

The Review of Basel II Uniform Regulations, Evaluation and Its Weaknesses

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Abstract: The journal of Banking and finance publishes theoretical and empirical research in major fields of banking and finance. The aim of this paper is to increase knowledge concerning financial institutions and capital market regulations. It is to improve communication between the academics, policy makers and research communities in their operational decision for financial institution.

Keywords: Banking regulations; banking efficiency; Bank Solvency; Capital structure Corporate Finance; Basel, Pillar.

1. INTRODUCTION

In 2004, the Basel committee adopted the revised framework on international convergence of Capital measurement and capital standards, known as Basel.¹ In order to address the increasingly apparent shortcomings of the current framework, Basel II will introduce more sophisticated approaches for calculating credit risk capital requirements and aims to reduce the scope of regulatory capital arbitrage, allow for credit risk mitigation techniques, and introduce a capital charge for operational risks as well as greater transparency through comprehensive disclosure requirements.²

2. REVIEW OF BASEL II

Basel II s framework is based on the following three pillars:

Pillar 1, however, provides a fundamental update of the Basel 1 methodology for calculation of risk weighted assets, the denominator of the capital ratio.³ Subdivided into three approaches that differ in complexity:

Firstly, the standardized approach- the simplest of the three, augments the simple risk –bucket approach of Basel 1 with further gradation in risk-weights of particular credit exposures based on, among other factors, credit rating agency ratings, for example the higher the credit rating of a company that receive a loan, the lower the amount of capital that a bank is required to hold against that loan.⁴ The SA increases the risk sensitivity of the capital framework by recognizing that the different counterparts within the same categories can present far different risk to the financial institutions.⁵

Secondly, the foundation internal ratings based approach (F-IRB) is a models based credit risk calculation, with regulators supplying both the models and the assumptions to be used for inputs into models for losses in the event of default of particular credits (“Loss given default”).⁶

Under this method, banks estimate the PDs or LGD themselves, and other inputs needed for calculation of capital requirement are provided by specific bank supervisors. Those banks allowed to use this method are supposed to meet the requirement mentioned in Basel II.⁷

¹ Basel 2.

² Basel 2 & Banks: key aspects and likely market impact, Nomura fixed income research.20 September 2005. p.2

³ ECB, Occasional Paper No 40, December 2005

⁴See Ibid (no.1), p.19-51.

⁵ Youbaraj Paudel. Minimum capital requirement Basel 2: credit Default model & its application. Vrije Universiteit, 21/06/2007. p. 12

⁶see Ibid(no.1), p. 59-60; Herring, p.414-15

Thirdly, the advanced internal ratings based approach (A-IRB). This modelling approach relies on risk model supplied by regulators, but unlike the foundation approach, the A-IRB allows banks themselves to determine certain assumptions used by model for default and other key credit risk-characteristics, include but not limited to loss given default, subject to regular approval.⁸ This is for large banks with enough resources to develop complex model to use A-IRB approach.

Banks which meet the requirement for overall ratings system and process as well as the other incremental requirements, which are related to the estimation of all risk parameters like Pd, LGD and EAD, are permitted to use their own estimation of inputs to the risk weight function.⁹

Pillar 1 is a set of minimum regulation for capital requirement. This is the amount of capital a bank should hold against risks which is the 8% of capital to a risk weighted assets. This new framework provided a continuation of approaches from basic to advanced methodologies to determine capital level by measuring both credit risk and operational risk.

Basel 1

Total capital = the bank's capital ratio

Credit risk+ market risk minimum 8%

Basel II

Total capital (unchanged) = the bank's capital ratio

Credit risk+ market risk minimum 8%

+operational risk

Source: Bank for international Settlement (BIS), 2001

Pillar II is the supervisory review. It deals with the process for supervisory review of an institution's risk management framework and, ultimately, its capital adequacy. It sets out specific oversight responsibilities for the board and senior management, thus reinforcing

Principles of internal control and other corporate governance practices are established by regulatory bodies in various countries worldwide. According to the Basel Committee, "The [New Accord] stresses the importance of bank management developing an internal capital assessment process and setting targets for capital that are commensurate with the bank's particular risk profile and control environment. Supervisors would be responsible for evaluating how well banks are assessing their capital adequacy needs relative to their risks. This internal process would then be subject to supervisory review and intervention, where appropriate".¹⁰

As a consequence, the supervisor may require, for example, restrictions on dividend payments or the immediate raising of additional capital.

Pillar III aims to bolster market discipline through enhanced disclosure by banks. It "sets out disclosure requirements and recommendations in several areas, including the way a bank calculates its capital adequacy and its risk assessment methods".¹¹ Enhanced comparability and transparency are the intended results. At the same time, the Basel Committee has sought to ensure that the Basel II disclosure framework aligns with national accounting standards—and, in fact, does not conflict with broader accounting disclosure standards with which banks must comply.¹² Basel 2 will limit banks saving on capital requirement initially until potential effects of Basel 2 are better known.

Pillar II is based on four principles:

*Principle 1: "Banks should have a process for assessing their overall capital adequacy in relation to their risk profile and a strategy for maintaining their capital levels."*¹³ Banks must demonstrate their chosen internal capital targets as well as founded and consistency of overall risk profile and operational environment. Bank management bears the basic responsibility to ensure the adequacy of banks support to risks. To be rigorous, such a process would encompass the

⁷ Youbaraj Paudel. Minimum capital requirement Basel 2: credit Default model & its application. Vrije Universiteit, 21/06/2007. p. 15

⁸ Basel 2, p. 144-56.

⁹ Youbaraj Paudel. Minimum capital requirement Basel 2: credit Default model & its application. Vrije Universiteit, 21/06/2007. p.15

¹⁰ Banks for International Settlement, Secretariat of Basel Committee on Banking Supervision, the New Basel Capital Accord: an explanatory note, January 2001 p.5

¹¹ Ibid

¹² Banks for International Settlement, Secretariat of Basel Committee on Banking Supervision, the consultative Document, overview of the Basel Capital Accord, April 2003, p. 11

¹³ Basel Committee on Banking Supervision, Consultative Document. The New Basel Capital Accord, April 2003, p.139.

following criteria (which the Basel Committee discusses at some length in the third Consultative Document): the board and senior management oversight, sound capital assessment, comprehensive assessment of risks, monitoring and reporting and control review.

The board and senior management should make analysis of a bank's current and future capital requirement in relation to its strategic objectives is vital element of strategic planning process. The strategic plan should clearly outline the capitals needs, anticipated capital expenditures, desirable capital level, and external capital sources. The board of directors has responsibility for setting the bank's tolerance risks. It should also ensure that management establishes a framework for assessing the various risks develops a system to relate risks to the banks capital level and establishes a method for monitoring compliance with internal policies.

Par 728-730

To ensure sound capital assessment, there must be policies and procedures designed to ensure that the bank's identifies, measures, and report all material risks. The processes must relate to capital level of risk. These processes must state capital adequacy goals with respect to risk, taking into account the banks strategic focus and business plan. A process of internal controls reviews and audits to ensure the integrity of the overall management process.

Par 731

*Principle 2: "Supervisors should review and evaluate banks' internal capital adequacy assessments and strategies, as well as their ability to monitor and ensure their compliance with regulatory capital ratios. Supervisors should take appropriate supervisory action if they are not satisfied with the result of this process."*¹⁴ This supervisory review could involve some combination of:

- _ On-site examinations or inspections
- _ Off-site review
- _ Discussions with bank management
- _ Review of work done by external auditors
- _ Periodic reporting

*Principle 3: "Supervisors should expect banks to operate above the minimum regulatory capital ratios and should have the ability to require banks to hold capital in excess of the minimum."*¹⁵

Capital requirements under Pillar I include a buffer for uncertainties pertaining to the bank population as a whole. Pillar II addresses bank-specific uncertainties.

*Principle 4: "Supervisors should seek to intervene at an early stage to prevent capital from falling below the minimum levels required to support the risk characteristics of a particular bank and should require rapid remedial action if capital is not maintained or restored."*¹⁶ In taking remedial actions, the regulator could require that the bank undergo intensified monitoring, be restricted in paying dividends, prepare a satisfactory capital restoration plan, and/or raise additional capital immediately. Regulators could require increased capital while the bank seeks to improve its position, perhaps with enhanced systems and internal controls.

What is central to these principles is the need for banks to access the capital adequacy relative to risk overall and to review banks assessment and consequently to determine whether to require banks to hold additional capital beyond that required under pillar1.

Basel 2 allows banks to choose which of the new credit risk and operational risk approaches is applicable to it, due to complexity of the advanced approach and its uncertainty

3. EVALUATION

An important consideration in evaluating Basel II ratios of financial institutions, however, is that defaults tend to cluster, correlations increase, and loss rates exceed historical means during periods of financial market stress. Thus, while the

¹⁴ Banks for International Settlement , Consultative Document, the New Basel Capital Accord 2003 p.144

¹⁵ Ibid

¹⁶ ibid

Basel II assumptions appear conservative relative to empirically derived correlations during “normal” market conditions; it is unclear whether the Basel II assumptions sufficiently capture correlation “jumps” during market crises. Similarly, regulatory imposition of capital ratios can be justified as a device to hold banks the capital that market the market would require in the absence of government safety net, a protection against the systematic problems that could result from bank failure, or both.¹⁷

Additionally, it is important to keep in mind that the Basel II correlations are static values describing the behavior of dynamic assets whose future loss experience is dependent on financial product innovation, changes in risk factors (e.g., underwriting practices), and structural shifts in financial markets.¹⁸ For example, the delinquency rates currently materializing on recent vintages of sub prime residential mortgages reflect sensitivities to risk factors (e.g., home price declines, the rapid growth of high-risk “affordability” features, deterioration in mortgage underwriting practices, higher loan-to-value ratios, and fraud misrepresentations within the origination process) that are causing differences in performance relative to the longer-run history for this asset class. Anecdotal evidence suggests that correlations for these more recent vintages likely will exceed the correlations derived from analyzing longer-run empirical loss data for mortgages, exemplifying the dynamic nature of correlations.

In the interests of tractability and establishment of a level playing field, Basel II applies the same correlation assumptions globally, irrespective of potential differences in the risk profile of assets across different geographic regions. For example, the same Basel II correlation values are applied to assets originated in Europe, the United States, Latin America and Asia, raising the issue of whether the IRB formulas potentially understate the capital needed to cover UL on portfolios of certain geographically concentrated portfolios. Of particular relevance is sensitivity to risk factors that are unique or that differ across countries and that might be associated with more extreme loss rate volatility than is indicated by the Basel II correlation assumptions.¹⁹ On its IRB method, the shared capital rules may provide reassurance that banks in other countries are sufficiently sound that they are unlikely to create significant counterparty risks for the country’s own banks, or even trigger an international crisis.²⁰ The Basel II methodology for operational risk is an excellent model for the evaluation of extreme risks in other high consequence areas such as terrorism, bio security, and rare natural disasters.²¹ It is also likely to be beneficial for financial stability and integration, although it raises complex issues that will need to be followed up closely.²² A key concern about current methods of determining risk weighted asset is that they leave room for individual banks to optimize capital requirements by understanding their risks and thus being permitted to hold lower capital.²³ Basel I was also harmonized set of capital adequacy requirements albeit a considerably simpler unlike Basel II, however, it did not include any explicit expectations as to how national officials would go about implementing the capital requirements by banks and it laid down only substantive rules that should be made binding on banks at national level, not a particular to supervision.²⁴ Contrary to that, the turmoil has revealed serious flaws with relying solely on such an approach given a long period of stability, backward-looking historical information indicated benign conditions so that these models did not pick up the possibility of severe shocks nor the build up of vulnerabilities within the system. Historical statistical relationships, such as correlations, proved to be unreliable once actual events started to unfold.²⁵ Banks with higher RWA performed worse during the severe phase of crisis, from July 2007 to September 2008, suggesting that the equity investors did look at RWA as a determinant of banks stock returns in the period and thus the relationship is weaker in Europe where banks can use Basel II internal risk models.²⁶

4. WEAKNESSES

According to the Bank of International Settlements, the financial crisis has highlighted weaknesses in stress testing practices employed prior to the start of the turmoil in four broad areas: Use of stress testing and integration in risk governance; Methodologies; Scenario selection; and Testing of specific risks and products.²⁷ The global financial crisis

¹⁷ Peterson institute for International Economics – www.petersoninstitute.org- accessed on 2012-05-02

¹⁸ Basel 2 Correlation Values- Fitch Ratings- credit market research financial institution, special report. 19 May 2008. p.1

¹⁹ Ibid at 13

²⁰ Peterson Institute for international Economics – www.petersoninstitute.org

²¹ J. Franklin, S.A. Sisson, M.A. Burgman, and J.K. Martin (2008). “Evaluating extreme risks in invasion ecology: learning from banking compliance,” *Diversity and Distributions* 14, 581-591

²² ECB Occasional paper no 4 December 2005

²³ IMF Working paper (WP/12/36) how risky are the banks risk weighted assets? Evidence from the financial Crisis. Sonali Das and Amadou N.R Sy. January 2012. p 3

²⁴ Peterson Institute for International Economics - www.petersoninstitute.org- accessed in 2012/05/02 (195)

²⁵ Basel II Stress Tests - Weaknesses That Led to the Turmoil By George J Lekatis available at <http://ezinearticles.com/?Basel-II-Stress-Tests---Weaknesses-That-Led-to-the-Turmoil&id=2021757> accessed on 2012-05-02

²⁶ IMF Working paper (WP/12/36) how risky are the banks risk weighted assets? Evidence from the financial Crisis. Sonali Das and Amadou N.R Sy. January 2012. p 4

²⁷ George J Lekatis, Basel II Stress Tests - Weaknesses That Led to the Turmoil, available at : <http://ezinearticles.com/?Basel-II-Stress-Tests---Weaknesses-That-Led-to-the-Turmoil&id=2021757> accessed 2012-05-02

has reinforced the pre-existing belief in the weaknesses of the Basel II Accord. It is argued that capital-based regulation and the Basel-style capital regulation cannot deal with financial crises and that attention should be paid to liquidity and leverage. The Accord is criticised, in view of what happened during the crisis, for allowing the use of bank internal models to determine capital charges, for boosting procyclicality of the banking industry, for reliance on rating agencies and for being an exclusionary, discriminatory and a one-size-fits-all approach.²⁸

According to the Remarks by Stefan Walter (2010), the pre-crisis financial system was characterized by the following weaknesses:

- too much leverage in the banking and financial system and not enough high quality capital to absorb losses;
- excessive credit growth based on weak underwriting standards and under pricing of liquidity and credit risk;
- insufficient liquidity buffers and overly aggressive maturity transformation, both direct and indirect (for example, through the shadow banking system);
- inadequate risk governance and poor incentives to manage risks towards prudent long term outcomes, including through poorly designed compensation systems;
- inadequate cushions in banks to mitigate the inherent procyclicality of financial markets and its participants;
- Too much systemic risk, interconnectedness among financial players as well as common exposures to similar shocks, and inadequate oversight that should have served to mitigate the too-big-to fail problem.²⁹

5. CONCLUSION

Basel II is a harmonized set of capital adequacy and supervisory requirements that, at least with respect the IRB approaches, were developed more or less from scratch through international negotiations.³⁰ The global financial crisis has raised concerns about and exposed the loopholes in the Basel II Accord. The Lehman scandal of reckless decisions by directors resulted to world economic meltdown. Lessons were learned taken from the Enron. As a result, the Basel Committee on Banking Supervision has come up with proposals to reform Basel II in search of the causes and ramifications of the global financial crisis. This was caused by failure of big banks to acknowledge and manages risk factor. Therefore the introduction of Basel 3 will be to break the shackles of Basel II especially in housing loans. Thus it has to evaluate extreme risk invasion and concentrate on bank compliance focusing on credit market research and liquidity measures.

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²⁸ Imad A Moosa. Journal of Banking Regulation (March 2010) 11, 95-114

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