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Minimising the impact of future financial crises: six key elements of regulatory reform we have to get right

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To be as prepared as possible for the next *financial crisis, we should not embark on a long list of detailed proposals that we believe might have prevented the* last *one. Instead, we should strengthen existing regulatory frameworks to take into account their fundamental shortcomings highlighted by the recent crisis. This improvement should focus on the essentials and be based on a few simple principles so as to be robust against unforeseen events. We have to get these key elements right to ensure that the next episode of stress in financial markets is less disruptive and costly than the current one.*

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Most observers agree that the origins of the ongoing financial crisis were broad and complex.[1] First, and primarily, there was a market failure characterised by deficient risk management practices, inadequate relaxation of credit standards (especially in the US mortgage markets), uncontrolled financial innovation, lack of investor due diligence and abuses of various sorts in the financial industry. Second, excessive leverage and risk appetite were favoured by the combination of an extended period of unusually low interest rates and large global imbalances. Finally, various weaknesses of regulatory and supervisory arrangements also contributed to the crisis, not least because they were unable to address the market failures in a timely fashion. Accordingly the focus of this Special Issue of the Banque de France *Financial Stability Review* is devoted to the future of financial regulation, so I will limit myself to this last aspect.

Reflecting a growing convergence of views among private sector participants, academics, national authorities and international institutions, strengthening the regulatory framework has been an important objective of much of the work currently under way to draw lessons from the present crisis. On April 2009, for instance, the Leaders of the G20 pledged to "strengthen financial regulation to rebuild trust". The international community wants to enhance regulation to lessen the impact of future financial crises, and this is a highly commendable objective.

Strengthening financial regulation will require substantial medium-term work. This might receive less attention than the more immediate crisis resolution tasks, since restoring stability, confidence and the proper functioning of markets is a first priority. But embarking on this long journey will also have benefits today. This crisis has very distinctive features and its resolution is likely to be protracted. Time will be needed to repair balance sheets, deleverage, revamp the business models of the various types of financial institutions and allow asset prices to find a new equilibrium. From this perspective, clarifying the medium-term orientation of the regulatory framework can be very useful: it will help restore confidence in a sustainable way, thereby smoothing the adjustment process in the short-term.

If history is any guide, herding behaviour is common and people tend to be overly myopic and euphoric when things go well. This means that once the current "bust" is over —and even though it may still take substantial time— it is likely to be followed by a renewed "boom", characterised by increased risk appetite, outright optimism and excessive focus on short-term gains, not least in the financial industry. Hence it is important to start reflecting *now* on the steps needed to strengthen regulation in a way that would both reduce the probability of *future* adverse systemic events and mitigate their impact when they occur.

Against this backdrop, current regulatory reform proposals aim at meeting the following objectives:

- *Better regulation* so as to strengthen standards and promote a macroprudential approach that, by taking a system-wide view, better addresses procyclical effects and extends the perimeter of regulation and oversight.

- *Better disclosure* by enhancing market discipline and setting up a more informed monitoring of risks in the financial system.

- *Better architecture* by enhancing regulatory cooperation, through joint assessments of systemic risks, early warning exercises, supervision and resolution of cross-border firms.

- *Better market infrastructure* by favouring the creation of platforms for counterparty clearing systems for over-the-counter derivatives.

- *Better procedures for crisis management* by, for instance, conducting early warning exercises and planning for cross-border crisis management.

Had these elements been in place before the crisis, the situation of the global financial system would most likely have been much better. This is why it is important to fully support the work currently undertaken by standard-setting bodies, the G20, the International Monetary Fund, the Financial Stability Forum (FSF) —now re-established as the Financial Stability Board— etc. But we should ask ourselves

1 *See IMF,* "Initial lessons of the crisis"*, prepared by the Research, Monetary and Capital Markets, and Strategy, Policy, and Review Departments, 6 February 2009; and Hervé Hannoun,* "Policy lessons from the recent financial market turmoil"*, speech at the XLV Meeting of Central Bank Governors of the American Continent, Ottawa, 8-9 May 2008.*

what the true test of these reforms in the future will be. In other words, what are the key points among the various elements listed above that must be firmly in place to avoid the reoccurrence of a costly systemic crisis like the current one?

While there is no simple answer to this question, the consensus view is that there is a need to work on strengthening financial regulation along the lines highlighted above. However, there is the risk of overregulation that would be detrimental to global well-being. There is a natural and unavoidable increase in risk-taking during upturns that is essential to growth and innovation. The call for *better* regulation may rapidly result in *more* regulation. It is desirable to achieve a reasonable balance between innovation and stability objectives.

Lastly, focusing our attention on too many regulatory changes raises the risk that we lose sight of the overall objective: the prevention of *excessive* risk accumulation that can have costly consequences. Hence, to be as prepared as possible for the *next* financial crisis, we should not embark on a long list of detailed proposals that we believe might have prevented the *last* one. Instead, we should strengthen existing regulatory frameworks to take into account their fundamental shortcomings highlighted by the recent crisis. This improvement should focus on the essentials and be based on a few, simple key principles so as to be robust against unforeseen events. In this spirit, I will now review the six key elements we have to get right to ensure that the next episode of stress in financial markets is less disruptive and costly than the current one.

1| Getting regulation right is not enough

Strengthening regulation and supervision alone will not be sufficient to prevent the next systemic crisis. In particular, the macro policy environment should also help to moderate the build-up of excessive risk when the economy is doing well. Indeed, macroeconomic policies should not only be used to deal with the aftermath of the collapse of an asset price bubble; they can play an instrumental role in mitigating the build-up of financial excesses in the first place.[2]

The role of monetary and fiscal policies clearly stands out, even though there are important limitations on how they can be implemented in practice. In the run-up to the current crisis, central banks retained their focus on maintaining price stability. Against the backdrop of low interest rates, the task of addressing the implications of surging asset prices and leverage was thus *de facto* left to the supervisory authorities. However, regulation alone cannot counteract booms. We should also focus on how monetary policies should be designed to "lean against the wind". On the fiscal side we have to redouble efforts to ensure prudent policies in good times. As the current turmoil has once more reminded us, those countries that do not take advantage of the good times to run down their deficits are ill-equipped to rescue their financial systems and stabilise output if and when the needs arise; in addition, the fiscal tool could prove quite effective in moderating demand and pre-empting financial excesses in periods of boom.

Moreover, the capacity of regulation and supervision to prevent a financial crisis should not be overstated either. We do not live in a zero probability world, and regulation will never be able to entirely eliminate the risk of a financial crisis. What well-designed regulation can do and should aim for is to lower the probability of such a tail event and, should it occur, to strengthen the financial system's ability to withstand it.

So my first key element is that getting regulation right will help achieve its objective of minimising the probability of crises and reducing their costs if, and only if, it is accompanied by "better measures": better macroeconomic policies, better risk management in the financial industry, better crisis management frameworks, better system-wide liquidity management, better market infrastructure, etc.[3] All these elements should be mutually reinforcing in order to enhance financial stability.

2 *See William White,* "Is price stability enough?", *BIS Working Papers, No. 205, 2006.*
3 *One of the lessons of recent crisis is that poor consumer/investor protection regulation may also have important systemic implications. Therefore, and although the focus of this article is on prudential regulation, sound consumer/investor protection frameworks can also contribute decisively to financial stability.*

2| Make the macroprudential framework operational

My second key element, advocated by the BIS for many years, is that we adopt a system-wide orientation of regulatory and supervisory frameworks. Such a macroprudential approach, now widely supported, should work to capture system-wide risks and their interplay with the macro economy. The approach has two dimensions: the "cross-sectional dimension", which concerns the distribution of risk in the whole financial system at a point in time, and the "time dimension", which has to do with how aggregate risk in the financial system evolves over time.[4] The former addresses the existence of common exposures and interlinkages in the financial system, regardless of the legal form of the financial firms involved. The latter deals with the mechanisms through which the financial system and the macroeconomy amplify business fluctuations and can generate financial instability ("procyclicality").

The key policy issue is how regulation and supervision can be adjusted to put appropriate safeguards in these two areas in place, making these concepts operational and developing the necessary tools. Let me now address separately each of the two equally important dimensions of the macroprudential approach.

2|1 The cross-sectional dimension: enlarging the regulation perimeter

In the past, financial regulation relied on two basic principles. One was that only (or almost exclusively) banks can be systemic and should therefore be regulated. The second was that a good view of what is happening in the financial system can be learned by looking through these regulated institutions. As a result, only those institutions deemed to have significant public policy importance (e.g. deposit-takers) faced well-defined prudential regulation. This was not the case for other financial firms performing similar activities or which were important counterparties. Regulation operated in silos, based on the legal form of an institution rather than its functional activity. The industry responded by creating vehicles, instruments and entities that existed in the shadow of the formal financial system. A telling example is the shadow banking system in the United States, which is estimated to be nearly the same size as the country's regulated banking system.

The current crisis has shown that this approach to regulation must change, to:

(i) focus on functions/objectives (e.g. financial stability, consumer protection) rather than institutions; and

(ii) assess risks for the system as a whole and not just for individual firms. Such re-orientation has to be backed by the development of new techniques and processes allowing for a macroprudential assessment of systemic risk.

A key task is to make the scope of regulation more appropriate. Broadening the focus of regulation from the firm to the system-wide level requires expanding the existing regulatory perimeter so that risks developing in the shadows of the supervised banking system can be recognised and addressed. A tiered approach has been proposed.[5] First, collect data capturing periodic information from an expanded set of institutions, instruments and markets that are outside the core present regulatory perimeter. Second, select those institutions that are deemed important from the point of view of their contribution to systemic risk, based on a range of parameters (e.g. size, interconnectedness, funding model). Third, apply to these selected institutions the type of (but not necessarily the same) prudential regulation that is in place for the firms belonging to the narrower, inner perimeter.

The concept is simple in design but may present significant operational challenges. One is that supervisors would require the legal ability to identify institutions in either perimeter, and clearer rules on the consolidation of off-balance sheet risks to enhance the assessment of the contribution of a single institution to system-wide risks. Supervisors would also need the capacity to act. In particular, specific procedures would have to be set up to wind down in an orderly fashion those institutions selected for

4 *See Borio (2009)* "Implementing the macroprudential approach to financial regulation and supervision".
5 *See IMF,* "Lessons of the financial crisis for future regulation of financial institutions and markets and for liquidity management", *prepared by the Monetary and Capital Markets Department, 4 February 2009.*

the importance of their contribution to systemic risk and considered as non-viable, in order to avoid the "too big to fail" problem and associated moral hazard issues. Lastly, consistent standards and tools would need to be developed across countries and sectors to prevent regulatory arbitrage, requiring better supervisory coordination. In particular, ensuring that a comprehensive consolidated supervision framework was applied to all the financial institutions deemed to be within the perimeter of institutions of system-wide importance would be essential.

Of course, the framework presented above should be complemented by specific arrangements for dealing with institutions that are not deemed as contributing to systemic risk, as is the case with deposit insurance coverage for commercial banks of limited size.

2|2 The time dimension: dealing with procyclicality while preserving risk sensitivity

As regards the time dimension of the macroprudential approach, the current crisis has underscored that addressing procyclicality in the financial system must be a key priority. From this perspective, some observers have focused on the higher risk sensitivity of minimum capital requirements associated with the recent evolution in banking regulation, arguing that this could lead to unwelcome procyclicality. This is a distinct possibility. At the same time, what is not sufficiently appreciated is that greater risk sensitivity is needed. Not least, if properly structured, it can encourage earlier recognition and mitigation of emerging risks, helping to forestall an unexpected and sudden call on capital later on. Indeed, one of the most procyclical forces in the current financial crisis has been the failure of risk management and capital frameworks to capture key risks. When banks and market participants realised what the true risks were, they retrenched at the worst possible time, amplifying the impact on the real economy.

In addition to risk sensitivity, another important feature of existing banking regulations that should be preserved in order to dampen procyclicality is the independence of the supervisory process. Past experience suggests that a lack of independence of supervisory authorities can indeed contribute significantly to procyclicality in both good and bad times.

There are a number of ways to reduce any potential procyclical bias in the regulatory framework and in particular feedback effects between the financial system and the real economy. Two important ones relate to provisioning and capital standards. Together, if properly designed, they should capture both expected and unexpected losses, fully taking into account the evolution of risk during business and financial cycles. Countercyclical regulations would imply that capital and provisions would be raised above the minimum in good times, when risks are building up. This would facilitate the accumulation of buffers that could be used in the downturn, when consequences of previous risk-taking materialise, enhancing risk management at the firm level. While this approach must necessarily be forward-looking, it has to be anchored on historical data and overseen by prudential supervisors (so as to limit the risk of manipulation).

There is wide agreement on the merits of countercyclical provisioning and capital requirements. In particular, risk would be better mitigated through several channels:

(i) the ***absorption capacity channel***, as a more forward-looking approach would provide more capacity to absorb losses when they occur;

(ii) the ***incentives channel***, as profits would be better adjusted to longer-term risks. During a boom, under a countercyclical approach declared profits would be less prone to exaggeration and lower, leading to the distribution of smaller bonuses and less dividends and most likely resulting in a fairer valuation of stock prices. This would ensure that profits distributed during upturns do not include risk premia, as it seems to have been the case in the run-up to the current crisis;[6] and

(iii) the ***portfolio shift channel***, as banks could adjust their portfolios more smoothly if the identification of risks were done earlier in the business cycle. This means that banks would be less prone to resort to fire sales and curb lending in downturns: either the pressure on capital would be less than otherwise, or remedial action would have been taken

6 *Although this would still not prevent excessive risk-taking in good times, it would surely help mitigate its impact.*

earlier thanks to improved risk sensitivity. In turn, all this would have positive effects on long-term economic growth.

No doubt there is much work to be done to develop, agree on and implement the right methodologies linking provisions and capital to business cycle developments. Nevertheless, work has already started in earnest. The April 2009 FSF Report *Addressing procyclicality in the financial system* represents a key milestone, as it includes recommendations suggesting methods to mitigate the procyclical effects of current regulatory practices. This work has benefited from strong support from the IMF, the Committee on the Global Financial System and the Basel Committee, especially on leverage and capital issues. Standard-setting bodies have embraced this agenda and are working to develop adequate methodologies to realise it. It is reasonable to expect that, when the next boom begins, there will be explicit features in capital, liquidity and provisioning rules in place along the lines outlined above.

3| Regulation must deal with uncertainty

My third key element is that regulation should find ways to deal with uncertainty. Indeed, a key challenge highlighted by the crisis is the limitations of the existing toolkit for dealing with unexpected events, particularly those that are infrequent and therefore unlikely. We turned out to know much less than we thought we did before the crisis. Key assumptions that underlie risk management models have come under scrutiny. Examples include the assumed normal shape of the risk distribution, the exceedingly short horizons for data records, the blindness to the possibility of herd behaviour, the inability to capture correlations, and the excessive reliance on market prices and past statistical relationships. However, all the financial institutions using similar models did not take similar decisions, suggesting that the problem is larger. The governance process that should support good judgment and decisions failed as much as the models on which people relied. Boards of directors and management of financial institutions were not always asking the right questions, often paying more attention to business volume than to risk management; profits were not analysed, and rewarded, on a risk-adjusted basis; and there were incentives to develop structures and new instruments to circumvent regulation and reduce short-term regulatory costs.

Hence, the recent crisis has shown that it is essential to both improve risk modelling techniques to factor in interactions and tail events *and* rely on judgment and experience to supplement mathematical analysis (not a new concept, but one that had tended to be forgotten).

But how can regulation help if models are inadequate, particularly in times of stress when they are needed the most, if uncertainty is difficult to manage and if governance arrangements do not favour adequate risk culture in financial institutions? The role of regulation, in short, should be to recognise the inadequacy of risk management frameworks to deal with uncertainty and to compensate for these shortcomings. Several possible ways to strengthen regulation in this respect may be considered:

- Building up larger cushions in capital, provisions and liquidity, so as to be prepared for uncertain adverse events.

- Multiple lines of defence against unexpected risks by looking at a wide array of indicators in both risk management (e.g. gross and net positions) and capital frameworks (e.g. simple and gross measures of risk, such as a leverage ratio).

- Automatic stabilisers to mitigate excessive risk-taking: given the difficulty in identifying uncertain events and avoiding delays in decision-taking as well as excessive optimism, cushions through the cycle should be built in as automatic stabilisers as much as possible, limiting the need for discretionary decision. There should, however, be an appropriate balance between automatic stabilisers and judgment by supervisors. An exclusive reliance on simple automatic rules could provide a false sense of comfort if the environment changes rapidly (e.g. financial innovation).

- Access to better information to improve market oversight.

4| FOSTER INCENTIVES FOR GOOD RISK MANAGEMENT CONSISTENT WITH FINANCIAL STABILITY

Fourth, regulation should foster adequate incentives for good risk management. This will also contribute to the preceding key element, because adequate incentives in financial institutions to foster sound risk management, good governance, proper checks and balances, market discipline and the internalisation of interactions and systemic risk in business decisions can prove of particular importance once the unexpected happens.

A first step, already being addressed by the Basel Committee, is to enhance the aspects of banking regulation to increase the resilience of the banking system through, in particular, strengthening the level and quality of capital and enhancing the global liquidity risk management framework.

More fundamentally perhaps, the need to reform regulation so as to better align private sector incentives with public goods such as financial stability is in itself a key objective —at least as important as the need to build larger capital cushions. Certainly, making wrong investment decisions is not necessarily a market failure, provided that markets can self-correct their excesses at a perhaps painful but still tolerable cost. However, in the recent crisis market discipline was not effective enough and large-scale public intervention proved necessary —problems that would not have been resolved by simply asking for more regulatory capital.

Public attention has particularly focused on incentives within financial firms. While the boards of these institutions are entrusted with the oversight of the risk management process —including determining risk appetite, approving risk management strategies and ensuring that management takes actions commensurate with these strategies— many of them overlooked the frenzied risk accumulation and in some cases allowed irresponsible executive compensation schemes. Although the financial industry should continue to be able to attract needed talents, it is clearly recognised that compensation schemes should stop providing the distorted incentives that helped amplify the recent crisis. In particular, the Basel Committee has worked on ways to strengthen risk management through Pillar 2 of the Basel Capital Framework. The FSF has proposed that compensation practices should be risk-adjusted and made consistent with the long-term goals of financial institutions. Financial supervisors are also being called upon to review compensation schemes as part of their supervisory exercises.

Another ingredient of market discipline that fell short during the crisis was the role of credit rating agencies. Their failure in addressing the conflict of interest between their advisory and rating roles has brought into question the use of their ratings in regulation. There were also failures in risk measurement and modelling, e.g. in the case of the ratings of structured products that had subprime mortgages embedded in them. Here, too, action has been initiated in several forums to enhance oversight of these agencies. IOSCO (International Organisation of Securities commissions) has developed a code of conduct which could form the basis of national frameworks, and the need for providing better disclosure on complex products to facilitate informed investment decisions has been highlighted. Important proposals have also been put forward by the Basel Committee to enhance market discipline in this area (enhancements of Pillar 3 of the Basel II Framework).

Yet, notwithstanding rating agencies' shortcomings, many institutional investors had adequate instruments and resources to perform their own due diligence but failed to do so and appeared blindsided in their quest for yield. The boards of these institutions overlooked the build-up of risk in their portfolios, highlighting that more remains to be done to further strengthen governance in this sector as well.

Ensuring the consistency of both prudential and accounting regulation with good risk management practices is also important, not least because these rules greatly influence the behaviour of financial institutions. It has long been argued that accounting rules aim at describing the balance sheet of an institution while the prudential approach is more forward-looking. This has led to a structural tension between the "incurred loss" model of the accounting world and the "expected loss" model of risk management and prudential regulations. On the accounting side, one worry is that a

forward-looking approach provides management with some discretion to manipulate earnings, thereby hurting investors. On the supervision side, one concern is that accounting rules that are backward-looking do not allow buffers to be built up when risks accumulate so as to meet future losses, undermining the soundness of the firm and exacerbating procyclicality. One positive outcome of this crisis is the apparent willingness to agree on a common ground which would address both concerns. Under the auspices of the FSF, both accountants and supervisors have looked deeply into the issues of valuation of financial instruments and provisioning. The International Accounting Standards Board (IASB) and Financial Accounting Standards Board (FASB) have been invited to reconsider the incurred loss model in order to recognise and measure loan losses that incorporate a broader range of available credit information. This would clearly narrow the gap with expected loss calculations, which incorporate past information that can be much richer than in the current, narrow, incurred loss approach.

5| Ensure meaningful cooperation for cross-border supervision and oversight

My fifth key element is that cross-border cooperation is of the essence. National solutions to financial system problems are unlikely to work effectively in today's globalised financial system, where large financial institutions straddle the world. Nor is it worthwhile to contemplate returning to a world with capital flow barriers. The solution is to find better ways to coordinate surveillance, oversight and policy responses across borders, thereby alleviating tensions between home and host countries. The importance of this issue has been highlighted during the current crisis. Uncoordinated policy actions at the national level led to defensive responses from other countries and possibly aggravated the early stage of the turmoil. Accordingly, several actions have been proposed to ensure more coordination in the future. The FSF has moved ahead with the development of principles to govern the scope, role and operations of supervisory colleges, which have been established for most of the identified large financial firms. The Basel Committee has in addition broadened the mandate of its Standards Implementation Group to concentrate on implementation of Basel Committee guidance, and all banking supervisory standards more generally.

But progress will be difficult in part because some important issues fall outside the normal scope of supervisors and risk remaining unaddressed. These are prickly areas of national sovereignty, implying that only strong political commitment can effectively reduce cross-border differences. For instance, legislative frameworks dealing with bank rescue intervention and insolvency have to be more compatible across jurisdictions to ensure the convergence of key policies such as early remedial action and intervention in the case of the failure of cross-border firms.

As highlighted by the recent crisis, such coordination will not be effective if not underpinned by some kind of institutional arrangement and strong political support promoting the convergence of national frameworks across sectors. This is also important to ensure a level playing field in the financial industry.

6| Enforce regulation proactively and devote more resources

My sixth and final key element is that setting adequate regulation is not enough if not properly enforced. The rules of the game do not matter without the ability and/or willingness to respect them. Even though it would have been better to have clearer regulation rules before the crisis, more could have been done under the existing regulatory framework, and supervisors did not use all the room for manoeuvre at their disposal. For example, it is now widely acknowledged that the relaxation of their underwriting standards and the growth of their off-balance sheet positions in the run-up to the crisis did not attract the desired supervisory responses.

The G20 has already picked up on this issue of regulation enforcement and has called upon national authorities to ensure the independence

and effectiveness of their regulatory activities. This should be complemented by a broader discussion on what should be done to ensure stronger oversight of the financial system in practice. Specific actions should be taken to provide the regulatory function with the necessary mandate, resources, operational independence and corresponding accountability so that the rules being set up are followed.

Good regulation has to be supported by equally good supervision, which must be able to act in a timely and credible fashion. Supervisory agencies must therefore also have adequate resources, in particular the ability to hire, train and retain skilled professionals. This is still not the case in a number of jurisdictions.[7]

This last point is even more important given that the role of supervisors is changing at a rapid pace. The last decade saw a shift in their roles, from the simple monitoring of how financial firms comply with regulation towards a more risk-focused approach. The next decade is likely to expand the supervisory focus further, from prudential regulation and firm-level risk assessment to macroprudential supervision and systemic risk determination. These changes will no doubt require significant additional resources and skills, not least to ensure the degree of operational independence required by supervisory actions to be credible and timely, and broader institutional reforms in some places. Though this issue has not yet gained visibility in the various discussions and reports emerging from the crisis, the question of resources is likely to be crucial in determining whether the reformed regulatory framework can effectively deal with the next financial crisis.

It is heartening to note that work has begun on almost all financial regulatory fronts. If properly implemented, my sense is that the roadmap presented here can provide assurance that things will be better on the next occasion of financial stress. However, cycles are an inevitable facet of the economy. The pursuit of policies to dampen procyclicality and moderate excessive risk-taking could also have a moderating effect on growth during specific periods of time. Policymakers should be prepared for these effects, taking comfort in the fact that growth would be more sustainable and stable in the longer run, and that the cost of future financial crises could be minimised.

7 *For example, the IMF paper "*Implementation of the Basel core principles for effective banking supervision: experience with assessments and implications for future work*", prepared by the Staff of the Monetary and Capital Markets Department, 2 September 2008, suggests that over a third of the sample of 137 assessed countries did not meet the criteria on the principle for operational independence and adequate resources, and points to the lack of experienced supervisors, training budgets, the inability to retain qualified staff due to low salary scales, and competition from the industry.*