IALS INSTITUTE OF ADVANCED LEGAL STUDIES | SCHOOL OF ADVANCED STUDY UNIVERSITY OF LONDON

Catherine Odigie

Financial Product Regulation in age of Innovation - The final frontier towards achieving effective financial services regulation

LLM 2016-2017

International Corporate Governance, Financial Regulation and Economic Law (ICGFREL)

Dissertation Topic:

Financial Product Regulation in age of Innovation - The final frontier towards achieving effective financial services regulation

The recent financial crises between 2007 and 2009 (**GFC**) revealed significant gaps and regulatory infrastructure and macro-economic policy of the financial system. Financial crises are generally unwelcome but prevalent feature in the financial market system. They generally cause upheaval across the financial system with impactful consequences across spheres of society. However in their wake lessons are learned and steps are taken with the revelations of the GFC have led to a beneficial revision of the financial regulatory architecture. However, this work will seek to present the argument that this revised regulatory architecture leaves room for ineffectiveness unless product regulation is properly addressed.

In order to achieve this, this work will be divided in three major sections. It is considered that in order to accurately assess the effectiveness of corrective regulatory measures it is necessary to consider the specific issues that need correcting. Thus the first section of this work will be focused on financial crises and identifying the specific GFC peculiarities. The second section will tackle the issue of regulation failure; specifically its role in the GFC peculiarities and the attempts at rectifying such failure in the revised regulatory architecture following the GFC. The last section will give a review of such revised architecture and considering a role forproduct regulation pursuant to fully eliminating the effects of the GFC peculiarities. Given the vast scope of the financial system and the far reaching effects of the GFC as well rectification measure taken following the GFC, this work will be limited to a the financial market regulatory infrastructure (excluding, the insurance market) and primarily the jurisdictions of the US and the European Union (**EU**).

1. FINANCIAL CRISES AND GFC

The primary role of the financial system is to ensure the effective allocation of capital in the economy. It does this by ensuring the price paid for an asset has a commensurate value by facilitating the interplay of demand and supply for that asset. Large capital availability is likely to foster confidence in market activity. Such large capital availability may also cause lenders to increase their lending activity given confidence as a reflection of such confidence. A culmination of these increases the potential of prices assets inflation. However, since inflation inevitably leads to a drop in demand and thus prices, prices will eventually drop which inevitably has an adverse effect on holders of such assets, lending activity and borrowers who may also be holders of such assets. This results in loss of trust in prices, transaction counterparties and ultimately the financial system itself. Such mistrust is reflected in the keen desire for self-protection by market participants hence bank runs. These issues have been reflected in past financial crises.

In 1907 the Unites States America (**US**) experienced a financial crisisas a result of market failure due to 'speculation, bank runs and links across players'[1]. In the 1930, again in the US, market failure occurred but as a result of 'huge macroeconomic shock [which] caused large losses at banks nationwide'[2]. After a few decades of respite the 1980s featured the savings and loans crises; which resulted from the 'losses experienced across the financial system due to 'risk shifting on the part of the banks'[3]as well as the collapse of the financial institution, Continental, Illinois which resulted in losses due to concentrated exposure, lost access to funding. The 1990s did not escape the occurrence of a crisis and in 1998 the failure of a large

[1]Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011
[2]ibid
[3]ibid

hedge fund was in danger of significant adverse effects on the financial system, due to its size.

The above can b encapsulated in the following sequential features:

Large capital inflows =>Confidence =>over extension of Credit =>Price misallocation =>Price crash =>Loss of trust =>Bank runs

On examination of the above, two specific factors are prevalent:

I) Market failure;

As stated above the key role of the financial system is the allocation of capital and the key tool with which it does this is the appropriate determination of asset prices to properly reflect the value of such asset in the market. An ideal market determines the appropriate value reflecting prices of assets through the activity and symbiotic relationship of demand and supply. However markets fail. Bator notes that, market failure '[t]ypically……. [means] failure of a more less idealised system of price-market institutions'.[4]Commentary on market failure reveals a number of reasons for its occurrence:

- Agency costs: This arises as a result of the prevalence of 'separation of ownership…'[5] in market participants' arrangements.
- Information asymmetry: As a direct result of agency arrangements in the market 'investors are not aware of certain information critical to their investment decisions…………'[6] Even when market participants have the opportunity to receive such information they may lack the skill required to understand or utilise it. The agent, however, on acting as an agent acquires expertise on understanding and utilising the full

[4]Francis M. Bator, Anatomy of Market Failure, The Quarterly Journal of Economics, Vol. 72, No. 3 (Aug., 1958), pp. 351-379
[5]Frank Partnoy, Financial Systems, Crises, and Regulation, Legal Studies Research Paper Series Research Paper No. 14-154 May 2014
[6]ibid

value of such information. This developed expertise results in continued reliance thereon and thus perpetuates the cycle of information asymmetry;

- Cognitive error- All factions of commentators on market failure agree on the fact that individuals are bound to act irrationally and as a herd, particularly in times of unusual circumstances or a panic. Partnoy notes that;

> 'financial crises arise because individual market participants are irrational in some way, perhaps because they follow a herd mentality or mob psychology, or because they misperceive risk and reward…..financial markets crises arise in the aftermath of irrational investor mania and then panic…….panics and crashes are endemic to financial markets because of human nature and investor psychology'[7]

- Moral Hazard- This arises from the adverse effect of protective measures/insurance made available to key financial institutions in the market undertaken to protect the market participants from the panic and crashes which are noted above as endemic to the market. The underlying thought is that these protective measures potentially results in increased risk exposure appetite making them vulnerable to failure which ultimately affects prices and creates the opportunity for market failure.

II) Loss of trust

The loss of trust resulting from market failure is generally represented by continued downward price movement and bank runs. The implication of this is reduction of liquidity in the market.

[7]ibid

1.1 GFC Peculiarities

The GFC was a financial crisis and thus reflects the features of market failure and loss of trust considered above. However, it is considered that there are a number of peculiarities which are relevant to the objective of this work.

In his assessment of the events leading up to the GFC, Lord Turner notedthat the following:

> - ‘the massive growth and increasing complexity of the securitised credit model underpinned by inadequate capital requirements against trading books, which facilitated unstable growth in credit extension to households and to some parts of the corporate sector;
> - Extensive commercial bank involvement in trading activities which meant that falling asset prices have had a large and rapid effect on bank profitability and in turn on perceptions of credit-worthiness creating a collapse in bank funding liquidity;
> - High leverage in multiple forms which helped drive the rapid growth in credit extension and asset prices, and which increased the vulnerability of the system, since asset price falls had an amplified impact on system capital adequacy;
> - Expanded maturity transformation dependent on the marketability of assets which made the system hugely more vulnerable to a loss of confidence and disappearance of liquidity;
> - The complexity and opacity of the structure credit and derivatives system built upon a misplaced reliance on sophisticated mathematics, which once irrational exuberance disappeared contributed to a collapse in confidence in credit ratings huge uncertainty about

> appropriate prices and a lack of trust that published accounting figures captured the reality of emerging problems;
>
> - Lack of adequate capital buffers as a result of which commercial banks losses have driven falling confidence in the banking system impairing the ability of the banking system to extend credit and creating a powerful loop between banking system stress and down turn in the real economy'[8]

Analysis on the GFC has indicated that the circumstances above were as a result of the following factors:

I) <u>Risk Taking incentives</u>

The reliance on the agency relationship in the operation of the financial market requires effective an effective corporate governance framework, to ensure an appropriate risk culture is preserved. This because of the risk of incentive misalignment between the agent and principal or shareholder. This was a particularly an influential cause of the GFC because it was noted that

> '[d]ramatic failures of corporate governance and risk management at many systemically important financial institutions- particular areas of emphasis here was the use of mathematical models by financial institutions and credit rating agencies such that 'risk management became risk justification'9 and 'compensation systems …..too often

[8]'The Turner Review, A regulatory response to the global banking crisis' March 2009
[9]Conclusions of the Financial Crisis Inquiry Commission Report

> rewarded the quick deal, the short-term gain-without proper consideration of long-term consequences[10]

Thus there was a very strong commercial incentive for this persistent misalignment of risk appetite and poor risk management that corporate governance failed to curb.

II) Systemic risk

Systemic risk was recognised as a danger to the financial system before the GFC. It is encapsulated by 'counterparty risk'[11] and 'spill over risk' [12]such that the failure of one financial institution to meet its financial obligations has the potential to immediately ripple through to its transaction counterparties. It was recognised as a threat to the US financial system in the collapse of a financial institution in the 1984. Furthermore, the danger was recognised in 1998 when the collapse of a hedge fund threatened the US financial system due its significant interconnections with systemic institutions. However, before the GFC systemic risk was only recognised as a potential within one nation's financial system. The GFC revealed that the threat of systemic risk was capable of affecting several financial systems when financial institutions expand their transactional and commercial reach beyond their domiciles and across the globe.

III) Banking activity

The primary role of banking institutions is to serve as conduits of financial capital distribution to market participants and society in general. The GFC revealed a change in banking activity

---

[10]ibid

[11]Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011

[12]ibid

to a ‘‘new-model’ of banking [which] relied heavily on the short-term wholesale funding market…..Short-term liabilities were funding longer term, less liquid assets……………..’[13].‘[F]inancial financial firms loaded up on assets with low volatility and high systemic risk (and therefore high expected returns). ……[14]. Such assets held ‘non-diversifiable credit risk associated with the AAA tranches of securitised loan portfolios……..[15]. This ‘new model’ of banking meant that banking institutions were operating significantly and transacting with each other in the shadow banking system.

Shadow banking activity is ‘usually defined as a complex network of credit intermediation outside the regulated banking sector’[16]. Its primary role was to transmit capital flows, credit and risk up to the banks and banking payment systems.

> ‘The shadow banking system emerged from the transformation of the largest banks from low return on-equity (**RoE**) utilities that originate loans and hold and fund them until maturity with deposits, to high RoE entities that originate loans in order to warehouse and later securitize and distribute them, or retain securitized loans through off-balance sheet asset management vehicles. In conjunction with this transformation, the nature of banking has changed from a credit-risk intensive, deposit-funded, spread-based process, to a less credit-risk intensive, but more market-risk intensive, wholesale funded, fee-based process.’[17]

---

[13]ibid
[14]ibid
[15]ibid
[16]Photis Lysandrou and Anastasia Nesvetailova The Shadow Banking System and the Financial Crisis- A securities production function view’, Financialisation, Economy, Society and Sustainable Development Working Paper Series No 5 ISSN 2052-8035
[17]Zoltan Pozsar, Tobias Adrian, Adam Ashcraft Hayley Boesky ‘Shadow Banking’ Federal Reserve Bank Staff Report No. 458 July 2010, Revised February 2012

Thus it traditionally transacted in products which are essentially receptacles of risk such as collaterised debt obligations (**CDOs**), a structured Over the Counter (**OTC**) product which turned out to be 'the epicentre of the [GFC]'.[18] The shadow banking system is heavily dependent on 'the capital and money markets in order to fulfil their function of 'credit intermediation and maturity/ liquidity transformation functions'[19]. Given the nature of its activity it poses systemic risks to the financial system, furthermore, '…..financial institutions operating in the shadow banking system are subject to bank-like runs.'[20]

It is noteworthy that

> '[i]n the regulated banking sphere, the credit intermediation and attendant maturity and liquidity transformation functions are usually performed by banks without recourse to any intermediary role on the part of the capital and money markets.'[21]

Notwithstanding this analysis of the GFC revealed that pursuant to the introduction of the advent of the 'new model' banking shadow banking activity was heavily conducted by

> 'bank owned or sponsored entities in the capital and money market domains for the primary purpose of expanding the rate of production of yield bearing debt securities required by the global investor community'.[22]

[18]Photis Lysandrou and Anastasia Nesvetailova The Shadow Banking System and the Financial Crisis- A securities production function view', Financialisation, Economy, Society and Sustainable Development Working Paper Series No 5 ISSN 2052-8035

[19]ibid

[20]ibid

[21]ibid

[22]ibid

Therefore it is no surprise that the banking liquidity was adversely affected by the GFC resulting in a 'credit crunch' across the financial system. It has been noted that banks participation in the shadow banking sector was the innovative solution to 'take unregulated risk exposure ……so as to get relief from regulatory capital requirements and subsequently take on additional risks….[23]

IV) <u>Market and Product opacity</u>

The GFC has revealed the ills of OTC products, particularly CDOs. They are synthetically derived from, credit default swap (**CDS**) which are 'U.S. private label securitization of weak credits'[24]and are essentially illiquid receptacles of risk used to place 'bets on the performance of real mortgage-related securities'.[25] Their illiquid nature is as a result of their complexity which is in turn as a result of the difficulty surrounding their valuation. This issue of complexity and valuation triggered the commencement of the GFC when in 2007 it was revealed by 'BNP Paribas that it could not value the CDOs held by three of its hedge funds…[26].

---

[23]Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011

[24]International Monetary Fund Working Paper, Research Department and Institute for Capacity Development 'The Regulatory Responses to the Global Financial Crisis- Some Uncomfortable Questions' Stijn Claessens and Laura Kodres WP/14/46 March 2014

[25]Conclusions of the Financial Crisis Inquiry Commission Report

[26]Photis Lysandrou and Anastasia Nesvetailova The Shadow Banking System and the Financial Crisis- A securities production function view', Financialisation, Economy, Society and Sustainable Development Working Paper Series No 5 ISSN 2052-8035

Another feature of their complexity was the opacity of the market in which they were traded. This opacity 'made it much more difficult to know their true value and who incurred the various risks.'[27]

V) <u>Globalisation effect</u>

'Globalisation finds perhaps its fullest expression in global capital flows and capital markets.[28] It has been noted that 'globalisation increased the volume of capital flows to and from nations'[29]…and this 'increased capital flows to the United States in the 2000s facilitated the profound misallocation of capital in the [GFC]'[30]. One could argue that the increased commercial and accordingly risk appetite of market participants including; financial institutions and banks, resulted in the search for yield beyond their domiciles. The capital available for allocation in one financial system was significantly increased and with each cross-border transaction between financial institutions 'ever-stronger financial linkages across countries' [31]were forged. This meant that the scope of the adverse effect of the systemic risk posed by a market participant was widened to potentially include the financial system of such market participant's counterparties. The United States Financial Inquiry Commission's report on the GFC noted one of the reasons for the GFC was a failure to appreciate the 'interconnections amongst firms and concentration of risk in the [OTC] market'.[32]

---

[27]International Monetary Fund Working Paper, Research Department and Institute for Capacity Development 'The Regulatory Responses to the Global Financial Crisis- Some Uncomfortable Questions' Stijn Claessens and Laura Kodres WP/14/46 March 2014IMF
[28]Buckley, RP, Arner, DW 'From Crisis to Crisis: The Global Financial System and Regulatory Failure University of Hong Kong Faculty of Law Research Paper No. 2012/002
[29]ibid
[30]ibid
[31] ibid
[32]Conclusions of the Financial Crisis Inquiry Commission Report

Shadow banking thrived in the precipitation of globalisation since it widened the market for demand and supply of financial innovation i.e. OTC products. The wider market increased the availability of capital, which propagated an increase in confidence and debt. This ultimately led to 'the emergence of large and persistent differences in credit growth and current account imbalances across countries….[33]. It is considered that the difficulty in valuing CDS and CDOs is significantly influenced by the fact that the weak credit risk profiles inherent in the underlying mortgage facilities. The wider the market, the wider the area of circulation of product transactions/transfer and the heightened difficulty in tracking the full information associated with such products as well as the originating source of such product.

[33]Buckley, RP, Arner, DW 'From Crisis to Crisis: The Global Financial System and Regulatory Failure University of Hong Kong Faculty of Law Research Paper No. 2012/002

2. REGULATION FAILURE

Notwithstanding the peculiarities of the GFC, they still reflect the two foundational causes of financial crises; market failure and loss of trust. In aftermath of past financial crises regulatory measures or revisions have shown to be effective in restoring stability to the financial system. Some examples are outlined below:

1907- The financial crisis of 1907 resulted in the institution of legislation that brought about the institution of 'a lender of the last resort'[34] to ensure financial stability.

1930s- The banking panics resulting from price imbalances, debt inflation and ultimately stock market crashes led to the introduction of the Federal Deposit Insurance Corporation (**FDIC**) and two pieces of innovative legislations; the Securities Act 1933 and the Securities Exchange Act of 1934. Their objective of the legislations was to '"shine a bright light" on financial information so that investors could make informed decisions [which it was considered would ultimately lead to establishing] confidence to make the markets function better.'[35]

1984 (Continental Illinois and Too-Big-To-Fail Status) - For the first time the concepts of 'systemic risk' and 'too big to fail' were introduced since the core issue of the crisis stemmed from a loss of confidence in the whole sale banking market. Thus, notwithstanding the implementation of the securities legislation in 1930s it became clear that the regulatory system would require updating to catch up with the activities in the US market and financial system.

Late 1980s- The savings and loans crisis of the late 1980s arose from the interplay of a rise in interest rates and the banks significant investment in real estate lending and antiquated

---

[34]Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011

[35]ibid

regulation. The concept of 'regulation capture' was featured as one of the significant reasons for the weakness of the regulatory architecture of the period.

1990s- Regulation was also used to rectify 'a systemically risky situation'[36]; when in the US a in 1998 a large hedge fund with significant interconnection across the financial system collapsed. The result of this crisis led to the implementation of legislation refining the 'procedures for winding up complicated systemic firms'[37].

On review of the above it is noted that a number of the features of the GFC highlighted in the GFC peculiarities above also featured in past financial crises to which regulation has served to rectify. Therefore since these issues were allowed to repeat themselves to disastrous effect it is considered that the underlying and primary cause of the GFC is regulation failure. The US's Financial Crisis Commission, it is analysis of the GFC confirmed this and particularly noted that the GFC was caused by 'widespread failures in financial regulation and supervision'[38]. In order to appreciate and identify the particular areas of such the following elements may be considered.

I) <u>Policy</u>

The difficulty of achieving good government policy amidst the juggling factors of political, economic and social concerns is acknowledged. It is possible that a conflict arises between financial system regulation and governmental agenda resulting in a skewered regulatory objective and framework. The failure to resolve such conflict by setting appropriate

[36]ibid
[37]ibid
[38]Conclusions of the Financial Crisis Inquiry Commission Report

regulatory policy results in bad policy and 'essentially a political failure'[39].This has been shown in past crises. The real estate lending strategy that resulted in the exposure of the banks following the increase in interest rates in the 1980s was as a result of government policy to further real estate development.[40]

In the UK, it was noted that '……..in a political context ……….the worst offence the regulator could commit was to cause London to lose business.'[41] This primary economic agenda led to '[t]he dominant economic philosophy, ………, was that markets were self-correcting and that firms were best placed to manage their own risk.'[42]. This led to the adoption of the deregulation agenda pervasive across the UK and US. Deregulation effectively facilitated economic growth. This permissive environment created by deregulation was represented in the fact that 'investment banks were permitted to use their own mathematical models of asset and portfolio risk to compute appropriate capital levels.'[43] In the US,

> '[t]he Fed ……….in 1996: ….permitted banks to use CDS to reduce capital reserves (Tett, 2009, p 49) [notwithstanding the fact that] CDS are financial derivatives that are transacted in unregulated, over-the-counter (OTC) markets'[44].

---

[39]David G. Tarr, 'The Political, Regulatory and Market Failures That Caused the US Financial Crisis', The World Bank Development Research Group Finance and Private Sector Development Team May 2010 Policy Research Paper 5324
[40]Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011Market
[41]Julia Black, 'The Rise, Fall and Fate of Principles Based Regulation, LSE Law, Society and Economy' Working Papers 17/2010 London School of Economics and Political Science Law Department
[42]ibid
[43]Ross Levine 'The Governance of Financial Regulation: Reform Lessons from the Recent Financial Crisis' Bank for International Settlements Working Papers No 329 November 2010
[44]ibid

Furthermore, in his commentary on GFC Levine noted that 'bad policy choices created perverse incentives that encouraged financial institutions to take excessive risk and divert society's savings toward unproductive ends'[45].

The resultant increase liquidity of the banks in culmination with the operation of the 'affordable housing mandate'[46] led to the increased appetite in reduction in real estate lending which set the stage for the crisis.

Levine further points out that the pervasive effect of policy is not only reflected in the regulatory framework but in the supervisory approach. He noted that before the GFC 'the SEC eliminated the risk management office and failed to complete a single inspection of a major investment bank in the year and a half before the collapse of those banks (Labaton, 2008).'[47]

II) Regulatory objective

Further to the acknowledgement that financial crises are caused by market failure and loss of trust, it is considered that the objective of any effective financial market regulation should be the rectification or prevention of market failure and restoration of trust.

The identification of the primary economic policy agenda inhibited the development of the appropriate and up to date regulatory objective and ultimately its architecture. Since it was believed that markets were self-correcting then it seemed the past financial crises that resulted

---

[45]ibid

[46]David G. Tarr, 'The Political, Regulatory and Market Failures That Caused the US Financial Crisis', The World Bank Development Research Group Finance and Private Sector Development Team May 2010 Policy Research Paper 5324

[47]Ross Levine 'The Governance of Financial Regulation: Reform Lessons from the Recent Financial Crisis' Bank for International Settlements Working Papers No 329 November 2010

from market failure were forgotten. Thus whilst there was a regulatory architecture, implemented to address past financial crises there was no economic incentive to continuously reassert the financial regulatory objective in alignment with the financial innovative development in pursuit of economic growth.

It is therefore no surprise that such that

> 'OTC derivatives rapidly spiralled out of control and out of sight, growing to $673 trillion in notional amount [and there was] uncontrolled leverage; lack of transparency, capital and collateral requirements; speculation; interconnections among firms and concentration of risk in this market'[48]

Partnoy notes that "trust plays a key role in the formation and function of financial markets[49] because 'financial systems are inherently unstable'[50]. He therefore considers that 'an important role of financial regulation is to preserve trust.'[51] In recognition of the susceptibility of financial systems to instability the failure in the aligning regulatory development with economic growth is effectively failing to put in measures to preserve trust. Again since it was considered that whilst markets may be unstable they are able to correct themselves the adoption of the deregulation agenda was not considered an obstruction to the required regulatory objective of preservation of trust.

---

[48]Conclusions of the Financial Crisis Inquiry Commission Report

[49]Frank Partnoy, 'Financial Systems, Crises, and Regulation', Legal Studies Research Paper Series Research Paper No. 14-154 May 2014

[50]ibid

[51] ibid

III) Design

In light of the defective regulatory objective and policy the regulatory design was also somewhat defective. The prevalent regulatory design approach before the GFC was Principles based regulatory design (**PBR)**. PBR is, centred on'a reliance on firms' internal management (or in polycentric PBR, on the governance infrastructure of national states or other actors in the regime)'[52] resulting, in meta-regulation or management based regulation[53.] Since the prevailing policy was that firms can be left to manage their own affairs, , 'PBR was seen as the solution that firms and regulators were looking for to deliver an effective and responsive regulatory regime'[54.]The 'regulated' therefore is deemed to be a conscientious regulatory partner of the regulator and thus plays an influential role in regulatory content. This means that in a primarily PBR focused regulatory environment the regulatory content is vulnerable to regulatory capture, that is, 'regulation ………. being tailored for the benefit of the regulated.'[55] However, the GFC revealed that, 'a principles-based approach does not work with individuals who have no principles.'[56] The result of this culminated in the defective regulatory architecture that facilitated the GFC.

IV) Content and scope

The regulatory architecture before the GFC centred on disclosure, conduct and capital regulation. However, '"deregulation" divert[ed] attention from the crucial task of fixing the

[52]Julia Black, 'The Rise, Fall and Fate of Principles Based Regulation, LSE Law, Society and Economy' Working Papers 17/2010 London School of Economics and Political Science Law Department
[53]ibid
[54]ibid
[55]Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure'
[56]Julia Black, 'The Rise, Fall and Fate of Principles Based Regulation, LSE Law, Society and Economy' Working Papers 17/2010 London School of Economics and Political Science Law DepartmentJ

perverse regulations in place and identifying where new regulation is needed'[57]. The pursuit of this particular policy revealed that lessons were note learned from past crises 'Congress repeated with Fannie and Freddie the mistake that caused the collapse of the S&L industry'[58]. Thus these pieces of regulation were either defective when compared with the financial activity undertaken at the time.

The detrimental effect of the considerations above was reflected in the Basel regulation of the time. The Basel suite of regulations is developed from international co-operation amongst the G20 countries particularly focused on cross border financial transactions, including but not limited to, capital retention. It was noted that

> '….in the case of the transition from Basel I to Basel II there is ample evidence to indicate that the major international financial institutions played a key role………………… many modifications were made favouring regulated institutions. This is illustrated by the reliance on internal models for measuring risk.'[59]

Furthermore there was a '[l]ack of regulation on liquidity mismatches…'[60]'Basel II rules in 2007, …….[allowed] for more use of internal bank models in the assessment of risk,.'[61] The full scope of systemic risk was blinded by the economic and commercial fruits of

[57]David G. Tarr, 'The Political, Regulatory and Market Failures That Caused the US Financial Crisis', The World Bank Development Research Group Finance and Private Sector Development Team May 2010 Policy Research Paper 5324World
[58]ibid
[59]Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure
[60]Jorge Roldos, 'Failure of Regulation and Supervision' International Monetary Fund Institute for Capacity Development
[61]David G. Tarr, 'The Political, Regulatory and Market Failures That Caused the US Financial Crisis', The World Bank Development Research Group Finance and Private Sector Development Team May 2010 Policy Research Paper 5324World

globalisation and financial instrument innovation. Thus, the 'OTC derivatives markets were allowed to grow without transparency or central clearing'.[62]

With respect to the disclosure suite of regulations it is noteworthy that 'the risks associated with complex securitization transactions and their underlying financial assets, including subprime mortgage loans, were fully disclosed; but that failed to prevent the catastrophic collapse of the securitization markets………………….'[63.]

V) <u>Supervisory philosophy or approach</u>

In light of the deregulation agenda, the supervisory approach was effectively limited to minimum interference financial market activity which 'opened gaps in oversight of critical areas with trillions of dollars at risk s'[64]. In summary there was:

- lack of adequate macro-prudential supervision
- ineffective early warning mechanisms
- problem of competencies- i.e. in their oversight duties supervisors failed to perform to an adequate standard their responsibilities. failure to challenge supervisory practices on cross-border basis]
- lack of frankness and cooperation between supervisors
- lack of consistent supervisory powers across Members States…………………'[65]
- reliance 'on sophisticated financial analysis of great intellectual appeal for its ability to quantify risks with few numbers[66]

---

[62]ibid

[63]Steven L. Schwarcz, 'Securitisation and Post-Crisis Financial Regulation' Cornell Law Review Online [Vol.101:115]

[64]Conclusions of the Financial Crisis Inquiry Commission Report

[65]Report, The High–Level Group on Financial Supervision in the EU Chaired by Jacque de Larosier, Brussels, 25 February 2009

[66]Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure'

The manpower size, organisational structure, authority and quality of the regulator and supervision measures were adversely affected.

In light of these failures it is no surprise that the prevailing regulatory framework and structure was ill-equipped to prevent or immediately rectify the disastrous effects of GFC.

2.1 REGULATION AFTER GFC

In an attempt to rectify the regulation failure that led to (or at the very least facilitated the GFC) the elements of regulation have been reviewed and continue to be reviewed particularly in light of the GFC peculiarities.

I) Revisiting the financial regulation objective and policy

The elements of regulatory failure above made it clear that a policy change on financial regulation was required. Thus, whilst, the political challenge of achieving economic development remains, it now recognised that 'close linkages between financial stability and the health of the real economy'[67]. Further it is accepted that a regulatory framework will be required to achieve such stability. Thus it is now accepted that effective regulatory framework will serve to foster financial stability in the financial system which will boost health in the real economy. Financial stability has been declared 'a public good'[68] by creating It'a more favourable environment for savers and investors'[69]. It is considered that financial stability encourages confidence in the financial system since

[67] Andrew Crockett 'Why is Financial Stability a Goal of Public Policy'
[68] ibid
[69] ibid

> '[i]f lenders lose confidence in the continued stability of the institutions to whom they have entrusted their funds, or in the integrity of the markets in which they have invested, they will seek to reduce their exposure and place their assets elsewhere.'[70]

Whilst the value of financial stability is recognised its prescriptive definition proves elusive. Notwithstanding this, commentary on the subject has agreed that it includes the stability of the financial market institutions as well as the financial market.

Conceptually, from a financial market perspective, 'stability ,,,,,,,,,,means the absence of price movements that cause wider economic damage…….'[71].The attempt to achieve financial or systemic stability from the financial market perspective has proved more specifically elusive in policy revisions. It is considered that the reason for this is that any regulatory influence on asset prices determination has the potential to adversely affect the desire efficiency of the market. Nonetheless, the GFC has shown that volatility in asset prices can adversely affect financial flows in the financial system and vice versa which in turn 'has the capacity to create "spill-over" effects[72] including undermining 'the stability of financial institutions. As we have learned above, the health of financial institutions is subject to contagion effect thus price instability affects global economy.

This revision in policy has ultimately affected the regulatory objective. It is considered that the implication of this revision is simply the reassertion of the desired regulatory objectives

---

[70]ibid
[71]ibid
[72]ibid

identified above; addressing market failure and preservation of trust in the financial system. The regulatory agenda of deregulation is clearly at an end.

II) Rethinking Regulatory Design

The policy and objective revisions noted above resulted in a revision in regulatory design. The PBR model has suffered greatly as a result. It has now become the 'derogatory label used to conjure up regulatory ineffectiveness'[73]. Black notes that this is no surprise since PBR is predicated on 'extensive trust between the actors in the regulatory regime'[74]…and without it 'there is little scope for PBR to operate in any substantive way and little chance that other will be afforded much discretion through the use of principles in the rulebooks'[75]. However, Black also notes that '[g]overnance and regulatory scholars and 'better regulation' practitioners rarely hold out much hope for the effectiveness of 'command and control' or detailed rules based regulation'.[76]

Therefore it is no surprise that the UK regulator, Financial Services Authority (**FSA**) (as it was then known) immediately changed their strategy to 'evidence based, risk based, principles based, and ….outcomes focused regulator, all at the same time'[77]. On review of regulatory strategies implemented since the GFC it is clear that risk based approach features prominently in the current regulatory agenda and design. The ultimate focus seems to be on 'risks not rules'[78] such that regulators veer away from a 'tick box' attitude to compliance. Black considers that

[73]Julia Black, 'The Rise, Fall and Fate of Principles Based Regulation, LSE Law, Society and Economy' Working Papers 17/2010 London School of Economics and Political Science Law Department
[74]ibid
[75]ibid
[76]ibid
[77]ibid
[78]ibid

> 'rules themselves, including any principles, play a rather ambivalent role in risk-based regulation. Their point of entry into the supervisory process is not in the design of the risk based system, or even its implementation. Rather it comes later, when a regulator is considering taking enforcement action against conduct or activities which it considers to be posing too high a risk.[79]

This means that contrary to the 'light touch' regime of the regulator amidst the environment of deregulation supervision is now enhanced and the regulator will now play a hands on role in facilitating the regulatory agenda. Black considers that this heavy reliance on regulator elevation might result in 'a critical lacuna in the regulatory regime.'[80]It is considered that the evidence of this lacuna is starting to emerge particularly in the area of product regulation.

Notwithstanding this possibility Black identified that 'the financial crisis was a global experiment in the effectiveness of a wide range of regulatory techniques and institutional structures of financial regulation. All of them failed at least once.[81]Therefore, it is considered that there can be little criticism for an approach that attempts to encapsulate all known techniques with the prominent aim of satisfying the reasserted regulatory objectives..

III) <u>Supervision approach</u>

In light of the change in regulatory design, the change in supervisory approach is evident. The FSA, for example, reflected this by structuring its organisation and splitting itself into two

---

[79]ibid
[80]ibid
[81]ibid

arms- Financial Conduct Authority (**FCA**) and the Prudential Regulatory Authority (**PRA**). The regulatory model is now one of 'intensive supervision' which was intended to include:

a) implementation of its risk-based system of supervision and a greater focus on risk identification and the integration of macro-prudential analysis into firm-specific supervision;

b) manner in which FSA relies on senior management;

c) third dimension to the FSA's changed approach is its focus on outcomes; and

d) policy of what it terms 'credible deterrence'[82]

This means that the revised regulatory agenda will require a new brand of regulator that must be properly equipped with the expertise to not only understand the full scope of financial activity within its remit but to identify any underlying risks such activity may pose to the financial system. It is therefore considered that the excuse of the limited skill of the regulator is no longer permitted as an excuse for any potential future financial crisis.

IV) <u>New Regulatory Content and scope</u>

The vision of financial stability of financial institutions and markets is accordingly reflected in the revised regulatory architecture in content and scope. It led to certain regulatory/legislative measures domestically and on an international level.

From an international perspective the third iteration of the Basel suite of regulations (**Basel III**) were adopted including, but not limited tocapital requirements. These further include measures for a countercyclical capital buffer and a surcharge for globally systemically important financial institutions (**G-SIFIs**), both of which represent a first international

[82]ibid

attempt to institute a macro-prudential tool. More generally the scope of regulatory change included the following:

- Agreement reached on one of two envisioned liquidity standards – the Liquidity Coverage Ratio (**LCR**).
- Some progress on reducing too-big-to-fail, with the identification of G-SIFIs, domestically systemically important banks (**D-SIBs**), higher capital adequacy requirements and more intense supervision, and some reforms of national resolution schemes (including bail-in instruments) so that failing institutions can be resolved without wider disruptions.
- Enhancements to the "securitization model."
- Adoption of principles for sound compensation practices, to avoid perverse incentives for risk-taking.
- Agreement in principle on similar treatment of some types of financial transactions under U.S. Generally Accepted Accounting Principles (**GAAP**) and International Financial Reporting Standards (**IFRS**).
- Some closure of data gaps, e.g., the beginning of harmonized collection of improved consolidated data on bilateral counterparty and credit risks of major systemic banks (for the major 18 G-SIBs and 6 other non-G-SIBs from 10 jurisdictions).
- Some OTC derivatives reforms.[83]

It is noted that '……there are strong parallels between the U.S. regulatory responses and the European regulatory responses.....[84]. Thus considerations of the revised regulatory content

[83]International Monetary Fund Working Paper, Research Department and Institute for Capacity Development 'The Regulatory Responses to the Global Financial Crisis- Some Uncomfortable Questions' Stijn Claessens and Laura Kodres WP/14/46 March 2014
[84]Steven L. Schwarcz, 'Securitisation and Post-Crisis Financial Regulation' Cornell Law Review Online [Vol.101:115]

will focus on these responses with only certain distinctions made in the event of differing approaches on a particular issue.

In the US under Title I (the Financial Stability Act of 2010) of the Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 (Dodd-Frank Act), the Financial Stability Oversight Council (**FSOC**) was created to:

- identify risks to US financial stability that could arise from the material financial distress or failure, or on-going activities of large interconnected bank holding companies (**BHCs**) or non-bank financial companies.
- promote market discipline by eliminating expectations of stockholders, creditors and counterparties that the federal government will shield them from losses in the event of the failure of these large interconnected BHCs or non-bank financial companies
- respond to emerging threats to the stability of the US financial system

In the EU, the European Systemic Risk Board (**ESRB**) was embodied to be responsible for the macro-prudential oversight of the EU financial system and the prevention and mitigation of systemic risk.'[85]

In summary the revised regulatory content can be categorised into the following;

a) <u>Conduct of Business</u>

The regulation of conduct still plays a prominent role in the revised regulatory architecture since 'no matter how tight or well intentioned the rules may be, the end result is greatly influenced by the actors who are regulated'[86].

[85] https://www.esrb.europa.eu/about/background/html/index.en.html

[86] Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure'

Accordingly in the US the Dodd-Frank Act includes new Conduct of Business (**COB**) standards 'including a 'best interests' duty when advising a state, municipality, pension plan or endowment'[87]. In the EU 'the 2014 [Markets in Financial Instrument Directive and Regulation] MiFID II/MiFIR[88]regime will retain the central pillars of existing EU COB regulation, but will significantly bolster the regulation of remuneration-based risks'[89]. They also include bolstered suitability and appropriateness duties similar to those imposed by the Dodd Frank Act in the US but which also includes a semblance of or first steps towards a product regulation regime.

b) <u>Financial Market and Market Infrastructure</u>

In the aftermath of the GFC

> '[r]egulators around the world acknowledged the need for structural reforms to the financial system and to market infrastructures in particular. Due to the global dimension of the crisis and the extent to which financial markets has been revealed to be closely interconnected, national regulators moved the related policy debate to the supranational level'[90]

Therefore the regulatory revisions took their guidance from the key guiding principles of the G20 summit from which the FSB and the International Organisation of Securities Commissions (**IOSCO**) received their mandate of devising 'securities market regulation to

[87]Andrew F Tuch, 'Conduct of Business Regulation', Oxford Handbook of Financial Regulation OUP 2015 pg 537

[88]Directive 2014/65 EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and the Directive 2011/61/EU

[89]Andrew F Tuch, 'Conduct of Business Regulation', Oxford Handbook of Financial Regulation OUP 2015 pg 537

[90]Ferrarini, Guido and Saguato, Paolo (2014) 'Regulating Financial Market Infrastructures. ECGI Working Paper Series in Law, 259/2014. European Corporate Governance Institute (ECGI), Brussels, Belgium

foster efficiency, transparency and resilience.'[91] Accordingly 'the four pillars set by the FSB-Standardisation, mandatory trading, mandatory clearing, and mandatory reporting'[92]. With respect to these have translated into legislative measures in theEU includingthe MiFID II and MiFIR as well as

> 'the European Market Infrastructure Regulation (**EMIR**), and the regulation on improving securities settlement in the EU and on CSDs (**CSDR**). With respect to the US, it considers the 2010 Dodd Frank Act and the role played by the Commodity Futures Trading Commission (**CFTC**) and Securities and Exchange Commission (**SEC**) in regulation and supervision of [Financial Market Infrastructure] FMIs.'[93]

The FMI regulatory architecture also seeks to enhance market integrity by imposing trading standardisation. In Europe, the Market Abuse Directive (**MAD**)'has been the testing ground for pan EU measures prohibiting insider dealing and market manipulation'[94]. Financial market trading standardisation has attempted to drive directly into the issue of price formation without affecting the economic operation of the market but achieving investor confidence and protection. The exchange has proved an effective vehicle for achieving this since it facilitates 'regulation of trading practices to ensure that prices set on official markets accurately reflect market supply and demand'.[95]

[91] ibid
[92] ibid
[93] ibid
[94] Harry McVea 'Supporting Market Integrity' Oxford Handbook of Financial Regulation OUP 2015 pg 631
[95] Andreas Martin Fleckner, Regulating Trading Practices pg 605 Oxford handbook of financial regulation

c) Capital

The capital adequacy requirements of Basel II have been revised by Basel III which has resulted in the revision of corresponding national legislations. The agenda of Basel III has been best described as a 'risk-sensitive market-based approach for calculating [bank] regulatory capital'.[96]This approach reflects a change in bank capital philosophy from micro-economic focus to the macro-economic policy agenda.

> 'Macro-prudential regulation consists of three main areas: 1) adjusting the application of regulatory rules to institutions according to developments in the broader economy (i.e. counter-cyclical capital requirements); (2) imposing economy-wide controls on the financial sector to limit aggregate risk taking (i.e. capital controls to limit foreign exchange risks or system-wide leverage limits); and (3) prudential requirements for financial infrastructure or firms providing infrastructure services (i.e. capital requirements for derivative clearing houses)…......'[97]

The implementation of Basel III in the US has resulted in the requirement that banks to maintain a liquidity coverage ratio (**LCR**) of a 'minimum amount of high-quality liquid assets (**HQLA**s)—assets that can be easily and immediately converted into cash with little or no loss of value'.[98] In the EU, the Basel III implementation 'mandates higher capital

[96] Kern Alexander, The Role of Capital in Supporting Banking Stability, 335 Oxford handbook of financial regulation
[97]Kern Alexander, The Role of Capital in Supporting Banking Stability, 335 Oxford handbook of financial regulation
[98]Steven L. Schwarcz, 'Securitisation and Post-Crisis Financial Regulation' Cornell Law Review Online [Vol.101:115]

requirements for investments in ABS [and] disfavors investments in ABS for purposes of satisfying its [LCR].'[99]

2.2 ELIMINATING GFC PECULIARITIES

In order to consider the efficiency of these measures, it is considered that they ought to be analysed against the GFC peculiarities outlined above.

a) Systemic Risk

Systemic risk was not unknown before the GFC. In the analysis of GFC peculiarities it was noted above, that embedded in systemic risk are two types of risk; 'counterparty risk' and 'spill over risk'. However what was not fully appreciated before the GFC was the potential scope of such 'spill over' risk. The globalisation of commercial activity resulted in an interconnected commercially fluid global environment before the GFC.

The Financial Market and Financial Market infrastructure (**FMI**) legislation referred to above are focused on addressing systemic risk. The ultimate aim is to enhance the profile of FMIs such that they become 'potential sources of liquidity and as transparency providers to the markets and as a mechanism to mitigate systemic risk'.[100]The internationally generated legislative architecture surrounding FMIs which include standardisation, mandatory trading, mandatory clearing, and mandatory reporting (the four pillars set by the FSB) now specifically address counterparty and spill over risk. Notwithstanding the international co-operation that designed the concepts and aims of these legislative measures the differences in the actual domestic legislation still poses an obstacle to fully tackling systemic risk. An

[99]ibid

[100]Ferrarini, Guido and Saguato, Paolo (2014) 'Regulating Financial Market Infrastructures. ECGI Working Paper Series in Law, 259/2014. European Corporate Governance Institute (ECGI), Brussels, Belgium

example of this is conflicting measures and extraterritoriality issues brought about by the interaction between the US's Dodd Frank Act and the EU's EMIR and MiFID measures. Thus 'harmony and domestic interest do not always move in the same directions.'[101]

It is considered that a crucial aspect of systemic risk is the health of financial institutions. Thus the issue of counterparty risk and spill over risk only become adverse to the financial system if the financial institution is itself not conducting its activities in a risk-averse manner. It has been noted that 'in the crisis financial firms loaded up on assets with low volatility and high systemic risk (and therefore high expected returns). ……[102]. It was further noted '……..large expected returns ….go hand in hand with large aggregate risk…. ….this is why financial institutions got into so much trouble when the negative aggregate shock to the real estate market began in 2007'[103]. Therefore in order to fully address the issue of systemic risk mitigation it is essential to deal with the risk taking incentive issue that has been identified above as a GFC peculiarity.

b) Risk Taking incentive

It has been noted that 'dramatic failures of corporate governance and risk management at many systemically important financial institutions'[104]were one of causes of the GFC. It is considered that an evident feature of such corporate governance failure is the failure to properly balance the financial institution's need to generate revenue against the risks exposure attached to any revenue generating activity and product.

---

[101]Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure'
[102]Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises

[103]ibid
[104]Conclusions of the Financial Crisis Inquiry Commission Report

Regulatory attempts at rectifying this have included for example, the improvement of the COB legislative measures and certain aspects of Basel III. These measures have sought to impose a corporate governance framework that requires the governing bodies of financial institutions are fully conscious risk exposure of the institution's activities and the systemic risk they may pose to the wider financial and economic system.

In the UK regulations also drill down to the foster the transparency, particularly with regards to remuneration arrangements[105] (which ensure that there is no undue pressure to override the considerations of the regulations) and best execution[106] (which require conscionable and transparent conduct in obtaining/quoting a price of a financial product) but manner in which now include express accountability measures with respect to best execution. It is considered that the effect of these legislative measures is to heighten the fiduciary duties expected of employees and management bodies of financial institutions. Whilst the economic and societal benefits of this agenda are clear, its realistic viability is doubtful since financial institution are commercial enterprises driven to generate profit. Further, it is considered that the regulatory design of PBR and its ills have been unavoidably retained here. This is because there is still some significant reliance on institutions to interpret and adhere to these in a way that they can proportionally can. This pathway is unavoidable because the past has shown that prescriptive rules, particularly relating to this particular aspect and in the economic environment of capitalism is the only feasible route to achievable success.

---

[105]Financial Conduct Authority Handbook, Remuneration provisions https://www.fca.org.uk/firms/remuneration

[106]Financial Conduct Authority Handbook- Best Execution provisions https://www.handbook.fca.org.uk/handbook/COBS/11/2.html

c) Market and Product Opacity

Market and product opacity has been significantly blamed for the GFC. The key reasons for this are complexity of financial market operation and complexity of the financial products being traded, specifically OTC products. Market opacity made it difficult for counterparties to fully evaluate counterparty risk spill over risk (and systemic risk as notes above). The issue with OTC products was their intrinsic complexity which made it difficult to clearly identify their price, or the risk exposure attached to transactions in such products. This means that no matter how robust the legislative measures are taken to address the risk taking incentive GFC peculiarity identified above, if the risks and value of OTC products are unknown, financial institutions will be unable to properly assess their risk appetite relating to such products or despatch their duties efficiently. Thus if these complexities are not properly dealt with in the current revised regulatory architecture the risk of another devastating GFC is unavoidable.

Thus it is noted that the scope of disclosure has been widened to include on the disclosure of risks of the OTC products and their underlying assets as well as due diligence requirements applicable to the OTC transaction counterparties. In the US this is reflected in

> '[s]ection 942(b) of the Dodd-Frank Act[which] requires, for each issue of ABS, the disclosure of information regarding the financial assets backing each class (sometimes called "tranche") of those securities'[107]

Schwarcz has criticised this approach since

> 'disclosure in securitization transactions is unlikely by itself to be meaningful. Prior to the financial crisis, the risks associated with

[107]Steven L. Schwarcz, 'Securitisation and Post-Crisis Financial Regulation' Cornell Law Review Online [Vol.101:115]

> complex securitization transactions and their underlying financial assets, including subprime mortgage loans, were fully disclosed; but that failed to prevent the catastrophic collapse of the securitization markets…………………'[108]

He does look more favourably on the EU's 'simplification' approach in seeking to address of the same GFC peculiarity.

> 'Article 8 of Chapter 3 describes the simplicity requirement, which includes a true sale or similar transfer of the underlying financial assets………..[which] must themselves meet simplicity requirements, including being homogenous, creditworthy (e.g., not in default, not from obligors that are insolvent or have adverse credit history or low credit scores), and not constituting already securitized financial assets.[109]

It is already noted that the issue with OTC products was intrinsically their complexity. It is not clear how these measures will directly address this. The risk retention measure possibly imposes some cautionary 'risk and reward' considerations of the product originators at the point of origination but since these OTC products are first and foremost hedging or risk receptacles it is unlikely to be effective. Furthermore it is possible that the risk retention requirements does nothing more than exacerbate the contagion of systemic risk since the risk of a product is not divested but simply shared amongst counterparties. Further, it is

[108] ibid
[109] ibid

considered that rather than dispel complexity the risk retention element may also increase complexity of the transactions in the market.

The EU measure of standardization and simplification may be a viable alternative. As noted by Schwarcz this approach 'does not require standardization but merely rewards standardized simplicity—and it appears to contemplate a significant degree of market flexibility in achieving that simplicity'.[110]However it is noteworthy that the increase in the size of the OTC market was not simply due to hedging strategy demand but to 'meet the increasing demand made upon the asset management function, institutional investors require increasing amounts of yield bearing securities, including debt securities'[111]. In other words there was a speculative demand for yield. In an environment of lowly maintained interest rate and the precarious real estate market the demand for yield remains. In the environment of persistent financial innovation, the possibility of the creation of even more complex financial products remains a commercial reality.

d) Banking Activity

It is argued that this vein of financial innovation runs through the banking activity that facilitated and caused the GFC. Shadow banking has been heavily blamed for the GFC since the shadow banking participants primarily traded in and created the credit risk OTC products that lay at the heart of the GFC. It is considered that credit, risk and commercial activity and demand are intrinsic financial market activity. These factors, collectively, amidst deregulation created a free flow of financial innovation in the shadow banking environment. It is considered that the shadow banking activity arose directly as a result of financial innovation.

[110]ibid

[111]Photis Lysandrou and Anastasia Nesvetailova The Shadow Banking System and the Financial Crisis- A securities production function view', Financialisation, Economy, Society and Sustainable Development Working Paper Series No 5 ISSN 2052-8035

If financial innovation in the years preceding the GFC resulted in OTC products that were so complex that BNP Paribas could not value it then financial innovation in the future still poses the same disastrous potential.

In recognition of this, there has been much debate about subjecting shadow banking to a specific regulatory architecture or bringing the activity into the 'formal' regulatory architecture applicable to regulated banking. However, it is considered a poignant point here that the GFC, and particularly the adverse liquidity issues it posed on society were not directly caused solely by shadow banking activity but by the shadow banking activity of the regulated banks.. Therefore it is considered that if the aim of regulating the shadow banking sector is to prevent another GFC it would be of limited benefit.

An alternative measure has been to require banking institutions to separate their retail banking/payment systems activity from their investment banking activity since such activity is more likely to engage in shadow banking activity. In the US this embodied in

> 'the Volcker Rule, which bans financial intermediaries with bank affiliates from engaging in a broad range of trading –related activities, including trading on behalf of clients, if doing so would give rise to a 'material conflict of interest'….The Dodd-Frank Act also created two new categories of market participants in derivatives markets- swap dealers and major swap participant- and imposed new COB standards on them, including a 'best interests' duty when advising a state, municipality, pension plan or endowment'[112]

[112]Andrew F Tuch, 'Conduct of Business Regulation', Oxford Handbook of Financial Regulation OUP 2015 pg 537

A number of issues are worthy of consideration. If the banks' shadow banking activities played an active role in the causes of the GFC simply transferring that activity to non-banking institutions simply creates a new bubble of institutions susceptible to systemic risk. The GFC has revealed that non-banking institutions operating in the shadow banking universe are equally subject to bank runs- not least because these non-banking institutions are inevitably still connected to banks. Perhaps the underlying idea is to ensure that in the event of failure of these divested shadow banking entities their failure will not adversely affect the payment institutions that are directly connected with the retail public-thus avoiding or reducing payment institutions exposure to failure and bank runs. However, banks are commercial institutions with a need to engage in commercial activity to ensure their survival. In addition, banks are perpetually subject to gaps in synchronicity of receipts. In order for this gap to be ordinarily synchronised 'significantly large cash balances would be required since 'cash holding provides either no or very low return, so that the opportunity costs of holding large working balances is quite high'[113]. Therefore for banks to survive, they need to 'economise on cash holdings' [114] 'by placing funds on deposit in the money market when cash balances are temporarily too high [and earn a higher rate of return] and by withdrawing or borrowing funds when the balance is too low'.[115] The money market plays a distinct role of funding in the shadow banking sector. Thus it is considered the connection to the shadow banking system is unavoidable.

The EU has sought to tackle this issue through its COB regulatory architecture, specifically

> 'the 2014 MiFID II/MiFIR regime will retain the central pillars of existing EU COB regulation, ……………will retain the suitability

[113]Mike Buckle; John Thompson, The UK Financial System: Theory and Practice, Fifth Edition, Manchester University Press, 2016
[114] ibid
[115] ibid

> and appropriateness duties with some additions….When building products and services together, an investment firm will need to apportion the costs of each component inform clients whether the different components may be bought separately and even inform clients when bundling creates risks different from those of the component parts. The regime will also provide greater protection for clients trading complex products, by amending the scope of application of the appropriateness duty. While non-complex products will remain outside the rule's reach, structured undertakings for collective investment in transferable securities (UCITS) will now be regarded as complex and thus within the rules' scope'[116]

In response to the EU measures the underlying threads seems to be the expansion of the disclosure regime along with an enhanced fiduciary duty to reflect an 'appropriateness duty'. We have seen above that disclosure cannot by itself be effective since it was not effective in preventing the GFC. The 'appropriateness duty' test may prove effective if a clear description of 'non-complex' and 'complex' products are expressly identified from a regulatory content perspective and understood from a regulator enforcement perspective. Perhaps the avenue in resolving this regulatory lacuna lies in the revised, enhanced supervisory/regulator approach described above which will include regulator's appreciation of risk.

e) <u>Globalisation</u>

The GFC was essentially market failure without walls. As noted above whilst the concept of market failure was not new it is considered that the unique features of the GFC was the effect

[116] Andrew F Tuch, 'Conduct of Business Regulation', Oxford Handbook of Financial Regulation OUP 2015 pg 537

of globalisation. Therefore, in order to have an effective mitigating regulatory architecture it must be tested from a global perspective. This would be facilitated by not just harmony and collective governmental agreement of principles and aims but significant uniformity of regulatory content, implementation and enforcement. Otherwise there is a risk of regulatory arbitrage and failure of overarching regulatory aims. Accordingly it is noted that '….there are international externality effects from national policy choices, especially in areas such as the implementation of financial regulation, reserve accumulation and capital controls'.[117]
Whilst it is recognised that

> 'the main responsibility for adapting policy regimes to cope with financial globalisation lies with national governments. In general, domestic policy reforms should be complementary to parallel reforms at the international level.[118]

Notwithstanding this, there are externality effects reflected, for example, in the extraterritoriality issues resulting from the conflict between the desired extraterritoriality provisions of the US's Dodd Frank Act and the EU's EMIR and MiFID/MiFIR measures.

Furthermore, the role that regulation failure played in the GFC, particularly the failure of globally conceived regulatory measures (particularly Basel I) has resulted in reticence by some countries to be beholden wholly to international legislative instruction.

> 'Countries that have adhered to the international set of rules have suffered from the spill-over of the crisis. They may want to insulate themselves from future contamination… It the thesis of regulatory

[117] Buckley, RP, Arner, DW 'From Crisis to Crisis: The Global Financial System and Regulatory Failure University of Hong Kong Faculty of Law Research Paper No. 2012/002Financial
[118] ibid

> failure is adequate, one should observe some countries distancing themselves from the international consensus inasmuch as there is one. And indeed this is what is happening. For instance, Singapore insists on mandating the clearing of derivatives involving a party based in its jurisdiction. This point can be summarized easily:'[119]

If the international externality persists on regulatory measures then such externalities would persist in supervisory implementation or enforcement measures. Perhaps a viable solution can arise from re-examining globalisation not just as a cautionary measure amidst 'crises avoidance' regulatory measures but as a guide to build a robust playing field or financial system.

Globalisation has been successful in developing financial commercial activity across jurisdictions. Its success fostered great strides in financial innovation through securitisation. It is considered that the reason it has been so successful is the uniform agreement on the description and function of innovative financial products across jurisdictions. Thus it was easy to trade OTC products across borders because there was an understanding of what they were to be used for in both transacting jurisdictions. Thus there were no externalities.

The considerations above have shown that not only was the GFC a result of market failure it was really as a result of regulation failure. The scope of such regulation failure has been pervasive at varying levels across the institution, financial market activity, infrastructure and even policy. Accordingly the regulatory measures adopted to rectify such failures have been vast and seemingly far reaching- possibly because there was a lot of ground to catch up to

[119] Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure'

financial innovation. In any event it is considered that in light of the continued strides of globalisation and financial innovation in conjunction with the significant role that the innovative complex OTC products played in instigating the GFC the regulatory strides would be incomplete without properly address product regulation in the financial regulation framework.

3. PRODUCT REGULATION: FINAL FRONTIER OF FINANCIAL REGULATION?

Examination of the revised regulatory architecture aimed at addressing the GFC peculiarities reveals that much effort has been done but it is considered that the interplay of the particular GFC peculiarities may hinder the desired effectiveness of these regulatory revisions. There is a global consciousness of the interconnection of the financial institutions of countries across the globe. The potential for contagion has been recognised amidst a flourishing globalisation regime. The health of financial institutions has been reasserted as core to risk mitigation and preservation of financial stability. In addition it has been noted above that the ultimate vehicle through which globalisation was able to flourish was through the development of innovative financial products which were traded freely by multi-national financial institutions. Financial market regulation has experience an overhaul to seemingly address all these issues. However it is considered that the framework surrounding product regulation is not sufficient to safeguard the financial system against another GFC event. In order to address this it is essential to initially consider the nature of OTC products, its function in the financial system before reviewing the regulatory framework implemented.

Financial innovation that birthed OTC products arose due to demand. They were initially developed as risk receptacles required pursuant to 'to hedge the risk of the underlying investment'.[120]However these risk receptacles were found to possess the dual benefit of risk transfer and 'rent' yielding. Much like any other piece of innovation, 'financial innovation is welfare neutral'[121]thus it is no surprise that amidst increasing demand for rent yielding

[120]Emelios Avgouleas, Regulating Financial Innovation, Oxford Handbook of Financial Regulation OUP 2015 pg 659

[121]ibid

investment strategies, these innovative products gradually became significantly featured in financially speculative transactions. Avgouleas notes that the increase in the demand for these products was exacerbated by, amongst other factors; the 'advent of global markets'[122], 'rapid advancement in telecommunications technology and computing capacity' [123]and 'neo-liberal economic doctrine and deregulation'[124]. He further notes that this demand for 'rent seeking speculative innovative products led to

> 'the creation of a number of exotic, opaque, complex and barely understood high risk reward financial products e.g. Collateralised Debt obligations ((CDOs), essentially amounting to a double securitisation process)'[125]

If the above is accepted then in light of the fact that efforts at globalisation and rapid advancement in technology show no signs of abating the regulatory architecture must be improved to catch up with financial innovation and guard against its potentially harmful effects on the financial system.

The commentary above on the market and product opacity shows that tentative steps are being taken in this respect. If considered from a wider perspective,

> '…the US and the EU –post 2008 regulation of financial innovation regulation show a certain degree of similarity and may be summarised as follows:

[122]ibid
[123]ibid
[124]ibid
[125]ibid

(a) Outright prohibition of financial products such as the EU ban on uncovered ('naked') short sales and sovereign CDS trading;

(b) Centralisation of derivatives trading and clearing and mandatory margin requirements for over the counter (OTC) derivatives;

(c) Restriction of bank involvement in securitisation and shadow banking activity; best example here is the Volcker Rule restriction

(d) Mandatory originator/sponsor investment participation ('retention') in securitisations and comprehensive capital charges for such participation (to capture the risk off balance – sheet assets) under Basel III…..

(e) Licensing regimes for alternative investment vehicles such as the (excessively) afr-reaching EU Alternatives Investment Fund Managers Directive (**AIFMD**)

(f) Strict liquidity requirements for money market funds ………………..

(g) New regimes for the governance of financial innovation under a clear regulatory mandate

(h) New powers given to financial consumer supervisors to ban innovative financial products and services if deemed to harm investor welfare and/or financial stability and establishment of financial consumer authorities either as independent entities like the US Consumer Financial Protection Bureau …….

(i) Initiatives to control automated trading, especially HFT and increase in transparency of all trading venues in the EU…….

(j) FSB-initiated measures to tackle the procyclical nature of risks and incentives associated with secured financing contracts such as repos and securities lending that may exacerbate funding strains in time of runs……………

(k) Other FSB proposals for the supervision of shadow banking entities, other than [Money Market Funds] MMFs'[126]

On review of the above these measures it is considered that they appear to deal with product regulation from the following perspectives:

I) Prohibition- This worked as an emergency measure on the on-set of the GFC and in limited targeted measures still works as an instrument of curtailing systemic risk. However, as noted above, financial innovation, globalisation and technological innovation show no signs of abating. Therefore, the development of OTC products will continue. In order for this approach to effectively work without stifling innovation the inherent risks of an OTC product will have to be identified on origination, following testing or in any event before widespread use or before it can cause damage to the stability of the financial system. Notwithstanding the continued advancement of mathematical risk assessment and calculation tools, it is considered the only definitive way of knowing the risk potential of a financial product is by transacting in it. Therefore, it is doubtful that this would be an economically approach across all products.

II) Activity restriction or ring-fencing- This effectively requires the separation of payment system institution from those involved in OTC product amongst other shadow banking activity. However the short comings of this approach have

---

[126]ibid

already been considered above in the analysis of regulatory measures taken to mitigate against the GFC peculiarity of market and product opacity. It is considered that this approach may be apparently appeasing to the society and possibly raise the risk and systemic risk consciousness of the managing bodies of banking institutions. However, the danger remains since this approach simply shifts risks of regulated banking entities to a new microcosm of shadow banking entities. Further, this microcosm still connected to the money market and thus still possesses a real potential of affecting the financial system and its liquidity.

III) Conduct– This approach has also been considered above in the analysis of regulatory measures taken to mitigate against the GFC peculiarities. It is considered that the conduct of financial institutions may be revised to ensure that the risks related to certain originated OTC products are retained. However this would simply widen the net of systemic risk. Further given the dual feature of OTC products (risk mitigation and speculative rent yielding) this risk retention is unlike to dissuade the development and use of OTC products. Additional disclosure to include considerations of targeted customer suitability simply means that the known risks associated with such OTC products are passed on. As indicated above, the full risk potential of any OTC product cannot be fully realised until it is utilised in the market thus the full risks of any such OTC products are still not completely curtailed.

IV) Consumer protection- It is considered that the implications of this approach are reflected in the first three approaches above.

V) Transparency- The risk disclosure aspect of this measure is already considered in (iii) above. Clearing is beneficial since it included counterparty risk but again it

results in the transfers the risk to another microcosm of institutions that may in themselves in due course pose systemic risk to the financial system.

It is noted that a running vein of the considerations above is the full appreciation of an OTC product and the full knowledge of the risks therein. The ultimate aim is to clearly identify what a 'dangerous' OTC product is. Since it is currently impossible to identify this on origination it is essential that any effective product regulation framework will need to be in a position to closely monitor the development, use and fully appreciate the risks resulting from the use of such products. This objective may be identified beneath the current product regulation framework of the EU.

> 'Article 40(1) of MiFIR provides that: 'ESMA may where it is satisfied on reasonable grounds that the condition in paragraph 2 and 3 are fulfilled, temporarily prohibit or restrict in the Union: the marketing, distribution or sale of certain financial instruments with certain features; or a type of financial activity or practice…….Article 40(3), in making a prohibition or restriction decision, ESMA shall take into account the extent to which the action '(a) does not have a detrimental effect on the efficiency of financial markets or on investors that is disproportionate to the benefits of the action; and do not create a risk of regulatory arbitrage'[127]

Two issues are inherent in this:

- How would ESMA effectively determine the detrimental effect of financial product; and would it be able to do this before the such product has in fact been shown to be detrimental to the financial market
- How would any alternative measure to the arbitrary language of the legislation above avoid regulatory complexity which has been identified as a systemic risk in itself?

Perhaps the answers lay in addressing the complexity of OTC products. As identified in this work and on review of commentary on the issue of product regulation the potential danger in OTC products lies in their inherent complexity. In his article on regulating complexity in financial markets Schwarcz notes that complexities in securities can;

- Impair disclosure since it 'can deprive investors and other market participants of the understanding needed for markets to operate effectively' [128] which thus 'increases the amount of information that must be analysed in order to value the investment with a degree of certainty'.[129]
- Obfuscate consequences since 'parties reviewing, or even structuring, the securities may not always appreciate all the consequences'[130].
- Further can make financial markets more susceptible to financial contagion since investors misunderstanding of how the products work leaves the market open to herding; and 'securities also can contribute to contagion insofar as securities are so specialized and sophisticated that they have no actual or active trading

[128] Steven L. Schwarcz 'Regulating Complexity in Financial Markets' Washington University Law Review Volume 87 Issue 2, January 2009
[129] ibid
[130] ibid

> market…Absent market valuation,…………….a valuation procedure sometimes called —marking to model.'[131]

Therefore if the attempt to regulate financial product innovation is more appropriately targeted at simplifying financial products it would be more achievable and effective. However before delving into that it is essential understand why OTC products are so complex.

The general understanding and in light of the comments above, OTC products are complex because their value is not only affected by the underlying physical asset but also the derivative aspect of its composition. This thus makes it difficult to determine its pay off. It is considered that this difficulty in payoff does not dissuade originators from creating it due its utility value in hedging transactions/arrangements. Avgouleas implies a correlation between high yield and OTC product when he notes that

> 'Commoditization of economic relationships and risk management leading to a dramatic soft of focus from long-term goals to transactions' speed and volume in a drive to maximise commission income [132]and short-term transaction based profit, a process often known as 'financialisation''[133]

He further notes that 'capitalism ………… favours short-term profit over long-term benefit; a trend that has been exacerbated by financialisation'.[134] It is therefore considered the driving force behind the increasing complexity of OTC products is the pursuit of high yield rather than risk mitigation utility. Therefore it would not be detrimental to the market and the

[131]ibid
[132]Emelios Avgouleas, Regulating Financial Innovation, Oxford Handbook of Financial Regulation OUP 2015 pg 659
[133]ibid
[134]ibid

financial system to structure financial product regulation by imposing simplicity requirements. It is considered that even if the less cynical view is adopted and the necessity of complexity is solely attached to the pay off as identified above, a simplification regime could still be feasible amidst the transparency regulatory framework.

This forms part of the ultimate EU agenda on product regulation. The EU Commission has already proposed 'a regulation which lays down common rules on securitisation and provides a framework for simple, transparent and standardised securitisations (**STS**).[135] On review it is noted that the simplicity requirement is satisfied if 'the underlying exposure is transferred or effectively assigned to a [Securitisation Special Purpose Entity] SSPE….the underlying assets are not encumbered…the underlying loan is not in default'[136]. The transparency requirement is satisfied if 'historical data on default and loss performance' is made available to investors. Lastly, the standardisation requirement is satisfied when the originator of the product retains risk related to the product. On closer inspection it would appear these measures only relate to OTC products with loans as the underlying asset. At the heart of these requirements lie disclosure, clearing and risk retention, the inefficiencies of which have been discussed above. Furthermore these measures only seem to contemplate loans as underlying assets, not surprising since, as indicated above the regulatory motivation is crises averse to counter the cause of the GFC. Presumably OTC products may not have any other underlying asset that may cause a GFC? Furthermore these measures only seem to address the issues related to the underlying assets and this, it is considered, focused solely on the risk mitigation utility feature of an OTC product. As noted above the high demand and transaction activity surrounding OTC products spun out of control to result in the GFC not because of the high speculative and

[135]Briefing EU Legislation in Progress 'Common Rules and New Framework for Securitisation', February 2016
[136]ibid

yield seeking agenda of the market. It is currently unclear if these agenda of simplification will address this. It is considered that until the product regulation framework addresses the use of OTC products and not just their underlying asset risk the full breath of risks associated with them cannot be properly reflected and mitigated against. Notwithstanding this, it is considered that in light of the challenges to achieve product regulation the 'simplicity' agenda is a viable route but with some proposed changes.

However it is acknowledged that the challenge of product regulation remains. Thus it is considered that the unavoidable way forward will be even more intrusion in the commercial activity of the financial institutions that make up the financial system. The expertise of the regulator must be amplified and a close working relationship must be fostered. It is considered this is the only way in which ESMA can feasibly achieve its mandate to 'temporarily prohibit or restrict in the Union: the marketing, distribution or sale of certain financial instruments with certain features; or a type of financial activity or practice'.

3.2 A POSSIBLE WAY FORWARD

The Financial Conduct Authority in its aim to achieve good customer outcomes has considered and introduced measures aimed at making innovation work for firms and customers[137]. In a speech on this subject the Chief Executive of the FCA, Martin Wheatley, noted that as a result of GFC there are 'questions over innovation in the market, new products or business models'[138]. Pursuant to this

> 'the FCA has been holding a series of roundtables with industry, as well as consumer groups, to provide a temperature check on emerging

[137] "Making innovation work for firms and consumers' Speech by Martin Wheatley, Chief Executive, the FCA, at Bloomberg, London, as drafted, which may differ from the delivered version..

[138] ibid

> concerns…..But the FCA is also now fast tracking thinking on ……………three specific strands ………: on advice, on disclosure, and on market innovation.'[139]

For the purposes of this work focus will be made on the market innovation initiative; 'project innovate'. 'A key objective of the programme is to make sure positive developments – ……. ones that genuinely promise to improve the lives of consumers or clients – are supported by the regulatory environment.'[140] Such support would require

> 'FCA expertise to support innovators in two distinct ways….First, by providing help to firms who are developing new models or products advice on compliance so they can navigate the regulatory system. Second, by looking for areas where the system itself needs to adapt to new technology or broader change – rather than the other way round.
>
> On top of this, we will also be launching an incubator to support innovative, small financial businesses ready themselves for regulatory authorisation.'[141]

Whilst it is recognised that the ultimate objective of this initiative lies in compliance, it is considered a valuable route to product regulation since this will inevitably develop the much needed market and technology expertise of the regulator. Since market and technological innovation lay at the heart of OTC product development it would serve a valuable tool at being better able to monitor and follow financial innovation and this keep up with regulatory measures to mitigate against inherent risks thereto.

[139] ibid
[140] ibid
[141] ibid

CONCLUSION

This work sought to bring the issue of effective product regulation to the forefront of the regulatory agenda amidst the regulatory position revision adopted following the GFC. Pursuant to this the scope and significance of OTC products has been highlighted as a driving force for economic development resulting from globalisation as well as a driving cause of the GFC. Therefore in light of the continued advancement of financial innovation and globalisation the issue of product regulation cannot be ignored if the regulatory objective of avoiding another GFC or indeed maintaining financial stability is to be achieved. Notwithstanding this truth the difficulty of the task is acknowledged but it is considered not impossible.

It is considered that the concept of product regulation has indeed begun but further work is required to make it effective. Given the constantly developing nature of financial market activity and thus innovative OTC products the only feasible method to achieve effective product regulation is a culmination of close monitoring to achieve simplicity where possible but in any event ensure that financial products originated and distributed do not

> '……… have a detrimental effect on the efficiency of financial markets or on investors that is disproportionate to the benefits of the action; and do not create a risk of regulatory arbitrage'[142]

[142]Emelios Avgouleas, Regulating Financial Innovation, Oxford Handbook of Financial Regulation OUP 2015 pg 659

BIBLIOGRAPHY

1. Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011
2. Francis M. Bator, 'Anatomy of Market Failure', The Quarterly Journal of Economics, Vol. 72, No. 3 (Aug., 1958), pp. 351-379
3. Frank Partnoy, 'Financial Systems, Crises, and Regulation', Legal Studies Research Paper Series Research Paper No. 14-154 May 2014
   http://ssrn.com/abstract=243533
4. 'The Turner Review, A regulatory response to the global banking crisis' March 2009
5. Conclusions of the Financial Crisis Inquiry Commission Report;
   https://fcic-
   static.law.stanford.edu/cdn_media/fcicreports/fcic_final_report_conclusions.pdf
6. Viral V. Acharya, Thomas Cooley, Matthew Richardson, and Ingo Walter 'Market Failures and Regulatory Failures- Lessons from Past and Present Financial Crises' Asia Development Bank Institute Working Paper Series No. 264 February 2011
7. Photis Lysandrou and Anastasia Nesvetailova 'The Shadow Banking System and the Financial Crisis- A securities production function view' Financialisation, Economy, Society and Sustainable Development Working Paper Series No 5 ISSN 2052-8035
8. Zoltan Pozsar, Tobias Adrian, Adam Ashcraft Hayley Boesky 'Shadow Banking' Federal Reserve Bank Staff Report No. 458 July 2010, Revised February 2012
9. International Monetary Fund Working Paper, Research Department and Institute for Capacity Development'The Regulatory Responses to the Global Financial Crisis- Some Uncomfortable Questions' Stijn Claessens and Laura Kodres WP/14/46 March 2014

10. Buckley, RP, Arner, DW 'From Crisis to Crisis: The Global Financial System and Regulatory Failure University of Hong Kong Faculty of Law Research Paper No. 2012/002
http://ssrn.com/abstract=1980010

11. Philip R. Lane 'Financial Globalisation and the Crisis, Trinity College Dublin and CEPR June 2012

12. David G. Tarr, 'The Political, Regulatory and Market Failures That Caused the US Financial Crisis', The World Bank Development Research Group Finance and Private Sector Development Team May 2010 Policy Research Paper 5324

13. Julia Black, 'The Rise, Fall and Fate of Principles Based Regulation, LSE Law, Society and Economy' Working Papers 17/2010 London School of Economics and Political Science Law Department
http://ssrn.com/abstract=1712862

14. Ross Levine 'The Governance of Financial Regulation: Reform Lessons from the Recent Financial Crisis' Bank for International Settlements Working Papers No 329 November 2010

15. Leon Courville, 'Financial Crisis: a perfect storm or regulatory failure'
http://www.hec.ca/iea/seminaires/120508_leon_courville.pdf

16. Jorge Roldos, 'Failure of Regulation and Supervision' International Monetary Fund Institute for Capacity Development
http://www.cemla.org/actividades/2013/2013-10-macropudential/2013-10-FailureOfRegulationAndSupervision.pdf

17. Steven L. Schwarcz, 'Securitisation and Post-Crisis Financial Regulation' Cornell Law Review Online [Vol.101:115]

18. https://uk.practicallaw.thomsonreuters.com/2-502 8309?transitionType=Default&contextData=(sc.Default)&firstPage=true

19. https://www.esrb.europa.eu/about/background/html/index.en.html

20. Report, The High–Level Group on Financial Supervision in the EU Chaired by Jacque de Larosier, Brussels, 25 February 2009

21. Andrew Crockett 'Why is Financial Stability a Goal of Public Policy' https://www.kansascityfed.org/publicat/sympos/1997/pdf/s97crock.pdf

22. Andrew F Tuch, 'Conduct of Business Regulation', Oxford Handbook of Financial Regulation OUP 2015 pg 537

23. Directive 2014/65 EU of the European Parliament and of the Council of 15 May 2014 on markets in financial instruments and amending Directive 2002/92/EC and the Directive 2011/61/EU http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=celex%3A32014L0065

24. Ferrarini, Guido and Saguato, Paolo (2014) 'Regulating Financial Market Infrastructures. ECGI Working Paper Series in Law, 259/2014. European Corporate Governance Institute (ECGI), Brussels, Belgium.

25. Harry McVea 'Supporting Market Integrity' Oxford Handbook of Financial Regulation OUP 2015 pg 631

26. Andreas Martin Fleckner, 'Regulating Trading Practices' Oxford Handbook of Financial Regulation OUP 2015 pg 596

27. Kern Alexander, The Role of Capital in Supporting Banking Stability, Oxford Handbook of Financial Regulation OUP 2015 pg 334

28. Financial Conduct Authority Handbook, Remuneration provisions https://www.fca.org.uk/firms/remuneration

29. Financial Conduct Authority Handbook- Best Execution provisions

https://www.handbook.fca.org.uk/handbook/COBS/11/2.html

30. Mike Buckle; John Thompson, The UK Financial System: Theory and Practice, Fifth Edition, Manchester University Press, 2016

31. Emelios Avgouleas, Regulating Financial Innovation, Oxford Handbook of Financial Regulation OUP 2015 pg 659

32. Steven L. Schwarcz 'Regulating Complexity in Financial Markets' Washington University Law Review Volume 87 Issue 2, January 2009 http://openscholarship.wustl.edu/law_lawreview/vol87/iss2/1

33. Briefing EU Legislation in Progress 'Common Rules and New Framework for Securitisation', February 2016

34. http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/573934/EPRS_BRI(2016)573934_EN.pdf

35. http://www.europarl.europa.eu/RegData/etudes/BRIE/2016/573934/EPRS_BRI(2016)573934_EN.pdf

36. 'Making innovation work for firms and consumers' Speech by Martin Wheatley, Chief Executive, the FCA, at Bloomberg, London, as drafted, which may differ from the delivered version. https://www.fca.org.uk/print/news/speeches/making-innovation-work-firms-and-consumers[28/03/2017 14:22:56]