

INTERNATIONAL MONETARY FUND

Lessons of the Financial Crisis for Future Regulation of Financial Institutions and Markets and for Liquidity Management

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Executive Summary

This paper seeks to draw lessons for financial sector regulation and supervision and central bank liquidity management from the ongoing crisis, focusing principally on implications for the future rather than on immediate crisis management policies. Inadequacies in macroeconomic policies and the design of the international financial architecture exposed in the crisis will also have to be addressed to make the suggested changes in the regulatory framework effective.

This paper does not seek to prescribe the specifics of various policy measures, since these will need to be defined by national regulators and international standard setters. Nonetheless, the Fund, given its unique mandate and broad membership, is well placed to both help define priorities and assist in implementation, and the following appear to warrant particular attention:

- Instituting a macroprudential approach to supervision and assigning a clear mandate to a systemic stability regulator.
- Expanding the perimeter of financial sector surveillance to ensure that the systemic risks posed by unregulated or less regulated financial sector segments are addressed.
- Ensuring that prudential regimes encourage incentives that support systemic stability and discourage regulatory arbitrage, and assure effective enforcement of regulation.
- Addressing the procyclicality of existing capital requirements and other prudential norms, preferably in a manner that is rules based and counters the cycle.
- Filling the information gaps, especially with regard to lightly regulated financial institutions and ‘off balance sheet’ transactions, ensuring that both supervisors and investors are provided more disclosure and a higher level of granularity in information provided.
- Resolving the political and legal impediments to the effective regulation of cross-border institutions, develop special insolvency regimes to be used for large cross-border financial firms, and harmonize remedial action frameworks.
- Strengthening the capacity of central banks to provide liquidity and respond to systemic shocks.
- Improving the capacity of national authorities to respond to systemic crises, including by establishing mechanisms for coordination both within and across borders.
- Establishing the basis for fiscal support during the crisis containment and restructuring phase, and an exit strategy for withdrawing public support and for a transition to a new and more stable financial market structure.

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I. INTRODUCTION AND SUMMARY

1. **Since the financial crisis began, the Fund has worked to assess the underlying causes of the turmoil, and to draw tentative lessons to help inform our surveillance and technical cooperation activities.** Some of this work was presented to the IMFC as part of the paper “*The Recent Financial Turmoil—Initial Assessment, Policy Lessons, and Implications for Fund Surveillance.*”¹ In addition, recent *Global Financial Stability Reports* have provided detailed analysis of the crisis and offered specific policy recommendations on a number of fronts.
2. **This paper extends this work by focusing on four key areas that warrant particular attention.** First, financial institutions and other investors were excessively optimistic about asset prices and risk, lulled by a low interest rate environment and changes in the financial landscape that masked the extent of leverage and made these risks more opaque and interconnected. Second, neither market oversight nor prudential supervision were able to stem excessive risk-taking or take into account the interconnectedness of the activities of regulated and non-regulated institutions and markets. This was due in part to fragmented regulatory structures and legal constraints on information sharing. Third, once the crisis hit, weaknesses and differences in national and international approaches to dealing with cross-border bank resolution and bankruptcy came to a head. And finally, the crisis drove home the limitations of existing mechanisms for central bank liquidity support and the need for significant changes in practice on this front.
3. **There is also little doubt that the crisis will require far-reaching changes in the shape and functioning of financial markets, and this evolution has already begun.** A massive deleveraging is already being forced by large losses coupled with sharp reductions in counterparty risk exposures, and it is likely that the post-crisis period will be characterized by a financial system that has lower levels of leverage, reduced funding mismatches (both in terms of maturity and currency), less exposure to counterparty risk, and greater transparency with regard to the financial instruments that are used. Moreover, it is likely that the type, size, and cross-border exposures of institutions and markets that will survive the crisis will be considerably different than before. Consolidation among banks is already underway, and there is already a significant and welcome push to reduce counterparty risk and to improve transparency. Some business models could disappear while others will have to considerably strengthen their risk management in order to survive.
4. **But further substantial adjustments will have to take place, including on the regulatory front.** Market failures that emerged as a result of financial innovation undermined the effectiveness of a regulatory model that rested, at least in large part, on transparency, disclosure, and market discipline to curb excessive risk taking. Reform of both

¹ www.imf.org/external/np/pp/eng/2008/040908.pdf

regulation and supervisory structures is needed to reduce the scope and incentive for regulatory and tax arbitrage, while encouraging continued innovation and the needed restructuring of institutions and markets in a manner that is consistent with strengthened systemic stability.

5. The challenge is to ensure that measures taken in the heat of a crisis are designed in manner that supports rather than hinders the needed restructuring.

Difficult questions still need to be answered about the likely (and appropriate) shape of the post-crisis financial system, with the thorniest issue the extent to which markets and policymakers will support global, universal banks, or prefer smaller and narrower institutions. Consideration may have to be given to whether mega- institutions should be discouraged, for example, through additional capital requirements proportional to their contribution to systemic risk or through stricter prudential oversight. Nonetheless, it is probably more important to ensure that the crisis response—including decisions on how to deal with weak institutions and efforts to re-start credit—does not foreclose or unduly increase the cost of the needed transformation. Still, policy responses will have to be consistent with the long-term view of the financial system without exacerbating the present crisis.

6. The specifics of the policy response are already being debated and developed in a range of fora. Coordinated by the Financial Stability Forum (FSF), the Fund, national authorities, and standard setters are already working to address deficiencies revealed in existing arrangements through the deliberations of the FSF Working Groups and the recently constituted G-20 Working Groups (see following Boxes 1 and 2). The Fund is represented in these groups and staff views have benefited from these discussions. These bodies are cognizant of the need to mitigate systemic risk while avoiding a “rush to regulate” that could impose excessive and inefficient regulation and stifle financial innovation. Moreover, these bodies are also attempting to tackle difficult legal and institutional hurdles to improving cross-border cooperation in regulation and the resolution of troubled institutions.

7. This paper aims not at defining the specific policy response, which is more the purview of these other bodies, but focuses on defining priorities for action:

- **The perimeter of financial sector surveillance** needs to be expanded to a wider range of institutions and markets, possibly with differentiated layers to allow institutions to graduate from simple disclosure to higher levels of prudential oversight as their contribution to systemic risk increases. Mechanisms also are needed to allow for the assessment of, and the response to, systemic risks posed by unregulated or less regulated financial sector segments.
- **Prudential regimes** should encourage incentives that support systemic stability; discourage regulatory arbitrage; and adopt a broad concept of ‘systemic’ risk, factoring in the effects of leverage, funding, and interconnectedness.

- **Capital, provisioning and liquidity norms** should be more demanding in good times to build buffers that in bad times can help to offset procyclical pressures. It will be necessary to develop a methodology to link the stage in the cycle to capital requirements in a non-discretionary way, and to accommodate the demands of accounting and prudential standards.
- Regulators need **better information** on a much wider range of financial institutions, including ‘off balance sheet’ risks (involving better consolidated supervision), and the risks of financial interlinkages. Investors also need more disclosure and a higher level of granularity in information provided. Careful consideration will have to be given to the costs and benefits of enhanced information collection and disclosure, especially the additional information that regulators require.
- Progress is needed in tackling political and legal impediments to the **regulation and resolution of cross-border institutions**. Developing harmonized insolvency regimes governing the resolution of large cross-border financial firms and early remedial action frameworks would be a desirable feature of a reformed crisis management framework of the future. Absent action on these fronts, the risk is that national authorities will begin to resist financial globalization.
- Greater flexibility for central banks to provide **liquidity** and also to focus greater attention on credit and asset booms is needed. The breakdown of markets has highlighted the need for a better understanding of the monetary policy transmission mechanism, including whether central banks should support liquidity in term markets. For central banks in many emerging market countries, facing capital outflows and exchange rate pressures, the provision of additional liquidity can be more complex as it may fuel a drain of foreign exchange reserves.
- The current crisis underlines the need for **better crisis responses**. Actions taken by national authorities have at times appeared piece-meal and uncoordinated both within countries and internationally, which has risked undermining confidence, weakening the impact of policy responses, and distorting markets.
- Increased concern about credit risk, and the realization of losses, underscores the need for **fiscal support** during the containment and restructuring process. This has included enhanced depositor protection and government guarantees for certain wholesale bank liabilities; bank recapitalization; and in some cases the direct purchase by government or the central bank of bank and other assets.
- **A clear exit strategy** to allow the authorities to withdraw market support and a transition to a new and more stable financial market structure will require careful planning and international cooperation in order to avoid market distortions and to

promote a revival of markets at a reasonable level of systemic risk. More work on the approach to this is required by Ministries of Finance, central banks, and regulators.

Box 1. The Financial Stability Forum and Its Response to the Financial Crisis

The Financial Stability Forum (FSF) was convened in April 1999 to promote international financial stability through information exchange and international co-operation in financial supervision and surveillance. Working with and through its members, the FSF's mandate is to assess vulnerabilities affecting the international financial system, identify and oversee needed action and improve co-ordination and information exchange among responsible authorities. The FSF presently brings together finance ministries, central banks, regulators and supervisory authorities from major financial centres (G7 plus five)^{1/}; the IMF, World Bank, BIS, OECD, and European Central Bank; the international regulatory and supervisory standard setting bodies, and committees of central bank experts.

In October 2007, the FSF established a senior working group to examine the causes and weaknesses that produced this crisis and to set out recommendations for increasing the resilience of markets and institutions going forward. The FSF report published in April 2008 set out an agenda for regulatory reform to strengthen prudential oversight of capital, liquidity and risk management; enhance transparency and valuation; change the role and use of credit ratings; strengthen the authorities' responsiveness to risks; and make more robust arrangements for dealing with stress in the financial system.^{2/} The report also called for the FSF and IMF to enhance cooperation and complement each other's role in financial stability. In November 2008, the heads of the two bodies issued a joint statement delineating responsibilities and outlining areas of cooperation, including work on an early warning system.

The current status of implementation of the FSF recommendations is provided in Table I. In addition, several FSF workstreams started in 2008 are feeding into the G20 November 2008 Action Plan. For instance, the workstream (WS) on capital procyclicality, jointly with the Basel Committee on Banking Supervision (BCBS), is developing recommendations to address the pro-cyclicality of the regulatory capital framework (Basel II). The WS on procyclicality of bank provisioning practices is examining the use of judgment in existing accounting standards and whether changes in accounting standards and the capital regime are needed to promote more effective through-the-cycle provisioning. The WS on the role of valuation and leverage in procyclicality, jointly with the Committee on the Global Financial System (CGFS), is preparing a set of policy options to reduce the build-up of leverage and maturity mismatches in the system, both via quantitative constraints and adjustments in valuation practices. The WS on compensation is developing principles for sound compensation practices in large financial institutions. The WS on financial crisis management is reviewing recent bank failures and rescues in the context of the 2001 report of the Joint Taskforce on Winding Down a Large Complex Financial Institution and will propose high-level principles for cross-border cooperation on crisis management. The WS on supervisory colleges is monitoring the establishment of colleges for the largest cross-border financial institutions, most of which were set up by end-2008, and will undertake a review of the college arrangements in 2009 once experience with the colleges has been garnered. Reports from these workstreams will be discussed in the March meeting of the FSF and then tie into the G20 process (see Box 2).

1/ Australia, Canada, France, Germany, Hong Kong SAR, Italy, Japan, Netherlands, Singapore, Switzerland, United Kingdom, United States.

2/ Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience, available at www.fsforum.org.

Box 2. G 20 Initiatives on Strengthening the Global Financial System

The G20 grouping was set up in September 1999 in the wake of the financial crisis in East Asia with the aim of providing a permanent forum for broadening the dialogue on issues of international financial stability between advanced and major emerging economies. Its membership consists of 19 systemically important countries¹ and the European Union, which together account for two-thirds of the world's population and nine-tenths of the global gross national product. The Managing Director of the IMF; the President of the World Bank and the chairs of the IMFC and Development Committees of the IMF/World Bank are ex-officio members.

The declaration² issued by the G20 Leaders following their summit in Washington DC in November 2008 committed the membership to implementing policies consistent with common principles for reform in the areas of strengthening transparency and accountability; enhancing sound regulation; promoting integrity in financial markets; reinforcing international cooperation; and reforming the International Financial Institutions. The declaration also set out a list of immediate actions to be taken by March 31, 2009 as well as medium term actions.

Following this, four working groups (WGs) have been set up to take these recommendations forward. Each WG is co-chaired by an advanced and emerging economy.

- The work of WG I on *'enhancing sound regulation and strengthening transparency'* focuses on high level principles aimed at mitigating pro-cyclicality; strengthening OTC infrastructures; expanding the regulatory perimeter; enhancing transparency in valuation and accounting; and compensation systems and risk management.
- The work of WG 2 on *'reinforcing international cooperation and promoting integrity in financial markets'* covers issues of governance and membership of international supervisory and standard setting committees including the FSF; and IMF/FSF collaboration including on early warning ; contingency planning and crisis management; cross-border supervisory arrangements, resolution regimes and bankruptcy laws and issues relating to money-laundering, tax havens and off shore centers.
- WG3 on *'reforming the IMF'* will look at the role, governance and resource requirements of the IMF while WG 4 on *'reforming the World Bank and multilateral development banks'* will consider the mandates, governance, resources and policy instruments of the MDBs in light of the needs of their members and the pressures of the economic downturn on developing countries.

The WG reports will be discussed by the G 20 Deputies in their March 2009 meeting and the outcome reflected in the April 2009 meeting of the G 20 Leaders.

1/ Argentina, Australia, Brazil, Canada, China, France, Germany, India, Indonesia, Italy, Japan, Mexico, Russia, Saudi Arabia, South Africa, South Korea, Turkey, the United Kingdom and the United States of America

2/ Available at the official website of the G 20 at www.g20.org

8. **These lessons are most immediately applicable to the advanced economies that are presently in crisis, but also have a broader relevance.** This crisis has been unusual since its origin has been the industrialized countries, reflecting the fact that financial innovation and deregulation had been more prevalent. However, many emerging market and developing economies are now beginning to face strains, both because of spillover effects and because many of these latter economies also have experienced asset price inflation, financial innovation, funding and currency mismatches, and weak risk management. So even for those economies that have proven resilient thus far, the lessons learned by those presently in crisis can offer important guidance for policymakers, even though flexibility in adapting them may be needed.

9. **These lessons also have important implications for the Fund.** As an institution with near universal membership and a mandate that encompasses macro-financial stability, the IMF is uniquely placed to help facilitate, promote, and coordinate appropriate national and multilateral responses to the crisis. The Fund is already actively engaged in this effort, both in the context of its bilateral surveillance, FSAP assessments, programs, and technical assistance; and through its multilateral surveillance, as illustrated by the policy messages drawn in the *World Economic Outlook* and *Global Financial Stability Report*. The Fund is also actively engaged with other international organizations and standard setters to complement their work where appropriate. Many of these recent efforts have been summarized in “Integrating Financial Sector Issues and FSAP Assessments into Surveillance—Progress Report,” while proposals for new roles for the Fund in the evolving new financial architecture are detailed in a companion Board paper. This paper seeks to complement these other papers by offering a number of more specific suggestions of where the Fund could provide additional impetus to an effective response to the crisis.

10. **These issues are discussed in detail below.** Section II provides an overview and analysis of the perimeter of regulation; Section III reviews information gaps and the need for improved data collection; Section IV addresses procyclicality and regulation; Section V reviews the cross-border and cross-functional coordination; and Section VI discusses issues related to central bank operations and liquidity support.

II. RETHINKING THE PERIMETER OF FINANCIAL REGULATION

11. **The G20 has called for a review of the scope of financial regulation.** The November 15 communiqué referred to “a special emphasis on institutions, instruments and markets that are currently unregulated, along with ensuring that all systemically-important institutions are appropriately regulated.”

12. **A macroprudential approach to regulation is needed.** This call reflects concern that the coverage of prudential regulation has been too narrow. Prudential regulation typically aims at ensuring the safety and soundness of the financial system by minimizing risks of failure by institutions (and settlement systems) that are viewed as critical for financial stability. Instruments of prudential regulation typically include minimum capital

and liquidity requirements, supervisory inspection, mechanisms to require early intervention by regulators, deposit insurance and similar safety nets, and special insolvency and resolution mechanisms. To successfully implement this macroprudential approach, a clear mandate for taking the lead in monitoring systemic risk should be assigned to the agency best placed to do so at the national level.

13. **The scale of relevant activities outside the regulatory perimeter depends on the definition of regulation that one applies.** For the United States, it has been estimated that the total assets of the “shadow banking system”—i.e., bank-like entities not subject to bank-like prudential regulation—were roughly US\$10 trillion in late 2007, the same size as the banking system. Although this total includes the assets of entities such as investment banks that were subject regulation, this was often more focused on investor protection and appropriate business conduct, and was not well integrated with the broader prudential oversight that applied to banks. This also underscores the need for better enforcement of regulations.

14. **Explicit public policy considerations have been used to argue for limiting the scope of prudential regulation.** It was argued that:

- market discipline and self-regulation would provide an effective brake on risk-taking by lightly regulated and unregulated institutions;
- only certain types of institution could create systemic risk—in particular banks should be seen as core because of their deposit-taking function and role in payment systems;
- regulation of the banks would be adequate to ensure that their lending to entities outside the core would be consistent with systemic stability; and
- applying regulation to a wider range of nonbanks (and new financial instruments) would be too costly, reduce innovation, and potentially increase systemic vulnerabilities by inhibiting the ability of markets to transfer risk.

15. **A discussion on extending the regulatory perimeter should therefore weigh carefully the experience of the past two years against these considerations.** It will also be important to understand whether the assumptions underlying the existing regulatory model are fatally flawed or whether better regulation and supervision of the banks would be adequate. And if a widening of the perimeter is called for, then care will be needed to weigh the compliance and economic efficiency costs, as well as the risk that new regulation may create fresh arbitrage opportunities and add to moral hazard.

16. **The experience of the crisis suggests that prevailing policy considerations were flawed in important respects:**

- Market discipline (coupled with weakened prudential regulation) was apparently ineffective in constraining risk-taking outside the banking sector. Some unregulated companies and vehicles, for example, were able to assume both credit risks and

significant liquidity risks, funding poor quality long-term securities by short-term borrowings with high degrees of leverage.

- The systemic importance of some nonbanks was under-appreciated, including their potential impact on key financial markets and confidence—for example, the failure of Lehman Brothers and the insolvency event of two Bear Stearns managed hedge funds appeared to have an unexpectedly large effects.
- Regulation (and supervisors) did not take adequate account of the systemic risks posed by the interaction between regulated and unregulated institutions, activities and markets. For example, bank regulation did not fully reflect risks from off-balance sheet vehicles, monoline insurance companies, or loan originators with weak underwriting standards.
- The limited scope of regulation, combined with ineffective market discipline, appears to have helped drive innovation, for example in the securitization process, but at a high cost when the risks of poorly understood products became apparent.
- Investors relied too heavily on credit ratings, which in turn were too focused on default risks, and subject to growing conflicts of interest in rating structured products.
- Moreover, public agencies that supported securitization (e.g., the U.S. GSEs) were weakly supervised, undercapitalized, and overburdened with public policy objectives that undermined their financial position.

17. Steps are being taken to attempt to strengthen the regulation of institutions already within the perimeter.

- Clearer and more stringent rules on the consolidation, coupled with more effective supervision, of the activities, entities, and risks of financial groups are needed, particularly with regard to bank-sponsored off-balance sheet activities.
- Ensuring there is an effective framework of both solo and consolidated prudential supervision of regulated securities and insurance companies is also required, given the systemic repercussions that have been experienced from failures in these sectors.
- It may be possible to strengthen further the oversight of counterparty risk management in regulated institutions so as to contain their exposure to unregulated companies and, indirectly, those companies' leverage and risk—the approach adopted to risks in hedge funds after the LTCM problems of 1998. (There remain practical difficulties, as identified at that time, in applying prudential regulation directly to hedge funds.)

18. **However, the experience of the last two years suggests that these steps will be insufficient, and an extension to the regulatory perimeter stills seems necessary.** Some considerations that should be at the forefront of discussions of this expanded perimeter include:

- The key objective should be to ensure that all financial activities that may pose systemic risks are appropriately overseen. The understanding of systemic significance should be broadened to ensure it addresses the scope for failure to cause disruption to key financial markets and loss of confidence as well as interconnectedness and size, and should take account of leverage and funding mismatches.
- A two-tiered approach with an outer and an inner perimeter is envisaged. All financial institutions within the outer perimeter would have disclosure obligations to allow the authorities to determine the potential of the institution and its activities to contribute to systemic risk. Those institutions within the wider groups that are recognized as being of systemic importance, based on broadly agreed and disclosed parameters, would be in the inner perimeter and subject to higher levels of prudential oversight. As this narrow group of systemically-important institutions will consist of nonbanks as well as banks, the authorities will need to decide whether access to liquidity facilities should remain limited to depository institutions. Should access be expanded, the haircuts and pricing of liquidity will be crucial for in minimizing moral hazard.
- Prudential requirements themselves should differ based on the type of institution or activity, but should allow for rapid corrective action in order to contain an unacceptable build-up in systemic risk. They should use incentives for behavior to be consistent with systemic stability. Capital charges can be used, for example, to favor safer exchange trading environments or use of robust clearing systems.

19. **Extensions to the regulation of products and markets could also be considered within a similar framework.** For example, regulation could be considered for financial products that may be particularly complex and prone to informational asymmetries, especially if they have systemic importance or if the users of these instruments are so dispersed as to fall outside the existing perimeter. Examples of such products are collateralized debt instruments and credit default swaps, since the recent crisis has illustrated the systemic risks that these instruments have posed.

III. POLICIES TO MITIGATE PROCYCLICALITY

20. **The crisis has led to calls for re-examining existing regulatory and institutional practices to ensure they do not exert a procyclical impetus.** For instance, there is an emerging consensus among market participants and regulators that current loan loss provisioning rules and practices tend to have a too short-term horizon, and are backward looking thus recognizing risks too late and allowing excessive risk-taking during economic upswings. Concerns have also been raised that the enhanced risk-sensitivity in the Basel II capital requirements could exacerbate potential procyclical behavior. These concerns, and the

recent crisis, have led to calls for regulatory policies that would exert a countercyclical impetus, as a supplement to monetary and fiscal policies.

21. **The surrounding debate, however, will need to balance carefully the aim of reducing procyclicality with the need to adequately reflect current risks.** A priority must still be laid on ensuring that prudential regulation continues to encourage risk sensitivity. Nonetheless, earlier recognition of risks that mount during economic upswings, but only materialize as losses during downturns, can contribute to financial stability through moderating excesses in good times while building up adequate buffers when profits are high and capital is more easily available.

22. Moreover, reforms in this area will need to be introduced in a comprehensive and gradual manner to avoid exacerbating the current difficulties of the banking system. For example, higher capital requirements to limit leverage should be introduced when recovery is underway: starting now would accentuate the deleveraging process and likely make it more disorderly. Moreover, care will be needed to ensure that reforms in one area (or sector) do not have unintended consequences, or still leave part of the system overly pro-cyclical.

23. **Finally, reforms will also need to balance carefully the benefits of rules-based, versus discretionary, prudential policy making.** The current framework for prudential regulation already allows supervisors discretion to implement some of the policies outlined below, but the current crisis has illustrated that policymakers can be reluctant or slow to act, suggesting the benefits of a rules-based framework. To the extent possible, automatic stabilizers that act through the cycle should be built in to the framework. At the same time, however, regulators and supervisors should be given the discretion (and be accountable) for acting to identify vulnerabilities and taking additional action where needed.

Proposals for strengthening prudential regulation, valuation, and accounting

24. **Capital regulation should include incentives and provide guidance for accumulation of additional capital buffers in good times.** To mitigate procyclical effects on bank activity during future downturns (and upturns), minimum regulatory capital requirements should be increased during upswings to permit the accumulation of capital buffers, which can be drawn down in the downturns.

25. **Such countercyclical measures should preferably be non-discretionary and built into the capital requirements.** While the ability and intent of national supervisors to require capital buffers above the minima is contained in guidance on Pillar 2 of Basel II currently being implemented in most major markets, there is merit in introducing a more rules-based methodology that would link capital requirements to some indicator of cyclical pressure. However, designing robust, credible metrics that could achieve this objective will be challenging, and more research is needed to develop the framework and identify the

parameters that would be appropriate in a multi-country context. The Fund could contribute in developing globally applicable indices for the current stage of the economic cycle.²

26. **Other areas where regulations and practices could be re-examined include:**

- **Loan-loss provisions should reflect expected losses through the cycle.** To mitigate procyclical effects banks should have the ability and incentives for greater provisioning during upswings when credits are originated, which can be drawn down in downturns. However, the current accounting approach that requires losses to have already been incurred restricts the recognition of future or expected losses in provisions. There is need for agreement on an international framework which permits banks to undertake such forward-looking provisioning. The current model of ‘dynamic provisioning’ practiced in some jurisdictions provides a good starting point for developing such a framework.
- **Re-calibrate risk weights.** Work is needed to ensure that risk weights and related risk parameters in the capital framework better capture ‘through the cycle’ effects, or the tail risks that have been exposed by the current episode.
- **Introduce a supplementary leverage ratio for banks.** A measure akin to the equity/asset ratio but with enhanced sensitivity to off-balance sheet exposures should be introduced in the capital framework as an upper bound to constrain excessive leverage in the upswing.
- **Allocate valuation reserves for trading book assets.** While maintaining Fair Value Accounting (FVA) as a benchmark,³ and maintaining full transparency, supervisors could require (and accounting standards should allow) the establishment of “valuation reserves” during periods when market prices deviate rapidly from trend (or possibly an estimate of underlying value), building up a buffer during upswings to be drawn down in downturns. This will lead to more accuracy in the depiction of fair value while being more consistent with good risk management.
- **Adopt more conservative collateral valuations.** Where valuations for the purpose of determining provisions and capital buffers are subject to large margins of uncertainty, they should rely less on contemporaneous market price valuations and

² One such method would be the deviation between actual and potential GDP; another would be to use deviations between smoothed or average credit growth and current credit growth (or similarly for provisions).

³ In making any such adjustments to International Financial Reporting Standards (IFRS), due process is essential. The consistent application of due process would mitigate incentives for specific modifications by national IFRS adopters and would help to ensure the integrity of the framework as necessary amendments are made.

include a buffer to withstand normal cyclical downward movements in collateral values. To the extent possible, the adjustments should be forward-looking and based on measurable indicators.⁴

Proposals to mitigate liquidity risk

27. Liquidity risk may be procyclical due to its links with market and credit risks, and to “accelerator” factors, such as the mark-to-market effects of asset values and net worth. In many cases, structural reliance on short-term wholesale market funding, including via securitization, has increased the sensitivity of banks’ balance sheets and cost of funds to procyclical elements (credit ratings, market liquidity of assets, and aggregate liquidity). Regulatory policies need to reflect appropriately the true price of funding liquidity on financial institutions’ balance sheets (including a liquidity risk premium)—ensuring that the market does not rely excessively on central bank emergency liquidity support facilities. Areas that could be considered include:

- **Improved funding risk management.** By strengthening risk management governance and controls, some procyclical tendencies can be avoided. In particular, stress test assumptions and estimates of risks of liquid assets, cash flows, and funding costs need to be more sensitive to firms’ credit ratings and collateral triggers, correlated credit risk events, and funding market breakdowns.⁵ Supervisors will need to ensure adherence to such risk management practices.
- **A minimum quantitative funding liquidity buffer.** A minimum required stock of high-quality liquid assets (less prone to illiquidity in extreme events) could provide some insurance during a downturn or period of market stress. This could be applied to systemically-important institutions, widely defined, and take account of their balance sheet structure (such as the stability of their liabilities).
- **Incentive-based mechanisms.** A requirement to hold high-quality liquid assets would impose costs on financial institutions, could be a relatively blunt instrument and does not necessarily provide a financial incentive to manage liquidity well. Instead, regulatory charges could be introduced for institutions that present a higher-than-average liquidity risk. Similarly, the pricing of access to central bank liquidity could be tailored in a way to encourage institutions to hold better-quality collateral.

⁴ For instance, estimates of the mean-reversion of prices could be used as an indicator risk.

⁵ Consideration of similar types of mechanisms is being given by the New Zealand authorities, for example.

IV. ADDRESSING INFORMATION GAPS

28. **For markets, policy makers and financial authorities, including the IMF, appropriate coverage and quality of information is critical to their capacity to assess risks and vulnerabilities.** Ideally, information available to investors and counterparties should be sufficient for them to assess the risks of their investments or counterparty institutions. For policy makers and financial authorities the information should be sufficient to formulate macro-financial policies to prevent or mitigate crises.

29. **The current crisis provided a stark illustration of significant gaps in information.** In the crisis, some large risk exposures, both on- and off-balance sheet, appear to have been unappreciated or unreported. The pricing and design of complex structured credit products were opaque to many investors, though much of the information was available if investors were willing to look hard enough. Lack of transparency in some over-the-counter (OTC) derivatives markets has also caused difficulties and uncertainties about the risk of some counterparties. More information disclosure, at a higher level of granularity, about risks and exposures and how they are managed could help to improve market discipline. Proprietary information should not be publicly released, but would still need to be collected (and acted upon in some cases) by those tasked with monitoring and mitigating systemic risks.

30. **A multilateral approach to filling information gaps is needed.** An internationally cooperative and coordinated approach would pay significant dividends, especially given the importance of measuring cross-border exposures, and the potential for cross-border spillovers. The IMF is already seeking to enhance its collaboration with national authorities responsible for financial stability assessments to help identify such information and areas for cooperation on follow-up actions.⁶ Such an effort will entail costs and will require commitment, and care is needed, therefore, to glean what information is truly relevant.

31. **Specific (and overlapping) gaps in coverage that the crisis has revealed as most critical include:**

- **On- and off-balance sheet exposures:** Supervisors and analysts appear to have been unaware of (or have paid inadequate attention to) the systemic risks posed by the off-balance sheet entities (SIVs, SPVs, etc.) sponsored by banks and other systemically important nonbank financial institutions (NBFIs). Even on-balance sheet risks, including that of bank trading books, appear to have been underappreciated and/or reported, in part because of the complexity of products and the lack of granularity and consistency in disclosures. This seems to have reflected insufficient data and

⁶ E.g., an interagency group has been established to strengthen finance statistics, chaired by the IMF and including the BIS, ECB, OECD, Eurostat, the UN, and the World Bank.

understanding of both the size and concentration of exposures, and their interlinkages across borders and markets.

- **Complex structured products:** Asset valuation techniques and risk models for these instruments were insufficiently developed and unable to capture the distribution of tail losses and price correlations. Specifically, the processes, including assumptions and data used for the calibration of the models and back testing, were not rigorous enough as they were based on an unusually benign segment of the credit cycle. Until the crisis provided an extreme, real-life stress test, the price distributions and cross-correlations of these new, structured products had never been tested by a downturn
- **OTC derivatives:** Insufficient information on prices, traded volumes and concentration in OTC traded instruments inhibited assessments of liquidity and market risk.
- **Leverage:** The monitoring and management of systemic leverage proved to be difficult, owing to the increased use of off balance sheet vehicles, the growth of leverage among systemically important NBFIs, and the increasingly complex web of exposures to other financial institutions.
- **Cross-border and counterparty exposures:** The crisis revealed surprisingly large exposures of non-U.S. banks to the U.S. sub-prime market and to Lehman Brothers, suggesting that the underlying vulnerabilities were under-appreciated by both bank risk managers and supervisors.

32. **The crisis also illustrated limitations in the early warning frameworks used to gauge systemic and institutional risks.** For example, standard indicators of financial soundness (FSIs), while useful in their own right, may be limited as leading indicators of vulnerability. Some widely used FSIs, such as capital adequacy ratios (CAR) depend on the underlying assessment of asset quality, and in the run up to this crisis, understated the risks associated with complex structured products on banks' trading books and off-balance sheet transactions. Moreover, market indicators and measures of financial institution soundness, such as distance to default, were driven largely by contemporaneous information and failed to provide early indications of stress. All this suggests the need to supplement the existing sets of indicators while designing the early warning systems of the future.

33. **Against this background, the proposals below focus on strengthening information for macro-financial analysis and complement initiatives by other institutions and fora that are underway in this area.** They fall into five main categories:

- **First, strengthen public disclosure practices of systemically-important financial institutions by making reporting information more granular and consistent:**

- **Large banks:** reporting should be frequent and cover market positions as well as exposures by economic sector, large counterparties, and countries. Off-balance sheet activities should also be covered, and reporting should be according to a common reporting template to permit aggregation, the identification of important network linkages and exposures, and cross-country comparison that will meet macro-prudential assessment needs.⁷
 - **Systemically important NBFIs**, such as insurance companies and large investment funds, should report information, including indicators on their leverage and exposures, in a format that is consistent and comparable to that for banks.
 - **Coordination will be required**, including by supervisors, central banks, market participants, and the IMF and other international organizations, to promote and support the initiatives to enhance bank and systemic NBFI disclosures.
- **Second, revamp and broaden the coverage of FSIs, with a greater emphasis on specific country circumstances and systemically important financial institutions.** Experience demonstrates that FSIs can only be the starting point of financial stability analysis. Nevertheless, work is still needed to improve both the quality of these indicators and their analysis, work that the IMF is well placed to help promote and guide given its existing mandate and its role in coordinating international efforts to develop standards for FSIs.⁸ Against this background, FSIs should be:
 - **re-prioritized** for banks, especially their CAR, liquidity, and leverage measures;
 - **expanded** to include systemic NBFIs; and
 - **enhanced** in terms of their coverage of sectoral risk exposures (households and corporates), including in foreign exchange where appropriate.
 - **Third, strengthen disclosure by large banks, systemic NBFIs and credit rating agencies of the valuation of complex models and risk management practices.** More complete and standardized information should be disclosed, including:

⁷ The IMF's Statistics Department is working on developing templates that could be used for these purposes.

⁸ The IMF's coordinated compilation exercise already provides a platform for supporting and would be used to collect more timely, higher frequency data, and eventually a basis for archiving a convergence of these data to an internationally comparable standard. See <http://www.imf.org/external/np/sta/fsi/eng/cce/index.htm>.

- the main characteristics of model valuation techniques and risk management practices, including the characteristics of the datasets used to calibrate the main risk parameters and stress tests as well as credit and liquidity risk management methodologies; and
- the linkages of risk models and parameters to macroeconomic conditions.
- **Fourth, financial stability departments of central banks and supervisory authorities should take the lead in translating disclosures into effective assessments of institutional and systemic risk.** Oversight of reporting institutions will be required to ensure that the disclosures are translated into clear messages for policymakers and result in actionable recommendations. In addition, the assessments should be disseminated to all relevant agencies, both domestically and internationally, that need the assessments for their work on financial stability and early warning systems.
- **Fifth, improve the transparency and coverage of information regarding OTC derivatives markets.** While deriving comprehensive OTC derivatives data, including on exposures, is likely to remain problematic:
 - The BIS could take the lead in assessing ways to enhance the usefulness of its OTC derivatives database. Issues that should be considered include: (1) the geographical and instrument coverage; (2) the frequency of reporting; (3) the granularity of disclosure as regards instruments, counterparties, and market concentration; and (4) the shifting the focus of data collection from information on volumes to exposures.⁹
 - Disclosure of CDS transactions would be enhanced by ensuring that the clearing house developments under preparation are well coordinated; and clearing and settlement platforms could be extended to other OTC traded instruments.
- **Sixth, enhance the transparency of credit ratings methodologies.** Work is already underway to address this issue, but national authorities will need to ensure that credit rating agencies provide more information regarding the methodologies used to rate structured credit products as well as information on the sensitivity of ratings to shocks. Moreover, as often stressed by the Fund's GFSR, adopting a different rating scale for such instruments could help encourage more prudent assessments of their vulnerability to multiple-notch downgrades.

⁹ This BIS has already established a task force to address many of these issues.

V. CROSS-BORDER/CROSS-FUNCTIONAL REGULATION

34. **There has been considerable progress in recent years toward improving cross-border and cross-functional cooperation among financial supervisors.** Besides the ongoing work of the FSF, and the various standard setters, the recent FSF proposal to set up colleges of supervisors to facilitate a coordinated approach to oversight of internationally active financial institutions is a positive step. Moreover, improving cross-border cooperation has been a perennial issue at international fora and many countries have actively worked to draft supervisory Memoranda of Understanding (MoUs), to provide a framework for information sharing.

35. However, further significant improvement is still needed to improve cooperation and effective supervision of globally and regionally important financial firms. Ahead of the crisis, supervisory authorities do not appear to have been effective in sharing information and identifying a buildup of vulnerabilities in globally active and systemically important financial institutions. The problems which hit AIG and the potential impact on the CDS market (and, consequently, the banking system in the United States and Europe) are a clear example of insufficient cross-functional cooperation and understanding. The need for further cooperation between home and host authorities in handling problem cases is most starkly illustrated by the recent crisis response to deal with the bankruptcy of Lehman Brothers and the three Icelandic banks.

36. **Insufficient progress in this area to date can be attributed to important legal impediments to better coordination.** The natural tendency of supervisory authorities to oversee institutions with the implicit mandate of protecting local depositors and other customers is reinforced by the lack of an international legal framework that could guarantee a fair resolution in case of the failure of a global firm. Furthermore, in many cases the proper flow of information among regulators even within the same jurisdiction appears to face constraints due to imprecise legislation.

37. **Policymakers from countries where large cross-border financial entities actively operate must work together to address these constraints.** Otherwise, there is a danger that in tranquil times national authorities will be unwilling to encourage the process of financial globalization, at a cost to national and international efficiency, and in times of stress will resort to ring-fencing their financial systems, including by using discriminatory bank resolution practices.

38. **With this background, the suggestions here for improving cross-border and cross-functional regulation and supervision are necessarily tentative but include:**

- **Compatible bank resolution and information-sharing legislation.** A key issue is the convergence of banking legislation by home and host countries of the financial firms along a number of fronts:¹⁰
 - **early corrective actions**, including common criteria on triggers and timing of resolution or bankruptcy procedures of a global firm;
 - **resolution tools**, to allow quick and well-synchronized action by the relevant authorities across countries to preserve the failing firm's franchise value and ensure fair treatment of all creditors;
 - **depositor and investor protection schemes**, to ensure that depositors/investors are covered by the scheme prevailing in each jurisdiction, regardless of whether the entity is a subsidiary or a branch (branches would have to join the local scheme);
 - **free exchange of information and cooperation by regulators** with local and foreign counterparts, including the possibility of participating in joint-inspections with foreign regulators; and
 - **loss sharing arrangements**, to ensure that the contribution of each country to the resolution of a firm is carried out on the basis of a fair and well-established framework, measured on the basis of objective criteria (for instance the level of unprovisioned non-performing loans of each location to total equity).
- **Compatible minimum supervisory practices to oversee cross-border firms.** The measures discussed below could be established in the form of a minimum set of core principles and would provide a firmer basis for cooperation among supervisors as well as a framework for achieving greater harmonization of MoUs:
 - **Appointing a lead regulator**, in principle the home authority, by the college of regulators overseeing a firm. The lead regulator would *inter alia* be responsible for drawing a clear picture of risk concentration across the firm, as well as of its major strengths and vulnerabilities.
 - **Harmonizing key information and reporting**, which would facilitate aggregation of risk and improve comparability of risk assessments across countries. Moreover, consistent requirements across borders would help encourage financial conglomerates

¹⁰ Consideration should be given to making this compatible regime applicable only to financial firms that operate internationally, so the existing insolvency regimes and confidentiality requirements in each jurisdiction remain intact for the rest of the financial institutions and corporations.

to establish a single, firm-wide definition of risk concentration, which in turn would improve supervisors' understanding of group-level risks.

- **Defining clearly the minimum permissible activities between the lead and other supervisors.** This would touch on the capacity of the lead regulator to (i) keep direct and regular contact with each individual regulatory teams; (ii) request the examination of certain items; and (iii) participate in joint examinations; and the obligations of the lead regulator regarding its relevant counterparts, as well as the presentation of periodic detailed progress reports on risks and vulnerabilities of the firms and free access to key information, including inspection reports and the database of risk concentrations across the firm.
- **Enhancing coordination among national supervisors.** Cross-functional coordination in non integrated supervisory regimes could be further strengthened by adopting the college of supervisors and the lead supervisor approach among local regulators, and seeking a higher degree of compatibility in the application of Core Principles across functional regulators. The latter would include addressing differences in the definition of capital across sectors, ensuring the adoption of consolidated supervision by securities and insurance companies, and harmonizing the definition of risk concentration.

39. **More broadly, the regulation of global or domestic firms should also be improved.** There are two areas of focus: (i) making the minimization of systemic risk the main mission of financial supervisors as this would force them to ensure full coordination with other counterparts, and (ii) addressing budgetary constraints in supervisory agencies that impede the hiring and/or retention of well-trained staff.

40. **To achieve these objectives, there will need to be more active and effective multilateral mechanisms for cross-border supervision.** These mechanisms could build on the existing frameworks of the FSF, the Basel Committee, and the other standard setters; but the IMF, in consultation with the World Bank and the Basel Committee, could play an important role in (for example) developing guidelines for dealing with cross-border bank supervision and resolution, which could address best practices (including in the area of triggers and depositor protection issues). Moreover, FSAP assessments could provide a platform for evaluating the adequacy of countries' oversight of cross-border financial firms and transactions.

VI. SYSTEMIC LIQUIDITY MANAGEMENT

41. **Major central banks have been successful in injecting liquidity and staving off the collapse of the financial system.** This has involved a significant expansion of the "perimeter" of central bank lending to encompass a much broader range of collateral, lengthened terms, new counterparties, as well as the introduction of U.S. dollar swap lines

with a number of central banks. It has also involved a massive increase in central bank balance sheets, some of which have more than doubled since September 2008.

42. **At the same time, the limitations of these actions have become apparent.** In particular, central bank intervention has not been able to restart active interbank trading, since these actions cannot address the underlying concerns about counterparty risk. Indeed, central bank liquidity has to a considerable extent substituted for market liquidity in the advanced economies. Moreover, the experience of some emerging markets illustrates the difficult tradeoffs between providing liquidity to support domestic markets and the risk of facilitating capital flight.¹¹

43. **Lessons still need to be learned about how to restore confidence in short-term money markets, but the crisis has already provided useful guidance for redesigning central bank liquidity frameworks to facilitate more effective crisis management in the future.** These include:

- In crises and periods of market dysfunctionality, it may no longer be appropriate to target a single short-term market rate, and central banks may need to consider a broader range of short rates and their impact on term rates and the macro-economy. Indeed, a breakdown in the normal transmission mechanism points to a need for a better understanding of how central banks can underpin its functioning in unusual times—perhaps through term transactions.
- Significant and rapid adjustments to operational frameworks may be needed in a crisis, as illustrated by the Federal Reserve’s establishment of a legal basis for remunerating reserves. Other adjustments have included varying the balance between short- and medium-term open market operations, broadening the range of counterparties, and reviewing the definition and pricing of acceptable collateral.
- At the same time, care is needed to ensure that changes in operational frameworks balance the need for a flexible and decisive response in the face of systemic shocks against the risk of moral hazard, particularly when the emergency measures are in place for a prolonged period. For instance, accepting a wider range of collateral weakens market incentives to hold high-quality paper. These concerns need to be alleviated with appropriate governance structures, and regular review to ensure that pricing and other incentives (e.g., haircuts) remain appropriate.

¹¹ Bagehot’s Lombard Street recommendation to lend freely but at a high cost *in the case of a liquidity crisis provoked or accompanied by capital outflows* remains appropriate here.

44. **The crisis has also illustrated the limitations of term lending and interbank guarantees, which have not prevented the breakdown of normal monetary transmission mechanisms.** Although term lending has proven useful in easing balance sheet adjustment, this instrument has not restarted interbank or commercial lending. Government guarantees of commercial bank liabilities can also distort the allocation of funding and are useful principally as a short-term palliative in the face of severe market dislocation.

45. **Asset swaps may be more effective in supporting the functioning of money markets.** These involve a central bank providing a liquid government security to a market participant in exchange for a (relatively) illiquid private credit instrument. However, it is not yet clear that these measures substantially reduce lending spreads or promote the re-establishment of a normal credit channel.

46. **There are broader concerns about the increased use of “quasi-fiscal” instruments by central banks.** Quasi-fiscal measures, whether undertaken to support a particular financial market (e.g., the commercial paper market), or to “bypass” the markets and support a particular group of borrowers (e.g. house loans or auto finance) go beyond the normal scope of monetary policy and liquidity management. While effective to the extent they provide credit,¹² they risk muddying the policy signal, particularly if prolonged. Moreover, they can substantially increase central bank balance sheets in a way that could take years to unwind. Early efforts are needed to transfer such operations and the resulting balance sheet items to the fiscal authorities. In general, the fiscal authorities need to shoulder the primary responsibility for addressing balance sheet weaknesses in the banking sector, including direct re-capitalization and/or restructuring.

47. **The importance of the smooth functioning of money market repo operations calls for forceful action by authorities to strengthen the underlying infrastructure.** Actions should focus on the introduction of central clearing counterparty (CCCP) services, already widely used in Europe. Stronger incentives and guidance by the public authorities may be needed in some jurisdictions, as markets are unlikely to adequately address the issue themselves given the public good element in this infrastructure. Measures should also aim at better measuring and averting the risks of excessive leverage via repo operations, including through regulatory limits.

48. **Complementary changes in bank regulation need to strengthen incentives to hold high quality liquid collateral.** In particular, a key lesson from the crisis appears to be that banks and other institutions undervalued the social benefit of liquidity, leaving the system vulnerable to liquidity shocks that can mutate into wide-spread solvency problems. One option might be to enhance liquid asset requirements, in the context of a well defined

¹² The Fed’s recent efforts to purchase mortgage securities do appear to have had an impact on the price, if not the volume, of mortgage lending.

framework for assessing institutional and systemic risk, and consistent with the central bank's approach to liquidity management.

49. **The crisis has also illustrated the critical need for better mechanisms for providing cross border liquidity including permanent arrangements for cross-border liquidity provision.** Major central banks—especially the U.S. Federal Reserve—have established swap lines that have effectively addressed cross-currency pressures. However, as with other liquidity-providing measures, these are a palliative rather than a solution to the broader structural and macroeconomic issues.

50. **Finally, early consideration will need to be given to exit strategies.** Central banks need to ensure as far as possible that measures introduced in response to the market breakdown do not unduly prolong that breakdown by undermining incentives or expose central banks to excessive risks, whether to their policies or to their balance sheets. Moreover, in many countries possibly overlapping policy measures have been introduced, including in some cases fiscal measures, and care will need to be taken to ensure their coherence and continued effectiveness. As conditions normalize, official interest rates should be set to provide appropriate incentives to the market to reduce transactions with the central bank; and eligible collateral lists, together with the relative pricing of using different types of collateral, should be reviewed.

Table 1. Update of Progress of Implementation of FSF Recommendations

	Status of implementation as on September 15, 2008¹³	Updates status of implementation as on date
1	The capital framework. The BCBS will publish later this year proposals for establishing higher capital requirements for complex structured credit products and short-term liquidity facilities extended to ABCP conduits. National and regional initiatives are also advancing. For example, the European Commission is currently discussing potential changes to the Capital Requirements Directive (CRD).	In January 2009, the BCBS issued two sets of consultative papers proposing (i) enhancements to the regulatory capital treatment for trading book exposures with the introduction of an incremental risk capital charge (IRC) and a stressed value-at-risk (VaR) requirement; and (ii) enhancements to all three Pillars of the Basel II framework including increased capital charges for re-securitizations and ABCP liquidity lines.
2	Liquidity risk management and regulation. On June 17, the BCBS issued for public consultation global guidance on the management and supervision of liquidity risks, expanding significantly on its 2000 paper on Sound Practices for Managing Liquidity in Banking Organizations. Local initiatives have also followed suit. The CEBS, for example, issued the second part of its Technical Advice on Liquidity Risk Management.	The BCBS published <i>Principles for Sound Liquidity Risk Management and Supervision</i> in September 2008. Implementation will be monitored by its Working Group on Liquidity with a first review slated for second half of 2009. It has also begun work to promote greater consistency of liquidity regulation and supervision for cross-border banking groups, including a review of tools, metrics, and benchmarks that can be used by supervisors.
3	Review of risk management. On April 16, the BCBS also announced the issuance of Pillar 2 guidance to strengthen risk management and supervisory practices, including stress-testing practices and capital planning processes. A consultative document will be issued around end-2008	The BCBS issued a consultative document in January 2009 aimed at strengthening risk management through Pillar 2. This focuses on enhancing firm-wide risk management; managing specific risk areas such as firm-wide risk concentrations, securitizations and reputational risk; and improving bank stress testing. The Senior Supervisors Group is reviewing implementation of the recommendations made in its report of March 2008, and expects to release a summary of findings in 2009.
4	Operational Infrastructure for OTC derivatives. In June, the Federal Reserve Bank of New York brought together major market participants and their supervisors to agree on an agenda to addressing weaknesses in this area, including through further standardization and automation of credit derivatives trade processing, and a central counterparty arrangement for credit default swap trades.	In October 2008, market participants released a letter outlining their commitment to and plans for building a stronger integrated infrastructure for OTC derivatives markets. In November, the President's Working Group announced initiatives to strengthen oversight and infrastructures for OTC derivatives including development of CDS central counterparties and an MOU among concerned national agencies. The IOSCO Task Force on Unregulated Financial Markets and Products is also looking at ways to introduce greater transparency and oversight in OTC derivatives markets.
5	Risk Disclosures by participants. Based on reports from its members, the FSF will assess in September how internationally active financial	Supervisors and national authorities have strongly encouraged their internationally active financial institutions to use the leading risk disclosure

¹³ As reported to the IMF Board.

	Status of implementation as on September 15, 2008¹³	Updates status of implementation as on date
	institutions have implemented the leading practice risk disclosures set forth in the FSF Report as part of their mid-2008 reporting, and whether national authorities' strong encouragement to use recommended risk disclosure practices has been sufficient.	practices recommended by the FSF. The BCBS consultative package on Basel II released in January 2009 aims to strengthen Pillar 3 disclosure standards for banks' securitization activities. Also, IASB proposed enhanced disclosure requirements for valuations and liquidity risk in October 2008.
6	Accounting Standards for off-balance sheet entities (OBSEs). The IASB has accelerated its Consolidation project, which identifies when an entity should be brought on to another entity's balance sheet, and its Derecognition project, examining when assets should be removed from the balance sheet. It will issue for consultation exposure drafts on consolidations project by end-2008, and on derecognition proposals shortly thereafter.	The IASB proposed in December 2008 revised standards for the consolidation of OBSEs and disclosure of related risk exposures. IASB also plans to publish its derecognition proposals by March 2009. The BCBS consultative package on Basel II released in January 2009 includes proposed Pillar 3 disclosures about sponsorship of OBSEs.
7	Valuation: The IASB established an expert advisory panel to review best practices in valuation and formulate additional guidance on valuation methods when markets are no longer active. In parallel, the BCBS is developing guidance to enhance supervisory assessments of banks' valuation processes.	The IASB finalized guidance on sound practices for valuation of complex securities and other financial instruments and related disclosures and issued a proposal to enhance valuation disclosures in October 2008. In November 2008, BCBS released a consultative paper <i>Supervisory Guidance for Assessing Banks' Financial Instrument Fair Value Practices</i> , which provides guidance on strengthening valuation processes for bank financial instruments.
8	Credit Rating Agencies. The IOSCO issued its revised Code of Conduct for CRAs in May, and is developing a work plan to review the adequacy of due diligence typically conducted by investment managers when making investments in structured products. In parallel, the Joint Forum is reviewing the use of ratings by member authorities.	IOSCO will shortly publish a report on Implementation of the IOSCO CRA Code of Conduct. The Implementation Report assesses the degree to which CRAs have adopted codes of conduct that reflect the updated provisions of the IOSCO CRA Code. IOSCO has developed a common inspection module for regulators undertaking inspections of CRAs in their jurisdictions based on the IOSCO Code. IOSCO is developing an approach securities regulators can use to oversee globally active CRAs. The Joint Forum has concluded a stocktaking of the use of ratings in regulation.

	Status of implementation as on September 15, 2008¹³	Updates status of implementation as on date
9	<p>Strengthening the authorities' responsiveness to risk. The FSF has formed a group of key supervisors to develop protocols needed to establish supervisory colleges by end-2008. The FSF and IMF are expected to strengthen their cooperation.</p>	<p>The FSF has developed protocols for establishing supervisory colleges as well as a list of the major global financial institutions to which the colleges should apply. Colleges now exist for most of the large complex financial institutions identified by the FSF, and the remaining ones will be put in place shortly. A review of these arrangements will be undertaken in 2009.</p> <p>To facilitate the coordination of policy development and its focus on priorities, the FSF is supporting joint strategic reviews by standard-setting bodies of their priorities</p> <p>The FSF is revamping its vulnerabilities assessment process.</p> <p>The FSF and the IMF clarified the form and content of their cooperation in a joint statement in November 2008,</p>
10	<p>Central Bank Operations: CGFS has compiled information on the steps taken individually or collectively by central banks to adapt operations, and a first version of report has been submitted. Central banks are continuing to actively investigate the lessons drawn from recent experiences for their operational frameworks, and the CGFS will present a progress report to the FSF in September.</p>	<p>The CGFS has since followed up on its recommendation on the international distribution of liquidity, focusing on two policy options: (i) inter-central bank swap lines; and (ii) the acceptance of cross-border collateral. The CGFS is preparing a review on measures taken by central banks to respond to the crisis, as well as setting up a database to collect information on measures across countries. The CPSS also finalized in December 2008 a report on operational arrangements that central banks may take to provide cross-border liquidity, particularly in emergency situations.</p>
11	<p>Dealing with Weak banks: BCBS is working with national authorities to take stock of country practices in crisis resolution. Consultations on establishing a cross-border group for crisis management planning have been initiated. The BCBS and the IADI are working jointly to develop core international principles for effective deposit insurance systems. Also, the IMF and World Bank have started to review national authorities' arrangements.</p>	<p>The BCBS' Cross Border Resolution Group has completed a preliminary assessment of legal frameworks and resolution policies and is now working on an examination of individual failures to draw lessons for policy.</p> <p>The IADI Core Principles for Effective Deposit Insurance are being finalized for publication in March or April.</p> <p>The FSF sub-group on cross-border crisis management has developed high-level principles for cross-border cooperation on crisis management, to be published in March 2009.</p>

Source: Financial Stability Forum.