Risk management by the Basel Committee: evaluating progress made from the 1988 Basel Accord to recent developments

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This paper traces developments from the inception of the 1988 Basel Accord to its present form (Basel II). In highlighting the flaws of the 1988 Accord, an evaluation is made of the Basel Committee’s efforts to address such weaknesses through Basel II. Whilst considerable progress has been achieved, the paper concludes on the basis of the principal aim of these Accords, that more work is still required particularly in relation to hedge funds, liquidity risks, and those risks attributed to non bank financial institutions. Further, the paper highlights existing problems with Basel II through a reference to capital measurement problems which were revealed in the aftermath of the Northern Rock crisis.
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The Role of Bank Supervisors in Maintaining Adequate Bank Capital

The importance of risk management derives from the objectives of financial regulation. The problem of systemic risk constitutes part of the embodiment of the rationale for financial regulation. Regulators impose liquidity monitoring measures on banks to meet specified minimum levels of withdrawals. However, such measures are precautionary against short-term cash flow problems rather than a situation of panic outburst. The level of confidence reposed in the public by the financial community is what sustains banks in modern times and this is strengthened by external checks which is given by credit agencies through scrutiny of published accounts and by bank regulation through prudential supervision.

Prudential regulation however, is not the only way in which some regulators take interest in the financial management of authorised firms – there is also the principle of ensuring that a firm operates with required minimum level of capital in order to reduce the consequences of failure. As a result, the focus on the solvency and safety and soundness of financial institutions and minimum capital requirement are often regarded as synonymous.

High profile failures such as those of Franklin National Bank, Banco Ambrosiano, BCCI, Barings and others have highlighted the need for effective consolidated supervision and close monitoring of activities on a transnational basis. Barings focussed on multi functional banking since it was fraud in the securities division which led to the collapse of the bank as a whole. The concept of ‘lead regulation’ developed independently from ‘consolidated supervision’ to manage the regulatory chain which was in place to supervise multi-authorised groups of institutions across various business forms. It originated from the 1986 ‘Big Bang’ and the introduction of the Financial Services Act 1986 and the Banking Act 1987 for the purposes of prudential regulation of diversified financial groups. The issue relating to Barings as well as highlighting the problems and gaps which existed with prudential banking supervision, poor regulation and supervision of multi function firms also highlighted the misleading problem of relying on the capital adequacy ratio as the sole source of determining a financial institution's well-being.

1 The other constituent being the problem of asymmetric information. Speech by Howard Davies, former chairman, Financial Services Authority 'Building the FSA – Progress to Date and Priorities Ahead' Wednesday, 30 September 1998 <http://www.fsa.gov.uk> (last visited 10 May 2009)
3 ibid
4 Such as the UK’s Financial Services Authority (FSA)
5 S Gleeson, Prudential Regulation of Banks under the FSMA page 181
6 ibid
8 ibid p 106
9 ibid
10 Bank and securities regulation
Capital Adequacy

Capital adequacy constitutes one of the foundations of prudential supervision. In most countries there are minimum capital requirements for the establishment of new banks and capital adequacy tests are a regular element in ongoing supervision. In the consultative package “The New Basel Capital Accord” issued by the Basel Committee in January 2001, the Basel Committee proposed a capital adequacy framework based on three complementary pillars: minimum capital requirements, a supervisory review process and market discipline. Capital adequacy is a term used to describe the adequacy of a bank’s aggregate capital in relation to the risks which arise from its assets, its off balance sheet transactions, its dealing operations and all other risks associated with its business. The aim is for a bank to have enough capital in relation to its risks to absorb the highest foreseeable amount of loss and still give allowance in which to realise assets, raise new capital or arrange for disposition of its business.

Statutory requirements govern the minimum amount of capital which a bank must have. These have been established by UK and European legislation and from internationally agreed recommendations of the Basel Committee on Banking Supervision. In the UK, the Financial Services Authority (FSA)’s approach to the calculation of the capital base and the capital ratios and the assessment of capital adequacy are set out in chapters of the FSA’s Interim Prudential Sourcebook for Banks (IPRU (BANK)). This was supplemented by the FSA’s policy statement “Individual Capital Ratios for Banks”. This has been replaced by the Integrated Prudential Sourcebook. In addition, at the international level, the Basel Committee has issued far-reaching proposals to refine and develop the current approach.

According to the drafters of the Basel Core Principles, “Banking, by its nature, entails a wide array of risks. Banking supervisors need to understand these risks and be satisfied that banks are adequately measuring and managing them.” The Core Principles attempt to address the main risks encountered by banks in Principle Six which states that banking supervisors should set prudent and appropriate minimum capital adequacy requirements for all banks. Capital is very vital in its role as it contains risk in a banking firm, protects deposits and equalises competition amongst banks. During the early 1980s, increasing international competition and

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11 The Relationship between Banking Supervisors and Banks' External Auditors' Jan 2002 para 33 page 9 see <http://www.bis.org/publ/bcbs87.pdf> (last visited 1st November 2010)
12 ibid
14 ibid
15 ibid
16 ibid
17 ibid; also see <http://www.basel-ii-risk.com/Integrated-Prudential-Sourcebook/index.htm>
18 see <http://www.basel-ii-risk.com/Integrated-Prudential-Sourcebook/index.htm> The Prudential Sourcebook integrates prudential requirements for banks, building societies, investment firms, and insurers, including directive friendly societies. These requirements incorporated the Basel II credit risk standards which were due for implementation in 2006. A consequence of the Integrated Prudential Source book is that capital held in a financial firm will be more aligned to the risk of the business they write.
20 ibid pp 10,11
21 ibid
losses on loans resulted in concerns about decreased capital levels in international banks.\textsuperscript{22} This instigated consultations between the Basel Committees and supervisory authorities in order to establish a common approach to capital measurements and standards for banks.\textsuperscript{23}

However, these capital measurements were usually, but not always, determined by banking supervisors based on disclosed items in the balance sheet which had been apportioned according to judgements concerning their underlying risks.\textsuperscript{24} The complaints which resulted from this mode of calculation related not only to its arbitrary nature, but also to the fact that it did not discriminate adequately between risk profiles of specific banks or between risks within a single bank.\textsuperscript{25} Furthermore, some banks felt that they were at a competitive disadvantage as a result of the regulation.\textsuperscript{26} The ensuing section discusses measures developed by the Basel Committee to address the flaws inherent in the 1988 Basel Capital Accord. These measures were developed with the consideration for the first time, of the calculation of regulatory capital partly based on the risk models and systems of the individual banks.\textsuperscript{27} However, as the following section will also reveal, criticisms still emanate from the new framework (Basel II).

Proposals to Update the Basel Capital Framework\textsuperscript{28}

The problem with the Basel Accord was that it rewarded risky lending since it required banks to set aside the same amount of capital against loans to shaky borrowers as against those with better credits.\textsuperscript{29} Apart from the fact that capital requirements were just reasonably related to a bank’s risk taking, the credit exposure requirement was the same regardless of the credit rating of the borrower.\textsuperscript{30} Furthermore, the capital requirement for credit exposure often depended on the exposure’s legal form – for instance, an on-balance sheet loan was generally subject to a higher capital requirement than that of an off-balance sheet to the same borrower, even though such differentiation could be insignificant owing to financial engineering.\textsuperscript{31} The subjectivity revolving round such requirements provided loopholes whereby banks could manipulate decisions in such a way as to attain the minimal level of capital requirement – without justification for a corresponding level of risk-related activities being undertaken by the banks. As well as insensitivity to risk – attributing from the fact that Basel I was not responsive and did not adapt easily to new banking activities and risk management techniques, another problem which resulted from Basel I was the reluctance of banks to invest in better risk management systems.\textsuperscript{32} Given this insensitivity to risk, it is not only difficult to see how regulators are able to gauge accurately the level of risk inherent in activities.

\textsuperscript{22} ibid
\textsuperscript{23} Ibid; Results of the consultations were formally incorporated in the Basel Accord in 1988 and later included within the Core Principles; ibid.
\textsuperscript{25} ibid at page 5
\textsuperscript{26} ibid; These banks considered their risk management processes to be effective and that too much capital was being required by the regulation.
\textsuperscript{27} ibid
\textsuperscript{28} J Hitchins, M Hogg and D Mallet, \textit{Banking: A Regulatory Accounting and Auditing Guide} (Institute of Chartered Accountants 2001) 195
\textsuperscript{29} “Basle bust” The Economist April 13\textsuperscript{th} 2000 <http://www.economist.com/displaystory.cfm?story_id=332561>
\textsuperscript{31} ibid
\textsuperscript{32} ibid page 5
undertaken by the bank, it would also complicate the task of alleviating the problem of systemic risk – one of the two principal objectives of financial regulation.

In January 2001, the Basel Committee published revised and updated drafts of its earlier proposals in June 1999 to reform the 1988 Basel Capital Accord. A revised framework known as Basel II consists of three pillars namely: capital adequacy requirements, centralized supervision and market discipline and these pillars constitute the basis of the reform of the Basel Accord. As well as linking capital to credit ratings by agencies such as Moody's and Standard and Poor's, banks' internal credit-ratings are also to be used as determinants of how much capital they should set aside. Basel II aims to improve measures of capital adequacy (Pillar 1), promote greater risk management practices whereby banks are required to continually assess internal risks relative to capital (through Pillar 2) particularly with regards to credit risk. The reforms also aim to develop the Accord into a more universal framework for use by national banking supervisors.

On the 15th November 2005, the Basel Committee on Banking Supervision issued an updated version of Basel II (updated version of the International Convergence of Capital Measurements and Capital Standards: A Revised Framework) and also an updated version of the Capital Accord to incorporate market risks. A “post-Enron” directive had been passed in 2002. The directive aims towards a more effective oversight of financial groups which combine banking, insurance and other activities which had not been adequately covered and accounted for by the EU regulation in operation at that time. As well as its main aim being the reduction of risk, it aims to ensure adequate capitalisation of financial conglomerates by banning practices which inflate a firm's capital base. The deadline for implementation of the directive was January 2005.

**Pillar One is based on more risk-sensitive capital requirements.** While the definition of capital and the minimum capital coefficient of 8% are to remain unchanged, the existing risk categories of credit risk and market risk have been supplemented by a third risk category, namely, operational risk. This will have to be corroborated by capital.

In response to the deficiency of Basel 1, and given the fact that the measurement of minimum capital requirements is based on a general assessment of risk dispersion in the banking sector which does not correspond in every case to the specific circumstances of individual institutions, credit institutions will be required to retain more capital than that stipulated for the minimum capital requirements if their individual risk situation so demands.

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33 See JP Decamps, JC Rochet and R Benoit, 'The Three Pillars of Basel II : Optimizing the Mix in a continuous time Model' April 2002 (last visited 1st November 2010)
34 “Basle bust” The Economist April 13th 2000 (last visited 24th May 2009)
35 “A bit of give and take “ The Economist October 17th 2002 (last visited 1st November 2010)
36 ibid
37 ibid
38 ibid
39 ibid
41 ibid
In addition to adapting to market developments, the revision of regulatory capital also aims to consider risk differentiation at the individual banks. Standard and advanced risk measurement methods should provide banks with an incentive to continuously refine their internal risk management methodologies within the various risk categories.

Pillar Two namely supervisory review consists of four principles. Principle 1 states that banks should have a means of determining their overall capital adequacy in relation to their risk profile and also a plan for sustaining their capital levels and that these processes require board and senior management oversight, sound capital assessment, a comprehensive risk management system, monitoring and review, internal control review. Principle 2 states that supervisors should review and evaluate banks' internal capital adequacy determinants and plans and also their ability to monitor and ensure compliance with regulatory capital ratios. Supervisors should also take necessary supervisory action if they are not satisfied with the outcome of this process. Pillar Two could also include the combination of on-site examinations or inspections; off-site review; discussions with bank management and review of external auditors' work (as long as it sufficiently focuses on necessary capital matters) and periodic reporting. Principle 3 states that supervisors should require banks to operate above the minimum regulatory capital ratio and also that banks hold capital in excess of the minimum. Principle 4 states that supervisors should act at an early stage to prevent capital from falling below stipulated minimum levels.

Risk cycles are usually pro-cyclical due to misperception by banks and markets about how risks move over the period. There has been worry that the new Basel Accord on banks' capital standards could worsen this misperception by banks and markets – danger being that from 2006, banks would have to adjust their minimum capital requirements over time to align with changes in measured risk. As a result, banks' internal risk assessment would vary more than it should over the course of the cycle.

Pro cyclical problems were revealed following the collapse of Northern Rock where it was highlighted that it was complying with Basel capital requirements and had excess capital on the eve of its crash. Another problem identified with Northern Rock was that it had high leverage – relying heavily on debt to finance its assets.

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42 ibid
43 ibid
44 K Alexander, 'Corporate Governance and Basel II' (paper presented at the Institute of Advanced Legal Studies, Russell Square on the 7th October 2004)
45 ibid
47 ibid
48 ibid
Northern Rock had obtained approval from the Financial Services Authority to switch to Basel II advanced approach in order to calculate risk weights for its assets using the bank’s internal models. In December 2006, its capital ration was 11.6 under Basel I calculations but this jumped to 17.5 under Basel II. In June 2007, this had risen to 18.2%; for further information on this see S Cociuba, ‘Seeking Stability: What’s Next for Banking Regulation?’
50 ibid; Leverage is pro cyclical – being high during booms and low during downturns. Whilst some other institutions adjusted their balance sheets by raising new equity or selling assets to repay some debt, Northern rock did not reduce its debt; ibid.
In response to Basel II’s shortcoming and since capital regulation contributes to the degree of economic downturns, a complement of the rules on bank capital with rules on liquidity and leverage is proposed by Cociuba as a means of addressing the inadequacy of risk based capital measures in promoting the stability of the financial system.

Furthermore, counter cyclical regulatory mechanisms have been proposed to address pro cyclical problems which have not been addressed by Basel II.

Other criticisms directed towards Basel 2 include supervisory discretion – that this could result to regulatory capture, that it is excessively risk sensitive, that its capital formula is too prescriptive and complex and that it is not well-suited for 90% of the world's population. Further, even though Basel 2, which is embodied in EU legislation, sets out what should be considered under Pillars 2 and 3, it does not provide directions to authorities of member states regarding what steps are to be taken in the cases involving non compliance. Such matters are to be decided at national level.

Pillar 2 of the New Basel Accord (Basel 2) however recognises the vital role played by supervisors in the maintenance of adequate bank capitalisation. With differences in legal and regulatory structures in different jurisdictions, the Basel Committee is conscious of the need to maintain adequate flexibility in the application of Pillar 2 in different jurisdictions. The Committee’s intention in creating Pillar 2 was to promote and support a more thorough process aimed at internationally active banks to determine the actual capital held and to make this process subject to a more focused supervisory review than may have been the case. Pillar 2, both in its first principle and in the consideration of several more specific risks, makes it clear that the prime responsibility is on banks to make this determination, taking account of their circumstances. While there are linkages between Pillar 1 and 2, the Committee sees clear differences between the two. Pillar 1 represents the minimum regulatory requirement whereas Pillar 2 expressly recognises that banks face risks not included under Pillar 1 (such as interest rate risks in the banking book and uncertainties in

51 Since banks choose to reduce lending when capital is scarce
54 K Alexander, ‘Corporate Governance and Basel II’ (paper presented at the Institute of Advanced Legal Studies, Russell Square on the 7th October 2004)
55 Through the Capital Requirements’ Directive
57 ibid
59 ibid
60 ibid
61 ibid
62 See 'Continued progress towards Basel II: Current sense of the Committee on the implementation of the supervisory review process – Pillar 2' 15th Jan 2004 <http://www.bis.org/press/p040115.htm>
measuring operational risks)\textsuperscript{63} and that many banks choose to operate at capital levels which are above those required under Pillar 1.\textsuperscript{64}

Pillar 2 therefore expresses the Committee’s intention that internationally active banks should operate above the Pillar 1 minimum.\textsuperscript{65} This principle plays a vital role in the overall Capital Accord, and Pillar 2 provides considerable flexibility as to how that is achieved.\textsuperscript{66}

The transparency requirements (Pillar 3) are not only designed to facilitate a complementary use of market mechanisms for prudential purposes but also bolster the minimum capital requirements (Pillar 1) and the supervisory review process (Pillar 2).\textsuperscript{67} This derives from the assumption that well informed market participants will reward a risk-conscious management strategy and effective risk control by credit institutions in their investment and credit decisions and will correspondingly penalise riskier behaviour.\textsuperscript{68} Hence a greater incentive to monitor and efficiently manage risks should be stimulated within credit institutions.\textsuperscript{69}

Having discussed the regulatory flaws in the Basel 1988 Accord, namely the fact that it was not risk-sensitive and the efforts of the Basel Committee in recognizing the calculation of regulatory capital which is premised partly on the risk models and systems of the individual banks, a shift from a wide command-and-control style of bank supervision to one whereby banks are still required to regulate capital, albeit according to their own models can be illustrated.

Meta – Risk Regulation

Regulation is often perceived as consisting of command and control strategies whereby the regulator imposes detailed rules with which the regulator monitors compliance.\textsuperscript{70} However, this type of regulatory strategy draws firms into regulatory processes and attempts to both influence and make use of firms internal risk management and control strategies.\textsuperscript{71} As a result, supervision is not so much about the simple monitoring of firms' compliance with regulatory rules but more about evaluating and monitoring firms' awareness of the risks created by their business and of their internal controls.\textsuperscript{72}

Meta risk regulation concerns the risk management of internal risk and being able to use the firms' own internal risk management systems to achieve regulatory objectives.\textsuperscript{73} The Basel II Capital Accord provides an example of the operation of meta regulation in that bank capitalisation is not to be imposed externally by regulators but will be determined by a bank's own internal risk management models provided these models are considered by regulators to

\textsuperscript{63} \url{http://www.bundesbank.de/bankenaufsicht/bankenaufsicht_basel_saeule2.en.php}
\textsuperscript{64} See ‘Continued progress towards Basel II : Current sense of the Committee on the implementation of the supervisory review process – Pillar 2’
\textsuperscript{65} ibid
\textsuperscript{66} ibid
\textsuperscript{68} ibid
\textsuperscript{69} ibid
\textsuperscript{71} ibid
\textsuperscript{72} ibid
\textsuperscript{73} ibid p 37
be adequate. One major advantage of meta-risk regulation is that whilst Basel II builds in a second pillar of a supervisory review process which requires regulators to ensure the soundness of banks' internal risk rating processes, it has been suggested that there is scope for bank “gaming and manipulation” of ratings as regulators at best, have information that is not as much as that of banks whilst banks have access to private risk-relevant information that can be excluded from the rating system presented to regulators.

**Most Recent Initiatives**

On the 21st February 2008, a paper “Liquidity Risk: Management and Supervisory Challenges”, was issued by the Basel Committee on Banking Supervision (BCBS). Responding to the market turmoil which commenced in mid-2007, the Committee’s Working Group made observations on the strengths and weaknesses of liquidity risk management whenever confronted with crisis.

On the 11th April 2008, the report delivered by the Financial Stability Forum (FSF), highlighted five recommendations for enhancing the resilience of markets and financial institutions. The five points include: strengthening prudential oversight of capital liquidity and risk management, improving transparency and valuation procedures, implementing changes to the role and uses of credit ratings; and fortifying the authorities’ responsiveness to risks.

On the 16th April 2008, the Basel Committee unveiled some procedures which are aimed at making the banking system more resilient to shocks, namely. The enhancement of different aspects of Basel II whilst at the same time observing the need for timely implementation of the Basel II framework; the consolidation of global sound practice standards for managing liquidity risk; stimulating efforts to strengthen banks’ risk management and supervisory practices and; improving market discipline through better disclosure and valuation procedures.

As Basel II is just being implemented in most Basel Committee member countries, the importance of its implementation, since it reflects the types of risks banks are confronted with in an ever increasing market oriented intermediation process, has been emphasised. Furthermore, some measures aimed at helping to ensure sufficient capital, incorporate off-balance sheet exposures more effectively and improve regulatory capital incentives will be introduced by the BCBS.
The BCBS aims to issue for consultation, in July 2008, global sound practice standards for the management and supervision of liquidity risk.  

CONCLUSION

The Basel Committee has come a long way from the days of the 1988 Basel Capital Accord, which not only established minimum capital requirements for internationally active banks and was able to increase capital levels during this period, but was actually also the first international accord of such.  

Having dedicated more focus to the first and second pillars of Basel II, with the third receiving the least attention, Basel II could be criticised for not having accorded as much attention as is due to Pillar 3.

The summer of 2007 signalled the start of events which culminated in the subsequent nationalisation of Northern Rock in the UK and the demise of Merill Lynch and Lehman Brothers. The unfolding of the mortgage crisis was revealed during this period and the crises deepened in 2007 and 2008 – resulting in turmoil for the global financial markets.

Some lessons from the Financial Crisis of 2007/08 indicated flaws in the following areas:

- Market discipline: This was ineffective in constraining risk taking outside the banking sector
- An underestimation of the systemic importance of some non-banks institutions
- That regulators (and supervisors) failed to take adequate account of the systemic risks presented by the interaction between regulated and unregulated institutions activities (such as hedge funds), and markets.

According to Brunnermeier et al failures such as Northern Rock, Lehman Brothers and Bear Stearns were triggered not only by their inability to transfer their liabilities (funding illiquidity), but also their inability to sell mortgage products at “non-fire sale-prices” (market illiquidity). The extent to which the maturity of funding determines the risk of an asset is an important lesson from the Crash of 2007/2008.

A reason which was attributed to Northern Rock’s vulnerability was its excessive reliance on wholesale funds.

Wholesale funds are obtained from non-financial corporations, money market mutual funds, foreign entities and other financial institutions. Typically, the funds are raised on a short-term basis through instruments such as certificates of deposit, commercial paper, repurchase agreements and federal funds.

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83 B Gadanecz ‘Recent Initiatives by the Basel-based Committees and Groups’ pg 84
85 Merrill Lynch was taken over by the Bank of America.
88 see ibid at viii
90 ibid
What Proportion of Risks are Actually Provided for by Basel II?

Hedge funds
The main purpose of Basel I and Basel II focuses round the incorporation of risks. As a starting point, it needs to be stated that risks cannot be eliminated – they can only be minimised. If risks were eliminated, then regulation would serve no purpose. Concerns remain over hedge funds as this is an area where regulators have limited jurisdiction. Many regulators do not authorise such funds and most of the administrators of these hedge funds are located offshore.\textsuperscript{91} In March 2008, the Financial Stability Forum (FSF) during its 19\textsuperscript{th} meeting, considered efforts by the hedge fund industry to review and improve sound practices – particularly those of the UK-based Hedge Fund Working Group and the US-based Asset Managers’ Committee and Investors’ Committee with the aim of increasing transparency and providing better risk management practices.\textsuperscript{92}

Non bank financial institutions
Even though banks are unique in the sense of the extent of systemic risk they generate, such risks could also be triggered by a non bank financial institution. This could be illustrated by the effects of Enron’s collapse on the financial markets. It could then be argued that the disclosure of risk to market participants under Pillar 3 is not on its own sufficient, and that there is need for greater efforts to incorporate those risks attributed to non-bank institutions.

\textsuperscript{91} \textit{FSA Annual Report} (2004/05) at page 22
The risks identified by the Financial Services Authority (FSA) in relation to hedge funds can be summarised as follows: Serious market disruption and erosion of confidence as a result of the failure or significant distress of a large and highly exposed hedge fund or, with greater probability, a cluster of medium sized hedge funds with significant and concentrated exposures; Liquidity disruption leading to disorderly markets as hedge funds make increasingly illiquid investments in particular markets and instruments whilst offering their investors the ability to withdraw their money more quickly.

This could result in a significant liquidity mismatch and require hedge fund managers to dispose of assets very quickly, causing volatile and potentially disorderly markets; insufficient reliable and comparable data is available to regulators which limits their ability to make informed decisions about risk and take proportionate regulatory action to mitigate such risk; Control issues arise as the trading (rather than management) background of many hedge fund managers, and their typical ownership structures, means that some managers do not have the right skills or incentives to create an effective control infrastructure. See \texttt{<http://www.fsa.gov.uk/pages/about/media/notes/bn008.shtml>}

\textsuperscript{92} B Gadanecz ‘Recent Initiatives by the Basel-based Committees and Groups’ pg 87