down payment, allowing borrowers to qualify for larger loans than they would normally be permitted to have under standard underwriting rules[714]. Freddie Mac introduced a similar loans program "*Affordable Gold"* in 1992[715].

In 1992 the Housing and Community Development Act was passed. Title XIII of the Act, the Federal Housing Enterprises Financial Safety and Soundness Act (FHEFSSA) was the charter

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714 HUD's Regulation of the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Final Rule, Published in the Federal Register, Vol. 65, Nº 211, Tuesday the 31st, 2000, page 65106.

715 "These loans were not written according to traditional underwriting standards; for example, for those in which the borrowers were allowed to meet part of the minimum down-payment requirement with funds from a third party, the delinquency rate from 1994 to February 1996 was about four times higher than for the peer group of traditional loans. Other "Affordable Gold Loans" originated in 1994 show a delinquency rate about 50% higher than for the peer group". Quoted from: MacDonald, Oonagh: *Fannie Mae & Freddie Mac: Turning the American Dream into a Nightmare*, Bloomsbury Academic (2012), page 251.

for the GSEs. It established the Office of Federal Housing and Enterprises Oversight (OFHEO) within the HUD, whose Secretary was to set annual affordable housing goals for the GSEs:

"The Secretary shall establish a special annual goal designed to adjust the purchase by each enterprise of mortgages on rental and owner-occupied housing to meet the then-existing unaddressed needs of, and affordable to, low income families in low-income areas and very low-income families. The special affordable housing goal established under this section for an enterprise shall not be less than 1 percent of the dollar amount of the mortgage purchases by the enterprise for the previous year"[716].

In 1996 Freddie Mac started guaranteeing the senior (AAA) classes of securitisations backed by subprime home equity loans, and was involved in 16 such transactions between 1996 and 1999 totalling $ 8.1 billion[717].

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716 Section 1333 of Federal Housing Enterprises Financial Safety and Soundness Act of 1992.

717 HUD's Regulation of the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Final Rule, Published in the Federal Register, Vol. 65, Num. 211, Tuesday the 31st, 2000, page 65106.

In October 2000 the U.S Department of Housing and Urban Development (HUD) issued new housing goal levels for Fannie Mae and Freddie Mac for the years 2001 through to 2003[718].

HUD presented arguments for the increased involvement of the GSEs in the subprime market, it reasoned that: "*Increased involvement by the GSEs in the subprime market might result in more standardized underwriting guidelines. As the subprime market becomes more standardized, market efficiencies might possibly reduce borrowing costs. Lending to credit-impaired borrowers will, in turn, increasingly make good business sense for the mortgage market"*[719].

It also claimed that: "*An expanded GSE presence in the subprime market could be of significant benefit to lower-income families, minorities, and families living in underserved areas. HUD's research shows that in 1998: African-Americans comprised 5.0 percent of market borrowers, but 19.4 percent of subprime borrowers; Hispanics made up 5.2 percent of market*

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718 Published in the Federal Register, Vol. 65, Num. 211, Tuesday the 31st, 2000, page 65099.

"The targets set by HUD in both the Clinton and George W. Bush administrations (under a law passed in 1992) mandated that 42 percent, 50 percent, and finally 56 percent of the loans bought by Fannie and Freddie had to go to people with low or moderate incomes." Quoted from: Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover…*, op. cit., page 179.

719 Ibid, page 65106.

borrowers, but 7.8 percent of subprime borrowers; very low-income borrowers accounted for 12.1 percent of market borrowers, but 23.3 percent of subprime borrowers; and borrowers in underserved areas amounted to 24.8 percent of market borrowers, but 44.7 percent of subprime borrowers"[720].

The change in policy led to an enormous increase in the purchase of private label securitisations by the GSEs:

"*From 2001 to 2005, GSE purchases of PLSs swelled dramatically, rising from $28 billion to $221 billion. Representing as much as 40 percent of the subprime market at its peak*"[721]

In 2003 Fannie Mae entered into an agreement with the mortgage originator Washington Mutual. Washington Mutual would originate loans and sell them to Fannie Mae. Fannie Mae would contribute $85 billion in loans over a five –year period, part of $375 billion that the bank had pledged to lend to low and moderate income families over a ten-year period[722].

From 2003 to 2007 Fannie Mae and Freddie Mac bought large quantities of subprime loans (using borrowed money) to either

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720 Ibid, page 65106.

721 Quoted from: Wharton Gates, Susan: *Days of Slaughter. Inside the Fall of Freddie Mac and why it could happen again*, John Hopkins University Press (2017), page 126.

722 Ibid, page 252.

hold on their portfolios of securitize (thereby conferring their guarantee on the loans). They also invested in private label securitisations to hold on their portfolios and by 2006 Fannie Mae held $ 80.3 billion and Freddie Mac $157.7 billion[723].

Figure 32 : The risk in GSE lending activity from 2003 – 2007 in billions of US dollars[724]

	GSE New Business			GSE Mortgage Portfolio Purchases		Private Market New Business (Nonagency)			GSE High Risk	GSE Share in High-Risk Activity
	High Risk (1) LTVs > 80% and/or FICO < 660	Very High Risk LTVs > 90% and FICO < 620	Total (2)	Private-Label Securities (PLS)	PLS/ Total	High Risk (3) LTVs > 80% and/or FICO < 660 Conforming Limit	Very high risk LTVs > 90% and FICO < 620 Conforming Limit	Total PLS	(1)/(2)	(1)/ [(1)+(3)]
2003	466	12.1	1,839	103.2	13%	168	8.9	527	25%	74%
2004	262	8.8	898	211.8	53%	283	14.1	804	29%	48%
2005	236	7.1	899	221.3	57%	330	13.9	1,139	26%	42%
2006	245	10.4	877	180	52%	240	12.4	1,108	28%	51%
2007	363	20.3	1,012	113.5	37%	54	2.4	665	36%	87%

Note: GSE new business represents guaranteed MBS plus non – private label MBS portfolio purchases; the private

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723 See: Fabozzi, Frank: *The Handbook of Mortgage Backed Securities*, op. cit., page 140.

724 Source: Acharya, Viral V.; Nieuwerburgh, Stijn Van; Richardson, Matthew & White, Lawrence J.: *Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance*, op. cit., page 59.

market new business represent all MBS financed through private-label securitization[725].

Figure 32 shows the extent of the GSEs' involvement in risky lending activity in the five-year period that preceded the financial crisis. As evidenced from the table the GSEs doubled their origination (or purchases for securitisation purposes) of high risk mortgages (those with Loan to Value ratios greater than 90% and FICO scores of less than 620) between 2006 and 2007. From 2004 to 2006 their purchases of Private Label Securities averaged $204 billion a year, at the same time as their overall MBS purchases halved, resulting in a much higher concentration of risky RMBS on their books.

By 2007: "*Fannie and Freddie's foray into riskier mortgage portfolios was now $313.7 billion, or 22% compared to just 2% ten years earlier. Their mortgage book as a percentage of MBS guarantees now included mortgages with FICO scores less than 660 (14% of $498 billion), LTVs greater than 80% (17% of $589 billion), and interest-only or negatively amortizing mortgages (6% of $210 billion)*"[726].

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725 Source: Ibid, page 59.

726 Quoted from: Acharya, Viral V.; Nieuwerburgh, Stijn Van; Richardson, Matthew; White, Lawrence J.: *Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance*, op. cit., page 81.

The rapid concentration of exposure to high risk loans was one of the key causes of the GSEs being put in conservatorship in 2008:

"*In 2007, Freddie's and Fannie's gigantic portfolio of loans incurred $ 8 billion in credit losses, and the GSEs turned their first annual loss after 15 years of record profits. These credit losses spiralled out of control in the second half of 2008. Because the GSEs were so highly leveraged, any credit losses had a dramatic impact on their solvency. On September 7, 2008, the GSEs were placed in the government's conservatorship"*[727].

The GSEs had pioneered modern securitisation in the U.S by creating the market for it, and their involvement with subprime securitisation was certainly partly responsible for their large losses, but their role in the GFC was secondary rather than principal:

"Fannie and Freddie were able to buy the senior (AAA-rated) tranches of private mortgage-backed securities backed by subprime debt. These securities could count as money loaned to people with below-average income, and they were supposed to be safe. These purchases of MBS were a mechanism by which government pressure to increase lending to low-income Americans translated into greater demand for mortgage-backed

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[727] Ibid, page 83.

securities and therefore greater profits for Wall Street. At the end of the day, government pressure on Fannie and Freddie contributed to the housing bubble by increasing the amount of money flowing into the securitization pipeline. The two GSEs were not the primary factor stoking the subprime fire, and were consistently behind the curve as both subprime lending and securitization heated up, out-hustled by the mortgage lenders and the Wall Street banks who built, expanded, and profited from the mortgage securitization money machine".

4.4 (g) Private Label Securitisations

A Private Label Securitization is the generic term for a securitisation that is not backed by a GSE guarantee. A securitisation must be issued as a Private Label Securitisation when the underlying loan collateral does not meet the prevailing GSE underwriting standards, either because of the credit status of the obligor, or because of the size of the loan. In a Private Label Securitization, the mortgage originator sells the mortgage loans to an SPV/SPE (which very often it has sponsored itself), the bankruptcy–remote entity that issues the securitisation notes.

Private Label Securitization grew very quickly from 2002 to 2005, and as a percentage of all securitization issued it went from 20 % to over 50%[728]

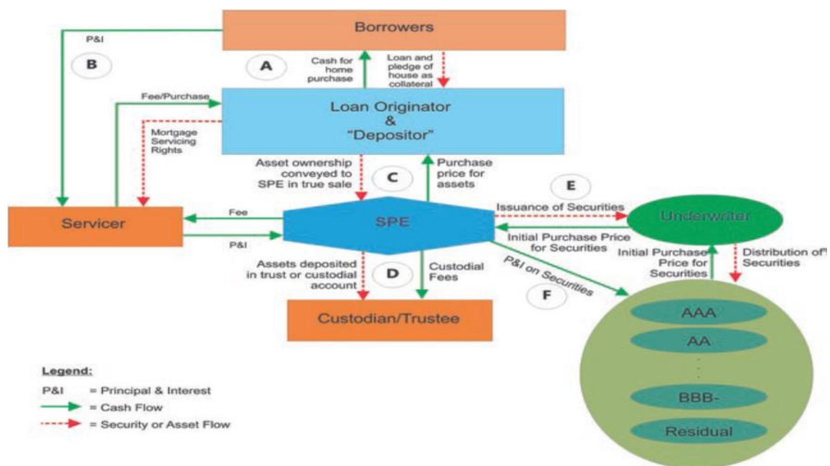
Figure 33 illustrates the stages of a Private Label Securitisation. In **(A)** a loan originator/sponsor lends to mortgage obligors who pledge the real estate as collateral for the mortgage loan. In **(B)** the loan originator/sponsor conveys the servicing rights to a servicer (often an affiliate of the originator) who receives either a cash payment or periodic servicing fees. The obligor makes mortgage payments directly to the servicer. In **(C)** the loan originator's depositor (an independent entity created by the originator specifically for this operation) conveys the mortgage loan assets to the SPV/SPE via a "true sale". This removes the loans from the originators''/sponsors' balance sheet. In return the SPE makes a cash payment to the originator/sponsor. The servicer will remit the principal and interest payments made by the obligors to the SPE. In **(D)** the SPE transfers the loan assets and documentation to the trustee of the operation. In **(E)** the SPE, using the services of an underwriter[729] to model the underlying assets into tranches and place the securitisation notes with

[728] Mian, Atif & Sufi, Amir: *House of Debt...*, op. cit., page 19.

[729] The underwriter is generally an investor bank and has the job of analysing investor demand, structuring and then marketing the securitisation issue, for which it receives a fee.

investors, issues multiple tranches of securitisation notes with different levels of seniority and different interest payments. A first lien on the mortgage assets of the SPE is perfected for the benefit of the noteholders, securing their claim on the assets in the case of default of interest and principal payments by the SPE. In **(F)** the principal and interest payments are made to the securitisation noteholders.

Figure 33: The stages of the Private Label Securitisation[730]



730 Source: Culp, Christopher L.; Stärkle, Bettina J. & Van Der Merwe, Andria: *Credit Default Swaps. Mechanics and Empirical Evidence on Benefits…*, op. cit., page 106.

Whereas Ginnie Mae, Fannie Mae and Freddie Mac collected guarantee fees to insure investors against non-payment, private label RMBS issued by an SPV were not guaranteed for credit risk. Nor did they consist of pools of heterogeneous mortgages with broadly similar contractual terms. For this reason, it was crucial that they be tranched into groups of different credit risk profiles. Credit enhancement (a way of improving the credit quality of the securitisation notes issued) in Private Label RMBS rarely took the form of external credit support (such as monoline insurance or credit default swaps as was the case for the super senior tranches of CDOs) but through tranche subordination, which, as explained in the first chapter, meant that senior rated notes received their principal and interest payments before junior rated notes, and were the last to receive losses should the number of defaults make full payment to investors impossible These were assessed by two credit rating agencies who granted ratings to the tranches in the structure according to their assessment criteria. An AAA rating would mean that the securitisation could withstand more severe default scenarios than a BBB rated note, etc.

Distinct from credit enhancement is the provision of a liquidity facility, which is a contractual agreement with a financial entity to provide cover for shortfalls in cash –flow in order to make timely principal and interest payments to noteholders.

Another typical feature of Private Label Securitisation Structures is that the interest rate risk of payments would be hedged by an interest rate swap, and both the agreement with the liquidity provider and the swap counterparty would be examined by the rating agencies to check that they were financially stable enough to be able to perform their duties.

Private Label securitisations were structured to protect against pre-payment risk, a particular concern in the U.S because mortgages were normally granted without any financial penalties for pre-paying or refinancing them. A common way of hedging against pre-payment risk was to issue planned amortization class tranches. These securitisation notes have companion tranches which absorb pre-payment risk (up to a certain pre-determined level), allowing the PAC tranche to follow the scheduled interest and principal payments. The PAC tranche would pay out at a lower rate of interest than its higher yielding companion tranche. Companion tranches would themselves receive protection from the subordinated companion tranches junior to them in the overall securitisation payment structure.

Figure 34 – U.S Private Label Securitisations by Product Type from 1999 – 2018[731]

[731] Source: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 262.

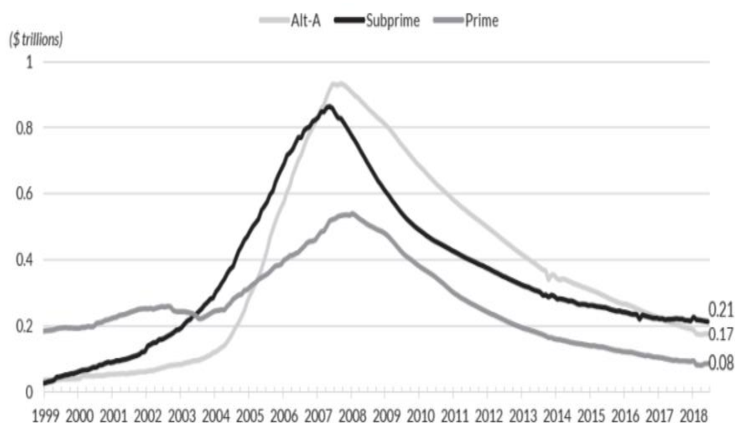


Figure 34 illustrates how all types of private label securitised product rose from about 2000 onwards, but there was a particularly dramatic increase in Alt – A and subprime securitisations. The overall level of MBS issuance increased from about $150 billion in 2000 to a peak of $1.15 trillion in 2005.

4.4 (h) The gradual erosion of Glass–Steagall and the Vertical Integration of the Securitisation Chain

Since the U.S Banking Act of 1933 (also known as the Glass–Steagall Act after the two Democratic Congressmen who had sponsored it [732]) commercial and investment banks had been kept

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[732] The concern of Senator Carter Glass is well captured in this quote from Professor Donald Langevoort: "Glass was extremely troubled during the later 1920s by extensive bank lending to finance securities purchases, not because he was opposed to the stock market itself, but because he believed that such lending was taking money away from local businesses in need of credit. He sought to use his influence to pressure the Federal Reserve and the bankers to adopt policies of restraint on brokers' call loans and margin lending, but he was not successful. Research under his direction a few years later

apart[733].Generally speaking, the job of investment banks was that of holding deposits and lending to individuals and businesses while that of investment banks was that of raising capital and investing its own money for the profit of its shareholders (proprietary trading). The brief that First National City Bank filed in the case *Investment Company Institute v. Camp,* 401 US 617, 1971) described the rationale for the act in the following terms:

"*The Glass-Steagall Act was enacted to remedy the speculative abuses that infected commercial banking prior to the collapse of the stock market and the financial panic of 1929-1933. Many*

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uncovered perhaps the most significant statistic leading to the eventual passage of the legislation – by 1930, some forty –one percent of all commercial bank assets were invested in securities or securities –related loans. It was during this period that Glass formed a negative view of bank securities affiliates, which he considered a major source of the temptation to divert bank funds away from commercial uses" (Langevoort, Donald C.: "Statutory Obsolescence and the Judicial Process: The Revisionist Role of the Courts in Federal Banking Regulation", *Michigan Law Review*, Vol. 85, Num. 4, February 1987, pages 672-733, page 694).

733 In order to qualify for a permit a bank holding company affiliate had to "(1) show that it does not own, control, or have any interest in, and is not participating in the management or direction of, any corporation, business trust, association, or other similar organization formed for the purpose of, or engaged principally in, the issue, flotation, underwriting, public sale, or distribution at wholesale or retail or through syndicate participation, of stocks, bonds, debentures, notes or other securities of any sort (hereinafter referred to as "securities company"); (2) agree that during the period that the permit remains in force it will not acquire any ownership, control, or interest in any such securities company or participate in the management or direction thereof; (3) agree that if, at the time of filing the application for such permit, it owns, controls, or has an interest in, or is participating in the management or direction of, any such securities company, it will, within five years after the filing of such application, divest itself of its ownership, control and interest in such securities company and will cease participating in the management or direction thereof, and will not thereafter, during the period that the permit remains in force, acquire any further ownership, control or interest, in any such securities company or participate in the management or direction thereof" [Section 19 (2) (e) of the Banking Act of 1933].

banks, especially national banks, not only invested heavily in speculative securities but entered the business of investment banking in the traditional sense of the term by buying original issues for public resale. Apart from the special problems confined to affiliation three well-defined evils were found to flow from the combination of investment and commercial banking.

(1) Banks were investing their own assets in securities with consequent risk to commercial and savings deposits. The concern of Congress to block this evil is clearly stated in the report of the Senate Banking and Currency Committee on an immediate forerunner of the Glass-Steagall Act.

(2) Unsound loans were made in order to shore up the price of securities or the financial position of companies in which a bank had invested its own assets. See 'Relation of Banks with the Securities Market', S. Res. 71, Hearings 1063-4.

(3) A commercial bank's financial interest in the ownership, price, or distribution of securities inevitably tempted bank officials to press their banking customers into investing in securities which the bank itself was under pressure to sell because of its own pecuniary stake in the transaction."[734]

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[734] The original quote is from the brief filed by First National City Bank in the case Investment Company Institute v. Camp, 401 us 617, 1971. Pages 40 – 42. The text is taken from the introduction to: Benston, George J.: *The Separation of Commercial and Investment Banking: The Glass-Steagall Act Revisited and Reconsidered*, Palgrave Macmillan (1990), page 11.

Sections 16, 20, 21 and 32 of the Act (amended throughout the years by the Comptroller of the Currency, the Federal Reserve Board and the Courts) referred to banks' securities operations. Section 16 generally prohibited Federal Reserve member banks from purchasing securities for their own account, but allowed national banks (that were chartered by the Comptroller of the Currency) to hold investment securities (bonds, notes or debentures) to up to ten per cent of its capital and surplus. Sections 16 and 21 forbade deposit-taking institutions from both accepting deposits and "*issuing, underwriting,*[735] *selling, or distributing, at wholesale or retail, or through syndicate participation, stocks, bonds, debentures, notes, or other securities (...)"*[736]

There were a number of exceptions which included U.S government obligations and government agencies[737]. Additionally, Commercial Banks were not forbidden to underwrite and deal in securities outside of the U.S[738].Sections 20 and 32 referred to commercial bank affiliations. Section 20 forbade member banks from affiliating with a company that

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735 The term underwriting here refers to assuming the risk that an issue of securities is not fully sold to investors.

736 Section 21. (a).1 of the Banking Act of 1933.

737 This came to include the GSEs.

738 Deal here means to hold securities for trading purposes.

engaged principally in *"the issue, flotation, underwriting, public sale, or distribution at wholesale or retail or through syndicate participation of stocks, bonds, debentures, notes, or other securities*"[739]. Section 32 prohibited Federal Reserve member banks from having interlocking directorships or close officer or employee relationships with a firm that was principally engaged in securities underwriting and distribution. This section applied even if there was no common ownership or corporate affiliation between the commercial bank and the investment company.

With respect to securitisation the terms of the Glass –Steagall Act meant that Commercial Banks could not underwrite or deal in securitisation products (such as MBS), however they could purchase them as investments and sell them when it suited their investment strategies. They were also permitted to securitise their loans and sell them in that form.

The reasons for maintaining the separation between Commercial and Investment banks included:

(i) The risk of losses. Banks engaging in underwriting and holding securities were at risk of losses which would have to be met by depositors and, in the worst case scenario, by the Federal government. Such losses could undermine public confidence in the banking system and so pose a systemic risk.

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[739] Section 20 of the Banking Act of 1933.

(ii) Access to the Federal Reserve discount window (allowing member institutions to borrow money at less than market rates) and Federally provided deposit insurance would encourage banks to take unacceptable risks with depositors' money.

However, these separations were under pressure from banks who saw them as an unnecessary constraint on their profit making potential in difficult times. Investment banks had seen their commission revenues decline from May the 1st 1975 when the U.S Congress put an end to the practice of fixed commissions,[740]

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740 At a speech given to the Economic Club of New York at the Waldorf Astoria Hotel on the 17th of November 1970 the (then) President of the New York Stock Exchange, Robert Haack spoke in favour of removing fixed commissions. He stated: "For many years the members of the New York Stock Exchange have operated under a fixed minimum commission rate structure and the Courts have upheld the fixing of such rates under the Securities Act of 1934. There are even legal questions as to whether the Exchange or the Securities Exchange Commission, under Congressional mandate, can do other than set fixed rates. Just a few weeks ago, the SEC reached a number of conclusions on commission rates after two years of extensive rate hearings, among the most important of which was its advocacy of competitive rates on the portion of orders valued over $I00,000. Notwithstanding my own previous personal and strong support of fixed minimum commissions, I believe that it now behoves our industry leaders to rethink their personal judgments on negotiated rates. While I question whether or not the industry is presently sufficiently strong financially to completely disregard fixed minimum rates, I personally think it might well consider fully negotiated commissions as an ultimate objective". The full text of the speech given by Mr Haack that night can be accessed at the following website http://3197d6d14b5f19f2f4405e13d29c4c016cf96cbbfd197c579b45.r81.cf1.rackcdn.com/collection/papers/1970/1970_1117_HaackCompetition.pdf).

The speech was controversial as the sales commission was the basic revenue source of Wall Street brokerage firms. In an interview with the New York Times just over a year later Mr Haack reiterated his views: ""The dominance of the New York Stock Exchange is being undermined", he continued, "and my position has been that our anticompetitive stances are fragmenting this market and are a boon to other markets. For example, because we fix our commissions and people thought they were too high, we have in fact contributed to the growth of the third market"." (This quote is taken from the interview with Haack on the front page of the New York Times of the 12th of December 1971).

and replaced them with negotiated commissions, resulting in a lowering of prices as competition for institutional brokerage business became more intense. Commercial banks in turn felt the effects of the competition that arose from the growth of money market funds on their deposit taking ability. The drive to raise profits led to a steady erosion of the legal separation between the two types of institution.

The Federal Financing Bank Act of 1973 made Fannie Mae Securities eligible for Commercial Banks and the Housing and Community Development Act of 1974 did exactly the same for Freddie Mac Securities. This meant that Commercial banks were able to underwrite or hold them, even though they carried no specific government guarantee. The list of exceptions grew steadily:

"*In 1978, Bankers Trust began placing commercial paper (short-term debt) issued by corporations with investors. The Federal Reserve Board of Governors ruled that this practice did not violate the Glass – Steagall Act opening a loophole that was ultimately (after an initial set-back in the Supreme Court) upheld by the D.C Circuit Court of Appeals in 1986. In 1986, the Federal Reserve opened up another loophole, allowing commercial banks to set up affiliated companies (through a common bank holding*

Haack retired in 1972 but the argument for abolishing rates was taken up the U.S Congress and included in the amendments to the Securities Act in 1975

company) to deal in specific securities that were off-limits to commercial banks, subject to limits on the revenues earned from those securities. Over the next decade, under the direction of Alan Greenspan, the Fed expanded the loophole, which began with municipal bonds, mortgage backed securities, and commercial paper, to include corporate bonds and equities; the Fed also raised the limit on revenues from the securities business and relaxed rules that enforced a separation between banking and securities operations within a single bank"[741].

On May the 22nd 1997, Alan Greenspan, the Chair of the Federal Reserve, gave testimony before the House Committee on Banking and Financial Services in favour of a bill designed to eliminate once and for all the divisions between Commercial and Investment banks[742]. In his testimony he stated that:

"*The (Federal Reserve) Board believes that Congress should widen the permissible range of affiliations for banking organizations in order to expand the choices for consumers and increase the efficiency of financial markets. Financial modernization should remove outdated restrictions that serve no*

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[741] Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover…*, op. cit., page 108.

[742] Bill H.R.10 initially called the Financial Services Competitiveness Act of 1997 became the Gramm – Leach – Bliley Act of 1999 and merged commercial, investment and insurance activities under a bank holding company structure.

useful purpose, that decrease economic efficiency, and that, as a result, limit choices and options for the consumer of financial services. Such statutory prohibitions result in higher costs and lower quality services for the public. Their removal would permit banking organizations to compete more effectively in their natural markets. The result would be a more efficient financial system providing better services to the public”.[743]

These opinions were not entirely unopposed. The consumer advocate Ralph Nader testified before the U.S senate that:

“The financial industry--securities, insurance and banks--are awash in profits. Banks, for example, have experienced five straight quarters of record profits. There is no emergency. There is nothing to suggest that this legislation should be a priority in the Senate or placed on a fast track. If Congress stampedes this legislation, as the giants in the financial industry demand they do, the day will come when the corruption or speculative risks, facilitated by HR 10, will materialize into gigantic taxpayer obligations to bail out these debacles. It will not go unnoticed who was responsible for laws that, even with the experience of recent

[743] The testimony of Chairman of the Federal Reserve Board Alan Greenspan before the Committee on Banking and Financial Services, the U.S House of Representatives, on H.R.10 “The Financial Services Competitiveness Act of 1997” given on May the 22nd, 1997. The full testimony given by Mr Greenspan to the Committee that day is available at: https://www.federalreserve.gov/boarddocs/testimony/1997/19970522.htm

bank failures, knowingly failed to foresee and forestall. Is anyone listening?"[744]

Added pressure to repeal the Glass – Steagall Act came in the form of a bold move by Citicorp to merge with the Insurance firm Travelers to create Citigroup[745]. The Federal Reserve approved the merger by citing an exemption contained in section 4 (a) 2 of the Bank Holding Company Act, allowing the Federal Reserve Board to permit Citicorp to retain direct or indirect ownership or control of voting shares in a non-bank company and engage in a different business to banking for a maximum period of five years (an initial two-year exemption followed by three one year exemptions) after which time the restrictions of Glass – Steagall would have applied and Citigroup's interest in Travelers (at that time one of the largest insurance companies in the U.S.A) would have had to have been sold off and possibly broken up.

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744 The prepared testimony of Mr Ralph Nader before the Senate Banking, Housing and Urban Affairs Committee during the hearing on H.R.10 "The Financial Services Act of 1998". Wednesday the 24th of June 1998. This testimony is available at: https://www.banking.senate.gov/themes/banking/hearing_archive/98_06hrg/062498/witness/nader.htm

745 "In 1998, Citibank audaciously purchased Traveller's Insurance (along with its brokerage firm and investment bank) making the bet that the last regulatory barrier, the Glass – Steagall Act, would be repealed. Afterward, the Clinton administration and Republicans in Congress did just that with the passage of the Gramm – Leach – Bliley Act of 1999". Quoted from Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page Page 17.

The Gramm–Leach–Bliley Act of 1999 (GLBA) finally repealed sections 20 and 32 of the Glass–Steagall Act. There is some discussion about whether the overturning of these restrictions was genuinely one of the causes of the role that securitisation was destined to play in the Great Financial Crisis, given that the barriers between Commercial and Investment banks had already been severely weakened some time before[746]. The GLBA did not repeal section 16 of the Glass – Steagall Act. Section 16 imposed limits on the investment securities a bank could hold on its own account from any one issuer of bank ineligible securities. As stated previously, Section 16 had been reformed to allow banks to hold mortgages in the form of securities backed by Fannie Mae and Freddie Mac (without imposing any quantitative limits), but it limited bank acquisition

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[746] "In the spring of 1996, after years of opposing repeal of Glass–Steagall, the Securities Industry Association –the trade organization of Wall Street firms such as Goldman Sachs and Merill Lynch– changed course. Because restrictions on banks had been slowly removed during the previous decade, banks already had beachheads in securities and insurance. Despite numerous lawsuits against the Fed and the OCC, securities firms and insurance companies could not stop this piecemeal process of deregulation through agency rulings. Edward Yingling, the CEO of the American Bankers Association (a lobbying organization), said, "Because we had knocked so many holes in the walls separating commercial and investment banking and insurance, we were able to aggressively enter their business – in some cases more aggressively than they could enter ours. So first the securities industry, then the insurance companies, and finally the agents came over and said let's negotiate a deal and work together". Quoted from: "The Financial Crisis Inquiry Report. Final Report of the National Commission on the Causes of the Financial and Economic Crisis in the United States". Submitted by the Financial Crisis Inquiry Commission. January 2011. Page 54.

of private-label mortgage backed securities, a limitation which did nothing to prevent the Great Financial Crisis. Neither can the repeal of sections of the Glass–Steagall act be held directly responsible for the decline in underwriting standards that is often attributed to securitization. A 2016 report prepared by the U.S Congressional Research Service stated that:

"*However, the Glass-Steagall Act limited the investment activities of commercial banks; it did not prevent non-depositories from extending mortgages that compete with commercial banks. It did not prevent these non-depositories from then selling the mortgages to investment banks. It did not prevent investment banks from transforming the mortgages into securities to sell to pension funds, insurance companies, or other investment pools. The Glass-Steagall Act also did not directly address the financial incentives of the institutions that originated mortgages, sold mortgage-related securities, or held mortgage assets. Therefore, the Glass-Steagall Act would have been unlikely to prevent the decline in underwriting standards that is attributed to non-depositories through securitization".*[747]

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[747] Congressional Research Service Report "The Glass–Steagall Act: A Legal and Political Analysis". Dated: January the 19th 2016. Authored by: Carpenter, David H. Murphy, Edward V, Murphy, Maureen M. H. Page 21.

This opinion is shared by British academic Oonagh McDonald who has written that: "The effect of Glass-Steagall's 1999 "repeal" has also been exaggerated. First, the restrictions contained in Glass-Steagall were always subject to some exceptions; second, those exceptions had already been enlarged by regulatory and judicial decisions

While it is true that the Gramm–Leach–Bliley Act of 1999 was perhaps not a definitive moment in the series of events that led to the financial crisis, it would also seem apparent that had the original intentions of the Glass–Steagall Act been preserved, the vertical integration of securitisation production chains could not have taken place.

As American sociologist Neil Fligstein writes:

"*Ironically, instead of producing conglomerate banks as the new business model, the breakdown of the barrier between investment and commercial banking mostly led to vertical integration of banks by incorporating the origination, securitization, loan servicing, and trading functions of MBS internally in their organizations*" [748].

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over the course of several decades, well before the GLBA was passed; and third, the GLBA only repealed some elements of Glass-Steagall. The general prohibition on banks underwriting or dealing in securities remained intact.

In any case, the 2008 financial crisis had precious little to do with Glass-Steagall, one way or the other. It was caused primarily by bad lending policies, which in turn led to the growth of the subprime market to an extent that neither the lawmakers nor regulatory authorities recognized at the time. The commercial banks and parent holding companies that failed— or had to be sold to other viable financial institutions —did so because underwriting standards were abandoned. Yes, these banks acquired and held large amounts of mortgage-backed securities, which pooled subprime and other poor quality loans. But even under Glass-Steagall, banks were allowed to buy and sell MBS because these were simply regarded as loans in a securitized form". Quoted from: McDonald, Oonagh: "The Repeal of the Glass–Steagall Act. Myth and Reality", Policy Analysis, Cato Institute Center for Monetary and Financial Alternatives, Num. 804, November the 16th 2016.

[748] Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 138.

This process of integration saw investment banks purchase subprime lenders. First Franklin was bought by Merrill Lynch, Advanta was bought by JP Morgan Chase, BNC Mortgage was bought by Lehman Brothers, Encore Credit was bought by Bear Stearns.

"*By the late 1990s and early 2000s all three groups of banks—investment banks, commercial banks and mortgage lenders—were following this logic. Rather than organizing their mortgage business around the GSEs, they set out to build integrated mortgage securitization businesses. Countrywide expanded from origination to securitization. A giant bank like Citi could envision itself as a provider at every stage, originating, securitizing, selling, holding and dealing in MBS*"[749].

The big disadvantage to this costly process of vertical integration was that it was a business model that, once committed to, was very hard to quickly draw back from:

"*Instead of pulling back from the market when the housing market turned down in 2006, all of the financial institutions who had business models based on the integration of mortgages and mortgage securitization doubled down and continued to seek out mortgages even as the quality of those loans deteriorated. By the*

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[749] Quoted from: Tooze, Adam: *Crashed-How a Decade of Financial Crises…*, op. cit., page 71.

end, eleven of the thirteen largest financial institutions in the United States either went bankrupt or were reorganized in the fall of 2008 because they were so locked in. Their entire business model was predicated on making money from mortgages and mortgage securitization, and their organizations were set up to efficiently buy, process and hold mortgage securities based on borrowed money"[750].

PART 3: FINANCING SECURITISATION THROUGH SHORT-TERM FUNDING

4.5 Asset Backed Commercial Paper

The most common mechanism for funding mortgages to be securitised was through the use of asset-backed commercial paper (ABCP). This was done through Structured Investment Vehicles[751] (SIVs), legal entities which were capitalised by their

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750 Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 8.

751 "The first SIV, Alpha Finance Corporation, was launched in 1988 by Citibank, and was followed a year later by another Citibank-sponsored vehicle, Beta Finance Corporation. In 1995, Gordian Knot established its vehicle, Sigma Finance Corporation. At its height in the summer of 2007, the SIV industry had grown to include 30 vehicles. Though that may not sound a particularly large number, those 30 vehicles together had aggregate assets under management of over US $400 billion". Quoted from: Collett, Elizabeth & Fuller, Geoff: "Structured Investment Vehicles—The dullest business on the planet?", *Capital Markets Law Journal*, Vol. 3, Num. 4, 2008, pages 376-388, page 376.

sponsors[752] (usually a financial institution), but with separate balance sheets[753]. The SIV would purchase portfolios of mortgage securities from its sponsor (together with other securitized debt such as student loans, credit card debt and auto – loans) with money that it raised from the issue of asset backed commercial paper, notes which generally had three - month maturities (or even shorter) and that were backed by the revenues on the assets it held (and by the good name and reputation of its sponsoring institution[754]). The SIV would profit from the difference between

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752 The sponsor acted as the invest manager of the SIV, they would manage the assets and liabilities of the SIV as well as liquidity and credit risks.

753 "These vehicles allowed banks to invest in their own structured securities without having to hold capital against them; since SIVs were technically not part of the bank in question—even though they were wholly owned by that bank, which might even have promised to bail them out if necessary—their assets were not counted when determining capital requirements. The result was that SIVs enabled banks to take on more risks with the same amount of capital". Quoted from: Johnson, Simon & Kwak, James: 1*3 Bankers: The Wall Street takeover…*, op. cit., page 165.

754 An example of how this worked is given by Asokan Anandarajan, Benjamin Chou and Michael Ehrlich in their article "Structured Investment Vehicles: The unintended consequence of financial innovation: some reasonable ideas and objectives combined to have unexpected effects". It explains how Citibank negotiated with the Credit Rating Agencies to establish their first SIV: "The bankers worked with the credit rating agencies to develop the parameters that would satisfy the requirements for an AAA rating, the highest rating possible. By establishing a sufficiently diversified and interest rate-hedged portfolio, they convinced the rating agencies to grant it AAA status on the proviso that Citibank stood by it. Citibank agreed to provide the new SIV with a 100 percent liquidity support guarantee for up to 360 days. This meant that if the entity needed cash, it could rely on Citibank funding for almost a year. With an AAA rating, the SIV liabilities were deemed to be of comparable risk to U.S. Treasury bills and could now be purchased by money market funds". Quoted from: Asokan Anandarajan, Benjamin Chou & Michael Ehrlich: "Structured Investment Vehicles: The unintended consequence of financial innovation: some reasonable ideas and objectives combined to have unexpected effects", *Banking Accounting & Finance*, Vol. 22, Issue 6, pages 29-32, page 29.

the income revenue on the securities it held and the interest paid on the notes that it issued to investors. The sponsors would use the money they received from the sale of assets to the SPV to purchase the mortgages that it made into securities. Financial institutions[755] would invest in ABCP because it was highly rated and liquid, and so allowed cash to be invested safely for short periods of time while still earning a rate of return[756].

By creating the SIV banks could borrow money to buy mortgages, securitise them either as RMBS or CDOs, and then repay the money when the RMBS or CDOs were sold to the SIV

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755 "The SIVs were also entwined with America's vast £3000 billion money market fund sector. Most ordinary Americans assumed that money-market funds were as safe as bank deposits. The funds marketed themselves on the mantra that no fund had ever 'broken the buck', or returned less than 100 per cent of money invested. However, these money-market funds were now holding large quantities of notes issued by SIVs and were not covered by any federal safety insurance. That created the potential for a chain reaction. If SIVs collapsed, the worry went, money-market funds would suffer losses and consumers would suddenly discover that their super-safe investments were not so safe after all." See: Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 199.

756 "For example, one might borrow for a year in the ABCP market for 2 percent and earn 5 percent return on the MBSs and CDOs during that period. At the end of the year, one would seek to roll over the loan for another year or find a different funder". Quoted from: Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 165.

"In addition to being bankruptcy remote, SIVs are also insolvency remote. This means that investors in SIVs only have limited recourse to the SIV upon the borrower's (the SIV) insolvency—the creditor (investor) only has recourse to the net proceeds of the assets supporting the SIV". Quoted from: Castro, Jr. Daniel I.: "Structured Investment Vehicles (SIVs)", in *The Capital Markets: Evolution of the Financial Ecosystem*, Edited by Gary Strumeyer and Sarah Swammy, John Wiley & Sons (2017), pages 381-388, page 383.

to serve as collateral for ABCP. Sponsoring banks would provide liquidity support[757] to the SIV in order to cover any temporary shortfalls in funds for interest or principal payments on the ABCP.

This whole arrangement depended on the SIVs being regarded as holding safe investments, however:

"*As mortgagors began to default in 2006 and house foreclosures began to increase, the value of MBSs and CDOs in the SIVs came into question. Moreover, since many of the SIVs contained a wide variety of assets, the buyers of assets did not really know what was in the package they were buying. Eventually, this made participants in this market become unwilling to purchase ABCP. This caused trouble for financial institutions that had relied on sales of ABCP to obtain funds for use in longer – term investments*"[758].

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757 Gillian Tett explains how Banks exploited a loophole in the Basel Accords to avoid having to hold capital against the risk that such credit lines might suppose: "The loophole was this: The Basel Accord stated that banks didn't need to hold capital resources for any credit lines that were less than a year in duration. So banks typically extended credit lines to SIVs and conduits that were 364 days or less". Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 104. They could also use SIVs to avoid leverage ratios: "Citibank had used a network of SIVs in order to circumvent the leverage limit imposed on Commercial Banks in the U.S that obliged them to keep the assets on their books below twenty times the value of their equity". See: Tett, Gillian: *Fool's Gold. How unrestrained greed corrupted a dream…*, op. cit., page 142.

758 Ibid, page 265.

4.5 (a) The opacity of SIVs

The use of ABCP to fund the production of RMBS and CDOs meant that, if the sale of ABCP ground to a halt, and the commercial paper could not be rolled over, then these institutions had to find alternative funding or wind down the SIVs they sponsored and sell the assets.

Figure 35: The Amount of Asset Backed Commercial Paper Outstanding in the U.S Market in Billions of Dollars (2004 – 2011)[759].

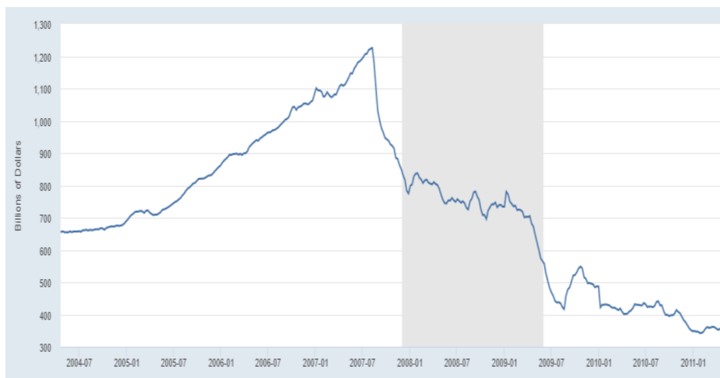

Figure 35 shows how the quantity of ABCP outstanding fell from over $1.2 trillion dollars in July 2007 to just under 400 billion dollars in January 2011. The shaded area of the graph represents the key years of the GFC.

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759 Source. Federal Reserve Bank of St Louis. Available at: https://fred.stlouisfed.org/series/ABCOMP#0

As concern grew that the SIVs contained assets tainted with subprime mortgages the value of the assets the SIVs contained began to fall and investors were unwilling to purchase ABCP.

Ironically only 2% of the SIVs' holdings were subprime mortgage related[760] and a large portion of their holdings were backed by trade receivables from producers of commodities and other goods. However, there was no way for investors to ascertain the assets held by the SIVs, and as CDOs and RMBS fell in price, it seemed safer to simply not invest in ABCP.

"*In 2007 and 2008, a number of ABCP issuers found themselves without buyers when it came time to auction new CP. Some dealt with these auction failures by extending the CP terms and paying the investors a premium interest rate during the extension period. When the extensions began to run out, the debt market was in even worse condition. A number of ABCP issuers ended up having to liquidate their underlying AAA and AA assets into a hostile market. A few couldn't even pay off their ABCP because proceeds from the liquidations came to less than 95 cents on the dollar. Investors began to question the quality of all types of underlying assets in all types of ABCP. The total amount of outstanding ABCP also began to decline as the renewals came up, which forced the sale or transfer of the underlying assets,*

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[760] Quoted from. Hill, Howard B.: *Finance Monsters*…, op. cit., page 73.

whether they were questionable subprime bonds or not. Over the period from mid-2007 to early 2008, aggregate ABCP declined from approximately $1.2 trillion to less than $800 billion, and those assets had to be sold or transferred onto the balance sheets of the sponsoring banks"[761].

As investors abandoned ABCP the sponsors were left without funding capabilities for their vertically integrated securitisation production chains [762], and after a deal with the U.S Treasury to rescue the SIVs failed, the sponsoring banks were forced to re-admit the troubled assets on their balance sheets[763].

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761 Ibid, page 163.

762 See. Fligstein: "If a bank was going to be vertically integrated, they were going to need capital to purchase mortgages, make securities, and borrow to hold those securities on their own accounts. When Lehman Brothers collapsed, it makes sense that those banks who were deepest into the vertical integration strategy were the ones who had borrowed the most money to fund their efforts and found themselves at greatest risk. While the vertical integration strategy worked dramatically to produce record profits from 2001 to 2006, it left the banks most deeply involved with large amounts of debt that was effectively hidden off books in SIV funded by the ABCP market. This borrowing short to go long worked spectacularly well while it worked, but once the confidence in the banks that employed it most successfully was in question the bottom fell out quickly" (Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*, op. cit., page 167).

Fligstein notes that Citibank, Bank of America, Morgan Stanley, Bear Stearns, Lehman Brothers and Countrywide Financial appeared in the top ten of conventional and nonconventional mortgage originators, the top ten issuers of RMBS and CDOs and the top eight entities most involved in the ABCP market. See: Ibid 167.

763 "Although the particular details on how rescues were structured differed across banks, they all amounted to a de facto transfer of the vehicle assets on balance sheet, the full repayment of senior debtholders and the end of the operation of the SIV as a going concern".763 Quoted from: Segura, Anatoli: "Why Did Sponsor Banks Rescue Their SIVs? A Signalling Model of Rescues", *Review of Finance*, Vol. 22, Issue 2, March 2018, page 687.

"*On September 20, Sachsen Funding Ltd was the first SIV to be rescued. Fearing the potential destabilizing effect of massive fire sales from SIVs trying to obtain liquidity in order to repay ABCP at maturity, the US Treasury tried to coordinate a private bail out of the SIV sector. This government supported plan led Citigroup, JP Morgan Chase, and Bank of America to propose in October the creation of the Master Liquidity Enhancement Conduit, also known as Super SIV, a conduit partially capitalized by these institutions that would buy the highest quality assets of SIVs with liquidity needs. However, problems in attracting external investors to the Super SIV delayed its creation and, after the failure of two additional SIVs, HSBC announced the rescue of its two SIVs on November 26. Under the pressure from market commentators and participants who commonly alluded to the reputation of the sponsors, other banks followed HSBC and announced rescue plans for their sponsored SIVs in the subsequent dates. On December 14, Citigroup announced the rescue of its seven SIVs and the creation of the Super SIV was abandoned. By February 2008, most sponsoring banks had announced their intentions to rescue their vehicles*"[764].

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[764] Quoted from: Segura, Anatoli: "Why Did Sponsor Banks Rescue Their SIVs? A Signalling Model of Rescues", op. cit., page 687.

4.5 (b) Repurchase agreements

As commented on in the first chapter, through repurchase agreements banks could buy securities and pay for their purchase price by immediately reselling them for a short period of time (often somewhere between one night and three months) with the contractual guarantee of repurchasing them at an agreed price. The seller would accept a haircut *(a discount*) on the price of the sale (and /or agree to buy it back at a slightly higher price). This mechanism was a collateralised short term funding agreement, and the haircut determined how much of its own money the bank needed to put into the purchase price. The short-term buyer would receive the interest payments on the collateral it purchased and the deal could be continually rolled over, allowing the short – term purchaser to receive the benefits of these interest payments for a discounted price.

The use of repurchase agreements as a means of short term funding had been reinforced in the U.S by the passing of the 2005 Bankruptcy Abuse Prevention and Consumer Protection Act, as this had excepted repurchase agreements from automatic stay[765] (which prohibits the immediate liquidation of collateral in favour of a loan) and allowed repo creditors to immediately liquidate

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[765] See section 569 of the Bankruptcy Abuse Prevention and Consumer Protection Act 2005.

collateral in the event of bankruptcy, permitting the resolution of repo obligations outside of bankruptcy proceedings. It also widened the range of collateral that would qualify for this exemption to include mortgages and mortgage related securities[766].

Obviously the operation carried a funding risk, as it was possible that the buyer would refuse to roll over the deal in times of economic difficulty, or buyers would demand ever greater haircuts for the same assets.

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[766] See section 907 of the Bankruptcy Abuse Prevention and Consumer Protection Act 2005. Previously on GSE RMBS had been granted this exception.

Figure 36: The weighted average haircut for nine asset classes (2007 – 2009)[767].

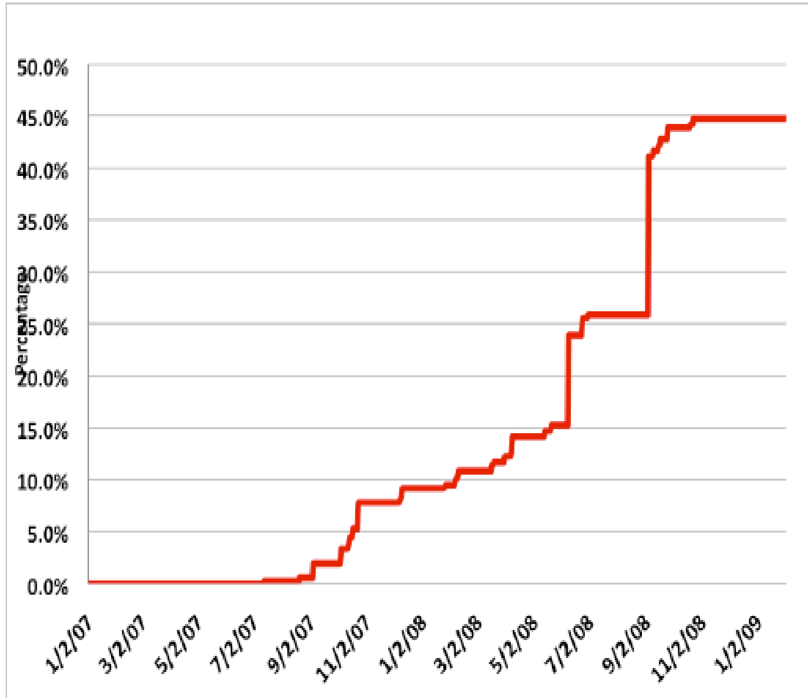

Figure 36 shows the weighted average haircut for the following securitised asset classes (auto securities, credit card receivables, student loans, commercial mortgage backed securities, collateralised debt obligations, residential mortgage backed securities, home equity loans, consumer receivables and

767 Source: Gorton, Gary B. & Metrick, Andrew: "Securitized Banking and the run on Repo", National Bureau of Economic Research, Working Paper 15223, August 2009, page 37.

corporate debt). The index rose from 0 in early 2007 to nearly 50% in late 2009.

As was the case for the ABCP market, the repo market was struck by uncertainty, as the size of subprime related holdings by repo counterparties was unknown:

"*The location and size of subprime risks held by counterparties in the repo market were not known and led to fear that liquidity would dry up for collateral, in particular non-subprime related collateral. Uncertainty led to increases in the repo haircuts, which is tantamount to massive withdrawals from the banking system*".[768]

PART 4: MODELLING ERRORS AND SECURITISATION

4.6 Modelling CDOs

Critical to the AAA rating of the senior tranches of CDOs was the assumption that the tranches of the CDOs, had very low rates of correlation. In retrospect this seems counterintuitive, given that the CDO managers (in charge of buying assets and structuring the

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[768] Quoted from: Gorton, Gary B. & Metrick, Andrew: "Securitized Banking and the run on Repo", op. cit., page 23.

deal) overwhelmingly purchased securitisation notes in which the probability of default had already been stratified, that is, BBB rated residential mortgage backed securitisation notes. However, the CDO managers used a sophisticated statistical technique called the copula model. A copula model tells you about the probabilistic behaviour of a group of variables in terms of the random behaviour of the variables individually. A correlation of 1 means that there is a perfect correlation, while a correlation of 0 means there is no correlation at all. In a CDO with (for example) 5000 mortgages, the number of possible correlations between them is 5000 x 4999 divided by 2, which equals 12,497,500, which is the number of pairs among the 5000 mortgages. The modellers, with no way of actually accurately calculating the correlation between the individual mortgage obligors' behaviour, would simply assume a correlation parameter based on the historical performance of securitisation bonds, however:

"*because most PLMBS issuance occurred during a period of rising house prices, there were few PLMBS downgrades over their history, leading modellers to conclude that correlations among PLMBS bonds were very low; Moody's assumed a 12% correlation, S&P's a much lower 6%*" (…) "*As a result of these very low assumed correlations, as much as 76% of mezzanine*

ABS CDOs and 89% of high-grade ABS CDOs were rated AAA"[769].

These correlation parameters proved to be incorrect.

Figure 37: Subprime private label mortgage backed securitisation issuance overall volumes and losses (as calculated in 2009) for the top 18 Asset backed Security CDO Originators[770]

Dealers	Subprime PLMBS Issuance	ABS CDO Issuance	Senior AAA ABS CDO Issuance	ABS CDO Writedowns
Merrill Lynch	76,747	91,767	64,324	26,100
Citigroup	54,032	70,552	50,945	34,106
UBS	20,024	65,409	35,126	21,865
Goldman, Sachs	52,727	59,103	45,313	–
Credit Suisse First Boston	99,081	38,209	18,221	3,427
Deutsche Bank Securities	59,635	37,362	16,363	2,092
Wachovia Securities	12,528	25,033	24,363	1,860
RBS Greenwich Capital	31,643	23,869	15,535	3,609
Calyon Securities (Agricole)	–	22,825	14,399	3,400
Bank of America Securities	28,524	22,617	15,911	10,041
Barclays Capital	33,812	21,424	19,883	3,254
Lehman Brothers	170,342	19,116	11,765	200
Bear Stearns	61,698	19,111	9,985	2,300
Morgan Stanley	121,289	14,237	7,356	7,800
WestLB Securities	–	12,125	9,121	–
Societe Generale	4,796	11,609	3,740	4,044
Dresdner Bank (Allianz)	–	9,875	7,087	1,604
JP Morgan	53,628	7,584	4,081	1,300
Totals	880,506	571,827	373,518	127,002

Figure 37 shows the reported write-downs according to the financial statements (from 2007 – 2009) of the top 18 ABS CDO originators from 1998 to 2007, representing 89% of all ABS CDOs issued over this period. Almost 90 % of the losses corresponded to CDOs issued from mid-2005 to 2007. The total

769 Quoted from: Cordell, Larry; Feldberg, Greg & Sass Danielle: "The Role of ABS CDOs in the Financial Crisis", op. cit., page 19.

770 Source: Cordell, Larry; Feldberg, Greg & Sass Danielle: "The Role of ABS CDOs in the Financial Crisis", op. cit., page 17.

losses amounted to $ 410 billion (a loss rate of 65%), of which $ 325 billion were from the AAA and super-senior tranches[771].

4.6 (a) VaR

Value at Risk was a system of statistical analysis that was used to allow banks to calculate the probable losses on a portfolio of assets within a given time-frame and, subsequently, to calculate the regulatory capital that they needed to keep to cover the assets on their balance sheets. So in theory, VaR determined how much money ought to be put aside to cover expected losses.

In 2004 it was adopted by the U.S Securities and Exchange Commission, which allowed large banks to calculate their own capital requirements by using VaR[772].

In very basic terms the method would use historical data to determine the past volatility of asset classes and then use this information as a guide to predicting future asset behaviour. It

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771 See. Cordell, Larry; Feldberg, Greg & Sass Danielle: "The Role of ABS CDOs in the Financial Crisis", op. cit., pages 10-27.

772 "In exchange for letting the parent holding companies be more closely scrutinized and policed, and provided that a lower-bound limit of $500 million in net capital was respected at all times and that a $5 billion net capital alarm bell was put in place (should such lower barrier be breached, the SEC was to be notified and it then would consider whether remedial actions should be taken), the large U.S. investment banks could from then on have their capital requirements calculated by VaR, along the lines previously set out by Basel (99 percent confidence interval, 10-day holding period, multiplication factor of three that could go up to four if the model misbehaves, minimum of one year of historical data, allowance for correlations within asset families and across asset families)". Quoted from: Triana, Pablo: *The number that killed us…*, op. cit., page 104.

would use the normal distribution pattern, the bell curve, to map out this probability and use standard deviations as a proxy for volatility. It would also use correlation assumptions (garnered again from historical data) to predict how asset classes would interact.

One of the key problems of the method was that historical data in the markets does not necessarily tell you very much about future performance. If the selected historical sample showed little volatility, then the expected losses on that asset class will be predicted as being tiny. The opposite could also be true. The same problem is faced with correlation, as assets that moved in the same direction in the past may move in opposite directions in the future, or have no correlation at all, or show a much more intense correlation than previously etc.

Another key problem was that the normal distribution pattern, which is very good for modelling the probability of certain self-limiting characteristics such as the height ranges of a population has no reason to be accurate with financial assets.

Unsurprisingly it did not work very well at calculating expected losses during the financial crisis.

"*VaR proved to be a very unreliable risk estimator, across all banks. VaR's "predictions" are bound to be off-base, but what happened during the crisis was flat-out obscene. The analytical misfirings were monumental. Take Swiss giant UBS, a prominent*

victim of the crash. It reported 50 VaR exceptions for 2008 and 29 for 2007. At the 99 percent confidence level chosen by UBS, there should have only been about 2.5 exceptions (trading days when actual losses exceeded VaR's predictions; 1 percent of roughly 250 trading days per year in this case) per year. Or take local rival Credit Suisse. The Zurich powerhouse experienced 25 and 9 VaR exceptions in 2008 and 2007, respectively; also at 99 percent confidence, this implies above six times more real losses than theoretically forewarned"[773].

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[773] Ibid, page 31.

CHAPTER 5: EUROPEAN RESPONSES TO THE CRISIS AND SPANISH SECURITISATION

Chapter 5 is divided in two sections. The first examines the performance of European Securitisation both during the GFC and over the years immediately after it, and the European regulatory responses that have directly affected securitisation, principally Regulation (EU) 2017/2402 that introduced a general framework for Securitisation and established the criteria for simple, transparent and standardised (STS) securitisation, and its recent amendment by Regulation (EU) 2021/557 which established STS criteria for balance sheet synthetic securitisations. The second part of the chapter explores the regulation of securitisation in Spain and focuses on Law 5/2015 (the Promotion of Business Financing Act) which regulates Spanish securitisation through its articles 15 to 42.

My concern in this chapter is to show that the performance of Spanish securitisation did not merit a radical legislative overhaul after the GFC, and that the 2015 domestic re-configuration of securitisation law would seem to have been sufficient. The Spanish market for residential mortgage backed securities was quite unlike its U.S counterpart and it is difficult to see how any

minimal improvement to quality that the STS criteria might effect could offset the costs of more onerous standards.

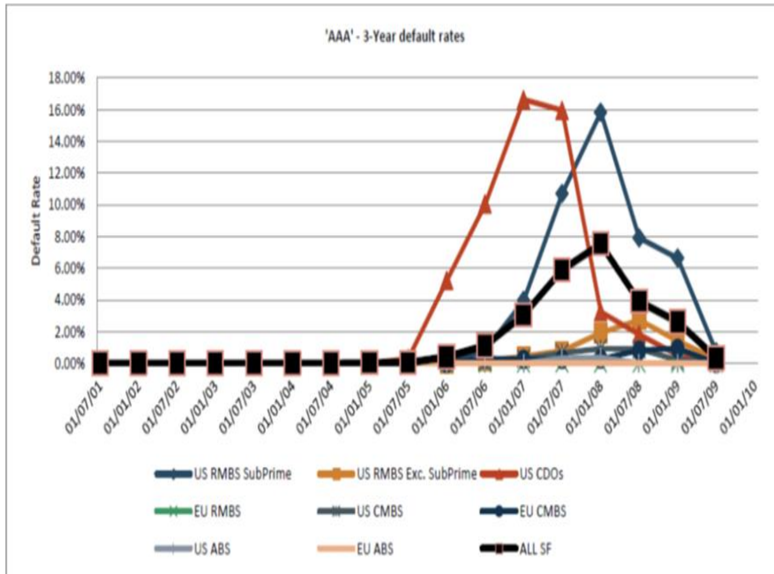
PART 1: EUROPEAN SECURITISATION AND THE EUROPEAN RESPONSE TO THE CRISIS

5.1 The performance of European and U.S Securitisation

As stated earlier in the thesis, European generated securitisations across all asset classes had significantly lower default rates both during and in the years immediately following the crisis than their U.S originated counterparts[774]. **Figure 38** shows the three year default rate for different European and U.S originated AAA rated securitisation products between July 2001 and January 2010. The thick black line in the graph shows the performance of securitisation products as a whole, without distinguishing between assets classes or whether they were originated in the U.S or Europe.

774 Securitized products in Europe performed much better than those in the US during the crisis. For instance, of more than 9,000 European asset-backed-securities issued before 2008, only 2 per cent defaulted, compared with about a fifth of US asset-backed-securities. Quoted from: Quaglia, Lucia: "It takes two to Tango: The European Union and the International Governance of Securitization in Finance", *Journal of Common Market Studies*, Vol. 59, Num. 6, 2021, page 1373.

Figure 38: Three-year default rates for AAA rated U.S and European Securitisations (June 2001 - January 2010)[775]



While U.S RMBS subprime products and U.S CDOs both struck levels of approximately 16% between 2007 and 2009, defaults in EU RMBS were well below 1%[776]. The contrast

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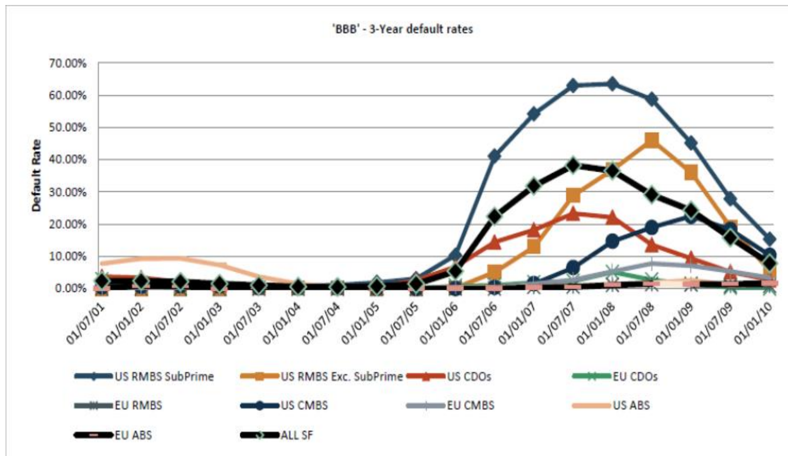
[775] Source: The European Banking Authority report on qualifying securitisation (2014). Page 12. Available at: https://www.eba.europa.eu/sites/default/documents/files/documents/10180/950548/3c52e2e3-66c2-493f-b3b7-a7d55dc5cd41/EBA%20report%20on%20qualifying%20securitisation.pdf?retry=1

[776] "In the USA, AAA-rated RMBS incurred default rates of 16 percent in the subprime market and 3 percent in the prime market. Yet in the EU defaults on RMBS never exceeded 0.1 percent. This disparity is even larger if one compares BBB rated securitized products. In the USA, default rates peaked at 62 percent in the subprime market and 46 percent in the prime RMBS market. In the EU, BBB-rated securitized products reached a peak default rate of 0.2 percent". Quoted from: Buchanan, Bonnie G.: *Securitization and the Global Economy…*, op. cit., pages 203-204.

between European and U.S Securitisation is even greater when comparing the three-year default rates for BBB rated securitisations as shown in **Figure 39**

Figure 39: Three – year default rates for BBB rated U.S and European Securitisations (June 2001 - January 2010)[777]



U.S residential mortgage backed securities reached a high of 60% for subprime products and 40% for non-subprime products, while U.S CDOs reached a high of just over 20%. Once again in contrast, European RMBS never approached 0.5 %.

In addition to the many idiosyncratic features of U.S securitisation already commentated on in the previous chapter, it

[777] Source: The European Banking Authority report on qualifying securitisation (2014), page 12.

is worth noting some of the reasons why European securitisation did not progress in the same direction as its U.S counterpart. E.U Competition Rules[778] would have prevented the establishment of anything resembling the Government Sponsored Agencies that have traditionally fuelled residential mortgage backed securities in the U.S (by providing liquidity in the secondary market). The covered bond market is not well established in the U.S and does not benefit from the same legal guarantees[779], which explains why it did not provide a competing source of funding there. The alternative mortgage contracts which featured heavily in the later stages of the CDO boom, are not so common in European jurisdictions[780], and the foreclosure procedures in Civil Law

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[778] See Articles 101 to 109 of the Treaty of the Functioning of the European Union.

[779] In European jurisdictions covered bonds are dual recourse, meaning that the bondholders can claim payment not only from the specific pool of mortgages covering the bonds but also from the issuing bank itself. This is not the case in the U.S: "A notable exception to the dual recourse feature arises in the case of covered bonds issued in the US. Consistent with strong traditions in the US securitization markets, bond holders of US covered bond issues do not have recourse to the issuing bank itself because the notes are obligations of a bankruptcy-remote, special purpose entity (SPE)". Quoted from." Fabozzi, Frank: *The Handbook of Mortgage Backed Securities*, op. cit., page 446. There is currently no specific U.S Legislative framework for covered bonds, despite attempts to introduce one such as the proposed United States Covered Bond Act of 2011, available at: https://www.congress.gov/112/bills/hr940/BILLS-112hr940rh.pdf

[780] "(…) during recent years and up to the financial turmoil, new atypical contracts have been introduced in the United States with so-called "teaser rates", negative amortisation rates and loan-to-value ratios of close to or above 100%, especially in the sub-prime segment. The higher default risk of such sub-prime mortgage loans was to a large extent removed from banks' balance sheets, and was possibly mostly transferred to private ABS issuers which were less regulated than GSEs. Such atypical contracts were used to a lower extent in the euro area, probably related to accounting rules making

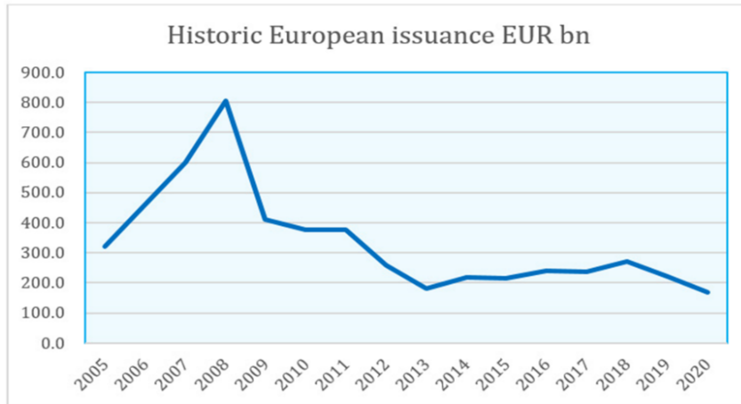
jurisdictions, which make up the majority of EU countries, tend to grant full recourse to the assets of defaulting borrowers to their creditors[781], allowing for better recovery rates for securitisation noteholders.

Despite the strength of the performance of European issued securitisations in the years surrounding the crisis period, demand fell precipitously from 2008 onwards. **Figure 40** shows the value of European issuance from 2005 to 2020 in billions of Euros.

it less easy to derecognise loans". Quoted from: The ECB Monthly Bulletin. August 2009. Page 19.

[781] For example, the Spanish Civil Code determines in article 1.911 that. "Debtors shall respond for the settlement of their obligations will all their present and future goods".

Figure 40 Total European Securitisation Issuance in Billions of Euros[782].



657 Source: DLA Piper Commentary: "Brexit - impacts and changes for securitisations in the UK and Europe".At https://www.dlapiperintelligence.com/investmentrules/securitisation/index.html?t=commentary&s=brexit

Figure 41: Total U.S Securitisation issuance compared to European issuance between 2006 and 2016[783].

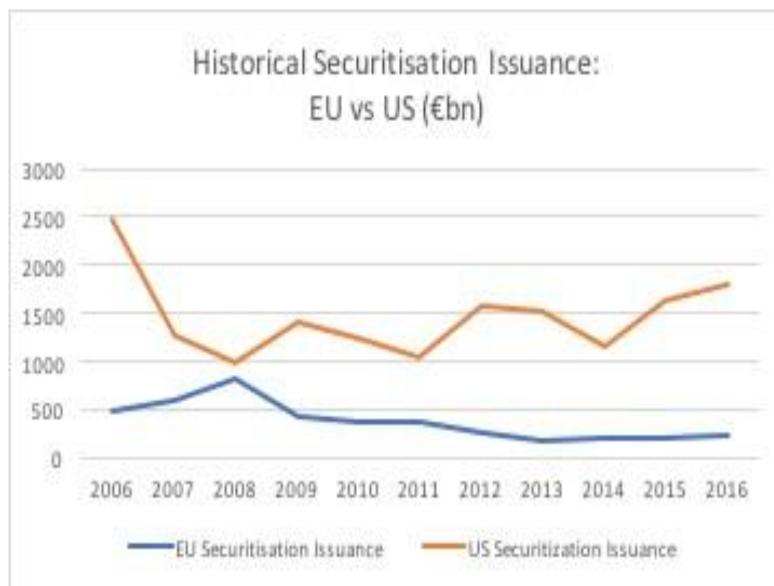
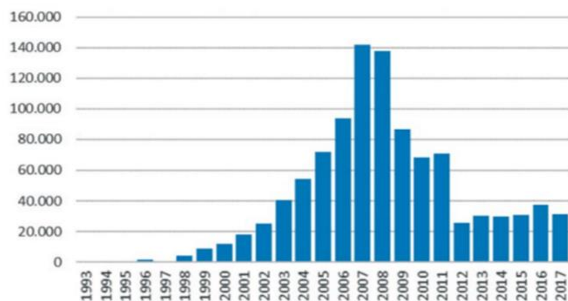


Figure 41 compares the issuance of U.S and E.U securitisations between 2006 and 2016 while Figure **42** shows the issuance of all types of Spanish securitisation notes between 1994 and 2017. The graphs confirm the decline and the lack of any significant recovery in the European and Spanish securitisation markets, despite the post-crisis growth in the U.S markets, where every asset class of securitisation had performed far worse.

783 Source: QSV group: "EU Securitisation Issuance to Remain Anaemic". Available at: http://www.qsvgroup.com/news-and-blog/eu-securitisation-issuance-to-remain-anaemic

Figure 42: Issuance of all types of securitisation note in Spain in millions of Euros[784]



The European Banking Authority has laid part of the blame of the poor recovery on the stigma the financial crisis has attached to securitised products in general:

"The perception of securitisations as an investment class altogether has been negative since the crisis struck, due to the stigma placed on the entire investment class following the high level of defaults and high losses that characterised specific asset classes of the securitisation market, in particular US sub-prime RMBS products, US CDO products and, to a lesser extent, CMBS products".[785]

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[784] The NCSM. The information is available in Spanish at:

https://www.cnmv.es/Portal/Publicaciones/SeriesWeb/PagSerie.aspx?serie=PFT112

[785] Quoted from: The European Banking Authority report on qualifying securitisation (2014), page 24.

5.2 Responses to the crisis – the E.U risk retention rule

One of the first Regulatory responses to the crisis in Europe that directly affected securitisation was the risk retention rule in article 122 (a) 1 of the 2011 modification of the Capital Requirements Directive (which was known as CRDII[786]). The risk retention rule was broadly modelled on Section 941 of the Dodd-Frank Act[787] in the U.S, which mandated that originators or sponsors had to retain a minimum of 5% on the issuance of non-qualifying private label residential mortgage backed securities. These minimum retained exposures could not be hedged or transferred. The risk retention requirement[788] was based on the

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786 Capital Requirements Directive II - Directive 2013/36/EU

787 Dodd-Frank Wall Street Reform and Consumer Protection Act. "To attempt to address moral hazard resulting from the originate-to-distribute model of loan origination (under which lenders sell off their loans as they are made), thereby improving the quality of the financial assets underlying securitization transactions, Dodd-Frank Act § 941 requires securitizers— who are effectively originators or sponsors of the securitization - to retain a portion of the credit risk (so-called 'skin in the game') for any financial asset (including mortgage loans, other than Qualified Residential Mortgages) that the securitizer, through the issuance of an asset-backed security, transfers, sells, or conveys to a third party. For example, securitizers are required to retain at least 5 per cent of the credit risk for non-qualified residential mortgage loan assets that they transfer, sell, or convey through the issuance of an asset-backed security. The regulations prohibit securitizers from directly or indirectly hedging or otherwise transferring the credit risk they are required to retain with respect to an asset". Quoted from: Schwarcz, Steven: "A global perspective on securitized debt", op. cit., Kindle position 18097 18146.

788 With reference to the European risk retention rule that was contained in CRD II: The originator could justify compliance with this requisite with any of the following actions: Vertical retention: if the originator retained at least 5% of the nominal value of each of the tranches transferred to investors or transferred between investors. In the case of the securitisation of renewable loans, the retention of at least 5% of the nominal value of the securitised exposures./ The retention of exposures chosen randomly: - the

assumption that obliging originators or sponsors to keep a part of the securitisation notes they issued would help to ensure the quality of the assets they contained, particularly the underwriting standards of residential mortgages. This was seen as a way of combatting one of the perceived causes of the GFC, the cavalier "*originate to distribute*" securitisation model.

There are at least two difficulties with risk retention being presented as a solution to problems made apparent by the GFC. The first is that financial firms retaining large quantities of CDOs on their balance sheets or in SIVs whose losses they were obliged to support was a far more serious problem than the distribution of poorly underwritten securitised loans to investors[789], a fact which

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retention of at least 5% of the nominal value of the securitised exposures, in such a way that these exposures would have been included in the securitisation process if they had not been retained, and providing that the number of exposures that have the potential to be securitised was not less than 100 in the moment of the initiation of the securitisation process.

The retention of the first loss tranche or other tranches with the same risk profile as the trances transferred or sold between investors and that do not have maturity dates that were less than those that had been transferred or sold to investors, in such a way that the retention as a whole was not less than 5% of the nominal value of the exposed securitisations.

[789] "For example, the FCIC found that Citigroup had a total of $55 billion worth of subprime-related exposures in November 2007.These subprime exposures included retained CDO tranches and payment guarantees provided by Citibank (a subsidiary of Citigroup) to their CDO investors in the form of liquidity puts. Specifically, in July 2003, Citigroup issued a $1.5 billion CDO named Grenadier Funding. This CDO included a $1.3 billion tranche backed by a liquidity put from Citibank, which would be triggered should the CDO tranche fail". Quoted from: Emedosi, Chike Jude: "The 2007/2008 Global Financial Crisis: A Further Reassessment of the Originate to Distribute Narrative", *Banking & Finance Law Review*, Vol. 35, Num. 2, May (2020), page 286.

puts in question the utility of a risk retention rule. The second is that, as Rasheed Saleuddin has written[790], allowing the originator or sponsor to choose between various alternative ways of complying with the risk retention rule can render it virtually ineffective.

5.2 (a) Initiatives to improve the quality of securitisation

A number of European initiatives focused on improving the quality of securitisations as a way of revitalising the industry by confronting the concerns of investors. In 2008, the European Securitisation Forum[791] published the document "*RMBS, Issuer Principles for Transparency and Disclosure"*[792], which provided guidelines on the information that potential investors in RMBS should receive. Their recommendations included the information

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A liquidity put is a contract that compels one party to buy an asset from another under certain specified circumstances.

790 See the detailed discussion on the subject in Chapter 5 of Saleuddin, Rasheed: *Regulating Securitized Products*, op. cit.

791 Now known as "The Association for Financial Markets in Europe (AFME)". The objectives of the Association can be found at: https://www.afme.eu/About-Us/Introducing-AFME

792"RMBS, Issuer Principles for Transparency and Disclosure". The full text of the document can be found at: https://ypfsresourcelibrary.blob.core.windows.net/fcic/YPFS/b57eda1f-88f9-47f2-a41d-93837801c322.pdf

that potential investors should receive at the pre-issuance stage[793], the ongoing reporting principles of information to investors[794] and the frequency with which investors should receive information post-issuance[795].

In December 2012 the Basel Committee on Banking Supervision published a consultative document on the proposed revisions to the risk weights and capital charges contained in the securitisation framework[796]. The Prime Collateralized Securities Association (PCS)[797] an independent, non-profit organisation established in June 2012 to promote best practices in the European securitisation market, responded to the document in a letter dated the 15th of March 2013[798]. Their letter to the Basel

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793 Section II of "RMBS, Issuer Principles for Transparency and Disclosure", Pre-Issuance Disclosure Principles, pages 7-10.

794 Ibid, Section III, pages 11-13.

795 Ibid Section III, page 12.

796 Available at: https://www.bis.org/publ/bcbs236.pdf

797 The organisation can be found at: https://pcsmarket.org/the-pcs-association/

The Prime Collateralised Securities Association initially offered its own "labels" in both True Sale and later, Synthetic Securitisation, seeking to set industry standards for transparency and quality. With the advent of the European Securitisation Regulation its work has changed to becoming a verification agent for securitisation transactions.

798 Letter from the PCS to the Basel Committee for Banking Supervision, dated the 15th of March 2013. The letter can be accessed at:

https://pcsmarket.org/draft//wp-content/uploads/2013/03/PCS-response-Basel-Committee-Consultation.pdf

Committee identified what they considered to be the four conditions that had led to *"difficulties"* with securitisations since 2007.

(i) The originate to distribute model, which it stated was responsible for: "*the dramatic decline in underwriting criteria"*[799].

(ii) Leverage which, the organisation felt "*implies that very small changes in the credit performance of the underlying assets have substantial impact on the credit performance of the securitisation"*. High levels of leverage meant that securitisations: "*relied on a purported degree of accuracy in the measurement of the credit risk (including issues of correlation) that proved highly illusory. Put differently, highly leveraged securitisations are very vulnerable to model risk and the CRAs, as well as the market, placed unwarranted faith in the capacity of models based on limited data sets to gauge credit outcomes"*[800].

(iii) Securitisation with embedded maturity transformations, which, in the case of structured investment vehicles, relied on "*refinancing within a narrow window of time"* and so were

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[799] Ibid, page 5.

[800] Ibid, page 6.

"vulnerable to market liquidity risks that are extremely difficult to model – if such modelling is even theoretically possible"[801].

(iv) Transparency, which the letter stated: "*can come in either the form of an absence of necessary data or in the form of complexity. When related to complexity, the data is available but either its quantity or the underlying complexity of the securitisation structure is such that even a sophisticated investor cannot derive a reasonable assessment of the risk of investment"*[802].

The letter went on to advocate simple and transparent securitisations which it believed should benefit from reduced risk weightings.

"*One lesson we feel should be learned from the crisis (and particularly from the issues that arose with CRA CDO models) is that "qualitative" elements (such as simplicity, transparency, absence of maturity transformation, low or no leverage and control of "originate to distribute" business models) are also material risk drivers. As a consequence, we would favour a securitisation framework that encourages simplicity and transparency. We are concerned that the proposed framework*

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801 Ibid, page 6.

802 Ibid, pages 6-7.

effectively does not do so, as it treats all securitisations, however complex or opaque, in a similar manner"[803].

5.2 (b) The Basel STC framework

In July 2015 the Basel Committee published their criteria for identifying an STC framework[804]. This would serve as a blueprint for the STS framework within the EU Securitisation Regulation, which is broadly similar (although far more detailed and extensive).

The identification of criteria for simple, transparent and comparable securitisations was intended to:

"help transaction parties, including originators, investors and other parties with a fiduciary responsibility, evaluate the risks of a particular securitisation across similar products. In the case of investors, these criteria should assist them with their due diligence on securitisations, but in no case would these criteria serve as a substitute for such due diligence"[805].

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[803] Ibid, page 7.

[804] Basel Committee on Banking Supervision. Criteria for identifying simple, transparent and comparable securitisations. July 2015. The full text is available at: https://www.bis.org/bcbs/publ/d441.pdf

[805] Ibid, page 3.

More transparent securitisations, the Committee argued, would help investors assess the quality of the underlying assets, simpler securitisations would better allow investors to quantify the possible risks involved, and more comparable securitisations would make it simpler for investors to choose between one securitisation product or another within an asset class[806]. The 14 STC criteria were designed to ameliorate three areas of risk; asset risk, structural risk and fiduciary and servicer risk. Within the category of asset risk the criteria referred to the nature of the assets, their historical performance, their payment status, the consistency of the underwriting that generated the underlying credit, the selection and transfer of assets and the ongoing information on asset performance to be provided to investors. The criteria concerning the structural risk of the securitisation covered the cash flows, the hedging of interest rate and/or currency risk, the payment priorities, the voting and enforcement rights of the securitisation noteholders, the documentation disclosure and legal review of the structure and the alignment of interests between the

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806 According to the Basel Committee simplicity "refers to the homogeneity of underlying assets with simple characteristics, and a transaction structure that is not overly complex". The criteria for transparency: "provide investors with sufficient information on the underlying assets, the structure of the transaction and the parties involved in the transaction, thereby promoting a more comprehensive and thorough understanding of the risks involved". Promoting the comparability of the securitisation products: "could assist investors in their understanding of such investments and enable more straightforward comparison across securitisation products within an asset class" (Ibid, page 3).

originator and or sponsor and the noteholders. The fiduciary and servicer criteria related to the fiduciary responsibilities of the trust or securitisation management company, the contractual responsibilities of the servicer and their disclosure obligations to investors.

5.2 (c) STC criteria relating to asset risk

The Basel criteria proposed that assets within securitisations should have contractually identifiable periodic payments, which would make it easier to model expected returns. For the same reason, they argued that referenced interest payments ought to be based on customary market rates or indices, and not excessively complex formulae or derivatives. To facilitate the performance of due diligence by investors, the Basel criteria determined that asset performance data, such as delinquency and default rates, should be available for a time period long enough to "*permit meaningful evaluation by investors*"[807].

The credit claims or receivables to be transferred into the pool should not be delinquent or in default at the time of transfer (as again, these are more problematic for investors to analyse and model). The originator should be able to demonstrate to investors that any credit claims to be included in the securitisation pool,

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[807] Ibid, page 6.

were generated according to the customary underwriting standards of the originator's business (to avoid the moral hazard of deliberate adverse selection). These cash flows must also have been stress tested to show that they can meet the stated obligations under "*prudently stressed loan loss scenarios*"[808].

The STC criteria further determined that the performance of the securitisation should not be structured so as to rely on the ongoing selection and the discretionary active management of the assets (which again complicates the ability to model the cash flows and evaluate the risk the structure presents).

The Basel criteria only made provisions for true sale securitisations, and contained a series of requirements to ensure that assets met with the principle of true sale which were:

(i) that the credit claims against the obligors are legally enforceable and that warranties are given to that effect. These warranties should furthermore guarantee that the assets being transferred to the SPV are not subject to any limiting conditions or encumbrances.

(ii) that the issuing SPV is bankruptcy remote and so there are no re-characterisation or claw-back risks.

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808 Ibid, page 7.

(iii) that the transfer of assets is not made synthetically (no provision for synthetic securitisations were made in the STC Basel criteria and would not be included in the European STS label until 2021).

(iv) that the assets do not consist of securitisation positions (as this, again, complicates due diligence by adding a layer of complexity[809]).

The Basel STC criteria also specified the type of data that investors should have made available to them concerning the assets in order to be able to carry out proper due diligence. These included review by "*an appropriate and legally accountable and independent third party, such as an independent accounting practice"*[810], to check that the underlying credit claims met the eligibility requirements.

5.2 (d) STC criteria relating to structural risk

The Basel Committee designed the STC criteria to try to reduce the chance of complications resulting from the organisational structure of the securitisation. To prevent the need for the short term refinancing of the underlying assets (which

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[809] Complexity is added in re-securitisations because the underlying assets of those securitisation positions have to be analysed, together with the structural risks of the first securitisation structure.

[810] Ibid, page 9.

could disrupt payments to noteholders), the STC criteria exclude the reliance on the sale or refinancing of the underlying credit claims in order to meet the liabilities of the structure. It also states that any interest rate or currency mismatches between the payment streams from the underlying credits and the payment of interest and principal to the noteholders should be hedged (and that these hedging derivatives should be documented "*according to industry standard master agreements")*[811].

The payment priorities of securitisation noteholders and all creditors of the securitisation structure (such as servicers and hedging counterparties) need to be clearly defined in advance, and any triggers that could alter the priority of payments should be fully disclosed. Triggers contained in the structure which call for the acceleration of the payment schedules must ensure that payment is made sequentially in order of tranche seniority. All procedures relating to the obligors which could affect the payments to noteholders (debt forgiveness, debt restructuring, payment holidays) must be laid out in clear terms, and the rights of noteholders (such as voting rights, enforcement rights, and the rights of senior versus junior noteholders) need to be defined in advance. Both initial and final offering documents should be composed "*such that readers can readily find, understand and*

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[811] Ibid, page 10.

use relevant information"[812], and the terms and documentation of the securitisation should be reviewed "*by an appropriately experienced third legal practice"*[813].

The STC criteria also contain a retention requirement, stipulating that: "*the originator or sponsor of the credit claims or receivables should retain a material net economic exposure and demonstrate a financial incentive in the performance of these assets following their securitisation"*[814].

5.2 (e) STC criteria relating to fiduciary and servicer risk

Finally, the Basel STC criteria provided safeguards relating to the trust or securitisation fund management company and the servicer of the securitisation. It called for servicers to be able to demonstrate their expertise in the servicing of underlying claims, and for all of their policies, procedures and risk management controls to be "*well documented and adhere to good market practices"*[815].The parties with fiduciary responsibilities (the securitisation fund management company or trust) should be able "*to demonstrate sufficient skills and resources to comply with*

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[812] Ibid, page 11.

[813] Ibid, page 11.

[814] Ibid, page 12.

[815] Ibid, page 12

their duties of care in the administration of the securitisation vehicle"[816].

Furthermore, to avoid any unexpected disruptions in payment streams and to help provide full transparency to investors, the contractual obligations of all parties to the securitisation should be clearly defined in the initial offering documentation, together with provisions for the replacement of the servicer, bank account provider, any credit enhancement or liquidity providers and derivative counterparties should any of these fail to fulfil their duties or become insolvent. The central ideas of the Basel STC criteria would be adopted and expanded upon in the European Securitisation Regulation.

5.3 The European Securitisation Regulation

The European Securitisation Regulation forms part of the European Commission's plan to construct a Capital Markets Union[817]. The Regulation marks the first unified treatment of Securitisation in EU law.

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816 Ibid, page 12.

817 In the words of the European Commission website: "The capital markets union (CMU) is a plan to create a single market for capital. The aim is to get money – investments and savings – flowing across the EU so that it can benefit consumers, investors and companies, regardless of where they are located". Available at: https://ec.europa.eu/info/business-economy-euro/growth-and-investment/capital-markets-union/what-capital-markets-union_en

In 2014 the European Banking Association had issued a report on qualifying securitisations[818] in response to a call for evidence by the European Commission. The EBA, in line with the Basel Committee, advised the European Commission that, in order to help revitalise the market, it would be helpful to introduce a category of qualifying securitizations that would receive favourable capital treatment if they met criteria pertaining to simplicity, transparency and standardisation (STS). The EBA believed that:

"*Securitisation with these characteristics should, as a minimum, result in more investor confidence in securitisation*

Lucia Quaglia attempts to explain the impetus behind the efforts to revitalize European securitisation: "To begin with, in Europe, which had a bank-based financial system, securitization could be used by banks to increase lending to the real economy without increasing their capital requirements. Hence, securitization could boost economic growth, allowing the transfer of risk away from the banking sector. Moreover, market-based finance – above all, securitization – was instrumental to promote higher economic growth and private risk-sharing in the absence of fiscal centralization in the euro area. Last but not the least, there was extensive lobbying by the financial industry (…)." With respect to the role of securitisation in the Capital Markets Union she writes that "High levels of securitization were regarded as instrumental in order to develop Capital Markets Union and fulfil its objectives". Quoted from: Quaglia, Lucia: "It takes two to Tango: The European Union and the International Governance of Securitization in Finance", ob. cit., page 1373.

[818] European Banking Authority Report on Qualifying Securitisation. December 2014.

https://www.eba.europa.eu/sites/default/documents/files/documents/10180/950548/3c52e2e3-66c2-493f-b3b7-a7d55dc5cd41/EBA%20report%20on%20qualifying%20securitisation.pdf?retry=1

products and provide a contrast to the "post-crisis stigma" that the market has attracted"[819].

5.3 (a) The stated objectives of the Regulation

The Securitisation Regulation, which came into force on the 1st of January 2019, had a number of stated objectives. Among them were:

(i) To prevent the recurrence of the originate to distribute model by ensuring that: "*the exposures to be securitised should be originated in the ordinary course of the originator's or original lender's business pursuant to underwriting standards that should not be less stringent than those the originator or original lender applies at the time of origination to similar exposures which are not securitised"*[820]. This was to be done above all through a risk retention rule.

(ii) To "*address the risks inherent to highly complex, opaque and risky securitisation"*[821] by adopting rules that "*better differentiate simple, transparent and standardised products from complex, opaque and risk instruments*[822]*"* , and to apply to these

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819 Page 7.

820 Consideration number 28. Regulation (EU) 2017/2402.

821 Consideration number 3. Regulation (EU) 2017/2402.

822 Consideration number 3. Regulation (EU) 2017/2402.

STS transactions "*a more risk – sensitive prudential framework*"[823].

(iii) Ban resecuritizations (subject to certain derogations).

(iv) Establish securitisation repositories to make relevant information over the life of securitisation transactions available to investors.

(v) Establish STS requirements for asset backed commercial paper transactions.

It is not my intention to review the full content of Regulation (EU) 2017/2402. Rather I wish to focus on those elements that I consider to be a reaction to the role of securitisation in the GFC. My principal interest is therefore in the STS criteria, as they are the core response of the Europe Union to the perceived role of securitisation in the GFC, and are the rules that will materially shape future securitisation structures.

I shall consider the definitions of the key elements of securitisation given in the text as they are applicable to residential mortgage backed securitisations, and as my interest is in the rules applying to residential mortgage backed securities, I shall not examine the stipulations relating to ABCP. Nor shall I focus on the sanctions (whether administrative or criminal) that member

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[823] Consideration number 3. Regulation (EU) 2017/2402.

states must impose for infringements of the regulation, as I consider them to be outside the main focus of this study. Nor shall I concentrate on the STS notification requirements, or the reporting role of the Joint Committee of the European Supervisory Requirements.

I shall however consider the recent inclusion of STS criteria for balance-sheet synthetic securitisations, as these may use residential mortgages as their underlying assets.

5.3 (b) Securitisation

The definition of a securitisation provided by article 2.1 states that a securitisation is a transaction or scheme, whereby the credit risk associated with an exposure or a pool of exposures[824] ,is tranched and has all of the following characteristics:

(i) payments on the transaction or scheme are dependent on the performance of the exposure or pool of exposures (the mortgages). Unlike covered bonds there is no dual recourse measure, as the securitisation note holders can only lay claim to the pool of securitised mortgages according to the seniority of

[824] The pool of underlying exposures is subject to credit risk, that is, the risk of principal losses. This excludes market risk, so for example, while a pool of mortgages is a securitisation because of the credit risk that the borrowers default, a pool of owned real estate would not meet the requirement, because the risk here is market risk on the value of real estate.

their notes, and have no recourse against the assets of the sponsor or the originator.

(ii) the subordination of the tranches determines the distribution of losses during the ongoing life of the transaction or scheme[825].

(iii) The transaction or scheme does not create exposures which possess all of the characteristics listed in Article 147 (8) of Regulation (EU) Nº 575/2013 (specialised lending exposures)[826].

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825 This allows for senior tranches to continue to perform when junior tranches suffer losses.

826 Article 147 (8) lists the following three characteristics for specialised lending exposures:

"(a) the exposure is to an entity which was created specifically to finance or operate physical assets or is an economically comparable exposure;

(b) the contractual arrangements give the lender a substantial degree of control over the assets and the income that they generate;

(c) the primary source of repayment of the obligation is the income generated by the assets being financed, rather than the independent capacity of a broader commercial enterprise. "

The exclusion is based on the fact that these activities carry a different risk profile and so different risk weights to securitisation under the Capital Requirements Regulation. Article 1 of Commission Delegated Regulation (EU) 2021/598 supplementing Regulation (EU) Nº 575/2013 of the European Parliament and of the Council with regard to regulatory technical standards for assigning risk weights to specialised lending exposures, gives some examples of different types of activities classified as specialised lending exposures: " (i) (…) to finance the development or acquisition of large, complex and expensive installations, including in particular power plants, chemical processing plants, mines, transportation infrastructure, environment, and telecommunications infrastructure, and the income to be generated by the assets is the money generated by the contracts for the output of the installation obtained from one or several parties which are not under management control of the sponsor('project finance exposures') (…) (ii) (…) to finance the development or acquisition of real estate, including in particular office buildings to let, retail space, multifamily residential buildings, industrial or

5.3 (c) Originator

Is defined as an entity which either by itself or through related entities, directly or indirectly was involved in the original agreement which created the obligations of the debtor (in this case mortgages), giving rise to the exposures to be securitised. Or, purchases a third party's exposures (the residential mortgages) on its own account and then securitises them[827].

5.3 (d) Sponsors

A sponsor[828] is either a credit institution[829] or an investment firm[830] distinct from the originator that: establishes and manages

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warehouse space, hotels and land, and the income to be generated by the real estate is lease or rental payments or the proceeds from the sale of such real estate obtained from one or several third parties (…) (iii) (…) to finance the acquisition of physical assets, including in particular ships, aircraft, satellites, railcars, and fleets, and the income to be generated by those assets is lease or rental payments obtained from one or several third parties (…) (iv) (…) to finance reserves, inventories or receivables of exchange-traded commodities, including in particular crude oil, metals, or crops, and the income to be generated by those reserves, inventories or receivables is to be the proceeds from the sale of the commodity (…).

827 Article 2.3 Regulation (EU) 2017/2402.

828 As defined by article 2.5 Regulation (EU) 2017/2402.

829 The sponsor may be located within or outside of the EU but if it is a credit institution then it must conform to the definition given by point 1 of Article 4(1) of Regulation (EU) Nº 575/2013 which determines that a "credit institution means an undertaking the business of which is to take deposits or other repayable funds from the public and to grant credits for its own account".

830 The investment firm must meet the definition given by point 1 of Article 4.1 of Directive 2014/65/EU which decrees that an "an investment firm means any legal person whose regular occupation or business is the provision of one or more investment

a securitisation that purchases mortgage exposures from third parties, or purchases the mortgage exposures from a third party but delegates the management of the securitisation to an entity authorised to perform the activity[831]. The originator and the sponsor may be the same entity, in which case one would talk only about the originator of the securitisation.

5.3 (e) The Special Purpose Entity

The Regulation refers to Securitisation Special Purpose Entities (SSPEs)[832]. These may be configured as trusts or corporations (or other entities)[833], distinct from the originator and/or the sponsor. They must be established for the specific purpose of carrying out one or more securitisations and the range of activities they can perform must be limited to accomplishing

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services to third parties and /or the performance of one or more investment activities on a professional basis".

831 The delegated party must be authorised in accordance with in accordance with Directive 2009/65/EC (on the coordination of laws, regulations and administrative provisions relating to undertakings for collective investment in transferable securities), Directive 2011/61/EU (on alternative investment fund managers) or Directive 2014/65/EU (on markets in financial instruments).

832 Article 2.2 Regulation (EU) 2017/2402.

833 In Spain article 29.1 (a) of the Law on the promotion of business finance (Law 5/2015), obliges Securitisation Fund Management Companies to register as limited companies. The Fund itself has no legal personality and no net patrimony and must be represented by the corresponding Securitisation Fund Management Company.

that objective[834]. Their structure is intended to isolate the assets (the underlying mortgage loans) from the assets of the originator/sponsor. This is the bankruptcy proof function that we have already referred to throughout the thesis.

While SSPEs may be established outside of the EU, article 4 stipulates that they cannot be established in a third country if this country is listed as a high-risk[835] and non-cooperative jurisdiction by the Financial Action Task Force (FATF)[836]. Neither can an SSPE be located in a third country that does not fully comply with the standards contained in Article 26 of the OECD Model Tax

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834 In Spanish Law article 29.1 (b) of Law 5/2015 limits the legal objective of the Securitisation Fund Management Company to: "the constitution, administration and legal representation of securitisation funds and funds of bank assets in the terms contained in the Law on the restructuring and resolution of credit entities (Law 9/2012 of the 14th of November)". Law 9/2012 on the restructuring and extinction of credit entities was almost entirely derogated by Law 11/2015 on the recovery and extinction of credit entities and investment companies; however, additional disposition 10 remains in force and allows the assets and obligations of banks in the process of restructuring or liquidation to be grouped together to constitute Bank Asset Funds, which can only be represented by Securitisation Fund Management Companies, which will manage the securitised assets of these funds.

835 The FATF website describes high-risk jurisdictions as those which: "have significant strategic deficiencies in their regimes to counter money laundering, terrorist financing, and financing of proliferation". See: https://www.fatf-gafi.org/publications/high-risk-and-other-monitored-jurisdictions/documents/call-for-action-october-2021.html

836 The FATF website describes the organisation as: "the global money laundering and terrorist financing watchdog. The inter-governmental body sets international standards that aim to prevent these illegal activities and the harm they cause to society. As a policy-making body, the FATF works to generate the necessary political will to bring about national legislative and regulatory reforms in these areas". See: http://www.fatf-gafi.org/about/

Convention on Income and on Capital or in the OECD Model Agreement on the Exchange of Information on Tax Matters[837].

5.3 (f) A tranche

Is defined as a contractually established segment of the credit risk associated with the exposures (the mortgage loans), by which a position in the segment entails a risk of credit loss greater or lesser than a position of the same amount in another such segment (without taking into account the credit protection offered by third parties). The tranches are therefore ordered according to their modelled credit risk (regardless of any third party credit enhancements that might ameliorate actual losses to investors)[838]. The first loss tranche is defined as the most subordinated tranche in the securitisation structure[839], that is the first tranche to bear losses incurred on the mortgage exposures, and thereby provides protection to the second loss (and where relevant the higher ranking tranches).

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[837] Both article 26 (Exchange of Information) of the OECD Model Tax Convention on Income and on Capital and the OECD Model Agreement on the Exchange of Information on Tax Matters are designed to prevent money laundering and tax avoidance.

[838] Article 2.6 Regulation (EU) 2017/2402.

[839] Article 2.18 Regulation (EU) 2017/2402.

5.3 (g) Traditional and synthetic securitisations

The Regulation distinguishes between traditional securitisations in which the economic interest in the exposures is transferred to the SSPE, and synthetic securitisations in which risk transfer is achieved either through derivatives or guarantees. In this case the mortgages remain on the balance sheet of the originator[840].

5.3 (h) Investors

An Investor is simply defined as a natural or legal person that holds a securitisation position. However, article 3.1 determines that securitisation positions should not be sold to retail clients[841], unless a number of conditions are fulfilled:

(a) A suitability test has been performed[842]

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[840] Article 2.10 Regulation (EU) 2017/2402.

[841] Retail clients are defined in point 11 of article 4.1 of Directive 2014/65/EU. This simply states that a retail client is a client who is not a professional client. Professional clients are those who meet the criteria established in Annex II of the Directive. This provides a long list of categories who are considered to be professionals which includes: Credit Institutions, Investment firms, Insurance Companies, Pension Funds, Commodity and commodity derivatives dealers, National and Regional governments and supranational institutions (such as the World Bank and the IMF).

[842] The suitability test has to be performed in accordance with article 25(2) of Directive 2014/65/EU. This article states that: "When providing investment advice or portfolio management the investment firm shall obtain the necessary information regarding the client's or potential client's knowledge and experience in the investment field relevant to the specific type of product or service, that person's financial situation including his ability to bear losses, and his investment objectives including his risk tolerance so as to enable the investment firm to recommend to the client or potential client the investment

(b) the seller of the securitisation position is satisfied that, on the basis of the test, the securitisation position is suitable for the client

(c) the seller of the securitisation position notifies the client in a report of the outcome of the test.

Even if the retail client passes the suitability test the Securitisation regulation adds some further restrictions:

(i) If the financial portfolio of the client does not exceed € 500,000, the seller must ensure that the retail client does not invest an aggregate amount exceeding 10% of the client's overall portfolio in securitisation positions.

(ii) that the minimum amount invested in one or more securitisation positions is € 10,000.

Institutional Investors are defined by article 2.12 of the Regulation. They include insurance undertakings[843], reinsurance

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services and financial instruments that are suitable for him and, in particular, are in accordance with his risk tolerance and ability to bear losses".

[843] Insurance undertakings are defined by point (1) of Article 13 of Directive 2009/138/EC, it states that an "insurance undertaking means a direct life or non-life insurance undertaking which has received authorisation in accordance with article 14".

undertakings[844], alternative fund managers[845], management companies for undertakings for the collective investment in transferable securities[846], and credit institutions.

5.3 (i) A servicer

Is defined in article 2.13 as an entity that manages a pool of purchased receivables or the underlying credit exposures on a day to day basis. In Spanish RMBS the originating bank is usually always the servicer, and will receive the monthly payments from the mortgage obligors and chase up missed payments etc.

5.3 (j) Key provisions that are applicable to all securitisations

The Securitisation Regulation contains a group of rules that apply to all securitisations and a group of special criteria for simple, transparent and standardised securitisations. I do not propose to.

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844 A reinsurance undertaking is defined by point (4) of Article 13 of Directive 2009/138/EC, which declares that: "a reinsurance undertaking means an undertaking which has received authorisation in accordance with article 14 to pursue reinsurance activities".

845 Alternative fund managers are defined in point (b) of Article 4(1) of Directive 2011/61/EU, which defines them as legal persons whose regular business is managing one or more alternative investment funds.

846 UCITS management companies are defined in point (b) of Article 2(1) of Directive 2009/65/EC, which stipulates that "management company means a company, the regular business of which is the management of UCITS in the form of common funds or of investment companies (collective portfolio management of UCITS).

(i) Due diligence requirements – Article 5

(a) If the originator or original lender established in the EU is not a credit institution or an investment firm, then the institutional investor is obliged to verify that the mortgages were originated on the basis of sound and well-defined underwriting criteria, with a clearly established process for "*approving, amending, renewing and financing those credits*".[847]

(b) If the originator or lender is established in a third country the institutional investors must verify that the underlying mortgages are granted on the basis of sound and well defined criteria, and that it has effective systems in place to ensure that the credit granting is based *"on a thorough assessment of the obligor's creditworthiness"*[848].

(c) The institutional investor must verify that the risk retention requirement is satisfied by the originator, sponsor or original lender

(d) The institutional investor must also carry out a risk assessment analysis of the securitisation which has to include:

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847 Article 5.1 (a) Regulation (EU) 2017/2402.

848 Article 5.1 (b) Regulation (EU) 2017/2402.

(i) An assessment of the individual securitisation position and of the underlying exposures (in this case the residential mortgage loans)

(ii) any structural features which could impact the performance of the securitisation position. This would involve an analysis of the liquidity enhancements, cash waterfalls, market value triggers, contractual definitions of default etc.

(e) The institutional investor must also establish written procedures to monitor the performance of the securitisation position. These procedures must include monitoring of the percentage of loans past due (30, 60 and 90 days), default rates, prepayment rates, loans in foreclosure, recovery rates, loan modifications, payment holidays, collateral type and occupancy, geographical diversification etc.

(f) The institutional investor must regularly perform stress tests on the cash flows and collateral values of the mortgages, and be able to demonstrate to the competent supervisory authority that it has "*a comprehensive and thorough understanding of the securitisation position*"[849].

These intensive due diligence requirements are designed to overcome what was seen as one of the core causes of the GFC,

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[849] Article 5.4 (e) Regulation (EU) 2017/2402.

the overreliance on credit ratings. However, the sheer volume of the obligations and the expertise and cost required to adequately evaluate such a wealth of highly detailed information, could have the effect of pricing potential investors out of the market.

(ii) Transparency requirements – Article 7

Article 7 contains the minimum transparency requirements that impinge upon the originator, sponsor and SSPE of a securitisation. The originator, sponsor and SSPE must designate one amongst themselves to fulfil these requirements:

These requirements include:

(i) Information on the mortgage loans on a quarterly basis

(ii) the underlying documentation essential for understanding the transaction, which must include:

(a) the final offering document or prospectus

(b) the asset sale agreement

(c) the servicing agreement

(d) the trust deed or equivalent legal documentation

(e) Any relevant derivatives documentation (such as interest rate or currency swaps) and liquidity facility agreements

(f) A description of the priority of payments of the securitisation structure.

(iii) If no prospectus has been drawn up in accordance with Directive 2003/71/EC[850] then a transaction summary is necessary which must include:

(a) the details of the structure of the deal including structure diagrams showing cash flows

(b) the exposure characteristics showing loss waterfalls, credit enhancement and liquidity support

(c) details of the voting rights of the holders of the securitisation position and their relation to other secured creditors

(d) A list of triggers that might have a material impact on the securitisation position.

The extensive transparency requirements are also an inheritance of the GFC, as securitisation structures were criticised for being opaque and riddled with complexity. This information is intended to give investors all the information they require to make an informed choice.

One of the key issues here is that, in the years directly before the GFC, purchasers of securitisations acted quickly in order to get the best deals and not "*leave money on the table*". The problem was not necessarily that the intricacies of the

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[850] This directive refers to the prospectus that must be drawn up when securities are offered to the public or admitted for trading.

securitisation structure could not be deciphered by a sophisticated institutional investor, but that there was a clear choice between carrying out proper due diligence and making money.

5.3 (k) The risk retention requirement – Article 6

The risk retention requirement demands that either the sponsor, originator or original lender of a securitisation to retain on an ongoing basis a material net economic interest in the securitisation of not less than 5%, although there are exemptions to this rule for exposures guaranteed by certain entities[851].

In the case of mortgage securitisations, the 5% may be held as:

(i) The retention of 5% in the nominal value of each tranche sold or transferred to investors

(ii) The retention of randomly selected exposures (mortgage debt) equivalent to not less than 5% of the nominal value of the securitised exposures (where such non-securitised exposures would otherwise have been securitised)

(iii) the retention of the first loss tranche, and, if this does not amount to 5% of the nominal value of the securitised exposures, other tranches with a more sever risk profile than those transferred

[851] Article 6.5 exempts exposures that are fully, unconditionally and irrevocably guaranteed by certain entities including: central governments or central banks, regional governments, local authorities and public sector entities.

or sold to investors until the retention equals 5% of the nominal value of the securitised exposures.

(iv) the retention of a first loss exposure of not less than 5% of every securitised exposure in the securitisation.

The purpose of the risk retention requirement is to prevent the originate to distribute model. Academic Steven Schwarcz indicates some of the problems with this technique:

"*In my experience, the market itself has always mandated risk retention. Prior to the financial crisis, for example, originators and sponsors of securitizations usually retained risk on the financial assets, typically mortgage loans, included in those transactions. The problem, however, was that originators and sponsors, as well as investors, generally overvalued those assets. That's in part because of the irrational characteristic of asset price bubbles: the unfounded belief that downside risk— in that case, the risk of home prices plummeting— will never be realized*".

And

"*It is also unclear whether the originate-to-distribute model of loan origination actually caused morally hazardous behaviour thereby lowering mortgage loan underwriting standards. In theory, separation of origination and ownership should not matter because ultimate owners should assess and value risk*

before buying their ownership positions. If the originate-to-distribute model did not cause a lowering of underwriting standards, then risk retention requirements may have little effect. Risk retention might not be insufficient but also dangerous, leading to a mutual misinformation problem. By retaining residual risk portions of certain complex securitization products they were selling prior to the financial crisis, securities underwriters may actually have fostered false investor confidence, contributing to the crisis[852].

5.3 (l) Transparency requirements – Article 7

Article 7 provides a list of the information that the originator, sponsor and the SSPE of a securitisation must provide to the holders of any securitisation position, the competent authorities[853] and potential investors upon request, and they must decide amongst themselves which of them shall be designated to carry out this function.

This information includes quarterly reports on the status of the underlying mortgages, the underlying documentation that is

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852 Quoted from: Schwarcz, Steven: “A global perspective on securitized debt”, op. cit., Kindle position 18097 18259.

853 Competent authorities are those designated in Article 29 of Regulation (EU) 2017/2402. In Spain the competent designated authority is the CMNV (the National Stock Market Commission or NSMC).

essential to the understanding of the securitisation[854], quarterly investment reports[855], any inside information relating to the securitisation that the originator, sponsor or SSPE is obliged to make public according to Article 17 of Regulation (EU) 596/2014 on insider dealing and market manipulation, and any material amendment that might have been made to the transaction documents. This article has been supplemented by Commission Delegated Regulation (EU) 2020/1224 of the 16th of October 2019 with regard to regulatory technical standards specifying the information and the details of a securitisation to be made available by the originator, sponsor and SSPE [856].

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[854] Article 7.1 (b) of Regulation (EU) 2017/2402 decrees that this must include (but not be limited to) the final offering document or prospectus (if positions are offered to retail clients), the asset sale or assignment agreement in true sale securitisations, any derivative agreements, the servicing agreement, and the account bank agreement. If no prospectus is required, then a transaction summary must be provided. This in should include: an overview of the transaction, the characteristics of cash flows, credit enhancement and liquidity support features, details of the voting rights of the noteholders, details of any triggers or events referred to in the documentation that could have a material impact on the securitisation position.

[855] These reports have to contain: all materially relevant data on the credit quality and performance of the underlying exposures, information regarding events that trigger changes in the priority of payments or the replacement of derivative counterparties, and data on the cashflows generated by the underlying mortgages.

[856] The information to be made available for a non-ABCP securitisation pursuant to Article 7.1 (a) of Regulation (EU) 2017/2402 in the case loans to private households secured by residential real estate is contained in Annex II of Commission Delegated Regulation (EU) 2020/1224.This includes a wealth of detail such as: the date on which the underlying exposure was transferred to the SSPE, whether the primary obligor is a resident of the country in which the collateral and underlying exposure reside, the employment status of the primary obligor, the annual gross and net income of the primary obligor, the currency in which the income of the primary obligor is paid, how

These rigorous transparency requirements are designed to ensure that the originators or sponsors do not take advantage of the superior information they hold over the assets transferred to the SSPE (by cherry-picking assets), and that potential investors may take informed decisions and carry out their own due diligence before acquiring securitisation positions.

5.3 (m) The ban on resecuritizations – Article 8

The Regulation bans resecuritizations. The ban on resecuritizations serves further to reduce complexity in modelling the cash flows and performing due diligence. The Regulation

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the income status of the primary obligor was verified, whether the primary obligor has any secondary sources of income and how these sources were verified, the date of maturity of the underlying exposure, the reason for the obligor taking out the loan (equity release, purchase, investment, construction), the currency denomination of the loan, the type of amortisation of the loan, the frequency of the principal payments made by the obligor, the frequency of interest rate payments made by the obligor, the type of interest rate, the existence of interest rate floors or caps, the number of payments the obligor had made before the loan was securitised, the number of days (if any) the loan has spent in arrears, the insurance provider to the property, the property type (flat, bungalow, detached house, terrace house), the current loan to value ratio, the original loan to value ratio, and the current (and original) valuation method.

permits the use of resecuritizations only in certain, limited circumstances:

(i) to facilitate the winding up of a financial institution, investment firm or credit institution

(ii) to ensure the viability of a credit institution, investment firm or financial institution

(iii) to preserve the interests of investors when the underlying exposures are non-performing.

5.3 (n) Loan granting criteria – Article 9

In order to avoid the problem of asymmetric information, originators, sponsors and original lenders must apply the same credit granting criteria to securitised and non-securitised exposures (here residential mortgage loans). Article 9.2 contains a special rule for residential loans, prohibiting the inclusion of any loans that were marketed or underwritten on the premise that the loan applicant was made aware that the information she provided may not be verified by the lender. Again this measure is inspired by the U.S experience before the GFC, when no documentation loans were offered to applicants[857].

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[857] "Among the loans that were hungrily consumed during this period were those that had no documentation and no verification of income or assets, along with the piggyback or down payment second mortgages". Quoted from: Hill, Howard B.: *Finance Monsters…*, op. cit., page 155.

If an originator purchases a third party's exposures for its own account and then securitises them, the originator must verify that the entity involved in the original agreement fulfilled these same loan granting criteria.

5.4 STS Securitisation

The key innovation of the EU Securitisation Regulation was its introduction into law (rather than simply being a set of recommendations like the Basel STC criteria) of the simple, transparent and standardised designation. This was the heart of the EU's attempt to revitalise European Securitisation and to combat the complex, opaque and tailored form of securitisation that it believed had scared investors away in such large numbers.

5.4 (a) The use of the STS designation – Article 18

A securitisation is only entitled to use the STS designation when:

(i) It complies with the specific STS provisions

(ii) It has been listed by ESMA on its official STS website

(iii) The originator, sponsor and the SSPE involved in the securitisation are established in the EU.

5.4 (b) The simplicity requirements – Article 20.

(i) True sale

The Regulation did not initially contemplate an STS designation for synthetic securitisations (as the EBA had yet to develop criteria for STS synthetic transactions) and the first of the simplicity requirements was that the securitisation be effected through a true sale. A synthetic transaction is more complex than a true sale in the sense that it introduces the additional element of counterparty risk.

(ii) No clawback provisions

The true sale has to be free from "*severe clawback provisions*"[858] in the case of the bankruptcy of the seller. These are defined as:

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[858] This criterion is designed to ensure that the transfer of legal title is enforceable in the event of the seller's insolvency. If the mortgages could be reclaimed simply because they were sold within a certain period before the insolvency proceedings were opened against the seller, or if the SSPE were forced to demonstrate its ignorance of the impending insolvency at the time of sale then the investors would be severely exposed to risk. However, as article 20.3 makes clear, this does not affect: "clawback provisions in national insolvency laws that allow the liquidator or a court to invalidate the sale of underlying exposures in the case of fraudulent transfers, unfair prejudice to creditors or transfers intended to improperly favour particular creditors over others" [Article 20.3, Regulation (EU) 2017/2402] Quaglia, Lucia: "It takes two to Tango: The European Union and the International Governance of Securitization in Finance", *Journal of Common Market Studies*, Vol. 59, Num. 6, 2021, pages 1364-1380, page.

(i) provisions that allow the liquidator of the seller to invalidate the sale of the underlying exposure (in this case the mortgage loan) purely on the basis that it had been concluded within a certain period of the seller's insolvency.

(ii) Provisions in which the only defence against the first case is if the SSPE can prove that it was unaware of the insolvency of the seller at the time of the sale.

In the case in which the underlying exposures are to be assigned and their sale perfected at a later date than at the closing of the transaction, triggers have to be in place to perfect the sale. These must include:

(a) A severe deterioration in the credit quality standing of the seller

(b) The insolvency of the seller

(c) Unremedied breaches of contract by the seller, including its default.

(iii) Unencumbered assets

The seller is obliged to provide representations and warranties that the underlying exposures are not encumbered or affected by any condition that could prevent the enforceability of the sale. Any such encumbrance could prejudice the enforceability of the underlying mortgages.

(iv) Clear eligibility criteria

As a further safeguard against the moral hazard posed by asymmetrical information, the seller must use clear, predetermined and documented eligibility criteria in order to select the assets for securitisation. These criteria shall not allow for discretional, active portfolio management[859]. The substitution of non-compliant exposures in the securitisation does not count as active portfolio management.

(v) Homogenous assets

By requiring that the assets in the pool are homogenous in terms of asset type, the Regulation seeks to facilitate the investors in their due diligence and assessment of any underlying risks. Assessing the differing risks of different asset classes is more complex than when the asset class is the same throughout. Pools of underlying exposures must therefore only contain one asset type (for example residential mortgages). These assets should not

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[859] The EBA guidelines on STS criteria state, with respect to active portfolio management that: "the active portfolio management of the exposures in the securitisation should be prohibited, given that it adds a layer of complexity and increases the agency risk arising in the securitisation by making the securitisation's performance dependent on both the performance of the underlying exposures and the performance of the management of the transaction. The payments of STS securitisations should depend exclusively on the performance of the underlying exposures" (The European Banking Authority, "Final Report on Guidelines on the criteria for non-ABCP securitisation", 12th December [2018], page 8).

consist of transferable securities[860] (although an exception is made for those not listed on a trading venue). Article 20.9 of the Securitisation Regulation reiterates the earlier general prohibition of Article 8.1 on including securitisation positions as underlying exposures[861]. The modelling of re-securitisations is more complex than modelling simply a pool of underlying assets (partly because both the cash flows of these securitisation positions and the credit risk of their underlying assets need to be taken into account when modelling the securitisation structure as a whole).

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[860] Transferable securities are defined in point 44 of article 4(1) of Directive 2014/65/EU.

This states that: "'transferable securities' means those classes of securities which are negotiable on the capital market, with the exception of instruments of payment, such as:

(a) shares in companies and other securities equivalent to shares in companies, partnerships or other entities, and depositary receipts in respect of shares;

(b) bonds or other forms of securitised debt, including depositary receipts in respect of such securities;

(c) any other securities giving the right to acquire or sell any such transferable securities or giving rise to a cash settlement determined by reference to transferable securities, currencies, interest rates or yields, commodities or other indices or measures".

[861] The EBA guidelines on the STS criteria explain that the ban on re-securitisations is: "a lesson learnt from the financial crisis, when resecuritisations were structured into highly leveraged structures in which notes of lower credit quality could be re-packaged and credit enhanced, resulting in transactions whereby small changes in the credit performance of the underlying assets had severe impacts on the credit quality of the resecuritisation bonds. The modelling of credit risk arising in these bonds proved very difficult, also due to high levels of correlations arising in the resulting structures" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 9).

The homogeneity requirement as expressed in the Regulation has been supplemented by Commission Delegated Regulation (EU) 2019/185 of the 28th of May 2019.

According to article 1 of this Regulation, residential mortgages are considered to be a homogenous asset type when:

(i) They are underwritten in accordance with standards that apply similar approaches for assessing the associated credit risk. This is designed to ensure that the mortgages have similar risk profiles and are therefore easier to model and evaluate.

(ii) They are serviced in accordance with similar procedures for monitoring, collecting and administering the payments from the mortgage obligors. This emphasises the importance of loan servicing for the securitisation process, as regular, predictable cash flows are essential to investor assumptions regarding the payment and default characteristics of the securitisation.

(iii) They comply with at least one of the homogeneity factors outlined in Article 2.

(iii) The mortgages are secured by properties located in the same jurisdiction

(vi) The specific homogeneity factors for residential mortgages

Article 2 of CDR(EU) 2019/185 provides a list of homogeneity factors for residential mortgages, at least one of which must be

complied with in order for the mortgages to be considered eligible for the EU STS label.

In terms of the ranking of security rights on the residential property the pool must consist of only one of the following:

(i) loans secured by first ranking security rights

(ii) loans secured by lower and all prior ranking security rights

(iii) loans secured by lower ranking security rights

(vii) Defined periodic payment streams

The underlying assets must also have defined periodic payment streams. This again makes modelling the payment waterfall structure and calculating expected loss, default and pre-payment levels much easier.

(viii) Exposures originated in the ordinary course of business

To ensure that the originator has operated in a field in which she has sufficient expertise and a stake in the outcome[862], the

[862] "To prevent the recurrence of 'originate to distribute' models, Article 20(10) of the Securitization Regulation requires that the securitized exposures have been originated in the 'ordinary course' of the originator's or original lender's business pursuant to underwriting standards that are no less stringent than those that the originator or the original lender applies to origination of similar exposures that are not securitized". Quoted from: Kastelein, Gerard.: "Securitization in the Capital Market Union. One Step Forward, Two Steps Back", in *Capital Markets Union in Europe*, Oxford University Press (2018), Kindle position 17605.

Regulation requires that the underlying exposure was generated as part of the ordinary course of business of the originator (or original lender). Any changes in the customary underwriting standards for the exposures in question must be communicated to potential investors. The assessment of the creditworthiness of the borrower performed by the originator must meet the requirements established in article 8 of Directive 2008/48/EC[863] or paragraphs 1 to 4, (point a) of paragraph 5, and paragraph 6 of article 18 of Directive 2014/17/EU[864] (or the equivalent requirements in third countries).

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863 Article 8 of Directive 2008/48/ EC determines that: “1. Member States shall ensure that, before the conclusion of the credit agreement, the creditor assesses the consumer's creditworthiness on the basis of sufficient information, where appropriate obtained from the consumer and, where necessary, on the basis of a consultation of the relevant database. Member States whose legislation requires creditors to assess the creditworthiness of consumers on the basis of a consultation of the relevant database may retain this requirement. 2. Member States shall ensure that, if the parties agree to change the total amount of credit after the conclusion of the credit agreement, the creditor updates the financial information at his disposal concerning the consumer and assesses the consumer's creditworthiness before any significant increase in the total amount of credit”.

864 The cited paragraphs of Directive 2014/17/EU read: “5. Member States shall ensure that: (a) the creditor only makes the credit available to the consumer where the result of the creditworthiness assessment indicates that the obligations resulting from the credit agreement are likely to be met in the manner required under that agreement; (b) in accordance with Article 10 of Directive 95/46/EC, the creditor informs the consumer in advance that a database is to be consulted; (c) where the credit application is rejected the creditor informs the consumer without delay of the rejection and, where applicable, that the decision is based on automated processing of data. Where the rejection is based on the result of the database consultation, the creditor shall inform the consumer of the result of such consultation and of the particulars of the database consulted. 6. Member States shall ensure that the consumer’s creditworthiness is re-assessed on the basis of updated information before any significant increase in the total amount of credit is granted after the conclusion of the credit agreement unless such additional credit was envisaged and included in the original creditworthiness assessment”.

Article 20.10 repeats the criteria established in article 9.2, which prohibits the inclusion of any residential loans in the securitisation pool that had been marketed on the understanding that the loan applicant's details might not be verified by the lender.

(ix) No exposures in default

The exposures (mortgage loans) must not consist of any that are in default[865] or made to a credit impaired debtor or guarantor[866]. Again, both risk analysis and due diligence assessments by investors are more difficult when a securitisation contains exposures that are already in default[867].

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[865] The definition of default is given by Article 178(1) of Regulation (EU) Nº 575/2013. It states that:"1. A default shall be considered to have occurred with regard to a particular obligor when either or both of the following have taken place: (a) the institution considers that the obligor is unlikely to pay its credit obligations to the institution, the parent undertaking or any of its subsidiaries in full, without recourse by the institution to actions such as realising security; (b) the obligor is past due more than 90 days on any material credit obligation to the institution, the parent undertaking or any of its subsidiaries. Competent authorities may replace the 90 days with 180 days for exposures secured by residential or SME commercial real estate in the retail exposure class, as well as exposures to public sector entities)".

[866] Article 20.11 of Regulation (EU) 2017/2402 states that the debtor or guarantor shall not be credit impaired: "to the best of the originator's or original lender's knowledge". Recital 26 of the Regulation declares that: "The 'best knowledge' standard should be considered to be fulfilled on the basis of information obtained from the originator in the course of its servicing of the exposures or in the course of the risk-management procedure or information notified to the originator by a third party".

[867] The STS guidelines published by the EBA declare that: "the objective of this criterion in Article 20 (11) is to ensure that that STS securitisations are not characterised by underlying exposures whose credit risk has already been affected by certain negative events such as disputes with credit-impaired debtors or guarantors, debt restructuring

A debtor or guarantor is considered credit impaired when:

(a) she has been declared insolvent or a court has granted her creditors a non-appealable right of enforcement or material damages as a result of a missed payment three years prior to the date of origination, or has undergone a debt restructuring process with regard to her non-performing exposures within three years prior to their date of transfer to the SSPE[868].

(b) Or, if at the time of origination, the debtor was on a public credit registry of persons with adverse credit history

(c) Or, the debtor has a credit assessment or credit score that suggests that her risk of default is higher than for comparable non-securitised mortgages.

(x) At least one payment made

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processes or default events as identified by the EU prudential regulation. Risk analysis and due diligence assessments by investors become more complex whenever the securitisation includes exposures subject to certain ongoing negative credit risk developments. For the same reasons, STS securitisations should not include underlying exposures to credit-impaired debtors or guarantors that have an adverse credit history" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., pages 11-12).

868 This disposition has two exceptions: when the restructured underlying exposure has not presented new arrears since the date of restructuring (which must have taken place at least one year prior to the date of the transfer or assignment of the underlying exposures to the SSPE; and, when the information provided by the originator, sponsor and SSPE in accordance with Article 7 of the Regulation explicitly sets out the proportion of restructured underlying exposures, the time and details of the restructuring and their subsequent performance.

The mortgage obligors in the case of STS securitised mortgages must have made at least one payment before the mortgage can be included in the pool. This requirement reduces the possibility of fraudulent loans being included in the securitisation pool[869].

5.4 (c) Standardisation requirements – Article 21

The standardisation criteria demand that the originator, original lender or sponsor satisfy the risk retention requirement of Article 6. The repetition of what is already a mandatory requirement for all securitisations can only be to emphasise the importance of its principal objective which is, according to the STS guidelines produced by the European Banking Authority: "*to ensure an alignment between the originators'/sponsors'/original lenders' and investors' interests, and to avoid a repetition of the originate to distribute model in securitisation*".[870]

(i) Mandatory hedging of currency and interest rate risks

[869] The EBA guidelines indicate that this rule "reduces the likelihood of the loan being subject to fraud or operational issues" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 14).

[870] EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 15.

The article also requires that any interest rate or currency risks of the securitisation should be hedged[871] (and that if this is done through derivatives that they only be used for the purpose of hedging these two types of risk and not in any other way)[872]. If derivatives are employed then they must be underwritten and documented according to "*common standards in international finance"*[873]. Such common standards allow for the clear

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[871] Hedging does not necessarily require the use of derivatives as mitigating measures may include the use of interest rate caps or floors, excess spread, or reserve funds.

[872] The wording of this article was not affected by the introduction of Regulation (EU) 2021/557 which introduced STS criteria for on- balance- sheet synthetic securitisations and specifically permitted the use of derivatives for risk transfer in this context. As such it should be understood that it only refers to the use of derivatives in true sale STS securitisations. The concern to exclude derivatives from the underlying pool stems from the belief that they increase the complexity of the transaction and therefore of the due diligence analysis of the investor.

[873] Article 21.2 of Regulation (EU) 2017/2402. Common industry standards are best represented by the ISDA definitions of derivatives. In 2021 ISDA published: "The 2021 ISDA Interest Rate Derivatives Definitions". See:https://www.isda.org/2021/10/04/landmark-change-in-interest-rate-derivatives-market-as-new-definitions-take-effect/

While the 2014 Credit Derivatives Definitions provides the contractual guidelines for currency swap agreements.

OTC derivative contracts entered into by the SSPEs as part of an STS securitisation are not subject to the clearing obligation established by Article 4.1 of Regulation (EU) 648/2012. Article 4.5 of this Regulation states that:

"Paragraph 1 of this Article shall not apply with respect to OTC derivative contracts that are concluded by covered bond entities in connection with a covered bond, or by a securitisation special purpose entity in connection with a securitisation, within the meaning of Regulation (EU) 2017/2402 of the European Parliament and of the Council provided that: (a) In the case of securitisation special purpose entities, the securitisation special purpose entity shall solely issue securitisations that meet the requirements of Article 18, and of Articles 19 to 22 or 23 to 26 of Regulation (EU) 2017/2402 (the Securitisation Regulation); (b) the OTC derivative contract is used to hedge interest rate or currency mismatches under the covered bond or securitisation; and (c) the

identification and assessment by investors of the suitability of the measures in place.

(ii) Referenced interest payments

Article 21.3 of the Securitisation Regulation stipulates that any referenced interest payments under either the assets or the liabilities of the securitisation should be based on generally used market interest rates or sectoral rates without referencing complex formulae[874] or derivatives. Once again, this is a measure designed to make it easier for investors (albeit overwhelmingly institutional investors) to carry out their own credit risk and cash flow analysis, given that generally used rates[875] provide more data points for analysis.

(iii) Enforcement notices

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arrangements under the covered bond or securitisation adequately mitigate counterparty credit risk with respect to the OTC derivative contracts concluded by the covered bond entity or securitisation special purpose entity in connection with the covered bond or securitisation".

[874] According to the EBA's STS guidelines "a formula should be considered to be complex when it meets the definition of an exotic instrument by the Global Association of Risk Professionals, which is a financial asset or instrument with features that make it more complex than simpler, plain vanilla, products. A complex formula or derivative should not be deemed to exist in the case of the mere use of interest-rate caps or floors" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., pages 39).

[875] Examples of generally used rates would include interbank rates established by monetary authorities such as LIBOR and EURIBOR.

If an enforcement or acceleration notice has been delivered on one or more of the mortgage obligors in the pool, then no amount of cash should be trapped in the SSPE beyond the amount necessary to ensure the functioning of the SSPE and the orderly repayment of investors[876].

(iv) Sequential payments and the prohibition of market value triggers

As a general rule the receipts from the underlying exposures should be passed to investors sequentially, as determined by the seniority of the securitisation position held. No contractual triggers can be included which would force the SSPE to liquidate the mortgaged properties at current market value (which could be significantly less than the value of the mortgage contracts and so could prejudice investors).

(v) Triggers for priority payments in non-sequential securitisations

Securitisation structures with features that permit the non-sequential priority of payments must include performance linked triggers to force the reversion to sequential payments in order of

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[876] Article 21.4(a) of Regulation 2017/2402 excepts from this stipulation amounts to be used in exceptional circumstances in order to avoid the deterioration of the credit quality of the underlying exposures (in this case the mortgage property).

seniority[877]. These triggers must as a minimum include the deterioration of the credit quality of the underlying exposures below a pre-determined threshold. Both this measure and the previous one protect the senior investors and maintain the integrity of the tranches.

(vi) Early amortisation triggers in revolving securitisations

If the securitisation structure allows new mortgages to be added to the underlying pool as others mature (i.e., it has a revolving structure), then it must include early – amortisation provisions for the termination of the revolving period. These must necessarily include the following:

(i) the deterioration of the credit quality of the mortgages

(ii) the occurrence of an insolvency-related event with regard to the originator or the servicer

(iii) the value of the mortgage pool held by the SSPE falls below a predetermined threshold

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[877] The EBA guidelines for STS securitisations declare that the objective of this criterion is: "to ensure that non-sequential (pro rata) amortisation should be used only in conjunction with clearly specified contractual triggers that determine the switch of the amortisation scheme to a sequential priority, safeguarding the transaction from the possibility that credit enhancement is too quickly amortised as the credit quality of the transaction deteriorates, thereby exposing senior investors to a decreasing amount of credit enhancement" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 17).

(iv) there is a failure to generate sufficient new mortgages that meet a predetermined credit quality.

(vii) Clearly defined contractual duties

Article 21.7 of the Securitisation Regulation requires that the contractual duties, obligations and responsibilities of the servicer, trustee (where a trust is employed in the securitisation) and any other ancillary service providers (such as derivative counterparties or liquidity providers) must be clearly defined in the transaction documentation. It must also include provisions for the replacement of the servicer (should this go into insolvency) as well as the replacement of other ancillary service providers in the case of their default or insolvency[878].

The Regulation further demands that the servicer has proven expertise[879] (in servicing mortgage contracts in the case of

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[878] The 2014 EBA report on Qualifying Securitisation states that: "Standard Securitisations should provide investors with certainty over the replacement of counterparties involved in the securitisation transaction in crucial roles which impact the credit risk of the securitisation, including the servicing of the underlying assets, the hedging through derivative instruments of risks arising in the securitisation as well as the roles of support to the securitisation, such as those of liquidity facility and bank account providers". Quoted from: The European Banking Authority Report on Qualifying Securitisation, Response to the Commission's Call for Advice of January 2014 on Long-Term Financing, December (2014), page 59.

[879] The EBA's STS guidelines declare that: "any of the following principles on the quality of the expertise should be taken into account in the determination of the expertise: (i) the role and duties of the members of the management body and the senior staff and the required capabilities should be adequate; (ii) the experience of the members of the management body and the senior staff gained in previous positions,

RMBS) and that its "*policies, procedures and risk-management controls"*[880] relating to the servicing of the mortgages are both adequate and well documented. As in residential mortgage backed securities the servicer is frequently the originating bank, this requirement is unlikely to pose difficulties.

Related to the servicing function is the specification that the transaction documentation set out clearly the responses to the default of the obligors[881], as well as the priorities of payment

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education and training should be sufficient; (iii) the involvement of the members of the management body and the senior staff within the governance structure of the function of servicing the exposures should be appropriate; (iv) in the case of a prudently regulated entity, the regulatory authorisations or permissions held by the entity should be deemed relevant to the servicing of similar exposures to those securitised" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., pages 41-42).

The guidelines also determine that a servicer should be deemed to have the required expertise where either of the following apply:

"(a) the business of the entity, or of the consolidated group, to which the entity belongs, for accounting or prudential purposes, has included the servicing of the exposures of a similar nature to those securitised, for at least five years; (b) where the requirement referred to in point (a) is not met, the servicer should be deemed to have the required expertise where they comply with both of the following: (i) at least two of the members of its management body have relevant professional experience in the servicing of exposures of a similar nature to those securitised, at personal level, of at least five years; (ii) senior staff, other than members of the management, who are responsible for managing the entity's servicing of exposures of a similar nature to those securitised, have relevant professional experience in the servicing of exposures of a similar nature to those securitised, at a personal level, of at least five years; (iii) the servicing function of the entity is backed by the back-up servicer compliant with point (a).

[880] Regulation (EU) 2017/2402: Article 21.8.

[881] Regulation (EU) 2017/2402: Article 21.9. The article declares that: "The transaction documentation shall set out in clear and consistent terms definitions, remedies and actions relating to delinquency and default of debtors, debt restructuring, debt forgiveness, forbearance, payment holidays, losses, charge offs, recoveries and other asset performance remedies".

within the securitisation structure. The documentation should also detail how conflicts between different classes of securitisation noteholders are to be resolved[882], as well as specifying the duties of the trustee (or equivalent entity) to the noteholders [883].

5.4 (d) The transparency criteria

Article 22 of the Regulation contains the STS transparency criteria. This is essentially the information that the securitisation structure must make available to potential and actual investors during the life of the securitisation notes.

On this point the EBA's STS guidelines remark that: "Investors should be in a position to know, when they receive the transaction documentation, what procedures and remedies are planned in the event that adverse credit events affect the underlying exposures of the securitisation. Transparency of remedies and procedures, in this respect, allows investors to model the credit risk of the underlying exposures with less uncertainty" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 18).

[882] Conflicts can arise between the noteholders of different tranches. In mortgage backed securities this may be related to the decision to foreclose properties at a price which would guarantee immediate payment to senior noteholders but which would result in a loss to be absorbed by subordinated noteholders, or allowing the mortgage obligors extra time to make payments.

[883] Article 21.10 decrees that: "The transaction documentation shall include clear provisions that facilitate the timely resolution of conflicts between different classes of investors, voting rights shall be clearly defined and allocated to bondholders and the responsibilities of the trustee and other entities with fiduciary duties to investors shall be clearly defined". The EBA's guidelines for STS securitisations indicate that these provisions should include: "(a) the method for calling meetings or arranging conference calls; (b) the maximum timeframe for setting up a meeting or conference call (c) the required quorum (d) the minimum threshold of votes to validate such a decision, with clear differentiation between the minimum thresholds for each type of decision; (e) where applicable, a location for the meetings which should be in the Union" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 43).

Article 22.1 requires the originator and the sponsor to make available data on static and dynamic historical default [884] for substantially similar exposures[885]. This data should cover a period of at least five years.

A sample of the underlying mortgages has to be made available for external verification prior to the issuance of the securitisation

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[884] Dynamic historical default studies default by focusing on the moment at which the default occurred (for example the 12th of October 2021), while static analysis considers the age of the mortgage at the moment of its default (for example, the default occurred in month 8). Dynamic analysis helps to plot seasonal trends in defaults, while static analysis allows one to examine mortgages as if they were advanced on the same day and calculate when mortgages tend to be most vulnerable to default over the course of their existence.

[885] According to the EBA's STS guidelines the term substantially similar exposures are those which meet the following two conditions:

"(a) the most relevant factors determining the expected performance of the underlying exposures are similar; (b) as a result of the similarity referred to in point (a) it could reasonably have been expected, on the basis of indications such as past performance or applicable models, that, over the life of the transaction, or over a maximum of four years, where the life of the transaction is longer than four years, their performance would not be significantly different" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 44).

The guidelines also require that: "The substantially similar exposures should not be limited to exposures held on the balance sheet of the originator" (Ibid, page 44).

notes, by an independent third party[886]. This third party[887] will act to verify that the sample mortgages comply with the STS criteria (however, a positive verification does not diminish the responsibility of the originator, sponsor or SSPE). The scope of this verification is given by the EBA's STS guidelines, which states that: *"the verification to be carried out based on the representative sample, applying a confidence level of at least 95%, should include both of the following:*

(a) verification of the compliance of the underlying exposures in the provisional portfolio with the eligibility criteria that are able to be tested prior to issuance; (b) verification of the fact that the

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[886] Article 22.2 of the Securitisation Regulation decrees that: "A sample of the underlying exposures shall be subject to external verification prior to the issuance of securities resulting from the securitisation by an appropriate and independent party, including verification that the data disclosed in respect of the underlying exposures is accurate" [Regulation (EU) 2017/2402].

According to the EBA report on qualifying securitisation: "A high quality of disclosure to investors and prospective investors is ensured by the fact that an external entity, not affected by a potential conflict of interest within the transaction, is mandated to carry out checks on the data to be disclosed to investors on the underlying exposures of the securitisation. The confirmation that the verification has occurred should indicate which parameters, e.g. loan size, LTV, interest rate, etc. have been subject to the verification". (The European Banking Authority Report on Qualifying Securitisation. Response to the Commission's Call…, cit., pages 61-62).

[887] The EBA's STS guidelines note that an independent third party has to meet both of the following conditions: "(a) it has the experience and capability to carry out the verification (b) it is none of the following (i) a credit rating agency (ii) a third party verifying STS compliance in accordance with Article 28 of Regulation (EU) 2017/2402 (iii) an entity affiliated to the originator" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., pages 44-45).

data disclosed to investors in any formal offering document in respect of the underlying exposures is accurate"[888].

(i) A liability cash–flow model

The originator or sponsor is obliged to make available a liability cash flow model (representing the contractual relationships between the underlying exposures and the payments flowing among the originator, sponsor and investors) to potential investors before the pricing of the securitisation notes. This model should allow investors to calculate the payment obligations of the SSPE and so come to their own evaluation of the worth of the securitisation.

(ii) Energy performance

Where the underlying assets are residential loans (or auto leases, or leases) the originator and sponsor must publish the available information related to the environmental performance of the assets[889].

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[888] Quoted from: EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 45.

[889] According to the EBA's guidelines on STS criteria the environmental performance requirement should be applicable: "only if the information of the energy performance certificates for the assets financed by the underlying exposures is available to the originator, sponsor or the SSPE and captured in its internal database or IT systems. Where information is available only for a proportion of the underlying exposures, the requirement should apply only in respect of the underlying exposures for which

5.5 Simple, transparent and standardised on-balance – sheet synthetic securitisations

The STS criteria for synthetic securitisations passed into European law through Regulation (EU) 2021/557, which amended the Securitisation Regulation. The original text of the Securitisation Regulation had contained a mandate requiring the EBA, in cooperation with ESMA[890] and EIOPA[891] to develop a report on the feasibility of an STS framework for synthetic

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information is available" (EBA, "Final Report on Guidelines on the criteria for non-ABCP securitisation", cit., page 46).

[890] ESMA is the acronym for the European Securities and Markets Authority. According to their website: "The European Securities and Markets Authority (ESMA) is an independent European Union (EU) Authority that contributes to safeguarding the stability of the EU's financial system by enhancing the protection of investors and promoting stable and orderly financial markets". See: https://www.esma.europa.eu/about-esma/esma-in-brief

ESMA was created by Regulation (EU) 1095/2010. Article 1.5 of the Regulation establishes the objectives of ESMA, stating that: "*The objective of the Authority shall be to protect the public interest by contributing to the short, medium, and long-term stability and effectiveness of the financial system, for the Union economy, its citizens and businesses".*

[891] EIOPA is the acronym for the European Insurance and Occupational Pensions Authority. Their website describes their mission in the following terms*: "EIOPA is an independent advisory body to the European Commission, the European Parliament and the Council of the European Union. We are one of the EU agencies carrying out specific legal, technical or scientific tasks and giving evidence-based advice. In this way, we help shape informed policies and laws at EU and national levels. EIOPA is one of three European Supervisory Authorities. The other two are the European Banking Authority (EBA) and the European Securities and Markets Authority (ESMA)".* Quoted from:https://www.eiopa.europa.eu/about/eiopa-glance/mission-and-tasks_en

EIOPA was created by Regulation (EU) 1094/2010. Article 1.6 states its objective in the same language as that used for ESMA: "The objective of the Authority shall be to protect the public interest by contributing to the short, medium, and long-term stability and effectiveness of the financial system, for the Union economy, its citizens and businesses."

securitisation[892]. The assessment of the EBA built upon the EBA report on synthetic securitisation that was published in 2015 [893], and the text of the assessment was released on the 6th of May 2020[894].

The EBA report of 2020 recommended *"establishing a cross-sectoral framework for simple, transparent and standardised synthetic securitisation that is limited to balance-sheet securitisation"*[895].

In balance-sheet transactions the originating credit institution uses either financial guarantees or credit derivatives to transfer the credit risk of a specified pool of assets that it holds on balance sheet (and has normally originated) to third parties (which might include pension funds, money market funds, hedge funds, credit

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[892] Article 45 of the original Securitisation Regulation text declared that:

"1. By 2 July 2019, the EBA, in close cooperation with ESMA and EIOPA, shall publish a report on the feasibility of a specific framework for simple, transparent and standardised synthetic securitisation, limited to balance-sheet synthetic securitisation.

2. By 2 January 2020, the Commission shall, on the basis of the EBA report referred to in paragraph 1, submit a report to the European Parliament and the Council on the creation of a specific framework for simple, transparent and standardised synthetic securitisation, limited to balance-sheet synthetic securitisation, together with a legislative proposal, if appropriate".

[893] The European Banking Authority: "The EBA Report on Synthetic Securitisation" (2015).

[894] The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402" (2020).

[895] The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402" (2020), page 84.

institutions and insurance companies[896]). An SSPE (SPV) is required only for funded (or partly funded) synthetic securitisations in which credit-linked notes are issued. The motivation for balance-sheet synthetic securitisations is normally twofold, the lower capital requirements on the assets held on balance sheet (thanks to the transfer of credit risk) and credit risk management (as part of the risk is absorbed by the guarantor/noteholders).

Balance sheet-synthetic securitisations can be contrasted with arbitrage synthetic transactions in which the objective is to achieve a profit from the difference between the spread received by the underlying assets and that paid out to the synthetic noteholders (such as the synthetic CDOs examined in the previous chapter).

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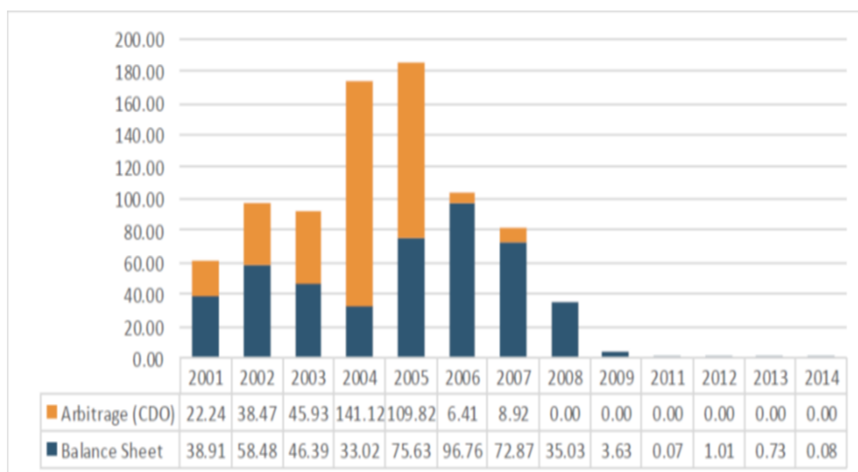
[896] The EBA report on an STS framework for synthetic securitisation identifies the main investors in synthetic securitisation, it indicates that: "*A substantial majority of investors in synthetic securitisation are non-bank private entities, which are usually highly specialised in credit investing and experienced in portfolio due diligence. The main motivation for investors to invest in synthetic securitisation is the search for a higher yield and enhanced diversification of their investments. With respect to private investors, they mostly include hedge funds (39.6% of distributed tranches over the period 2008 – 2019), pension funds (30.6%) and asset managers (19.7%). Insurance companies form only a minority of the investor base (less than 1%). Overall, 90% of credit protection provided by the private investors is funded credit protection. Credit institutions enter the current market of synthetic securitisation as originators and not as investors. With respect to public investors, 4.5% of them are 0% risk weighted multilateral development banks".* The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402" (2020), page 19.

Figure 43 shows the pre-crisis issuance of both balance-sheet and arbitrage synthetic securitisations in Europe from 2001 to 2014. As can be seen from the chart, arbitrage synthetic structures vanished completely after 2008, while the level of issuance of balance-sheet structures fell sharply.

Figure 43: Synthetic Securitisation Issuance in Europe in billions of Euros from 2001 – 2014 [897]



	2001	2002	2003	2004	2005	2006	2007	2008	2009	2011	2012	2013	2014
Arbitrage (CDO)	22.24	38.47	45.93	141.12	109.82	6.41	8.92	0.00	0.00	0.00	0.00	0.00	0.00
Balance Sheet	38.91	58.48	46.39	33.02	75.63	96.76	72.87	35.03	3.63	0.07	1.01	0.73	0.08

However, the EBA report of 2020 noted the resurgence of balance-sheet securitisations, commenting that: "*Arbitrage*

[897] Source: The EBA Report on Synthetic Securitisation, (2015), page 14.

transactions have disappeared from the European market, which is now formed almost exclusively by balance-sheet securitisations. In terms of volume, balance-sheet synthetics in 2018 overstepped the highest pre-crisis volumes"[898].

Synthetic Securitisation was initially excluded from the scope of the European STS framework[899], as it was from the earlier Basel STC framework. As explained in the EBA's report of 2020, this was partly due to a lack of data on the performance of synthetic transactions:

"One of the core considerations is a lack of systematic and publicly available data on market developments, volume and the historical performance of synthetic securitisation and different asset classes in Europe. This is because the synthetic deals during

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[898] Quoted from: The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402, 6th May (2020), page 14.

The report goes on to suggest that the growing interest in balance-sheet synthetic securitisation from the originators' perspective is related to regulatory changes, citing, among other reforms, the increase in capital requirements in the Basel III framework (applicable from 2022). See: The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., pages 18-19.

[899] While synthetic securitisation was excluded from the STS framework, Article 270 of Regulation 575/2013 on capital requirements had allowed for preferential regulatory treatment of synthetic securitisation on a limited basis. This treatment was applied to the senior tranches of SME portfolios retained by originator credit institutions, provided that significant credit risk had been transferred to either supranational entities (such as central banks and multilateral development banks) or international organisations, that were 0% risk weighted, through unfunded guarantees or private investors through fully collateralised guarantees.

the post-crisis period were mostly bilateral and therefore almost entirely private, with very little public information available"[900].

Additionally, the EBA report indicated that the bespoke nature of the structures used had led to a plethora of non-standardised practices: *"In particular, the credit protection mechanism, which is the core of a synthetic securitisation transaction and constitutes the structural element of difference with respect to true sale transactions, has been implemented in accordance with a wide spectrum of practices and was perceived at the time to increase the structural complexity because of the additional counterparty credit risk of the protection seller"*[901].

5.5 (a) The Prime Collateralised Securities Risk Transfer Criteria

Although synthetic transactions had been excluded from the Basel STS framework, in 2017, the PCS label released the first version of their eligibility criteria for risk transfer securitisation, which was intended to provide a market reference standard for synthetic securitisations, as their "PCS True Sale Label" had set out to achieve for regular securitisations in 2012. The criteria

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[900] Quoted from: The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., page 11.

[901] Quoted from: The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., page 12.

have clearly served as a template for the amendment to the European Securitisation Regulation.

These criteria were broadly divided into two main sections, common eligibility criteria and asset specific eligibility criteria.

5.5 (b) Common eligibility criteria for PCS synthetic securitisations

In order to meet the common eligibility criteria[902] a securitisation structure has to satisfy the standards established in each of nine different areas:

(i) Balance sheet asset criteria

(ii) Alignment of interests

(iii) No resecuritisations

(iv) No embedded maturity transformation

(v) Transparency standards

(vi) Risk transfer securitisation quality standards

(vii) Risk transfer standards

(viii) General underlying asset standards

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[902] The PCS synthetic criteria are taken from the document: The Prime Collateralised Securities Association "Risk Transfer Securitisation Eligibility Criteria", Version 2, July (2018). The document can be found on the PCS website:https://pcsmarket.org/

(ix) Warranty standards

(i) Balance street criteria

The PCS label requires that in the case of regulated banks or insurance companies the assets are held on the balance sheet of the protection buyer or one of its affiliates, and that in the case of other types of protection buyer, that the assets are owned either by them or by a member of their group.

(ii) Alignment of interests

The criteria for the alignment of interests obliges the protection buyer to retain a net economic interest in the assets during the life of the securitisation sufficient to meet the requirements of Article 405 of the EU Capital requirements Regulation[903]. The Protection Buyer must also undertake not to further hedge its protected position (so that it does not double hedge the same risk, thus essentially eluding the alignment of interests criteria).

(iii) No resecuritisations

The Risk Transfer securitisation cannot involve resecuritisations.

[903] Regulation (EU) 575/2013. Article 405 obliges the originator, sponsor or original lender to retain a net material interest of at least 5% in the securitisation position.

(iv) No embedded maturity transformation

Underlying assets have to be underwritten so that (i) the creditor has full recourse to an obligor that is either an individual or a corporation (and not a special purpose entity) (ii) that the repayment necessary to repay the underlying asset was not intended to be substantially reliant on the sale, or re-financing of the security for the underlying obligation.

(v) Transparency Standards

The PCS label produced extensive transparency standards for synthetic securitisations.

These include:

(a) The obligation for the protection buyer and the SPE (if one is employed) to provide access to potential investors to data on static and dynamic historical default and loss performance (including data on delinquency and recoveries) for exposures that are substantially similar to those being securitised for a period no shorter than five years.

(b) The protection buyer and/or SPE must provide investors (on at least a quarterly basis) with relevant information on the performance of the securitisation throughout its existence. This must include the coupon payment information and its method of calculation.

(c) The protection buyer has to disclose to potential investors loan level data to enable the investors to construct a cash –flow model. This information should include: the notional amount of the underlying asset, the amortisation profile of each underlying asset, the maturity date of each underlying asset, the value of the collateral for each underlying asset, the payment frequency of the underlying assets, the currency in which the underlying asset is denominated.

(d) The protection buyer must further provide potential investors with a description of the underwriting criteria used for originating the underlying assets (mortgage loans in the context of this thesis), a description of the processes and standards applied in servicing the underlying assets, and any undertakings, representations and warranties provided by the protection buyer.

(d) The protection buyer must further provide the ratings which will trigger: a requirement for the provision of collateral, the replacement of any entity involved in the risk transfer securitisation (such as derivative providers or servicers), or the confirmation that such triggers do not exist.

(e) The protection buyer also has the obligation to provide the identity of the verification agent for the transaction, and explain the nature and extent of the verification process that the agent will perform. This must be accompanied by a statement verifying that this agent is an independent entity.

(f) The Protection buyer must provide details of the loss triggers that may result in protection payments. This information should include: the method of calculation of the protection payments, the timing for any protection payments and if interim protection payments are provided for, the timing of these payments, the method of calculation of these payments and the timing of any adjustment payments following the interim payments made.

(g) The Protection buyer is obliged to detail the servicing procedures applicable throughout the life of the transaction.

(vi) Risk transfer securitisation quality standards

The quality standards set by the PCS are, like the transparency standards very extensive and detailed. Among them are the following:

(a) The protection buyer has to be incorporated within the European Economic Area or Switzerland.

(b) All underlying assets can only be removed from the securitisation when:

(1) The underlying asset has been fully repaid (or otherwise matured)

(2) The protection buyer has disposed of its interest in the exposure to an entity which is not an affiliate.

(3) The underlying asset did not meet the eligibility criteria at the time of its inclusion in the securitisation

(4) The underlying asset is subject to refinancing or amendment which occurs in the ordinary course of servicing the asset

(5) The amount of regulatory capital that would otherwise have had to be held against the underlying asset has increased.

(c) The underlying asset has to be homogenous in terms of asset category.

(d) The underlying assets cannot include derivatives

(e) Following an enforcement or acceleration event, sequential amortisation should apply to all tranches in order of seniority.

(f) The underlying assets have to be serviced in the same way as other assets of the protection buyer which are not securitised.

(g) The servicer must have expertise in servicing assets of a similar nature (and have performed this servicing for at least three years).

(h) If the Risk Transfer Securitisation has a replenishment period, then any additional exposures added to the securitisation must meet the eligibility criteria

(i) An independent verification agent must be appointed and investors cannot be required to make any final protection

payments under the Risk Transfer agreement unless the verification agent has attested to the fact that:

(1) The underlying assets complied with the eligibility criteria at the moment in which they were included in the securitisation

(2) Any replenishments made to the assets have complied with the replenishment conditions

(3) That loss occurrence events had taken place

(4) That all relevant exposures were included in the securitisation at the time of the loss trigger event

(5) That the protection buyer complied with its risk retention requirements

(6) The final loss and credit protection amounts were correct

(vii) Risk transfer standards

With respect to the risk transfer agreement, the main points of the PSC eligibility criteria require that:

(a) Any amounts payable to investors under the Risk Transfer Securitisation are:

(1) Clearly defined

(2) Limited in amount

(3) Capable of calculation in all circumstances

(b) The circumstances under which investors are required to make payments under the Risk Transfer agreement must be:

(1) Clearly defined

(2) Subject to a determination by a verification agent

(c) The rights of the protection buyer to receive protection payments under the Risk Transfer Agreement must be enforceable

(d) The Risk Transfer Agreement may only include four loss trigger events which are:

(1) Bankruptcy

(2) The Failure to pay

(3) Restructuring

(4) The circumstance that the debtor is unlikely to pay

(e) Credit protection payments must:

(1) Be calculated based on the actual realised loss incurred by the holder of the underlying asset (and be determined in accordance with its standard recovery policies)

(2) If the protected amount is less than the total exposure of the Protection Buyer to the underlying asset, then the credit protection payment should be in the same proportion as the buyer’s realised loss bears to its total exposure.

(viii) General underlying asset standards

With respect to the underlying assets:

(a) The obligors must be domiciled in the EEA or Switzerland

(b) The underlying assets must have been originated in the ordinary course of the originator's business and the same underwriting standards must have been applied as to those exposures not included within the securitisation

(c) When a securitised exposure is included in a securitisation the obligor must have made at least one scheduled payment

(ix) Warranty standards

With respect to representation, warranties and undertakings:

(a) If the Protection buyer is a bank or insurance company it must account for the credit risk of the underlying assets on its balance sheet.

(b) Where the Protection buyer is neither a bank nor an insurance company it must have a valid title to the underlying assets (the residential mortgages) and their ancillary associated rights.

(c) Each of the underlying asset agreements (the mortgage loans) must contain the legal, valid and binding and enforceable obligation of the obligor to pay the sums of money specified in it.

(d) The Protection buyer cannot be aware of any material breach or default of any obligations under the loan agreements

(e) The underlying assets must meet the standard originating and underwriting criteria of the originator

5.5 (c) The specific Risk Transfer Eligibility Criteria for Spanish Residential Mortgage Loans

The PCS synthetic criteria have specific asset criteria for Spanish residential mortgage loans:

(a) The rules applying to Spanish mortgage loans are dependent on whether the PCS had issued responsible lending rules and guidelines at the time of origination of the loans[904]

(1) Where specific responsible lending rules and guidance do not apply at the time of origination:

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[904] The PCS "Interpretations User Guide book" explains that: "The determination of which rules come within the definition of "Responsible Lending Rules and Guidance" is to be made by the PCS Secretariat. In reaching this determination, the PCS Secretariat will consult the Market Committee. Although it will be guided by the views of the Market Committee, these views shall not be binding on the PCS Secretariat. As a matter of practice, the PCS Secretariat will only consider rules for inclusion in the "Responsible Lending and Guidance" category if requested by a market participant. Nothing should therefore by read into the absence from the current list of any rules applying to any jurisdiction. The PCS Secretariat may simply not have been solicited by any market participant with respect to such rules".

Quoted from Point 4 of The Prime Collateralised Securities Association: "Interpretations User Guide Book". Version 8. July (2016).

At the time of writing (March 2022), no such rules had been issued for the Spanish Market.

(i) The weighted average loan to value ratio of the underlying assets covered by the risk transfer agreement cannot exceed 75%

(ii) No individual underlying asset has an original loan to value ratio greater than 100 %

(2) If responsible lending rules and guidance recommended by the PCS apply at the time of origination, then:

(i) The weighted average original loan to value ratio of the underlying assets is not greater than 85%

(ii) No individual asset has an original loan to value ratio greater than 100%

(3) If the recommended responsible lending rules and guidance were not followed in the origination of each underlying asset then:

(i) the weighted average original loan to value ratio of the underlying assets is not greater than 75%

(ii) No individual underlying asset has an original loan to value ratio greater than 100%

(b) As of the date specified by the Risk transfer agreement, the number of obligors or underlying assets is not less than 1,000.

(c) As of the date specified by the Risk transfer agreement no underlying asset has an outstanding principal balance:

(1) Of more than € 1,000,000 and;

(2) Which exceeds an amount equal to 1% of the aggregate outstanding balance of all the underlying assets

(d) The sum of the underlying assets that have an outstanding principal balance greater than 0.25% of the outstanding principal balance of all the underlying assets, shall not exceed 5% of the outstanding principal balance of the underlying assets.

(e) Each underlying assets is subject to a first ranking mortgage, or is a second ranking residential mortgage loan

(d) The underlying assets do not include self-certified mortgage loans or equity release mortgage loans

(e) At the date specified by the Risk transfer agreement each obligor has made at least one scheduled payment.

5.5 (d) The PCS criteria for Representations, Warranties and Undertakings for Spanish Residential Mortgages

Where underlying assets are Spanish Residential Mortgage Loans the Risk Transfer Securitisation Documentation must contain specific representations, warranties and undertakings. These include:

(a) That the mortgage loan certificates have been issued in accordance with current laws and legal regulations

(b) That the mortgage loans are not subject to any issue of mortgage securities, mortgage shares, or mortgage transfer certificates (other than the present synthetic securitisation).

(c) That the real estate mortgages have been registered in the relevant property registers.

(d) That the loans exist, are valid and enforceable

(e) That the loans are clearly identified

(f) That the mortgages have been established on properties on which the full and complete ownership is held by the mortgage obligor, and that the protection buyer is not aware of the existence of litigation regarding the ownership of those properties.

(g) That the protection buyer has no knowledge of the existence of any circumstance preventing enforcement of the mortgage guarantee.

(h) That to the best of the protection buyer's knowledge there is no litigation in relation to the mortgage loans that may detract from their validity or that may result in the application of article 1535 of the Spanish Civil Code[905].

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[905] Article 1.535 of the Civil Code states that: "In the event of sale of a litigious credit, the debtor shall be entitled to extinguish it by reimbursing the assignee the price paid, any costs incurred and interest on the price from the day on which it was paid. A credit shall be deemed litigious from the time that a reply to the claim relating thereto is filed. A debtor may exercise this right within nine days, counting from the assignee's demand for payment".

(i) That where mortgage participations and/or mortgage transfer certificates are used in the securitisation[906] they are issued with the same term to maturity and interest rate as the underlying mortgage loans.

(j) That the mortgage loan information contained in the risk transfer securitisation documentation is accurate and complete.

(k) That the loans are denominated and payable exclusively in Euros.

(l) That the mortgage properties have been appraised by entities duly authorised for that purpose and the appraisers are duly registered in the corresponding Register of the Bank of Spain.

(m) That all the obligors are individuals.

The influence of the PCS risk transfer eligibility criteria on the STC synthetic criteria is clear, as many of the same points are covered and treated in the same manner.

5.5 (e) The decision to promote an STC framework for on-balance sheet synthetic securitisations

The decision to promote an STS framework for on-balance sheet synthetic securitisations and not arbitrage synthetic structures

[906] The next section shall explain the legal nature of mortgage participations and mortgage transfer certificates in Spanish Law.

seems to have been based largely on the difference between their respective performances during the financial crisis, and the understanding that the primary objective of one is the conservative goal of risk transfer, while the other is driven by the more inherently risky desire of making a profit for investors.

In its 2015 report, the EBA explained the European Union's regulatory focus on balance sheet synthetics in the following manner:

"Within the market of synthetic securitisation balance sheet synthetics, i.e., transactions structured by institutions to transfer exposures originated in their banking book off their balance sheet, performed consistently better than arbitrage synthetics and were typically structured to be far less complex than the latter. In addition, while "balance sheet" synthetics fulfil, as their primary objective, the genuine risk transfer objective acknowledged for securitisation in prudential regulation, arbitrage synthetic transactions are primarily structured to achieve yield arbitrage targets driven by investors and asset managers"[907].

Figure 44 shows the lifetime default rate (%) for European issued balance sheet synthetic tranches, arbitrage synthetic tranches and traditional "true sale" tranches, from 2000 to 2014. The lifetime

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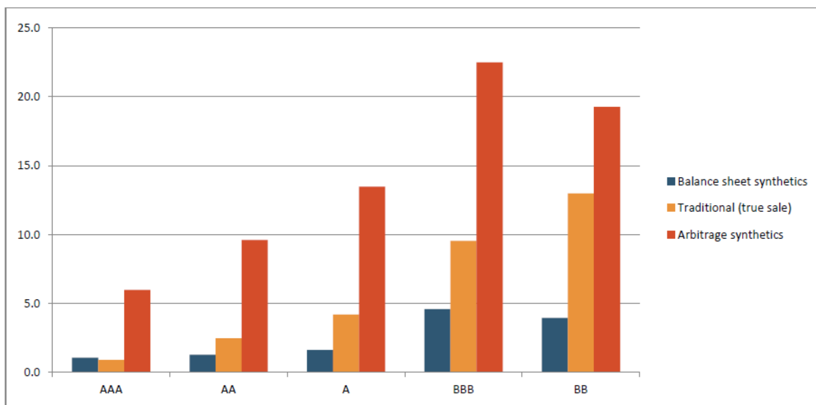
[907] Quoted from: EBA, The EBA Report on Synthetic Securitisation (2015), page 34.

default rate measures the percentage of tranches initially rated at a given level that defaulted at any point during their lifetime.

Figure 44: The lifetime default rate of different tranches of European issued synthetic (balance sheet and arbitrage) and traditional securitisations from 2000 to 2014 [908]



The graph shows that arbitrage synthetic transactions performed worse over every tranche class than both true sale and balance sheet synthetic securitisations, while balance sheet synthetic

908 Source: EBA, The EBA Report on Synthetic Securitisation (2015), page 17. According to the EBA: "The comparative analysis is based on the historical performance of ratings issued by Standard & Poor's. Standard & Poor's issued most of its ratings on synthetic securitisation transactions between 2000 and 2008, with very few ratings also issued prior to 2000 and after 2008. The overall S&P sample used for the purposes of this analysis is made of 5952 synthetic securitisation tranches, where reflecting the composition the composition of the European synthetic market a majority of the rated tranches belongs to the category of arbitrage synthetic securitisation" (Ibid, page 16).

structures outperformed true sale securitisations in all but the AAA tranche (where their performance was roughly comparable).

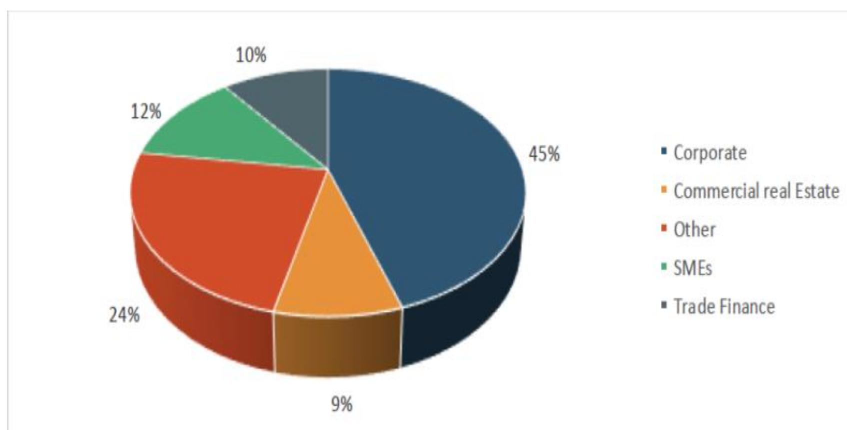
5.5 (f) The assets used in synthetic securitisations

The EBA report on STS synthetic securitisation points out that RMBS have not generally been employed as reference assets in European synthetic securitisation structures: *"Retails exposures, such as RMBS and consumer loans, are less common in synthetic securitisation. They are securitised mostly for funding and not for credit risk management, for various reasons, including the fact that they have relatively lower risk weights. They also have internal ratings and are more prone to being subject to concentration limits of the banks; they are therefore more appropriate for traditional securitisation"*[909].

Figure 45 shows the type of collateral used in European synthetic securitisations from July 2014 up to May 2020.

[909] Quoted from: EBA: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., page 20.

Figure 45: Assets used in European synthetic securitisations between July 2014 and May 2020[910]



In the pie chart the category "other" includes: residential mortgages, which make up only 3% of the total.

In the specific case of RMBS used as the collateral for balance-sheet synthetic securitisations, these structures have performed favourably in comparison with true sale RMBS securitisations.

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[910] Source: EBA: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., page 23.

Figure 46: The lifetime default rate of European synthetic RMBS securitisations compared to true sale RMBS securitisations from 2000 to 2018[911]

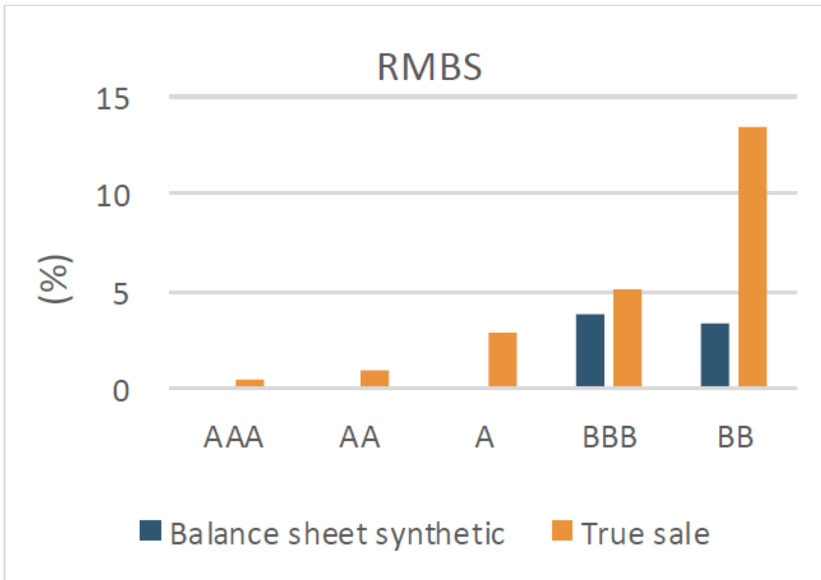

Figure 46 shows the superior performance of European issued RMBS balance - sheet synthetic securitisations over European issued RMBS true sale securitisations for the period covering 2000 to 2018.

911 Source: EBA: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., page 26.

5.5 (g) The focus of regulation in synthetic securitisations

While the principal focus of regulation in true sale STS is placed overwhelmingly on the protection of the investor (as the underlying assets have left the balance sheet of the originator), the rules in balance sheet synthetic securitisation must pay equal attention to mitigating the potential risks for both parties. The content of the protection agreement is crucial to maintaining this balance. While the protection seller (and/or investors when credit linked notes are issued) must be properly informed about the underlying assets, the protection buyer needs to be protected against counterparty risk should default occur.

5.5 (h) The STS synthetic regime in EU Regulation 2017/2402

As mentioned previously an STS balance sheet synthetic securitisation regime[912] was introduced by Regulation (EU) 2021/557 of the 31st of March 2021 which amended Regulation (EU) 2017/2402.

The requirements for simple, transparent and standardised on-balance sheet securitisations are contained in articles 26(b) to 26

[912] According to consideration 14 of Regulation (EU) 2021/557: “The object of credit risk transfer should be exposures originated or purchased by a Union regulated institution within its core lending business activity and held on its balance sheet or, in the case of a group structure, on its consolidated balance sheet at the closing date of the transaction. The requirement for an originator to hold the securitised exposures on the balance sheet should exclude arbitrage securitisations from the scope of the STS label”.

(e) of the Securitisation Regulation, while the key definitions pertaining to synthetic securitisation are to be found in article 2.

An important difference between "true-sale" and synthetic transactions is that payments to investors are not generated directly by the underlying assets, as investor payments are limited to the protection premium and, in funded transactions, the yield from the re-investment and redemption at maturity of the collateral placed to guarantee payment in the case of a credit event. Therefore, the most crucial parts of the STS criteria for synthetic securitisations are not those dispositions which cover the underlying assets, but rather the content of the credit protection agreement.

5.5 (i) Key Synthetic Securitisation Definitions in the EU Regulation

Article 2.10 describes a synthetic securitisation as a transaction in which: "*the transfer of risk is achieved by the use of credit derivatives or guarantees, and the exposures being securitised remain exposures of the originator*". As commented on earlier, while the use of credit derivatives may involve the issue of credit – linked notes to investors through a SSPE, the synthetic transfer of risk through guarantees does not necessitate the use of a SSPE.

A credit protection agreement is: "*an agreement concluded between the originator and the investor to transfer the credit risk*

of securitised exposures from the originator to the investor by means of credit derivatives or guarantees, whereby the originator commits to pay an amount, known as a credit protection premium, to the investor and the investor commits to pay an amount, known as a credit protection payment, to the originator in the event that one of the contractually defined credit events occurs"[913].

A credit protection premium means: "the *amount the originator has committed to pay to the investor under the credit protection agreement for the credit protection promised by the investor*"[914], and the credit protection payment is: "*the amount the investor has committed to the originator under the credit protection agreement in the event that a credit event defined in the credit protection agreement occurs"*[915].

5.5 (j) The STS balance-sheet synthetic securitisation simplicity requirements

The simplicity requirements[916] are broadly similar to those examined earlier for "true sale" securitisations and have the same

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[913] Article 2.26 Regulation (EU) 2017/2402.

[914] Article 2.27 Regulation (EU) 2017/2402.

[915] Article 2.28 Regulation (EU) 2017/2402.

[916] The simplicity requirements for on-balance sheet synthetic securitisations are contained in Article 26 (a) of Regulation (EU) 2017/2402.

basic rationale. I shall cover only briefly the points they share with the “true sale” STS criteria and concentrate on the specific synthetic criteria.

As with the true sale criteria, the synthetic criteria only allow originators that are authorised or licensed to operate in the European Union. The exposures an originator has generated and that will form the underlying assets for the credit protection agreement must have been created as part of its core business activity.

If the originator has purchased a third party’s assets then it is obliged to ensure that the same policies regarding underwriting, servicing and debt work-out arrangements have been and shall be applied to these credits as the originator would normally apply to its own exposures (in this case residential mortgages).

As the STS synthetic criteria only recognise balance-sheet transactions, then, at the closing of the transaction the underlying exposures must be held on the balance sheet of the originator or of an entity that belongs to the same group[917] as the originator.

The originator is prohibited from hedging its exposure to the credit risk of the underlying mortgages beyond the protection

[917] Article 26 (b). 3 of Regulation (EU) 2017/2402 states that a group is either: (i) A group of legal entities that is subject to prudential consolidation in accordance with Chapter II of Part One of Regulation (EU) 575/2013, or (ii) a group as defined in point (c) of Article 212(1) of Directive 2009/138/EC.

afforded by the credit protection agreement itself (avoiding the excessive complexity and risk that would be created by establishing a chain of counterparties).

The credit protection agreement must comply with the rules established in Article 249 of Regulation (EU) 575/2013[918] (or with a similarly robust set of applicable requirements if the protection buyer is not an entity regulated by the European Capital Requirements Regulation).

The protection buyer is further obliged to provide a series of guarantees and warranties with respect to the underlying exposures. These include assurances that:

(i) The originator (or the group to which the originator belongs) has full legal valid title to the underlying exposures and their associated ancillary rights

(ii) If the originator is a credit institution[919] or an insurance undertaking[920] that it keeps the credit risk of the underlying exposures on its balance sheet

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[918] These rules limit funded credit protection to the financial collateral which is eligible for the calculation of risk-weighted exposure amounts under Chapter 4 of the CRR and the credit risk mitigation recognition criteria provided for in the same chapter. It limits unfunded credit protection to the credit risk mitigation criteria of Chapter 4 of the CRR, and the providers of unfunded protection to those entities eligible under Chapter 4.

[919] As defined in point (1) of Article 4(1) of Regulation (EU) 575/2013.

[920] As defined in point (1) of Article 13 of Directive 2009/138/EC.

(iii) Each of the underlying exposures complies with the eligibility criteria for a credit protection payment under the credit protection agreement

(iv) The contractual agreement for each underlying exposure contains an enforceable obligation to make payment

(v) The underwriting criteria for the mortgages referenced by the credit protection agreement were no less stringent than those applied to similar exposures originated by the protection buyer that are not covered by the agreement

(vi) No obligors were in default or in material breach of the mortgage agreements at the time of the credit protection agreement (to the best of the protection buyer's knowledge).

(vii) No untrue information is contained in the securitisation documentation (to the best of the protection buyer's knowledge).

(viii) At the closing date of the protection agreement, the mortgages that it covers have not undergone any modifications that could adversely affect the collection of their cash flows or their enforceability.

The simplicity criteria also prohibit the active portfolio management of the mortgages referenced in the credit protection agreement. Again, this is designed both to prevent the cherry-picking of the underlying exposures and the difficulties in

modelling exposures chosen according to the discretion of an asset manager.

The substitution of mortgages that are in breach of the representations and warranties mentioned earlier is not given the consideration of active portfolio management, and nor are the replenishment practices in the case of revolving securitisations (provided the same underwriting criteria are kept in place). There are also some conditions under which mortgage exposures may be legitimately removed from the credit protection agreement These include:

(i) The repayment of the mortgage loan

(ii) The case that the mortgage loan did not meet the eligibility criteria for inclusion and was included due to error.

The synthetic simplicity criteria require the underlying exposures to be homogenous in terms of asset type (meeting the criteria for homogeneity of residential mortgages that was discussed earlier), subject to the conditions specified in the transaction documentation. These assets must have defined periodic payment

streams. The STS conditions exclude transferable securities other than unlisted corporate bonds[921] and securitisation positions[922].

With respect to the underwriting standards applied to the origination of the underlying mortgages, these must be fully disclosed to potential investors. As with STS "true sale" securitisations, the mortgage contracts should provide full recourse to an obligor that is an individual, SME or a corporate body (but not an SSPE)[923]. Any changes in the underwriting standards that produce the mortgage contracts must be communicated to potential investors immediately.

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[921] As with the true sale STS criteria, Article 26 (b). 8 of Regulation prohibits the inclusion of transferable securities as defined by point 44 of Article 4(1) of Directive 2014/65/EU other than the unlisted corporate bonds mentioned in the text.

[922] The EBA report on the synthetic STS framework states that: "In the past resecuritisations have been structured into highly leveraged structures in which lower credit quality notes could be re-packaged and credit could be enhanced, resulting in transactions in which small changes in the credit performance of the underlying assets severely affected the credit quality of the resecuritisation tranches. Synthetic resecuritisations were often structured with arbitrage purposes and did not serve the credit risk transfer as a primary objective. In addition, unlike synthetic securitisations that are not structured for arbitrage purposes and are not using securitisation positions as underlying exposures, synthetic resecuritisations performed materially worse than traditional securitisations that were structured largely in line with the STS criteria for traditional securtisation". Quoted from: EBA: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., page 50.

[923] Arbitrage synthetic securitisations sometimes used SSPEs as the underlying obligors (and securitisation positions as the underlying assets). This measure helps ensure that only balance-sheet securitisations are employed in STS synthetic securitisations, and that the underlying assets covered by the credit protection agreement are exposures that form part of the core business activity of the protection buyer.

The underlying exposures covered by the credit protection agreement cannot contain any “self-certified” loans[924], nor any that were in default at the time of their selection, while the obligors to the underlying loans must have made at least one mortgage payment[925].

5.6 The STS synthetic standardisation criteria

As with the simplicity STS criteria, the standardisation criteria for synthetic securitisations[926] is similar to the “true sale” standardisation criteria examined previously. The originator or original lender must have satisfied the risk retention requirement contained in Article 6. Any interest rate or currency risk[927] in the

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[924] As with the “true sale” STS positions, article 26 (b) 10 of Regulation (EU) states that: “In the case of securitisations where the underlying exposures are residential loans, the pool of loans shall not include any loan that was marketed and underwritten on the premise that the loan applicant or, where applicable, intermediaries, were made aware that the information provided might not be verified by the lender”.

[925] With regard to the obligation to have made at least one payment, the EBA report on the STS synthetic framework justifies the requirement in the following terms: “*STS synthetic securitisation should minimise the extent to which investors are required to analyse and assess fraud and operational risk. At least one payment should therefore be made by each underlying borrower at the time of inclusion of the exposure in the securitisation, since this reduces the likelihood of the exposure being subject to fraud or operational issues”.* Quoted from: EBA: “Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402”, cit., page 54.

[926] The standardisation requirements are contained in Article 26 (c) of Regulation (EU) 2017/2402.

[927] Currency risk may arise in synthetic securitisations when the underlying exposures are denominated in a currency that is different from the currency used for credit protection. Exchange rate fluctuations could cause the outstanding amount of notes,

structure must be hedged, and while this may be done through derivatives, the underlying exposures themselves must not contain derivatives. The payments that are charged on the underlying assets and which make use of a reference rate have to employ a generally used market or sectoral rate and not depend upon complex formulae[928].

In the case of an enforcement event in respect of the protection buyer, the protection seller is entitled to take enforcement action and/or terminate the credit protection agreement. If the synthetic securitisation is funded, then any collateral must be returned to investors in order of their seniority. If an SSPE has been employed, then cash should not be trapped inside the structure (beyond any money necessary to ensure that the SSPE continues to function for the payment of protection payments that are still being worked out and the orderly repayment of investors).

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collateral or guarantees available to cover losses in the case of a credit event to be insufficient after conversion into the protection payment currency.

[928] With respect to the use of market or sectorial rates the EBA report on synthetic STS securitisation remarks that: "This criterion is less relevant for synthetics, as the repayment of the securitisation positions is not dependent on the cash flows from the underlying exposures on a pass-through basis, and consequently there is less need for investors to understand the calculation of the interest payments on the underlying exposures. However, this information might still be useful, particularly with regard to public synthetic securitisations making use of an SSPE with various investors, and the requirement should therefore be kept for consistency purposes". Quoted from: EBA: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402", cit., pages 56-57.

In the case of losses, these should be allocated in order of the seniority of the tranches held. If the transaction has features allowing for the non-sequential priority of payments (such as pro-rata payments) it must also have triggers in place that force the reversion to sequential, hierarchical payments related to the performance of the underlying exposures. These triggers should include the case that either the increase in the cumulative amount of defaulted exposures or the increase in the cumulative losses exceeds a given percentage of the outstanding amount of the underlying portfolio[929]. These triggers determine the application of sequential amortisation in order to ensure that tranches providing credit protection have not already been amortised if significant losses occur at the end of the transaction.

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[929] The Regulation requires that there are both forward looking and backward looking triggers in place. Backward looking triggers come into play when losses are higher than expected while forward looking triggers are actioned following rating downgrades or the probability of default according to risk models increases. On the 12th of December 2021 the EBA launched a public consultation on Draft Regulatory Standards for specifying and calibrating the minimum performance-related triggers for STS on – balance-sheet securitisations. See:https://www.eba.europa.eu/regulation-and-policy/securitisation-and-covered-bonds/regulatory-technical-standards-performance-related-triggers-sts-balance-sheet-securitisations#pane-new-7bdd87fb-e02f-492a-99d6-129449e3cf9d

According to the Draft Regulatory Standards: "This Regulation should not calibrate the two triggers provided under Article 26c (5) third paragraph point (a) of Regulation (EU) 2017/2402 as there is no one-size –fits-all calibration. Instead, transaction parties should set appropriate individual thresholds for the respective transaction". Quoted from: "Consultation Paper. Draft Regulatory Technical Standards specifying and, where relevant, calibrating the performance-related triggers pursuant to Article 26c (5) of Regulation (EU) 2017/2402 as amended by Regulation (EU) 2021/557".

In the case of revolving securitisations, these too should include triggers to provoke termination of the revolving period and the amortisation of the tranches, which must at a minimum include the cases of: (i) the deterioration of the credit quality of the underlying exposures to below a minimum, predetermined threshold (ii) losses that rise above a predetermined threshold, or losses over a predefined period that rise above a predetermined threshold (iii) a failure to generate sufficient new underlying exposures that meet the predetermined credit quality over a specified time period.

5.6 (a) Listing the underlying exposures

Of particular importance in synthetic securitisations is the clear identification of the underlying exposures to be included in the credit protection agreement (as their ownership is not transferred to an SSPE). The STS criteria require that the reference obligations on which protection is purchased are listed on a reference register[930].

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[930] Article 26 (c) 9 of Regulation (EU) 2017/2402 decrees that: "The register shall identify the reference obligors, the reference obligations from which the underlying exposures arise, and for each underlying exposure, the nominal amount that is protected and that is outstanding".

5.6 (b) Transaction documentation

The transaction documentation has to clearly specify the contractual duties of all the parties[931], and ensure that provisions are in place to replace any relevant counterparties. It must also detail the servicing procedures that apply to the mortgage contracts and the servicing standards that shall apply during the life of the securitisation.

As with true sale securitisations, in the case of funded synthetic securitisations, the transaction documentation must include provisions for the resolution of conflicts between different classes of noteholders, specify their voting rights and define the responsibilities of the trustee (or equivalent entity).

5.7 The STS synthetic transparency criteria

The transparency requirements are contained in Article 26 (d) of Regulation (EU) 2017/2402.

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[931] These include the verification agent, the trustee (in Common Law jurisdictions), the servicer, any derivative counterparties etc. If credit linked notes are issued in funded synthetic securitisations, then it is necessary that a trustee or equivalent entity with fiduciary responsibilities is appointed in order to act in the interests of the note holders and minimise any potential conflicts between them.

In line with the true sale requirements, the originator[932] must make available to potential investors data on both static and dynamic historical default and losses for mortgages similar to those that are the object of the credit protection agreement. This data should cover a period of at least five years. A sample of the underlying exposures must be subject to external verification. In the case of synthetic securitisation, ensuring the eligibility of the underlying mortgages is crucial for determining the effectiveness of the credit protection.

As with true sale securitisation the originator shall be required to provide the investors with a liability cash – flow model representing the relationship between the underlying exposures and the payments between the originator, investors, the SSPE (where applicable) and any third parties. This model must be made available to investors on an ongoing basis.

5.7 (a) Specific Synthetic Securitisation Criteria

Article 26 (e) of the Securitisation Regulation contains criteria that are exclusive to synthetic securitisation. Of particular importance are those relating to the credit protection agreement.

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[932] In synthetic STS transactions the obligation to make data available has been limited to the originator. According to the simplicity requirements the protection buyer must be an originator with respect to the securitised exposures.

This must cover, at a minimum, a number of specified credit events which vary depending on whether the risk transfer is achieved by guarantees or credit derivatives.

5.7 (b) Specified credit events

(i) In the case of guarantees then the credit events referred to in point (a) of Article 215(1) of Regulation (EU) 575/2013 must be covered. This article refers to the default or non-payment of the underlying obligor[933].

(ii) In the case of derivatives then the credit events referred to in point (a) of Article 216 (1) of Regulation (EU) 575/2013. This article refers to:

(i) The failure to pay the amounts which are due under the terms of the underlying obligation (the mortgage contract).

(ii) The bankruptcy, insolvency or inability of the obligor to pay its debts.

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[933] According to the EBA report on the synthetic STS framework: "Restructuring has been excluded as a credit event in the case of financial guarantees, in order to avoid them being treated as a derivative in accordance with the relevant accounting standards. The underlying reference portfolio is often held in the banking book and is therefore subject to accrual accounting, while derivatives are subject to mark-to-market. Financial guarantees, however, are typically accrual accounted; nevertheless, if a financial guarantee also references restructuring, then it may have to be treated as a derivative in accordance with relevant accounting standards. Therefore, buying protection for portfolios held on the banking book in the form of a financial guarantee rather than a derivative avoids mark-to-market volatility". Quoted from: The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402, cit., page 67.

(iii) The restructuring of the underlying obligation which involves forgiveness or postponement of principal, interest or fees that result in a credit loss event.

The requirement to cover these events does not prevent the parties from agreeing on additional credit events.

5.7 (c) The credit protection payment

The credit protection payment that follows the occurrence of a credit event must be calculated based on the actual realised loss suffered by the originator or the original lender. Obviously it is important from the perspective of the originator that the amount paid does not fall short of the loss amounts, and aligning actual losses to the credit protection payment leads to clearly defined incentives for both parties. The right of the protection buyer to receive the protection payment must be enforceable, and the amount of the payment must be clearly defined and capable of calculation. The third-party verification agent[934] shall be

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[934] According to Article 26(e) 4 of Regulation (EU) 2017/2402 the verification agent must verify, as a minimum that: "(a) the credit event referred to in the credit event notice is a credit event as specified in the terms of the credit protection agreement (b)that the underlying exposure was included in the reference portfolio at the time of the occurrence of the credit event concerned (c) that the underlying exposure met the eligibility criteria at the time of its inclusion in the reference portfolio (d) where an underlying exposure has been added to the securitisation as a result of replenishment, that such a replenishment complied with the replenishment conditions (e) that the final amount is consistent with the losses recorded by the originator in its profit and loss statement (f) that, at the time the final credit protection payment is made, the losses in relation to the underling exposures have correctly been allocated to the investors".

responsible for assessing whether a credit event has taken place. The verification may be performed on a sample basis, rather than an examination of each individual underlying exposure covered by the credit protection agreement.

In the event of a verified credit event, the credit protection payment must be paid within a specified time period following the end of the workout process.

However, given that the workout of full losses can be a lengthy process (and in the case of mortgages it could potentially involve the foreclosure and auction of many thousands of properties), and to ensure that an originator does not have to keep paying credit protection on a notional amount when a credit event has already occurred in relation to certain exposures, the law requires that an interim payment is made within six months of the occurrence of a credit event. When such an interim credit protection payment is made the final credit payment shall be adjusted to cover the actual realised loss. The method for calculating both the interim and the final protection payments must be specified in the protection agreement.

Verification agents must be independent of both the originator and the investor and (in the case of funded synthetic securitisations that issue credit-linked notes) of the SSPE.

The credit protection agreement shall specify the maximum extension period for the debt workout to be completed, but this extension period shall not be longer than two years.

5.7 (d) The protection premium

With respect to the premium paid to investors, these should be contingent on the size and credit risk of the protected tranche, and structured as a fixed percentage of the residual outstanding balance of the protected tranche at each payment date (thus reflecting tranche amortisations or write-downs due to incurred losses).

Premiums which are non-contingent, i.e., that are not a strict function of the outstanding size and credit risk of a tranche are not permitted in STS synthetic securitization[935].

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935 "In some transactions, protection premiums are paid up front, in contrast to the most widespread market practice, according to which protection premiums are paid in accordance with a regular schedule. Transactions may also be structured to include protection premium rebate mechanisms, through which, if at the maturity of the protection period the aggregate premium paid by the protection buyer exceeds losses suffered on the reference portfolio, the excess would be returned to the originator. In order to ensure that synthetic STS securitisations are simple and that the risk assessment of these securitisations is not overly complex, these premium structures should not be allowed." Quoted from: The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402, cit., page 70.

5.7 (e) Early termination of the credit protection agreement

The criteria also provide for the circumstances in which the credit protection agreement may be terminated early by the originator (prior to its scheduled maturity). These are restricted, in order to preserve the integrity of the agreement, to:

(i) the insolvency of the protection provider[936]

(ii) the failure of the protection provider to pay any amounts due under the agreement

(iii) relevant regulatory events. These include a number of circumstances such as:

(a) Unforeseeable changes in any law or regulation (or its official interpretation), or the tax or accounting treatment of a transaction that could have an adverse effect on the amount of capital that the protection buyer is required to hold in connection with the securitisation compared with that anticipated at the time of entering into the transaction.

This excludes other factors which could affect the economic efficiency of the transaction, such as rating downgrades from a rating agency.

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[936] The originator's insolvency is not permitted as an early termination event. This is because the termination of the agreement would mean that the originator's insolvency estate could not rely on credit protection on the securities portfolio while at the same time facing reduced regulatory capital against the same portfolio. This would pose a serious threat to the recovery prospects of the originator's insolvency creditors.

(b) A determination by a competent authority that the protection buyer (or any of its affiliates) is no longer permitted to recognise significant risk transfer in accordance with article 245 (2) or (3) of Regulation (EU) 575/2013 in respect of the securitisation[937].

(iv) The exercise of a time call[938]

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[937] Articles 245 (2) and (3) of Regulation (EU) 575/2013 state the following with regard to significant risk transfer: "2. Significant credit risk shall be considered as transferred in either of the following cases: (a) the risk-weighted exposure amounts of the mezzanine securitisation positions held by the originator institution in the securitisation do not exceed 50% of the risk-weighted exposure amounts of all mezzanine securitisation positions existing in this securitisation. (b) the originator institution does not hold more than 20% of the exposure value of the first loss tranche in the securitisation, provided that both of the following conditions are met: (i) the originator can demonstrate that the exposure value of the first loss tranche exceeds a reasoned estimate of the expected loss on the underlying exposures by a substantial margin (ii) there are no mezzanine securitisation positions. Where the possible reduction in risk-weighted exposure amounts, which the originator institution would achieve by securitisation, is not justified by a commensurate transfer of credit risk to third parties, competent authorities may decide on a case-by-case basis that significant credit risk shall not be considered as transferred to third parties. 3. By way of derogation from paragraph 2, competent authorities may allow originator institutions to recognise significant credit risk transfer in relation to a securitisation where the originator institution demonstrates in each case that the reduction in own funds requirements which the originator achieves by the securitisation is justified by a commensurate transfer of risk to third parties. Permission may only be granted where the institution meets both of the following conditions: (a) that the institution has adequate internal risk-management policies and methodologies to assess the transfer of risk; (b) the institution has also recognised the transfer of credit risk to third parties in each case for the purposes of the institution's internal risk management and its internal capital allocation".

[938] A time call is a contractual option to bring the transaction to a close. However, the Regulation stipulates that this may only be done when the time period measured from the closing date of the transaction is equal to or greater than the weighted average life of the initial reference portfolio. The time call should not be structured so as to avoid allocating losses to credit enhancement positions.

(v) The exercise of a clean-up call option[939].

(vi) In the case of unfunded credit protection, when the investor no longer qualifies as an eligible protection provider[940].

In the case of funded credit protection, upon termination of the credit protection agreement after a credit event, collateral must be returned to investors in order of the seniority of the tranches.

5.7 (f) Synthetic excess spread

Synthetic excess spread is defined in Article 2 (29) of Regulation (EU) 2017/2402 as: *"the amount that, according to the documentation of a synthetic securitisation, is contractually designated by the originator to absorb losses of the securitised exposures that might occur before the maturity date of the transaction"*.

Synthetic excess spread is a form of credit enhancement which makes the investment more attractive for investors.

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[939] Clean-up call options are defined in point (1) of Article 242 of Regulation (EU) 575/2013. It states that: "'Clean-up call option' means a contractual option that entitles the originator to call the securitisation positions before all of the securitised exposures have been repaid, either by repurchasing the underlying exposures remaining in the pool in the case of traditional securitisations or by terminating the credit protection in the case of synthetic securitisations, in both cases when the amount of outstanding underlying exposures falls to or below certain a certain pre-specified level".

[940] The requirements for eligible protection providers for unfunded positions are set out in 26 (e) 8 of Regulation (EU) 2017/2402 in relation with the form that the credit protection agreement must take. This article in turn refers to points (a) to (d) of Article 214(2) of Regulation (EU) 575/2013.

However, the potential danger of permitting too much synthetic excess spread subordinated to the investor is that their positions would only be eroded by losses under very extreme scenarios, which would effectively result in no effective risk transfer at all. It is therefore only allowed subject to strict conditions:

(i) the amount of excess spread that the originator uses as credit enhancement must be specified in the transaction documentation and be expressed as a fixed percentage of the outstanding portfolio balance

(ii) synthetic excess spread not employed to cover credit losses during each payment period must be returned to the originator

(iii) If originators use the IRB approach to calculate their capital requirements[941] then the total synthetic excess spread committed per year must not exceed the one-year regulatory expected loss amounts for all the underlying exposures for that year.

(iv) Originators not using the IRB approach then the calculation of the one-year expected loss (which the total synthetic excess spread may not exceed) must be clearly determined in the transaction documents.

[941] This is the approach to calculating capital requirements that is referred to in Article 143 of Regulation (EU) 575/2013.

5.7 (g) The credit protection agreement

The extent of credit risk transfer hinges primarily on the risk of default in unfunded securitisations and on the quality and availability to the protection buyer of the collateral provided in funded synthetic securitisations

Regulation (EU) 2017/2402 specifies the types of credit protection agreement which may be used for on-balance sheet STS synthetic securitisation.

5.7 (h) Unfunded credit risk protection agreements

In the case of unfunded credit risk protection arrangements, eligible credit risk protection providers are restricted to those entities that are eligible providers in accordance with the Capital Requirements Regulation and that are risk weighted at 0% in accordance with the standardised approach to credit risk contained in the Regulation. These are listed in Article 214(2) of Regulation (EU) 575/2013 and include central banks and central governments, regional governments and local authorities, and certain public sector entities.

5.7 (i) Funded credit risk protection agreements

In the case of funded credit risk protection agreements, the counterparty will fund the credit protection by providing high-quality collateral (which may include the issuance of credit linked

notes through an SSPE), such as state bonds or cash (either held by a third-party credit institution or deposited with the protection buyer).

With respect to this collateral the Securitisation Regulation determines that the funded agreement must stipulate:

(i) that the right of the originator to use the collateral to meet protection payment obligations is enforceable and ensured through appropriate collateral arrangements

(ii) that the right held by investors to have collateral that has not been employed to meet protection payments returned to them is enforceable

(iii) that in the case that the collateral has been invested in securities, that the transaction documentation has set out the eligibility criteria of these securities and their custody arrangements.

5.8 The type of securities eligible for funded synthetic securitisations

The high quality security that must be held in the case of funded synthetic securitisations is either:

(a) 0% risk-weighted debt securities[942]

(b) collateral in the form of cash held with a third-party credit institution.

PART 2: SPANISH SECURITISATION

5.9 Mortgage Participations and Mortgage Securitisation Funds

The foundation for mortgage securitisation in Spain was established by Law 2/1981 of the 25th of March on the Regulation of the Spanish Mortgage Market[943], and Royal Decree 685/1982 of the 17th of March[944], by which certain aspects of Law 2/1981 on the regulation of the mortgage market are developed. These laws structured the Spanish mortgage market around the emission

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[942] The 0% risk-weighted debt securities are those referred to in Chapter 2 of Title II of Part Three of Regulation (EU) 575/2013. Both the originator and the investor must have access to this high-quality collateral which must meet the following three conditions: (i) The debt securities must have a remaining maximum maturity of three months (which shall be no longer than the remaining period up to the next payment date) (ii) they can be redeemed in cash in an amount equal to the outstanding balance of the protected tranche (iii) they are held by a custodian independent of the originator and the investors.

[943] This has since been derogated by Royal Decree Law 24/2021, although the derogation is set to take effect from the 8th of July 2022.

[944] This was derogated by Royal Decree 716/2009 of the 24th of April, that determines certain aspects of Law 2/1981 of the 25th of March, on the regulation of the mortgage market, and other regulations on the mortgage and financial system.

of three kinds of debt security, covered mortgage bonds, mortgage bonds[945] and mortgage participations[946].

The specific regulation of mortgage securitisation did not arrive until Law 19/1992 on mortgage investment funds and mortgage securitisation funds. The motivation for introducing securitisation into the Spanish legal system was the creation of a more liquid market for mortgage loans and the hope that this would have the secondary effect of lowering the cost of purchasing a property for Spanish homebuyers[947].

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[945] Also commonly referred to in the literature in English as mortgage debentures. The crucial difference between covered mortgage bonds and mortgage bonds/debentures is that while the first are covered by all the loans or credits inscribed in favour of the issuing entity, the second are guaranteed by a specific, referenced group of loans and credits.

[946] For a history of the development of both the Spanish Mortgage Industry and Spanish Securitisation see: Madrid Parra, Agustín: *Inversión Colectiva, Mercado hipotecario, titulización,* published by Marcial Pons, Madrid-Barcelona, 2017.

[947] "*The Present Law also regulates, for the first time in Spain, the so-called "Mortgage Securitisation Funds". These Funds, which are pools of mortgage participations, and whose legal and financial framework must distinguish them from Real Estate Investment Funds, transform the participations in mortgage loans acquired from credit entities into homogenous and standardised fixed-rate securities, which can be traded on organised securities markets. This will create a more liquid market for mortgage loans, which will stimulate competition between credit entities, allow for their greater specialisation in the various stages of underwriting and administrating mortgage loans, and, as a consequence, help to lower the cost of loans for the purchase of residential housing."* Preamble Law 19/1992.

The law configured mortgage participations as the underlying assets of mortgage securitisation funds[948]. Mortgage participations[949] are registered securities issued by credit entities that operate in the Spanish mortgage market and that allow third parties to participate in the loans or credits that make up their portfolios. The participation confers economic rights on the registered holder, that normally constitute a percentage of the principal and interest payments of the underlying mortgage loan, which appear in the security document itself. The "participation" in the mortgage loan is not limited to a share in the loan as it could cover the entire loan[950].

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[948] Article 5.1 of Law 19/1992 stated that: "*For the emission of the securities referred to in this Article, pools of mortgage participations must be formed which shall be referred to as "Mortgage Securitisation Funds". These Funds shall be separate and closed patrimonies, and shall not have legal personality, without prejudice to the dispositions contained in point 7 of this Article. Their assets shall consist of mortgage participations and their liabilities of the securities issued, so that the quantity and conditions of their issue shall result in the fund having a net patrimony of zero*".

[949] The current regulation of mortgage participations is shared between Royal Decree 24/2021 which is the transposition of the EU Directive 2019/2162 on the issue of covered bonds and covered bond public supervision and Royal Decree 716/2009.

[950] Article 15 of Law 2/1981 declared that: *"The entities that are referred to in article 2 shall be able to let third parties participate in all or part of one or various mortgage credits in their portfolio, through the issue of securities denominated mortgage participations".*

Each mortgage participation is attached to a specific loan[951], and Law 19/1992 stipulated that the mortgage participations grouped together in the mortgage securitisation funds had to be supported by loans that met the requirements established in section two of Law 2/1981[952] (which in turn entailed their subjection to the regulatory development of this section in Royal Decree 685/1982).

The characteristics of the mortgages that backed mortgage participations were that:

(i) They had to be over the freehold of the property without any limiting restrictions or liens[953].

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[951] Article 61.2 of Royal Decree 685/1982 determined that*: "In all cases, each security issued shall represent a participation in a specific mortgage loan. When various participations are issued over a single mortgage loan, the issue may take place either simultaneously or successively, in both cases either at the beginning or during the term of the loan."*

[952] Article 5.4 of Law 19/1992 stated that: "*The mortgage participations pooled in the fund, as well as consisting of loans that comply with the requisites established in the Second Section of Law 2/1981, of the 25th of March on the Regulation of the Mortgage Market, must have a maturity that coincides with the loans they participate in".*

[953] Article 5 of Law 2/1981 required that: *"The loans and credits referred to in this Law must be guaranteed, in all cases, with a first mortgage over the freehold of an immovable object that is constituted over the whole property. If the property were subject to other mortgages or prohibitions over the sale of the property, or a suspensive condition, or any other restriction over the freehold, then these must be either cancelled or subsumed by the mortgage that is constituted before it can support the issue of securities.*

The loan or credit guaranteed by this mortgage cannot exceed 60% of the appraised value of the mortgage property. When it finances the construction, repair or acquisition of homes, the loan or credit can reach 80% of the appraised value, without prejudice to the exceptions contained in this Law. The time to amortisation of the guaranteed loan

(ii) The mortgage loan could not exceed 80% of the appraised value of the property. If the property were to fall in value by more than 20% of the appraised value then the financial entity that extended the loan could require the mortgage obligor to choose between extending the mortgage to other properties in order to maintain the ratio between the loan and the effective guarantee, cancelling the mortgage and returning the money owed, or returning the part of the loan required to restore the ratio. If the mortgagor obligor did none of these things within a two-month period then the mortgage contract would be cancelled automatically and the mortgage obligor would be required to return any outstanding interest and principal[954].

(iii) The mortgage was limited to a 30-year period.

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or credit when it finances the acquisition, construction or repair of the habitual domicile, cannot exceed 30 years".

[954] See Article 29.1 of Royal Decree 685/1982 which specified that: 1. *If, due to the housing market or for any other reason the value of the mortgaged property falls below the official appraisal price by more than 20%, the financial entity that is the creditor of the mortgage, after demonstrating the change in value through a new appraisal carried out at its request, can require the mortgage obligor to extend the mortgage to other immovable goods until there is sufficient to cover the differential between the value of the mortgaged property and the loan that it guarantees.*

The mortgage obligor, after being requested to extend the mortgage, can choose between returning the full price of the loan or the quantity that exceeds the value of the loan that is the result of applying to the revised appraisal value the percentage used to initially determine the value of the loan.

If, within two months of being required to extend the mortgage, the mortgage obligor neither extends it nor returns that part of the loan referred to in the previous paragraph, then it shall be understood that the mortgage obligor has chosen to return the mortgage loan in full, and this shall be immediately enforceable by the lending credit institution.

(iv) The property guaranteeing the mortgage had to be insured for its appraised value against damages[955].

(v) The issuing entity of the mortgage participation was subject to a number of restrictions with regard to the mortgage, as it was unable to cancel it or extend its terms without the express permission of the participant in the loan[956].

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[955] Article 8 of Law 2/1981 stipulated that: "*The immovable objects mortgaged must be insured against damages for their appraised value, in the conditions determined by regulations"*.

[956] Article 25 of Royal Decree 685/1982 decreed that:

1. *The mortgage loans referred to in the previous article must be guaranteed, in all cases, by a first mortgage over the freehold.*

2. The inscription of the mortgage property must be current and un-contradicted; it cannot be subject to any restrictions due to its registration or because of inscriptions made in accordance with Article 298 of the Mortgage Regulation.

3. The issuing entities may not postpone the mortgages in their favour that guarantee loans which serve as the underlying assets for the payment of mortgage bonds, or which have been participated in, without the consent of the bondholder's syndicate, or all the participants in the loan respectively.

4. Nor may they, without express permission to do so:

a) Voluntarily cancel these mortgages, for any cause other than the payment of the loans they guarantee

b) Renounce or make concessions regarding them

c) Novate the loan, forgive all or part of the loan or extend its repayment period.

d) In general carry out any act that diminishes the rank, legal efficacy or economic value of the mortgage loan or credit.

5. The mortgages inscribed in favour of the entities that can participate in the mortgage market can only be challenged in the case of the insolvency of the mortgagor when the mortgage had been formalised in a moment after the date in which the bankruptcy is ruled to have retroactive effect. The legal action to challenge the mortgage can only be exercised by the insolvency practitioners that demonstrate fraud in the constitution of

(vi) The mortgage that backed the participation could only be challenged in the case of the insolvency of the mortgagor if the insolvency practitioners could demonstrate fraud in the constitution of a mortgage formalised after the date in which the insolvency was ruled to have retroactive effects.

(vii) The titleholder of the mortgage participation had special enforcement rights in the foreclosure process against a mortgage obligor in default. Should the issuing entity of the participation not initiate foreclosure proceedings, the titleholder of the participation could subrogate the issuer in the proceedings and execute the mortgage contract for the value of the principal and interest of the participation[957].

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the mortgage. In all cases the rights of third parties that were not involved in the fraudulent insolvency shall be respected.

[957] Article 66 of Royal Decree 685/1982 determined that: "*If the issuing entity does not comply with its obligations as a consequence of the non-payment of the mortgage obligor, the titleholder or titleholders of the mortgage participations shall have the following faculties:*

a) Oblige the issuing entity to instigate foreclosure proceedings

b) Be represented, with the same rights as the mortgage creditor, in the foreclosure procedure that the mortgage creditor has instigated against the mortgage obligor and receive the product of the sale of the property in proportion to the respective participation in the loan pursued, without prejudice to the issuing entity receiving the possible difference between the interest agreed upon in the loan and that agreed upon in the participation when this amount is inferior.

c) If the issuing entity does not instigate foreclosure proceedings within 60 working days from the obligor's reception of the notarised request to make payment, or does not pay the price of the participation due, the titleholder of the participation is authorised to exercise, by subrogation, the foreclosure action corresponding to the mortgage loan participated in for the quantity corresponding to the value of the participation, for both principal and interest payments.

These conditions together made mortgage participations a particularly high quality asset, and a convenient one, as unlike transferring a mortgage loan[958], the transfer of a mortgage participation did not require the modification of the notarised deed that formalised the loan, the change of the beneficiary of the mortgage guarantee, or even the notification of the change of creditor to the debtor[959].

The use of mortgage participations as underlying assets also ensured that the link between the originating entity and the mortgage obligor was not broken, as the law commended the

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d) In the case of the suspension of the foreclosure procedure instigated by the issuing entity, the titleholder of the participation may subrogate the issuing entity and continue the procedure."

958 Article 149 of the Mortgage Law approved by Decree on the 8th of February 1946 states: "*The loan or credit guaranteed by a mortgage can be transmitted in whole or in part in accordance with Article 1526 of the Civil Code. The transmission of the ownership of a mortgage that guarantees a credit or loan must be done by public deed and inscribed in the Property Registry"*.

959 *"Ten years later, Law 19/1992, of the 7th of July, allowed for the securitisation of the Mortgage Participations (MP) established in RD 685/1982 and defined the figure of Mortgage Securitisation Funds (MSF). By permitting the securitisation of Mortgage Participations and not mortgage loans directly, the law streamlined the process of securitisation, because, among other advantages, it was not necessary to communicate the change of ownership to the mortgage obligor nor modify the public deed of the mortgage. Furthermore, each MP represented a high quality mortgage loan, whose amount was set at less than 80% of the official valuation of the property (Loan to Value, LTV), among other minimum requisites established in Royal Decree 685/1982"*. Quoted from Catarineu, Eva/Pérez, David: "La Titulzación de los Activos por parte de las entidades de crédito: el modelo Español en el contexto internacional y su tratamiento desde el punto de vista de la regulación internacional", *Revista de Estabilidad Financiera*, núm. 14, mayo 2008, page 98.

custody and administration of the mortgage loans to the issuing entity[960].

The Mortgage Securitisation Funds created by Law 19/1992 were configured as separate patrimonies with no legal personality, managed by Mortgage Securitisation Fund Management Companies that legally represented them. They were closed funds, which meant that no additional assets could not be added after their formal constitution, except if substitutions were required due to the early repayment of the underlying mortgages that supported the participations, and the funds automatically extinguished when the mortgage participations they contained amortised[961]. Although the fund could issue securitisation notes in different series with distinct rates of interest and maturities, the principal and interest payment streams of the securitisation notes

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[960] See article 61.3 of RD 685/1982 relative to the issue of mortgage participations: "*The issuer shall conserve the custody and administration of the mortgage credit, as well as its partial ownership and shall be obliged to carry out whatever actions are necessary to ensure the effectiveness and successful outcome of the mortgage participation, paying to the participants, including in cases of pre-payment, the percentage that corresponds to them of the amounts received from the mortgage obligor in terms of both the principal and interest, in accordance with the conditions of the issue*".

[961]The second paragraph of Article 5.3 of Law 19/1992 stated: *"In all cases a fund shall extinguish when all the mortgage participations that compose the fund have amortised. The deed of constitution of a fund can expressly determine its early liquidation when the value of the mortgage participations pending amortisation is less than 10% of the original total value, in this case the deed of constitution must also determine how the remaining assets shall be disposed of"*.

were timed to coincide with those of the mortgage participations[962]. The fund, through its management company, could hedge any interest rate mismatches through swaps and temporarily acquire other securities to offset any payment stream mismatches between the mortgage participations and the securitisation notes[963].

The titleholders of the securitisation notes were exposed to the risk of non-payment of the mortgage participations, and had no legal recourse to the management company except when it failed

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[962] According to Article 5 .6. of Law 19/1992: *The securities issued and supported by the fund may differ in terms of their interest rates, which may be fixed or variable, their maturities and form of amortisation, the rules regarding their early amortisation if the mortgage participations backing them amortise early, their priority of payment, and other special advantages in the case of the non-payment of the mortgage participations, or any other characteristics.*

Without prejudice to the differences that may be established among different series, the principal and interest payment streams corresponding to the group of securities issued and supported by the fund must coincide with the group of mortgage participations pooled in the fund, without any more differences or temporal mismatches than those derived from commissions, costs of management and administration, insurance premiums and other applicable concepts. Such concepts and temporal mismatches may be limited by the pertinent regulations.

[963] See Article 5.7 of Law 19/1992: "*Subject to the previous number of this Article and the rules contained in the deed of constitution of the fund, the fund may contract swaps, insurance contracts, fixed rate reinvestment contracts, or enter into any other financial operations, with the objective of increasing the security or regularity of the payments of the securities issued, or neutralising the difference in interest rates between the mortgage participations and the securities the fund supports, or, in general transforming the financial characteristics of all or some of those securities. The fund may also, with the objective of covering any temporal mismatches between the payment calendar for principal and interest streams from the mortgage participations and those of the issued securities, temporarily acquire financial assets of the same or superior quality to those securities with the best credit rating supported by the fund".*

to comply with the rules for the administration of the fund set out in its deed of constitution[964].

The Mortgage Securitisation Fund Management Companies created by Law 19/1992 legally represented the funds and managed them but they were not the owners of the assets, as these were the noteholders and creditors of the fund. In this sense the funds operated in a similar manner to the trusts that are prevalent in Common Law jurisdictions, and were a mere instrument designed to transform mortgage assets into tradeable securities. The net patrimony of the funds was zero, as they were engineered so that their assets and obligations would cancel one another out.

Both the funds and their management companies were subject to the supervision, inspection and sanctioning regime of the

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[964] The second paragraph of Article 5.8 of Law 19/1992 stated that: "*The holders of the securities issued and supported by the fund shall run the risk of the non-payment of the mortgage participations pooled together in the fund, subject to, where applicable, the rules concerning the priority of payments and the special advantages established for the different series of securities in the deed of constitution of the fund. The holders of the securities shall have no legal action against the securitisation fund management company except in the case of its failure to correctly carry out its functions or comply with the rules set out in the deed of constitution of the fund*".

NSMC[965], and the creation of the funds had to be approved by the Ministry of the Economy and the Treasury[966].

Article 16.3 of Royal Decree Law 3/1993 permitted (in theory if not in practice at that time) the extension of securitisation to other types of asset, ostensibly to allow small and medium sized businesses (SMEs) to securitise their trade receivables as an additional and possibly cheaper source of funding than traditional bank loans[967]. However, the first application of securitisation to

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[965] The first paragraph of Article 6 of Law 19/1992 determined that: *"The Securitisation Fund Management Companies and the Mortgage Securitisation Funds they manage shall be subject to the rules concerning supervision, inspection, and where applicable sanctions of the NSMC".*

[966] Article 6.2 of Law 19/1992 decreed that: "*The creation of Management Companies shall require the authorisation of the Ministry of the Economy and the Treasury, which it shall grant pending a report from the NSMC. Once authorised the Management Company must be inscribed in the special Registry opened by the NSMC. The maximum share participation or voting rights or other means of exercising effective control over the Management Company by a natural person, entity, or group of entities may be restricted by regulation".*

[967] The Preamble of the Law stated that: *"One of the most important problems that face small and medium sized businesses (SMEs) is their difficulty in accessing finance that is adequate to their needs. The lack of direct access to the capital markets, the insufficiency of their guarantees for credit entities and the lack of information and business advice available to them all contribute to the problem of reduced access to outside finance, and a dependency on bank finance, the cost of which is normally high. For these reasons it is expedient to design a strategy that will facilitate finance to this type of business, whether by strengthening their own resources, or by establishing easier and cheaper access to external resources.*

The measures with this objective contained in the present Royal Decree Law will permit SMEs to enter the security markets, both for fixed rate and variable rate securities, by issuing securities. It will also permit the Government to extend the legal framework of securitisation contained in Law 19/1992, of the 7th of July, on the legal regime for real estate companies, real estate investment funds and mortgage securitisation funds, to the loans and rights of credit derived from the operations carried out by SMEs".

assets other than mortgage participations was facilitated by Law 40/1994 on the ordering of the National Electrical System. Additional disposition 8 of this Law allowed for the creation of: "*Securitisation Funds of the assets resulting from the nuclear moratorium"*[968].A moratorium on nuclear energy had been part of the manifesto of the ruling socialist party when they had run for office in 1982, and Law 40/1994 finally honoured that electoral promise[969], but offered compensation to the electricity companies that had invested in the necessary infrastructure[970].

Article 16 decreed that: "*The government, after a report by the National Securities Market Commission and the Bank of Spain, will be able to extend the legal framework for the securitisation of mortgage participations in articles 5 and 6 of Law 9/1992 of the 7th of July on the legal regime for real estate companies, real estate investment funds and mortgage securitisation funds, with the necessary adaptions, to the securitisation of other loans and rights of credit, including those derived from leasing operations, and those related in general to the activities of small and medium sized businesses*."

For an extensive examination of the use of securitization to fund SMEs in Spain see: Escrivá Bertó, Miguel/Gil Cívico, Rafael/Giménez Zuriaga, Isabel/Pampliega García, Margarita/Sáez Villar, Mireya/Vargas Escudero, Leonor, *Los Fondos de Titulización como Instrumento Alternativo para la Financiación de PYMES,* Civitas, Madrid, 2003.

968 The PSOE (The Spanish Socialist Workers' Party) were the governing party in Spain between the 3rd of December 1982 and the 6th of May 1996. Their manifesto in 1982 (titled "For Change") had promised to: "*Carry out a policy of using nuclear energy as a strictly complementary energy source, which will be used to attend exclusively to consumer needs not covered by other available sources. The total potential installed will not exceed 7,500 MW by 1990, requiring a planned detention of the nuclear programme currently under construction".*

969 Additional disposition 8.1 of Law 40/1994 had declared the definitive end to projects for the construction of the nuclear power plants of Lemóniz and Valdecaballeros and the second reactor at Trillo nuclear power plant.

970 Article 8.3 of Law 40/1994 had stated that: "*The titleholders of the construction projects that are detained shall receive, in the terms laid out in the present law,*

The Law then went on to allow this compensation to be used as the underlying asset in securitisation operations[971]. It also introduced the concept of *open securitisation funds* into Spanish Law, permitting funds that were open both in terms of their assets (by allowing new assets to be incorporated after the moment of a fund's constitution) and their liabilities (sanctioning the issue of repeated series of securitisation notes)[972].

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compensation for the investments made in them and the cost of financing them by designating to meet this end a percentage of their sales of electricity to consumers".

[971] Article 8.8 of Law 40/1994 went on to determine that:

"*The titleholders of the construction projects referred to in part 1 of this disposition may assign the right to compensation recognised in this Law to third parties, without any compromise or pact, whether explicit or implicit, to repurchase this compensation.*

In particular, this right may be assigned, totally or partially, in one or various occasions, to open funds that will be known as "Securitisation Funds of the Assets resulting from the Nuclear Moratorium", of the type contemplated in additional disposition 5 of Law 3/1994 of the 14th of April, which adapts Spanish legislation on credit entities to the Second Directive of Banking Coordination. These funds may proceed, from the moment this law comes into force, to practise securitisation through these funds, to which number 3 of additional disposition number 5 of Law 3/1994 of the 14th of April shall be applied together with the legal framework provided for in articles 5 and 6 of Law 19/1992 of the 7th of July for Mortgage Securitisation Funds, in those matters that are not specific to mortgage participations, with the following specifications:

a) The assets of the funds shall consist of the rights of compensation that are assigned and the interest produced by these and the obligations of the fund by the securitisation notes that the funds issue successively, and in general, by any other type of finance."

[972] Making the funds open was vital given that the underlying asset was the periodical addition of a supplement to the electricity bill of consumers, which would then serve as the support for a new series of securitisation notes.

5.9 (a) Asset Securitisation Funds, Covered Mortgage Bonds and Mortgage Transfer Certificates

(i) Asset Securitisation Funds

The regulation of all other types of securitisation would be covered by Royal Decree 926/1998 which created Asset Securitisation Funds.

Like Mortgage Securitisation Funds before them, Asset Securitisation Funds were configured as separate patrimonies with no legal personality[973]. They had to be approved by and registered with the NSMC[974], and their internal regulations, economic characteristics, and the rules which determined the process of their liquidation had to be collected in a notarised deed of constitution[975].

This Law permitted the securitisation of rights of credit that were assets of the assignor, and this enabled the securitisation of

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[973] The first paragraph of Article 1.1 of Royal Decree 926/1998 determined that: *"Asset securitisation funds are separate patrimonies that have no legal personality. Their assets consist of the financial assets and other rights (hereinafter assets) grouped together in them and their liabilities consist of the fixed-rate securities they issue and the loans made to them by credit entities. As a general rule, their financing through securities should be higher than 50 percent of the liabilities of the fund, unless there are financial, technical, legal or market causes that justify a lower percentage and these causes are accredited in the moment of the constitution of the fund".*

[974] See Article 5 of Royal Decree 926/1998.

[975] See Article 6 of Royal Decree 926/1998.

Covered Mortgage Bonds[976] and later, Mortgage Transfer Certificates.

The Law introduced subjective requisites for the assignor of the underlying credits, requiring that it have audited accounts for the last three years and a favourable opinion granted by the auditor for the last audit[977]. Furthermore, it was required to deposit its annual accounts with the NSMC.

The assignment was also subject to objective requirements[978]:

(i) The assignment of the assets had to be total and unconditional and for the full amount remaining until the assets reached maturity

(ii) There could be no guarantee of payment

The act of assignment of assets required certain formalities:

(i) A contract to accredit the operation

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[976] Technically it also permitted the direct securitisation of mortgage loans, without the need to convert them first into mortgage participations. However, as mentioned previously, the direct securitisation of mortgage loans would have entailed notification of the mortgage obligor and inscription in the Property Registry whilst the transfer itself would have had to have been made by a notarised deed of assignment. So it was not considered practical.

[977] Article 2.2 (a) of Royal Decree 926/1998

[978] Article 2.2 (b) of Royal Decree 926/1998

(ii) A document deposited with the NSMC describing the assets to be incorporated and confirming that they adhered to the requisites in the deed of constitution of the fund itself [979].

The funds could be *open* or *closed*. Closed funds could not modify their assets or liabilities after the moment of their constitution except to substitute assets or remedy defects[980].

The funds had to be managed and legally represented by Asset Securitisation Fund Management Companies, authorised to operate by the Ministry of the Economy following a favourable report by the NSMC[981], which were responsible for the defence of the interests of the securitisation notes issued[982]. The management companies were required to comply with a number of requisites[983] including:

(i) To employ experienced experts or contract their services to manage their operations

(ii) To evaluate the risks involved in their operations

(iii) To write a clear and transparent prospectus

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[979] Article 2.2 (c).1 of Royal Decree 926/1998.

[980] See Article 2.3 of Royal Decree 926/1998.

[981] See Article 13 of Royal Decree 926/1998.

[982] See Article 12 of Royal Decree 926/1998.

[983] See Article 12 of Royal Decree 926/1998.

(iv) To take the form of limited companies[984]

(v) Have a minimum share capital of just over 900,000 Euros[985]

If the Asset Securitisation Fund Management Company became insolvent it had to find a substitute within a four-month period, if not, the fund had to be liquidated and the assets amortised[986].

(ii) Covered Mortgage Bonds

Covered Mortgage Bonds had existed in Spain for over a century before their regulation by Law 2/1981[987]. This law did not present a definition of covered mortgage bonds but regulated their key features, their issuance, circulation and the rights that they incorporated. From 1982 to 2009 the regulation of covered

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[984] See Article 14 (a) of Royal Decree 926/1998

[985] See Article 14 (b) of Royal Decree 926/1998

[986] Article 19 Royal Decree 926/1998

[987] They were first regulated in Spain by a Royal Decree of the 5th of February 1869. This was developed by a law of the 2nd of December 1872 that established in its Articles 30 and 31 a special procedural and economic regime, allowing the holder of the covered mortgage bond to recover any outstanding principal or interest payments directly from the issuing bank when the instrument reached maturity. In 1875 a Royal Decree of the 24th of July made the right to issue covered mortgage bonds the exclusive privilege of the Spanish Mortgage Bank (an entity which was eventually privatised in the 1960s and dissolved in 1991). Royal Law Decree 31/1978 of the 31st of October extended the power to issue covered mortgage bonds to the Building Loan Bank. However, the modern regulation of covered mortgage bonds came with Law 2/1981 on the Regulation of the Mortgage Market. This has since been derogated by the single derogating disposition of its replacement, Royal Decree Law 24/2021, which incorporates the basic content of Law 2/1981 with a number of modifications.

mortgage bonds was supplemented and expanded upon by Royal Decree Law 685/1982[988], and from 2009 until the present day this role is fulfilled by Royal Decree 716/2009.

Covered mortgage bonds are securities that represent a right of credit against their issuer. Like a bond, the titleholder of a covered mortgage bond is effectively lending money to the issuing entity, which it can recoup after a set period of time. The obligation of the issuer to return the principal upon maturity of the covered mortgage bond is incorporated into the security, and they can be issued with or without premiums.

Law 2/1981 initially limited the right to issue covered mortgage bonds to the Spanish Mortgage Bank, official credit entities, savings banks and mortgage companies[989], but after a reform in

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[988] It was derogated by the single derogating disposition of Real Decree 716/2009 of the 24th of April.

[989] The content of Article 2 after its modification by Law 41/2007 which modifies Law 2/1981 of the 25th of March on the Regulation of the Mortgage Market and other regulations of the mortgage and financial system, the regulation of inverse mortgages and care insurance cover and which establishes a special tax regulation, read: "The following credit entities are entitled to grant loans and credits and issue the securities regulated by this law in the conditions determined by the corresponding regulations:

a) Banks and, when their statutes so determine, official credit entities

b) Savings banks and the Spanish confederation of Savings Banks

c) Credit institutions."

While article 11 of Law 2/1981 added that:

"The entities referred to in article 2 that grant mortgage loans or credits with the requisites established in the previous section will be able to issue covered mortgage bonds and mortgage bonds, either in series or individually".

2007 the Law permitted their issue to banks, savings banks and credit institutions.

Article 5 of Law 2/1981[990] placed conditions on the type of mortgage loans and credits that could support covered mortgage bonds (the same as those seen previously for mortgage participations). These were that:

(a) It was a first mortgage over the freehold of the entire property

(b) Any second mortgages, or restrictions on the freehold had to be cancelled or subordinated to the first mortgage before it could be used to back covered mortgage bonds.

(c) Mortgages already backing mortgage bonds or participations could not be used without the respective permission of the bondholders' syndicate or all the participants.

(d) The mortgage over the property could not exceed 80 percent of its appraised value.

(e) The re-payment period of the loan could not exceed 30 years.

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[990] In connection with Article 25 of Royal Decree 685/1982 and subsequently Article 4 of Royal Decree 716/2009.

While these conditions alone would have ensured that the underlying assets for covered mortgage bonds (and therefore the securitisation notes they backed) would have been of high quality, covered mortgage bonds had an additional guarantee that made them of *even higher quality*. Article 12 of Law 12/1981 determined that the principal and interest payments of covered mortgage bonds were specially guaranteed (without needing to be inscribed in the property registry) by all the mortgages that the issuing entity carried on its books that were not encumbered by mortgage bonds, and furthermore by the general guarantee of unlimited liability of the Spanish Civil Code[991].

Furthermore, a limit was placed on the issuance of covered mortgage bonds with respect to the sum of the unpaid capital of the mortgage loans and credits eligible to be used as their underlying assets in the portfolio of the issuing entity (as a means of ensuring that there were always sufficient assets to back the payment of the covered mortgage bonds). This was set at 90% by Royal Decree 685/1982[992] and later at 80% by Royal Decree

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[991] Article 12 stated that: "*The capital and interest of the covered mortgage bonds are specially guaranteed, without the need for them to be inscribed in the property register, by a mortgage over all the mortgages that the issuing entity has on its books that are not encumbered by mortgage bonds, without prejudice to the universal liability affecting the same (...)"*. The universal liability principle is contained in the Article 1.911 Civil Code.

[992] Article 59.1 of Royal Decree 685/1982 determined that: "*The volume of covered mortgage bonds issued by each entity, that are not amortised, cannot be higher than 90% of the unpaid capital of the mortgage credits eligible to serve as cover"*.

716/2009[993]. If this limit was surpassed for any reason, then there was a mechanism to re-establish it[994].

The law specified a minimum content for covered mortgage bonds[995] which included:

(a) The specific designation of the law by which they were regulated

(b) Whether they were registered securities, bearer securities or payable to order. If they were registered securities then the document had to feature the name of the titleholder, while if

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[993] Article 24.1 of Royal Decree 716/2009 stipulated that: "*The volume of covered mortgage bonds issued by the entity and not amortised cannot be higher than 80% of the total of the unpaid capital of all the mortgage loans and credits on the portfolio of the entity that are eligible in accordance with Article 3*".

[994] Article 60 of Royal Decree 685/1982 contemplated the following ways of re-establishing the proportion: i) The deposit of cash or public funds with the Bank of Spain (ii) The acquisition of covered mortgage bonds in the market (iii) The concession of new credits suitable to serve as the underlying assets for covered mortgage bonds (iv) The attachment of new credits to the covered mortgage bonds to replace those that no longer met the requirements to serve as underlying assets (v) The amortisation of existing covered mortgage bonds.

Likewise, according to Article 25 of Royal Decree 716/2009 the proportion could be re-established by: i) the deposit of cash or public funds with the Bank of Spain ii) The acquisition of its own covered mortgage bonds by the issuing entity iii) The concession of more eligible mortgage loans or credits iv) Subscribing to bank guarantees or credit insurance to satisfy the payments for those credits or loans that had become ineligible for use as underlying assets (and therefore could not be included in the calculation of the underlying credit base) (v) Linking the payment of the covered mortgage bonds to new assets to substitute those that had reached maturity, been paid early, had deteriorated or had defaulted, always providing that these new assets met the criteria for serving as the underlying assets for covered mortgage bonds. (vi) The re-payment of covered mortgage bonds up to the value necessary to re-establish the equilibrium.

[995] This was set by Article 44 of Royal Decree 689/1982 and Article 14.1 of Royal Decree 716/2009

they were issued to order they had to feature the name of the person who issued the order of payment

(c) The nominal value of the covered mortgage bond and that of any premiums

(d) The schedule for the repayment of the capital

(e) The schedule and quantity of interest payments

Finally, Article 14 of Law 2/1981 configured a special preference to the holders of covered mortgage bonds in the case of insolvency proceedings against the issuer[996].

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[996] *"The covered mortgage bonds and mortgage debentures incorporate the right of credit of their holders against the issuing entity, guaranteed in the form described in articles 12 and 13, and is coupled with an enforcement action to claim payment from the issuer once they have reached maturity. The titleholders of these securities shall be considered preferential creditors with respect to all other creditors in accordance with article 1923.3 of the Civil Code, in the case of covered mortgage bonds in relation with all the mortgage credits and mortgage loans registered in favour of the issuing entity, excepting those that serve as underlying assets for mortgage debentures, and in the case of mortgage debentures with respect to all the mortgage loans and credits that serve as their underlying assets, and, in both cases, in relation to the substituting assets and the cash flows generated by derivative instruments linked to the issues, where these exist. In the case of the insolvency of the issuing entity the titleholders of mortgage debentures and covered bonds shall have the special privilege established in number 1º, section 1 of article 90 of Law 22/2003, of the 9th of July (The Law on Insolvency).*

Without prejudice to the above, in accordance with number 7 of section 2 of article 84 of Law 22/2003 on Insolvency, the capital and interest payments that correspond to covered mortgage bonds and mortgage debentures that have been issued and which are pending at the moment the insolvency proceedings were applied for shall be satisfied from the aggregate assets of the insolvent debtor, up to the limit of the quantities received by the insolvent debtor for the mortgage loans and credits and, if these exist, the substituting assets that serve as collateral for the covered mortgage bonds and mortgage debentures, and the cash flows generated by any financial instruments linked to the issues.

If, due to a temporal mismatch, the income received by the insolvent debtor is not sufficient to cover the payments mentioned in the previous paragraph, the insolvency

(iii) Mortgage Transfer Certificates

Mortgage Transfer Certificates were introduced into the Spanish legal system by Article 18 of Law 44/2002 on Measures for the Reform of the Financial System. The Article introduced a new paragraph to additional disposition number 5 of Law 3/1994 which adapted Spanish legislation to the Second Directive on Banking Coordination[997]. The change in the law allowed mortgages that did not conform to the general requisites that would have qualified them to serve as underlying assets for mortgages participations and covered mortgage bonds to be grouped together and assigned to asset securitisation funds. Legally they were regulated in all other respects as mortgage participations.

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practitioner must satisfy the payments by the liquidation of the substituting assets that serve as collateral for the issue, and, if this were to be insufficient, to carry out financing operations in order to comply with the obligation to pay the holders of the covered bonds or the mortgage debentures, by which the financiers shall be subrogated in their position.

If it were necessary to proceed according to number 3 of article 155 of Law 22/2003 on Insolvency, the payment of the holders of the covered mortgage bonds shall be carried out proportionately, independently of the date of issue of the securities. If a single credit were affected by payment to both covered mortgage bonds and mortgage debentures, then the holders of the mortgage debentures would be paid first."

[997] The new paragraph introduced read: "*Mortgage participations grouped together in asset securitisation funds may correspond to loans and credits that do not conform to the requisites established in Section 2 of Law 2/1981, of the 25th of March, on the Regulation of the Mortgage Market. These participations shall be issued and traded under the denomination "mortgage transfer certificates*".

5.10 The economic performance of Spanish Securitisation

One of key indicators of the quality of the mortgage loans used as underlying securities is their loan to value ratio. Before the advent of Mortgage Transfer Certificates in 2002, the widespread use of mortgage participations as the underlying asset in RMBS meant that the loan to value ratio was generally legally required to be kept below 80%. In fact, according to the NSMC: "*The average weighted loan to value ratios of the securities portfolios during this period show that, in practice, this ratio remained below this percentage, varying between 50% and 60%*"[998].

[998] Quoted from: Martín Martín, María del Rosario: "An analysis of Spanish securitisation funds…", op. cit., page 34.

Figure: 47. The loan to value ratio of securitised mortgages in Spain from 1993–2012[999]

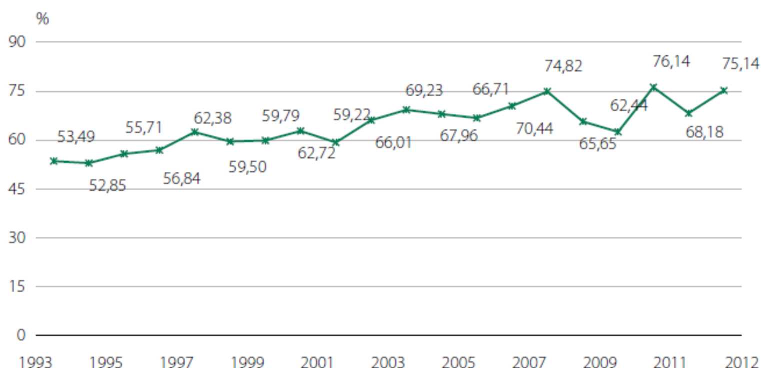

Figure 47 shows that even with the advent of Mortgage Transfer Certificates from 2002 onwards, while this ratio steadily increased, it remained below 80%. As the NSMC report quoted relates, the increase in LTVs is partially explained by the lengthening of mortgage repayment periods over the same time frame. While the loans that were securitised in 1993 had an initial average maturity date of 14 years, by the year 2000 that had lengthened to 24 years, and by 2007 to 30 years. The increase in repayment periods meant a proportional decrease in the monthly quantity that homeowners were required to pay, and, as their

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[999] Source: Martín Martín, María del Rosario. "An analysis of Spanish securitisation funds…", op. cit., page 34.

capacity to make repayments increased, their appetite to request larger loans grew.

The quality of the underlying assets used in Spanish Mortgage Securitisation helps to explain why, during the worst of the GFC, Spanish RMBS performed so well[1000].

The conclusion of the NSMC report was that:

"The data analysed in this work does not support the idea that Spanish securitisation contributed to the implantation in this country of the originate to distribute model among originators, financial entities in the majority of cases. The fact that loans stayed on the balance sheets of the originating entities for an average of two years before they were assigned indicates that securitisation was used as a means of obtaining liquidity, but not as an end in itself. Also, in contrast to what occurred in the U.S.A, Spanish originators remained involved in the securitisation

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1000 *"Despite the substantial lowering of the credit ratings of securitisation bonds, there were no substantial defaults of securitisation bonds. In accordance with the information provided by the securitisation fund management companies to the National Securities Market Commission, at the end of December 2012 the funds had registered on their balances unpaid amounts to the value of 205,000,000 Euros, of which 132,500,000 Euros corresponded to unpaid interest and 72,700,000 to unpaid principal. Although the default rate of the portfolios used rose to 2.39%, the non-payment rate on the bonds was only 0,087% thanks to the limiting effect of the credit enhancements employed by these funds. The greatest part of unpaid quantities corresponded to funds registered between 2006 and 2008, a period in which there was a significant increase in the default rate. The funds registered in 2007 are those which display the worst behaviour, with a non-payment rate (on the bonds) of 0.4%"* Quoted from: Martín Martín, María del Rosario, *"An analysis of Spanish securitisation funds…",* op cit., page 44.

operations that they promoted, and therefore had incentives to ensure certain minimum quality levels in the assets created, and in the robustness of the securitisation structures (they had) designed".[1001]

Spanish Residential Mortgage Securitisation performed so well during the crisis precisely because of the simplicity of its

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[1001] Quoted from: Martín Martín, María del Rosario: "An analysis of Spanish securitisation funds…", op. cit., page 57.

This description of the Spanish model being centred on high quality assets and sound structures is echoed by this 2008 Article by employees of the Bank of Spain, who noted that: "*With respect to the model developed in Spain, it is important to point out that, as has been indicated previously, it is not an originate to distribute model. Spanish entities have not seen asset securitisation as a business in itself or as an element in the transmission of risks through complex structures, but rather they have employed this mechanism fundamentally as an additional means of obtaining finance. In this sense, they have developed a more traditional model of securitisation, in which entities maintain the correct incentives to continue applying an adequate loan underwriting and post-securitisation risk management policy. The second of the elements is the high quality of the portfolios securitised by Spanish entities. On one hand, there was no subprime market in Spain, while on the other, the high quality of the securitised portfolios is evidenced by the various quantitative indicators available. The delinquency rate of securitised family mortgage loans is not only very low, but is even lower than that of loans that have not been securitised. Also, although a slight tendency towards an increase has been observed over the last few years, the average loan to ratio value of the assets securitised has been around 70%, which is a relatively low number. Nor has there been an excessive concentration of those credits which make up the credit portfolio, which, is similar to the mortgage portfolio of the entities. Finally, with respect to the securitisation of covered mortgage bonds, it has to remembered that covered mortgage bonds are supported by the entire mortgage portfolio of the entities, which makes them of extremely high quality, and additionally, covered mortgage bonds are overcollateralized to a minimum 25 percent*".

Quoted from: Catarineu, Eva and Pérez, Daniel: "La Titulización de los activos por parte de las entidades de crédito", op. cit., page 107.

structures[1002], the quality of its assets and the close relationship between the originators, the mortgage obligors and the sponsors of Spanish Securitisation Funds, as it was used primarily by banks to fund their credit concession policy[1003]. It bore almost no relation to the highly leveraged, synthetically enhanced products funded by the shadow banking system which had paralysed the U.S economy.

1002 "*The model of Securitization in Spain, once again, is significantly more conservative than that of other countries. The differences show themselves not only with respect to the greater simplicity of the structures employed (traditional structures), but by the practical nonexistence of asset backed commercial paper programmes (ABCP) and CDOs in the proper sense of the term. So it is that, in the Spanish market, the portfolios securitised are of very granular and homogenous assets, and the securitisation notes issued are long term notes. It is therefore fundamentally an ABS market".* Ibid, page 98.

1003 The pre-crisis model was not employed in Spain for relief on capital charges: "*Until now, the securitisation in Spain has been carried out through traditional structures which have meant the sale of assets to a special purpose vehicle. However, although the assets to be securitised were sold to special purpose vehicles, in the great majority of cases (95% of the securitisations originated from 2004) due to the application of Accounting Circular 4/2004 of the Bank of Spain (which is consistent with International Financial Reporting Standards), these assets have not left the balance sheets of entities, as no substantial transfer of the risks and benefits of the securitised assets took place. This was because the entities retained the vast majority of the first-loss tranches of the securitisations they had originated*." Ibid, page 95.

And was employed principally as a form of funding the concession of credits:

"*The high number of traditionally securitised assets in Spain, that have not resulted in the assets leaving the balance sheets, and the absence of synthetic transactions, that have only recently been considered by solvency regulations, reveal an important characteristic of the Spanish model: securitisation has permitted, more than the transfer of risks, the financing of the concession of credits. Through securitisation, Spanish entities have found a way to finance the growth of credit concession, while maintaining a close relationship with their clients, and this is a fundamental characteristic of a banking system in which the traditional retail bank predominates*." Ibid, page 95.

It was, in essence, already the kind of securitisation that Regulation (EU) 2017/2402 wishes to achieve.

Despite this, the issue of Spanish RMBS has been in steady decline since 2010.

Figure 48: The decline in the volume of Spanish RMBS issued[1004]

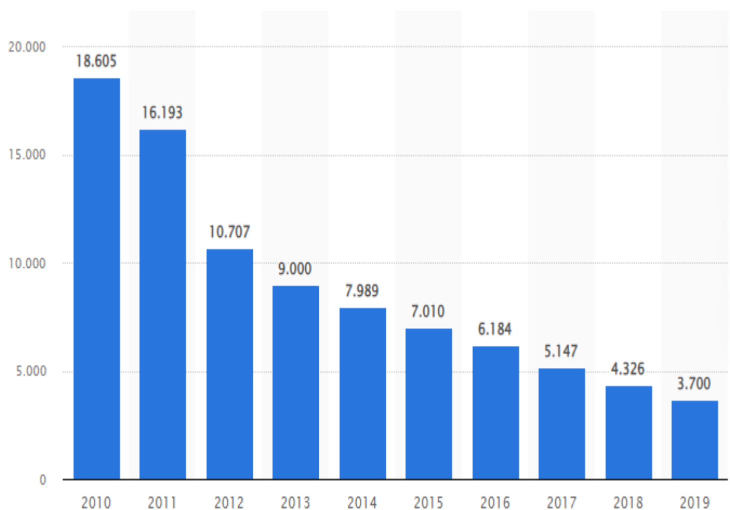

Figure 48 shows the volume of RMBS issued in Spain from 2010 – 2019 in millions of Euros.

1004 Source:https://es.statista.com/estadisticas/560282/evolucion-del-saldo-vivo-de-bonos-de-titulizacion-hipotecaria-bth-en-espana/

5.11 LAW 5/2015

Articles 15 to 42 of Law 5/2015 of the 27th of April, for the Promotion of Business Financing represent the core of the current regulation of securitisation in Spain. It presented a number of changes with respect to the previous regulation[1005], among the most significant of which are:

(i) The Law fused together the separate regulation on the types of asset that could be securitised and replaced Mortgage Securitisation Funds and Asset Securitisation Funds with Securitisation Funds that could serve either purpose[1006].

(ii) It allowed securitisation funds to acquire assets through any means permitted by law[1007], which included the adjudication of property to a fund in a foreclosure procedure. It also permitted funds to acquire securities directly from the

[1005] For a superlative overview of the differences between the previous regulation of Spanish Securitisation and Law 5/2015 see: Madrid Parra, Agustín: "Nueva Regulación de la titulización en la Ley 5/2015", *Revista de Derecho del Mercado de Valores,* Num. 16, 2015.

[1006] Article 15.1 of Law 5/2015 simply refers to Securitization Funds while Article 16 references mortgage participations, mortgage transfer certificates, rights of credit that figure in the assets of the assignor, future rights of credit, motorway toll payments granted by public concession and other rights of an analogous nature.

[1007] Article 16.2 of Law 5/2015.

markets (through their management companies), without the necessary intervention of an intermediary.[1008]

(iii) It allowed funds to insure the performance of notes issued by another party. Article 18.5 of Law 5/2015 states: *"The Securitisation Funds can grant guarantees in favour of obligations emitted by third parties"*. This was essentially akin to permitting the Securitisation Fund to act as a counterparty in a synthetic transaction.

(iv) It made an explicit recognition of synthetic securitisation in Article 19 [1009].

[1008] Article 2.2 (c) 2º of Royal Decree 926/1998 had required that the assigning entity signed a document together with the Asset Securitisation Management Fund to be deposited with the CNMV when assets were incorporated into the fund. The Article declared that:

"*2º For each new incorporation of assets into the asset securitisation fund, the management company must deposit with the NSMC so that it may verify the transaction, a document signed by the assigning entity that contains:*

2.a) A description of the assets to be incorporated and their characteristics. This description must have the same degree of specificity as the description of the assets grouped in the fund in the deed of constitution.

2.b) A declaration by the securitisation fund management company that the new assets comply with the requisites established in the deed of constitution of the fund".

[1009] Article 19 declared that:

1. Securitisation Funds can synthetically securitise loans and other rights of credit and assume either totally or partially their credit risk by contracting credit derivatives with third parties or by granting guarantees or security in favour of the holder of the loan or other rights of credit.

2. The assets of the securitisation funds that carry out synthetic securitisations may be comprised of deposits in credit institutions and fixed rate securities purchased on official secondary markets, including those acquired through the temporary transfer of assets.

(v) The object of Securitisation Fund Management Companies was extended by Article 25.2 which [1010] permitted them to constitute, manage and represent entities analogous to securitisation funds (such as special purpose vehicles) abroad.

(vi) The Management companies were required to have minimum resources and capital of a million Euros. If the accounting book value of the fund exceeds 250 million Euros, the resources of the fund must be increased by 0.02 percent of the accounting book value of the assets being managed.

(vii) Significant shareholders in the Management Company must meet certain suitability criteria[1011].

These deposits and securities may be transmitted, pledged or encumbered in any form to guarantee the obligations assumed to the creditors of the Fund, and in particular to the counterparties of credit derivatives and temporary transfer of assets.

3. The operations of synthetic securitisations will be governed by this Law, together with any adaptions that may be stipulated by regulations. To this effect, the references to the transmission of credits, the assignors and assets transferred or incorporated into the Fund shall be understood to be made, respectively to credit derivative contracts, the counterparties of these contracts and the rights of credit of the reference assets whose risk is transmitted to the Fund by virtue of these contracts.

Article 97.2 of Law 62/2003 had previously introduced the possibility of synthetic securitisation in Spanish Law, but had required that the counterparty of credit default swaps employed were credit entities, investment companies or non-resident entities authorised to carry out the same activities.

[1010] Article 25.2 of Law 5/2015 states: "*The Securitisation Fund Management Companies can constitute, manage and represent Funds and special purpose vehicles analogous to securitization funds abroad, in accordance with the law applicable in each case".*

[1011] A significant share in a management company is defined in Article 45 of Law 35/2003 on Collective Investment Institutions. The first three sections of this Article state that:

"1. For the purposes of this Law, a significant share in a management company is that which extends to, either directly or indirectly, at least 10 percent of the capital or the voting rights of the company. Additionally, those shareholders who, according to the companies' regulations, are permitted to exercise a notable influence over the company, shall be considered significant shareholders, even if they did not hold the percentages indicated.

2. Any natural or legal person, acting either alone or together with others, that has acquired, directly or indirectly, a participation in a management company, and whose percentage share of the voting rights or of the company capital is equal to or greater than 5 percent, shall communicate this in writing to the National Stock Market Commission and the corresponding management company, indicating the extent of the participation obtained.

3. Any natural or legal person, acting either alone or together with others that intends to acquire, directly or indirectly, a significant share in a management company or, increase, directly or indirectly their participation in the company significantly, so that the percentage of company capital or voting rights they hold reaches or surpasses 20 percent, 30 percent or 50 percent, must have notified previously the National Stock Market Commission of their intention, indicating the quantity of the intended participation, the mode of acquisition and the latest date at which the operation is to be completed. The same requisite shall apply to any one who, through acquisition, intends to gain control of the management company."

The suitability of shareholders is treated in article 42 of Law 35/2003 which states that.

"Suitability shall be assessed by taking into account, among other factors:

1. The honourability of the shareholders conduct in business and professionally

2. The patrimony that the shareholders possess with which they may meet the liabilities they have assumed

3. The possibility that the entity might be exposed inappropriately to the non – financial activities of its directors, or, with regard to their financial activities, that the stability or control of entity might be affected by the high risk that these activities entail.

c) When any of the causes established in Article 10.4 of this law occur

d) The existence of grave conflicts of interest among the positions, responsibilities or functions held by the members of the board of directors of the investment company or among any other positions, responsibilities or functions that they might hold simultaneously". According to article 11.2 (c) of Law 35/2003 "Honourability shall be deemed to be present in those individuals that have shown personal, commercial and professional conduct that casts no doubt over their capacity to carry out a healthy and prudent management of the entity. In order to evaluate the honourability of an individual, all available information must be considered, in accordance with the parameters determined by the pertinent regulations".

(viii) The competence to authorise the management fund company is entrusted to the NSMC[1012].

(ix) Law 5/2015 dedicates a whole chapter to transparency requirements. Article 34 stipulates that for each of the securitisation funds it manages the securitisation management fund must publish on its website:

(a) The deed of constitution of the fund and any other notarised documents registered after the moment of the constitution of the fund

(b) The prospectus of the fund and any supplementary prospectus

(c) The annual company report[1013] and quarterly reports

[1012] Royal Decree 926/1998 had previously granted this authority to the Ministry of the Economy and the Treasury.

[1013] With reference to the annual company reports Article 35 stipulates that they must contain:

1. The audited annual accounts accompanied by the corresponding auditor's report

2. An itemised list of the assets assigned to the fund in accordance with the criteria established by the NSMC

3. An itemised list of the liabilities of the fund, in accordance with the criteria established by the NSMC

4. When applicable it must indicate the value of any derivative contracts entered into

5. An itemised list of the quantity and object of any commissions paid

6. A report on the compliance with the internal rules established in the deed of constitution of the fund. If the fund carries out active portfolio management then an

Article 36 requires the securitisation fund management company to immediately report any significant events to both the NSMC and the fund's creditors[1014].

Law 5/2015 sought to strike a balance between incentivising securitisation and limiting its potential risks. The incentives included allowing Spanish securitisation funds to operate as derivative counterparties in synthetic operations, permitting securitisation fund management companies to manage and represent entities analogous to funds abroad, and permitting funds to acquire assets through a far wider range of methods. At the same time, it increased the transparency requirements linked to securitisation transactions, required significant shareholders in management companies to meet suitability criteria, and increased

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additional report on compliance with the policy governing the management of the assets and their associated risks must be included.

7. Any other information requested by the NSMC

(d) The annual report must be sent to the NSMC for inscription in the corresponding registry within the four months following the end of previous financial year.

(e) The quarterly reports (containing the information mentioned in 2 – 7 above) must be sent to the NSMC within the two months following the end of each quarter, and must be incorporated in the corresponding registry.

(f) The NSMC can establish and modify the accounting regulations and the models that the financial information of the fund must adhere to as, well as the modifying the scope and content of the auditor's report and that of any other independent experts.

[1014] Although this is only compulsory when the securitisation notes are traded on a secondary market. The relevant events particular to the fund are those that can significantly affect the securitisation notes issued or the assets contained in the fund.

the financial resources that management companies had to maintain.

CONCLUSIONS

First. There are a number of European and North American institutions that had characteristics of modern securitizations

Residential Mortgage Backed Securities were first developed in the U.S in the last decades of the twentieth century, but they have clear antecedents in a number of European and North American institutions, and we can identify in them some of the characteristics from which modern securitization was built.

The *Compera* in twelfth century Genoa used city taxes as the collateral for the repayment of the principal and interest on a loan forwarded by a group of shareholders. The shares could themselves be traded or used as collateral in commercial operations. Corporations in eighteenth century Britain pooled sovereign debt and sold stock to investors using this debt as collateral. The stock was divided into differently ranked claims which could be traded, as could derivatives on the right to acquire stock. The Dutch Colonies of the eighteenth century developed the *negotiate* system. These were funds, headed by fund directors who raised capital by selling bonds to investors and lent the money raised to plantation owners to buy property. The mortgages on the plantation land, buildings, slaves and produce served as collateral for the loans. The Prussian *Pfandbriefe* of the late eighteenth century created a credit association, the *Landschaft,* to manage loans to the landowning nobility. The

loans were funded through tradeable bonds. The principal and interest on the bonds were enforceable in the case of non-payment by recourse both to the land of the estate of the specific borrower named in the bond and to the pooled assets of the *Landschaft.*

In the U.S.A. the cotton growing southern states in the first decades of the nineteenth century saw the formation of associations which lent money to farmers who used their slaves and property as collateral. These associations raised the money through the sale of bonds, both nationally and internationally. U.S mortgage companies in the late nineteenth century pooled farm mortgage loans into trust accounts and issued debenture bonds which gave the holder a direct claim against the mortgage company that had originated and serviced the mortgage in the case of non-payment. Real estate bonds were created at the beginning of the twentieth century which granted its holders claims on residential and commercial properties on skyscrapers in cities such as New York and Boston. Some of these had sophisticated characteristics such as clauses allowing claims for interest and principal payments to be converted into claims on the rentals generated by the building.

Second. The creation of GSEs permanently changed the mortgage market and made mass securitisation viable

A key development in the growth of securitisation was the genesis of Government Sponsored Enterprises in the U.S, companies

which, while privately owned, rely on the explicit or implicit guarantee of the Federal Government should they default. The Federal Farm Loan Act of 1916 created central land banks that were liable for the combined debts of the smaller land banks in their region. These central banks used their initial capital to make agricultural mortgage loans which they pooled together to back tax-exempt bonds. The 1932 Home Loan Bank Act attempted to tackle problems caused by regional fluctuations in the capital reserves of mortgage lenders by creating twelve regional banks and a body designed to oversee and partially finance their operations called the Federal Loan Bank Board. The Board tried to stabilise national mortgage markets by granting regional banks long or short term loans depending on their needs.

The Home Owners' Loan Corporation Act of 1933 created the HOLC, which was assigned the task of purchasing delinquent residential mortgage loans from Saving and Loans institutions in order to re-finance struggling mortgage obligors with long-term, low-interest loans. The National Housing Act of 1934 created the Federal Housing Administration, an institution intended to foster new lending activity by insuring institutional lenders that granted long-term, low-interest mortgages against default on mortgage repayments. The FHA indemnified lenders from the premiums it collected from participating institutions. The security this programme afforded to lending institutions brought about

structural changes in U.S mortgages, allowing for smaller down payments and longer amortisation periods, making home purchases more viable for a greater percentage of the U.S population than ever before. The Federal National Mortgage Association, which came to be known as Fannie Mae, was created by an amendment to the National Housing Act in 1938 as part of President Roosevelt's New Deal measures. The role of Fannie Mae was to buy FHA insured loans from mortgage lenders in order to create liquidity in the housing market. It pooled these loans and sold certificates of loan participation to investors. The 1968 Housing Act split Fannie Mae into two agencies, Fannie Mae was a government sponsored private corporation that continued its operations in the secondary housing market while the newly formed Government National Mortgage Association (which became known as Ginnie Mae), guaranteed payments on Mortgage Backed Securities which would be backed by pools of FHA mortgages. The Emergency Home Finance Act of 1970 set up The Federal Home Loan Mortgage Corporation (colloquially referred to as Freddie Mac), a privately owned agency whose primary function was to purchase mortgages that conformed to certain conditions from Savings and Loans Banks in order to provide them with the liquidity they needed to make more loans and securitise them.

The GSEs promoted the use of MBS by providing the market with a series of advantages. They created uniform loan documentation and standardised underwriting practices, while the implicit government guarantees of Fannie Mae and Freddie Mac and the explicit guarantee of Ginnie Mae attracted investors.

Third. The development of tranching, changes in Federal legislation and the creation of the REMIC led to the growth of the private label securitisation market in the U.S.

A new type of securitisation note, the collateralised mortgage obligation, pioneered by the investment bank Salomon Brothers, sliced mortgage payments into three or more tranches depending on their expected risk profile, or expected order of repayment. The tranching technique could be combined with subordination, creating a waterfall of payments that would be directed to satisfying the principal and interest repayments of each tranche according to their seniority. High risk tranches would receive a higher rate of interest but would be the last to receive payments in the case of any temporary shortfalls, and the first to lose their principal in the case of defaults. This produced securitisation notes that could appeal to investors would different risk appetites.

The Secondary Mortgage Enhancement Act removed restrictions against state chartered financial institutions from investing in non-agency, or private label, MBS. It also handed a crucial role

to credit rating agencies who became responsible for rating mortgage related securities.

The Real Estate Mortgage Conduit, the legal precursor of the Special Purpose Vehicle, was created by the Tax Reform Act of 1986. This prevented issuers of MBS from being taxed on revenue streams by both mortgage obligors and the sale of securities to investors. The REMIC was a separate legal entity used as a conduit for passing mortgage payments to MBS holders, and allowed mortgage originators to liberate them from their portfolios and issue multi-tranched MBS.

Fourth. The Common Law tradition of derivative regulation was overturned by the Commodity Futures Modernization Act of 2000 which permitted the fusion of credit default swaps and securitisation in collateralised debt obligations.

The funding needs of the British Monarchy in the eighteenth century saw the promotion of large joint-stock companies whose stock could be exchanged for government debt annuities. The state would offer the holders of government annuities stock in companies with a state licensed monopoly, and the joint stock company would receive these annuities at a collectively reduced rate of interest. As the number of joint stock companies rose, so did trading in stocks and derivatives on stocks, such as *time bargains*, which were derivative contracts settled on the basis of differences in value between stock prices at two separate dates

that involved no physical delivery of the stock in question but were purely synthetic in nature. This type of derivative contract and the *stockjobbers* who traded in them were widely blamed for falsely inflating stock prices and creating bubbles. The events of the South Sea Bubble in 1720 had a lasting effect on the way derivatives were treated in the Common Law tradition. *Barnard's Act of 1734* made time bargains sold by those who did not actually possess the stock at the moment the contract was made illegal. Although the Act proved to be ineffective in stopping speculative derivative contracts on stock, its mere existence prevented the parties from compelling the losing party in such a contract to make payment through the courts, and its wording would later be replicated in the legislation of a large number of U.S states. The inability of traders to legally enforce certain types of derivative contract led to the establishment of the London Stock Exchange, whose members were honour bound to respect contracts made between members, even if they were formally illegal**.**

Although *Barnard's Act* was repealed in 1860 there remained the possibility that speculative derivative contracts could be characterised as wagers and so fall foul of gaming legislation. In 1851 the Gaming Act of 1845 was interpreted in the English Courts in the case of *Grizewood v. Blane.* The case concerned a contract to pay the difference between the price of railway company shares on a date in the future with respect to a notional

price. The defendant, who had lost money on the agreement, wished to have the contract voided on the basis of the Gaming Act. The resolution of the case had rested on whether the intention of the parties had been to purchase and take delivery of the shares, or simply bet upon a change in price. The jury found for the defendant and its significance was that derivative transactions in which there was no intent to deliver a security or a commodity could not be enforced in English courts.

Early U.S state legislation against derivatives in both securities and commodities borrowed from *Barnard's Act* and the precedent set by *Grizewood v. Blane.* In 1792 the State of New York passed "*An Act to prevent the pernicious practice of Stock – Jobbing*" which voided all contracts for the sale of stocks and other securities which were not the property of the seller at the moment in which the contract was agreed upon. Over the course of the next 100 years a large number of U.S states passed legislation against derivatives on stocks and commodities.

To separate contracts for the sale of the commodities in the future from derivative contracts for differences, which were treated as gaming contracts, the U.S Courts employed the intent to deliver test first used in *Grizewood v. Blane*. The U.S Supreme Court in the case of *Irwin v. Wilar* in 1884, which concerned a dispute over the balance of orders placed at the Baltimore Corn and Flour Exchange determined that a contract for the sale of goods to be

delivered at a future date is valid, even though the seller does not possess the goods at the moment the contract was made, providing the effective delivery of the goods is intended. As commodity exchanges grew and proved to be essential for the U.S economy to regulate commodity prices and avoid drastic seasonal fluctuations the intent to deliver rule had to be modified for practical purposes, as the vast majority of transactions on these exchanges were not motivated by the intention to deliver. The growth of commodity exchanges spurred the rise of "*bucket shops*", synthetic exchanges in which customers made bets on real (or invented) price fluctuations. The 1905 U.S Supreme Court Case of *Board of Trade of the City of Chicago v. Christie Grain & Stock Company* replaced the intent to deliver test with the serious business purpose test, as Judge Wendell Holmes ruled that the transactions made on Official Exchanges were justified because they were entered into for a serious business purpose. This judgement established Exchanges as the only traders of legitimate, and thus judicially enforceable, derivative contracts.

The Grains Futures Act of 1922 and later the Commodity Exchange Act of 1936 regulated future transactions on official, organised exchanges or *contract markets* and ensured the legal enforceability of derivatives trading on these exchanges. Over the counter derivatives trading was forbidden. However, the CEA only prohibited futures trading outside the designated contract

market for those commodities contained in the Act itself, and unregulated commodities could be traded outside contract markets even though they risked contravening state "*bucketshop*" laws and so be judicially unenforceable.

The CEA was gradually modified to expand the definition of the term "commodity" (which came to include various types of security) and in 1974 was modified further to create the Commodity Futures Trade Commission which had the authority to oversee the regulation of derivatives contracts.

The creation of swaps in the 1980s lead to a discussion as to whether they were futures contracts and so came under the jurisdiction of the CFTC. The financial industry campaigned for legal certainty to be granted to swaps, which came with the Futures Trading Practices Act of 1992, which granted the CFTC legal authority to exempt swaps from the terms of the CEA and state bucket shop laws, providing they were only entered into by eligible swap participants.

The Commodities Futures Modernization Act of 2000 exempted all swap transactions entered into on a principal to principal basis between eligible swap participants from the terms of the CEA, the Securities Act of 1933 and state bucket shop laws. This exclusion included credit default swaps which proved to be an essential component to Collateralised Debt Obligations.

Fifth. The financial industry campaigned to prevent Credit Default Swaps from being classified as insurance contracts

Another important legal distinction was drawn between gaming contracts and insurance contracts. This was first seen in the field of Marine Insurance. An English statute from 1745 had voided insurance contracts in which the policy holder had no insurable interest to protect. The case of *Amory v. Gillman* before the Massachusetts Supreme Court in 1806 drew on this distinction to reinforce the need for an insurable interest in insurance contracts.

While the CFMA had excluded credit default swaps from the provisions of bucket shop laws the swaps industry saw the potential threat of their characterisation as insurance contracts, particularly the need for large capital reserves and a licence to operate as an insurer. ISDA attempted to circumvent this possibility by contracting the English Barrister Robin Potts to provide a written opinion on this matter. At the centre of his argument was the lack of an insurable interest in credit default swaps. This opinion was echoed by the State of New York Insurance Department in a written response to an inquiry by a law firm in 2000, which was particularly relevant given that insurance was subject to state, not Federal Regulation, and the State of New York Insurance Department had jurisdiction over firms based in Wall Street. In 2004 New York Insurance Law excluded credit default swaps from insurance regulation as long as compensation

was not structured to be dependent exclusively on the protection buyer having suffered a loss.

Sixth. Collateralised Debt Obligations were dependent on Credit Default Swaps.

The super-senior tranches of Collateralised Debt Obligations were *insured* by credit default swaps. This *insurance* enabled them to obtain an AAA rating and be kept on the balance sheet of financial institutions who had to hold little capital in reserve in order to cover their position, allowing financial institutions to build up highly leveraged positions. As super-senior tranches were not high yielding they were difficult to place with investors and were increasingly kept on balance sheet.

Synthetic collateralised debt obligations were constructed entirely from credit default swaps, and the proportion of synthetic CDOs to cash CDOs increased dramatically in the years directly preceding the GFC as the volume of raw materials for creating cash CDOs (residential mortgages, refinance loans and home equity loans) declined.

Seventh. The counterparties to the Credit Default Swaps were thinly capitalised. When they experienced problems this pushed credit ratings of CDO notes further downwards.

The counterparties to the Credit Default Swaps on collateralised debt obligations were not initially required to post collateral or

hold large capital reserves to guarantee their positions. When significant collateral calls came as a result of rating agency downgrades of the notes they insured, many monoline insurance companies went out of business, while AIG required a sizeable loan from public funds to avoid insolvency.

The problems experienced by these CDO counterparties had a significant negative effect on the ratings of CDOs.

Eighth. Alternative mortgages, enabled by changes to legislation in the 1980s, became particularly important when prime mortgage lending and refinancing began to dry up.

The Depositary Institutions Deregulation and Monetary Control Act of 1980 repealed all usury caps on first lien regulated mortgages and the Alternative Mortgage Transaction Parity Act of 1982 removed prohibitions against *alternative mortgages*, such as negative amortisation mortgages and option adjustable rate mortgages. As prime mortgage origination declined an increasing number of securitised mortgages were alternative mortgages.

Ninth. The repeal of the Glass – Steagall Act allowed for the vertical integration of securitisation production chains

The U.S Banking Act of 1933 had kept commercial and investment banks as separate entities. This had meant that commercial banks could not underwrite or deal in securitisation products, although they were permitted to purchase them as

investments and securitise their loans. The 1933 Act was modified to admit an increasing number of exceptions until it was repealed completely by the Gramm – Leach – Bliley Act of 1999. The gradual erosion and final dissolution of the barriers between commercial and investment banks allowed for a process of integration of the securitisation production chain. Financial entities could originate, securitise and deal in mortgage backed securities and collateralised debt obligations. However, the investment involved in vertical integration discouraged banks from pulling out of the industry quickly when the housing market turned down from 2006 onwards.

Tenth. Financial Entities used Structured Investment Vehicles to fund mortgages to be securitised by the issue of asset backed commercial paper. The collapse of this funding mechanism when confidence in the value of their content was lost meant that the sponsoring entities of the SIVs had to take large quantities of securitised assets back on balance sheet and absorb their losses. Repurchase agreements, another common form of funding suffered in a similar manner.

Banks sponsored SIVs would purchase portfolios of mortgage securities, collateralised debt obligations and other types of securitised debt and issue short-term commercial paper. The SIV would profit from the difference between the income revenue on the securities it held and the lower interest it paid on the notes that

it issued to investors. The sponsors would use the money they received from the sale of assets to the SPVs to purchase mortgages to make into securities. Financial institutions would invest in asset backed commercial paper because it was highly rated and liquid, allowing short term investments that would generate revenue. The SIV relied on its commercial paper being constantly renewed by investors. By creating SIVs banks could borrow money to buy mortgages, securitise them as RMBS or CDOs and repay the borrowed money when it sold these securities to SIVs. However, when mortgagors began to default from 2006 onwards RMBS and CDOs began to be downgraded. SIVs were opaque in the sense that investors had no way of knowing what assets they contained. A loss of confidence in SIVs meant they had to be wound down and their assets sold, which itself led to a downward spiral of prices. Unable to sell the assets, sponsors were obliged to readmit them on their balance sheets as losses.

The repurchase agreement market was frozen by a similar lack of confidence, as the size of the subprime related holdings of repurchase counterparties was unknown and participants preferred to withdraw from the market rather than take risks.

Eleventh. The correlation of default in tranches of CDOs was essentially assumed rather than calculated. These assumptions proved to be incorrect.

Having no way of realistically calculating the correlation between the default of mortgages in different parts of the country modellers made assumptions based on the historical performance of securitisation bonds. This proved to be unreliable, among other reasons, because the data was mostly taken from a period of rising housing prices.

Twelfth. European Securitisation performed much better than its U.S counterpart

European defaults on RMBS between 2007 and 2009, the worst years of the financial crisis never exceeded 0.1 percent. The peak default rate of BBB rated securitised products was 0.2 percent.

The solid performance of European issued RMBS during the crisis has not been sufficient to prevent a continued decline in European RMBS issuance.

Thirteenth. The European Securitisation Regulation focuses on risk retention, simple structures and transparency requirements, which would appear to respond to the common diagnosis of the causes of the crisis in the U.S

A number of European initiatives have been launched to help revitalise the industry, and chief among these has been the European Securitisation Regulation. Among the Regulation's stated objectives are to prevent the recurrence of the originate to distribute model, and to address the risks of highly complex and opaque securitisation. The core of the Regulation is the risk retention requirement and the STS criteria which refer to simple, transparent and standardised securitisation in both its traditional and synthetic forms.

The Regulation appears to be a response to a particular interpretation of the causes of the Financial Crisis, which places blame on lax underwriting requirements as a consequence of the originate to distribute model and excessively complex securitisation structures which institutional investors did not fully understand. The interpretation favoured in this thesis is that, of the multiple causes of the crisis, the heavy dependence of financial institutions on short-term funding and the opacity of the structures used to trade them, the move towards the vertical integration of the securitisation note production chain and the widespread use of poorly capitalised derivative counterparties to insure CDOs, bear the bulk of the responsibility.

While many of the dispositions of the Regulation can be welcomed as common sense, such as banning re-securitisations and discouraging arbitrage synthetic securitisation, others would

appear to address problems that European Securitisation avoided and which, even in the U.S, were not central to the causes of the financial crisis.

The risk retention requirement formalises what was already a common market practice in securitisation deals in both Europe and the U.S, and overlooks one of the consequences of the failure of bank sponsored SIVs during the financial crisis, which was that financial entities had never properly dispersed credit risk at all.

The overwhelming thrust of the Regulation appears to be the provision of accurate information, so that the institutional investors to whom securitisation is directed can make informed investment decisions. However, this policy does not appear to take into account the fact that institutional investors during the financial crisis often sacrificed proper due diligence in order to buy up securitised product quickly so as to secure the best margins.

Fourteenth. Spanish Securitisation has historically been centred on precisely the simple structures and high quality assets that the E.U. Regulation seeks to promote, and recent legislation had tried unsuccessfully to incentivise issuance.

Spanish Mortgage Backed Securities performed particularly well throughout the financial crisis. This can partly be attributed to the high quality of its underlying assets, particularly the extensive use

of both mortgage participations and covered mortgage bonds that ensured low loan to value ratios and included mechanisms to protect the integrity of the mortgage loans. It is also the case that Spanish Banks employed securitisation primarily for funding the concession of mortgage loans, and there was no CDO market or use of synthetic arbitrage structures, so that historically it has had many of the attributes lauded in the European Regulation.

In terms of combatting the possible risks of securitisation, the latest reform of Spanish legislation in 2015 significantly increased the transparency requirements of the parties to the process, dedicating a whole chapter to them. It required significant shareholders in the securitisation fund management company to comply with suitability criteria, and augmented the financial resources that the management companies were required to maintain.

With respect to incentivising securitisation, it permitted securitisation funds to acquire assets through any means permitted by law, to act as counterparties in synthetic transactions, and allowed its management companies to manage analogous entities abroad.

However, there has been no significant recovery in issuance, which leads one to question how the measures in the European Securitisation Regulation might help the Spanish industry.

ANNEX I. TRANSLATION OF ARTICLES 15 TO 42 OF THE PROMOTION OF BUSINESS FINANCING ACT

Article 15: Securitisation Funds and their content

1. Spanish Securitization Funds are separate patrimonies that lack legal personality and have a net patrimony of zero and that consist of:

a) In relation to its assets, rights of credit, present or future, that shall be grouped according to article 16 and

b) In relation to its liabilities, the fixed rent securities that it issues and the credits conceded to it by any third party

2. The patrimony of the securitization funds will be able, when its deed of constitution so permits, to be divided into individual and independent compartments, which may emit securities or assume obligations of different classes that may be liquidated independently.

   The part of the patrimony of the securitization fund attributed to each compartment will respond exclusively to the costs, expenses and obligations expressly attributed to this compartment and the costs, expenses and obligations that have not been specifically attributed to a compartment in the proportion determined in the notarised deed of constitution of the fund or a complementary deed. The creditors of a compartment shall only be able to seek the satisfaction of their credits against the patrimony of this compartment.

Article 16. The Assets of a Securitization Fund

1. The following may be incorporated into the Securitisation Fund as Assets:

a) Rights of credit that figure in the assets of the assignor. Included in this letter are the mortgage participations that correspond to those loans that present the requisites established in section two of Law 2/1981 of the 25th of March, on the regulation of the mortgage market as well as certificates of mortgage transmission. The securities issued by securitisation Funds that have integrated into their assets mortgage participations or mortgage transmission certificates will be treated as mortgage securities as defined by Law 2/1981 of the 25th of March.

b) Future rights of credit that constitute income or payments of a known or estimated magnitude and whose transmission is formalised contractually so that the transfer of the credit is proven unequivocally and in a reliable manner. Future credits shall be understood to be:

   1. The right of the concessionaire to the payment of tolls on motorways, taking into consideration the specific rules concerning the pertinent administrative authorization and the legal regulation applicable to the concession.

   2. Other rights of an analogous nature to those mentioned that are determined by a circular of the National Securities Market Commission.

2. Securitisation Funds can acquire the ownership of assets by any means, whether through their transfer, acquisition or

subscription through primary markets or through any other means permitted by law.

3. The ownership and any other rights in rem over immovable properties belonging to the Securitisation Funds may be inscribed in the Property Registry. Equally the ownership and any other rights in rem related to any other goods belonging to the securitisation funds may be inscribed in the corresponding registries.

4. In relation to the loans and other rights of credit acquired by Securitisation Funds, the applicable legal regulation will be that in favour of the owners of mortgage participations that is contained in article 15 of Law 2/1981 of the 25th of March on the regulation of the Mortgage Market.

Article 18. The Liabilities of the Securitisation Fund

1. The liabilities of the Securitisation Fund will consist of the fixed rate securities that the Fund issues and any credits conceded by third parties.

2. The securities issued may be sold on an official secondary market or on a multilateral trading system and may differ according to their interest rates, maturities, form of repayment, priority of payment or any other characteristics.

3. Without prejudice to the differences that may be established between the different series of securities issued, the anticipated flow of principal and interest payments on the assets grouped together in the fund must be sufficient to cover the principal and interest payments on the securities issued by the Fund.

4. In accordance with the provisions of this Law, the Securitisation Fund Management Companies may, with the objective of increasing the probability of the satisfaction of the

economic rights associated with the securities issued, neutralise the differences between the interest rates of the assets grouped together in the Fund and the obligations emitted that are supported by them, or, in general terms, transform the financial characteristics of all or some of those obligations, or at expense of the Fund contract swaps, insurance contracts, guaranteed investment contracts and other financial operations that have the same purpose.

5. The Securitisation Funds can grant guarantees in favour of obligations emitted by third parties.

Article 19. Synthetic Securitisation

1. Securitisation Funds can synthetically securitise loans and other rights of credit and assume either totally or partially their credit risk by contracting credit derivatives with third parties or by granting guarantees or security in favour of the holder of the loan or other rights of credit.

2. The assets of the securitisation funds that carry out synthetic securitisations may be comprised of deposits in credit institutions and fixed rate securities purchased on official secondary markets, including those acquired through the temporary transfer of assets.

These deposits and securities may be transmitted, pledged or encumbered in any form to guarantee the obligations assumed to the creditors of the Fund, and in particular to the counterparties of credit derivatives and temporary transfer of assets.

3. The operations of synthetic securitisations will be governed by this Law, together with any adaptions that may be stipulated by regulations. To this effect, the references to the transmission of credits, the assignors and assets transferred or incorporated into the Fund shall be understood to be made, respectively to credit

derivative contracts, the counterparties of these contracts and the rights of credit of the reference assets whose risk is transmitted to the Fund by virtue of these contracts.

Article 20. Closed Securitisation Funds

1. Closed Securitisation Funds are those whose deed of constitution does not contemplate the incorporation of assets or liabilities after its constitution.

Without prejudice to the above, the deed of constitution of closed securitisation funds may contemplate a maximum period of four months from the moment of constitution during which the Fund may incorporate assets and liabilities up to a pre-determined maximum quantity.

2. The Fund may establish rules concerning the substitution and correction of assets in the following cases:

a) The pre-payment of the assets grouped in the Fund.

b) The correction of latent or hidden defects in the assets that were incorporated in the fund initially, when it is subsequently shown that these assets did not have the characteristics attributed to them in the prospectus or in the deed of constitution.

3. The Fund may also temporarily acquire assets, with the objective of covering any mismatches in the payment schedule of the assets incorporated into the Fund, providing they are of sufficient quality so as not to negatively affect the credit worthiness of the Fund with respect to its liabilities.

Article 21. Open Securitization Funds

1. Open securitization Funds are those whose deed of constitution specifies that its assets or liabilities or both may be modified after the constitution of the Fund in any of the following ways:

a) The modification of the liabilities when successive securities are to be issued, as for example, contracting new credits.

b) The expansion or substitution of an asset at any moment during the life of the Fund in accordance with the terms stipulated in the deed of constitution.

c) Carrying out active management. Active management is understood to mean that which, in accordance with the deed of constitution, allows for the modification of the assets of the fund with the objective of maximising the profitability, guaranteeing the quality of the assets and carrying out an adequate risk assessment, or maintaining the conditions established in the deed of constitution. The mere substitution of depreciated or liquidated assets carried out in open securitization funds will not be considered active management and neither will the sale of immovable objects or other assets adjudicated or given in payment to satisfy the rights of credit acquired by the securitization fund. The management policy of the Fund will be regulated by the deed of constitution in detail and, where applicable, must appear in the issuing prospectus.

2. The notarised deed of constitution of an open securitisation fund must explicitly refer to its open nature and specify which of the characteristics mentioned in this article are present in it.

3. Numbers 2 and 3 of the previous article apply to open securitisation funds.

Article 22. The requisites for the constitution of securitisation funds

1. The constitution of securitisation funds is subject to their compliance with the following requisites:

(a) An application for the constitution of the Fund presented to the National Securities Market Commission by the Securitisation Fund Management Company.

(b) The presentation before and registration with the National Securities Market Commission of the following:

1.º A proposal for the public deed of constitution of the Securitisation Fund

2.º A document that accredits the existence of the assets of the fund, and

3.º Any other document of accreditation required for the constitution of the fund and the creation of compartments, (in the case that there are compartments), required by the National Securities Market Commission.

c) The presentation of reports on the assets that will constitute the Securitisation Fund or its compartments elaborated by the Securitisation Fund Management Company, or by auditors or independent experts considered by the National Securities Market Commission to be sufficiently qualified for the task.

This requisite can be excused by the National Securities Market Commission in consideration of the type of structure of the Fund and any relevant circumstances pertaining to the market and the protection of investors.

The National Securities Market Commission will determine in the case of open securitisation funds the regulations regarding the updating of the reports necessary for the incorporation of new assets.

d) The approval by and registration in the National Securities Market Commission of an informative prospectus on the constitution of the Securitisation Fund and its compartments (where they exist) and the liabilities that these will finance. This

prospectus shall be adapted to the specific model determined by the National Securities Market Commission in accordance with the Law of the European Union. If the liabilities of the Securitisation Fund are not composed of securities, then the procedure detailed in section 4 of this article shall apply.

2. In compliance with the requisites stated in the previous section, the regulations concerning the issue of securities shall apply.

The National Securities Market Commission may, when providing justifications for so doing, impose the condition that the Fund be directed solely at institutional investors.

3. The Securitisation Fund may take no action until the documents mentioned in section 1 of this article have been approved and registered by the National Securities Market Commission and its deed of constitution has been notarised.

4. When the securities issued by a Securitisation Fund are to be sold only to qualified investors and are not to be traded on an official secondary market then:

a) In order for the fund to be constituted it shall only be obligatory for it to present an application to the National Securities Market Commission and to deposit and register its notarised deed of constitution; additionally

b) The securities issued by the fund may only be transmitted to qualified investors

5. The inscription in the Commercial Register will be optional for Securitisation Funds and their compartments. In either case the annual accounts of the funds must be deposited with the National Securities Market Commission.

6. If a Securitisation Fund wishes to create a compartment once it has already been constituted then it must complete a new application to the National Securities Market Commission for the

complementary deeds of these compartments and register them with the same body.

Article 23. The extinction of the Funds.

1. The Securitisation Fund Management Company will initiate the extinction of the Funds in the cases and according to the procedures established in the notarised deed of constitution. This deed must determine the way in which the liquidation of the fund will be carried out and the payment of the securities issued at the expense of the fund as well as the payment of any loans made to the fund.

2. In all cases the fund will terminate when:

(a) The rights of credit grouped together in the fund have been satisfied and any other goods or securities that comprise the fund have been liquidated.

(b) The creditors' committee votes for the extinction of the Fund by a majority of three quarters.

(c) All the liabilities of the Fund have been satisfied

(d) In the case of the forced substitution of the Securitisation Fund Management Company in accordance with section 2, article 33 of this Law.

Article 24. The modification of the notarised deed of constitution of the Securitisation Fund

1. The notarised deed of constitution of the Securitisation Fund can be modified at the request of the Securitisation Management Company responsible for the administration and legal

representation of the Fund, in accordance with the terms of this article, however this may not entail the creation of a new fund.

2. In order to modify the deed of constitution of the Fund the Securitisation Management Company must accredit:

a) The consent of all the holders of the securities emitted at the expense of the fund and the creditors of any other liabilities of the fund, excluding non-financial creditors, or alternatively, the consent of the creditors' committee, in accordance with the procedure established in the deed of the Fund.

b) The consent referred to in the previous letter shall not be required given any of the following circumstances:

1.º When, in the opinion of the National Securities Market Commission, the modification is of minor importance. However, modifications that affect the securities issued at the expense of the Fund, or the rules governing the process of liquidation with respect to the securities issued or the rules concerning the calculation of the resources available to the fund and their distribution to meet the obligations that the fund has to its creditors, shall under no circumstances be considered of minor importance.

In all cases the Securitisation Fund Management Company must demonstrate that the modification will not negatively affect the guarantees and the rights of the holders of the securities issued, that it does not establish new obligations for those holders and that the credit ratings given to the assets remain the same or are improved after the modification.

2.º In the case of an open Securitisation Fund consent is not required when the modification only affects the rights and obligations of the holders of the securities issued after the date of the notarised deed of modification. In this case the Securitisation Fund Management Company must demonstrate that the

modification maintains or improves the condition of the securities issued before the modification.

3. Once the National Securities Market Commission has checked that the requirements of this article have been complied with, the Securitisation Fund Management Company will hand over an authorised copy of this document to the Commission so that it may be registered in the corresponding registry.

4. The modified copy of the notarised deed of constitution of the Securitisation Fund will be disseminated by the Securitisation Fund Management Company via the release of periodic public information on the Fund and through its web site.

When required to do so the Securitisation Fund Management Company must produce a supplement to the prospectus and disseminate it as relevant information in accordance with article 82 of the Law on the Securities Market (Law 24/1988 of the 28th of July).

CHAPTER II

The Securitisation Fund Management Companies

Article 25. The Company Objective

1. The objective of the Securitisation Fund Management Companies is the constitution, administration and legal representation of securitisation funds and funds of bank assets in the terms contained in the Law on the restructuring and resolution of credit entities.

2. The Securitisation Fund Management Companies can constitute, manage and represent Funds and special purpose vehicles analogous to securitization funds abroad, in accordance with the law applicable in each case.

Article 26. The obligations of Securitisation Fund Management Companies

1. Securitisation Fund Management Companies will have the following obligations:

a) To act with the maximum diligence and transparency in order to defend the best interests of the holders of the securities financed by the funds that they manage.

b) To manage and administer the assets grouped together in the Securitisation Funds

c) Employ experts of proven experience or contract the services of independent assessors with proven experience.

d) Assess the risks of the assets with diligence and rigour.

e) Write a clear and transparent prospectus

f) Have an administrative and organisational infrastructure that is sufficient to avoid any possible conflicts of interest, in particular in relation with undue influences that could exist between the assignors of the assets that form part of the fund and the Securitisation Fund Management Company when they both form part of the same corporate group.

g) To have their annual accounts audited in accordance with the Consolidated text of the Law on Account Auditing (Royal Legislative Decree 1/2011, of the 1st of July), adjusting their fiscal year to the natural year.

h) To remit to the National Securities Market Commission an auditor's report on their last financial year, together with any other information that might be deemed necessary for the supervision of the obligations contained in this Law.

i) To ensure compliance with all the obligations contained in this law, as well as in the legislation on the securities market and any other applicable legislation, and to keep a register of all the operations in relation to the services that it conducts over a period of at least five years so that its compliance with legislation may be checked.

2. In relation with the activities reserved to Securitisation Fund Management Companies in article 25.1 (of this law), the Securitisation Fund Management Companies will be responsible to the holders of the securities issued by the Fund and any other creditors of the Fund for any damages caused as a result of a failure to comply with their obligations.

Article 27. The authorisation and registration of the Securitisation Fund Management Companies

1. The authority to authorise the creation of a Securitisation Fund Management Company lies with the National Securities Market Commission. The resolution concerning the authorisation must be emitted within six months from the reception of the application or from the moment in which the documentation required is completed. If this time-limit expires without an express resolution being made, then the application will be considered granted by administrative silence in accordance with the Law on the legal regime of the Public Administration and the Common Administrative Procedure (Law 30/1992 of the 26th of November).

The resolutions of the National Securities Market Commission will, by virtue of the authorisation granted to the Commission by this article, bring an end to the administrative procedure.

2. Once constituted, in order to commence their activity, the Securitisation Fund Management Companies must be inscribed in

the Commercial Register and in the corresponding registry of the National Securities Market Commission. The inscription must take place within six months from the concession of the authorisation. If inscription is not carried out within this time limit then the authorisation will immediately expire.

3. The application for authorisation for the creation of a Securitisation Fund Management Company must be accompanied by the documentation required by law and shall in all cases include:

a) The proposed statutes of the Company

b) An explicative report which must describe in detail the organizational structure of the company, the activities that the company will undertake and the technical and human resources that will be at the company's disposal.

c) A list of the administrative and managerial personnel as well as their credentials for the roles that they will perform.

d) The identity of the shareholders, whether they be direct or indirect shareholders, physical or legal persons, that possess a significant holding in the company, and the value of their participation; and,

(e) Any other details, reports or background information that the National Securities Market Commission might require in order to verify that the conditions and requisites established in this chapter have been complied with.

Article 28. The reservation of activity and denomination

1. No person or entity that has not received the necessary authorisation or has not been inscribed in the registry of the National Securities Market Commission may undertake the

activities legally reserved to the Securitisation Fund Management Companies.

2. The use of the denomination “Securitisation Fund Management Company” and its acronym “SFMC” is reserved to those entities that have obtained the perceptive authorisation and that are inscribed in the corresponding registry of the National Securities Market Commission. No other entity may use these denominations or any others that might lead to confusion with these denominations.

3. The Commercial Registry and other public registries will refuse the inscription of those entities whose activity and company objective or denomination are contrary to the terms of this article. Any inscriptions that are carried out in contravention of this disposition will be null and void, and shall be cancelled *ex officio* or at the request of the competent administrative body. The nullity of the inscription shall not adversely affect the rights of any third-parties that have acted in good faith and that have been acquired in accordance with the content of the corresponding registries.

Article 29. The requisites for the exercise of the activity

1. The following are the requisites for obtaining and maintaining the authorisation:

a) The Securitisation Fund Management Company will take the form of a Joint Stock Company and shall be constituted by the simultaneous founding procedure and for an indefinite term.

b) The company objective shall be exclusively the objective contemplated in article 25.1 of this law.

c) The company domicile as well as the effective centre for the management and administration of the company shall be situated in Spanish territory.

d) The company shall have a minimum company capital of one million euros which shall consist of fully-paid up registered shares.

Furthermore, the resources of the company must be increased by 0.02 % of the total accounting value of the assets of the fund managed by the company when these assets are greater than 250 million euros. However, the amount of the company's own resources, together with the quantity required to cover the additional value of the assets it manages must not exceed 5 million euros. For the purpose of this article the company's own resources shall be calculated according to the regulations applicable to collective investment institutions, taking into account any particularities that the National Securities Market Commission may determine.

e) The shareholders of any significant shares must be "suitable". For the determination of the significance of a shareholding and the suitability of a shareholder this law remits to the definitions contained in the Law on Collective Investment Institutions (Law 35/2003 of the 4th of November).

f) The Securitisation Fund Management Company must have a board of Directors formed by at least three members. The persons appointed must be of acknowledged commercial and professional honour and (at least) the majority of them must possess adequate knowledge and experience for the exercise of their functions. The qualities of honourability, knowledge and experience must also concur in the general managers (or those with an analogous position) of the company. The requisites of honourability and experience shall be evaluated in accordance with the terms

established in the Law on Collective Investment Institutions (Law 35/2003 of the 4th of November).

g) In accordance with article 30 of this law the Company must have an adequate administrative and accounting organization that is proportionate to the character, scale and complexity of its operations, and must have the technical and human resources to carry out its activities.

h) The Company must include the expression “Securitisation Fund Management Company”, or the abbreviation “SFMC” in its denomination.

i) The Company must have in place adequate procedures and mechanisms of internal control that will guarantee correct and prudent management, this must include procedures for managing the risks associated with its activity, as well as mechanisms for the control and security of any information stored on computer, and internal bodies and procedures to prevent money laundering and the financing of terrorism, as well as internal regulations governing any operations linked to its principal activity.

j) The company must approve an internal regulation on conduct that will cover the activities of managers, directors, employees, representatives and persons or entities in which the company may delegate functions, in accordance with the requisites established by the law applicable to investment services companies, with any adaptations that may be necessary.

2. When the resources of the Securitisation Fund Management Company are inferior to those required by letter d) of the previous section, the management company shall present a programme before the National Securities Market Commission detailing its plans to ensure its conformity with these requisites and the time-scale for compliance, which in no circumstances may be may exceed three months.

Article 30. Organisational Requirements

1. The Securitisation Fund Management Companies must have sufficient technical and human resources to carry out their activities and an adequate organisational structure that is proportionate to the scale, character and complexity of its activities.

2. The Securitisation Fund Management Company must contain units responsible for compliance, risk management and internal auditing and these units must be appropriately separated from its operational units. Each of these units must be sufficiently developed in proportion to the volume and complexity of the assets managed by the company.

3. The Management Fund Company that, in accordance with article 21.1 c) has assumed in its deed of constitution the active management of the assets of a securitisation fund must:

a) Have a special committee to supervise this activity

b) Calculate its remuneration by procedures that are in accordance with the investment and risk management policy of each fund, and by doing so avoid the appearance of incentives that would be contrary to the objectives set out in these policies. The policy of remuneration of the Securitisation Fund Management Company and its senior management as well as any other employees whose professional activity has a significant impact on the Company's risk profile, or with the persons or entities in which these functions may be delegated, must also be inspired by these same principles.

4. The responsibility of the Securitisation Fund Management Company will not in any case be affected by the fact that it delegates any of its functions to third-parties, nor by any

subsequent sub-delegation of functions, and nor may the Securitisation Fund Management Company delegate its functions to the point at which it becomes a purely instrumental entity or empty of content.

5. The requisites contained in this article may be developed further by regulations.

Article 31. The modification of the statutes.

The process of modification of the statutes of the Securitisation Fund Management Companies will be governed by the same procedure as that provided for the authorisation of the Securitisation Fund Management Company and its statutes. The modifications that have any of the following objectives will not require prior authorisation but must be communicated to the National Securities Market Commission within twenty days of their inscription in the Commercial Registry:

a) Changing the denomination of the Securitisation Fund Management Company

b) Changing the domicile of the Securitisation Fund Management Company within national territory

c) Incorporating into the statutes of the Securitisation Fund Management imperative legal precepts or regulations or modifications in order to comply with judicial or administrative resolutions

d) Increases or decreases in company capital

e) Any other modification for which the National Securities Market Commission, in response to a consultation by the Securitisation Fund Management Company has deemed it

unnecessary, due to its scant relevance, to apply the authorisation procedure.

2. Once the communication referred to in sub-section 1 of this article has been received by the National Securities Market Commission, it may, within one month of reception, require the Securitisation Fund Management Company to revise any modifications of its statutes that do not conform to current regulations, these modifications will then be subject to the authorisation procedure regulated in this chapter.

Article 32. Renouncement

1. The Securitisation Fund Management Company may renounce its functions of management and legal representation of all or part of the funds it controls when its considers it appropriate to do so, and request its substitution in these roles. This must be authorised by the National Securities Market Commission in accordance with the procedure and conditions that are established by regulation.

2. The Securitisation Fund Management Company may not renounce its functions unless all the requisites and procedures necessary for the assumption of its functions by the substituting entity have been complied with.

The expenses occasioned by the substitution shall correspond to the Securitisation Fund Management Company that renounces its functions, and under no circumstances shall they be imputed to the Fund.

Article 33. Forced Substitution

1. If the Securitisation Fund Management Company has been declared insolvent then a substitute entity must be found in the terms provided for in the previous article.

2. When, in the case of the declaration of insolvency contained in the previous paragraph, four months have passed since the moment that triggered the cause of substitution without a new Securitisation Fund Management Company having agreed to take over the management of the fund, then the fund shall be liquidated and the securities it supports shall be amortised at the expense of the fund and any loans received by the management company, in accordance with the notarised deed of constitution of the management company.

CHAPTER III. THE REGULATION OF TRANSPARENCY AND THE CREDITORS' COMMITTEE

Article 34. Information Obligations

1. For each of the funds that the Securitisation Fund Management Company manages and in accordance with the requirements of this law, the Securitisation Fund Management Company must publish on its website:

a) The deed of constitution, and if applicable, any notarised deeds added at a later date

b) The prospectus and any of its supplements

c) The annual report and the tri-monthly reports

2. The Securitisation Fund Management Company must be able to accredit at any moment the fulfilment of the information obligations established in the preceding paragraph.

3. The National Securities Market Commission may determine the form, content and any other conditions for the writing and publication of the information referred to in this chapter.

Article 35. The annual report and the tri-monthly reports

1. The annual report must contain:

a) Annual accounts that have been audited appropriately and that must be accompanied by their corresponding auditor's report

b) A detailed catalogue of the assets assigned to the fund in accordance with the criteria established by the National Securities Market Commission

c) A detailed catalogue of the liabilities of the fund in accordance with the criteria established by the National Securities Market Commission

d) Where applicable an indication of the total value of any derivative contracts the fund has contracted

e) A breakdown of any commissions paid and the reason for their payment

f) A report on the compliance with any other rules concerning the function of the fund established by the deed of constitution. If the Securitisation Fund Management Company actively manages the fund then the annual report must also contain a report on the compliance of the management and risk management policy of the company.

g) Any other information that the National Securities Market Commission may establish

2. A copy of the annual report must be sent to the National Securities Market Commission and inscribed in the

corresponding register within four months of the end of the financial year.

3. The tri-monthly reports must contain the information referred to in letters b) to g) of section 1 of this article and must be sent to the National Securities Market Commission within two months following each quarter of the natural year. The Commission will incorporate these reports in the corresponding registry.

4. The National Securities Market Commission may establish and modify the accounting rules and the models that the financial statements of the funds must adopt, as well as the scope and content of any special reports from auditors or other independent experts.

Article 36. The communication of any relevant facts or events

1. The Securitisation Fund Management Company must immediately communicate any fact or event especially relevant to the situation or the development of each fund to the National Securities Market Commission and to the creditors of the fund, except in the case that the securities backed by the fund have not been admitted to an official secondary market.

Any fact or event that may affect the securities issued or the elements that integrate the assets of the Fund shall be considered especially relevant.

2. The National Securities Market Commission is empowered to determine the form, content and the deadline for communication of any relevant facts or events.

Article 37. The creditors' committee

The deed of constitution of the securitisation fund can create a creditors' committee. The composition, faculties and the rules governing the functioning of the committee shall be contained in the deed of constitution of the securitisation fund, and will differentiate between the participations of the different categories of creditors.

The creditor's committee, once it has been duly convened, shall be presumed to be legitimised to agree upon the measures to be taken in defence of the legitimate interests of the creditors of the securitisation fund.

The creditors committee shall be governed, in all matters not contained in the deed of constitution of the securitisation fund, by the Commercial Law legislation relative to the syndicate of bondholders in corporations.

CHAPTER IV. THE REGULATION OF THE SYSTEMS OF SUPERVISION AND SANCTION

Article 38. The supervisory function and the regulation of the system of sanctions

1. The following persons and entities are subject to the system of supervision and sanctions of the National Securities Market Commission in respect to the compliance with the obligations referred to in this title of the present law, as well as to the law of the European Union where it contains precepts that refer specifically to them:

a) The Securitisation Fund Management Companies and the Securitisation Funds that they manage.

b) The entities that assign assets to the Securitisation Funds, the issuer of assets created for incorporation in a securitisation fund, the managers of assets assigned to the fund and any other persons

and entities that may be subject to the obligations contained in this title and the legislation of the European Union.

In the case of legal persons, the competences of the National Securities Market Commission held by virtue of this Law may be exercised over those that occupy the positions of managers or directors or any other similar position.

The positions referred to in the previous paragraph shall refer to managers or members of collective management bodies, as well as general directors or those that hold similar positions, as well as any other person that holds such a position by law or who effectively carries out the functions of a member of senior management.

2. The persons and entities referred to in the previous paragraph shall also be subject to the system of supervision and sanctions established in Title VI of the Law on Collective Investment Institutions (Law 35/2003 of the 4th of November). The references that that law makes to management companies, collective investment institutions, and stake and shareholders shall be taken to refer to securitisation fund management companies and the financers and titleholders of the securities issued at the expense of the fund respectively.

Article 39. Very serious infractions

The following shall constitute very serious infractions:

a) Any omission or falsehood in the accounts and in the information that must be made available or published in accordance with this law, or in the prospectus or deed of constitution of the securitisation fund.

b) Any breach of the obligation to provide information periodically when this breach is motivated by an interest in hiding

the information concerned or caused by an act of serious negligence, taking into account the relevance of the information that failed to be provided or the length of the delay in providing the information concerned, this shall include the obligations stemming from article 8 the third of Regulation (EC) No 1060/2009 of the European Parliament and of the Council of the 16th of September 2009 on credit rating agencies.

c) The modification by the Securitisation Fund Management Company of the company statutes without the prior authorisation of the National Securities Market Commission in those cases in which this permission is necessary in accordance with the present law.

d) The failure to send information or sending information that is inaccurate, untrue, misleading or that omits aspects or data that is relevant for the financial information regulated by the National Securities Market Commission, or data or documents that it is required to send to the Commission or which the Commission requests in the exercise of its functions when this makes it difficult to determine the solvency of the entity or the financial status of the securitisation funds.

e) Investing the financial resources of the fund in assets or contracting operations that are not authorised by the deed of constitution of the fund, or which are contrary to the dispositions of this law, when this distorts the structure or purpose of the fund, seriously affects the quality of the assets, seriously damages the interests of the holders of the securities and financers, or in the case of repeated non-compliance.

f) Carrying out the activities that are reserved to Securitisation Fund Management Companies by article 25 of this law without the necessary authorisation.

g) The modification of the deed of constitution of a securitisation fund without complying with the requisites established in the norms applicable

h) The failure to comply with any of the obligations contained in article 26 of this law

i) Maintaining for a period of six months or more resources that are inferior to those legally required.

j) If the securitisation fund management company has assumed the active management of the fund then (the very serious infraction shall consist in the delegation of the functions attributed to the securitisation fund management company without respecting the provisions set out in this law, when such delegation can damage the interests of the holders of the securities issued by the fund and the financers of the fund, or when the delegation of functions diminishes the capacity to control the fund internally or diminishes the capacity of supervision of the National Securities Market Commission.

k) The evaluation of the assets held by the securitisation fund that is carried out in a different manner to that established by the legislation applicable, when this may seriously damage the interests of the holders of the securities issued by the fund, when it is done repeatedly, or when it has a substantial impact on the financial stability of the securitisation fund.

l) The presentation of the deed of constitution of the securitisation fund that differs from the terms of the proposal for the deed of constitution and the prospectus registered with the National Securities Market Commission, if these differences are relevant to the structure of the fund.

m) The issue of the reports and documents required by this law and by article 8 the third of Regulation (EC) No 1060/2009 on credit rating agencies that incur in serious errors or untruths or

omit substantial or relevant details for the purposes of making an informed assessment of the object or the investment

n) The payment of the securities issued by the fund or the execution of any payments at the expense of the fund without respecting the order of precedence, the limits or conditions imposed by the dispositions that regulate payment, the deed of constitution of the fund or the prospectus, causing serious damage to the investors.

ñ) The renouncement by the Securitisation Fund Management Company of the management and legal representation of all or part of the securitisation funds that it manages without respecting the requisites established.

o) Acquiring a controlling share in non-compliance with the applicable legal regulations established.

p) The breach of any measures or precautionary measures applied by the National Securities Market Commission outside of its power to impose sanctions.

q) The breach of any commitments undertaken by the Securitisation Fund Management Company to correct any deficiencies detected in its internal supervisory system, when these deficiencies seriously affect the interests of investors or in the case of repeated non-compliance.

r) The existence of organisational deficiencies in the management or accounting of the Securitisation Fund Management Company or in its internal procedures of control, this includes those concerning its risk management when these deficiencies endanger the solvency or viability of the entity, or when they seriously damage or endanger the interests of investors.

s) The commission of a serious infraction when, within a period of five years before its commission, a final sanction had been imposed on the infringer for the same type of infraction.

t) The breach of the obligations referred to in article 8 the fourth of Regulation (EC) No 1060/2009 on credit rating agencies, when these are not only an occasional or isolated occurrence.

Article 40. Serious infractions

The following shall constitute serious infractions:

a) The breach of the obligation to provide investors with the information that this law requires that they receive, the prospectus or the deed of constitution of the securitisation fund, as well as the breach of the obligation to provide information derived from article 8 the third of Regulation (EC) No 1060/2009 on credit rating agencies, when this does not constitute a very serious infraction.

b) The occasional or isolated breach by the Securitisation Fund Management companies of any of the obligations imposed on them by article 26 of this law.

c) The breach of the information obligations required by the National Securities Market Commission by a Securitisation Fund Management Company when it has lower resources than the legal minimum.

d) The investment in any assets distinct from those authorised by the legislation applicable or those permitted by the prospectus or the deed of constitution of the securitisation fund when the infraction cannot be categorised as a very serious infraction

e) The effective management or directorship of the Securitisation Fund Management Company by persons who do not formally hold a position of this nature in the company.

f) The unauthorised use of the denominations referred to in article 28 of this law.

g) The emission of any obligatory reports and documents on the assets that are grouped together in the active patrimony of the securitisation fund or on the securities that they issue that incur in inaccuracies or omit details when the infraction cannot be categorised as very serious.

h) The acquisition of a participation in the capital of the securitisation fund management company in breach of the requisites contained in the present law and the regulations applicable, providing that this infraction cannot be classified as very serious

i) The payment of commissions for services that have not been rendered, or charging commissions that had not been previously agreed upon or in breach of the limits and conditions established in the statutes or the internal regulations of the securitisation fund management company.

j) The breach of the obligations established by article 8 the fourth of Regulation (EU) No 1080/2009 on credit rating agencies, providing that this infraction cannot be classified as very serious.

Article 41. Minor infractions

The following shall constitute minor infractions:

a) Any delay in the publication or the communication of the information that, in accordance with the regulations, the deed of constitution or the prospectus of the securitisation funds

managed, must be made available to holders of the securities issued by the securitisation fund or its financers or to the general public.

b) The failure to send to the National Securities Market Commission the documents, data or information required by the legislation on securitisation or by the Commission itself in the exercise of its functions, within the time limit established by the law or stipulated by the Commission, as well as the breach of the duty of collaboration with the Commission with respect to its supervisory powers, including the failure to appear before the Commission to give a statement, when these infractions cannot be classified as serious or very serious.

c) Any breach of the legislation applicable to securitisation that does not constitute a serious or very serious infraction in application of the preceding articles.

d) The breach of the obligation contained in article 8 quinquies of Regulation (EU) 1060/2009 on credit rating agencies if it is shown that at least one credit rating agency with a market share of less than 10 % was not designated.

Article 42. Sanctions

Without prejudice to the general application of the system of sanctions contained in the Law on Collective Investment (Law 35/2003 of the 4th of November), the National Securities Market Commission can impose on the persons and entities referred to in article 38 of this law, fines of up to 12,000 Euros per day with the objective of compelling them to:

a) Comply with any precautionary measures adopted

b) Comply with the duty of collaboration contained in article 70 of the Law on Collective Investment with respect to acts of

supervision conducted by the National Securities Market Commission, this includes summons before the Commission in order to make statements, as well as the presentation of data, documents or information that must be communicated to the Commission in application of the law or that the Commission requests in the exercise of its functions.

ANNEX 2 – TRANSLATION OF ARTICLES 5 TO 7 OF LAW 19/1992 - THE LAW ON MORTGAGE INVESTMENT FUNDS AND MORTGAGE SECURTISATION FUNDS

Article 5. Mortgage Securitisation Funds

1. For the emission of the securities referred to in this Article, pools of mortgage participations must be formed which shall be referred to as "Mortgage Securitisation Funds". These Funds shall be separate and closed patrimonies, and shall not have legal personality, without prejudice to the dispositions contained in point 7 of this Article. Their assets shall consist of mortgage participations and their liabilities of the securities issued, so that the quantity and conditions of their issue shall result in the fund having a net patrimony of zero.

2. The management and legal representation of the funds shall correspond to the management companies created for this purpose. The constitution of each fund shall be formalised in a public deed of constitution. In the deed of constitution:

1º The mortgage participations grouped together in the fund shall be identified, and, where applicable, the rules for their substitution in the case of the early amortization shall be determined.

2º The content of the securities to be issued shall be defined precisely, as well as that of each series of securities if various series are to be issued.

3º The other rules that the fund must obey shall be established, and, in particular, those operations that, in accordance with point 7 of this Article, the fund may undertake.

3. The constitution of the funds must be checked and registered by the NSMC according to the terms contained in Law 24/1988 for the issue of securities, with any adaptions that may be established by regulation. Neither the funds themselves nor the securities supported by the funds shall be inscribed in the Commercial Registry, nor shall they be subject to the terms of Law 211/1964 on the issue of debt obligations by legal persons that are not limited companies.

In all cases a fund shall extinguish when all the mortgage participations that compose the fund have amortised. The deed of constitution of a fund can expressly determine its early liquidation when the value of the mortgage participations pending amortisation is less than 10% of the original total value, in this case the deed of constitution must also determine how the remaining assets shall be disposed of.

4. The mortgage participations pooled in the fund, as well as consisting of loans that comply with the requisites established in the Second Section of Law 2/1981, of the 25th of March on the

Regulation of the Mortgage Market, must have a maturity that coincides with the loans they participate in.

5. The minimum value of the funds at the moment of their constitution can be determined by regulation.

6. The securities issued and supported by the fund may differ in terms of their interest rates, which may be fixed or variable, their maturities and form of amortisation, the rules regarding their early amortisation if the mortgage participations backing them amortise early, their priority of payment, and other special advantages in the case of the non-payment of the mortgage participations, or any other characteristics.

Without prejudice to the differences that may be established among different series, the principal and interest payment streams corresponding to the group of securities issued and supported by the fund must coincide with the group of mortgage participations pooled in the fund, without any more differences or temporal mismatches than those derived from commissions, costs of management and administration, insurance premiums and other applicable concepts. Such concepts and temporal mismatches may be limited by the pertinent regulations.

7. Subject to the previous number of this Article and the rules contained in the deed of constitution of the fund, the fund may contract swaps, insurance contracts, fixed rate reinvestment contracts, or enter into any other financial operations, with the

objective of increasing the security or regularity of the payments of the securities issued, or neutralising the difference in interest rates between the mortgage participations and the securities the fund supports, or, in general transforming the financial characteristics of all or some of those securities. The fund may also, with the objective of covering any temporal mismatches between the payment calendar for principal and interest streams from the mortgage participations and those of the issued securities, temporarily acquire financial assets of the same or superior quality to those securities with the best credit rating supported by the fund.

8. The financial risk of the securities issued and supported by each fund must be evaluated by a credit rating agency established in the European Union and registered in accordance with Regulation (CE) nº 1060/2009 of the European Parliament and the Council, of the 16th of September 2009, on credit rating agencies. The rating given to the securities should figure in the issuing prospectus.

The holders of the securities issued and supported by the fund shall run the risk of the non-payment of the mortgage participations pooled together in the fund, subject to, where applicable, the rules concerning the priority of payments and the special advantages established for the different series of securities in the deed of constitution of the fund. The holders of the

securities shall have no legal action against the securitisation fund management company except in the case of its failure to correctly carry out its functions or comply with the rules set out in the deed of constitution of the fund.

9. The securities issued and supported by the Funds shall be represented exclusively by book entries, and the public deed of constitution referred to in point number 2 of this Article shall have the effects detailed in Article 6 of Law 24/1998 on the Stock Market. The securitisation fund management companies must request that the securities issued and supported by the fund are traded on an official organized market established in Spain, with the exceptions that may be determined by regulations.

10. Mortgage Securitisation Funds are subject to general corporate income tax. Their constitution shall be exempt from the concept of "company transactions" contained in the Tax on Capital Transfers and Documented Legal Acts.

The payments made to the holders of the securities that are issued and supported by Mortgage Securitisation Funds shall be considered income from capital in accordance with Article 1º of Law 14/1985 of the 29th of May on the Tax Regulations for certain financial assets. The management of the funds by the management companies shall be exempt from Value Added Tax.

11. Special limits may be placed by regulation on the acquisition by Collective Investment Institutions of the securities issued and

supported by Mortgage Securitisation Funds that are managed by companies that belong to the same group as the management companies of these Collective Investment Institutions.

Article 6. Mortgage Securitisation Management Funds

1. The Constitution of Mortgage Securitisation Funds shall be carried out by specialised management companies that shall have the exclusive objective of managing these funds and which shall be denominated: “Mortgage Securitisation Fund Management Companies”. These management companies can legally represent and manage one or more fund. As mangers of the interests of third-parties they shall be responsible for representing and defending the interests of the holders of the securities supported by the funds that they manage.

2. The creation of Management Companies shall require the authorisation of the Ministry of the Economy and the Treasury, which it shall grant pending a report from the NSMC. Once authorised the Management Company must be inscribed in the special Registry opened by the NSMC. The maximum share participation or voting rights or other means of exercising effective control over the Management Company by a natural person, entity, or group of entities may be restricted by regulation.

3. The Securitisation Fund Management Companies and the Mortgage Securitisation Funds they manage shall be subject to the rules concerning supervision, inspection, and where applicable sanctions of the NSMC. Both the Securitisation Fund Management Companies and the Mortgage Securitisation Funds shall be regulated, by the applicable dispositions of Chapter V of Title I of Law 46/1984 of the 26th of December that regulates Collective Investment Institutions. In addition to the sanctions contained in that legislation, the following shall be considered very serious infractions:

a) The investment of the assets of the Fund or the contracting of operations that are not authorised in the deed of constitution of the Fund or that are contrary to the terms of this and the previous Article or of its implementing regulations.

b) The refusal to cooperate with or resistance to inspection

c) Not filing the information required by the NSMC, when this does not already have the consideration of a serious or minor infraction.

Article 7. The Modification of the deed of constitution of mortgage securitisation funds and asset securitisation funds

1. The deed of constitution of a fund, whether it is a mortgage securitisation fund or an asset securitisation fund, can be modified

in accordance with the rules in this Article. The modification must always be initiated by the securitisation fund management company responsible for the management and legal representation of the fund.

2. The modification must never.

a) Change the nature of the assets assigned to the fund

b) Transform a mortgage securitisation fund into an asset securitisation fund or vice versa

c) Result in the de facto creation of a new fund

3. In order to proceed with the modification of the deed of constitution of the fund the management company must accredit:

(a) The agreement of all the holders of the securities issued and supported by the fund, as well as the entities that are creditors of the fund and any other creditors it might have, providing that these are affected by the modification

(b) The existence of any of following circumstances, if the consent mentioned in the previous letter of this article has not been sought:

(i) That the modification is, in the judgement of the NSMC, of scarce relevance. Modifications that affect any of the following shall not be considered to be of scarce relevance: the securities issued and covered by the fund, the rules governing the process

of liquidation with respect to the securities issued, or the rules governing the calculation of the payment streams to the fund and their division among the holders of the securities issued. In all instances the management fund must accredit that the modification does not prejudice the guarantees and rights of the holders of the securities issued, that it does not create new obligations for them and that the credit ratings given to the assets of the fund are either maintained or improved as a result of the modification.

(ii) That, in the case of a fund open with respect to its liabilities, that the modification only affects the rights and obligations of those that hold securities issued after the date of the deed of modification of the fund. In this case the management company must accredit that the modification maintains or improves the credit rating of the securities issued before the modification.

4. Before the deed of modification of the fund can be notarised, the securitisation fund management company must accredit before the NSMC its compliance with the dispositions of this Article. Once the NSMC has verified said compliance, the securitisation fund management company shall proceed with the deed of modification and lodge an authorised copy of the modification with the NSMC so that it may be registered in the corresponding public registry. The modification of the deed of constitution of the fund shall be publicised by the securitisation

fund management company as part of the periodic public information issued by the fund, and must be published on the website of the securitisation fund management company. When required, a supplement to the prospectus of the fund must be drawn up and communicated and distributed as relevant information in accordance with Article 92 of Law 24/1998 of the 28th of July on the Stock Exchange.

Additional disposition

The Government is authorised to develop the provisions of this law by regulation.

In particular, the Government may establish a specific name for the securities issued and supported by a Mortgage Securitisation Fund, and reserve this name exclusively for these securities.

ANNEX 3 - TRANSLATION OF ROYAL DECREE 926/1998 ON ASSET SECURITISATION FUNDS

CHAPTER I: Asset Securitisation Funds

Article 1. General dispositions

1. Asset securitisation funds are separate patrimonies that have no legal personality. Their assets consist of the financial assets and other rights (hereinafter assets) grouped together in them and their liabilities consist of the fixed-rate securities they issue and the loans made to them by credit entities. As a general rule, their financing through securities should be higher than 50 percent of the liabilities of the fund, unless there are financial, technical, legal or market causes that justify a lower percentage and these causes are accredited in the moment of the constitution of the fund.

The liabilities of the fund may also consist of contributions from institutional investors, who have the right to claim any outstanding balance of the fund when it is liquidated, once the rights of credit of the other creditors have been satisfied. To this effect, institutional investors are those mentioned in Article 7.1, paragraph (a) of Royal Decree 291/1992 of the 27th of March, on public issues and offerings of the sale of securities.

2. In anything not covered by the dispositions of this Royal Decree, asset securitisation funds shall be regulated by the rules

governing mortgage securitisation funds contained in Law 19/1992 of the 7th of July on the regulation of mortgage companies and mortgage investment funds and mortgage securitisation funds, whenever these rules are applicable with respect to the specific nature of the funds.

Article 2. The assets and liabilities of asset securitisation funds

1. The assets that can be incorporated into an asset securitisation fund are assets of a homogenous nature that belong to one of the following categories:

a) Rights of credit that are assets of the assignor

b) Future rights of credit that consist of income or payments of a known or estimated magnitude whose transmission is formalised by a contract that unequivocally proves the assignment of ownership. The following shall be considered future rights of credit:

1º The right of the concessionaire to motorway toll payments in the terms described in additional disposition number 5 of Law 8/1972 of the 10th of May on the construction, conservation and commercial exploitation of motorways under the rules of administrative concession, in accordance with Article 157 of Law 13/1996 of the 30th of December on fiscal measures,

administrative measures and measures concerning social order. Within this framework the special rules regarding the pertinent administrative authorization and the regulations applicable to the concession shall apply.

2º Other rights, analogous to those mentioned, that are to be determined by Order of the Ministry of the Economy and the Treasury after a report issued by the NSMC and, if required, the corresponding Ministerial Department. This specific determination, which shall be published in the Official State Newsletter, shall establish, where applicable, the conditions for the cession of assets to the asset securitisation fund.

2. The cession of credits to an asset securitisation fund should comply in all cases with the following requisites:

a) Subjective requisites

1º The assignor should, in general circumstances, have audited accounts for the last three fiscal years, and a favourable opinion granted by the auditor for the latest audit. This requirement may be waived by the NSMC when the assigning entity has recently been constituted.

2º Without prejudice to the compliance on the part of the assigning entity with the general obligation of depositing its annual accounts with the Commercial Registry, it must also

deposit its annual accounts with the National Securities Market Commission with the object of granting them publicity.

Both of these requirements may be waived when the guarantor or obligor of the assets is the State, an Autonomous Community or an International Organization of which Spain is a member.

3º The assignor must mention in its annual reports any operations concerning the assignment of future rights of credit that affect that fiscal year, including any operations that guarantee the successful completion of the transaction

b) Objective requisites

For rights of credit that are assets of the assignor the following shall be required:

1º That the assignment of assets be total and unconditional and for the full amount remaining until it reaches maturity

2º That the assignor does not provide the assignee with a guarantee of payment or ensure the successful outcome of the operation.

In all cases the assignor shall retain the management and administration of the assigned credit unless otherwise agreed upon.

c) Formal requisites

1º The assignment of credits must be formalised in a contractual document that accredits the operation.

2º For each new incorporation of assets into the asset securitisation fund, the management company must deposit with the NSMC so that it may verify the transaction, a document signed by the assigning entity that contains:

2.a) A description of the assets to be incorporated and their characteristics. This description must have the same degree of specificity as the description of the assets grouped in the fund in the deed of constitution.

2.b) A declaration by the securitisation fund management company that the new assets comply with the requisites established in the deed of constitution of the fund

3. The liabilities of the fund must comply with the following requisites:

a) The securities issued must be sold on an organised secondary market, with the exception contained in Article 10 of this Royal Decree.

b) The financial risk of the securities issued that are covered by each fund must be evaluated by a rating agency recognised for this purpose by the NSMC. The rating given to the securities must be highlighted in the issuing prospectus and in all the publicity given to the fund. In the case of unsubordinated securities, then,

in consideration of the characteristics of the assets in the fund and of the securities they support, the NSMC might condition its approval on the securities obtaining a minimum credit risk rating.

Article 3. Closed funds

1. Funds shall have the consideration of closed funds when, after the moment of their constitution, neither their assets or liabilities are modified.

2. However, rules providing for the substitution of assets and the remedy of defects may be established in the following cases:

a) The early amortisation of the assets pooled in the fund

b) The remedy of hidden defects in the assets that were initially pooled in the fund when these subsequently have been shown not to have the characteristics attributed to them in the prospectus or the public deed of constitution of the fund.

3. It shall also be permitted, with the objective of covering any temporal lapses between the calendar of payment streams of principal and interest on the assets incorporated in the fund and the securities issued or the credits received, for the fund to acquire, transitorily, assets of sufficient quality to ensure that the credit quality of the liabilities of the fund do not deteriorate.

Article 4. Open funds

1. Funds shall have the consideration of open funds when, their assets, their liabilities or both can be modified after the constitution of the fund in any of the following ways:

a) The modification of the liabilities is provided for, either through the successive issue of securities or by the possibility of entering into new credit agreements

b) The assets can be modified because they are renewable in character.

c) The increase in assets is provided for through the incorporation of new assets and, in consequence, the issuance of new securities or the arranging of new credits

The deed of constitution of an open fund should specify which of the characteristics mentioned are present in the fund.

Points 2 and 3 of the previous article shall also apply to open asset securitisation funds.

Article 5. The requisites for the constitution of asset securitisation funds

1. The constitution of asset securitisation funds is subject to previous compliance with the following requisites:

a) Informing the NSMC of the projected constitution of the fund

b) Providing to and registering with the NSMC the accrediting documents required for the constitution of the fund and for the assets that will be pooled within it, together with the proposed deed of constitution for the asset securitisation fund.

c) Providing the NSMC with the reports made either by the securitisation fund management company, or by auditors, or other independent experts with sufficient aptitude to do so in the opinion of the NSMC, on the assets in the asset securitisation fund. This requisite can be waived by the NSMC in consideration of the type of structure, the circumstances of the market and the protection of investors.

d) Presentation before the NSMC of the reports compiled by the credit rating agencies on the credit ratings of the fund's liabilities.

e) The approval by and registration with the NSMC of the prospectus on the constitution of the asset securitization fund and the liabilities that finance it

2. For the purposes of compliance with the requisites contained in the previous section, the dispositions contained in Royal Decree 291/1992 of the 27th of March on public issues and offerings of the sale of securities and its implementing provisions shall be applicable, with the exception of its Articles 6 and 7, and in so far as these do not oppose the regulations contained in this Royal Decree. Within the procedural framework of the aforementioned Royal Decree, the NSMC, in keeping with the

principle of protecting the investor, can make the decision to approve the constitution of the fund conditional on the liabilities of the fund being available only to institutional investors or professionals according to the terms defined in Article 7.1 (a) of the aforementioned Royal Decree 291/1992.

3. The fund cannot carry out any action until the documents mentioned in section 1 of this Article have been verified and registered with the NSMC.

4. Inscription in the Commercial Registry is optional for Asset Securitisation Funds. In all cases the annual accounts of the funds must be deposited with the Commercial Registry.

Article 6. Public deed of Constitution

1. In the public deed of constitution of asset securitisation funds:

a) The assets pooled in the fund shall be identified, along with the regulations governing their administration and the management of their payment streams, and, where applicable, the rules for their substitution. The economic, financial and legal characteristics of the assets must be described, together with their value, the regularity of the payment streams, conditions of payment, maturities and their amortisation scheme. In the case of future rights of credit, the basis and hypotheses used to estimate or quantify them must be specified.

b) The financial characteristics of the securities to be issued must be defined with precision, or those of each class should there be various classes, as well as any loans or contributions to the fund.

c) The rules of operation of the fund must be established, and the operations that shall be contracted on its behalf in order to augment the security or regularity of the payments from the securities, neutralise the difference between the interest rates on the assets incorporated in the fund and the securities issued and charged to the fund or any other liabilities, or, in general, to transform the financial characteristics of all or some of the assets.

d) The rules which shall determine the process of liquidation of the fund.

2. The deed of constitution of funds in which the assets are either renewable or in which they may be increased must also:

a) Specify the entity or types of assigning entities from which the assets for the fund have been or are to be acquired, both in the moment of the fund's constitution and subsequently.

b) Specify the projected life of the fund and, in the case of funds whose assets may be increased, the limit placed on the maximum value of the fund.

c) Detail the mechanism by which the rights of investors shall be protected in the case of hidden faults, false information or

negligence that affects the assets acquired after the constitution of the fund.

3. In the funds in which there is a successive emission of securities and in which the assets can be increased, the successive emission of securities shall require, in order to be represented through book entry, the expedition of the certificates referred to in section 2 of Article 6 of Royal Decree 116/1992 of the 14th of February, on the representation of securities through book-entry and the compensation and liquidation of stock exchange transactions.

Article 7. The prospectus

The prospectus mentioned in Article 5 shall be adapted to the specific model approved by the NSMC by circular, for the constitution of asset securitisation funds. The NSMC shall also approve in the same manner a specific model for a brief prospectus to be used for the successive issuance of securities for those funds that carry out successive emissions and whose assets can be increased.

Article 8. Auditing and expert reports

1. The reports required by the NSMC referred to in Article 5 shall have the objective of checking and verifying the existence,

ownership and conditions of the assets that are to be grouped in the asset securitisation fund, and shall contain a declaration, under the responsibility of its authors, attesting to the exactitude of the information contained in the documents required for the constitution of the fund. To this effect the statistical sampling techniques that are generally admitted shall be permitted.

In the case of future rights of credit, the report shall examine: the rationale of the hypothesis employed for the estimation of the future income or the payment streams to the fund, the possibility of concurrent payment streams, the parameters or variables used, the calculation of the present value of the fund, and the procedures and parameters to be employed in order to update the fund's value.

2. The elaboration of the reports shall not reduce or mitigate any of the responsibilities in which the assigning entity or entities, or their directors or managers may incur, with respect to the information they have supplied to the asset securitisation fund management company on the assets that, at the moment of the constitution of the fund or at a subsequent date, have been grouped together in the fund.

3. In order to protect the interests of investors the NSMC is empowered to request from asset securitisation fund management companies further reports to contrast with those initially presented to it.

4. The NSMC shall determine, where appropriate, the regulations for updating the reports, in accordance with the incorporation of new assets.

Article 9. The disclosure requirements of asset securitisation funds

Asset securitisation fund management companies must present the annual accounts of the funds that they manage together with the corresponding auditor’s report, together with the reports referred to in Article 4 of the Law.

Article 10. Exemption from requirements

When the securities issued by an asset securitisation fund are to be sold exclusively to institutional investors then the transmission of these securities may only take place between entities that belong to this category and the securities cannot be sold on an official secondary market.

The sole obligations of the funds described in the previous paragraph are to inform the NSMC before their constitution and to deposit with the NSMC their deed of constitution. The assets of these funds are not obliged to comply with the homogeneity requirement contained in Article 2.1 of this Royal Decree, and the

securities they issue are not obliged to be represented by book entry.

Article 11. The extinction of the funds

Asset securitisation funds shall terminate for the following reasons:

a) Those that are stated expressly in the deed of constitution

b) When, in the judgement of the asset securitisation fund management company, there are exceptional circumstances that make it impossible, or extremely difficult, to maintain the financial stability of the fund.

c) In the cases of forced substitution contained in Article 19 of this Royal Decree

d) When there is a non – payment that is indicative of a grave and permanent imbalance in relation to the securities issued or to a non- subordinated credit, or that such a situation is expected to occur. In this case the asset securitisation management company, after informing the NSMC, shall proceed to liquidate the fund in an orderly manner, in accordance with the rules established in the deed of constitution of the asset securitisation fund.

e) In the case that the fund is a closed fund, when the assets of the fund have completely amortised.

CHAPTER II. Securitisation Fund Management Companies

Article 12. The Company Objective

1. The exclusive objective of securitisation fund management companies shall be the constitution, management and legal representation of both asset securitisation funds and mortgage securitisation funds. As managers of the business interests of others the funds shall be responsible for the representation and defence of the interests of the holders of the securities issued and supported by the funds they manage and the ordinary creditors of these funds.

2. Specifically the management companies shall be obliged to:

a) Have experts of proven experience in the field or contract the services of independent experts

b) Evaluate the risks of the assets with rigour and diligence

c) Write a clear and transparent prospectus

d) Avoid situations that might suppose conflicts of interest and give priority to the holders of the fund's securities and creditors

e) Show great diligence and transparency in the defence of the interests of the holders of the fund's securities.

f) Comply with all the disclosure requirements in the legislation on the Stock Market.

g) Keep detailed documentation on all the operations carried out.

h) In all cases comply with the rules of conduct contained in the legislation on the Stock Market

3. The securitisation fund management company shall be responsible to the holders of the fund's securities and its other creditors for any prejudice to them caused by the company's failure to comply with its obligations. They shall equally be responsible under those parts of the system of sanctions contained in the previously mentioned Law 19/1992 that might be applicable to them.

Article 13. Authorisation and Registration of securitisation fund management companies

1.The Ministry of the Economy and the Treasury, following a report from the NSMC, is entrusted with authorising the creation of securitisation fund management companies.

2. The application for authorisation must be resolved within three months of its reception in the registry of the Ministry of the Economy and the Treasury. If the application is not resolved within the specified time – period, then it shall be understood to have been refused in accordance with terms of Law 30/1992 on the Legal Framework for Public Administrations and the Common Administrative Procedure.

3. The securitisation fund management companies, once they have obtained the authorisation and have been constituted and inscribed in the Commercial Registry must, before initiating their activities, register with the Special Register opened for them by the NSMC. This inscription must take place within six months from the concession of the authorisation. If this period passes without the inscription in the Special Registry having taken place, then the authorisation shall expire.

Article 14. Requisites for carrying out the activity

The following requisites shall apply in order to obtain and conserve the authorisation:

a) The company must take the form of a limited company, be constituted by the process of simultaneous foundation and have no pre-determined duration.

b) It must have a minimum share capital of 150 million pesetas, which must have been fully paid up in cash and be represented by nominative shares. Furthermore, it can be required to have its own resources or other guarantees, according to conditions established by the Ministry of Economy and the Treasury or, by express mandate of this Ministry, the NSMC, with the objective of reinforcing the solvency of the entity, and taking into particular

account the patrimony managed and the risks derived from the activity.

c) The shareholders who have a significant holding in the company must be considered suitable. In order to determine both whether a holding in the company is significant and whether a shareholder is suitable Title VI of Law 26/1988 on the discipline and Intervention in Credit Entities and its implementing regulations shall be applied.

d) Have a board of directors made up of at least five members. All the directors must be people of recognised commercial and professional honour and, at a minimum, the majority of the directors must have adequate knowledge and experience to carry out their functions. The qualities of honourability, knowledge and experience must all be present in the general managers or those who hold analogous positions in the company. In order to appreciate the qualities of honourability and experience Article 43 of the aforementioned Law 26/1988 and its implementing regulations shall be applied.

e) Have a well-organised accounting and administrative infrastructure as well as adequate internal control procedures and sufficient means to carry out their operations.

f) Include in their company name the expression “Securitisation Fund Management Company” or its abbreviated form “SFMC”, which is reserved to these entities.

Article 15. Requirements for the application

1. The application for the authorisation for the creation of a securitisation fund management company shall be addressed to the General Directorate of the Treasury and Financial Policy, and must be accompanied by the following documents:

(a) The proposed deed of constitution of the company, accompanied by a certificate confirming that no other company has previously registered with the proposed company name.

(b) A detailed report listing the shareholders who are to form the company and indicating their respective shares in the company capital.

In the case of shareholders who are going to have a significant holding in the company the following information is also required: In the case of natural persons, information on their professional trajectory and activities, as well as on the patrimony they possess. In the case of legal persons, their annual accounts, financial management report and, where they exist, the auditor's reports for the past two financial years, the composition of their board of directors and the detailed structure of the group to which the legal person belongs.

c) A list of the directors of the company indicating who shall be appointed as General Director or hold an analogous position in

the company, with detailed information on all their professional trajectories and activities.

d) A programme of the companies proposed activities.

2. The promoters can be required to provide any data, reports or additional information considered necessary in order to verify compliance with the conditions and requirements established in the Law.

Article 16. Rejection of the application

The Ministry of the Economy and the Treasury shall reject, by a resolution setting out the grounds on which it is based, the application for the creation of a securitisation fund management company when the proposed company does not comply with the requisites established in the previous articles. The NSMC shall file a negative report against the request for authorisation if it considers that the administrative and accounting infrastructure, the human resources, or the techniques and procedures for the internal control of the proposed company are insufficient.

Article 17. Modification of the statutes

1. The modification of the company statutes shall follow the rules established for the creation of the company. Although they shall

not require prior authorisation, the following modifications must be notified to the NSMC and the General Directorate of the Treasury and Financial Policy within twenty days of their inscription in the Commercial Registry:

a) A change in the company domicile to an area outside of the geographical location fixed in the previous company statutes

b) The incorporation of legal or regulatory precepts that are imperative or prohibitive in character or which are inserted to comply with judicial or administrative resolutions.

c) Any other modifications which the General Directorate of the Treasury and Financial Policy, in answer to a consultation formulated by the securitisation fund management company, considered to be unnecessary to address in the authorisation process, due to their low importance.

2. Once the communication mentioned in the previous number of this Article has been received, the NSMC, within a month of its reception, may require the management company to revise those modifications to its statutes that do not conform with any existing regulations, and to these modifications the authorisation procedure outlined in this chapter devised for the creation of the company shall apply.

Article 18. Renouncement

1. The securitisation fund management company can renounce the management and legal representation of all or part of the funds it manages when it decides that it is pertinent to do so, requesting its substitution by means of a written request to the NSMC in which it must designate a replacement securitisation fund management company. This request must be accompanied by a statement from the replacement company in which it agrees to take over the management of the fund and solicits the corresponding authorisation.

2. The authorisation of the substitution by the NSMC shall be conditional on compliance with the following requisites:

a) The departing securitisation company must deposit its accounting register and its digital records with the substituting company. The deposit of these records shall be understood to have taken place only when the substituting company can fully assume its functions and communicates this to the NSMC.

b) In the case that the securities issued and charged to the fund managed by the securitisation fund management company have been rated by a credit rating agency, the rating given should not have to be lowered as a consequence of the proposed substitution.

3. Under no circumstances may the securitisation fund management company renounce the exercise of its functions until it has complied with all the requisites and procedures necessary for the substituting company to be able to assume its functions.

4. The costs occasioned by substitution must be borne by the departing securitisation fund management company and under no circumstances should be charged to the fund.

5. The substitution must be published, within 15 days, in adverts placed in two national newspapers and in the official newsletter of the organised secondary market in which the securities issued by the securitisation fund management company are traded.

Article 19. Forced substitution

1. When the securitisation fund management company has been declared in suspension of payments or insolvent it must find a securitisation fund management company to substitute it, following the rules set out in Article 18.

2. When, given the circumstances described in the previous number of this Article, four months have passed since the event which triggered the forced substitution, without a new securitisation fund management company that is prepared to assume the management of the fund being found, the fund shall be liquidated early, and the securities issued and supported by the assets of the fund and the loans made to the fund amortised, following the procedures contained in the deed of constitution.

Article 20. Supervisory Regime

The securitisation fund management company shall be subject to the regime of supervision, inspection and sanctions contained in Article 6.3 of Law 19/1992, of the 7th of July on mortgage securitisation fund management companies.

BIBLIOGRAPHY AND MATERIALS

Books and Reports

Acharya, Viral V.; Nieuwerburgh, Stijn Van; Richardson, Matthew; White, Lawrence J.: *Guaranteed to Fail: Fannie Mae, Freddie Mac and the Debacle of Mortgage Finance*, Princeton University Press (2011).

Anderson, Adam: *An historical and chronological deduction of the Origin of Commerce from the Earliest Accounts*, Vol. III, Printed by the Logographic Press (1787).

Andreades, Michael: *A History of Greek Public Finance*, Vol. I, Harvard University Press (1933).

Aristotle, *The Politics*, translated by T.A Sinclair, Penguin Books (1962).

Ash, Michael & Louçã, Francisco: *Shadow Networks – Financial Disorder and the System that caused crisis*, Oxford University Press (2018).

Banner, Stuart: *Anglo-American Securities Regulation: Cultural and Political Roots*, *1690-1860*, Cambridge University Press (1998).

Banner, Stuart: *Speculation. A History of the Fine Line between Gambling and Investing*, Oxford University Press (2017).

Baptist, Edward E.: *The half has never been told. Slavery and the making of American Capitalism*, Basic Books (2014).

Benston, George J.: *The Separation of Commercial and Investment Banking: The Glass-Steagall Act Revisited and Reconsidered*, Palgrave Macmillan (1990).

Bilginsoy, Cihan: *A History of Financial Crises. Dreams and Follies of Expectations*, Routledge (2015).

Birks, Peter: *The Collected Papers of Peter Birks. The Roman Law of Obligations*, Oxford University Press (2014).

Black, William K.: *The best way to rob a bank is to own one. How corporate executives and politicians looted the S& L industry*, University of Texas Press (2005).

Blank, David M.; Grebler, Leo & Winnick, Louis: *Capital Formation in Residential Real Estate: Trends and Prospects*, Princeton University Press (1956).

Blinder, Alan: *After the Music Stopped. The Financial Crisis, The Response, and the Work Ahead*, The Penguin Press (2013).

Brewer, John: *The Sinews of Power. War, money and the English state 1688-1783*, Unwin Hyman (1989).

Brown, Stephen R.: *Merchant Kings. When Companies Ruled the World 1600-1900*, Douglas & McIntyre (2009).

Buchanan, Bonnie G.: *Securitization and the Global Economy: History and Prospects for the Future*, Palgrave Macmillan [2017],

Carey, George G: *Every Man his own Stock-Broker: or, a complete guide to the Public Funds with the manner of transferring stock*, printed by J Johnston (1820).

Carruthers, Bruce G.: *City of Capital: Politics and Markets in the English Financial Revolution*, Princeton University Press (1996).

Carswell, John: *The South Sea Bubble*, Sutton Publishing (2001).

Cato's Letters, Vol. I, printed for W. Wilkin's, T. Woodward, J. Walthoe and J. Peele, London (1724).

Ciro, Tony: *The Global Financial Crisis-Triggers, Responses and Aftermath*, Ashgate (2012).

Coispeau, Olivier: *Finance Masters: A Brief History of International Financial Centers in the Last Millennium*, World Scientific Publishing Company (2017).

Coke, Sir Edward: *The Selected Writings of Sir Edward Coke*, Vol. I, edited by Steve Sheppard, Liberty Fund, Indianapolis (2003).

Culp, Christopher L.; Stärkle, Bettina J. & Van Der Merwe, Andria: *Credit Default Swaps. Mechanics and Empirical*

Evidence on Benefits, Costs, and Inter Market Relations, Palgrave Macmillan (2018).

Dale, Richard: *The First Crash. Lessons from the South Sea Bubble*, Princeton University Press (2004).

Dalrymple, William: *The Anarchy. The East India Company, Corporate Violence, and the Pillage of an Empire*, Bloomsbury Publishing (2019).

Deku, Solomon y Kara, Alepar, *Securitization. Past, Present and Future*, Palagrave Macmillian (2017).

De La Vega, Joseph: *Confusión de Confusiones*, translated by Professor Hermann Kellenbenz, Baker Library. Harvard Graduate School of Business Administration (1957).

Dickson, P.G.M.: *The Financial Revolution in England. A Study in the Development of Pubic Credit*, 1688-1756, Routledge (1967).

Douglas, Roy: *Taxation in Britain since 1660*, Palgrave Macmillan (1999).

Dewey, Henry: *A treatise on contracts for future delivery and commercial including options, futures and short sales*, Baker Voorhis & Co. (1886).

Dewey, Henry T.: *Legislation against speculation and gambling in the forms of trade: including futures, options and short sales*, Published by, Baker, Voorhis & Company (1905).

Donahue, James & Weisman, Robert: *Sold Out. How Wall Street and Washington Betrayed America*, Consumer Education Foundation (2009).

Dulles, Foster Rhea: *America Learns to Play. A History of popular recreation. 1607-1940*, Appleton Century Company (1941).

Escrivá Bertó, Miguel/Gil Cívico, Rafael/Giménez Zuriaga, Isabel/Pampliega García, Margarita/Sáez Villar, Mireya/Vargas Escudero, Leonor, *Los Fondos de Titulización como Instrumento Alternativo para la Financiación de PYMES,* Civitas, Madrid, 2003.

Fabian, Ann: *Cardsharps and Bucket shops. Gambling in Nineteenth Century America*, Routledge (2013), Kindle Edition.

Fabozzi, Frank: *The Handbook of Mortgage Backed Securities*, Oxford University Press, 7th Edition (2016).

Fabozzi, Frank & Goodman Laurie, S.: *Collateralized Debt Obligations: Structures and Analysis*, John Wiley & Sons, Inc. (2002).

Flamm, Michael W.: *Law and Order: Street Crime, Civil Unrest, and the Crisis of Liberalism in the 1960s*, Columbia University Press (2005).

Fligstein, Neil: *The Banks did it: An Anatomy of the Financial Crisis*. Harvard University Press (2021).

Freund, David M. P.: *Colored Property: State Policy and White Racial Politics in Suburban America*, The University of Chicago Press (2007).

Friedman, Lawrence M.: *A history of American Law*, Simon Schuster (1974).

Gjerstad, Steven D. & Smith, Vernon L.: *Rethinking Housing Bubbles. The Role of Household and Bank Balance Sheets in Modeling Economic Cycles*, Cambridge University Press (2014).

Goetzmann, William N. & Newman, Frank: “Securitization in the 1920’s”, National Bureau of Economic Research, Working Paper 15650 (2010).

Gregory, Jon: *Counterparty Credit Risk. The New Challenge for Global Financial Markets*, Wiley (2010).

Hafner, Wolfgang & Zimmerman, Heinz (Editors): *Vinzenz Bronzin’s Option Pricing Models. Exposition and Appraisal*, Springer (2009).

Hagerty, James R.: *The Fateful History of Fannie Mae: New Deal Birth to Mortgage Crisis Fall*, Chapter 2, History Press (2012).

Hakluyt, Richard: *The principal navigations, voyages, traffics and discoveries of the English Nation*, printed by George Bishop, Ralph Newberie and Robert Barker (1599).

Hans-Joachim Voth, Peter: *Prometheus Shackled: Goldsmith Banks and England's Financial Revolution after 1700*, Oxford University Press (2013).

Harvey, David.: *A Brief History of Neoliberalism*, Oxford University Press (2007).

Haskins, George L.: *Law and Authority in Early Massachusetts-A Study in Tradition and Design*, Mac Millan Company (1960).

Hill, Howard B.: *Finance Monsters. How unregulated betting by a small group of financiers propelled the mortgage market collapse into a global financial crisis*, Merriam (2014).

Hirsch, Michael: *Capital Offense. How Washington's Wise Men Turned America's Future Over to Wall Street*, John Wiley & Sons, Inc. (2010).

Jackson, Kenneth T.: *Crabgrass Frontier: The Suburbanization of the United States*, Oxford University Press (1985).

Jacque, Laurent L.: *Global Derivative Debacles. From Theory to Malpractice*, World Scientific Publishing Company (2010).

Johnson, Simon & Kwak, James: *13 Bankers: The Wall Street takeover and the next financial meltdown*, Knopf Doubleday Publishing Group (2010).

Jordà, Oscar; Schularick, Moritz & Taylor, Alan M.: "Financial Crises, Credit Booms, and External imbalances: 140 years of Lessons", National Bureau of Economic Research, Working Paper 16567 (2010).

Kamen, Henry: *Spain 1469-1714. A Society of Conflict*, Longman (1983).

Kellenbenz, Hermann: *Introduction to "Confusion de Confusiones"*, Baker Library, Harvard Graduate School of Business Administration (1957).

Keyser, Henry: *The Law relating to transactions on the Stock Exchange*, printed by Henry Butterworth (1850).

Kynaston, Phillip: *Til Time's Last Sand: A history of the Bank of England 1694-2013*, Bloomsbury (2017).

Leacock, Elspeth: *The Exxon Valdez Oil Spill*, Facts on File Incorporated (2005).

Levy, Jonathan: *Freaks of Fortune. The Emerging World of Capitalism and Risk in America*, Harvard University Press (2012).

Lewis, Michael: *Liar's Poker*, W.W. Norton & Company (1989).

Lowenstein, Roger: *When Genius Failed. The Rise and Fall of Long-Term Capital Management*, Random House (2001).

Lurie, Jonathan: T*he Chicago Board of Trade: 1859-1905. The Dynamics of Self-Regulation*, University of Illinois Press (1979).

MacDonald, Oonagh: *Fannie Mae & Freddie Mac: Turning the American Dream into a Nightmare*, Bloomsbury Academic (2012).

MacDonald, Roderick: *Genesis of the Financial Crisis*, Palgrave Macmillan (2012).

Madrid Parra, Agustín: *Inversión Colectiva, Mercado hipotecario, titulización,* published by Marcial Pons, Madrid-Barcelona, 2017.

Maidment, Kenneth John: *Minor Attic Orators*, Vol. I, Harvard University Press (1960).

Mara, Wil: *Perspectives on Civil Unrest in the 1960s: Riots and their Aftermath*, Marshall Cavendish Benchmark (2010).

Markham, Jerry W.: *A Financial History of the United States,* Vol. II: *From J.P Morgan to the Institutional Investor (1900 – 1970)* (2002).

Markham, Jeremy W.: *The History of Commodity Futures Trading and its Regulation*, Praeger (1987).

Martín Martín, María del Rosario: *An analysis of Spanish securitisation funds: their characteristics in the moment of their constitution and their behaviour during the years of the crisis*, CNMV (2014). Document available in Spanish at: https://www.cnmv.es/DocPortal/Publicaciones/MONOGRAFIAS/DT_57.pdf.

Mason, David L.: *From Buildings and Loans to Bail-Outs: A History of the American Savings and Loans Industry, 1831-1995*, Cambridge University Press (2004).

McLean, Bethany & Elkind, Peter: *The smartest guys in the room. The amazing rise and scandalous fall of Enron*, Penguin. Digital Edition (2013).

McLean, Bethany & Nocera, Joe: *All the Devils are Here. The Hidden Story of the Financial Crisis*, Penguin (2010).

Mian, Atif & Sufi, Amir: House of Debt, *How they, and you caused the Great Recession, and how we can prevent it from happening again*, The University of Chicago Press (2014).

Michie, Ranald C.: *The London Stock Exchange. A History*, Oxford University Press (1999).

Michie, Ranald C.: *The Global Securities Market: A History*, Oxford University Press (2006).

Moore, Charles: *A full inquiry into the subject of suicide to which are added (as being closely connected with the subject) two treatises on duelling and gaming*, Vol. II, printed for J. F and C. Rivington (1790).

Morris, Edward: Wall Streeters: *The Creators and Corruptors of American Finance*, Columbia University Press (2015).

Mortimer, Thomas: *Every Man His Own Broker*, printed by S. Hooper London, 5th ed. (1762).

Morgan, Victor E. & Thomas, W. A.: *The Stock Exchange: its History and Functions*, Elek Books (1962).

Murphy, Anne L.: *The Origins of English Financial Markets: Investment and Speculation before the South Sea Bubble*, Cambridge University Press (2009).

Neal, Larry: *The Rise of Financial Capitalism. International Capital Markets in the Age of Reason*, Cambridge University Press (1990).

O'Neil, Cathy: *Weapons of Math Destruction. How Big Data Increases Inequality and Threatens Democracy*, Crown Publishing Group (2016).

Orhangazi, Özgür: *Financialization and the US Economy*, Edward Elgar Publishing (2008).

Palley, Thomas I.: *Financialization: the economics of finance and capital domination*, Palgrave Macmillan (2013).

Park, James Allan: *A System of the Law of Marine Insurances*, Vol. II, 8th ed., printed by Rayner and Hodges (1842).

Paul, Helen J.: *The South Sea Bubble: An economic history of its origins and consequences*, Routledge (2011).

Perlstein, Richard (Editor), *Richard Nixon, Speeches, Writings, Documents*, Princeton University Press, 2008.

Petersdorff, Charles: *A practical and elementary abridgement of the Common Law as altered and established by the recent statutes, rules of court and modern decisions; comprising a full abstract of all the cases agued and determined in the Courts of Common Law, & on Appeal with the Rules of Court, from M.T 1824, to M.T 1840*, Inclusive Vol. III, V.&R Stevens and G.S Norton (1843).

Petram, Lodewijk – Translated by Lynne Richards: *The World's First Stock Exchange*, Columbia Business School Publishing (2014).

Reich, Robert B.: *Supercapitalism: The transformation of Business, Democracy, and Everyday Life*, New York: Knopf (2008).

Reynolds, David S.: *Waking Giant. America in the Age of Jackson*, Harper Perennial, Reprint edition (2009).

Rosenman, Samuel I.: *The Public Papers and Addresses of Franklin D. Roosevelt with a special introduction and explanatory notes by President Roosevelt*, Volume Three: “The Advance of Recovery and Reform 1934”, Random House (1938).

Roseveare, Henry: *The Financial Revolution 1660-1760*, The Longman Group (1991).

Saleuddin, Rasheed: *Regulating Securitized Products. A Post Crisis Guide*, Palgrave Macmillan (2015).

Saleuddin, Rasheed: *The Government of Markets. How Interwar Collaborations between the CBOT and the State Created Modern Futures Trading*, Palgrave Macmillan (2018).

Smith, Adam: *Lectures on Jurisprudence*, Oxford, Clarendon Press (1978).

Snowden, Kenneth, A.: *Coordination and Information: Historical Perspectives on the Organization of the Enterprise*, Chapter 7: “The Evolution of Interregional Mortgage Lending Channels. 1870-1940: The Life Insurance Mortgage Company Connection”, University of Chicago Press (1995).

Snowden, Kenneth A.: “The Anatomy of a Residential Mortgage Crisis: A look back at the 1930s”, National Bureau of Economic Research, Working Paper 16244 (2010).

Stanton, Thomas H.: *Government-Sponsored Enterprises: Mercantilist Companies in the Modern World*, Aei Press (2002).

Stringham, Edward Peter: *Private Governance. Creating order in Economic and Social Life*, Oxford University Press (2015).

Swan, Edward J.: *Building the Global Market: A 4,000 Year History of Derivatives*, Kluwer Law International (1999).

Tett, Gillian: *Fool’s Gold. How unrestrained greed corrupted a dream, shattered global markets and unleashed a catastrophe*, Hachette Digital (2009).

Tooze, Adam: *Crashed-How a Decade of Financial Crises Changed the World*, Viking (2018).

Triana, Pablo: *The number that killed us. A story of modern banking, flawed mathematics and a big financial crisis*, Wiley (2015).

Van Der Wee, Herman: *The Growth of the Antwerp Market and the European Economy*, Springer (1963).

Vogel, Harold L.: *Market Bubbles and Crashes. Features, Causes and Effects*, Palgrave Macmillan (2018).

Wallison, Peter J.: *Hidden in Plain Sight: What really caused the World's worst Financial Crisis and why it could happen again*, Encounter Books (2015).

Wandschneider, Kirsten: "Lending to Lemons: Landschafts-Credit in 18th Century Prussia", National Bureau of Economic Research, Working Paper 19159 (2013).

Wharton Gates, Susan: *Days of Slaughter. Inside the Fall of Freddie Mac and why it could happen again*, John Hopkins University Press (2017).

White, Eugene N.: "Lessons from the Great American Real Estate Boom and Bust of the 1920s", National Bureau of Economic Research, Working Paper 155573 (2009).

Articles and Book Chapters

Acharya, Viral V., Schnabl, Philipp & Suárez, Gustavo: "Securitization without risk transfer", *Journal of Financial Economics*, 107 (2013), pages 513-536.

Adrian, Tobias, Ashcraft, Adam, Boesky, Hayley & Pozsar, Zoltan: "Shadow Banking", *Federal Reserve Bank of New York Policy Review*, December 2013.

Ali, Paul U.: "The Legal Characterization of Weather Derivatives", *The Journal of Alternative Investments*, Fall 2004, pages 75-79.

Asokan Anandarajan, Benjamin Chou & Michael Ehrlich: "Structured Investment Vehicles: The unintended consequence of financial innovation: some reasonable ideas and objectives combined to have unexpected effects", *Banking Accounting & Finance*, Vol. 22, Issue 6, pages 29-32.

Baluch, Faisal; Mutenga, Stanley & Parsons, Chris: "Insurance, Systemic Risk and the Financial Crisis", *The Geneva Papers on Risk and Insurance, Issues and Practice*, January 2011, Vol. 36, Num. 1, pages 126-163.

Beltran, Daniel O.; Cordell, Larry & Thomas, Charles P.: "Asymmetric information and the death of ABS CDOs", *Journal of Banking and Finance*, Issue 76 (2017), pages 1-14.

Blakely, Robert: "Gaming, Lotteries and Wagering: The Pre-Revolutionary Roots of the law of Gambling", *Rutgers Law Journal*, Vol. 16, Num. 2, Winter 1985, pages 211-267.

Boysen, Louis K.: “History of Real Estate Bonds”, *Chicago Real Estate Magazine*, Issue 6 (1931).

Brennan, William J.: “Securities Backed by Loan Packaging”, *Business Lawyer*, Vol. 26, Num. 2, November 1970, pages 401-410.

Castro, Jr. Daniel I.: “Structured Investment Vehicles (SIVs)”, in *The Capital Markets: Evolution of the Financial Ecosystem*, Edited by Gary Strumeyer and Sarah Swammy, John Wiley & Sons (2017), pages 381-388.

Catarineu, Eva/Pérez, David: “La Titulzación de los Activos por parte de las entidades de crédito: el modelo Español en el contexto internacional y su tratamiento desde el punto de vista de la regulación internacional”, *Revista de Estabilidad Financiera*, núm. 14, mayo 2008, pages 89-121.

Chambers, Matthew; Garriga, Carlos % Schlagenhauf, Don E.: “The Post–War Boom in Homeownership: An Exercise in Quantitative History” (2011), page 7. Working paper of the University of Florida which is available at the following website: https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=mmm2011&paper_id=62

Chambers, Matthew; Garriga, Carlos & Schlagenhauf, Don: “The New Deal, the GI Bill, and the Post-War Housing”, Meeting Papers 1050, Society for Economic Dynamics (2012).

Collett, Elizabeth & Fuller, Geoff: “Structured Investment Vehicles—The dullest business on the planet?”, *Capital Markets Law Journal*, Vol. 3, Num. 4, 2008, pages 376-388.

Cordell, Larry; Feldberg, Greg & Sass Danielle: “The Role of ABS CDOs in the Financial Crisis”, *The Journal of Structured Finance*, Summer 2019, pages 10-27.

Dulani, Jayasuriya: “The Rise and Fall of the Monoline Bond Insurers. Icarus of the 21ST Century”, Paper Presented at the National University of Singapore at the 4th National Business and Management Conference (2016), pages 640-657.

Emedosi, Chike Jude: “The 2007/2008 Global Financial Crisis: A Further Reassessment of the Originate to Distribute Narrative”, *Banking & Finance Law Review*, Vol. 35, Num. 2, May (2020), pages 279-305.

Feder, Norman Menachem: “Deconstructing over-the-counter derivatives”, *Columbia Business Law Review*, Num. 3 (2002), pages 677-748.

Ferguson R.B.: “Commercial Expectations and the guarantee of the Law: Sales Transactions in Mid-Nineteenth Century

England", contained in *Law, Economy and Society, 1750-1914: Essays in the History of English Law*, edited by G.R Rubin, David Sugarman, London, Professional Books (1984), pages 192-208.

Fishback, Price V.; Flores-Lagunes, Alfonso; Horraca, William; Kantor, Shawn & Treber, Jaret: "The Influence of the Home Owners' Loan Corporation on Housing Markets During the 1930s", *The Review of Financial Studies*, Vol. 24, number 6 (2011), pages 1783-1813.

Fishback, Price, V.; Rose, Johnathan; Snowden, Kenneth: Chapter 6 "An HOLC Primer" pages 54 -69 of the National Bureau of Economic Research Publication *Well Worth Saving: How the New Deal Safeguarded Home Ownership*, University of Chicago Press (2013).

Fratianni, Michele and Spinelli, Franco: "Italian City States and Financial Evolution", *European Review of Economic History* (2006), Vol. 10, issue 3, pages 257-278.

Frederiksen, D. M.: "Mortgage Banking in Germany", *The Quarterly Journal of Economics*, Volume 9, Number 1 (October 1894), pages 47-76.

Galán López, Carmen: "La figura de los 'CDS' como instrumentos financieros derivados y contratos de cobertura de riesgos", en *La regulación del Shadow Banking en el contexto de*

la reforma del mercado financiero (ed. R. Marimón), Thomson Reuters-Aranzadi (2015), pages 213-243.

Green, Richard K. & Wachter, Susan M.: "The American Mortgage in Historical and International Context", *Journal of Economic Perspectives*, Vol. 19, Num. 4, Fall 2005, pages 93-114.

Glock, Judge: "The Rise and Fall of the First Government-Sponsored Enterprise: The Federal Land Banks, 1916 -1932", *Business History Review*, Issue 90 (Winter 2016), pages 623-645.

Gorton, Gary B. & Metrick, Andrew: "Securitized Banking and the run on Repo", National Bureau of Economic Research, Working Paper 15223, August 2009.

Harris, Ron: "The Bubble Act: Its Passage and its Effects on Business Organization", *The Journal of Economic History*, Vol. 54, Num. 3, pages 610-627.

Hester, Pierce: "Securities Lending and the Untold Story of AIG", Working Paper, Mercatus Center, George Washington University, May (2014).

Hochfelder, David: "'Where the Common People Could Speculate': The Ticker, Bucket Shops, and the Origins of Popular Participation in Financial Markets, 1886-1920", *Journal of American History*, Vol. 93, Num. 20 (2006), pages 333-358.

Hoonbout, Bram: “The crisis of the subprime plantation mortgages in the Dutch West Indies, 1770-1775”, Leidschrift, Issue 28. Vol. 2. (2013).

Houghton, John.: “A collection of Letters for the improvement of Husbandry and Trade”, Number 102, July the 13th, 1694.

Huault, Isabelle & Rainelli-Le Montagner, Hélène: “Market Shaping as an Answer to Ambiguities: The Case of Credit Derivatives”, *Organization Studies*, Vol. 30, Issue 5, (2009), pages 549-575.

Johnson, Kristin N.: “Things Fall Apart: Regulating the Credit Default Swap Commons”, *University of Colorado Review*, Vol. 82, Issue 1 (2008), pages 167-258.

Jonathan, Ira Levy: “Contemplating Delivery: Futures Trading and the Problem of Commodity Exchange in the United States, 1875-1905”, *The American Historical Review*, Vol. 111, Num. 2, April, 2006, pages 307-335.

Jordà, Oscar, Schularick, Moritz & Taylor, Alan M.: “Financial Crises, Credit Booms, and External imbalances: 140 years of Lessons”, National Bureau of Economic Research, Working Paper 16567 (2010).

Juurikkala, Oskari : “Financial Engineering Meets Legal Alchemy: Decoding the Mystery of Credit Default Swaps”,

Fordham Journal of Corporate & Financial Law, Vol. XIX, Num. 3 (2014), pages 425-487.

Kastelein, Gerard.: “Securitization in the Capital Market Union. One Step Forward, Two Steps Back”, in *Capital Markets Union in Europe*, Oxford University Press (2018).

Langevoort, Donald C.: “Statutory Obsolescence and the Judicial Process: The Revisionist Role of the Courts in Federal Banking Regulation”, *Michigan Law Review*, Vol. 85, Num. 4, February 1987, pages 672-733.

Madrid Parra, Agustín: “Nueva Regulación de la titulización en la Ley 5/2015”, *Revista de Derecho del Mercado de Valores,* Num. 16, 2015.

Maki, Dean M.: “Household Debt and Tax Reform Act of 1986”, *The American Economic Review*, March 2001, Vol. 91, Num. 1, pages 305-319.

Marimón, Rafael: “Delimitación y perspectivas de regulación del sector bancario en la sombra”, en *La regulación del Shadow Banking en el contexto de la reforma del mercado financiero* (ed. R. Marimón), Thomson Reuters-Aranzadi (2015), pages 23-55.

Markham, Jeremy W.: “Super Regulator: A comparative analysis of Securities and Derivatives Regulation in the United States, The

United Kingdom, and Japan”, *Brooklyn Journal of International Law*, Vol. 28, Issue 2, 2003, pages 319-410.

McCoy, Patricia A.; Pavlov, Andrey; & Wachter, Susan: “Systemic Risk Through Securitization: The Result of Deregulation and Regulatory Failure”, *Connecticut Law Review*, Vol. 41, Num. 4, May 2009, pages 493-541.

McDonald, Oonagh: “The Repeal of the Glass – Steagall Act. Myth and Reality”, Policy Analysis, Cato Institute Center for Monetary and Financial Alternatives, Num. 804, November the 16th 2016.

Moldogaziev, Tima T.: “The Collapse of the Municipal Bond Insurance Market: How did we get here and is there life for the monoline industry beyond the great recession”, *Pennsylvania State University Journal of Public Budgeting, Accounting and Financial Management*, Spring, pages 176-210.

Murphy, Anne L.: “Trading options before Black- Scholes: a study of the market in late seventeenth-century London”, *Economic History Review*, Nº 62, 2009, pages 8-30.

O’Flynn, Andrew: “La regulación de la titulización post-crisis: sencilla, transparente y normalizada”, en *Shadow Banking y Financiación Empresarial Alternativa* (ed. R. Marimón), Thomson Reuters-Aranzadi (2017), pages 51-96.

Palley, Thomas I.: “The Levy Economics Institute of Bard College”, Working Paper No. 525. *Financialization: What It Is and Why It Matters* (2007).

Partnoy, Frank: “Financial Derivatives and the Costs of Regulatory Arbitrage”, *The Journal of Corporation Law*, Winter 1997, pages 211-256.

Patterson, Margaret & Reiffen, David: “The Effect of the Bubble Act on the Market for Joint Stock Shares”, *The Journal of Economic History*, Vol. 50, Num. 1, March, 1990, pages 163-171.

Quaglia, Lucia: “It takes two to Tango: The European Union and the International Governance of Securitization in Finance”, *Journal of Common Market Studies*, Vol. 59, Num. 6, 2021, pages 1364-1380.

Quinn, Stephen: “Securitization of Sovereign Debt: Corporations as a Sovereign Debt Restructuring Mechanism in Britain, 1694 to 1750” (2008), page 1. Research Gate: available at file:///C:/Users/Usuario/Downloads/Debt_Restructuring_Mechanism_in_Britain_1694_to_17%20(1).pdf

Rawlings, Phillip: “A Compleat System of Knavery: Folk Devils, Moral Panics and the Origins of Financial Regulation”, *Current Legal Problems*, Vol. 61, Issue 1 (2008), pages 325-370.

Rose, Johnathan: “The Incredible HOLC? Mortgage Relief during the Great Depression”, *Journal of Money, Credit and Banking*, Vol. 43, No.6 (September 2011), pages 1073-1107.

Ruebling, Charlotte E.: “The Administration of Regulation Q”, published by the Research Department of the Federal Reserve Bank of St. Louis, in “Review” February 1970, pages 29-40.

Segura, Anatoli: “Why Did Sponsor Banks Rescue Their SIVs? A Signalling Model of Rescues”, *Review of Finance*, Vol. 22, Issue 2, March 2018, pages 661-697.

Schmidt, Walter S.: “Private versus Public Enterprise in Housing”, *The Journal of Land & Public Utility Economics*, Vol. 11, Number 4 (1935), pages 342-351.

Schwarcz, Steven: “A global perspective on securitized debt”, *Capital Markets Union in Europe*. Oxford University Press (2018).

Shea, Gary S.: “Financial market analysis can go mad (in the search for irrational behaviour during the South Sea Bubble)”, *Economic History Review*, 60, 4, (2007), pages 742-765.

Shea, Gary S.: “Understanding financial derivatives during the South Sea Bubble: the case of the South Sea subscription shares”, *Oxford Economic Papers*, 59, 2007, pages 73-104.

Snowden, Kenneth A.: "Mortgage Companies and Mortgage Securitization in the Late Nineteenth Century" (2007), Research Gate, Available at: https://www.researchgate.net/publication/228822552

Stassen, John H.: "The Commodity Exchange Act in Perspective. A short and not so reverent history of futures trading legislation in the United States", *Washington and Lee Law Review*, Vol. 39, Issue 3, pages 825-843.

Strine, Walter M. Jr.: "New Commercial Devices: Mortgage Backed Securities", *Real Property, Probate and Trust Journal*, Vol. 13, Num. 4, Winter 1978, pages 1011-1054.

Stout, Lynn A. "Derivatives and the Legal Origin of the 2008 Financial Crisis", *Harvard Business Law Review*, Vol. 1, 2011, pages 1-38.

Taylor, Telford: "Trading in Commodity Futures: A New Standard of Legality?", *The Yale Law Journal*, Vol. 34, Num. 1, November 1993, pages 63-106.

Thiemann, Matthias: "In the Shadow of Basel: How Competitive Politics Bred the Crisis", *Review of International Political Economy*, Vol. 21, Núm. 6, 2014, pages 1203-1239.

Weber, Ernst Juerg: "A Short History of Derivative Security Markets", in Hafner, Wolfgang & Zimmerman, Heinz (Editors):

Vinzenz Bronzin's Option Pricing Models. Exposition and Appraisal, Springer (2009), pages 431-466.

Wheelock, David C.: "The Federal Response to Home Mortgage Distress: Lessons from the Great Depression", *The Federal Reserve Bank of St. Louis Review*, May/ June 2008, pages 133-148.

Van Dillen, J.G.; Majithia, Asha & Poitras, Geoffrey: "Isaac Le Maire and the early trading in Dutch East India Company shares", from *Pioneers of financial economics*, Vol. I: Contributions prior to Irving Fishes", Edited by Geoffrey Poitras, Edward Elgar Publishing (2006), pages 45-63.

Watzlaff, R. H.: "The Bubble Act of 1720", *Abacus*, Vol. 7, Issue 1, June 1971, pages 8-28.

Whittall, Christopher: "The birth (and troubled life) of CDS", *International Financing Review*, 2000, issue supplement which is available at http://www.ifre.com/the-birth-and-troubled-life-of-cds/21104482.fullarticle

Working, Holbrook: "Futures Trading and Hedging", in *The Economics of Futures Trading*, Reading Selected and Edited by B.A Goss and B.S Yamey, published by John Wiley & Sons (1976), pages 68-82.

Newspaper and Magazine Articles

"The Gentleman's and London Magazine and Monthly Chronologer". Volume XXXI. Printed by John Exshaw (1741).

The Public Advertiser, the 9th of Janauary (1782).

"Unsafe Farm Mortgages", The New York Times, December 27, (1887)

"Derivatives as the Fall Guy, Excuses, Excuses", The New York Times, October 2, (1994).

Pamphlets

"Plain dealing: in a dialogue between Mr Johnson and Mr Wary his friend, a stock-jobber, and a Petitioner against the East India Company, about stock-jobbing and said Company". Anonymous, published on the 1st of January 1691.

"*Angliae Tutamen, or the Safety of England*", an anonymous pamphlet dated 1695.

"*A letter to a conscientious man concerning the use and abuse of riches and the right and wrong ways of acquiring them: showing that Stock Jobbing is an unfair way of dealing; and particularly demonstrating the fallaciousness of the South-Sea scheme*". Anonymous author. Printed for W. Boreham, London (1720).

“Reasons for making void and annulling those fraudulent and usurious contracts, into which multitudes of unhappy persons have been drawn to the utter ruin of themselves and families by the late directors of the South-Sea Company “. Anonymous (1720).

“Further reasons offered and fresh occasions given for making void and annulling fraudulent and usurious contracts, especially those time –contracts for putting or refusal of stock (formerly declared illegal) into which, multitudes of unhappy persons have been drawn, to the utter ruin of themselves and families by the vile arts and practices of the late directors of the South-Sea Company, their agents and confederates”. Anonymous (1721).

Budgell, Eustace: “A letter to a friend in the country, occasioned by a report that there is a design still forming by the late directors of the South Sea Company” (1721).

Dalrymple, David “Time Bargains tried by the Rules of Equity and Principles of Civil Law”. Pamphlet printed in 1720.

U.K Parliament and Collections of Statutes

The House of Commons Journal, Volume 11, 1693-1697”, November 25th 1696, Published by his Majesty’s Stationery Office, London, 1803.

The Journals of the House of Commons, Volume 19, From November 11th 1718 to March 7th 1721.

"The Several Reports of the Committee of Secrecy to the Honourable House of Commons Relating to the late South Sea Directors". Printed by A. Moore (1721).

The History and Proceedings of the House of Commons from the Restoration to the Present Time (1727 – 1733). Printed for Richard Chandler, London (1742).

The Statutes at Large: from the fifteenth year of King Edward III to the thirteenth year of King Henry IV inclusive: Compiled by Danby Pickering. Volume II. Printed by Joseph Bentham. London (1762).

The Statutes at Large: from the first year of King Henry V to the twenty – second year of Edward IV inclusive" compiled by Danby Pickering. Volume III. Printed by Joseph Bentham. London (1762).

The Statutes at Large: from the thirty-second year of King Henry VIII to the seventh year of King Edward VI inclusive", complied by Danby Pickering. Volume V. Printed by Joseph Bentham. London (1762).

The Statutes at Large: from the twelfth year of King Charles II to the last year of King James II inclusive", complied by Danby

Pickering. Volume VIII. Printed by Joseph Bentham. London (1762).

The Statutes at Large: from the fifth to the ninth year of King George I. Compiled by Danby Pickering. Volume XIV. Printed by Joseph Bentham. London (1762).

The Statutes at Large: from the fifteenth year of King Edward III to the thirteenth year of King Henry IV inclusive: Compiled by Danby Pickering. Volume II. Printed by Joseph Bentham. London (1762).

The Statutes at Large: from the second to the eighth year of Queen Anne: complied by Danby Pickering. Volume XI. Printed by Joseph Bentham. London (1764).

The Statutes at Large: from the eighth to the twelfth year of Queen Anne" complied by Danby Pickering. Volume XII. Printed by Joseph Bentham. London (1764).

The Statutes at Large from the Second to the 9th Year of King George II, Volume XVI, by Danby Pickering Esq". Printed by Joseph Bentham (1765).

The Statutes at Large from the 15th to the 20th year of King George II: by Danby Pickering, Volume XVIII". Printed by Joseph Bentham (1765).

The Statutes at Large: from the first year of the reign of King George the First to the ninth year of the reign of King George the Second. Volume the Fifth. Printed by Charles Eyre and Andrew Strahan (1786).

The Statutes at Large of England and of Great Britain. From Magna Carta to the Union of the Kingdoms of Great Britain and Ireland. Volume VIII." Printed by George Eyre and Andrew Strahan (1811).

Cobbett's Parliamentary History of England. From the Norman Conquest in 1066 to the year 1803. Volume IX (1733 – 1737). Published by T.C. Hansard (1811).

The Statutes of the Realm: Printed by Command of his Majesty King George the Third in pursuance of an address of the House of Commons of Great Britain. Volume VII", (1820).

Acts and Ordinances of the Interregnum, 1642 – 1660. Volume II. Edited by CH Firth and R S Rait. Printed by Wyman and Sons. (1911).

U.S Public Hearings and Reports

"Report of the committee including an Act relating to Contracts for the sale of stocks". The Commonwealth of Massachusetts (1836).

"Fictitious dealing in Agricultural Products. Testimony taken from the Committee on Agriculture during a consideration of Bills Nos 392, 2699 and 3870, restricting and taxing dealers in "futures" and "options" in agricultural products, and for other purposes". Washington Government Printing Office (1892).

Congressional Record. Proceedings and Debates of the first session of the sixty-seventh congress of the United States of America. Volume 61, part 5, July 25 to August 20, 1921." Printed by the Washington Government Printing Office (1921).

Hearings before the Committee on Rules. House of Representatives. Seventy Third Congress. Second Session on H.R. 9623: "A Bill to amend the Grain Futures Act to prevent and remove obstructions and burdens upon interstate commerce in grains and other commodities by regulating transactions therein on commodity futures exchanges, by providing means for limiting short selling and speculation in such commodities on such exchanges, by licensing commission merchants dealing in such commodities for future delivery on such exchanges, and for other purposes". May the 16th, 1934.

Commodity Exchange Act, Report to Accompany H.R.6772. Report no 421. March 18, 1935.

Slum and Low Rent Public Housing. Hearing Before the Committee on Education and Labor. United States Senate. 74th Congress June (1935).

Hearings before the Committee on Agriculture and Forestry. United States Senate. Ninety Third Congress. Second Session on S.2485. A Bill to Establish an Independent Commodity Exchange Commission. S.2578. A Bill to Strengthen the Regulation of Commodity Exchanges. S.2837. A Bill to Regulate the Interstate and Foreign Commerce Trading on Futures Contracts in Order to Prevent Unfair and Deceptive Acts and Practices. H.R.13113. A Bill to Amend the Commodity Exchange Act to Strengthen the Regulation of Futures Trading, to bring all Agricultural and other Commodities Traded on Exchanges under Regulation, and for other purposes. Part 2, May 16, 17, and 20, 1974. U.S Government Printing Office (1974).

Hearing before the Subcommittee on Housing and Urban Affairs of the Senate Committee on Banking, Housing and Urban Affairs, 98th Congress, September 21st and 22nd (1983).

Hearings before the Committee on Agriculture, Nutrition, and Forestry United States Senate. One Hundred Second Congress. First Session on S.207. The Future Trading Practices Act of 1991. February 7 and 20, 1991". U. S Government Printing Office. Washington (1991).

Recent Derivative Losses. Hearing Before the Committee on Banking, Finance and Urban Affairs. House of Representatives. One Hundred Third Congress. October 5, 1994.

Hearing before the Committee on Banking and Financial Services, the U.S House of Representatives, on H.R.10 “The Financial Services Competitiveness Act of 1997” given on May the 22nd, 1997.

Hearing before the Senate Banking, Housing and Urban Affairs Committee on H.R.10 “The Financial Services Act of 1998”. Wednesday the 24th of June 1998.

The regulation of OTC derivatives, before the U.S House of Representatives Committee on Banking and Financial Services. July the 24th, 1998.

“Over the Counter Derivatives”. Hearing Before the Committee on Agriculture, Nutrition, and Forestry. United States Senate. Second Session. July 30, 1998.

S. 2697 – The Commodity Futures Modernization Act of 2000 - Joint Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate and the Committee on Banking, Housing and Urban Affairs. One Hundred Sixth Congress”. June 21, (2000).

Bond Insurers: Issues for the 110th Congress. Congress Research Service. RL34364. March the 10th (2008).

Hearing on “The Role of Financial Derivatives in the current Financial Crisis”. Hearing before the Committee on Agriculture, Nutrition, and Forestry United States Senate One Hundred Tenth Congress Second Session Tuesday, October 14th, (2008).

The Financial Crisis Inquiry Report”. Submitted by the Financial Crisis Inquiry Commission. U.S Government Printing Office. (2011).

Congressional Research Service Report “The Glass – Steagall Act: A Legal and Political Analysis”. Authored by: Carpenter, David H. Murphy, Edward V, Murphy, Maureen M. H. Dated: January the 19th 2016.

Publications by Organisations

The Basel Committee on Banking Supervision, International Convergence of Capital Measurement and Capital Standards, July (1988).

The Basel Committee on Banking Supervision. Criteria for identifying simple, transparent and comparable securitisations. July (2015).

Brown, Keith & Smith, Donald J.: “Interest Rate and Currency Swaps: A Tutorial”, The Research Foundation of the Institute of Chartered Financial Analysis (1995).

The European Securitisation Forum: “*RMBS, Issuer Principles for Transparency and Disclosure”*. (2008).

National Association of Insurance Commissioners. "Weather Financial Instruments (Temperature): Insurance or Capital Markets Products?" Property and Casualty Insurance Committee, draft White Paper, September 9, (2003).

Survey of Credit Underwriting Practices 2005. Office of the Comptroller of the Currency National Credit Committee. June (2005).

Survey of Credit Underwriting Practices 2006. Office of the Comptroller of the Currency. October (2006).

The J.P. Morgan Guide to Derivatives (with contributions from the Risk Metrics Group) (1999).

The ECB Monthly Bulletin August 2009

The European Banking Authority report on qualifying securitisation (2014).

The European Banking Authority report on Synthetic Securitisation (2015).

Letters

Letter from the State of New York Insurance Department dated the 16th of June 2000, to Bertil Lundqvist of the firm Skadden, Arps, Slate, Meagher & Flom, LLP.

Letter from Robert G. Pickel, Executive Director & CEO, ISDA, to Ernst N. Csiszar, President, NAIC & Robert Esson, Senior Manager, Global Insurance Markets., NAIC (Feb. 23, 2004).

Letter dated the 22nd of July 2009 sent by the President and Committee Chair of the NCOIL to the Senate Committee on Agriculture, Nutrition & Forestry, the Senate Committee on Banking, Housing & Urban Affairs, the House Committee on Agriculture, and, the House Committee on Financial Services.

Letter from the PCS to the Basel Committee for Banking Supervision, dated the 15th of March 2013.

Internet resources

Attomdata: https://www.attomdata.com/news/market-trends/mortgage-origination/attom-data-solutions-q1-2020-u-s-residential-property-mortgage-origination-report/

Corporate finance institute:
https://corporatefinanceinstitute.com/

CNMV: https://www.cnmv.es/portal/home.aspx

Defoe, Daniel: "The free-holders' plea against stock-jobbing. Elections of Parliament Men" (1701), contained in the William P. Trent Collection of Works relating to Daniel Defoe and his time, Boston Public Library digital archives.

DLA Piper Commentary: https://www.dlapiper.com/

ESMA: https://www.esma.europa.eu/about-esma/esma-in-brief

Federal Reserve Fund of St. Louis: https://www.stlouisfed.org/

"Instructions to Counsel", Robin Potts, QC, Erskine Chambers, reference EHM/DMB, the 19th of May, 1997": https://www.isda.org/a/BNEDE/edcreditderivatives.pdf

Kummer, Steve. "The History of Derivatives: A Few Milestones". EFTA Seminar on the Regulation of Derivatives Markets (2012). The full text of the seminar is available at https://www.seco.admin.ch/dam/seco/it/dokumente/Aussenwirtschaft/Wirtschaftsbeziehungen/Handel%20mit%20Dienstleistungen/Artikel_Studien/History_of_Derivatives.pdf.

opensecrets.org

Ranieri Lewis an interview. “Your mortgage was his bond”. The interview with Mr Ranieri can be accessed at interview:https://www.bloomberg.com/news/articles/2004-11-28/lewis-s-dot-ranieri-your-mortgage-was-his-bond

Roosevelt, Franklin D. “The Great Communicator”. The Master Speech Files, 1898, 1910 – 1945. Series 1: Franklin D. Roosevelt’s Political Ascension. File No.483a, 1932, July 2. Chicago IL – Acceptance Speech for Presidential Nomination. Available online at::http://www.fdrlibrary.marist.edu/archives/collections/franklin/index.php?p=collections/findingaid&id=582

Santos, Joseph: “A History of Futures Trading in the United States”, EH.Net Encyclopaedia, edited by Robert Whaples, available at:http://eh.net/encyclopedia/a-history-of-futures-trading-in-the-united-states/

Securities Industry and Financial Markets Association:https://www.sifma.org

Smallberg, Michael: “How the Clinton Team Thwarted Effort to Regulate Derivatives”. Available at: https://www.pogo.org/investigation/2014/04/how-clinton-team-thwarted-effort-to-regulate-derivatives/

The Institutes of Gaius. English Translation of the Latin Text:https://droitromain.univ-grenoble-alpes

The J.P. Morgan Guide to Derivatives (with contributions from the Risk Metrics Group). http://www.defaultrisk.com/pp_crdrv121.htm

The Weather Risk Management Association:https://wrma.org/page/about-wrma

Time Magazine online article: “25 People to Blame for the Financial-Crisis” http://content.time.com/time/specials/packages/article/0,28804,1877351_1877350_1877342,00.html

QSV group: http://www.qsvgroup.com/

U.S casualties Vietnam War: https://www.militaryfactory.com/vietnam/casualties.asp

U. S History .com

U.S house prices since 1930: http://observationsandnotes.blogspot.com/2011/06/us-housing-prices-since-1900.html

U.S spending on Vietnam War:https://www.nytimes.com/1975/05/01/archives/us-spent-141billion-in-vietnam-in-14-years.html

Laws U.S

Federal Laws

The Federal Farm Loan Act 1916.

The Grain Futures Act 1922.

The Banking Act 1933.

The Home Owners’ Loan Act 1933.

The Securities Act of 1933.

The National Housing Act 1934.

The Securities Exchange Act 1934.

The Commodity Exchange Act 1936.

The United States Housing Act (Wagner – Steagall Act) 1937.

The Servicemen’s Readjustment Act 1944.

The McCarran – Ferguson Act 1945.

The Housing Act 1954.

The Housing and Urban Development Act 1965.

The Housing and Urban Development Act 1968.

The U.S Housing Act 1968.

The Housing and Urban Development Act 1969.

The Emergency Home Finance Act 1970.

The Federal Financing Bank Act 1973.

The Commodity Futures Trading Commission Act 1974.

The Housing and Community Development Act 1974.

The Depository Institutions Deregulation and Monetary Control Act 1980.

The St Germain Depository Institutions Act 1982.

The Secondary Mortgage Market Enhancement Act 1984.

Federal Housing Enterprises Financial Safety and Soundness Act 1992.

The Gramm – Leach – Bliley Act 1999.

The Commodities Futures Modernization Act 2000.

Bankruptcy Abuse Prevention and Consumer Protection Act 2005

Dodd-Frank Wall Street Reform and Consumer Protection Act 2010.

U.S Bills

The Derivatives Safety and Soundness Supervision Act 1994

The Derivatives Supervision Act 1994.

Supervisory Improvement Financial Derivatives Act 1998

United States Covered Bond Act 2011

U.S State Laws and Regulations

"An Act to Incorporate the Board of Trade, Chicago". Act of Incorporation, Rules, By – Laws and Inspection Regulations of the Board of Trade of the City of Chicago. as adopted September 25, (1875).

Act of Incorporation, Rules, By – Laws and Inspection Regulations of the Board of Trade of the City of Chicago. As adopted September 25, (1875).

The New York Insurance Code.

HUD's Regulation of the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac). Final Rule, Published in the Federal Register, Vol. 65, Num. 211, Tuesday the 31st, (2000), pages 65044-65229.

Final rule of the OCC. Federal Register. Volume 69. Nº 8. Tuesday the 13th January (2004).

U.S Compilations of Laws and Judgements

"The Laws of the State of New York: Volume 1". Printed by Charles R. and George Webster. (1802).

Cases argued and determined in the Supreme Judicial Court in the County of Suffolk, Boston, March term, (1806).

“Laws and Resolutions of the State of North Carolina: passed by The General Assembly at its Session of 1889.” Published by: Joseph Daniels (1889).

Texas Penal Code 1895.

“New Legislation Concerning Crimes, Misdemeanours and Penalties, compiled from the Laws of the fifty-fifth Congress and from the Session Laws of the States and Territories for 1897 and 1898”. Printed by the Washington Government Printing Office (1900).

“Constitution and Revised Laws of Louisiana. Volume I.” Printed by Hansell & Bro Ltd (1904).

The Revised Statutes of the State of Illinois 1908: containing all the general statutes of the state in force January 1, 1909.” Published by the Chicago Legal News Company (1908).

“The Code of the State of Georgia Volume I”. Published by Foote and Davies Company (1911).

U.S Regulations and Statements

Commodity Futures Trading Commission. Regulation of Hybrid Instruments. Federal Register. Volume 54. Number 139. Friday, July 21. (1989).

Commodity Futures Trading Commission. Concept Release. May 7, 1998.

Joint Statement by Treasury Secretary Robert E. Rubin, Federal Reserve Board Chairman Alan Greenspan and Securities and Exchange Commission Chairman Arthur Levitt". Issued on the 5th of July 1998.

The opinion of the Office of the General Counsel representing the position of the New York Insurance Department, given on the 15th of February 2000.

U.S Speeches

Speech given to the Economic Club of New York at the Waldorf Astoria Hotel on the 17th of November 1970 by the President of the New York Stock Exchange, Robert Haack.

"The Lessons of Long-Term Capital Management L.P". Remarks of Brooksley Born, Chairperson Commodity Futures Trading Commission. Chicago Kent – Illinois Institute of Technology, Commodities Law Institute. Chicago, Illinois. October 15, 1998.

U.S Cases

Amory v. Gillman (1806).

Brua's Appeal. The Supreme Court of Pennsylvania (1867).

Board of Trade of the City of Chicago v. Christie Grain & Stock Company. U.S Supreme Court (1905).

Board of Trade of the City of Chicago et al v. Olsen, United States Attorney for the District of Illinois. Supreme Court of the United States. April 16, (1923).

Cassard v. Hinmann (1856).

Gregory v. Wendell. Michigan Supreme Court, April 8, (1879).

Hill v. Wallace. U.S Supreme Court, May 15, (1922)

Irwin v. Williar& Another. The Opinion of the Court. U. S Supreme Court, March 3, (1884).

Kirkpatrick v. Lyons versus Bonsall, given by the Supreme Court of Pennsylvania in (1872).

Porter v. Viets. United States Circuit Court for the Northern District of Illinois (1857).

Stafford v. Wallace. U.S Supreme Court (1922).

Rumsey v. Berry. The Maine Supreme Judicial Court. July 1, (1876).

Trusler v. Crooks. U.S Supreme Court, January 11, (1926).

Reports from U.S Organisations

The forty-eighth annual report of the Trade and Commerce of Chicago for the year ended December 31, (1905).

The Federal Reserve Bulletin. October (1924).

"Annual Report of the Chief of the Grain Futures Administration". United States Department of Agriculture (1934)

CFTC. Policy statement concerning swap transactions. Federal Register, Volume 54, Number 139, Friday July 31, 1989.

"Financial Derivatives. Actions Needed to Protect the Financial System". United States General Accounting Office. May 18 (1994).

"Over the Counter Derivatives Markets and the Commodity Exchange Act". Report of the President's Working Group on Financial Markets. November 1999.

Laws U.K

An Act for punishing of such persons as live at high rate and have no visible estate, profession or calling answerable thereunto 1657.

An act against deceitful, disorderly, and gaming 1664.

The Bill of Rights 1689.

An Act to restrain the number and ill practice of brokers and stock-jobbers 1697.

An Act to prevent the infamous practice of stock-jobbing 1734.

An Act to regulate insurance on ships belonging to the subjects of Great Britain, and on merchandises or effects laden thereon 1746.

The Gaming Act of 1845.

The Gaming Act of 1851.

The Gaming Act 1892.

The Financial Services Act 1986.

U.K Cases

Darcy v. Allen (1603).

Smith v. Westall (1697).

Mitchell v. Broughton (1702).

Thomson v. Harcourt (1722).

Faikney v. Reynous (1767).

Petrie v. Hannay (1789).

Sanders v. Kentish (1799).

Child v. Morley (1800).

Cannan v. Bryce (1819).

Henderson v. Bise (1822).

Bryan v. Lewis (1826).

Greenland v. Dyer (1828).

Wells v. Porter (1836).

Hibblewhite v. M' Morine (1840).

Grizewood v. Blane (1851).

Williams v. Trye (1854).

Wilson v. Jones, Exchequer Division (1867).

Carlill v. Carbolic Smoke Ball Company. The Queen's Bench (1892).

City Index Limited v. Mr. S.A. Leslie. The Supreme Court of Judicature Court of Appeal, on appeal from the high Court of Justice, Queen's Bench Division (1991).

Morgan Grenfell & Co Ltd vs Welwyn Hatfield District Council (Islington London Borough Council third party), Queen's Bench Division (Commercial Court), April (1993).

U.K Reports

Thomson, Henry “A report of a case argued and adjudged in the Court of the Exchequer and affirmed in the House of Lords relating to a contract about South Sea Stock”. Printed for J. Roberts, at the Oxford Arms in Warwick Lane (1724).

Reports of Cases Argued and Determined in The Court of the King’s Bench, during Easter and Trinity Terms, Ninth Geo IV. Volume II”. Printed by C. Roworth. (1829).

The Law Journal Reports for the year 1839. Volume XVII. Part II. Cases at Common Law. Reports or Cases argued and determined in the Court of the Exchequer of Pleas.” Published by E.B.Ince (1839).

Strictures on the evidence in the Report of the Royal Commission of Inquiry into the Corporation into the City of London on the Regulation of Brokers and Stock Brokers and the Proposed Repeal of Sir John Barnard’s Act”. Published by Houlston and Wright (1860).

Hansard, Volume 157 (1860).

English Reports, Full Reprint, King’s Bench, Volume 91.W. Green & Son, Limited, Edinburgh. (1930).

Laws Spain

The Spanish Civil Code.

Law 19/ 1992 on Real Estate Investment Companies and Funds and Mortgage Securitisation Funds

Royal Decree 926/1998 on the Regulation of Asset Securitisation Funds and Securitisation Fund Management Companies.

Law 5/2015, of the 27th of April, for the Promotion of Business Financing.

Laws E.U

Directive 1995/46/EC.

Directive 2003/71/EC.

Directive 2008/48/ EC.

Directive 2014/17/EU.

Directive 2014/65/EU on markets in financial instruments.

Treaty on the Functioning of the European Union - 2012/C 326/01.

Capital Requirements Directive - Directive 2013/36/EU.

Regulation (EU) 1094/2010.

Regulation (EU) 1095/2010.

Regulation (EU) 648/2012.

Regulation (EU) 575/2013.

Regulation (EU) 596/2014 on insider dealing and market manipulation.

Regulation (EU) 2017/2402 - laying down a general framework for securitisation and creating a specific framework for simple, transparent and standardised securitisation.

Regulation (EU) 2021/557.

Commission Delegated Regulation (EU) 2019/1851 – supplementing Regulation (EU) 2017/2402.

Commission Delegated Regulation (EU) 2020/1224 – supplementing Regulation (EU) 2017/2402.

EU. Consultation Papers

Draft Regulatory Technical Standards specifying and, where relevant, calibrating the performance-related triggers pursuant to Article 26c (5) of Regulation (EU) 2017/2402 as amended by Regulation (EU) 2021/557

Draft Report on STS Framework for Synthetic Securitisation under Art. 45 of Regulation (EU) 2017/2402 (2019).

Reports from European Organisations

The European Banking Authority Report on Qualifying Securitisation. Response to the Commission's Call for Advice of January 2014 on Long-Term Financing. December (2014).

The European Banking Authority. The EBA Report on Synthetic Securitisation. (2015).

The European Banking Authority. "Final Report on Guidelines on the criteria for non-ABCP securitisation". 12th December (2018).

The European Banking Authority: "Report on STS Framework for Synthetic Securitisation under Article 45 of Regulation (EU) 2017/2402. 6th May (2020).

The Prime Collateralised Securities Association: "Interpretations User Guide Book". Version 8. July (2016).

The Prime Collateralised Securities Association: "Eligibility Criteria" Version 12. July (2018).

The Prime Collateralised Securities Association "Risk Transfer Securitisation Eligibility Criteria". Version 2. July (2018).