Regulatory reforms – incentives matter
(can we make bankers more like pilots?)

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Thank you very much for your invitation to be part of this conference today. The topic you have chosen – Global Risk Management: Governance and Control – is an important one at any time, but it is particularly crucial in the current environment when banks need the strongest possible governance and control if they are to successfully navigate a very difficult external environment.

The banking industry today faces many challenges, and the need for strong internal governance and control has never been more important. Whether you are here today as a banker, a regulator, an auditor, or indeed as a bank customer, you have an interest in the strength of internal governance and risk control systems, not just of your own bank but, due to the interconnectedness that characterises banking, of all banks.

The revelations from the ongoing financial crisis have shown us that the previous systems of control imposed within banks, as well as those prescribed by regulators, were manifestly inadequate. It is easy to see now that banks, markets and regulators allowed banks to take on too much risk: risk was underestimated and as a result risk limits were set too high. But systems of governance and control are not just about managing the *level of risk*. Controls, rules and limits within a bank – and in particular, the interactions of those controls, rules and limits – do more than just limit risk; they also *create incentives*. Ideally, those incentives should be aligned towards the long-run health of the bank as a whole. We can see now that, in many instances, they were not.

Incentives matter

So let me start by stating the obvious: incentives matter. But in diverse and complex organisations such as today's banks, ensuring that incentives are working in the right direction is easier said than done. Effective regulation and supervision is about helping to ensure those incentives are appropriately aligned, for the benefit not just of the bank but also for society as a whole. Again, this is no easy task.

To illustrate this challenge, let me draw some parallels with the aviation industry.

As time has gone by, air travel has become commonplace. The skies are more crowded, and more and more air miles are flown. Planes, like banks, have developed in size, speed, sophistication and complexity, allowing more people to travel further, faster, and at less cost. But at its core, flying is still a risky business.

Airlines, of course, are commercial businesses seeking to maximise profit by, among other things, minimising costs. An entire framework of air safety rules and regulations has therefore grown up to ensure that the incentives to minimise costs and maximise profits do not jeopardise the safety of passengers. As in banking, risk management must be paramount.

Over time, these rules, and the supervisory practices of air traffic control, have become more detailed and sophisticated. Unfortunately, accidents still do occur, and the results can be devastating. But overall the airline industry has become safer with time, certainly when measured against passenger numbers or distance flown. The trade-off between increasing complexity and the costs associated with air safety is deemed worthwhile, even though ultimately we all pay those costs in one form or another.

Banking regulation is designed to make banks safer, just as aviation regulation is designed to make planes safer. But there is one advantage that airline safety regulators have that banking regulators do not: that is, the passengers of planes can take comfort that their desire for a safe flight is highly aligned with that of their pilots. Pilots have little incentive to take off in an unsound plane, or to perform aerial manoeuvres that provide a short-term thrill but could stress the plane beyond its limits. Pilots want to land safely. Bankers do not necessarily have the same natural incentive towards risk aversion. So bank regulation needs to pay particular attention to the incentives it creates for those “flying the plane”.

Regulatory incentives

It has long been recognised that a financial firm is different from most other commercial enterprises, and that it needs special regulation: experience has taught us that internal governance and market discipline are not enough, given the costs of failure. Just as passengers cannot readily assess the relative safety standards of the airlines on which they fly, depositors in banks cannot adequately assess bank safety and soundness. So bank regulation and supervision is needed to supplement – but, to be clear, not replace – the normal workings of internal governance and market discipline. Banking regulators and supervisors need to help ensure that normal commercial incentives are working in the right direction from the perspective of the broader community.

At the heart of the international approach to the regulation of bank capital adequacy for the past 25 years has been the concept of a risk-based capital ratio. The concept is simple in principle – that the amount of capital needed for a given type of activity should reflect the risk of that activity. More risk needs more capital. The first Basel capital framework, instituted in 1988, set capital requirements based on some fairly broad definitions of capital, and a simple set of risk weights.

One reason international regulators chose to adopt a risk-based approach rather than other, simpler measures was because of the incentive effects. Since capital is a scarce commodity, banks will respond to constraints on their capital position by maximising the return they can achieve for each euro of capital employed. If risk is mispriced in the regulatory framework, there is an incentive for banks to undertake activities for which risk is underpriced by the regulators and to cut back businesses where the risk is overpriced. And, almost by definition, a simple measure will misprice almost every risk. Even if calibrated to an appropriate level for the average bank balance sheet, a simple capital-to-assets ratio will, on its own, create incentives for banks to undertake riskier activities and reduce their less risky activities. We also have seen in the past that simple measures can be easily arbitraged (the growth of off-balance sheet business, particularly prior to the advent of the risk-based regime, was one manifestation of this tendency).

Basel I was therefore an attempt to price risk within the regulatory framework. But despite some tweaks at various times, the simple system of crude risk weights that lasted almost 20 years was ultimately overwhelmed by the increasing sophistication of risk measurement within banks themselves. Indeed, one could argue that the simplicity of Basel I was a contributing factor in the misalignment of incentives that created the financial crisis: the simple regulatory framework was no match for the growing array of derivatives and complex financial products that allowed banks to keep their capital requirements to a minimum while maximising their risk-taking capacity. We were allowing modern planes to fly, but utilising outdated safety manuals.

Basel II therefore sought to develop a much more risk-sensitive approach to capital adequacy – again, seeking to better price risk within the regulatory framework, and to create stronger incentives for better risk management. It did this by co-opting banks' own internal risk models into the regulatory framework.[1] Unfortunately, since Basel II was only introduced well after the seeds of destruction that led to the financial crisis had been sown, it is impossible to tell whether banks would have fared better had the regulatory system more accurately priced risks in the preceding years. But we should not fool ourselves: given the failings in all aspects of the financial system that the crisis revealed, it is highly unlikely that we could have avoided the crisis altogether even with a better capital adequacy regime. In all likelihood, the allure of modern technology would have still convinced many bankers that they were better pilots than they really were.

Basel III, and the broader set of regulatory reforms developed in recent years, build on the lessons of the past to create both more robust minimum safety standards, and better incentives. Beyond substantially ratcheting up capital requirements[2] – which were shown to be too low – the reforms introduce a number of additional measures designed to have an impact on incentives. Let me highlight some examples:

- Basel III has introduced a capital conservation buffer, in addition to the set of minimum requirements. The regime creates incentives for banks to maintain a healthy capital buffer over and above the minimum, while at the same time allowing it to be used during the inevitable times of need. The incentive comes from the strings attached to the use of the buffer – when it is utilised, it will constrain a bank's ability to pay dividends to shareholders and bonuses to staff.

- Capital instruments under Basel III will contain elements to ensure they are truly loss-absorbing. We saw during the crisis that the public sector was forced to bail out certain classes of capital investor, even though they supposedly existed to bear the losses in the event of a problem. Not only do the new requirements ensure that the full stock of capital is genuinely available in times of need, but they provide proper incentives for investors to monitor their investments and exert pressure on management if the bank's strategy or performance is veering off course.

[1] This idea of using internal models was actually first introduced into the regulatory framework in the 1996 market risk amendment. Subject to supervisory approval, banks were able to use value-at-risk models to assess their capital needs for certain market risks.

[2] Basel III sets a much higher standard for minimum capital requirements. Not only are the headline minimum requirements much higher (equity requirements are, at a minimum, three to four times higher), but the quality of capital has been strengthened to ensure that instruments included in regulatory capital are truly loss-absorbing.

- Taken together, Basel 2.5[3] and Basel III substantially raise the capital requirements for certain types of trading and securitisation activities. Previously ignored risks will need to be backed by meaningful amounts of capital, creating strong incentives for banks to better manage their risks and price these types of products more appropriately.

- We have also introduced strengthened requirements for systemically important banks, be they global or domestic. These regimes are designed to add an additional layer of safety to the largest banks, to take account of the externalities that their failure would impose on society. In other words, we are seeking to offset the incentive, via a perception that public support would be available in a crisis, to grow 'too big to fail'.

I have focused on capital, but of course the introduction of new global liquidity standards under Basel III has the same intent. Not only will there be new minimum liquidity and funding requirements, but they are deliberately designed to create incentives for prudent behaviour; in this case, to provide adequate self-insurance, to better price liquidity risk, and to ensure that contingent risks are better managed. In other words, our banking pilots should be encouraged not just to fly at a healthy altitude, but also to carry adequate fuel supplies to ensure that they can stay aloft for longer periods of time in the event of unforeseen circumstances.

It would be remiss of me if, in a discussion on incentives, I did not also mention the most obvious incentive-based reform in recent years: the Financial Stability Board's *Principles for sound compensation practices.*[4] These principles are targeted directly at altering the personal incentives of bankers, by rewarding them for good performance over the long run, rather than providing large short-term incentives that could encourage short cuts and reckless behaviour.

Regulatory complexity

There is no doubt that adding risk sensitivity to the regulatory regime has also added complexity. But this reflects the nature of banking, which itself has become more complex. If we still lived in a world of 3-6-3 banking,[5] then a much simpler framework might suffice. Unfortunately for all of us, rules in all too many areas of public policymaking tend to gravitate towards complexity. For example, tax law in many countries typically runs to thousands of pages, while civil and criminal codes far exceed the Ten Commandments. This increase in complexity reflects many factors, such as innovation, greater and easier access to information, the desire for policy to meet multiple objectives, and the growing complexity of society more broadly. In international rule-making, the achievement of consensus on a common rulebook is also complicated by divergences in objectives that arise from different countries each having their own, quite legitimate, way of doing things.

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[3] *Revisions to the Basel II market risk framework* and *Enhancements to the Basel II framework* were introduced by the Committee in July 2009 and are now commonly referred to as Basel 2.5. Among other things, Basel 2.5 strengthened the capital treatment of securitisations, and supplemented the trading book rules with an incremental risk capital charge and a stressed value-at-risk requirement.

[4] See *Principles for sound compensation practices* (April 2009) and *Principles for sound compensation practices – Implementation standards* (September 2009).

[5] This refers to the bygone world where banking was said to involve borrowing at 3%, lending at 6%, and being on the golf course by 3pm. Luckily, these bankers, and their regulators, lived in a time well before the advent of credit derivatives, collateralised debt obligations, high-frequency trading and modern banking's many other sophisticated innovations.

Of course, I am not suggesting that increased complexity is always good, or that we must meekly succumb to its seemingly inexorable rise. Indeed, we should actively seek to avoid unnecessary complexity, because it makes it more difficult to understand the incentives we create. The point I would make is that a corner solution of either extreme complexity or absolute simplicity will almost inevitably be suboptimal – like most things in life, we need to find a balance between the two. To borrow Einstein's dictum, "everything should be as simple as possible, but not simpler."

And it has not entirely been a one-way street towards greater complexity. For example:

- Important steps have been made in Basel III to simplify the capital structure of banks, with a much greater focus on common equity and, as I noted earlier, requirements to make sure that other instruments included in capital are simpler, and genuinely loss-absorbing.

- And we have (re)introduced a leverage ratio into the framework. The leverage ratio is designed to provide a backstop for the risk-based approach and to ensure that, notwithstanding the complexity of the risk-based framework, we do not miss seeing the forest for the trees.

I should note in passing that, despite its apparent simplicity, an internationally comparable leverage ratio is anything but simple to design. The Committee has a number of working groups and workstreams that are striving to make this simple concept operational – believe me, it is not easy. Dealing with differences in underlying accounting regimes (eg US GAAP versus IFRS), the treatment of off-balance sheet exposures, the treatment of derivatives, collateral and netting, and the scope of consolidation (do we include subsidiary insurance companies and other non-bank businesses in the measure?) means the determination of a leverage measure that is comparable across jurisdictions and different types of bank is a real challenge.

But we think it is important because being reliant on a single metric to capture all risks within something as complex as a modern bank is asking too much. Pilots do not focus on a single dial in the cockpit when they fly. Instead, a range of instruments, designed to give them a broader context and perspective, provides much greater information content.

Under Basel III, the risk-based approach remains the foundation of the regulatory regime, because it is the measure that best drives incentives in the right direction. But we also know that risk-based approaches can be prone to bouts of risk underestimation, model risk, or outright manipulation. Having two capital measures work in combination provides the benefits of both a risk-based framework and the simplicity of a simple floor to guard against model risks and periods of systematic underestimation. When we couple these with the new liquidity measures, we will have a much better radar with which to keep track of where and how banks are travelling.

Regulatory costs

As with increased airline safety, all these initiatives will impose costs on the industry, its owners and customers. It is well understood that these reforms are likely to reduce returns and make banking activity marginally more costly than it was before the crisis. But we can see with the benefit of hindsight that the previous safety standards for banking were too low, and risks were not adequately priced. Incentivising more rational behaviour by banks and markets is a prerequisite for long-run financial stability.

The trade-off involved in avoiding disastrous future costs is one that is well worth making. Banks, their customers and the communities they serve will be materially safer as a result of the recent round of regulatory reforms. Studies of the costs and benefits of the new regulations focus on the expected costs of reform, and compare them to the costs of crises. These studies find that the costs of reform are expected to be relatively low, and are significantly exceeded by the reduction in costs imposed on society by periodic financial crises.[6] Yet most of these studies focus simply on changes to the structure of bank balance sheets, and take no direct account of an important dimension of the regulatory reform agenda: to substantially alter the incentives built into the regulatory regime. If we consider that planes will not only be safer, but that their pilots will also behave more prudently, the case for the reforms becomes even more compelling.

Concluding remarks

Let me now try to sum up. In doing so, I would note that the points I have made about the importance of incentives within recent regulatory reforms apply equally well to building better internal governance and risk management systems: these lessons are not just for regulators.

- To repeat my starting point, incentives matter. In whatever control systems we design, we create incentives for those who operate within them. It is a considerable help if the incentives of those employed within a business are highly aligned with those of its customers, as is the case with pilots and their passengers. If not, the risk of adverse outcomes is much greater.

- If we care about incentives, then we need control frameworks that acknowledge the diverse risks in banking and are sensitive to them. Furthermore, regimes that do not explicitly take risk into account nevertheless implicitly price it – and inevitably do so poorly.

- Risk is unfortunately difficult to measure, so that risk sensitivity inevitably creates complexity. We must take care to avoid being caught up in a never-ending chase for perfection in risk measurement, since that is unattainable. But complex organisations such as today's banking institutions need sophisticated control frameworks that can cope with the multifaceted incentive structures that already exist within them.

- A single measure of risk, which purports to meet the many objectives we seek to achieve, is asking too much. A much better approach is a set of measures designed to give greater context and perspective.

Basel III is not just a set of minimum requirements, but it also creates a set of incentives. When examining the merits of regulatory reform, it is important to look at both the minimum requirements imposed at a given point in time, and the incentives they create for the future. We believe that Basel III creates the right type of framework for safe banking. Getting this right is difficult, and requires a great deal of analysis, careful thought, and a good dose of common sense. But our goal is rather simple: to reduce the risk of flying in unsafe planes where the pilot is the only one with a parachute. On that, I am sure we all agree.

Thank you.

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[6] The Basel Committee and the FSB have produced two reports as inputs into the calibration of Basel III: *An assessment of the long-term economic impact of stronger capital and liquidity requirements*, prepared by the Basel Committee, and *Assessing the macroeconomic impact of the transition to stronger capital and liquidity requirements*, a report of the joint FSB-BCBS Macroeconomic Assessment Group (MAG). Together, the two reports provide an assessment of both the net economic impact of stronger capital and liquidity reforms once implementation is complete and the macroeconomic implications during the transition to full implementation.