SIMPLICITY, RISK SENSITIVITY AND COMPARABILITY: THE REGULATORY BALANCING ACT

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Before I begin my remarks today, I would like to thank the FSI and EMEAP for once again organising yet another excellent event in the series of High-Level Meetings in Asia. Prior to taking up my current role in Basel, I attended these events as an Australian bank supervisor, and always found them to be valuable opportunities for the exchange of ideas and views between the region's senior regulators and industry representatives. Although I am now based in another part of the world, I am very happy to be able to continue to participate and contribute to these discussions.

I would also like to acknowledge that the Asian region leads the world in its implementation of Basel III. The region has benefited from the development of strong banking systems supported by strong regulatory regimes. Furthermore, many of you have recognised Basel III as a minimum, and have adopted local practices that impose additional requirements to deal with local risks. The result is healthy banking systems that are well equipped to support economic growth, not least by stepping into the gap created by the constraints faced by many banks in other parts of the world.

Finding the right balance

I am sure that many of you know the story of Goldilocks and the three bears. In it, Goldilocks explored the bears' house, testing the porridge, the chairs and the beds until she found things that she thought were "just right". When I took up my role in Basel, a friend suggested I had a "Goldilocks" job. By this he meant that my task was to take a range of competing objectives, and find some middle ground that was "just right". In an international policymaking context, that implies policies that are:

- comprehensive, yet simple;
- strong, but not burdensome;
- risk-based, yet easy to understand and compare;
- flexible and adaptable, yet consistently applied;
- suitable for normal times, but founded on the lessons from crises;
- built on consensus, but also on the broadest possible engagement; and
- utilising appropriately the relative strengths of both regulation (rules) and supervision (oversight).

With such a multidimensional set of trade-offs, finding the optimal point for any given set of regulatory proposals is inevitably very difficult. In the case of Basel III, the Committee sought a suitable minimum amount of capital that was "just right" – not so little that the financial system remained susceptible to the weaknesses revealed in 2007–08, but not so much that banks could not perform their important economic functions. The Committee also needed to improve the way that the adequacy of capital was measured so that it appropriately recognises the materially different magnitudes of risk within individual bank balance sheets, but at the same time provides an overall measure of soundness that investors can compare across banks. And, recognising that the Basel framework is the global standard for bank capital, the Committee needed something that was suitable for internationally active banks – our core constituency – but could also be applied more broadly.

Capital requirements – adequate and comparable

Regulatory capital requirements do many things, but at their heart they must achieve two fundamental objectives:

- ensure banks have an *adequate* level of capital (ie relative to their risk profile); and
- provide a measure of capital that is *comparable* over time and between banks.

The first of these objectives – adequacy – is an obvious goal, but failure to achieve the second – comparability – undermines confidence that the first is being achieved. Since we are dealing with institutions that have a business model founded on confidence, the importance of comparability should not be underestimated.

During the recent crisis, questions began to be asked about the reliability of risk-based capital ratios as an indicator of bank health. In my view, there were three factors which served to undermine confidence in the risk-based measure of capital:

- the regulatory capital base included capital instruments that were not truly loss-absorbing – financial markets increasingly discounted these;
- the regulatory capital base in some countries filtered out (ie ignored) some unrealised losses that banks had incurred – financial markets wanted to account for these; and
- risk-weighted asset calculations had become complex and opaque, making them difficult for external investors to understand – financial markets became confused by these.

In other words, questions were legitimately being asked about whether capital was both adequate and comparable. The questions related to both the numerator and the denominator of the regulatory measure.

The reforms contained in Basel III largely deal with these first two items. Basel III raises the minimum quantity of truly loss-absorbing capital by many multiples. It also improves the quality of that capital by eliminating quasi-capital instruments, and certain other assets, that proved of limited value in times of stress (indeed, investors in some of these instruments, rather than providing a source of support, had to be bailed out themselves!).[1] In addition, by removing prudential filters and forcing banks to recognise unrealised losses on fair value assets, capital ratios will be more credible by better reflecting the true capacity of a bank to absorb further losses at any given point in time.

Having substantially simplified and improved the numerator of the capital ratio, the Committee's attention is now turning to concerns about the risk-weighting framework:

- it is said by some to be *too complex* and difficult to understand, and that something simpler (indeed, some say simple) would be better; and

- it is said by some to provide *too much flexibility* on how risk should be measured, making it difficult to compare reported capital ratios.

These concerns are closely related – although that does not mean less complexity and less flexibility always lead to more comparability.

Complexity and flexibility

International banks are complex organisations. Today, not even "traditional" lines of business, such as retail and commercial banking, are simple businesses to run, if they ever were. Capturing the risk profile of these businesses in a single measure of financial soundness is extremely difficult.[2]

The complexity in the capital framework largely comes from the decision to allow banks to use their own internal models to measure risk, the major innovation contained in Basel II. Although internal models had already been part of the regulatory framework for a decade, this was only for a relatively small area of activity.[3] Basel II provided the capacity to do this for the biggest risk most banks face – the credit risk within their loan books. While, of course, banks were required to jump a large number of hurdles in relation to model specification and validation before they could use their own models the new framework did move banks away from the "one model fits all" approach that was at the core of Basel I.

The primary objective behind this important step was to better align capital with underlying risks. Regulatory requirements create incentives; Basel II attempted to align those incentives much more closely with economic reality than was the case in Basel I. In this respect, Basel II's goal can be thought of as promoting both capital adequacy and capital efficiency. Properly applied, banks' capital requirements could be much more responsive to the underlying risks they were taking; low-risk banks would benefit by not being burdened with

[1] The Committee's analysis during the development of Basel III found that the widest definition of regulatory capital used pre-crisis (total capital, containing Tier 1 and Tier 2 instruments as previously defined) produced a risk-based capital ratio that had very little predictive ability in identifying banks that subsequently became stressed. On the other hand, using a much narrower definition of capital (akin to Common Equity Tier 1, as contained in Basel III) did produce a risk-based ratio that seemed to distinguish between banks that became stressed and those that did not.

[2] Of course, the pre-crisis focus on a single measure of financial soundness had its drawbacks. It is one of the reasons why Basel III proposes to utilise both risk-based and non-risk-based ratios – see *Regulatory reforms – incentives matter (can we make bankers more like pilots?)* at http://www.bis.org/speeches/sp121024.htm.

[3] Using internal models to determine regulatory capital requirements was first introduced via the market risk amendments. These came into force at the end of 1997.

unnecessary capital requirements, and those with higher risk profiles would need to hold additional capital commensurate with the risks they are exposed to. To put it another way, Basel II sought to better distinguish between high- and low-risk banks, and it required higher-risk banks to operate with lower levels of leverage than their low-risk peers.

But as anyone knows who has built, supervised or just tried to understand internal risk models within a bank, they are not simple. They are, of course, a simplification of the real world, but that is not much of a consolation since the real world is extremely complex. The difficulty is that, if models are oversimplified, they do not produce risk measures that reflect reality. But if made too complex, hardly anyone can say whether they produce realistic risk measures or not! And by allowing a degree of flexibility for banks to model risks as they see them, we make it more difficult to achieve comparability. Getting it "just right" therefore requires careful judgement.

Comparability

Basel II was undoubtedly a major improvement in the conceptual soundness of the capital measurement process. It also created important incentives for banks to refine and improve their risk models, and to avoid high correlations between risk management methods which could have detrimental implications for financial stability. These benefits should not be lightly dismissed, but there are now concerns that the way in which models are currently used hinders comparability, since users of information cannot understand the impact that modelling choices have on the resulting capital requirements. The Committee therefore needs to ensure that this additional risk sensitivity is not, as a result of its complexity, undermining the overall regime by making comparison too difficult for all but supervisory experts (and maybe even for the experts too!).

But before we revert to a simpler measurement methodology, we need to be sure that it would really be more comparable. Comparability has two basic dimensions:

- between banks at a given point in time; and
- for a given bank, over a period of time.

Any standardised approach will necessarily be blunt. It will be simpler to understand than an internal model, but that is because it will necessarily make many assumptions. These assumptions will mean risk can be incorrectly measured. They will also mean that changes in a bank's risk profile can go undetected. Take the example of the leverage ratio. It will not distinguish between two similarly sized banks even if one holds a large portfolio of high-quality sovereign exposures, and the other a large portfolio of highly leveraged loans for property development. Nor will it show any response if a bank switches its balance sheet from one of those portfolios to the other over time. A leverage ratio measures exactly what it says – the degree of leverage on a bank's balance sheet. For this purpose, it is perfectly suited. That does not necessarily make the most useful measure for judging the adequacy of a bank's capital base.

Risk-based regimes seek to respond to this problem by introducing greater risk sensitivity. But even with the standardised approaches in the Basel framework, there are limits to what can be achieved. The risk-based framework would respond, via changes in the reported capital ratio, to the situations I have mentioned above. It would not, however, necessarily respond at a more detailed level – for example, it does not meaningfully distinguish between portfolios of low loan-to-value ratio (LVR), full documentation, amortising mortgage loans, and high LVR, interest-only, self-certified mortgage loans. Only with additional complexity can we take greater account of the multifaceted risks within a bank's loan book. However, as the framework becomes more and more risk-sensitive in judging capital adequacy, it may no longer be the best means of monitoring, comparing and controlling overall leverage.

For these reasons, Basel III utilises both a risk-based capital ratio and a non-risk-based leverage ratio to provide complementary measures of capital adequacy and leverage. Both ratios serve their individual purposes: one a measure of capital relative to risk; the other a measure of overall leverage. The two measures can also be compared with each other, providing additional information that would not be readily available from either measure on its own.

Improving comparability

The inclusion of the leverage ratio in Basel III does not remove the need to further review the comparability of the risk-based regime. To borrow from Winston Churchill, "however beautiful the strategy, you should occasionally look at the results." The Committee has been conscious of this issue for some time, and over the past year it has been exploring the issue from both a bottom-up and top-down perspective.

With regard to the concerns about the comparability of model-based risk-weighted asset calculations, the Committee has established two workstreams; one to look at the consistency of calculations in relation to the trading book and another parallel stream for the banking book. This work has examined publicly available data for a selection of large banks across multiple jurisdictions, as well as asking a number of banks to provide risk measures for a series of hypothetical portfolios. The outcome of this work has been supplemented with a series of meetings with individual banks by an international team of supervisory experts, with the aim of providing greater understanding of the reasons behind different results.

The trading book review was published at the end of January, and I will focus my comments on it today. The results of the banking book work will be released in the coming months.

The trading book review found that it is reasonable for investors to complain that they find current risk disclosures opaque – the Committee's analysis found the same thing! Current disclosures were not adequate for external parties to be able to judge whether movements in modelled risk-weighted assets over time, or between banks, were due to underlying differences in risk, or for other reasons.

That there is variability in results between banks should not surprise. It is inevitable, and indeed desirable, in any model-based framework that there be some. What was possibly surprising, however, was that regulatory and supervisory decisions were producing a non-trivial proportion of the variability: contrary to the initial hypothesis of many, it did not arise solely from giving banks too much freedom to model risk. Around a quarter of the variability was due to one single factor: the use of supervisory multipliers, which are applied as an incentive for banks to improve their models and risk management systems. [4]

[4] In determining its capital requirement, a bank is required to multiply the output of their Value at Risk model by a factor of at least 3. This factor will be increased by the supervisor if backtesting results suggest the model is not performing with a sufficient degree of reliability. It may also be raised by the supervisor if there are other operational issues associated with the risk management framework that require rectification.

There are two other points worth noting from the trading book analysis:

- The variability driven by supervisors (due to the use of multipliers, or by restricting modelling choices) will almost invariably increase capital requirements relative to what they might otherwise be. In other words, some of the variability is due to some banks being held to a higher standard than the Basel minimum requires. This improves the adequacy of capital resulting from internal models but, due to the fact that some supervisory discretion is not disclosed, reduces comparability.

- The outcomes produced by banks were benchmarked to a risk model produced by the team of supervisory experts conducting the analysis. The output of this model was broadly consistent with the average of the results being produced by banks. Although the analysis is necessarily limited to the sample of banks and by the simple portfolios used, there was no evidence to suggest that the banks' modelling efforts systematically under-estimated risk (and hence the adequacy of capital requirements) across the group as a whole.[5]

Nonetheless, even after allowing for supervisory decisions, bank modelling practices were the primary driver of variability, and that variability makes comparability more difficult to achieve. Thankfully, the analysis showed that the bulk of this could be attributed to a relatively small set of modelling choices, giving the Committee some obvious areas to look at if it decides that variability should be reduced. I will say more about this shortly.

In parallel with this detailed analysis, the Committee has appointed a task force to look into the question of the simplicity and comparability of the regulatory framework from a top-down perspective. This task force has not been looking at specific issues of detail, but instead is approaching the issue from a more conceptual perspective: what is the optimal trade-off between simplicity, risk-sensitivity and comparability?

The task force found that there are many drivers of complexity in the regulatory framework, and that the greater focus on the risk sensitivity of capital measures is just one of them. Others include the need to reflect developments in financial markets, integrate modern risk management practices, and respond to innovation. Nevertheless, the task force has highlighted a number of areas the Committee could consider if it wanted to rebalance the current framework to promote greater simplicity.

Getting the balance "just right"

The Committee is still considering what, if any, changes could to be made to the regulatory framework to enhance the comparability of risk-based capital ratios, bringing together the top-down strategic thinking of the task force with the bottom-up analysis of the teams examining the results of internal models. However, the potential means of enhancing comparability are likely to fall under three broad themes:

- *Enhancing disclosure*: If current disclosure is inadequate to enable investors to understand changes in risk profile, then it makes sense to examine how disclosures can

[5] This finding only provides limited comfort, of course, since we are still concerned with the adequacy of capital of individual banks.

be improved. The Committee recently established a new Working Group on Disclosure, with a view to reconsidering existing Pillar 3 disclosure requirements, as well ideas proposed by groups such as the Enhanced Disclosure Task Force,[6] to see whether they can be improved. That does not necessarily mean we will advocate ever-increasing levels of disclosure; it may be that "less is more" and that we can streamline disclosures and make them more useful at the same time.

- *Making modelling more robust and consistent*: To fully standardise internal models (ie to make them "external models") would defeat some of their purpose: we would just be imposing a standard supervisory model on banks, and thereby imposing a single regulatory judgment on the best way to model risks. Thus, we would end up with a complex system, but without necessarily reaping any of the benefits that come from using internal models. The aim of this work therefore would not be to eliminate the use of models but, rather, to reinforce it. That is, to make models more robust and transparent, and to ensure that improved safeguards and backstops are in place.

- *Developing supplementary measures*: Basel III already requires banks to disclose a risk-based ratio and a leverage ratio. Following this approach, additional benchmarks could also be disclosed. For example, the current review of the trading book framework is currently considering industry feedback on a proposal to require banks to disclose capital requirements using both internal models and the standardised approach.

All of these options have costs, and the Committee will need to consider them carefully. But the costs of a lack of confidence in bank capital ratios are likely to be substantial, so cost should not be a reason to immediately dismiss any ideas out of hand. Industry feedback on the merits of different solutions will be welcome.

Concluding remarks

In the post-crisis period, we have substantially strengthened the regulatory framework. This is an important investment in the financial system's future resilience. While there have been complaints about the burden of reform, many studies show the cost-benefit trade-offs to be overwhelmingly positive. Much of this debate is now winding down: indeed, many countries – including here in Asia – now have the Basel III capital reforms in place, and their banking systems continue to perform well. It is important we press ahead to complete the reform agenda, particularly as there are signs that the banking industry is again shedding its inhibitions in its keenness to take advantage of improved market conditions.

Basel III substantially improved the adequacy of minimum capital requirements. However, this work will be undone to some degree if counterparties and investors lose faith in the comparability of reported ratios. Much of the debate on this issue is focused on the role of internal models in the regulatory framework: do they help or hinder our understanding of banks' financial soundness? It is stating the obvious to say that the faith placed in models has been dented by the events of the recent crisis. Reverting to simpler measures, however, does not necessarily produce comparable measures of a bank's capacity to absorb the risks in its balance sheet. To do this well, some complexity is inevitable; indeed, it can be justified if it improves confidence in the adequacy and comparability of capital ratios.

[6] See https://www.financialstabilityboard.org/publications/r_121029.pdf.

The Committee will be examining whether more can be done to improve the comparability of bank capital measures. That does not mean, as some have suggested, that we should stop what we are doing to implement Basel III and go back to the drawing board. The Committee will be looking at how we can reinforce and enhance the framework. Today's banks could not operate anywhere near as effectively without models for pricing and risk management. If this is how banks run their businesses, there is logic in at least understanding and considering the output of these models for regulatory and supervisory purposes. We just have to make sure the balance is right.