

Implementing Basel III through the Capital Requirements Directive (CRD) IV: Leverage Ratios and Capital Adequacy Requirements

Prof. Marianne Ojo¹

Abstract

The Capital Requirements Directive (CRD) IV, which constitutes the Capital Requirements Regulation (CRR), as well as the Capital Requirements Directive (CRD), is aimed at implementing Basel III in the European Union. Consequently, this CRD package, replaces Directives 2006/48 and 2006/49 with a Regulation and a Directive. The significance of such a move not only highlights the awareness of the importance of ensuring that Basel rules and regulations become more binding and enforceable, but also signals an era whereby the use of enforcement and supervisory tools such as Binding Technical Standards (BTS) are being introduced and generated by the European Banking Authority, as it plays a crucial role in the implementation of Basel III in the EU. Another significance of such a move towards Basel rules and regulations becoming more enforceable and binding lies in the facilitation of greater consistency, convergence and compliance, which the introduction of a Regulation, Binding Technical Standards, as well as other reporting requirements and provisions would generate in the implementation process. The increased relevance of Basel rules, and particularly Basel III rules, as well as their significance for the Euro zone, European Union institutions and European banks is hereby emphasised. This paper is also aimed at providing an analysis of the recent updates which have taken place in respect of the Basel III Leverage Ratio and the Basel III Supplementary Leverage Ratio – both in respect of recent amendments introduced by the Basel Committee and proposals introduced in the United States. As well as highlighting and addressing gaps which exist in the literature relating to liquidity risks, corporate governance and information asymmetries, by way of reference to predominant based dispersed ownership systems and structures, as well as concentrated ownership systems and structures, this paper will also consider the consequences – as well as the impact – which Basel III, and in particular, the recent Basel Leverage ratios could have on the Euro zone, and European financial institutions. From this perspective, micro economic inefficiency debates – as well as the validity of such debates, the rise of macro economics, Basel III's focus on macro prudential regulation, will be considered.

Keywords: Basel III, Capital Requirements Directive IV, European Banking Authority, enforcement, supervision, Binding Technical Standards, Keynesian revolution, macroeconomics, micro economic inefficiency

¹ PhD, LLM, Faculty of Commerce and Administration, School of Economic and Decision Sciences, North West University

A. Introduction

According to the European Banking Authority (EBA), “the overarching goal of the Basel III agreement and its implementing Act, the CRD IV package, is:²

- to strengthen the resilience of the EU banking sector so that it would be better placed to absorb economic shocks whilst ensuring that banks continue to finance economic activity and growth.”

The CRD IV package, which was introduced in 2013, replaces the Directives 2006/48 and 2006/49, with a Directive and Regulation.³ The CRD IV entered into force on 1 January 2014 - with some phasing in arrangements taking place between 2014 and 2019.

The first consultative paper on a new capital adequacy framework, which was issued by the Basel Committee on Banking Supervision, introduced the „three pillar“ model which encompasses the minimum capital requirements, supervisory review and market discipline - „as a lever to strengthen disclosure and encourage safe and sound banking practices.“⁴ As well as the criticism related to the fact that it rewarded risk lending, the fact that „capital requirements were just reasonably related to banks’ risk taking activities and that the credit exposure requirement was the same regardless of the credit rating of the borrower,“⁵ a general criticism of Basel I relates to the fact that it promoted capital arbitrage. Such capital arbitrage being attributed to its wide risk categories which provided banks with the liberty to „arbitrage between their economic assessment of risk and the regulatory capital requirements.“⁶

² European Banking Authority, Implementing Basel III Europe: CRD IV Package <http://www.eba.europa.eu/regulation-and-policy/implementing-basel-iii-europe>

³ “The Regulation, the CRR, contains detailed prudential requirements for credit institutions and investment firms whilst the new Directive covers areas of the current Capital Requirements Directive where EU provisions need to be transposed by Member States in a way suitable to their respective environment.” see *ibid*

⁴ Basel Committee on Banking Supervision, 'Consultative Paper on a New Capital Adequacy Framework' 3rd June 1999 <http://www.bis.org/press/p990603.htm>

⁵ See M Saldenberg and T Schuermann, 'The New Basel Capital Accord and Questions for Research' (2003) Wharton Financial Institutions Center Working Paper 2003 at page 4

⁶ Basel Committee on Banking Supervision, 'Capital Requirements and Bank Behaviour: The Impact of the Basel Accord' Basel Committee on Banking Supervision Working Papers April 1999 at page 21

„Regulatory capital arbitrage“, a practice which involves banks „using securitisation to alter the profile of their book“ usually produces the effect of making bank's capital ratios appear inflated.⁷ Four identified types of capital arbitrage are:⁸ cherry picking, securitisation with partial recourse, remote origination and indirect credit.

The Second Consultative Paper, issued by the Basel Committee in January 2001, introduced the two Internal Ratings Based (IRB) methodologies – the Foundational IRB and the Advanced IRB methodologies. The Internal Ratings Based approach to capital requirements for credit risk, not only relies significantly on the internal assessment carried out by a bank, in relation to counterparties and exposures, but is also geared towards the achievement of two primary goals, namely:⁹ „additional risk sensitivity“ and „incentive compatibility“.

Basel 2 is premised on a three level approach which permits banks to select from three models, namely: the basic standardized model, the IRB foundation approach and the advanced ratings approach. According to the Consultative Document on Standard Approach to Credit Risk, capital requirements under the standardized approach are considered to be more synchronised and in harmony with the principal elements of banking risk – owing to the introduction of more differentiated risk weights and a broader recognition of techniques which are applied in mitigating risk whilst such techniques attempt to avoid undue complexity. As a result, capital ratios generated through the standardized approach, should adapt more to present and actual risks encountered by banks, than was the case previously.¹⁰

Under Pillar One minimum capital requirements, operational risk is to be corroborated by capital. Measurement approaches for operational risk can be found in the Capital Requirements Directive (CRD) and there are three broad approaches to the capital assessment of operational risk which are as follows:

⁷ See *ibid*; Bank's capital ratio may appear inflated „relative to the riskiness of the remaining exposure“ see *ibid*

⁸ *Ibid* at pages 22-24

⁹ In establishing an Internal Ratings Based approach, the Committee's intention was directed at „fine tuning capital requirements with a greater degree of accuracy to the level of a bank's exposure to credit risks.“ Basel Committee on Banking Supervision, 'The Internal Ratings Based Approach' Supporting Document to the New Basel Capital Accord 2001 at pages 1 and 3

<http://www.bis.org/publ/bcbsca05.pdf>

¹⁰ Basel Committee on Banking Supervision, Consultative Document, Standard Approach to Credit Risk, Supporting Document to the New Basel Accord January 2001 at page 1
<http://www.bis.org/publ/bcbsca04.pdf>

- Basic Indicator Approaches
- Standardized Approaches
- Internal Measurement Approach

The developments and evolution across the Basel Capital Accords have illustrated their focus to address prevailing financial risks at the time, their focus on the regulation of complex financial instruments such as hedge funds, the pro cyclical nature of risks and the need to mitigate occurrences related to regulatory capital arbitrage. The era of Basel III has also witnessed the introduction of liquidity standards – these being the first of their kind, However the need to address off balance sheet instruments, complex derivative products, exposures of various kinds – and particularly those exposures relating to derivatives, off balance sheet and leverage, as well as those risks attributed to non-bank institutions, continually constitute a vital focal point.

This paper is structured as follows: The next section discusses Basel III Liquidity Standards, Basel III Leverage and Basel III Supplementary Leverage Ratios and their role as complements to the risk based capital adequacy framework. The relationship between Basel III and the Capital Requirements Directive IV is then considered under section BII whilst the literature review section (BIII) highlights gaps which exist in the current and previous literature on the topic - with particular reference to micro economic efficiency and corporate governance are highlighted.

Section C then consolidates on the Basel Leverage Ratio's role as a supplementary measure to the risk-based capital adequacy framework, as well as the impact of the recent legislative proposals and changes on risk taking activities. Components of the Basel III Level Ratio and recent proposals aimed at updating such components are considered – with the aim of highlighting the importance of such updates in the minimisation of regulatory capital arbitrage activities. Section D then considers not only the events leading up to (as well as culminating) in the 2013 Rule and the Final Rule, but also arguments put forward to bolster U.S proposals to update the Basel Leverage Ratio.

In concluding the paper, reference is made to the all-important need to achieve a balance between the need for consistency, comparability and improved harmonisation whilst ensuring that simplicity and a „one size fits all“ approach does not promote a situation whereby credible and accurate results are neglected at the expense of achieving a standardized approach.

B Basel III Liquidity Standards, Basel III Leverage and Basel III Supplementary Leverage Ratios: Complements to the Risk Based Capital Adequacy Framework

Whilst the Liquidity Coverage Ratio (LCR)'s objective is aimed at „promoting the short-term resilience of the liquidity risk profile of banks by ensuring that banks have an adequate stock of unencumbered high quality assets (HQLA) that can be converted easily and immediately into cash“ to meet the liquidity needs of private markets for a 30 calendar day liquidity stress scenario, the Net Stable Funding Ratio (NSFR) is targeted at medium to longer term funding activities of banking institutions. By the very nature of the definition of these liquidity standards, the first to be introduced under Basel III, it is not difficult to comprehend why the Liquidity Coverage Ratio constitutes the more crucial standard.

The NSFR serves as a complementary standard to the LCR in serving to „limit over-reliance on short-term wholesale funding during times of buoyant market liquidity and encourage better assessment of liquidity risk across all on- and off-balance sheet items“ as well as a „minimum enforcement mechanism.“ As is the case with the two liquidity standards which are intended to serve as complementary measures to the risk-based capital adequacy framework, the Basel III Leverage Ratio was established by the Basel Committee as a non-risk based measure which is intended to serve as a supplement to the Basel risk based capital framework.

The merits of the Leverage Ratio as a supplement to the risk based capital adequacy framework include:¹¹ i) Its constraint of the build-up of leverage in the banking sector – which the risk based regime is not equipped to address; ii) Through a non-risk based „backstop“ which ultimately serves to protect against model risk, and the reduction of capital requirements, its reinforcement of risk based requirements; iii) Its role as a standardized measure that investors and counterparties can use in making comparisons between banks over a period of time; iv) The establishment by certain academics that the leverage ratio is a „statistically significant“ predictor of potential bank failures. Hence it can be illustrated that the Basel III Leverage ratio not only serves as a supplementary measure to the risk based capital adequacy framework, but also a means whereby the facilitation of greater comparability between banks can be achieved (since standardization promotes consistency, enhanced transparency and disclosure). Its vital role as a supplementary tool to the risk based capital adequacy framework in countering risk taking incentives is hence illustrated.

¹¹ Basel Committee on Banking Supervision, Discussion Paper 'The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability' July 2013 Bank for International Settlements Publications at page 16

- *An underlying feature of the financial crisis was the build-up of excessive on- and off-balance sheet leverage in the banking system. In many cases, banks built up excessive leverage while maintaining strong risk-based capital ratios. At the height of the crisis, the market forced the banking sector to reduce its leverage in a manner that amplified downward pressure on asset prices. This deleveraging process exacerbated the feedback loop between losses, falling bank capital, and shrinking credit availability.*¹²

The Basel III reforms introduced a „simple, transparent, non-risk based leverage ratio which is intended to serve – not only as a „credible supplementary measure to the risk-based capital requirements“ but also:¹³

- restrict the build-up of leverage in the banking sector to avoid destabilising deleveraging processes that can damage the broader financial system and the economy; and
- reinforce the risk-based requirements with a simple, non-risk-based “backstop” measure.

Furthermore, the Basel Committee is of the view that:¹⁴

- a simple leverage ratio framework is critical and complementary to the risk-based capital framework; and
- a credible leverage ratio is one that ensures broad and adequate capture of both the on- and off-balance sheet leverage of banks.

BII the Relationship between Basel III and the Capital Requirements Directive IV

The legislative package for the CRD IV was adopted by the European Parliament and the EU Commission in April 2013, with the CRD IV changes being grouped into two areas:¹⁵

- capital reform
- liquidity standards

¹² Basel Committee on Banking Supervision, Consultative Document Revised Basel III Leverage Ratio Framework and Disclosure Requirements June 2013 at page 4 of 22

<http://www.bis.org/publ/bcbs251.pdf>

¹³ *ibid*

¹⁴ *ibid*

¹⁵ See KPMG, “CRD IV: Single Rule Book for EU Banking Regulation Changes and Implications” May 2013

“The enhanced Basel II Framework (which includes reforms aimed at increasing the quantity of capital – as well as improving the quality of capital), and the macro prudential overlay (together), are referred to as Basel III.”

Under Basel II, the Tier One Capital ratio which banks were required to retain was 4%. Under Basel III, this has been raised to 6%. Further, whilst Basel II stipulated a Core Tier One capital ratio of 2%, this has been increased to 4.5% under Basel III and comprises of common equity before deductions. In respect of the capital conservation buffer, Basel III regulations require that banks retain a capital conservation buffer of 2.5% - bringing total common equity requirements to 7%. In respect of the countercyclical buffer, Basel III regulations stipulate a requirement within a range of 0% and 2.5% of “common equity or other fully absorbing capital” to be implemented according to national circumstances. Both the capital conservation and counter cyclical buffers did not exist under Basel II Under Basel III, additional capital requirements have also been stipulated for systemically relevant financial institutions.

The CRD IV is also aimed at:¹⁶

- Increasing the quality of eligible capital
- Increasing the quantity of capital held by establishing significantly higher minimum capital ratios and reducing pro cyclicity through the introduction of the new capital buffers
- Increasing the capital requirements for Counterparty Credit Risk - including a new capital charge for potential mark-to-market losses on OTC derivatives
- Introduction of a non risk based leverage ratio to safeguard build-up of leverage in the system

Key CRD IV provisions in relation to increased quality of capital, include the following:¹⁷

- Common equity Tier One becomes the primary measure of capital adequacy
- Basel II deductions are applied in full to common equity Tier One rather than 50:50
- Exclusion of hybrid instruments from common equity Tier One (with stricter criteria for inclusion of instruments in additional Tier One)
- Harmonised and stricter requirements for Tier 2
- Tier 3 capital no longer eligible

¹⁶ See *ibid*

¹⁷ *ibid*

Key CRD IV provisions in relation to increased quantity of capital, include the following:¹⁸

- Minimum common equity Tier One ratio of 4.5% (excluding buffers)
- Minimum Tier One ratio of 6% (excluding buffers)
- Minimum total capital of 8% (excluding buffers)
- Introduction of three capital buffers: namely, the capital conservation buffer, counter-cyclical buffer and the systemic buffer

The significance of the CRD IV in implementing Basel III lies in the fact that Basel III will become more directly binding and enforceable in EU member states. This differs significantly from the previous situation with Basel II, not just because two directives (Directives 2006/48 and 2006/49), existed then, but because of the European Banking Authority's new mandate (as will be illustrated in the conclusive section of this paper), in generating Binding Technical Standards (BTS). BTS are to be adopted by the European Commission by means of Regulations or Decisions - regulations being binding and directly applicable in member states, according to EU Law.

The ensuing sub section is not only aimed at considering the relevance of Basel III - from the perspective of its macro-prudential focus, but also addressing gaps in the literature on liquidity risk, but also to highlight why pre dominantly based dispersed ownership structures - such as those which prevail in the United Kingdom and the United States, need to focus more on the issues related to liquidity risk, whilst concentrated ownership based structures and systems (inclusive of family firms) need to focus on their accounting frameworks, the vital role played by audit committees and audits, in order to ensure that objectives of the Basel risk based capital framework, as well as certain corporate governance objectives are fulfilled.

BIII Growing Importance of Macro-Economic Perspectives and Accounting for the Gaps in the Literature on Corporate Governance and Information Asymmetries through Liquidity Risk Considerations

"First and foremost, this is a crisis of economics and particularly of conventional macroeconomics. The discussion of the shocks..... demonstrates quite clearly that the waves of huge crises which hit the high-income economies was not a result of events outside the economic system, such as an unexpected war or a vast natural disaster.....

¹⁸ ibid

Secondly, this has been a crisis of the financial system. Naturally and inevitably, efforts have been made to tighten up regulation and improve the resilience of the system. These efforts are not insignificant. But in essence, they are conservative: an attempt to preserve the essence of a system that we already know is extremely fragile.....”¹⁹ In his article,²⁰ Boettke illustrates how “new economics of Keynes moved away from the methodological individualist position and questioned the self regulatory robustness of the market economy.” He further adds that instead of reliance on market forces to self- correct for errors in investment, the government was given the policy role of correcting for market instability and that in addition to this Keynesian revolution in macro economics, economists started to develop arguments about the micro economic efficiency of the market economy - with theories of imperfect competition and monopolistic competition being developed during the 1930s.

The shortcomings of macro economics, the reliability of macro economic indicators have been brought to light following the recent Financial Crisis. Furthermore, the extent of government intervention in regulation is very evident as revealed through the G20 gathering of member states which promulgated the introduction of Basel III measures. To what extent should judiciary, legislature or the executive intervene in regulatory standard setting? Will Basel III’s more macro prudential focus resolve issues which are attributed to monetary and fiscal shortcomings? From this perspective, those discussions relating to monetary policy, which have considered problems of addressing challenges presented by inflexible wages are also relevant. This is also relevant to the present crises encountered by the Eurozone in respect of German wage flexibility and lack of competitiveness in the rest of the Eurozone.²¹ Even though micro economic theory has lost much of its relevance over the years, as rightly highlighted,

- the analysis of fine details of the economy’s structure, can teach one to understand such vital issues as the role of competition.”²²

¹⁹ See prologue, M Wolf, *The Shifts and the Shocks: What We’ve Learned - and Have Still to Learn* 2014 Penguin Press New York

²⁰ See P Boettke, “Information and Knowledge: Austrian Economics in Search of Its Uniqueness” *The Review of Austrian Economics*, 15:4, 263–274, 2002 Kluwer Academic Publishers at page 264

²¹ For further information on this see A Review, by Kenneth Rogoff, *Harvard University Prospect Magazine*, August 20, 2014

²² See F Hayek, “Competition as A Discovery Procedure” *THE QUARTERLY JOURNAL OF AUSTRIAN ECONOMICS VOL.5, NO. 3 (SUMMER 2002)* page 10

In addressing more effectively, fiscal and monetary policy issues, there is need for greater focus on the underlying basis of these issues which could be provided through greater research on micro economic theories and an appreciation of the answers which could be provided through greater exploration of these theories. It has been argued in many studies, that bank capital ratios and several other financial indicators do not serve as effectively in emerging market economies (as is the case with industrial nations). According to Rojas-Suarez (2002), the capital-to-asset ratio, has under-performed as an indicator of banking crisis related problems in Latin America and Asia.²³

Two reasons which have been put forward as explanations for this are:²⁴

- Severe deficiencies in the accounting and regulatory framework in these jurisdictions;
- Lack of liquid markets for bank shares, subordinated debt and other bank liabilities and assets which are required to confirm and justify the actual worth of a bank – rather than merely its accounting value.

To which it will also be added that audits, which serve as vital signalling mechanisms in capital markets, have limited roles in many emerging economies than is the case with more industrialised nations. Even though it is widely acknowledged that systems founded on concentrated ownership systems (that is, where a dominant shareholder prevails) are less susceptible to information asymmetries, it cannot be conclusively argued that such systems are immune from or less culpable of those issues associated with lack of transparency and inadequate disclosure requirements.

Regardless of the distinctive features which may exist between family firms and those other firms which are not family-run, but which are predominantly based on concentrated ownership systems and structures, one common feature between these concentrated ownership based structured firms and enterprises is, namely, their reduced dependence on audits and audit committees - as well as the existence of relatively thin audit markets, when compared to their pre-dominantly based dispersed ownership counterparts (and mainly industrial nations where the demand for audits, and audit markets are much greater).

²³ L Rojas-Suarez, „Rating Banks in Emerging Markets: What Credit Agencies Should Learn From Financial Indicators (2002) http://papers.ssrn.com/sol3/papers.cfm?abstract_id=300891

²⁴ *ibid*

Audits are regarded as vital signalling mechanisms which are supposed to reduce information asymmetries – if such audits provide credibility to the financial statements (on which opinions are provided and relied upon by shareholders and investors) as they should. Furthermore, disclosure stringent accounting, audit requirements which operate in many capital market economies and predominantly based dispersed ownership systems and structures, should serve as means of fostering greater transparency, disclosure and accountability.

Hence should it still be concluded that structures based on concentrated ownership models are less susceptible to information asymmetries and “free-rider” problems? The definition of liquidity, as provided by the Bank of International Settlements (BIS), is “the ability of a bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses.

The fundamental role of banks in the maturity transformation of short-term deposits into long-term loans makes banks inherently vulnerable to liquidity risk, both of an institution-specific nature and that which affects markets as a whole.”²⁵ A liquidity crisis is considered to be „the classic type of banking crisis whereby a bank for some reason, cannot meet all its payment obligations.”²⁶ The role played by imperfect knowledge in triggering such a crisis is further elaborated. In this sense, bank runs are triggered as a result of such imperfect knowledge which customers have of their banks, and the links through the interbank market and payment system.”²⁷ Such role played by imperfect knowledge or information asymmetries in triggering such crises could also be extended to enterprises, firms and organisations - and not just banking organisations.

Results obtained by Fu, Lu-Andrews and Yu-Thompson²⁸ reveal that family firms incorporated in their study, with better quality of corporate governance mechanisms, are associated with higher levels of corporate liquidity and stock liquidity, as well as lower level of liquidity risk. Whilst the issue relating to reduced information asymmetries with concentrated ownership structures (in comparison with predominantly based dispersed ownership systems and structures) appears less contentious, a more contentious issue is that relating to whether better corporate

²⁵ Principles for Sound Liquidity Risk Management and Supervision Sept 2008 at page 1 <<http://www.bis.org/publ/bcbs144.htm>>

²⁶ See RM Lastra and GWood, „The Crisis of 2007 – 09: Nature, Causes and Reactions“ Journal of International Economic Law 13(3) at pages 531 and 532

²⁷ *ibid*

²⁸ L Fu, R Lu-Andrews and YY-Thompson “Liquidity and Corporate Governance: Evidence From Family Firms“ http://papers.ssrn.com/sol3/papers.cfm?abstract_id=2433764

governance mechanisms operate in concentrated ownership structures than is the case with predominantly based dispersed ownership structures and systems. Audit committees, whose operation are more common and widespread in predominantly based dispersed ownership structures, are by definition, considered to be “internal monitoring devices which are supportive of good corporate governance practices.” The Cadbury definition of corporate governance, that is, “the system whereby companies and directors are directed and controlled” or a structure whereby those enterprises are governed and directed, as well as certain vital elements of corporate governance, namely: supervision, monitoring, accountability, transparency and disclosure, have profound repercussions in the evaluation of how well corporate governance mechanisms operate in dispersed ownership systems - as well as in relation to concentrated ownership structures or systems.

According to Bennedsen, Perez-Gonzalez and Wolfenzon,²⁹ “the main governance issue facing family firms is balancing the benefits associated with having a controlling family with the challenges the structure imposes on minority shareholders. Common governance mechanisms are less likely to be effective whenever control and decision rights are concentrated around a family.” Further, it is widely acknowledged in the literature that even though dispersed ownership firms usually encounter the traditional principal agent problem, conflicts of interests between controlling shareholders and non-controlling shareholders (minority shareholders) are more prevalent with concentrated ownership structures.³⁰ With respect to corporate governance, effects of family owned firms on performance could be considered to be another distinctive feature - in addition to blood relations involved in the control of family run firms – when comparing and contrasting with other firms which are based on concentrated ownership structures but not run by family or blood relations. Resources available to family run firms to conduct full scale audits, the structure of the firm, whether CEO and other duties are adequately segregated or all performed by the same individual, as well as the competence or qualifications required to effectively supervise or engage auditors, are all decisive and contributory in the determination of whether adequate accountability, supervision, monitoring, transparency and disclosure requirements are met in fulfilling corporate governance criteria.

²⁹ M Bennedsen, F Perez-Gonzalez and D Wolfenzon “The Governance of Family Firms” <http://web.stanford.edu/~fperezg/familyfirmresearch.pdf>

³⁰ See M Ojo, “Why the Traditional Principal Agent Theory May No Longer Apply to Concentrated Ownership Systems and Structures” http://mpra.ub.uni-muenchen.de/50832/1/MPRA_paper_50832.pdf

Even though the ensuing subsection is exclusively dedicated to highlighting the benefits of the Basel Leverage Ratio, reasons for recent proposals aimed at updating the originally introduced Basel Leverage Ratio will be considered in the ensuing section. From the discussions related to predominantly based dispersed ownership systems and concentrated ownership structures, it can easily be seen why the risk based capital adequacy framework is of such vital importance to capital market based economies such as the United Kingdom and the United States. However greater focus will be required in relation to liquidity risks in these systems - just as more efforts are required to upgrade the status of audits and audit committees in many concentrated ownership based systems and structures.

C. The Basel Leverage Ratio's Role as a Supplementary Measure to the Risk Based Capital Adequacy Framework

According to Valladares, the June 2013 proposed leverage ratios by the Basel Committee, is a necessary supplement to the current risk-weighted asset credit risk measurement and is crucial to making banks better capitalized to sustain unexpected losses.³¹ Even though many criticisms have arisen in relation to the risk taking incentives that could be induced by such recent Basel leverage proposals, the following observations highlight the importance of incorporating and supplementing risk based capital ratios, leverage ratios and the liquidity requirements with themselves since the implementation of one ratio in isolation, as will be highlighted, is likely to facilitate the tendencies for riskier ventures: Valladares raises the point that even though critics of the proposed Basel guidelines argue that the leverage ratio would encourage banks to transact riskier on- or off-balance sheet instruments, that:

- if banks were to do so, such added riskiness would, however, raise banks' RWAs and force them to increase their capital. This action would also impact their liquidity coverage ratio by making the banks less liquid since most risky assets do not count for the LCR - which is another reason why the leverage ratio is an important complement to the RWA and liquidity buffers.³²

In bolstering this viewpoint, Bundesbank Vice President Sabine Lautenschlaeger has reiterated that „the leverage ratio shouldn't be the main gauge because it doesn't demand more capital to back the more loss-prone investments, and thus can give bankers “unhealthy incentives” to take on more risk.

³¹ M Rodriguez Valladares, 'Why Basel' Latest Leverage Ratio is Better' <http://www.americanbanker.com/bankthink/why-basels-latest-leverage-ratio-is-better-1060635-1.html>

³² *ibid*

“ In accentuating the need for its complementary function and role to the risk-based capital framework, the Basel leverage ratios must be linked to the risk based capital adequacy framework – both in respect of their calculations, metrics and measures, as well as primary objectives and goals in introducing such leverage ratios. Some of the objectives for originally introducing leverage ratios in 2010 being the creation of a “secondary metric which was simple and transparent – whereby regulators could assess balance sheet sizes appropriately” as well as the need to facilitate more consistent modes of measurements of risk weighted assets.

In its aims to address concerns raised by the Basel Committee’s June 2013 consultative paper, namely concerns that the Consultative Paper’s definition of exposure was “too expansive”, that is, “the leverage ratio’s denominator was too large”³³ changes have been made to the June 2013 paper, as evidenced by the more recent January 2014 update and the April 2014 Final Standard for measuring and controlling large exposures. These changes introduce a more simplistic, consistent approach to the measurement of exposures through incorporating the use of credit conversion factors (CCFs).

According to the January 2014 revised leverage ratio standard,³⁴ in the risk based capital framework, off balance sheet items are converted under the standardised approach into credit exposure equivalents through the use of credit conversion factors. It is also stipulated that the CCFs set out in paragraphs 14-22 of its Annex must be applied to notional amounts – for purposes of determining the exposure amount of Off Balance Sheet (OBS) items for leverage ratio.

³³ See PricewaterhouseCoopers, “Regulatory Brief: Basel Leverage Ratios: No Cover For US Banks” January 2014

http://www.pwc.com/en_US/us/financial-services/regulatory-services/publications/assets/fs-reg-brief-dodd-frank-basel-leverage-ratio.pdf Also see Basel Committee on Banking Supervision, “Supervisory Framework for Measuring and Controlling Large Exposures - Final Standard” See particularly paragraph 35 “For the purpose of the large exposures framework, off-balance sheet items will be converted into credit exposure equivalents through the use of credit conversion factors (CCFs) by applying the CCFs set out for the standardised approach for credit risk for risk -based capital requirements, with a floor of 10%.” <http://www.bis.org/publ/bcbs283.htm> and Basel Committee on Banking Supervision, Consultative Document: The Non Internal Model Method for Capitalising Counterparty Credit Risk Exposures (June 2013) <http://www.bis.org/publ/bcbs254.htm> and: Basel Committee on Banking Supervision, “The Standardised Approach for Measuring Counterparty Credit Risk Exposures (March 2014) Available at <http://www.bis.org/publ/bcbs279.htm>

³⁴ see paragraph 39 Basel Committee on Banking Supervision, “Basel III Leverage Ratio Framework and Disclosure Requirements” January 2014

C.II Components of the Basel III Leverage Ratio and Recent Updates to the Components

The Basel III Leverage Ratio is defined as the Capital Measure (the numerator) divided by the Exposure Measure (the denominator), with this ratio expressed as a percentage and with the basis of calculation being the average of the three month-end leverage ratios over a quarter.³⁵

As reported by DB Research, the Basel Committee's issuance of its consultation paper on common definitions for the non-binding leverage ratio enshrined in Basel III, is not only considered to be an indication of a clear preference to move to a binding leverage ratio, the new Basel definition, it is further contended, would „disallow much of the derivatives netting which had seen US banks post substantially stronger leverage ratios than most European institutions.“³⁶

As highlighted under section B, one of the goals of leverage ratios, as intended by the Basel Committee on Banking Supervision, is to ensure that both on and off balance sheet leverage of banks are adequately captured and accounted for. Given the revisions which have occurred, following the introduction of the original 2010 Basel Leverage Ratios, it would be expected that subsequent revisions would have the effect of expanding the denominator component, namely the exposure component – as a means of highlighting the commitment to expand the horizons being accounted for, as regards exposures – particularly credit exposures. Even though the numerator component, comprising Tier One capital of the risk-based capital framework, is also important, in line with the goals of adequately capturing on and off balance sheet exposures, the importance of focussing on the denominator component (which comprises of the exposure measure) of the Basel III Leverage Ratio is also illustrated thus:

Components of the Exposure Measure

A bank's exposure measure is considered to be the sum of the following:

- On balance sheet exposures

³⁵ Basel Committee on Banking Supervision, Consultative Document Revised Basel III Leverage Ratio Framework and Disclosure Requirements at page 5 of 22 <http://www.bis.org/publ/bcbs251.pdf>

³⁶ DB Research, "Leverage Ratio: Pressure on Europe is Rising" [http://www.dbresearch.de/servlet/reweb2.ReWEB?addmenu=false&document=PROD000000000317297&rdShowArchivedDocu=true&rwnode=DBR_INTERNET_DEPROD\\$NAVIGATION&rwobj=ReDisplay.Start.class&rwsite=DBR_INTERNET_DE-PROD](http://www.dbresearch.de/servlet/reweb2.ReWEB?addmenu=false&document=PROD000000000317297&rdShowArchivedDocu=true&rwnode=DBR_INTERNET_DEPROD$NAVIGATION&rwobj=ReDisplay.Start.class&rwsite=DBR_INTERNET_DE-PROD)

- Derivative exposures
- Securities Financing Transaction Exposures
- Off balance sheet (OBS) items

According to the most recent, updated Standard on leverage ratios (hereinafter referred to as “the Final Standard”), issued by the Basel Committee on Banking Supervision in January 2014,³⁷ the exposure measure for the leverage ratio, should generally, follow the accounting value, subject to the following:

- On-balance sheet, non derivative exposures are included in the exposure measure net of specific provisions or accounting valuation adjustments;
- Netting of loans and deposits is NOT allowed.

As well as disallowing the “netting” of loans and deposits, the January 2014 final standard³⁸ on leverage ratios, as issued by the Basel Committee on Banking Supervision, in compliance with the June revision, also provides under paragraph 30 that, in order to capture the credit exposure to the underlying reference entity, in addition to the prescribed CCR treatment for derivatives and related collateral, the effective notional amount referenced by a written credit derivative is to be included in the exposure measure.

However, in contrast to its predecessor, which highlighted under paragraph 27 that:

- collateral received in connection with derivative contracts does not reduce the economic leverage inherent in a bank’s derivatives position. In particular, the exposure arising from the contract underlying is not reduced. As such, collateral received (cash or non-cash) may not be netted against derivatives exposures whether or not netting is permitted under the bank’s operative accounting or risk-based framework the Final Standard, paragraph 23 projects a more lenient and cautious tone in its approach to netting
- collateral received in connection with derivative contracts does not necessarily reduce the leverage inherent in a bank’s derivatives position, which is generally the case if the settlement exposure arising from the underlying derivative contract is not reduced.

³⁷ Basel Committee on Banking Supervision, “Basel III Leverage Ratio Framework and Disclosure Requirements” January 2014 Bank for International Settlements Publications, see paragraph 12. It is however contended that this version is a “near final version”.

³⁸ Basel Committee on Banking Supervision, “Basel III Leverage Ratio Framework and Disclosure Requirements” January 2014 Bank for International Settlements Publications

As a general rule, collateral received may not be netted against derivative exposures whether or not netting is permitted under the bank's operative accounting or risk-based framework. Hence, when calculating the exposure amount by applying paragraphs 19 to 21 above, a bank must not reduce the exposure amount by any collateral received from the counterparty.

Furthermore, extended provisions have been included to permit certain netting transactions between counterparties – to the extent that certain provisions and conditions stipulated in the Final Standard are met. As a means of ensuring consistency, comparability and accuracy in its calculations and measurements, the same coverage as that adopted for regulatory consolidation – as used within the risk-based capital framework, is applied by the Basel III leverage ratio framework. In contrast to many other jurisdictions, the U.S has introduced proposals aimed at enhancing the Basel III leverage ratios, (the recently revised Supplementary Leverage ratios), as well as the Dodd Frank Leverage Ratio.³⁹

Recent proposals aimed at enhancing the Basel III leverage ratios in the U.S would result in an increase to 5 percent of assets for parent companies and 6 percent for their banking subsidiaries under a proposal which will affect the eight globally systemically important banks in the U.S. In November 2012, the FSB and BCBS published a list of banks that meet the Basel Committee for Banking Supervision definition of a G-SIB based on year-end 2011 data. The eight globally systemically important banks in the U.S, identified as G-SIBs by the Financial Stability Board, are: Bank of America Corporation, The Bank of New York Mellon Corporation, Citigroup Inc., Goldman Sachs Group, Inc., JP Morgan Chase & Co., Morgan Stanley, State Street Corporation and Wells Fargo & Company.⁴⁰

³⁹ "Dodd Frank section 165 compels foreign banks to comply with banking rules. Whereas eight of the largest U.S banks meet the 3% ratio, many foreign banks are permitted to meet the 4% ratio". See S Skyrms, "New Regulation and the Repo Market: Leverage Ratios"

<http://scottskyrms.com/2014/03/new-regulation-and-the-repo-market-leverage-ratios/>

⁴⁰ See Financial Stability Board, Update of Group of Global Systemically Important Banks (G-SIBs) (Nov. 1, 2012) http://www.financialstabilityboard.org/publications/r_121031ac.pdf

D. The 2013 Rule and the Final Rule

The 2013 Rule „revised and replaced the agencies’ risk-based and leverage capital standards and established a 3 percent minimum supplementary leverage ratio for banking organizations subject to the agencies’ advanced approaches risk-based capital rules.”⁴¹ The 2013 rule was adopted as a final rule on July 2, 2013.

Moreover, this final rule:

- Implements a revised definition of regulatory capital;
- A new common equity tier 1 minimum capital requirement;
- A higher minimum tier 1 capital requirement; and

For banking organizations subject to the advanced approaches risk-based capital rules, a supplementary leverage ratio that incorporates a broader set of exposures in the denominator.⁴² Following the publication of the U.S. Basel III Final Rule, many U.S. banking agencies proposed higher leverage capital requirements for the eight U.S. bank holding companies (BHCs) which have been identified by the Financial Stability Board, as global systemically important banks („referred to as „covered BHCs”) and their insured depository institution (IDI) subsidiaries: namely, Bank of America Corporation, The Bank of New York Mellon Corporation, Citigroup Inc., Goldman Sachs Group, Inc., JP Morgan Chase & Co., Morgan Stanley, State Street Corporation and Wells Fargo & Company.

⁴¹ See Federal Reserve, 'Regulatory Capital Rules: Regulatory Capital, Enhanced Supplementary Leverage Ratio Standards for Certain Bank Holding Companies and their Subsidiary Insured Depository Institutions' at page 12

<http://www.federalreserve.gov/newsevents/press/bcreg/bcreg20130709a1.pdf>. and also Federal Reserve, 'Federal Reserve Approves Final Rule...' „ The final rule minimizes burden on smaller, less complex financial institutions. It establishes an integrated regulatory capital framework that addresses shortcomings in capital requirements, particularly for larger, internationally active banking organizations, that became apparent during the recent financial crisis. The rule will implement in the United States the Basel III regulatory capital reforms from the Basel Committee on Banking Supervision and certain changes required by the Dodd-Frank Wall Street Reform and Consumer Protection Act.” See <<http://www.federalreserve.gov/newsevents/press/bcreg/20130702a.htm>>

⁴² See Federal Reserve, Regulatory Capital Rules: Regulatory Capital, Implementation of Basel III, Capital Adequacy, Transition Provisions, Prompt Corrective Action, Standardized Approach for Risk-weighted Assets, Market Discipline and Disclosure Requirements, Advanced Approaches Risk-Based Capital Rule, and Market Risk Capital Rule <http://www.federalreserve.gov/bcreg20130702a.pdf>

DII. Arguments put forward by US Federal Agencies in Support of Recent Proposals

According to a report by the Federal Reserve, the following arguments were provided in support of the need for revisions to the Basel Leverage Ratios:⁴³

- BCBS's approach for determining the minimum level of the Basel III leverage ratio was different than the calibration approach described above for the risk-based capital ratios.
- The BCBS used the most loss-absorbing measure of capital, common equity tier 1 capital, as the basis for calibration for the risk-based capital ratios, but not for the Basel III leverage ratio. In addition, the BCBS did not calibrate the minimum Basel III leverage ratio to meet explicit loss absorption and market confidence objectives as it did in calibrating the minimum risk-based capital requirements and did not implement a capital conservation buffer level above the minimum leverage ratio. Rather, the BCBS focused on calibrating the Basel III leverage ratio to be a backstop to the risk-based capital ratios and an overall constraint on leverage.
- The agencies believe that while the establishment of the Basel III leverage ratio internationally is an important achievement, further steps could be taken to ensure that the risk-based and leverage capital requirements effectively work together to enhance the safety and soundness of the largest, most systemically important banking organizations.

Furthermore, the agencies are of the opinion that the proposed rule would permit covered BHCs and their IDI subsidiaries to fund themselves more than 90 percent with debt while still satisfying the proposed leverage thresholds.⁴⁴ Having highlighted the above, general consensus appears to favour proposals relating to the increase of Basel Leverage ratios in the U.S – with many commentators having considered the previous ratios to be inadequate.

Arguments Favouring 2013 Basel Committee Revisions over those Updates Made to Basel Leverage Ratios in the U.S

In commencing this section, it needs to be highlighted that the recent moves and proposals in the U.S, in relation to the Basel Leverage Ratio, are very much welcomed and quite encouraging given the prior concerns that the implementation of Basel rules, regulations and initiatives appeared to be implemented at a slow pace in the U.S.

⁴³ Federal Reserve, 'Regulatory Capital Rules: Regulatory Capital, Enhanced Supplementary Leverage Ratio Standards for Certain Bank Holding Companies and their Subsidiary Insured Depository Institutions' pages 16 and 17

⁴⁴ Ibid at page 24

The recent proposals in the U.S serve as indication, not only of the willingness to adopt Basel rules, but also reveal the extra steps being taken to ensure that financial stability is fostered and more rigid and stringent measures to avert another global scale crisis.

Arguments favouring 2013 Basel Committee updates over those 2013 proposals introduced in the US, are partly based on the following:

- 1) The fact that revisions and proposals undertaken in the U.S are premised on Tier 1 capital, instead of higher-quality Core Tier 1.
- 2) Recent Basel Guidelines (June 2013) are more extensive in scope as opposed to the denominator of the U.S. leverage ratios which are based on original 2010 Basel Leverage ratios.
- 3) The cumbersome nature of the supplementary leverage ratio – which in the opinion of many commentators, will be more burdensome for subsidiaries of BHCs to comply with than the generally applicable leverage ratio for U.S. banks. It is calculated using a „tighter definition of Tier 1 capital in the numerator and the denominator includes off-balance sheet exposures such as the grossing-up of derivatives to include collateral and cash“ (which is why many banks are likely to want to evade as much inclusion of such derivatives in the denominator – given the value/magnitude of derivatives). The 6% standard is considered by many to be onerous for bank subsidiaries covered by the proposal and may encourage banking groups to conduct certain activities, such as derivatives based activities, away from their subsidiaries. Furthermore, an introduction of the supplementary leverage ratio, it is most likely envisaged, will result in lower dividends being distributed by the BHCs.
- 4) The focus accorded to disclosures of the numerator and denominator components of the Basel Leverage Ratios in the Basel June 2013 Guidelines.

According to paragraph 43 of the Consultative Document on the Revised Basel III Leverage Ratio framework and Disclosure Requirements:⁴⁵

- Public disclosure by banks of their Basel III leverage ratios commences on 1st January 2015
- To enable market participants reconcile leverage ratio disclosures with banks' published financial statements from period to period, and to compare the capital adequacy of banks across jurisdictions with varying accounting frameworks, it is important that banks adopt a consistent and common disclosure of the main components of the leverage ratios while reconciling to their published financial statements.

⁴⁵ Basel Committee on Banking Supervision, Document on the Revised Basel III Leverage Ratio framework and Disclosure Requirements June 2013, Bank for International Settlements Publications, page 11

Paragraphs 44 as well as 45⁴⁶ underline the Committee's commitments to, as well as its realisation of the need for focus on measures and initiatives aimed at facilitating the harmonisation and consistency of disclosure requirements across various jurisdictional frameworks which would also result in the facilitation of the realisation of the Basel Committee's objectives and aims. Enhanced Supplementary Leverage Ratios (ESLR) – 2014 U.S Revisions

In April 2014, the Federal Deposit Insurance Corporation (FDIC), the Board of Governors of the Federal Reserve System (the FRB) and the Office of the Comptroller of the Currency (the OCC) took two important steps:⁴⁷

- 1) The Agencies approved a notice of proposed rulemaking (the “NPR”, and the rules stipulated therein, the “Proposed Rules”) which would revise the definition and scope of the “total leverage exposure”, which is the denominator of the SLR (hence, also the denominator of the enhanced SLR).
- 2) The Agencies approved final rules (the “Final Rules”) that would effectively result in a rise from the SLR's usual 3% minimum SLR standard to 5% for bank holding companies with total consolidated assets of more than \$70 billion or assets under custody of more than \$10 trillion and 6% for their insured depository institution subsidiaries.

Following the issue of the January 2014 revised Basel leverage ratios, Pricewaterhouse were of the opinion that U.S regulators would not only have to decide whether an alteration of the exposure calculations of the supplementary leverage ratio (SLR) would be necessary (as a means of further harmonizing with the January 2014 revised Basel leverage ratios), but also decide if they would, more importantly, adjust the Enhanced Supplementary Leverage Ratios.⁴⁸

⁴⁶ Which states that „to facilitate consistency and ease of use of disclosures relating to the composition of the leverage ratio, and to mitigate the risk of inconsistent formats undermining the objective of enhanced disclosure, the Basel Committee has agreed that internationally active banks across Basel member jurisdictions, will be required to publish their leverage ratio according to a common template.”

⁴⁷ See Sullivan & Cromwell LLP, „Bank Capital: Supplementary Leverage Ratio, Federal Banking Agencies Propose Revisions to the Supplementary Leverage Ratio's Exposure Measure and Approve Final Rules Implementing an Enhanced Supplementary Leverage Ratio for the Largest U.S Baking Organizations“ April 16 2014. In April 2014, the Federal Reserve Board, the Federal Deposit Insurance Corporation (FDIC), and the Office of the Comptroller of the Currency (OCC) “adopted a final rule to strengthen the leverage ratio standards for the largest, most interconnected U.S. banking organizations. The final rule applies to U.S. top-tier bank holding companies with more than \$700 billion in consolidated total assets or more than \$10 trillion in assets under custody (covered BHCs) and their insured depository institution (IDI) subsidiaries.” See Agencies Adopt Enhanced Supplementary Leverage Ratio Final Rule and Issue Supplementary Leverage Ratio Notice of Proposed Rulemaking <http://www.federalreserve.gov/newsevents/press/bcreg/20140408a.htm>

⁴⁸ PricewaterhouseCoopers, “Regulatory Brief : Basel Leverage Ratios: No Cover For US Banks” January 2014

http://www.pwc.com/en_US/us/financial-services/regulatory-services/publications/assets/fs-reg-brief-dodd-frank-basel-leverage-ratio.pdf

It is Pricewaterhouse' view that U.S regulators are unlikely to lower the ESLR's 2% buffer – primarily attributable to the fact that U.S regulators are considered to view the ESLR as a “needed complement to risk-based capital standards (as opposed to a “back-stop”).⁴⁹ The need for consistency in the implementation of Basel requirements and regulations is all the more vital and necessary if practices relating to regulatory capital arbitrage are to be minimised and controlled.

Differences in the implementation of Basel requirements and rules across various jurisdictions are evident from the very stringent application of rules in certain jurisdictions – as is recently evidenced by the U.S initiatives aimed at increasing Basel III Leverage ratios (above global standards) to those jurisdictions where more lax approaches have been adopted. Evidence which highlights the fact that different countries could be inconsistently implementing parts of the Basel rules and regulations – either by consolidating or weakening the original requirements, is illustrated through the following:⁵⁰

- In the EU, in relation to the Capital Requirements Directive/Regulation IV (CRD/RIV) - where based on evidence from latest proposals and negotiations, EU member states will assume greater independence in their ability to increase capital requirements.
- In China, where the implementation framework for Basel III is considered to be more stringent than the international standard (with a requirement of a higher core tier 1 capital adequacy ratio – 5% as opposed to 4.5%, as well as a higher leverage ratio requirement of 4% as opposed to 3%).
- In the U.S, as discussed throughout this paper, through recent proposals relating to standard and supplementary leverage ratios.

Having highlighted the above, it is also worth mentioning that “over compliance” with rules (and particularly where it appears that such rules or ratios appear to be insufficient) – as indicated by the supplementary ratios in the U.S, is certainly much better than under compliance. What may be regarded as over compliance for a particular jurisdiction may not necessarily be the case for another. Conversely what may be required for minimal compliance purposes in certain jurisdictions may prove inadequate for certain major economies.

⁴⁹ Ibid. This view being shared by PwC even though “the impact of the ESLR's 2% buffer is further accentuated by the competitive advantage which the now more aligned revised January 2014 leverage ratio provides non-US banks.”

⁵⁰ See JP Morgan, 'Basel III Implementation: Is the Industry Running Out of Time?' http://www.jpmorgan.com/tss/General/Basel_III_implementation_Is_the_industry_running_out_of_time_/1320504512062

Hence it may be necessary to invent additional rules or supplement existing legislation and rules as a means of achieving longer term efficiency in terms of overall costs and benefits to be generated from implementing new innovative - but also complementary measures.

E. Sound Bank Stress Testing Techniques as Complementary Measures

Sound stress testing practices, as identified by the Basel Committee, should embrace the provision of forward-looking assessments of risk, complement information from models and historical data, - as well as constitute an integral part of capital and liquidity planning.

Even though the Basel capital accords have evolved, recurring lessons related to failures of mechanical approaches such as those of bank stress testing techniques, provide reflections of the fact that internal ratings based models should not always be expected to provide credible results where standardization, particularly, is unduly resorted to. Standardization is certainly required for the basis of comparability – however, a healthy balance needs to be struck between the extent of standardization and the need to obtain credible, reliable and accurate results.

As is the case with the Basel Leverage Ratio, bank stress techniques should not be used in isolation. In effectively performing their roles as monitoring, predictive devices and risk management tools, they will greatly assist Basel Leverage ratios, as well as the risk based capital adequacy framework, in achieving their intended aims and objectives. According to the Basel Committee,⁵¹ the financial crisis not only revealed weaknesses in organisational aspects of stress testing programmes in the sense that prior to the crisis, stress testing at some banks was carried out on an isolated basis (by the risk function with little interaction with business areas), but also the fact that test analyses were not credible.

Furthermore, the mechanical approaches adopted by certain organisations resulted in inaccurate and unreliable results being generated. As rightly observed, by the Committee, „mechanical approaches can neither fully take account of changing business conditions nor incorporate qualitative judgments from across the different areas of a bank.“

Other identified weaknesses of stress testing programmes, as identified by the Committee include:⁵²

⁵¹ See Basel Committee on Banking Supervision, Principles for Sound Stress Testing Practices and Supervision May 2009 at pages 8-12 <http://www.bis.org/publ/bcbs155.htm>

⁵² See *ibid*

- Stress testing frameworks were usually not flexible enough to respond quickly as the crisis evolved (for example, inability to aggregate exposures quickly, apply new scenarios or modify models).
- Weaknesses in infrastructure limited the ability of banks to identify and aggregate exposures across the bank. This weakness limits the effectiveness of risk management tools – including stress testing.
- An appropriately conducted firm-wide stress test would have beneficially drawn together experts from across the organisation. For example, the expertise of retail lenders, who in some cases were reducing exposure to US subprime mortgages, should have counteracted the overly optimistic outlook of traders in securities backed by the same subprime loans.
- That particular risks that were not covered in sufficient detail in most stress tests include: the behaviour of complex structured products under stressed liquidity conditions; basis risk in relation to hedging strategies; pipeline or securitisation risk; contingent risks; and funding liquidity risk.
- That, had stress tests adequately captured contractual and reputational risk associated with off-balance sheet exposures; concentrations in such exposures may have been avoided.

It was also identified by the Committee that most risk management models, including stress tests, use historical statistical relationships to assess risk – under the assumption that risk is driven by a known and constant statistical process, that historical relationships constitute a good basis for forecasting the development of future risks. The Financial Crisis, according to them, has revealed serious flaws with relying solely on such an approach.

F. Conclusion: Harmonisation and Challenges Resulting from Basel III Implementation in the EU

As well as facilitating enhanced requirements for the quantity and quality of capital, serving as a basis for new liquidity and leverage requirements, providing new rules for counterparty risk and new macro prudential standards, the CRD IV also introduces changes to rules on corporate governance (including remuneration), as well as introducing standardised EU regulatory reporting (COREP and FINREP).⁵³ Potential Basel III implementation issues for the Eurozone and European banks relate to increased cost of capital for banks, restrictions on distribution of earnings and dividends. However in relation to potential enforcement and compliance issues, the role assumed by the European Banking Authority, as well as tools being incorporated to ensure such enforcement and compliance, should serve to facilitate the implementation process - further improving convergence and harmonisation

⁵³ See KPMG, “CRD IV: Single Rule Book For EU Banking Regulation Changes and Implications” May 2013 at page 8

across the EU. The European Banking Authority (EBA) is now empowered to generate a number of Binding Technical Standards (BTS), guidelines, and reports for the implementation of the CRD IV package.

- BTS are legal acts which specify particular aspects of an EU legislative text (Directive or Regulation) and aim to ensure that consistent harmonisation is achieved in specific areas.⁵⁴

Guidelines are also illustrated by the EBA as being “important tools for fostering convergence of supervisory practices across the EU.”

According to the EBA, although guidelines are not legally binding, supervisory authorities and institutions around Europe must make every effort to comply with them. Further the EBA adds that supervisory authorities are particularly obliged to inform the EBA of their compliance or intention to comply with them and also to explain their reasons for eventual non compliance. Despite the merits of improved consistency and harmonisation in the implementation of Basel rules and regulations – such merits including enhanced facilitation of disclosure and transparency, a balance also needs to be struck between the need to avoid a „one size fits all“ situation whereby the needs of respective jurisdictions are not met. The need to achieve more relevant and accurate results is evidenced by the evolution of the Basel capital accords from the rather „crude“ original 1988 Capital Accord (which even though risk based, focused exclusively on credit risk and did not apply risk weights in a specific and tailor made manner to asset classes) to the adoption of more tailor made and specific internal ratings models.

Whilst comparability and consistency, which is sometimes attributed to simpler and cruder models, may be desired, it is also vital that results derived from such models reflect the reality and accuracy of prevailing conditions – hence the need to provide for models which provide and generate credible results. As identified by the Basel Committee on Banking Supervision in its discussion paper „The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability,⁵⁵ the disadvantages attributed to undue complexity and reduced comparability in the capital framework, potentially“ include:

- Increased difficulties for bank management in understanding the regulatory regime;
- The challenges arising in capital planning;

⁵⁴ European Banking Authority, Implementing Basel III Europe: CRD IV Package <http://www.eba.europa.eu/regulation-and-policy/implementing-basel-iii-europe>

⁵⁵ Basel Committee on Banking Supervision, Discussion Paper “The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability” July 2013 Bank for International Settlements Publications at page 12

- Less accurate risk assessments;
- The creation of regulatory gaps and opportunities for arbitrage;
- An undermining of the ability of supervisors to effectively assess the capital adequacy of banks
- Impediments presented to the effective review of the capital management process by supervisors.

In addressing more effectively, fiscal and monetary policy issues, there is need for greater focus on the underlying basis of these issues which could be provided through greater research on micro economic theories and an appreciation of the answers which could be provided through greater exploration of these theories.

Furthermore, the importance of adequately addressing liquidity risks cannot be over- emphasised. Data generated from family firms as well as other firms whose systems and structures are regarded as synonymous to those of concentrated ownership, are also therefore of vital importance and do indeed provide fertile ground for future research. It will also be vital for such concentrated ownership systems and structures to review and upgrade the status accorded to audits and audit committees if they are to effectively and maximally achieve goals and objectives of the Basel Committee's risk based adequacy framework, leverage ratios - as well as improve on attributes of good corporate governance practices - namely accountability, adequate supervision, monitoring, transparency and disclosure.