

Briefing Paper

Accurately measuring & allocating capital: the need for risk sensitive capital requirements

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Objective of this paper

This paper sets out the advantages of a risk based capital framework and discusses the issue of variability in modelled capital outcomes, providing a brief overview of measures taken to address criticism relating internal models. It also describes the various initiatives underway at international level that are increasingly heading towards removing risk sensitivity from the capital framework and calls on European policymakers to carefully consider the implications of this conceptual shift.

Why do we need a risk sensitive capital framework?

Given the advantages for banks to accurately measure risk, it has been argued that institutions would make use of sophisticated, internal risk modelling techniques regardless of whether regulatory capital requirements are linked to risk models. This theoretical calculation and pricing of risk is however very different to the practical allocation of capital. As one European regulator has said in a recent speech: “[We need] an approach that is risk sensitive and minimises undesirable incentives that may distort market outcomes. Whether we like it or not, banks will evaluate their activities based on return on regulatory capital requirements. So if those requirements diverge from banks’ own assessments of risk, regulation will change market behaviour. Sometimes that may be intended and desirable. But often it will not be.”¹

A risk sensitive capital framework is therefore necessary to both accurately measure risk and allocate capital accordingly. Without risk sensitivity, the capital framework will not represent a firm’s true risk levels and may incentivise misguided origination. The less risk sensitive the framework is, the more opportunities for regulatory arbitrage are created, incentivising firms to seek higher risk assets as a means of boosting expected returns. A lack of risk sensitivity will also likely lead to the inappropriate pricing of risk, less lending in low-risk asset classes, less diversification across firms’ portfolios and a corresponding increase in risk to the financial system as a whole.

Risk sensitivity: a virtuous circle supporting economic growth

An appropriately risk sensitive framework however creates the right incentives for firms to increasingly invest in improved data collection, together with a better understanding of risk drivers and the construction of models with superior predictive power. Models are in turn increasingly embedded in the business and used extensively to improve lending policies and risk-adjusted pricing, creating a virtuous circle. While the state of risk modelling is constantly evolving, its role in the capital framework provides a continual motivation for improvements and refinements which lead to the more accurate measurement and management of risk. Moreover, when regulatory capital is appropriately linked to underlying risk levels, the problems of adverse selection described above are avoided: capital will be allocated efficiently and in a way that supports sustainable economic growth. Therefore, particularly in a context where European policymakers are seeking to support growth, it is essential that the regulatory capital framework reflects the effects of risk-reducing collateral (and thus the true risk profile) of real asset financing solutions such as specialised lending².

¹ [What is left to do on the post-crisis bank capital framework?](#) by David Rule, Executive Director, Prudential Policy, PRA, 2 March 2015

² Specialised lending includes project finance, object finance, commodity finance

Reducing variability and increasing comparability of risk sensitive capital outcomes

It is precisely for the above reasons that Basel II was introduced to encourage banks to move from simple, standardised, relatively risk insensitive approaches for determining regulatory capital, to internal models based approaches that better aligned capital with underlying risks.

Since then, internal models have come under criticism for being unduly optimistic and not being able to prevent the crisis. Given that the bulk of failings contributing to the crisis were identified in the areas of market, liquidity and funding risk, these criticisms are largely unjustified. These shortcomings have all been remedied through the introduction of Basel III/CRDIV and the vast majority were not due to flaws in capital modelling³. Moreover, models are not synonymous to free choice for banks - they are subject to rigorous validation processes and on-going scrutiny by supervisors. Lastly, While RWA levels may indeed have fallen over past years, rather than being a result of banks "gaming the system", the reduction can be attributed to a combination of deleveraging, improvements in portfolio quality and the accumulation of high quality liquid assets⁴.

More recently, concerns have centred on the wide range of modelled outcomes, leading to various studies on RWA variance. For example, in 2013, the BCBS undertook a review of banks' risk weighted assets⁵. It found that "much of the variation (up to three quarters) is explained by the underlying differences in the risk composition of banks' assets, reflecting differences in risk preferences as intended under the risk-based capital framework. The remaining variation is driven by diversity in both bank and supervisory practices."

Given their different businesses and risk management practices, some variation in risk-weighted assets between banks is appropriate and to be expected, as it precisely reflects differences in their risk levels. This being said, the remaining (quarter of the) variation needs be addressed to improve the consistency of the framework. This depends on its uniform implementation, both by legislators and supervisors in their requirements they may make of firms, and by banks in their modelling choices.

Through collaboration between supervisors and industry, significant progress is being made in this area. For example, the European Banking Authority is making great strides to achieve a Single Rule Book and a Single Supervisory Handbook in the EU⁶. The EBA has also recently published a Discussion Paper setting out a programme of initiatives designed to improve the comparability of IRB outcomes⁷. The areas where banks' risk modelling practices diverge have been identified and industry has made extensive recommendations to adopt common approaches, effectively harmonising modelling choices⁸. Additionally, industry continues to engage with supervisors on multifaceted, technical modelling issues. These discussions show that the recognition of a particular business's characteristics, risk management processes and recovery strategies, is entirely compatible with the implementation of comparable methodological frameworks between banks⁹. Lastly, benchmarking exercises¹⁰ have become an integral supervisory tool and can be used to demonstrate how the variance in risk weights has evolved as a result of these ongoing efforts. In the same vein, Pillar 3 disclosures have recently be reviewed and, in an effort to further improve transparency, industry is in the process of developing indicators to provide a simple, standard disclosure of model performance.

It is also important to remember that the introduction of the **leverage ratio** precisely serves to act as a binding backstop to risk based capital requirements and that there are already numerous other safeguards in place in the regulatory framework. For instance, Pillar 2 requirements address the potential of risks not being fully

³ Shortcomings in VAR models for tail risk in the market risk framework were addressed through Basel 2.5 and are being further refined in the current fundamental review of the trading book. Credit risk modelling in particular was not identified as a shortcoming of the regulatory framework.

⁴I.e. in anticipation of the Liquidity Coverage Ratio; see IIF RWA Task Force, [Risk Sensitivity: The Important Role of Internal Models](#), September 2014 for a more detailed description.

⁵ BCBS, [Analysis of risk-weighted assets for credit risk in the banking book](#), July 2013. The [EBA](#) has also undertaken extensive analysis of risk weighted asset variability for European banks.

⁶ See for instance the EBA's [Guidelines on the Supervisory Review and Evaluation Process](#) and its development of a common methodology for the [approval and assessment of IRB models](#)

⁷ EBA's [Discussion Paper on the Future of the IRB Approach](#)

⁸ See AFME's Downturn LGD Discussion Paper as an example

⁹ IIF RWA Task Force final report, including approximately 100 recommendations for harmonisation of modelling approaches

¹⁰ See the EBA's [benchmarking package](#).

reflected under Pillar 1 calculations. This is further strengthened by the stress testing requirements implemented in many jurisdictions, including in the EU¹¹. Models are also extensively challenged by supervisors and, as already mentioned, are subject to extremely close and ongoing scrutiny. Through use test requirements, firms have to demonstrate that models are integrated into their internal decision making, management and governance processes. Indeed, the regulatory framework is designed so that models set up solely for the purpose of calculating capital requirements are not acceptable.

A conceptual shift in the capital framework?

In spite of the clear benefits of a risk sensitive capital framework and the progress made in achieving its consistent implementation, we are currently witnessing a wave of regulatory initiatives at international level that will result in a very different conceptual approach towards capital requirements.

These include the development of new risk frameworks which are insufficiently risk sensitive:

- Calibration of the new **securitisation framework**¹² does not reflect global historical loss experience and its various approaches are not appropriately calibrated to encourage firms to move from the simplest to the most advanced approach. Firms in some jurisdictions are also prohibited from using the external rating based approach under this framework, leaving certain banks with little option but to adopt the least risk sensitive approach.
- Modelling freedom under the Internal Models Approach (IMA) approach of the **new framework for the trading book**, once finalised, is likely to be considerably limited and certain risk factors subject to undue regulatory restrictions.
- The **credit valuation adjustment (CVA)** framework is overly conservative and does not reflect internal CVA risk measurement.
- Work is underway to make the simpler risk frameworks more risk sensitive than existing **standardised approaches**¹³. However, a number of these changes, although purported to be risk sensitive, are in fact unlikely to achieve this goal:
 - For *credit risk*, the risk sensitivity of the new standardised approach is likely to be less than the existing approach if external credit ratings are replaced by simplistic risk drivers as proposed. Moreover, under the proposals, capital requirements will also materially increase for good quality, low risk portfolios, creating misguided origination incentives. Changes to the credit risk mitigation framework are also likely to render the approach less risk sensitive.
 - For *market risk*, although the Sensitivity-Based Standard Approach (SBA) is an improvement over the current standardised approach, no standardised approach will ever be able to adequately approximate the thousands of risk factors that firms typically take into account when measuring such risk. This new approach also fails to recognise the effects of cross asset diversification. Moreover, as they stand, the proposed risk sensitivities are far from being suitably granular and correlations between these have not been sufficiently taken into account.
 - For *operational risk*, the proposed revisions place the emphasis on the size of the institution but without taking into account the quality of its operational risk management. Moreover, the proposal appears to be based on the assumption that fee-based businesses are riskier than others, resulting in disproportionately high requirements for banks with e.g. leasing, consumer credit or asset management activities.

¹¹ Such as the ECB's asset quality review and the EBA's regular stress tests

¹² Basel 269

¹³ The Standardised Approach for Counterparty Credit Risk is a good example of a standardised approach that has effectively become increasingly risk sensitive

In addition, the following proposals to **explicitly limit the role of internal models** are under consideration:

- The proposed **introduction of a capital floor** based on the new standardised approaches, whether calculated at an aggregate or risk-category level, will significantly reduce and distort the incentive for banks to develop and maintain sophisticated risk measurement and management models. This trade-off should not be taken lightly. While banks always manage themselves on a variety of bases, including strategic objectives, internal limits and investor demands, as explained above, undue regulatory constraints such as capital floors have the potential to overtake these other important considerations.
- The introduction of **further, granular exposure or parameter level modeling constraints** across the various risk framework and above those that currently exist, could likely lead to the misrepresentation of risk and inappropriate capital allocation, without actually avoiding modelling risk. The result will be a mispricing of risk and the misallocation of economic resources. Moreover, models will be less useful for internal risk management purposes and the virtuous circle described above becomes less effective.
- Lastly, but by no means least, the proposal to introduce **total loss absorbing capital (TLAC)** may significantly amplify the effects of the backstop **leverage ratio**, particularly if it is based on a floored (minimum) RWA amount.

Particularly when considered in **combination**, the above measures are likely to result in a fundamental change to the underlying philosophy of the capital framework. A non-risk sensitive leverage ratio together with a largely non-risk sensitive capital framework may very well call into doubt the extent of investment firms will be willing to make to continue improving risk measurement and management. The cost will be a less accurate appreciation of risk and non risk sensitive, regulatory driven capital allocation and pricing. Risks will also be pushed into the unregulated sector and the end result will be a more risky financial system overall.

AFME recommendation

In order to ensure a regulatory system that measures risk accurately, allocates capital accordingly and provides sound origination incentives that benefit the economy at large, AFME considers that risk sensitivity must remain a decisive feature of the capital framework. Industry stands ready to work together with the regulatory community to achieve this in a manner that will prove beneficial to financial stability and economic growth.

In particular, AFME encourages European policymakers to carefully consider the implications of this progressive yet continued removal of risk sensitivity from the international regulatory framework. If there is an intention to remove risk sensitivity from the regulatory framework, this objective needs to be set out explicitly and accompanied by a robust justification for undertaking such a conceptual shift. It would then need to be extensively and publicly debated and tested.

Moreover, any further reduction in risk sensitivity also needs to be assessed against the significant progress that has been made to reduce undue variance in capital outcomes. AFME also stress that this needs to be done in a comprehensive manner, taking into account the combined implications of all of the work streams listed above. Only if there is a proven need to take further action should additional measures such as capital floors be considered.