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ABSTRACT

As well as highlighting the importance of cost benefit analyses in decision- making processes where (expected) outcomes are very difficult to predict – given the degree of prevailing and potential risks and uncertainties, as well as the unquantifiable nature of such risks and uncertainties, this paper also illustrates the importance of complementary measures in the current Basel risk based capital adequacy framework.

As technological advances and societal changes contribute towards the generation of certain levels of risks – some of which were previously not in existence, it is increasingly becoming evident that risks certainly have a dual nature. Institutional risks comprise of risks which are not only attributable to the firm or organisation where models (such as internal controls) or techniques are operated, namely internal control risks, but also the risks involved in managing those risks.

In view of such uncertainties, and the continual evolution of risks, it becomes immediately apparent that certain outcomes cannot be predicted with high accuracy and certainty – hence the need to weigh the investment of high expenditure in such unpredictable outcomes. Is the desire to achieve comparability, as well as simplicity, greater than the need to attain accurate, reliable and more relevant results through investment in more complex techniques? Such techniques involving not only initially high outlays but also costs (as well as risks) involved in managing such techniques? These constitute some of the questions which this paper attempts to address.

Key words: comparability, simplicity, risk based capital adequacy framework, bank stress testing, risks, risk theories, Basel leverage ratios, liquidity standards

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Marianne Ojo

A. Introduction

The current Basel capital adequacy framework, with its reliance on the risk-based capital at its core, has been considerably enhanced and improved in its goals to balance the objectives of:

- producing a sound minimum standard of capital adequacy for internationally active banks – whilst still being capable of application to smaller institutions;
- producing a well understood measure of capital adequacy that is comparable across banks and over time;
- support a reasonable level playing field between banks

This is evident from lessons drawn from the recent Financial Crisis – since flaws in relying upon capital measures, on their own, were revealed – hence compelling the need to introduce liquidity standards. Basel III has also witnessed a shift in focus from the previous objective of ensuring the soundness of individual institutions to, additionally safeguarding the stability of the banking system. Current efforts in revising the Basel Leverage Ratio are also geared towards supporting a reasonable level playing field between banks.

Further, in assessing whether the current framework appropriately and adequately balances the objectives above, as set out in paragraph 29 of the Discussion Paper, „The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability,“¹ consideration is to be had to trade-offs required to find the right balance: Trade offs between costs in improving framework in a bid to improve complexity, risk sensitivity – at the possible expense of simplicity and comparability.

a) Cost benefit analyses and assessments of the possible benefits that can be derived from an investment in complex, advanced models and techniques which are incorporated into the regulatory framework. This is required since the engagement of complex techniques at extremely high costs, does not always guarantee that accuracy or more accurate results and predictions will be achieved by using such techniques.

b) Complexity of the Risk Based Capital Adequacy Framework (which is aimed at increasing its risk sensitivity, but which may result in reduced comparability) and whether such complexity has improved its performance – as is evident from the recent Financial Crisis. Such complexity embraces dynamism and the ability of the risk based capital adequacy framework to adapt to changes – as will be considered in the ensuing section.

B. Dynamism and the ability of the risk based capital adequacy framework (as well as its supplements/complements) to adapt to changes

Within this context, it is also necessary to give due attention to theoretical considerations – as well as jurisdictional and environmental factors. The lessons drawn from bank stress testing techniques, as well as from the recent Financial Crisis, illustrate and indicate that even with the incorporation of more sophisticated models into the risk based regulatory framework, certain stress testing techniques were still not flexible² enough to adapt to environmental changes. It should also be mentioned, that even though various stress testing techniques have incorporated historical scenarios,³ which could be considered to be premised (to an extent) on the „risk society“ theory, dynamic⁴ considerations were (and are) still lacking in such models. The risk society approach is one that identifies broad socio-economic and political changes which occurred in late modern societies. „Alongside these changes, loss of faith in institutions and authorities and a greater awareness of the limits and uncertainties linked to science and technology have been identified“.⁵

Coupled with the inherent uncertain nature of risks is also the quantifiable, as well as unquantifiable aspect and characteristic of risk. In this regard, it is important to distinguish between risk and uncertainty. Whilst risk is traditionally associated with probability calculations – which suggests that an event can be predicted and controlled, „uncertainty is not capable of measurement and deals with possibilities incapable of calculation which are based on guesswork and judgement“.⁶

To which will be added, that in line with the risk society theory, risks are incapable of being predicted or measured with astute accuracy – even though they are still more predictable and quantifiable than uncertainties. Such unquantifiable nature being attributed to what has been highlighted under the risk society theory - limits and uncertainties linked to science and technology, as well as the dynamism inherent in changes in science and technological developments.

In considering the features that make risk such a vital tool for regulation, Rothstein et al conclude that“risk provides an organizing concept for societal decision-making under uncertainty and is a key characteristic of modernity.....as regulatory systems attempt to control events that have formerly been beyond control, the process of decision making transforms those events into risks as a way of rationally managing the limits of regulation.“⁷

2 „Stress testing frameworks were usually not flexible enough to respond quickly as the crisis evolved (eg inability to aggregate exposures quickly, apply new scenarios or modify models).“ See Basel Committee on Banking Supervision, Principles for Sound Stress Testing Practices and Supervision May 2009 at page 3 <http://www.bis.org/publ/bcbs155.htm>

3 „Most risk management models, including stress tests, use historical statistical relationships to assess risk. They assume that risk is driven by a known and constant statistical process, ie they assume that historical relationships constitute a good basis for forecasting the development of future risks. The crisis has revealed serious flaws with relying solely on such an approach.“ See Basel Committee on Banking Supervision, Principles for Sound Stress Testing Practices and Supervision May 2009 at page 5 <http://www.bis.org/publ/bcbs155.htm>

4 The Financial Crisis also revealed that, especially in stressed conditions, „risk characteristics can change rapidly as reactions by market participants within the system can induce feedback effects and lead to system-wide interactions.“ see *ibid* at page 4. Furthermore, and in general, „stress tests of structured products suffered from the same problems as other risk management models in this area in that they failed to recognise that risk dynamics for structured instruments are different from those of similarly-rated cash instruments such as bonds.“

5 „Risk society“ theory also suggests that the focus on risk in government and regulatory circles is a response to a general realisation that there are limits to the ability to know or control the uncertainties related to late modernity.

6 See J Gray and J Hamilton, *Implementing Financial Regulation : Theory and Practice* (2006) at page 20

7 H Rothstein, M Huber and G Gaskell „A Theory of Risk Colonization: The Spiralling Regulatory Logics of Societal

Coupled with risks arising from the risk-society theory are also „man-made“ institutional risks or the risks of risk management. The shift towards the management of institutional risks and the risks of risk management are evident. Institutional risks and the risks of risk management should also be distinguished from the more natural occurring and inevitable societal risks which are less capable of being controlled.

As previously mentioned, even though various stress testing techniques incorporated historical scenarios into their models, this did not ensure the required level of predictability in averting the destabilising events which occurred during the recent Financial Crisis.⁸

C. Is it then worth the investment if despite all the expenditure, predictions can still not be made with the required and acceptable level of accuracy?

The answer to this partially lies with cost-benefit considerations as well as the overarching need to consider the fact that bank stress testing techniques, just as Basel leverage ratios (and the risk based capital adequacy framework, the Basel liquidity standards and other monitoring tools) are all intended to serve as complementary measures.

This underlines the point that such techniques or models should not ideally, be operated in isolation. Bank stress testing techniques, in their role as predictive, monitoring and risk management tools, are intended to serve as complements to the risk based adequacy framework, as well as the Basel leverage ratios and liquidity standards. In essence, they are a necessary and vital supplement to capital and liquidity measures.

Therefore, in undertaking a cost benefit analysis of the investments to be undertaken, the role of stress testing techniques as supplementary measures, to an extent, should also be taken into consideration.

Furthermore, as re iterated previously, there is need for a balance between the desire for sufficient standardization (as a means of facilitating consistency, comparability and enhanced disclosures) and the need to invest in more complex techniques – even though greater complexity may result in reduced comparability and as a consequence of reduced standardization, result in the facilitation of regulatory capital arbitrage practices.

As a means of corroborating the points which have been highlighted, measures introduced by the Basel Committee, which are designed to reduce reliance on a single capital adequacy ratio as the primary means of ensuring the soundness of banks, are therefore welcomed. As indicated in the discussion paper, „The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability“, such measures introduced by the Basel Committee, include:⁹

and Institutional Risk“ (2006) *Economy and Society* (35) 1 at page 99

8 „Historical scenarios were frequently implemented based on a significant market event experienced in the past. Such stress tests were not able to capture risks in new products that have been at the centre of the crisis. Furthermore, the severity levels and duration of stress indicated by previous episodes proved to be inadequate. The length of the stress period was viewed as unprecedented and so historically based stress tests underestimated the level of risk and interaction between risks.“ See Basel Committee on Banking Supervision, *Principles for Sound Stress Testing Practices and Supervision* May 2009 at page 5 <http://www.bis.org/publ/bcbs155.htm>

9 Basel Committee on Banking Supervision, „The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and

- The introduction of a leverage ratio
- An additional capital surcharge for global systemically important banks (G-SIBs)
- A proposed framework for measuring and controlling large exposures
- Minimum liquidity and funding standards

In support of the comments highlighted by the Committee in its discussion paper,¹⁰ „risk is indeed multi-faceted and far from straight forward to measure“ - and whilst a risk sensitive regulatory framework, definitely offers a number of benefits, the complexity resulting therefrom bears with it, „potentially adverse consequences.“

The risk based capital regime should definitely remain at the core and focus of the regulatory framework for banks – supported by liquidity and funding metrics, as well as other measures such as the leverage ratio.

Even though, as highlighted in the discussion paper, under paragraph 36, „the banking industry has contributed to the increasing complexity of the capital framework and the consequent reduction in comparability“, such a contribution to the complexity also partly derives from circumstances beyond banks' control – namely , their very nature.

By their nature, bank holding companies (BHCs) are usually associated with subsidiaries – which usually or sometimes operate in foreign jurisdictions. Hence such inevitability needs to be considered in accepting the fact that a „one-size-fits-all“ approach is not workable for jurisdictions operating and implementing Basel regulations.

Indeed, even though different treatments in the implementation of parts of Basel regulations across various jurisdictions may contribute to regulatory arbitrage practices, jurisdictions which over-comply with standards, rather than under-comply are to be commended.

Hence a distinction should be drawn between those jurisdictions which, even though it appears, are not consistently implementing standards, are nevertheless applying them at a level and degree which is considered to be above global standards.

Further, consideration needs to be given to the fact that jurisdictions are not expected to implement such standards in a manner which would result in their being placed at a competitive disadvantage.

The recent proposals introduced in the U.S as a means of increasing the Basel Leverage Ratio provides an illustration of this. The reasons and background for the introduction of such proposals need to be taken into account. As well as the proposals being aimed at minimising distortions in competition, „too-big-to-fail“ considerations and the need to reduce moral hazard constituted part of the impetus for the U.S agencies decision to proceed with the introduction of such proposals.

As a means of further expressing my support for the risk based capital adequacy framework, attention is drawn to the advantages of risk-sensitive capital requirements, namely, that they:¹¹

Comparability' July 2013 at page 1

¹⁰ See *ibid*

¹¹ *Ibid* at page 10

- Allow supervisors to better identify banks' risk exposures and their individual risk profiles – hence demanding corresponding capital requirements
- Provide fair basis for a level playing field of banks in systems with different banking structures
- Strengthen comparability by reflecting a variety of different risk drivers
- Encourage better risk management by banks
- Allow banks to manage their businesses more efficiently in terms of the use of scarce capital
- Reduce incentives for regulatory arbitrage – if supported by clear and detailed requirements

Furthermore, as re iterated by the Committee, „to the extent that a degree of complexity achieves much more accurate risk measurement, it is an investment worth making. In practice, however, not all the intended benefits may be fully achievable.“

Reasons why intended benefits may not be fully achievable have already been highlighted: namely, the need for theoretical considerations (application of risk theories), the difficulties attributed to the quantifiability of risk, changes in society over time (risk society theories) which may affect the predictability of results of even the most complex and highly sophisticated models or supplementary tools used in connection with the risk based capital adequacy framework.

Furthermore, it is noted that many bank stress testing techniques have incorporated reasonable considerations¹² into their models – nevertheless still had problems with accurately predicting the events which generated and triggered the recent Financial Crisis. In this respect, whilst a certain degree of investment is worth the effort, it does not always guarantee the expected or desired results.

For this reason, supplementary measures introduced by the Committee should operate together as intended – whilst attempting to keep costs as minimal as possible. Expenditure will also be required to be kept at a minimal level since the present capital adequacy framework, indeed, reflects developments in the financial sector over decades – and as rightly observed, „changes will need to be designed so as to preserve the benefits that the framework currently provides. Such changes probably requiring further investment and hence corresponding expenditure.

Furthermore, the tailor-made, risk sensitive nature of the capital adequacy framework facilitates its qualification as a suitable measure in the Committee's goals aimed at achieving greater accuracy and relevance in terms of results. Hence, further objectives that should be considered in reviewing the international capital adequacy framework include the objectives of ensuring that the capital adequacy framework remains relevant and that measures operating within are also reliable.

12 „The management of most banks did not sufficiently question these limitations of more traditional risk management models used to derive stress testing outcomes nor did they sufficiently take account of qualitative expert judgment to develop innovative ad-hoc stress scenarios. Therefore, banks generally underestimated the strong interlinkages between, for example, the lack of market liquidity and funding liquidity pressures. The reliance on historical relationships and ignoring reactions within the system implied that firms underestimated the interaction between risks and the firm-wide impact of severe stress scenarios.“ See Basel Committee on Banking Supervision, Principles for Sound Stress Testing Practices and Supervision May 2009 at pages 3-5 <http://www.bis.org/publ/bcbs155.htm>

D. Conclusion: Potential Ideas to Improve Simplicity and Comparability

Which ideas offer the greatest potential benefit in terms of improving the balance between simplicity, comparability, and risk sensitivity of the capital framework?

Two dimensions to comparability are highlighted by the Basel Committee in its discussion paper:¹³

- Comparability for a given bank over time
- Comparability between banks

A third dimension is proposed – comparability between banks over time – however such a time frame could be dependent on prevailing economic conditions. Comparability between banks over time would also require the consideration of jurisdictional factors.

A reasonable choice of the period of time over which comparisons are to be undertaken is definitely crucial in obtaining a clearer and more accurate picture of desired results.

In respect of focus accorded to the Three Pillars, more focus should be accorded to Pillar III (than was previously the case) – in line with the developments which have taken place over the years. As the recent Financial Crisis revealed, capital requirements on their own, are no longer sufficient in averting and containing global crises. Liquidity measures as well as other metrics have come into the equation.

The need for focus also applies to derivatives – given their magnitude and scale of operations. More off-balance sheet instruments should be accounted for – than was previously the case – and monitoring techniques adopted to enforce such a move. Immense efforts have been made to facilitate greater disclosure – more efforts will be required to monitor and enforce the application and implementation of rules and standards which serve to ensure that more off-balance sheet instruments are incorporated within many ratios. For example, recent efforts by the Basel Committee, as highlighted in its June 2013 Guidelines in relation to the Leverage Ratio proposals, are welcomed since many relevant items are being incorporated within the denominator as well as the numerator components of the ratio.

Off-balance sheet instruments and derivatives therefore constitute topics and areas for consideration in view of their magnitude – as well as their exposures.

¹³ Basel Committee on Banking Supervision, 'The Regulatory Framework: Balancing Risk Sensitivity, Simplicity and Comparability' July 2013 at page 14

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