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Draft Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience

Financial Stability Forum: Working Group on Market and Institutional Resilience

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Executive summary

The turmoil that broke out in the summer of 2007 was the culmination of an exceptional boom in credit growth and leverage in the financial system. The boom was fed by a long period of benign economic and financial conditions, which increased the amount of risk and leverage borrowers, banks and investors were willing to take on, and by a wave of innovation that expanded the system's capacity to generate credit assets and leverage but outpaced its capacity to manage the associated risks.

While periods of boom and bust are inherent to a market-based system, the forces for amplification and contraction that characterised this cycle have been of exceptional strength and breadth.

This report examines the causes and weaknesses that have produced this outcome and sets out recommendations for increasing the resilience of markets and institutions going forward. Policy development is underway in many of the areas of recommendation. The FSF will monitor these initiatives and oversee their robust implementation. We recognise the strains under which the system is currently operating and will pursue implementation in a way that avoids exacerbating stress in the short term. We will report on progress in September and as needed thereafter.

In the **short term**, we must restore confidence in the soundness of financial institutions and markets. Authorities are closely monitoring the condition of the financial system and that of major banks and investments banks. They have taken and will continue to take steps to facilitate the de-leveraging process. In the near term, the following actions will have the highest positive impact on market confidence:

- Capital replenishment: Banks need to continue their efforts to replenish capital to compensate for losses and so that their balance sheets can absorb assets previously distributed in securitised markets. Supervisors are working with firms to identify plans for addressing their capital and funding needs.
- Disclosures: The lack of fully adequate and consistent disclosures of risk exposures and valuations continues to have a corrosive effect on confidence. The FSF has set out a template of leading practice disclosures by large financial institutions in these areas. We strongly encourage firms to implement these leading practices starting with their forthcoming mid-year 2008 disclosures.
- Central bank operations: Central banks should continue to respond flexibly and rapidly to market developments, working in concert when necessary.

Actions to enhance market and institutional resilience

To enhance market and institutional resilience going forward, the FSF proposes actions in five areas: (1) strengthened prudential oversight of capital, liquidity and risk management; (2) stronger standards for valuation and transparency, (3) changes in the role and use of credit ratings, (4) strengthening the authorities' responsiveness to risks, and (5) robust arrangements for dealing with stress in the financial system.

Internationally integrated financial markets bring large benefits. We must therefore pursue internationally coordinated approaches to address the weaknesses that have come to light. And we must ensure that their implementation preserves the advantages of a level playing field across countries.

The recommendations in this report are the product of an intensive collaborative effort through the FSF of the main international bodies and national authorities in the main financial centres. These recommendations are supported by a large body of co-ordinated work, comprising that of the Basel Committee on Banking Supervision (BCBS), the Senior Supervisors Group, the International Organization of Securities Commissions (IOSCO), the Joint Forum, the International Accounting Standards Board (IASB), the Committee on Payment and Settlement Systems (CPSS), the Committee on the Global Financial System (CGFS), the International Monetary Fund (IMF) and the Bank for International Settlements (BIS). Senior officials and staff from national authorities in key financial markets have brought significant expertise and judgment to this co-ordinated effort. Insights have been gained, as well, from private sector market participants.

The FSF will continue to facilitate co-ordination of these initiatives and will review follow-up of the recommendations.

1. Strengthened oversight of capital, liquidity and risk management

Events have revealed weaknesses in risk management at large banks and securities firms and in the framework of incentives that regulators and supervisors provide through capital requirements, liquidity guidance and oversight.

Basel II provides an appropriate framework within which to address many of these weaknesses. Its implementation should proceed with priority. But Basel II needs to be adapted to strengthen the capital treatment, risk management, supervision, and transparency of structured credit and off-balance sheet activities.

The Basel Committee on Banking Supervision, working with national supervisors, is taking appropriate actions to address these weaknesses. These changes to Basel II will be implemented over time, being sensitive to balancing the need to put the system on a long-term sound footing without exacerbating short-term stress.

1.1 Capital requirements

To strengthen the capital treatment of exposures associated with securitisation activities, both on and off the balance sheet, the Basel Committee will:

- raise capital requirements for complex structured credit products, in particular highly-rated collateralized-debt obligations of asset-backed securities;
- introduce capital charges for credit exposures in banks' and securities firms' trading books; and
- strengthen the capital treatment for banks' exposures to off-balance sheet conduits.

Banking supervisors will also:

- use the flexibility within Basel II to help ensure that capital buffers and estimates of potential credit losses are appropriately forward looking and take account of uncertainty associated with valuation and concentration risk; and
- assess the impact of Basel II implementation on banks' overall capital levels and decide whether additional capital buffers are needed.

Authorities will also strengthen the regulatory and capital framework for monoline insurers and financial guarantors.

1.2 The management and supervision of liquidity

Events have demonstrated the need for larger and more robust liquidity buffers and an internationally shared view among supervisors on sound liquidity risk management guidelines.

Banking supervisors are conducting a fundamental review of their global guidance for the management and supervision of liquidity risk and will issue revised guidance in July 2008. This will cover:

- improved measurement of the full range of liquidity risks, including contingent liquidity risk associated with off-balance sheet vehicles;
- stress testing that emphasises market-wide stresses and stronger contingency funding plans;
- the management of intra-day and foreign currency liquidity risks domestically and across borders; and
- enhanced supervisory oversight of liquidity risk management practices.

Supervisors and central banks will promote more robust and internationally consistent liquidity approaches and supervision for cross-border banks.

1.3 Assessment of risk management capacity and capital strength

The management of risk is the responsibility of firms' boards and senior management. They must take urgent steps to sharpen the analysis and firm-wide control of tail risks and mitigate the build-up of excessive exposures and risk concentrations. They must strengthen practices regarding valuation of complex or illiquid securities, and the management of funding liquidity, capital and the balance sheet, and pipeline risk.

Supervisors will issue in 2009 guidance for using the process of supervisory review under Basel II that will:

- strengthen supervisory oversight of banks' stress testing practices;
- require banks to develop their own risk assessment tools for securitisation exposures;
- factor the implications of reputation risk into their stress tests, capital adequacy assessments and contingency planning; and
- enhance the robustness of banks' valuation practices and assist supervisors in assessing them.

Supervisors will use the supervisory review process to proactively raise capital above regulatory minima, as appropriate.

1.4 Off-balance sheet activities

Implementation of Basel II and the steps above will substantially reduce the incentives that motivated banks to generate and hold large off-balance-sheet risk exposures.

To further strengthen the incentives for banks to manage the risks from off-balance sheet exposures appropriately, supervisors will:

- require that firms' information management systems and supervisory reports capture off-balance sheet exposures;
- require stress testing procedures that take account of the potential for risk exposures of off-balance sheet entities to be absorbed on the institution's balance sheet, whether for contractual or non-contractual (e.g. reputation) reasons.

1.5 Operational infrastructure for over-the-counter (OTC) derivatives

Market participants should act promptly to strengthen the robustness of the settlement, legal and operational infrastructure for OTC derivative markets. Market participants should:

- promptly amend standard credit derivative trade documentation to provide for cash settlement of obligations stemming from a credit event, in accordance with the terms of the existing cash settlement protocol;
- automate trade novations and set rigorous standards for the accuracy and timeliness of trade data submissions for OTC derivatives; and
- develop a longer-term plan for a reliable operational infrastructure supporting OTC derivatives that captures all significant processing events over the entire lifecycle of trades.

2. Stronger standards for valuation and transparency

Sound disclosure, accounting and valuation practices are essential to market confidence and effective market discipline. The rigorous verification of valuations and related disclosures by external auditors will contribute to enhanced market confidence. The FSF urges market participants to enhance their risk disclosure and valuation practices and standard setters to take prompt action to enhance their standards to address these problems.

2.1 Improved risk disclosure by market participants

Firms should provide more useful disclosures about their risk exposures, risk management and accounting policies that are relevant to current market conditions. The FSF has developed a template (see Annex C) of leading practices to achieve this in the near term and proposes further work to develop these risk disclosure practices going forward. Authorities will monitor these developments and add more prescription where necessary.

2.2 Enhanced accounting and disclosure standards for off-balance-sheet vehicles

The IASB will take urgent action to enhance its standards so as to achieve clarity about the treatment of off-balance-sheet entities and about the risks they pose to financial institutions. Standards should require the risk exposures and potential losses associated with off-balance-sheet entities to be clearly identified and presented in financial disclosures. Standard setters should accelerate international convergence on improved accounting and disclosure standards for off-balance sheet vehicles.

2.3 Valuation

The IASB will strengthen its guidance on valuing financial instruments when markets are no longer active and disclosures about valuation methodologies and uncertainties.

Financial institutions should establish rigorous and timely valuation processes for complex or illiquid instruments and enhance disclosures about those processes.

The IAASB should strengthen its guidance for auditing valuations of complex or illiquid products, drawing on leading practices and lessons learned during the turmoil.

2.4 Transparency in securitized products and markets

Originators, arrangers, distributors, managers and credit rating agencies (CRAs) should strengthen transparency at each stage of the securitisation chain, including by enhancing and standardising information about structured finance products.

3. Changes in the role and use of credit ratings

3.1 Strengthening the quality of the rating process

Authorities will require that CRAs demonstrate they have implemented steps to improve the quality of their ratings process and to better manage conflicts of interest in rating structured products.

The existing IOSCO Code of Conduct for CRAs is being revised to address these issues in 2008.

3.2 Differentiated ratings and expanded information on structured products

Structured credit products differ in fundamental ways from the corporate and government debt for which the existing ratings scale has been developed. In recognition of this, and to contribute to investor understanding of the risk properties of the ratings for structured products, CRAs should:

- clearly differentiate, either with a different rating scale or with additional symbols, the ratings used for structured products from those for corporate bonds, subject to appropriate notification and comment; and
- work with investors to expand the information provided on the risk characteristics, including ratings volatility, of structured products.

3.3 Role of CRAs in the assessment of data underlying securitisations

CRAs should take responsibility for assessing the quality of the data provided by the originators, arrangers and issuers of structured finance products. To this end, CRAs should:

- require underwriters to provide representations about the level and scope of due diligence that they have performed on the underlying assets;
- adopt reasonable measures to ensure that the information they use is of sufficient quality to support a credible rating;
- establish an independent function to review the feasibility of providing a credit rating for new products where they are materially different from those currently rated; and
- refrain from rating a security if insufficient underlying data are available or the product structure is too complex.

3.4 Use of ratings by investors and regulators

Investors should change their investment guidelines and risk management practices to avoid over-reliance on ratings. Ratings cannot and should not replace thorough risk analysis by investors themselves. Investors for whom such analysis is not cost-effective should refrain from investing in structured products.

Authorities will examine whether the roles that they have assigned to ratings in regulation and supervisory rules are consistent with the objective of having investors make independent judgment of risks.

4. Strengthening authorities' responsiveness to risk

Some of the weaknesses that have come to light were known or suspected within the financial comunity. And on some of the weaknesses, work was underway at international levels that – if already implemented – might have tempered the scale of the problems experienced.

4.1 Translating risk analysis into action

Supervisors, regulators and central banks – individually and collectively – need to take steps to more effectively translate their risk analysis into actions that mitigate identified risks.

- Supervisors and regulators will communicate early to firms' boards and senior management their risk management concerns and the need for firms to take responsive action.

4.2 Improving cooperation in the supervision of global financial institutions

In the process of implementing Basel II, supervisors have intensified cross-border cooperation. But more systematic cross-border supervisory cooperation in the oversight of large global financial institutions is needed.

- Building on existing arrangements, such as Basel II colleges, an international college of supervisors should be established for each of the largest global financial institutions by September 2008. These colleges should hold their first meetings by December 2008 to exchange information and assessments and, where appropriate, to cooperate in supervisory activities.
- Supervisors and central banks should improve cooperation and the exchange of information including in the assessment of financial stability risks. The exchange of information should be rapid during periods of market strain.

4.3 Enhancement of international bodies' policy work

International bodies will enhance the speed, prioritisation and coordination of their policy development work:

- International committees will establish priorities and timetables for their work and, for difficult to resolve issues, mechanisms for their speedy resolution;
- The FSF will organise joint strategic reviews by standard-setting committees to ensure policy development is coordinated and prioritized;

- The FSF and IMF will intensify their coordination on financial stability; the IMF will report its findings on financial stability risks to FSF and in turn will incorporate the FSF's conclusions into its surveillance work.

5. Robust arrangements for dealing with stress in the financial system

Central banks are actively investigating the lessons from recent experiences for their operational frameworks, including the capacity to provide liquidity broadly and flexibly under stressed conditions, for their communication with markets, and for the steps that might be advisable across central banks to address liquidity needs in globalised financial markets. Authorities need to strengthen arrangements (e.g., legal frameworks for resolution, deposit insurance) for dealing with weak and failing banks, both nationally and cross-border.

5.1 Central bank operations

Central bank operational frameworks should be capable of conducting operations against a wide range of collateral, over a wide range of maturities and with a wide range of counterparties.

- Lending facilities for meeting frictional funding needs that are less subject to stigma, and swap lines, have been used in recent times to deal with stress situations. Central banks should consider making these permanent.
- To enable market liquidity strains to be better mitigated, large banks will be required to share their liquidity contingency plans with relevant central banks.

5.2 Dealing with weak and failing banks

Internationally, authorities should accelerate work to share information on national arrangements and address challenges that have been identified. They should agree a set of international principles for deposit insurance systems and review and strengthen national deposit insurance arrangements against these principles.

Authorities will strengthen cross-border coordination in crisis management. For each of the largest cross-border financial firms, the most directly involved supervisors and central banks should establish a small interest group to address specific cross-border crisis management planning issues. Each group should hold its first meeting before end-2008.

I. Underlying Causes and Weaknesses

1. Factors underlying the market turmoil

The turmoil in the most advanced financial markets that started in the summer of 2007 was the culmination of an exceptional boom in credit growth and leverage in the financial system. This boom was fed by a long period of benign macroeconomic, monetary and financial conditions, including low risk premia and abundant liquidity, which increased the amount of risk and leverage that borrowers, investors and intermediaries were willing to take on, and by a wave of innovation in credit market structuring and trading, which expanded the system's capacity to generate credit assets and leverage but outpaced its capacity to manage the associated risks.

As the trend of global low risk premia and low expectations of future volatility gathered pace from 2003, financial technology that produced the first collateralised debt obligations (CDOs) a decade earlier was extended on a dramatic scale, transforming low quality assets into credit products to which CRAs assigned high ratings. Credit enhancements by financial guarantors contributed further to the perception of unlimited high quality investment opportunities. The growth of the credit default swaps market made credit risk easier to trade and to hedge. This greatly increased the perceived liquidity of credit instruments and expanded demand for what had previously been seen as illiquid assets. The easy availability of credit and rising asset prices contributed to low default rates among businesses and households, which reinforced the low level of credit risk premia.

Banks and other financial institutions gave substantial impetus to this development by establishing off-balance sheet funding and investment vehicles to produce, hold and distribute a large volume of complex structured credit products, often largely backed by mortgage-backed securities (MBSs). These vehicles, which benefited from regulatory and accounting incentives, operated with significant liquidity and maturity mismatches and with asset compositions that were often misunderstood by investors in them. Both the banks themselves and those that rated the vehicles misjudged the liquidity and concentration risks that a deterioration in general economic conditions posed for them. Banks also misjudged the risks that were created by their explicit and implicit commitments to these vehicles, such as contingent liquidity lines and the reputational risks arising from the sponsorship of the vehicles.

The benign macroeconomic environment and low default rates also encouraged a loosening of credit standards, most glaringly in the US subprime mortgage market, but more broadly in standards and terms of loans to households and businesses, including loans for buy-outs by private equity firms. Here, too, banks, investors and rating agencies misjudged both the level of risks and the risk characteristics of the relevant credit instruments, particularly their common exposure to broad factors such as a weakening housing market or a fall in the market liquidity of high-yield corporate debt.

Worsening underwriting standards for subprime mortgages and a weakening in the US housing market led to in a steady rise in delinquencies and, from early 2007 onwards, sharply rising risk premia for indices based on subprime-related assets. This produced losses and margin calls for leveraged holders of even highly-rated products backed by subprime mortgages. The problems in the subprime market provided the trigger for a broad reversal in market risk-taking. As CRAs made multiple-level downgrades of subprime-backed structured products, investors lost confidence in the ratings of a wider range of structured assets and, in August 2007, money-market investors in asset-backed commercial paper (ABCP) refused to roll over investments in paper issued by conduits and structured investment vehicles (SIVs) backed by structured products.

As sponsoring banks moved to fund immediate and prospective liquidity commitments to ABCP conduits and SIVs, they sought to build up liquid resources and became unwilling to provide term liquidity to others. This led to a severe contraction of activity in the term interbank market, leading to a substantial rise in term premia in money markets, especially in the US and Europe, and dysfunction in a number of related short-term financial markets.

Just as low risk premia, low funding costs and ample leverage had fuelled the earlier increase in credit and liquidity, the sharp reduction of liquidity and leverage accentuated the subsequent contraction. Fears of fire sales of mortgage-linked and other assets by leveraged players reinforced upward pressures on credit spreads and generated valuation losses in broad asset classes across the quality spectrum in many countries. As funding and market liquidity for structured credit products evaporated, major banks faced increasing difficulties valuing their own holdings and became less confident of their assessments of the credit risk exposures and capital strength of others. The disruption to funding markets lasted longer than many banks' contingency plans had allowed for.

As the turmoil spread, increased risk aversion, reduced liquidity and increased uncertainty about the financial system and the macroeconomy fed on each other. New issuance in securitisation markets fell sharply. As large banks reabsorbed assets and sustained large valuation losses, their balance sheets swelled and their capital cushions shrank. This caused banks to tighten lending conditions. Because the difficulties reduced the capital strength of the largest regulated financial institutions at the core of the global financial system, both bank-based and capital-market channels of credit intermediation slowed.

At present, nine months after the turmoil broke out, de-leveraging continues to pose significant challenges for large parts of the financial system in major centres. Although some large banks and financial guarantors have moved to replenish capital, the system is burdened by uncertainties about the health of key financial institutions and the large overhang of assets held by banks, SIVs, hedge funds and other leveraged entities. Financial system weaknesses have contributed to deteriorating prospects for the real economy, although to different degrees in different countries.

2. Underlying weaknesses

Given the maturing of the credit cycle, and the weakening in the US housing market, a pullback in risk-taking of some kind, if only in the form of a reversion to the mean, was inevitable. However, because of accumulated weaknesses in risk management and assessment, and the sheer scale of the adjustment required, attempts by individual institutions to contain their risk exposures have led to reinforcing dynamics in the system as a whole.

Poor underwriting standards

The benign macroeconomic conditions gave rise to complacency among many market participants and led to erosion of sound practices in important financial market segments. In a range of credit market segments, business volume grew much more quickly than did investments in the supporting infrastructure of controls and documentation. This was most conspicuous in the poor underwriting and in some cases fraudulent practices that proliferated in the US subprime mortgage sector, especially from late 2004. The combination of weak incentives, an increasingly competitive environment, low interest rates and rapidly rising house prices led originators and mortgage brokers to lower underwriting standards and to offer unsuitable products to borrowers who often could not afford them. Weak government oversight of these entities contributed to the rise in unsound underwriting practices, especially for mortgage companies not affiliated with banks. Another segment that saw rapid growth accompanied by a decline in standards was the corporate leveraged loan market where the popularity of private equity investments contributed to a weakening of loan covenants.

Shortcomings in firms' risk management practices.

Some of the standard risk management tools used by financial firms are not suited for estimating the scale of potential losses in the adverse tail of risk distributions. The absence of a history of returns and correlations, and the greater complexity in many structured credit products, created high uncertainty around value-at-risk and scenario-based estimates. Market participants severely underestimated default risks, concentration risks, and market and liquidity risks, particularly for super-senior tranches of structured instruments. Some firms made strategic decisions to retain large exposures to super-senior tranches of collateralized debt obligations that far exceeded the firms' understanding of the risks inherent in such instruments, and failed to take appropriate steps to control or mitigate those risks. When the turbulence started, firms and investors misjudged or were unable to rapidly assess their exposures, particularly as liquidity evaporated and markets became unavailable.

Poor investor due diligence

In parallel, many investors, including institutional buyers with the capacity to undertake their own credit analysis, did not sufficiently examine the assets underlying structured investments. They overlooked leverage and tail risks and did not question the source of high promised yields on purportedly safe assets. These weak due diligence practices further fuelled the issuance of complex credit products. Many investors placed excessive reliance on credit ratings, neither questioning CRAs' methodologies nor fully understanding the information credit ratings do and do not transmit about the risk characteristics of rated products.

Poor performance by the CRAs in respect of structured finance products

The sources of shortcomings in rating agency performance included weaknesses in rating models and methodologies; inadequate due diligence of the quality of the collateral pools underlying rated securities; insufficient transparency about the assumptions, criteria and methodologies used in rating structured products; insufficient information provision about the meaning and risk characteristics of ratings; and insufficient attention to conflicts of interest in the rating process.

Incentive distortions

The shortcomings in risk management, risk assessment and underwriting standards reflected a variety of incentive distortions, including those embedded in market practices, compensation schemes and regulations:

- Originators, arrangers, distributors and managers in the originate-to-distribute (OTD) chain had insufficient incentives to generate and provide initial and ongoing information on the quality and performance of underlying assets. High investor demand substantially reduced incentives for suppliers in the origination chain to appropriately check the quality of their output;
- The pre-Basel II capital framework encouraged banks to securitise assets through instruments with lower capital charges (such as 364-day liquidity facilities);
- Compensation schemes in financial institutions encouraged disproportionate risk-taking with insufficient regard to longer-term risks. These risks were not always subject to adequate checks and balances in firms' risk management systems.

Weaknesses in disclosure

Weaknesses in public disclosures by financial institutions have damaged market confidence during the turmoil. Public disclosures that were required of financial institutions did not always make clear the risks associated with their on- and off-balance sheet exposures. There were also shortcomings in the information provided about market and credit risk exposures, particularly as these related to structured products. Where information was disclosed, it was often not done in an easily accessible or usable way.

Feedback effects between valuation and risk-taking

Finally, the turbulence revealed the potential for adverse interactions between high leverage, market liquidity conditions, valuation losses and bank capital, producing adverse feedback effects on the behaviour of regulated firms. For example, writedowns of assets for which markets were thin or buyers unavailable raised questions about the adequacy of capital buffers, leading to asset sales, deleveraging, and further pressure on asset prices.

Weaknesses in regulatory frameworks and other policies

Public authorities recognised some of the underlying vulnerabilities in the financial sector but failed to take effective countervailing action. perhaps partly because they may have overestimated the strength and resilience of the financial system. Limitations in regulatory arrangements, such as those related to the pre-Basel II framework, contributed to the growth of unregulated exposures, excessive risk-taking and weak liquidity risk management.

3. Underpinnings of the originate-to-distribute model

Although securitisation markets and the OTD model of intermediation have functioned well over many years, recent innovations greatly increased complexity and leverage and, as noted above, were accompanied by a reduction in credit standards for some asset classes.

When accompanied by adequate risk management and incentives, the OTD model offers a number of benefits to loan originators, investors and borrowers. Lenders can benefit from greater capital efficiency, enhanced funding availability, and lower earnings volatility since the OTD model disperses credit and interest rate risks to the capital markets. Investors can benefit from a greater choice of investments, allowing them to diversify and to match their investment profile more closely to their risk preferences. Borrowers can benefit from expanded credit availability and product choice, as well as lower borrowing costs.

However, in some markets, these fundamental features of the OTD model progressively weakened in the years preceding the outburst of the turmoil. Financial innovation, which had been expected to disperse risk broadly across a diverse range of market participants, in some cases turned out to have concentrated risks in entities unable to bear them. For example:

- Some assets went into conduits and SIVs with substantial leverage and liquidity risk, making them vulnerable to a classic type of run;
- Banks ended up with significant direct and indirect exposure to many of these vehicles to which risk had apparently been transferred, through contingent credit lines, reputational links, revenue risks, and counterparty credit exposures;
- Financial institutions adopted a business model that assumed substantial ongoing access to funding liquidity and asset market liquidity to support the securitisation process;
- Firms that pursued a strategy of actively packaging and selling their originated credit exposures retained increasingly large pipelines of these exposures, without

adequately measuring and managing the risks that materialised when they could not be sold because securitisation markets stopped functioning.

The years preceding the crisis also featured a steady increase in the complexity and opacity of securitised instruments, and a corresponding increase in the reliance placed on judgments made by credit rating agencies. As prices and liquidity for these products fell, the market became aware of the great uncertainty attached to their credit quality, credit enhancement, valuation, and risk properties. Many participants lost confidence in their ability to value and hedge these products, leading to the breakdown of primary and secondary markets in them.

Among the issues that need to be addressed are:

- Misaligned incentives along the securitisation chain. The turmoil has revealed that participants in the OTD chain - originators, arrangers, managers, distributors, CRAs and investors – had weakened incentives to make accurate risk assessments of securitised assets;
- Lack of transparency about the risks underlying securitised products, in particular including the quality and potential correlations of the underlying assets;
- Poor management of the risks associated with the securitisation business, such as market, liquidity, concentration and pipeline risks. The turbulence showed that institutions using the OTD model should have prudent controls over pipeline exposures, including effective scenario and stress testing processes and prudent limits. They should also manage exposures that they retain on the balance sheet or could return to it, and avoid significant risk concentrations;
- Usefulness and transparency of credit ratings. Because of their role as gate-keepers in the OTD model, CRAs should make the process and the information underlying ratings transparent. This information enables investors to make informed decisions about risks and strengthens discipline in the OTD chain.

Although all market participants involved in the OTD chain had weaknesses in risk management, and nearly all ultimately needed to write down their structured product portfolios substantially, some firms seem so far to have handled these challenges better than others. Differences in performance across firms were especially notable in business lines related to CDOs, syndication of leveraged loans, and off-balance sheet vehicles. This suggests that it is not the OTD model or securitisation per se that are problematic. Rather, these problems, and the underlying weaknesses that gave rise to them, show that the underpinnings of the OTD model need to be strengthened.

4. Areas for policy action

Many of the weaknesses that have come to light will need to be addressed by market participants themselves. Financial institutions are considering, or have already taken, steps to address the relevant concerns. Collective efforts are underway by private sector bodies to improve market practices. Lessons can be learned from those market participants that have demonstrated more successful risk management and disclosure practices.

Authorities will not pre-empt or hinder market-driven adjustments, but should monitor them and add discipline where needed. It is especially important that an appropriate incentive structure is in place, contributing, together with transparency, to sound risk assessment and risk management. For example, a number of options are available to participants in the securitisation market for aligning the incentives of parties in the OTD chain.

Where market discipline fails, taking further regulatory action must be considered. In several areas, important corrective measures have already begun: for example, US authorities are addressing regulatory gaps and consumer protection issues in relation to mortgage lending.

Authorities must do all they can to identify emerging problems so as to be able, if necessary, to take prompt appropriate action to mitigate them. Given the difficulty in foreseeing and preventing specific threats to the financial system, however, a major focus of efforts must be on trying to ensure that the core of the system is resilient when markets come under stress.

FSF has set out detailed recommendations to enhance resilience and will review their implementation.

II. Prudential oversight and risk management

The market turmoil has revealed weaknesses in risk management at the banks and securities firms at the core of the global financial system, and in the system of incentives that regulators and supervisors provide through capital and liquidity requirements and oversight.

The management of risk is the responsibility of firms' boards and senior management. Firms must address with urgency the significant weaknesses that have come to light. Basel II provides the appropriate framework for supervisors to monitor and incentivise this process. But further improvements to Basel II and strengthened supervisory liquidity guidelines are needed to improve resilience in times of stress.

In addition, specific weaknesses relating to asset securitisation and derivatives market need to be addressed to strengthen the underpinnings of the OTD model. This requires action by markets participants, supervisory and regulatory authorities to better align incentives, reduce regulatory arbitrage and strengthen market discipline for financial institutions' off-balance sheet activities, and initiatives to make the operational infrastructure for credit derivatives more robust.

This chapter contains recommendations on:

- Capital arrangements;
- Liquidity management;
- Risk management practices;
- Off-balance sheet activities; and
- Operational infrastructure for over-the-counter (OTC) derivatives.

1. Capital arrangements

The Basel II capital framework needs timely implementation.

The need to amend some elements of Basel II has become evident in the light of recent events, as set out below. But the starting point for improving capital arrangements is Basel II's timely implementation.

The build-up and unfolding of the financial turmoil has occurred under the Basel I capital framework and highlighted many of its significant shortcomings, including its lack of risk sensitivity for higher risk exposures, like subprime mortgages, and its inflexibility to rapid innovation. Basel I created perverse regulatory incentives to move exposures off the balance sheet and did not adequately capture banks' risk exposures within the capital adequacy calculation.

Basel II, by contrast, provides better support to sound risk management practices by much more closely aligning minimum capital requirements with the risks banks face

(Pillar 1), by strengthening supervisory review of bank practices (Pillar 2) and by encouraging improved market disclosure (Pillar 3). Pillar 1 subjects all on- and off-balance sheet exposures to regulatory capital requirements and reinforces sound credit risk management practices by enhancing risk sensitivity. It is designed to be able to flexibly address the risks arising from financial innovation. For instance, its securitization framework aims to eliminate regulatory capital arbitrage incentives for moving exposures off-balance sheet or distributing them through the securitisation process. Basel II's Pillar 2 provides supervisors with the tools to assess banks' risk management and internal capital management processes and, in a more proactive manner, to promote capital buffers above the minimum as appropriate. Pillar 3 enhances the quality and consistency of disclosures about banks' risk exposures and capital adequacy.

Supervisors will assess the impact of Basel II implementation on banks' capital levels and will decide whether additional capital buffers are needed.

It is important for supervisors to closely monitor the operation of Basel II once it is implemented, and its effect on banks' minimum regulatory capital, on the levels of capital banks actually hold and on banks' behaviour more generally. This will help to ensure that the Basel II capital framework results in appropriate levels of risk sensitivity and capital over the business cycle.

National supervisors also need to bear in mind that, while Basel II sets minimum capital requirements on an international basis, supervisors are free to complement the Basel II measures in ways that set higher minimum requirements in their own jurisdiction. Based on the future evidence from Basel II's implementation, supervisors should determine the need for additional capital buffers or, as appropriate in national contexts, supplementary measures of capital strength as a complement to risk-based capital measures. Supervisors should share experiences of developing and using such measures.

Supervisors will strengthen the Basel II framework to reflect lessons of the current turmoil.

The turmoil has shed important light on the risks to financial intermediaries from their securitisation activities and about the need for stronger minimum standards for the robustness of balance sheets to market stress. Supervisors, working through the BCBS, will enhance all three pillars of Basel II to strengthen the capital treatment, risk management, supervision and transparency of structured credit and off-balance sheet activities. Changes will be implemented over time, being sensitive to balancing the need to put the system on long-term sounds footing without exacerbating short-term stress.

Minimum capital requirements (Pillar 1)

The Basel Committee will issue specific proposals in 2008 to:

- ***Raise capital requirements for certain complex structured credit products such as CDOs of ABSs.***

The most serious risk management shortcomings and losses at major financial institutions related to structured credit securitisations. This was particularly so for re-securitisations of debt that had been securitised and split into different tranches once already. In many cases, the complexity of these products led both the firms as well as CRAs to underestimate the associated risks. In the interest of garnering fee income from selling equity and mezzanine tranches of these instruments, structuring firms retained a large volume of highly-rated tranches of CDOs of ABSs without adequate capital to back them. The BCBS will therefore raise the minimum capital requirements for highly rated CDOs of ABSs to reflect the fact that these products do not behave like traditional highly rated securities such as government or corporate bonds and that their risk of default is very sensitive to broad economic conditions.

- ***Introduce additional capital charges for credit exposures in the banks' and securities firms' trading books.***

A large proportion of structured credit products are held in banks' and securities firms' trading books, with capital requirements based on market risk, whereas Basel II as currently designed only explicitly captures the default risk that is in the banking book. Where market risk capital measures do not fully capture the credit risk of these products, there is a regulatory arbitrage incentive to reduce capital requirements by holding such exposures in the trading book. The BCBS and IOSCO will therefore introduce an additional capital charge that more fully captures both the default and event risk of credit risk exposures held in the trading book. This will better cover the risk of credit losses on structured credit products.

- ***Strengthen the capital treatment for banks' liquidity facilities to off-balance sheet ABCP conduits.***

Banks incurred significant losses through poor management of off-balance sheet vehicles they sponsored as part of the structured credit securitization process. Indeed, the creation of such vehicles obscured the risks that banks faced. Basel II, unlike Basel I, requires banks to capitalise liquidity commitments to such vehicles, but treats them as senior exposures, with low risk weights for short maturities. The BCBS will therefore strengthen the capital treatment for banks' liquidity facilities to off-balance sheet ABCP conduits to further reduce such regulatory arbitrage incentives.

Supervisors should use Pillars 2 and 3 of Basel II to strengthen banks' incentives for sound risk management practices and capital planning.

Strengthened supervision of risk management (Pillar 2):

- ***The BCBS will issue guidance in 2009 to use Pillar 2 to strengthen firm-wide risk management and capital planning practices.***

Supervisors will issue further Pillar 2 guidance on risk management using the lessons about which risk practices have worked well, and which have not, during the current market turmoil. These lessons are discussed further in the section of this chapter on risk management. Supervisors will also set out Pillar 2 guidance for banks to develop their own tools to assess the capital needed to cover the risks that they face from their activities in the credit markets. A particular focus will be the adequacy of reporting to senior management of contractual and non-contractual off-balance sheet exposures. Taken together, these steps will promote better risk management practices and improve the robustness of capital buffers for on- and off-balance sheet risks.

- ***Supervisors will issue guidance to strengthen firms' management of concentration risk.***

One of the underlying weaknesses exposed by the current turmoil has been the overexposure of market participants to certain market sectors. The most extreme example has been the exposures to the US subprime market. Supervisors should therefore set out guidance that strengthens firm-wide management of concentration risks to particular sectors, taking account of both direct and indirect exposures and the potential for exposures in related sectors to become more correlated at times of market strain.

- ***Supervisors will strengthen their existing guidance on the management of counterparty exposures to leveraged counterparties.***

Recent events have demonstrated the importance of taking proper account of counterparty credit exposures. Existing supervisory guidance on counterparty exposures to hedge funds needs to be extended to exposures to other large, highly leveraged counterparties, including other banks and financial guarantors. Counterparty credit exposures to firms providing hedges or guarantees need to take account of the potential correlation of the creditworthiness of those counterparties with the risks of the assets being hedged, particularly in difficult market conditions.

- ***National supervisors will use the flexibility within Basel II to ensure that capital buffers and estimates of potential credit losses are appropriately forward-looking and take account of uncertainty associated with valuations and concentration risks. National supervisors will report to the BCBS with a view to ensuring a level playing field and the BCBS will report its findings and actions to the FSF.***

Supervisors will strengthen their assessments of the robustness of banks' stress testing practices and capital cushions over the cycle. Events have highlighted the risk of model error in capital and risk calculations. Supervisors need to ensure that firms appropriately assess their own capital adequacy based on the risks that may emerge over the full credit cycle, taking account of current and future economic and credit conditions, and the uncertainty that attaches to valuations..

Enhanced transparency and market discipline (Pillar 3):

- ***The BCBS will issue by 2009 further guidance to strengthen disclosure requirements under Pillar 3 of Basel II for:***
  - ***securitisation exposures, particularly exposures held in the trading book and related to re-securitisation;***
  - ***sponsorship of off-balance sheet vehicles, to give the market greater insight into the extent of banks' contractual and non-contractual obligations and exposures;***
  - ***banks' liquidity commitments to ABCP conduits, to ensure that disclosure is as clear as for on-balance sheet credit exposures; and***
  - ***valuations, including the methodologies and uncertainties related to those valuations.***

Enhanced disclosures in these areas will help to avoid a recurrence of the market uncertainties about the strength of banks' balance sheets in the event of a future episode of market turmoil. This strengthened guidance will be based on the lessons from the recent turmoil, together with an early assessment of the implementation of Basel II. The first Pillar 3 disclosures in many countries will be available in 2009.

Going forward, supervisors should continue to update the risk parameters and other provisions of the Basel II framework as needed.

Supervisors need to continue to track the implementation of Basel II and the BCBS should update the risk parameters and other provisions of the Basel II framework as appropriate to ensure that its incentives remain adequate as financial markets change and new financial products are created. National supervisors will rigorously assess banks' compliance with the framework's provisions.

Authorities should strengthen the regulatory and capital framework for monoline insurers and financial guarantors in the structured credit market.

Large amounts of credit risk transfer have taken place under guarantees or other forms of support from monoline insurers, which many investors relied upon rather than conducting their own credit assessments. Some investors apparently either disregarded their counterparty credit risk to monoline insurers or failed to appreciate the concentration risk that monolines' creditworthiness was dependent on the continued health of the structured credit market. The difficulties caused by the market turmoil on these insurers forced them to raise extra capital in the market and have caused dislocations in the markets in which they operated. Supervisors should strengthen the capital and other regulatory arrangements for monoline insurers and financial guarantors, to ensure that they are appropriate from a prudential point of view and do not encourage regulatory arbitrage. Such changes should promote a reduction in the risks of these highly leveraged institutions. Supervisors will strengthen guidance for regulated firms doing business with monolines and guarantors, including as part of the management of counterparty and concentration risk.

2. Liquidity management

Supervisors will complete their fundamental review of the management and supervision of liquidity and issue sound practice guidance by July 2008.

The BCBS guidance will cover the following areas:

- ***the identification and measurement of the full range of liquidity risks, including contingent liquidity risk associated with off-balance sheet vehicles;***
- ***stress tests, including greater emphasis on market-wide stresses and the linkage of stress tests to contingency funding plans;***
- ***the role of supervisors, including communication and cooperation between supervisors, in strengthening liquidity risk management practices;***
- ***the management of intra-day liquidity risks arising from payment and settlement obligations both domestically and across borders;***
- ***cross-border flows and the management of foreign currency liquidity risk; and***
- ***the role of disclosure and the market discipline in promoting improved liquidity risk management practices.***

National supervisors should closely check banks' implementation of the updated guidance as part of their regular supervision. I, banks' implementation of the guidance is inadequate, supervisors will take more prescriptive action to improve practices.

Supervisors and central banks should also examine the scope for additional steps to promote more robust and internationally consistent liquidity approaches for cross-border banks. This will include the scope for more convergence around liquidity supervision as well as central bank liquidity operations.

The turmoil has demonstrated the need for larger and more robust liquidity buffers and an internationally shared view among supervisors on sound liquidity risk management guidelines. It has been a vivid illustration of the critical importance of market liquidity to the banking sector, and of the links between market liquidity risk, funding liquidity risk and credit risk.

Many large banks and other financial firms were more vulnerable to a prolonged disruption in market liquidity than they expected. Firms were surprised by the nature and length of the market disruption and faced funding needs not anticipated in their contingency funding plans. This included retaining exposures in warehouse portfolios for significantly longer periods of time than anticipated when firms realized they were unable to find buyers for securities such as RMBSs, CDOs of ABSs, and high-yield bonds. Firms also needed to fund leveraged loan commitments made to corporate borrowers that they were unable to syndicate and could not cancel despite material adverse changes in market conditions. Moreover, some firms had not planned for the need to fund contractual commitments backstopping a range of off-balance sheet financing vehicles, such as ABCP conduits and SIVs. In other cases, firms chose to provide support to these and other off-balance sheet financial vehicles not because they were contractually obligated to do so, but instead because they were concerned about the potential damage to their reputations and their ability to sell investments in such vehicles in the future if they failed to support them during the period of market distress.

3. Risk management practices

Firms must strengthen their risk management practices, to sharpen their control of tail risks and mitigate the build-up of excessive exposures and risk concentrations.

The current market turmoil has highlighted the need for improvements to firms' risk management practices. Significant differences in specific risk management practices among even the largest and most sophisticated firms seem to have been associated with how well they have weathered the period of turmoil to date. Firms should strengthen risk management practices according to the lessons they have learned. Supervisors should support this through supervisory guidance and assessments that each firm has improved its practices as necessary.

Firms must strengthen practices in the following key areas:[1]

- ***The effective identification and analysis of firm-wide risks.***

  In this respect, the timing and quality of information flows both up to senior management and across the different businesses of the firm are important. Firms that shared information effectively benefited by being able to plan up to a year ahead of the turmoil to reduce identified risks.

- ***The consistent application of independent and rigorous valuation practices across the firm, particularly for complex or potentially illiquid securities.***

  Valuations need to be actively verified by a process that considers all available information and is sensitive to the potential for complex assets to fall in value.

- ***Effective management of funding liquidity, capital and the balance sheet, including contingency planning.***

[1] Supervisors of major financial institutions in France, Germany, Switzerland, the United Kingdom and the United States have set out in more detail the risk management practices that have differentiated those firms who have dealt more successfully to date with the turmoil from those who have suffered more problems. See the report, "Observations on Risk Management Practices during the Recent Market Turbulence", Senior Supervisors Group, March 6, 2008.

Such management should include adequate planning for, and creating the right internal price incentives for, contingent events. It should be flexible in the use of funding liquidity management tools.

- ***Informative and responsive risk measurement and management reporting and practices.***

  The turmoil has emphasised the importance of using multiple risk-measurement tools and stress tests, blending quantitative rigour with qualitative assessments. Use of a wide range of measures of risks helps in the adjustment to new market circumstances and in the understanding of the limitations of individual risk measures.

- ***Effective risk management approaches in three particular business lines: CDO structuring, warehousing, and trading businesses; syndication of leveraged financing loans; and conduit and SIV business.***

  Individual national supervisors will issue strengthened guidance on these issues and will check that the firms they supervise draw appropriate lessons from the turmoil, make changes in risk management practices and integrate their risk assessments into overall decision-making processes and controls. This includes the need for more effective control of pipeline risk.

Regulators and supervisors should work with market participants to mitigate the short-termism in risk-taking practices arising from remuneration policies.

One of the underlying weaknesses that have come to light during the current turmoil is the misalignment of incentives created by financial institutions' compensation schemes, which in some areas has encouraged disproportionate risk-taking with insufficient regard to longer-term risks. Regulators and supervisors will therefore work with market participants to identify means by which risk management policies and controls can mitigate these incentives.

4. Off-balance sheet activities

Supervisors should strengthen the incentives for banks to properly manage the risks from off-balance sheet risk exposures.

By implementing the Basel II framework and incorporating the changes to Pillar 1, 2 and 3 described above, supervisors will substantially reduce the incentives that motivated banks to generate and hold large off-balance sheet risk exposures.

Supervisors should take a number of additional actions to strengthen the incentives for banks to manage the risks from off-balance sheet exposures appropriately:

Supervisors should require that financial institutions' prudential reports adequately include the risks arising from off-balance sheet exposures.

Supervisors should set guidelines that specify how firms' internal management information systems capture off-balance sheet exposures, so that these form part of firms' internal capital and liquidity management.

Supervisors should expect firms' stress testing procedures to take account of their exposures of off-balance sheet entities, including the risk that they might need to be absorbed on the institution's balance sheet, whether for contractual or non-contractual (e.g. reputational) reasons.

Many banks did not adequately measure or understand their contractual and non-contractual off-balance sheet exposures to entities such as conduits and SIVs. Supervisors should require that this information is internally presented to firm's senior management in a timely and useful manner, and that firms have procedures in place to manage these exposures and any related concentrated risks.

Supervisors should require that financial institutions' prudential reports adequately include the risks arising from off-balance sheet exposures.

Going forward, supervisors, through the BCBS, should keep Basel II under continuous review and take action as needed to mitigate any further regulatory arbitrage incentives to remove assets and liabilities from the balance sheet that are identified as arising from Basel II or accounting standards.

5. Operational infrastructure for over-the-counter (OTC) derivatives

Market participants should act promptly to ensure that the settlement, legal and operational infrastructure underlying credit risk transfer markets is sound.

Market participants should amend standard credit derivative trade documentation to provide for cash settlement of obligations stemming from a credit event, in accordance with the terms of the cash settlement protocol that has been developed, but not yet incorporated into standard documentation.

Although the industry has developed a "cash settlement protocol" that can obviate the need for purchasers of credit protection to physically deliver obligations of the reference entity following a default or other credit event, standard industry trade documentation still requires physical settlement. Until the protocol is incorporated into standard industry documentation, there is a risk of significant market disruptions if one or more major market participants choose not to adopt the protocol for a credit event. Of particular concern is the market impact such choices could have if several credit events were to occur simultaneously. Market participants therefore need to rapidly complete work to verify that the protocol is internationally applicable and then amend the standard documentation.

More generally, market participants should also be aware of the potential for credit derivatives and securitised products (e.g. CLOs) to affect the dynamics of corporate workouts, especially for out-of-court restructurings.

Market participants should automate trade novations and set rigorous standards for the accuracy and timeliness of trade data submissions and the timeliness of resolutions of trade matching errors for OTC derivatives.

During the turmoil, spikes in credit derivatives trades resulted in substantial increases in backlogs of unconfirmed trades throughout the industry. Despite the significant progress that the industry has made in automating the infrastructure of the OTC derivatives markets during the last two years, the industry has not achieved a “steady state” in which spikes in trading volume do not lead to operational problems.

The financial industry should develop a longer-term plan for a reliable operational infrastructure supporting OTC derivatives.

Although the OTC derivatives markets’ infrastructure has coped quite well during the turmoil, an integrated operational infrastructure would bolster reliability and robustness. Such an infrastructure should: (a) capture all significant processing events over the entire lifecycle of trades; (b) deliver operational reliability and scalability; (c) maximize the efficiencies obtainable from automation by promoting standardization and interoperability of infrastructure components; (d) enhance participants’ ability to manage counterparty risk through netting and collateral agreements by promoting portfolio reconciliation and accurate valuation of trades; (e) address all major asset classes and products types; and (f) encompass both dealers and investors.

III. Transparency

This period of market turmoil and illiquidity has highlighted the importance to market confidence of reliable valuations and useful disclosures of the risks associated with structured credit products and off-balance sheet entities. Accounting standards define the fundamental framework of financial reporting, which permits the measurement of the financial condition and performance of firms. Adherence to these standards is the cornerstone of a well-functioning financial system. In addition, the quality of financial reporting is enhanced by the efforts of market participants, auditors and supervisory and regulatory authorities to strengthen the reliability of valuations and of risk disclosures. Sound disclosure, accounting and valuation practices are essential to achieve transparency, to maintain market confidence and to promote effective market discipline.

This chapter sets out recommendations to improve market transparency in the following areas:

- Risk disclosures by market participants;
- Accounting and disclosure standards for off-balance sheet entities;
- Valuation; and
- Transparency of securitisation processes and markets.

1. Risk disclosures by market participants

Firms should provide useful disclosures about their risk exposures, risk management and accounting policies that are relevant to current market conditions.

During the early stages of the market turmoil, public disclosures that were required of financial institutions did not always make clear the risks associated with their on- and off-balance sheet exposures. The information disclosed about risk exposures was not sufficiently timely and useful to many investors and other market participants. Financial institutions and auditors worked together to improve risk disclosures for structured products and other exposures, for example in financial accounts and other disclosures for the second half and for year-end 2007. However, a lack of adequate and consistent disclosure of risk exposures and valuations continues to have a corrosive effect on confidence.

<u>Near term</u>

Financial institutions should draw from leading practices to ensure, going forward, that they provide useful disclosures about their risk exposures, risk management and accounting policies that are most relevant in view of market conditions at the time. This will require firms to ensure that they maintain appropriate internal firm-wide risk measurement systems to deliver the useful risk disclosures recommended here.

Examples of leading practice risk disclosures in current market conditions have been summarised in an annex (see Annex C) to this report, based on a review of recent qualitative and quantitative disclosures by global banks and securities firms, and are summarised below. Each of the disclosures is presently made by at least one of the surveyed firms, though few of the firms come close to making all of the disclosures. Indeed, some disclosures may not be relevant for firms that do not have significant exposure to the activity concerned. In the near term, the FSF strongly encourages financial institutions to make these leading practice disclosures starting with their upcoming mid-year 2008 report, for those activities where they ghave significant exposures.

Many of the surveyed firms disclosed the following summary quantitative information for each of the asset categories in the table below:

- Total exposure, including on- and off-balance sheet analysis (as well as funded and committed lines if applicable)
- Exposure before and after hedging
- Exposure before and after write-downs

Each firm provided additional specificity by making some, but not all, of the following disclosures:

<u>**Special Purpose Entities (SPEs) - General**</u>	<u>**Collateralized Debt Obligations**</u>
• Size of SPE vs. firm's total exposure • Activities of SPE • Reason for consolidation (if applicable) • Nature of exposure (sponsor, liquidity and/or credit enhancement provider) • Collateral type • Geographic distribution of collateral • Average maturities of collateral • Credit ratings of underlying collateral	• Size of CDOs vs. firm's total exposure • Breakdown of CDOs – type, tranche, rating, etc. • Breakdown of collateral by type • Breakdown of subprime mortgage exposure by vintage • Hedges, including exposures to monolines, other counterparties • Creditworthiness of hedge counterparties • Credit valuation adjustments for specific counterparties • Sensitivity of valuation to changes in key assumptions and inputs
<u>**Other Subprime and Alt-A Exposure**</u>	<u>**Commercial Mortgage-Backed Securities**</u>
• Whole loans, RMBSs, derivatives, other • Detail on credit quality (e.g., credit rating) • Breakdown of subprime mortgage exposure by vintage • Sensitivity of valuation to changes in key	• Breakdown of collateral by industry

assumptions and inputs	• Breakdown of collateral by geography **Leveraged Finance** • Funded exposure and unfunded commitments • Change in exposure from prior period(s), including sales and writedowns • Distribution of exposure by industry • Distribution of exposure by geography

Medium term

The above template is designed to address the specific areas of market concern during the current turmoil. To accomplish the same principle noted above in the medium term, the areas in which detailed additional disclosures should be made will need to vary as key risks evolve. To assist in the development of a disclosure process that will be most relevant to investors and other users in assessing risks and risk management:

- Investors, industry representatives and auditors should develop a basic core template of risk information that could be a basis, operationally, for useful risk disclosures.
- Investors, industry representatives and auditors should meet together, on a semi-annual basis, to discuss the key risks faced by the financial sector and to identify the types of risk disclosures, in addition to those in the core template, that would be most relevant and useful to investors at that time.
- Regulators, supervisors and standard setters should be consulted with respect to the above efforts. A more prescriptive approach by securities market regulators, bank supervisors or accounting standard setters may prove necessary if this market-led approach proves inadequate.

2. Accounting and disclosure standards for off-balance-sheet entities

The build-up and subsequent revelation of significant off-balance sheet exposures has highlighted the need for clarity about the treatment of off-balance-sheet entities and about the risks they pose to financial institutions. The use of off-balance sheet entities created a belief that risk did not lie with arrangers and led market participants to underestimate firms' risk exposures. Risk exposures and potential losses associated with off-balance-sheet entities should be clearly presented in financial disclosures, and the accounting standards affecting these entities should be enhanced and their international convergence accelerated based on the lessons learned. Standard setters must take urgent action to enhance their standards.

Accounting and disclosure standards for off-balance sheet vehicles will be improved and their international convergence accelerated.

Off-balance-sheet treatment in financial reports can arise as a result of the standards for derecognition (e.g., removing assets off balance sheets through securitisations) and consolidation (e.g., special purpose entities). The standards of the IASB and the FASB differ for both topics and with respect to the required disclosures about off-balance-sheet vehicles. The IASB and FASB have projects underway to converge their standards in these areas and this work should be accelerated so that high-quality, consistent approaches can be achieved. Standards should require the risk exposures and potential losses associated with off-balance-sheet entities to be clearly identified and presented in financial disclosures. The IASB and FASB should consult investors, regulators, supervisors and other stakeholders for their views during this process and should take note of issues that have come to light during the current market turmoil and the progress reflected in 2007 annual reports and other disclosures.

Also, as noted above, in the near- and medium-term, financial institutions should work with auditors to implement high-quality disclosures about off-balance-sheet entities and the risks they pose to institutions.

3. Valuation

Potential weaknesses in valuation practices and disclosures, and the difficulties associated with fair valuation in circumstances in which markets become unavailable, have become apparent from the turmoil. Financial institutions, auditors, accounting standard setters and supervisors must take urgent action to address these problems.

Generally, structured finance products are held as (a) financial instruments measured at fair value through profit or loss or (b) as part of assets available for sale (AFS). Financial instruments measured at fair value through profit or loss are those held for trading and any other financial instruments designated by management at fair value (often referred to as the “fair value option”). As a result of the mark-to-market (MTM) process for these instruments, changes in their fair value directly impact firms’ income statements in the period in which they occur. Changes in the fair value of financial assets which are classified as AFS are recorded directly in equity without affecting profit and loss until the financial assets are sold, at which point the cumulative change in fair value is charged or credited to the income statement.[2] In contrast, unless held for sale, loans are typically

[2] When a decline in the fair value of an AFS financial asset has been reported directly in equity and there is objective evidence that the asset is impaired, the cumulative loss that had been reported directly in equity is removed from equity and reported in profit or loss, reducing net income. These situations are sometimes referred to as involving “permanent impairment”.

measured at amortised cost using the effective interest method, less an "allowance" or "provision" for impairment losses. Loans held for sale may be reported in trading or AFS portfolios, or in the US, in held for sale portfolios (at the lower of cost or fair value).

During the turmoil market liquidity for certain financial products dried up and in the absence of any trading, price discovery proved virtually impossible. In the primary and secondary markets for other products, liquidity did not dry up but did recede substantially, even in instances when there was no prima facie evidence that the asset quality had deteriorated. It became clear that market participants were demanding a liquidity premium for buying assets that was in some respects more significant, more broadly based, and more persistent than during prior stress periods. This change in the nature and duration of the premia contributed to the valuation challenge. As liquidity receded for a variety of financial instruments, accounting valuations fell, resulting in significant deterioration in capital and earnings at many firms.

Valuation approaches seek to rely on prices obtained from active markets when these are available for identical or similar instruments. When markets are not active, sophisticated firms estimate values by using another valuation technique, such as a model (which may utilise a variety of technical approaches). The use of these techniques has underlined the fact that most valuation methods, including those based on accrual accounting, result in an inevitable measure of uncertainty attaching to the point estimates of valuations. Finding ways to highlight such uncertainty is important to avoid giving management and market participants a false impression of precision, possibly lulling them into an equally false sense of security. Sound processes for modelling financial products' values can help ensure that complex risks and their implications for valuation, capital and earnings are understood, managed and reported.

International standards should enhance disclosures about valuations and methodologies when markets are no longer active.

The IASB will strengthen its standards to achieve better disclosures about valuations, methodologies and the uncertainty associated with valuations.

The IASB should examine its disclosure requirements about the valuation of financial instruments to identify areas for enhancement in light of lessons learned from the market turmoil. This effort should assess disclosures in year-end 2007 annual reports and draw from the views of investors, firms, auditors, supervisors and regulators about the quality of valuation disclosure practices.

The IASB will enhance its guidance on valuing financial instruments when markets are no longer active.

During the market turmoil, active markets did not exist for many financial instruments, leading to challenges in valuing these products. The IASB should form an expert panel to: (i) determine best practices in the area of valuation techniques; and (ii) formulate sound practices guidance on valuation methods for financial instruments when markets are no longer active. This panel should comprise experts representing both preparers and users of financial statements, as well as supervisors, regulators and auditors. The group should have a broad perspective of expertise encompassing risk modelling, valuation and auditing.

Financial institutions should enhance valuation practices and related disclosures.

Financial institutions should:

- ***Establish rigorous and timely processes to apply critical expert judgment and discipline in how they value holdings of complex or illiquid instruments (avoiding undue reliance on ratings and consensus pricing services);***
- ***Maintain sound governance and control practices associated with valuation processes, including those that deal with hard-to-observe inputs to valuation models, model validations, price verification and related audit programs; and***
- ***Enhance the quality of their disclosures about valuations, valuation methodologies, price verification processes, and the uncertainty associated with valuations.***

Supervisors' assessments of valuation practices have stressed the importance of consistent application of independent and rigorous valuation practices across the firm. At firms that performed better in late 2007, management had established, before the turmoil began, rigorous internal processes requiring critical judgment and discipline in the valuation of holdings of complex or potentially illiquid securities. When these firms reached decisions on values, they sought to use those values consistently across the firm, including for their own and their counterparties' positions. Once the turmoil began, these firms were also more likely to test their valuation estimates by selling a small percentage of relevant assets to observe a price or by looking for other clues, such as disputes over the value of collateral, to assess the accuracy of their valuations of the same or similar assets.

In contrast, firms that faced more significant challenges in late 2007 generally had not established or made rigorous use of internal processes to challenge valuations. They continued to price the super-senior tranches of CDOs at or close to par despite observable deterioration in the performance of the underlying RMBS collateral and declining market liquidity. Management did not exercise sufficient discipline over the valuation process: these firms generally lacked relevant internal valuation models and sometimes relied too passively on external views of credit risk from rating agencies and pricing services to determine values for their exposures. Furthermore, when considering how the value of their exposures would behave in the future, they often continued to rely on estimates of asset correlation that reflected more favourable market conditions.

Firms should ensure that sound governance and control practices are maintained with respect to their valuation processes and that their internal systems provide timely information needed for senior management and for useful public disclosures.

Financial institutions and auditors have worked together to improve valuation approaches and related disclosures in end-year financial accounts. But further work is needed to provide confidence that valuation methodologies and related loss estimates are adequate, to clearly highlight the uncertainties associated with valuations, and to allow for more meaningful comparisons across firms.

The Basel Committee on Banking Supervision will issue guidance so as to enhance the supervisors' assessment of banks valuation processes and reinforce sound practices.

The BCBS plans to issue guidance that will enhance the supervisory assessment of banks' valuation processes and reinforce sound practices.

This guidance[3] will apply to all fair valued positions, whether reported under the guidance for banks' trading accounts, available-for-sale assets, or the fair value option (FVO) and will cover sound governance and controls, the quality of banks' measurement approaches and the appropriate use of a diverse set of information to improve the reliability of valuations. Following this guidance, banks will:

- strengthen their capacity to produce reasonable valuations during periods of stress;
- consider the quality of inputs (including consensus pricing services), models, and the extent of liquidity in assessing valuation uncertainty; and
- implement systems and procedures that will assure internal and external transparency.

International standards should enhance verification of valuations of complex illiquid products.

The International Auditing and Assurance Standards Board (IAASB) and major national audit standard setters should work with the large audit firms to consider the lessons learned during the market turmoil and enhance the guidance for auditors' verification of valuations of complex illiquid products.

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3 In developing this guidance for supervisors, the BCBS will reinforce industry sound practices with respect to rigorous valuations and related governance and control procedures. As part of its supervisory guidance the BCBS strongly encourages banks to adopt the 17 best practices outlined in the December 2003 Group of 30's report "Enhancing Public Confidence in Financial Reporting" ("G30 Report").

Valuations and related disclosures that have been rigorously verified by external auditors contribute to enhanced market confidence. The largest audit firms should review the audit approaches that they brought to bear in addressing the market turmoil issues and draw from these approaches to provide recommendations to the IAASB on enhancements to its guidance for auditing model-based valuations of complex or illiquid financial products and related disclosures. The IAASB and national audit standards setters could benefit from these recommendations as they determine how best to update their auditing guidance based on lessons learned during the turmoil.

4. Transparency in the securitisation process and markets

Arrangers, distributors, investors and credit rating agencies have strong incentives to develop appropriate initial and ongoing transparency improvements in the securitization process and related markets. A number of initiatives are underway in this area, which authorities are monitoring closely.

> ***Originators, arrangers, distributors, managers and CRAs should strengthen transparency at each stage of the securitisation chain, including by enhancing and standardising information about the pools of assets underlying structured finance products.***

Firms that sponsor or provide credit or liquidity enhancements to ABCP programs should disclose initially and periodically the distribution of assets underlying the programs by type, industry and credit rating, and the performance of these underlying assets.

The ASF and ESF are developing templates for disclosures to investors about ABCP conduits, as the ASF has done for multi-seller ABCP conduits. The Japan Securities Dealers Association (JSDA), together with originators, arrangers, investors and the regulator, is making efforts to establish distributors' rules and a standardized format of disclosure of securitized products. CRAs also have made proposals to enhance the information they provide. Work by the ESF, JSDA, ASF and CRAs in this area is welcome.

> ***Institutions arranging securitised products should be transparent about the underwriting standards for the underlying assets and the risk characteristics of structured financial products. They should also make available to investors and CRAs the results of their own due diligence.***

The problems in the US subprime market revealed serious lapses in due diligence by the arrangers of securitised products concerning the quality of the underlying assets. Where arrangers undertake due diligence, they have not always disclosed the results. Arrangers should conduct rigorous due diligence and make available to investors and CRAs the results obtained.

> ***Investors, and their asset managers, should obtain from sponsors and underwriters of securitized credits access to better information about the risk characteristics of***

the credits, including information about the underlying asset pools, on an initial and ongoing basis.

Ensuring the provision by arrangers of information necessary for investors' due diligence and risk management is not solely the responsibility of arrangers. Investors themselves have a responsibility to specify and demand the information that they require.

[***Regulators will work with market participants towards setting up a comprehensive system for post-trade transparency for credit instruments, which will include prices and volumes traded in secondary markets.***

Sufficient post-trade information on credit instruments, including information about prices and volumes in the secondary market, is critical to provide pricing data that can reinforce valuation practices and as supplementary information on the scale of risk transfers.]

The FSF will review changes in private sector practices by year-end.

IV. The uses and role of credit ratings

CRAs play an important role in disseminating and evaluating information on structured credit products, and many investors have relied heavily on their ratings opinions. Poor credit assessments by CRAs contributed both to the build up to and the unfolding of recent events. In particular, CRAs assigned high ratings to complex structured subprime debt based on inadequate historical data and in some cases flawed models. As investors realised this, they lost confidence in ratings of securitised products more generally.

CRAs have since undertaken, individually and collectively, a series of actions to draw lessons for their internal governance and operational practices to strengthen ratings quality, enhance the rating process, manage conflicts of interest and enhance information they provide on rating methodologies and the meaning and limitations of ratings. The steps are welcome but more is needed.

In this chapter, we set out recommendations relating to:

- the quality of the rating process;
- differentiated ratings and expanded information on structured products;
- CRA assessment of underlying data quality; and
- The uses of ratings by investors and regulators.

1. Quality of the rating process

CRAs should improve the quality of the ratings process and manage conflicts of interest in rating structured products.

One of the important triggers of the current turmoil was the precipitous decline in confidence in ratings of structured credit products. The earlier assignment of high ratings to subprime-related RMBSs and CDOs was a critical element in the procyclicality of these products. It enabled the phenomenal growth of subprime lending between 2004 and 2007, and was followed by an inordinate number of rapid multi-notch downgrades of these instruments. This has raised questions about the quality of credit ratings with regard to structured products.

One issue that has received attention is whether CRAs' poor ratings performance in structured products might have reflected more intense conflicts of interest in the rating of these than in other products. The CRAs that rate the vast majority of such products rely primarily on an issuers-pay model and the revenues from this ratings activity accounted for a fast growing income stream for these CRAs in recent years. In many cases, CRAs are typically paid only if the credit rating is issued, though they sometimes receive a breakup fee when not. The issuers-pay model places a premium on CRAs being able to demonstrate that their ratings operations and decisions are carried out to the highest standards of objectivity and that conflicts of interest are effectively addressed.

While the issuers-pay model applies to all the products rated by these CRAs, including corporate bonds, the standard conflicts of interest may be more acute for structured finance ratings. Because structured products are designed to take advantage of different investor risk preferences, they are typically structured for each tranche to achieve a particular credit rating. To the extent that CRAs discuss with issuers during this structuring process the rating implications of particular structures, the potential for conflicts of interest becomes greater. The conflicts are exacerbated when CRAs also sell consulting services to entities that purchased ratings.

The severe underestimation by CRAs of credit risks of instruments collateralized by subprime mortgages resulted in part from flaws in their rating methodologies. The limited set of historical data available for subprime lending activities increased the model risk in the rating process. As a result, CRAs underestimated the correlations in the defaults that would occur during a broad market downturn. Model risk undermining the quality of highly rated structured products was not appreciated by the agencies.

In particular, historical data on the performance of US subprime loans were largely confined to a benign economic environment with rising house prices. The lack of sufficient historical data or of scenario analysis that adequately assessed how particular asset pool would respond to potential economic scenarios led to ratings mistakes.

In addition, CRAs did not take account of substantial weakening of underwriting standards for products associated with certain originators.

Some CRAs are strengtheing internal governance to address conflicts of interest and enhance the rating methodology processes for structured products. Those steps include the operational and legal separation of rating activities from non-rating business activities; de-linkage of rating analysts' compensation from the performance of their business unit; enhancement to rating surveillance functions; and strengthened oversight of rating methodologies. Meanwhile, rating methodologies themselves have been rapidly revised in the light of market events.

These steps are welcome. Additional measures must be taken to improve the internal governance, enhance transparency about the rating practices, and ensure compliance with relevant Codes of Conduct. These are important ways for CRAs to regain market confidence.

Of particular interest is that fact that currently, many CRAs do not publish verifiable and easily comparable historical performance data regarding their ratings. The comparability of rating performance would promote competition by allowing customers to better assess the accuracy of the CRAs' past ratings. CRAs should disclose past ratings in a more systematic way, and improve the comparability of track records.

To these ends, IOSCO will revise its Code of Conduct Fundamentals for Credit Rating Agencies [in 2008] to:

- ***improve the quality of the rating process including the models, methodologies and information used for ratings (e.g. by CRAs creating an independent function to conduct periodic reviews)***
- ***address conflicts of interest, including concerns about analyst remuneration and about the separation of consulting and rating activities;***
- ***provide investors with additional information on the methodologies and criteria used for ratings, how CRAs address data limitations, and data on the historical performance of ratings.***

In recent years, the strong growth in demand for ratings services for structured products, together with the growing complexity of structured products, has put strains on CRAs' available resources. Adequate resources are needed not only in the initial rating process, but also in subsequent monitoring of the ratings.

CRAs should demonstrate that they have the ability to maintain the quality of their service in the face of rapid expansion of their activities, and to allocate adequate resources to both the initial rating and to the rating's regular review.

2. Differentiated ratings and expanded information on structured products

CRAs should clearly differentiate, either with a different rating scale or with additional symbols, the ratings used for structured products from those for corporate bonds, subject to appropriate notification and comment.

Because of the complexity of many structured products, many investors took CRAs' ratings opinion of structured credit products as a seal of approval and looked no further. But structured finance ratings differ from traditional corporate ratings in that they are model-based and assumption driven, result from an "inverted" ratings process in which a structure is fitted to a desired rating, often rely on non-public information about the underlying assets, and have the potential for significantly higher ratings volatility in certain circumstances.

As the pooling technique diversifies away the idiosyncratic risk of each individual asset, the average credit performance of the underlying pool of assets tends to be less volatile and more predictable in normal times, compared with the individual assets. But when an economy-wide event occurs that influences the creditworthiness of many assets at once , correlated defaults in the asset pool eliminates the benefits of diversification. This gives a strong "cliff" effect to the ratings of structured products: while structured products have more stable ratings than corporate bonds during times of overall economic and financial calm, they have a higher risk of a severe downgrade than corporate bonds during difficult conditions.

Despite these differences, CRAs currently apply the same rating categories for both structured products and corporate bonds. Many investors did not understand or fully appreciate the differences of risk characteristics between those products. Clear, additional information therefore needs to be provided on the varying risk characteristics of structured products.

A separate rating scale or additional rating symbols for structured products will signal to investors that, under stress conditions, the credit rating of structured products can be more volatile. Separate symbology also alerts investors that a rating relies on different information and methodologies than for a corporate bond. The steps that CRAs have taken to consult on improvements in this area are welcome. But at the same time, the introduction of a new, separate rating symbology can also require fundamental changes to investment guidelines and to regulations that reference credit ratings. The introduction of a different rating symbology should therefore be subject to review of its transitional implications for markets and for regulations.

CRAs should expand the initial and ongoing information provided on the risk characteristics of structured products and work with investors to this end.

CRAs should provide:

- ***additional initial and ongoing information on rating stability;***
- ***the assumptions underlying a structured product rating and the sensitivity of the rating to changes in these assumptions;***
- ***information on limitations of rating analysis due to insufficient data or untested models, including rating uncertainty; and***
- ***standardised initial and ongoing performance reports, especially for re-securitised products.***

Ratings of mortgage-backed structured instruments relied heavily on CRAs' assumptions about future house price movements and broader economic conditions. As already discussed, the pooling of assets reduces idiosyncratic risk, but increases exposures to systematic risk factors. For that reason, CRAs' assumptions and scenario analysis about economic and other systemic factors are an important part of the information that investors need if they are to use ratings properly. Investors should therefore have access to the assumptions and scenarios underlying the rating of structured finance products. In the past, these assumptions and scenarios, and the sensitivity of ratings to these assumptions, have not been conveyed to investors sufficiently explicitly.

Where ratings involve a type of financial product with limited historical data or untested models, CRAs should make clear, in a prominent place, the limitations of ratings and the additional risks associated with the credit ratings of such products. CRAs should also clearly and regularly disclose to investors the assumptions underlying their ratings. They should document the sensitivity of structured finance ratings to changes in their central assumptions.

3. CRA assessment of underlying data quality

CRAs should assess the quality of the data input provided by originators, arrangers and issuers involved in structured finance and securitisation products.

CRAs should:

- ***require underwriters to provide representations about the level and scope of due diligence that they have performed on the underlying assets;***
- ***adopt reasonable measures to ensure that the information they use is of sufficient quality to support a credible rating;***
- ***establish a independent function to review the feasibility of providing a credit rating for new products materially different from those currently rated;***
- ***refrain from rating a security if sufficient underlying data are unavailable or the product structure is too complex;***
- ***disclose what qualitative reviews they perform on originators' underwriting standards; and***
- ***take into account the information on the portion of underlying assets held by originators upon rating securitized products.***

One cause of the poor performance of recent-vintage subprime mortgages was lax loan underwriting that accommodated unverified borrower financial information. A significant fraction of early payment default in subprime loans had clear signs of fraud in the loan files. Due diligence about the quality of underlying data and about the quality of operations of originators, issuers or servicers could have identified these problems and is important to the assessment of creditworthiness.

When rating structured products, CRAs do not generally confirm the validity of the underlying data provided to them. Nor do they monitor the performance of all the various agents involved in the securitisation process. CRAs rely on originators, issuers and arrangers to verify and validate information before passing it on to others, including CRAs. However, the recent episode has highlighted that credit ratings for structured products had been often based on incorrect information.

The quality of the underlying data has an important impact on the accuracy of ratings. Therefore CRAs should take more responsibility for assessing the data input. An improvement in, and disclosure of, CRAs' diligence work and monitoring procedures will contribute to strengthening the incentive structure of the OTD model. CRAs should disclose information on the retention by orginators and arrangers of parts of tranches in structured credit products.

4. Uses of ratings by investors and regulators

Investors should address their over-reliance on ratings. Investor associations should develop standards of due diligence and credit analysis for investing in structured products.

Investor should reconsider how they use credit ratings in their investment guidelines and mandates and for risk management and valuation. Ratings cannot and should not replace a thorough risk analysis and management on the part of investors. Investors for whom such analysis is not cost-effective should refrain from investing in structured products.

While ratings play a useful role in limiting, monitoring and communicating the credit risks to investors and asset managers take, they clearly do not cover the full range of risks securities investments face. Credit ratings are assessments of creditworthiness, but not assessments of the level of liquidity, market or volatility risk. However, some institutional investors have relied too heavily on ratings in their investment guidelines and choices, in some cases fully substituting ratings for independent risk assessment and due diligence. Some also relied exclusively on ratings for valuation purposes.

The over-reliance on ratings was particularly acute with respect to structured finance products. One important factor is that the analysis of the underlying assets and the correlation risk is quite challenging, and investors in highly-rated products with low risk premia may lack the expertise or be tempted to avoid the costs of doing their own analysis. Other factors include the absence of an active secondary market for these products, lack of sufficient historical performance data, and lack of an universally understood valuation method.

All these factors have contributed to a situation where many investors largely relied on credit ratings to assess the risk of holding structured finance products. Consequently, when the quality of CRAs' ratings became questioned, some investors were left with no independent means of assessing the risk of these products, which added to market illiquidity.

As was already discussed, CRAs should improve the quality of their rating process, and expand the information provided on the risk characteristics of structured products. But enhanced disclosure by CRAs is useful only if investors make appropriate use of the disclosed information for their due diligence and risk management. Investors should therefore re-consider how they use credit ratings in their investment guidelines and mandates, and for risk management and valuation.

Authorities will review the use of ratings in the regulatory and supervisory

framework.

Authorities should examine whether the roles that they have assigned to ratings in regulation and supervisory rules are consistent with the objective of having investors make independent judgment of risks and perform their own due diligence, and do not induce uncritical reliance on credit ratings as a substitute for that independent evaluation.

Credit ratings are referred to in various regulatory and supervisory frameworks both at international and national level, including Basel II. Such official recognition in regulation and/or supervisory policies may have played a role in encouraging investors' over-reliance on ratings, by discouraging some investors from paying close attention to what the ratings actually mean.

It is important to ensure that the use of ratings by authorities does not contribute to the lack of competition in the CRA industry. Issuers prefer to obtain, and investors prefer to use the opinions of CRAs that public authorities also use. Regulatory recognition in turn takes into account the extent of use of CRAs in the market. These forces can potentially act as barriers to entry for new participants. Regulators and other bodies need to keep their processes under review to avoid this. Indeed regulators' requirements that CRAs whose ratings are to be used within regulations must maintain adequate disclosures about ratings processes and performance can help to promote competition.

Structured products have different rating stability properties than those for corporate bonds. However, authorities' policies and regulations that refer to ratings do not always distinguish between corporate and structured finance ratings. While the links between low default rates, low volatility and high liquidity are not logical necessities, some regulations also implicitly assume that securities with high credit ratings are liquid and have lower price volatility.

Authorities will review whether their regulations and/or supervisory policies unintentionally give credit ratings an official seal of approval that further discourage investors from making their own due diligence. When doing this review, authorities are aware that credit ratings play an important role in investment and risk management frameworks. The transitional implications of any changes to regulation and supervisory rules should be carefully considered.

V. Strengthening the authorities' responsiveness to risk

Some of the weaknesses that have come to light were known or suspected within the community of financial authorities. Indeed, much work was underway at international levels that - if already implemented – might have tempered the scale of the problems experienced. However, international processes for agreeing and implementing regulatory and supervisory responses have in some cases been too slow given the pace of innovation in financial markets. Where authorities have expressed concerns about risks to markets or to individual institutions, they have not always been successful in changing behaviour. Authorities need to enhance the prioritisation and coordination of their risk assessments and international policy development work and increase the effectiveness of their communication with markets.

This chapter contains recommendations on:

- Translating risk analysis into action;
- Improving information exchange and cooperation among authorities; and
- Enhancement of international bodies' policy work.

1. Translating risk analysis into action

Supervisors, regulators and central banks – individually and collectively – will take additional steps to more effectively translate their risk analysis into actions that mitigate those risks.

Supervisors should have the requisite resources and expertise to oversee the risks associated with financial innovation and to ensure that firms they supervise have the capacity to understand and manage the risks.

The increased complexity of financial products and markets poses greater challenges to the ability of market participants, regulators and supervisors to keep pace with the evolving risks to markets and institutions. Supervisors and regulators need to make sure that the risk management and control framework within financial institutions keeps pace with the changes in instruments, markets and business models, and that firms do not engage in activities without having adequate controls. The skills of risk managers and supervisors will need to be continually updated to keep pace with market changes.

Supervisors and regulators should formally communicate to firms' boards and senior management at an early stage their concerns about risk exposures and the quality of risk management and the need for firms to take responsive action. Those supervisors who do not already do so should adopt this practice.

Where supervisors identify concerns about a firm's risk exposures and the quality of risk management, they can best assure that the firm will take prompt, responsive, firm-wide action by raising the concerns in a timely manner directly with the firm's board and senior management, rather than solely with risk managers and compliance officers. Supervisors in some jurisdictions already follow this practice, and others should do so.

At the international level, the FSF will give more force to its own risk analysis and recommendations, both directly and through the actions of its members, by initiating and following up action to investigate and mitigate risk.

In the years leading up to the market turmoil, many authorities, including supervisors, regulators and central banks, identified concerns about weaknesses that have to come to light (e.g., about lack of effective credit risk transfer, valuation difficulties in complex products, weaknesses in the robustness of market and funding liquidity risk management practices). Nevertheless, they had only limited success in focusing market participants' attention on these issues and on taking proactive steps to address them.

The FSF will establish a mechanism for regular interaction at senior level with private sector participants, including investors and rating agencies, for taking mitigating actions to identified risk and weaknesses.

2. Improving information exchange and cooperation among authorities

Authorities' exchange of information and coordination in the development of good practices will be improved at national and international levels.

Supervisory exchange of information and coordination in addressing cross-border issues should continue to be improved.

Much work has taken place in recent years among supervisors to improve cross-border exchange of information and coordination. Some of the most concrete and formal examples of this work involve regional initiatives, such as in the European Union. Work to further improve international cooperation should continue and be further enhanced. Some specific examples are as follows.

The use of international colleges of supervisors should be expanded so that, by September 2008, a college is established for each of the largest global financial institutions.

Cross-border communication between supervisors of the various units of each large global financial institution has worked fairly well in the period leading up to, and during, the market turmoil. Nevertheless, the global ramifications of the turmoil, the further illustration that it has given of the importance of firm-wide risk management, and more specifically the difficulties over cross-border liquidity management have further emphasised the importance of systematic cross-border supervisory cooperation.

Supervisors should build on existing examples of supervisory colleges to establish an international college of supervisors for each of the largest global financial institutions by September 2008. These colleges should hold their first meetings by December 2008 to exchange information and assessments and, where appropriate, to cooperate in supervision.

> ***Supervisors involved in these colleges should conduct an exercise, by 2009, to draw lessons about good practices.***

The most appropriate format for each international college of supervisors and priorities for issues to be addressed will vary according to the organisational form and activities of the particular financial institution. At the same time, it would be valuable to derive common lessons about good practices in operating colleges. Supervisors should therefore undertake an exercise, by 2009, to draw lessons from the experiences of colleges up to that point.

> ***To quicken supervisory responsiveness to developments that have a common effect across a number of institutions, supervisory exchange of information and coordination in the development of best practice benchmarks should be improved at both national and international levels.***

Supervisors, both nationally and internationally, will seek further opportunities to compare risk management practices across firms and draw lessons and develop benchmarks to improve those practices. The recent study by the Senior Supervisors Group of risk management practices of major financial services firms during the market turmoil provides an example of the way supervisors can flexibly organise themselves to address in a timely way issues having a common effect across a number of institutions and to draw common lessons.

> ***Supervisors and central banks should improve cooperation and the exchange of information including in the assessment of financial stability risks. The exchange of information should be rapid during periods of market strain.***

An important feature of the current market turmoil has been the interaction of market concerns about the health of individual financial institutions with strains in market functioning, including dislocations in money markets. Communication and cooperation among supervisors and central banks has worked well, being both timely and flexible, including across borders. Nevertheless, the episode has provided a reminder that such arrangements need to be kept under review, to ensure that they remain robust in both normal times and periods of market strain, and that they evolve to meet changing requirements as markets themselves change.

The supervision of individual institutions should be complemented by information on the results of central banks' assessments of the stability of the broader financial system, and conversely the central bank assessments should be complemented by information from the supervisory assessments of individual institutions.

> ***To facilitate central bank mitigation of market liquidity strains, large banks will be required to share their liquidity contingency plans with relevant central banks.***

Rapid availability of information at the relevant authorities is especially important at times of market strain. This involves both arrangements for prompt sharing of information once strains emerge, and also advance sharing of information that would be relevant. One such example is the need for large banks to share their liquidity contingency plans not only with their supervisors but with relevant central banks. Sharing of such information would enable central banks to adapt their money market operations to better understand the implications of market strains for banks' liquidity needs.

3. Enhancement of international bodies' policy work

International bodies will enhance the speed, prioritisation and coordination of their policy development work.

International regulatory, supervisory and central bank committees will establish priorities and, for difficult to resolve issues, mechanisms for escalating them to a senior decision-making level As part of this effort, they will establish timetables for required action and action plans for addressing delayed and/or difficult issues.

The speed of innovation and increasing globalisation pose challenges for authorities in responding in a rapid and internationally coordinated fashion. The turmoil has involved a number of instruments and markets which grew very rapidly in volume and complexity in recent years and which had systemic effects that crossed national and sectoral boundaries.

International regulatory, supervisory and central bank committees need to remain flexible and responsive in their prioritisation of issues, and ready to find rapid solutions to issues which are proving difficult to resolve by their regular channels. As part of their response to the current turmoil, these committees have demonstrated their willingness to accelerate their work timetables where needed. Member bodies of these committees need to ensure that their senior managements are made aware at an early stage of issues of potential systemic importance that may in due course require resolution at a senior level.

The FSF will organise joint strategic reviews by standard-setting committees to ensure policy development is coordinated and focused on priorities.

International standards play an important role in shaping a resilient integrated financial system on a level playing field. As the system integrates and becomes more market based, interdependencies across standard setting areas increase. To ensure that policy development is coordinated and focused on priorities, the FSF will organise joint strategic reviews by standard-setting bodies of their priorities, ensure that gaps are filled and duplication avoided. The BIS will actively support the FSF in this work.

The FSF and IMF will intensify their coordination on financial stability, with each complementing the other's role. As part of this, the IMF will report the findings from its monitoring of financial stability risks to FSF meetings, and in turn would seek to incorporate the FSF's conclusions into its own bilateral and multilateral surveillance work.

The FSF and IMF have cooperated closely on financial stability work ever since the FSF was formed. The IMF, in its role as a member of the FSF, participates fully in FSF activities. The FSF Chairman regularly reports to the International Monetary and Financial Committee of the IMF. The FSF and IMF have worked together on many different projects, in particular with respect to the joint IMF/World Bank assessment of countries' compliance with the 12 key standards and codes that the FSF has designated as deserving of priority implementation.

The global nature of the recent turmoil has emphasised the need for cross-border cooperation between authorities and, as part of that, the FSF and IMF are exploring ways to intensify their cooperation. As one example of this, the IMF will send to the FSF a note describing their assessment of key risks to global financial stability ahead of each semi-annual FSF meeting. This will supplement the existing analysis of risks taking place within the FSF. The IMF would in turn draw lessons from each FSF meeting for issues to focus on in its bilateral and multilateral surveillance work.

VI. Dealing with stress in the financial system

Central banks' operational frameworks should be able to supply liquidity effectively when markets and institutions are under stress. The extended tensions in interbank markets, which have continued with varying intensity since August 2007, have provided a severe test of those frameworks, and central banks have responded in a variety of ways, including innovations in the instruments they use.

Central banks, through the Committee on the Global Financial System, are actively investigating the lessons to be drawn from these recent experiences for their operational frameworks, including the capacity to provide liquidity broadly and flexibly under stressed conditions, for their communication with markets, and for the steps that might be advisable across central banks to address liquidity needs in globalised financial markets. This chapter draws on the preliminary lessons from that ongoing study.

Meanwhile, liquidity or solvency problems at a number of banks and securities firms in various countries, and the global nature of the market problems, have highlighted the importance of robust cross-border arrangements for dealing with weak and failing banks. To date, none of the problems at individual institutions have required a coordinated international response from authorities, but it is prudent to ensure that well established coordination arrangements are in place. Authorities need to strengthen, where appropriate, arrangements (legal frameworks for resolution, deposit insurance, etc) for dealing with weak and failing banks, both nationally and cross-border.

This chapter sets out recommendations on:

- Central bank operations; and
- Dealing with weak and failing banks.

1. Central bank operations

Overall, central banks' responses to the liquidity tensions caused by the financial market turmoil have been reasonably effective at relieving pressures in term bank funding markets. They could not, and were not intended to, address the underlying causes of the problems, which lay well beyond the scope of central banks' reserve-providing operations. Nevertheless, the experience offers some lessons that could lead in some cases to a revision of central bank operational objectives and policy instruments.

To meet an increased but uncertain demand for reserves, monetary policy operational frameworks should be capable of quickly and flexibly injecting substantial quantities of reserves without running the risk of driving overnight rates substantially below policy targets for long periods of time.

In the initial phases of the turmoil, the fluctuations of overnight market interest rates around central banks' targets increased in the major currency areas. Over the following weeks, central banks achieved better control of targeted market rates, either by adjusting their frameworks or by changing the modalities of their actions within those frameworks.

The events provided a sharp illustration that, during periods of financial market turmoil, demand for central bank reserves can increase quickly and substantially. Central banks may also have to consider lending substantial amounts to ease a market malfunction or to provide support operations for a specific institution. Unless the increased demand for reserves is persistent, the central bank will likely want to conduct subsequent offsetting reserve-draining operations to avoid excess reserves putting downward pressure on the overnight interest rate.

Central banks therefore should have the ability to readjust their portfolios on a large scale while maintaining control over the aggregate level of reserves. Current central bank frameworks show that there are a variety of potential methods of achieving this. For example, central banks can maintain a sufficiently large stock of short-term repurchase agreements that can be run down; hold a substantial quantity of assets that can be redeemed for cash, quickly repoed out or sold outright; or have the ability to borrow in the market.

To deal with extraordinary situations, policy frameworks should include the capability to conduct frequent operations against a wide range of collateral, over a wide range of maturities and with a wide range of counterparties.

Many firms had contingency funding plans that were based on an expectation that asset market liquidity would not become impaired and that secured funding would always be available. However, many secured funding markets have been highly illiquid for several months. Where this was necessary, the widening by central banks of the set of eligible collateral made it possible for market participants to mobilise instruments whose markets had faced severe dislocation. Some central banks extended the maturity of their transactions or placed more emphasis on term operations in supplying reserves. These actions enhanced the effectiveness of central bank efforts to address the financial market turmoil.

Operational frameworks need to be sufficiently flexible so that, in stressed situations, central banks can make adjustments to widen the breadth of eligible collateral, the range of maturities and the range of counterparties as necessary. Central banks are reviewing, where appropriate, the adequacy of their current frameworks, including considering the experiences of other central banks.

To deal with stressed situations, central banks should establish mechanisms for meeting frictional funding needs that are less subject to stigma.

A standing loan facility is a widely adopted central bank instrument for providing liquidity insurance against frictional problems arising in payment systems and overnight money markets. However, some central banks found that the usefulness of this instrument was stifled by banks' unwillingness to use it. In particular, because of stigma, on some occasions there was relatively little use of standing lending facilities, even on days when interbank rates rose above the interest rates on the facilities.

Stigma can sometimes exist in normal times but increases under stress. While stigma is unavoidably associated with lending related to support operations, it can also extend to lending for purely frictional purposes. If anonymity is not well preserved, or if senior bank management and other market participants are not completely familiar with the role of standing loan facilities for meeting frictional needs, as uncertainty mounts there is a greater risk that borrowing from a central bank loan facility be regarded as a sign of borrower weakness. If that were to occur, the effectiveness of the loan facility as a liquidity backstop would be severely impaired.

Central banks therefore should consider whether mechanisms can be designed for meeting liquidity needs whose use is not curtailed by excessive stigma. For example, central banks that do not already have them may wish to establish clearly separate facilities for providing loans for purely frictional lending. They may educate senior bank staff and bank regulators that borrowing is not at all discouraged, including for the purpose of relending the proceeds. Additional steps may be taken to ensure anonymity when borrowing. Auction facilities may also be useful in reducing stigma by having a large number of borrowers on a single day and by reducing the direct linkage between an immediate need for funds and their receipt. Banks and regulators may reduce uncertainty about banks' financial conditions through steps outlined in other sections of this report.

Events have demonstrated that central banks will at times need to use a variety of instruments when illiquidity of institutions or markets threatens financial stability.

Central banks may need to take extraordinary actions to deal effectively with market turmoil if the risk to financial stability and to the proper transmission of monetary policy are serious enough, if there is a sufficient likelihood that central bank actions could be effective and if any anticipated costs, including those associated with moral hazard, are not too high.

As an example, during the turmoil, spreads on term money market rates relative to expected policy rates widened sharply as investors became hesitant to invest in unsecured money markets at anything other than the shortest horizons. Central bank operations are not generally intended to influence term rates. During the current turmoil, however, central banks, to a greater or lesser extent, adjusted their operations to help ease the gridlock in term money markets or to reduce term spreads. This had its effect through market confidence as well as through relative supply of reserves.

The recent experience has demonstrated that central banks will take extraordinary actions to respond to widespread liquidity shortages. This information necessarily affects, at least to some extent, the incentives of private market participants and, consequently, their behaviour. To address the risk that market participants will either assume more liquidity risk or weaken their own liquidity management efforts, it might be appropriate that there is an offsetting tightening of bank liquidity regulations.

To deal with problems of liquidity in foreign currency, central banks may want to consider establishing standing swap lines among themselves. In addition, central banks should consider allowing in their own liquidity operations the use of collateral across borders and currencies.

In stressed conditions, global channels used in normal times for distributing liquidity may face significant constraints. When international liquidity distribution is inadequate, coordination between central banks may be useful to provide funds in a foreign currency to banks with international operations where they are unable otherwise to obtain adequate access. Any such initiative would naturally need to consider carefully the macro- and microprudential implications for both home and host central banks, including the need to avoid market participants regarding such measures as substitutes for setting up their own robust frameworks for managing risks associated with offshore transactions.

Enhancing frameworks for prompt information exchange among relevant staffs and principals across central banks is an essential starting point to enhancing coordination more broadly. The turmoil prompted central banks to have more frequent and detailed discussions about market developments and the technical aspects of open market operations, both bilaterally and collectively.

Communication intensified and improved in quality as time went on. The enhanced cooperation involved various groups of central banks, and the framework of contacts at the Bank for International Settlements was particularly important.

> ***In December 2007, central banks initiated coordinated actions to address heightened market tensions arising from year-end funding pressures, including the establishment of swap lines between the Federal Reserve and the ECB and SNB that enabled the latter to provide dollar funds to their counterparties. This coordinated operation, which also involved actions by other central banks to widen collateral and lengthen terms, was seen as a sign of central banks' determination to maintain control of the money market.***

Going forward, the major central banks will either maintain standing swap lines or preserve the ability to establish them at short notice. An option to allow banks to mobilise liquidity across borders, for those central banks that do not already do so, is to supply liquidity against collateral denominated in foreign currencies and/or held in foreign locations. In the medium to long term, central banks may be able to work out other viable options for dealing with problems of liquidity in foreign currencies. Those central banks that do not already accept foreign government marketable obligations as collateral should consider doing so. Differences in collateral frameworks across central banks may stem from differences in the structure of national financial systems. However, in some cases, less differentiated collateral frameworks could make it easier for banks, especially multinational banks, to mobilise collateral at different central banks. One possibility that major central banks may wish to consider in the longer term is conducting open market operations against, or accepting at standing facilities, a common list of high-quality collateral denominated in a range of global currencies. Central banks would need to consider the effects of broader collateral lists on markets and on banks' incentives to manage liquidity.

The FSF will review a report on progress under these recommendations in 2008.

2. Dealing with weak and failing banks

Authorities will clarify and strengthen national and cross-border arrangements for dealing with weak and failing banks.

National arrangements for dealing with weak and failing banks have been tested by recent events and are the subject of review in some countries. Issues that have arisen include coordination between domestic authorities, the legal framework for intervention in banks, banks' bankruptcy regimes and deposit insurance arrangements.

Cross-border cooperation has worked satisfactorily overall between authorities, and arrangements for dealing with problems at a cross-border institution have not been tested. Nevertheless, the nature of the turmoil, the effects of which have been felt in many countries and in many different types of institutions, has emphasised the need to continue to work on crisis coordination.

Domestically, authorities need to review, and where needed, strengthen legal powers and clarify the division of responsibilities of different national authorities for dealing with weak and failing banks.

The diversity of national financial systems, of national arrangements for ongoing management of the system and for dealing with problem institutions, and of the impacts which the turmoil has had on individual countries and institutions mean that the domestic lessons for dealing with problem banks vary widely. The FSF has not attempted to draw lessons for individual countries but has identified some common themes.

One such area is the need to ensure that the legal and supervisory framework for dealing with weak and failing banks is well defined, clear and enables prompt action. National authorities should therefore review their national frameworks to ensure that they have an adequate range of tools to deal with problem banks, in order to minimise market and public uncertainty relating to the resolution, risks of contagion to other banks and potential damage to financial stability. This may be particularly valuable in countries where arrangements for resolving a problem bank have not been tested for some time, or have only been tested for isolated cases.

The domestic allocation of responsibilities among supervisors, regulators, central banks and finance ministers needs to be clear. Prompt, adequate sharing of information between central banks and supervisors will be needed in cases where liquidity and the balance sheet health of institutions are both involved, so as to ensure that institutions are able to fulfil their responsibilities.

Internationally, authorities should accelerate work to share information on national arrangements for dealing with problem banks and catalogue cross-border issues, and then to decide how to address the identified challenges.

Work has taken place in a number of international fora in recent years to share information and discuss issues relating to the resolution of problem banks, including potential cross-border issues that could arise. A number of long-standing issues and legal uncertainties have been identified.

A working group of the BCBS is currently taking stock of existing resolution policies, allocation of responsibilities and legal frameworks of various countries as a foundation to a better understanding of the potential impediments and possible improvements to cooperation in the resolution of cross-border banks. In doing so, it is building on the work that has been done by previous groups. The group aims to produce an initial internal report by November 2008.

The BCBS exercise provides a useful basis from which to accelerate work to catalogue cross-border issues and address the identified challenges. Authorities need to agree a work plan to take these issues forward.

Authorities will review and, where necessary, strengthen deposit insurance arrangements, based on international principles.

Events during the recent turmoil have illustrated the importance of effective depositor compensation arrangements in giving depositors confidence, thereby reducing the likelihood of a run on the bank, and in supporting confidence in the financial system as a whole.

An explicit and limited-coverage deposit insurance system clarifies the authorities' obligations to depositors, limits the uncertainty that arises from the scope for discretionary decisions, can promote public confidence, helps to contain the costs of resolving failed institutions and can provide countries with an orderly process for dealing with bank failures. To be credible and minimise moral hazard, deposit insurance systems must be properly designed, well implemented and understood by the public. To be effective, the deposit insurance function needs to be part of a well-designed financial safety net, supported by strong prudential regulation and supervision, effective laws that are enforced, and sound accounting and disclosure regimes.

Authorities need to review their deposit insurance arrangements, and where necessary strengthen them, using international principles as a benchmark.

Authorities will agree a set of international principles for deposit insurance systems.

To date, national deposit insurance systems have lacked a clear international benchmark against which to judge the effectiveness of their own system.

Authorities should agree on an international set of principles for effective deposit insurance systems. These principles should recognise that there may be a variety of different designs for deposit insurance arrangements that meet the objectives behind the principles, and therefore should be adaptable to a broad range of country circumstances. The development of the principles should also take close account of the broader characteristics of safety net arrangements, including those of the regulatory and supervisory framework and of resolution procedures for failing institutions. The International Association of Deposit Insurers has developed a draft set of core principles that provide a possible basis for internationally agreed principles.

> ***National deposit insurance arrangements should be reviewed against these agreed international principles, and authorities should strengthen arrangements where needed.***

Once international deposit insurance principles are agreed, the FSF should encourage individual countries' national arrangements to be reviewed against these principles, either by countries themselves or by some international body, in the same way that the IMF and World Bank assess compliance with core principles in other areas.

Where weaknesses are identified, national authorities should initiate measures to promptly address those weaknesses.

In the meantime, given the importance of pubic confidence, national authorities should not delay planned reviews of their national arrangements to await a mechanism for approval and review of international principles. Such reviews should take place at an early stage, to identify areas for enhancing arrangements.

Authorities will strengthen cross-border coordination in crisis management.

The continuing globalisation of markets and of institutors calls for greater cooperation between authorities in crisis management. This needs to extend beyond the clarification and strengthening of national legal and regulator arrangements for resolving problem institutions to include active cooperation in strengthening cross-border crisis management arrangements more generally.

> ***For each of the largest cross-border financial firms, the most directly involved supervisors and central banks should establish a small interest group to address specific cross-border crisis management planning issues. Each group should hold its first meeting before end-2008.***

In authorities' planning for managing a potential crisis at a major cross-border firm, there will be some planning issues that are of general applicability across firms and across countries, while others will be specific to the structure of the individual firm and will be likely to be most felt in a small number of countries.

In the near term, specific practical issues of crisis management planning relating to individual cross-border firms can be most practically and flexibly addressed by small interest groups of the most directly involved authorities, including central banks and supervisors, between which there are mutually systemic institutional or capital market links. Only a very limited number of firms would be likely to have large enough international implications to make setting up such a group useful. Each group would probably need to be limited to authorities from a few countries, and they would focus on the systemic issues of mutual interest to those authorities. This could enable enhanced practical information sharing, impact assessment and co-ordination in a crisis.

Authorities should share international experiences and lessons about crisis management. These experiences should be used as the basis to extract some good practices of crisis management that are of wide international relevance.

Authorities have individually accumulated a wide variety of experiences and lessons about crisis management, either directly from crisis incidents or from national planning arrangements and simulation exercises. These experiences relate not only to problem institutions but to other forms of crisis, such as problems in markets or business continuity and other operational problems. Such information is shared internationally in a number of fora, but there has been little systematic attempt to extract lessons and good practices of common international relevance.

Authorities should build on the existing sharing of information, in both regional and wider international fora, to extract such good practices. Individual countries should then review how to incorporate these lessons so as to enhance their existing planning.

Authorities should conduct an international crisis management exercise, organised through the FSF.

A large number of crisis management exercises have been conducted on a national or regional basis, adding a rich variety of insights to crisis planning. To date, however, the international component of crises has not been as fully explored as national or specific regional aspects. Nevertheless, the recent turmoil has demonstrated the capacity of a single incident to have wide-reaching global implications through a wide variety of channels, affecting large numbers of regulators, central banks and other authorities.

The experience gained in the development of exercises in recent years, together with the importance of exploring the international dimension, suggest the time is right for an international crisis simulation exercise to be designed and conducted. The scenario for such an exercise would inevitably need to be a good deal simpler than the long duration and many ramifications of the current market turmoil. Nevertheless, even a relatively simple example could yield valuable insights about issues of information exchange and cooperation. Experiences with national and regional exercises suggest that it will also throw up further issues to be explored.

List of reports (TO BE COMPLETED)

This annex lists the reports that the FSF has drawn upon to draft the recommendations presented in the main body of the report.

Report by the official sector

1. Basel Committee on Banking Supervision
   - “Liquidity Risk: Management and Supervisory Challenges", February 2008
   - Guidelines for Computing Capital for Incremental Default Risk in the Trading Book – consultative document, October 2007
   - Fair value measurement and modelling: A survey of banks' processes, implementation challenges and initial lessons learned from the recent market stress, March 2008
2. Committee on the Global Financial System
   - Interim Report by the study group on ratings in structured finance
3. Joint Forum
   - Credit Risk Transfer – Developments from 2005 to 2007, March 2008;
4. IOSCO
   - Subprime Task Force Report
   - Report by the Task Force on CRAs
5. International Association of Deposit Insurers
   - Core principles for effective deposit insurance systems
6. Senior Supervisors Group
   - Observation on risk management practices during the recent market turbulence, March 2008.
7. The President's Working Group on Financial Markets, report, March 2008;

Report by the private sector

1. Institute for International Finance
   - Report of the IIF committee on market best practices;

Members of the Working Group on Market and Institutional Resilience

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Summary of Leading Practice Disclosures

The following leading practices were observed in a survey of the latest disclosures of large commercial and investment banks. Each of the disclosures is presently made by at least one firm, though few firms come close to making all of the disclosures. As such, the list of disclosures below represents leading practices across a variety of risks and exposures, and some disclosures may not be relevant for firms that do not have significant exposure to the activity. As a near term measure, the FSF recommends that financial firms provide these disclosures when they have significant exposures, starting in their mid-term 2008 disclosures.

The table below highlights these disclosures; it is followed by a brief discussion that describes the individual disclosures. In addition to the information in the table, many of the firms first disclosed the following details for each and all of the categories:

- Total exposure, including on- and off-balance sheet analysis (as well as funded and committed lines if applicable)
- Exposure before and after hedging
- Exposure before and after write downs

Some firms added further specificity through varying combinations of the following disclosures:

Special Purpose Entities (SPEs) - General	**Collateralised Debt Obligations**
• Size of SPE vs firm's total exposure • Activities of SPE • Reason for consolidation (if applicable) • Nature of exposure (sponsor, liquidity and/or credit enhancement provider) • Collateral type • Geographic distribution of collateral • Average maturities of collateral • Credit ratings of underlying collateral **Other Subprime and Alt-A Exposure** • Whole loans, RMBS, derivatives, other • Detail on credit quality (e.g., credit rating) • Breakdown of subprime mortgage exposure by vintage • Sensitivity of valuation to changes in key assumptions and inputs	• Size of CDOs vs firm's total exposure • Breakdown of CDOs – type, tranche, rating, etc. • Breakdown of collateral by type, • Breakdown of subprime mortgage exposure by vintage • Hedges, including exposures to monolines, other counterparties • Creditworthiness of hedge counterparties • credit valuation adjustments for specific counterparties • Sensitivity of valuation to changes in key assumptions and inputs **Commercial Mortgage-Backed Securities** • Breakdown of collateral by industry • Breakdown of collateral by geography

	<u>Leveraged Finance</u> • Funded exposure and unfunded commitments • Change in exposure from prior period(s), including sales and writedowns • Distribution of exposure by industry • Distribution of exposure by geography

Special Purpose Entities - General

- A summarisation of exposures to the special purpose entities (SPEs) with which the firm is involved, distinguishing between those that are consolidated and those that are not consolidated.[4] These generally include CDOs, ABCP, SIVs, and a variety of other SPEs. If circumstances require that a particular SPE move from off-balance sheet to on-balance sheet status, that is noted.
- The size and activities of the SPEs.
- The nature of the firm's involvement with particular categories of SPEs and its maximum exposure to loss a result of its involvement with each category.
- Breakdowns of assets underlying SIVs and ABCP conduits by collateral type, credit rating, and geographical location of the ultimate borrowers and the average maturity of their obligations.

Collateralised Debt Obligations

- The total of the firm's exposure to CDOs and a breakdown of this exposure according to the firm's internal methodology, e.g., a breakdown of super-senior exposures to high-grade, mezzanine and CDO-squared underlying.
- Separate data for CDOs whose ultimate underlying collateral is of particular concern to the markets (e.g., subprime residential mortgages) and other CDOs. More generally, discussion that informs market participants how the firm determines a CDO to be a "subprime mortgage CDO" (e.g., the percentage of ultimate collateral that is comprised of subprime mortgages).
- CDO exposure before and after hedging, including exposures to financial guarantors, showing the notional amount of protection bought from individual

[4] Whether a SPE is consolidated depends on the applicable accounting standard; thus, a particular SPE may be consolidated in one jurisdiction and not consolidated in another.

guarantors and the fair value of such exposure both before and after credit valuation adjustments, if any.[5]

- Data pertaining to the creditworthiness of the CDOs, e.g., mark-to-market or other write-downs from face value, broken down according to the firm's methodology, and the vintage of the underlying subprime mortgages.
- The methodology for the valuation of the instruments and the primary drivers of the valuation.

Other Subprime Exposures

- Exposure to sub-prime mortgages not in CDOs, whether whole loans, RMBS, via derivatives or commitments, both before and after hedging, together with data indicating their creditworthiness, e.g., write-downs or credit ratings.
- Similar data for Alt-A mortgages.
- The sensitivity of the valuation of RMBS to changes in assumptions, such as prepayment rates, credit losses and the discount rate, broken down by the quality of the mortgages.

Commercial Mortgage-Backed Securities

- Exposure to CMBS, both before and after the effect of hedging and including breakdowns by industry of the underlying collateral and geographical area.

Leveraged Finance

- On- and off-balance sheet exposure to leveraged finance, together with elaboration, e.g., write-downs and distributions over industries and geographical areas.

[5] Exposure to financial guarantors may result from subprime RMBS carried directly on the firm's balance sheet, as well as from CDO transactions.