

Since mid-2007, financial markets have been in turmoil. Soaring delinquencies on U.S. subprime mortgages were the primary trigger of recent events. However, that initial shock both uncovered and exacerbated other weaknesses in the global financial system. Because financial markets are interconnected, both across asset classes and countries, the impact has been widespread. Global capital markets must function smoothly and effectively for economies to achieve sustainable growth. It is therefore in the interests of both policy makers and market participants to identify the causes of the market turmoil and to take the steps necessary to mitigate systemic risk, restore investor confidence, and facilitate stable economic growth.

The President's Working Group on Financial Markets (PWG) has undertaken a thorough analysis of the underlying factors contributing to the recent and on-going market stress. This analysis has been conducted to identify the weaknesses in global markets, institutions, and regulatory policies that triggered, amplified, or failed to mitigate the stress. On the basis of this analysis, the PWG has developed a comprehensive set of recommendations to address those weaknesses. This statement summarizes that analysis and sets out recommendations. It is comprised of three sections: a diagnosis and summary of recommendations; a review of factors contributing to the market turmoil; and a fuller discussion of policy issues and recommendations.

## **I. *Diagnosis and Summary of Recommendations***

### ***Diagnosis***

The global market turmoil has not yet abated, so any diagnosis is necessarily incomplete. Nonetheless, it seems clear from experience to date that the principal underlying causes of the turmoil in financial markets were:

- a breakdown in underwriting standards for subprime mortgages;
- a significant erosion of market discipline by those involved in the securitization process, including originators, underwriters, credit rating agencies, and global investors, related in part to failures to provide or obtain adequate risk disclosures;
- flaws in credit rating agencies' assessments of subprime residential mortgage-backed securities (RMBS) and other complex structured credit products, especially collateralized debt obligations (CDOs) that held RMBS and other asset-backed securities (CDOs of ABS);
- risk management weaknesses at some large U.S. and European financial institutions; and
- regulatory policies, including capital and disclosure<sup>1</sup> requirements, that failed to mitigate risk management weaknesses.

The turmoil in financial markets clearly was triggered by a *dramatic weakening of underwriting standards for U.S. subprime mortgages, beginning* in late 2004 and extending into early 2007. But the loosening of credit standards and terms in the subprime market was symptomatic of a much broader erosion of market discipline on the standards and terms of loans

---

<sup>1</sup> In this document disclosure requirements refer to the requirements of prudential regulators of financial institutions rather than to the Securities and Exchange Commission's (SEC) disclosure regulations and requirements applicable to U.S. public companies.

to households and businesses. Following many years of benign economic conditions and plentiful market liquidity, global investors had become quite complacent about risks, even in the case of new and increasingly complex financial instruments.

Competition and the desire to maintain higher returns created significant demand for structured credit products by investors. Originators, underwriters, asset managers, credit rating agencies, and investors failed to obtain sufficient information or to conduct comprehensive risk assessments on instruments that often were quite complex. Investors relied excessively on credit ratings, which contributed to their complacency about the risks they were assuming in pursuit of higher returns. *Although market participants had economic incentives to conduct due diligence and evaluate risk-adjusted returns, the steps they took were insufficient, resulting in a significant erosion of market discipline.*

*Faulty assumptions underlying rating methodologies and the subsequent re-evaluations by the credit rating agencies (CRAs) led to a significant number of downgrades of subprime RMBS, even of recently issued securities. Downgrades were even more frequent and severe for CDOs of ABS with subprime mortgage loans as the underlying collateral. The number and severity of negative ratings actions caused investors to lose confidence in the accuracy of the ratings of a wide range of structured credit products. This loss of investor confidence caused many structured finance markets to seize up and caused markets for asset-backed commercial paper (ABCP), some of which was backed by RMBS and CDOs of ABS, to contract substantially.*

These developments revealed *serious weaknesses in risk management practices at several large U.S. and European financial institutions*, especially with respect to the concentration of risks, the valuation of illiquid instruments, the pricing of contingent liquidity facilities, and the management of liquidity risk. Common themes were the failure of stress testing procedures to identify institutions' vulnerabilities to system-wide shocks to markets and market participants, and difficulties aggregating exposures across business lines and valuing instruments when markets became illiquid. These weaknesses were particularly evident with respect to the management of risks of holding CDOs of ABS, sponsoring or supporting off-balance sheet conduits that issued ABCP, and syndicating leveraged loans. As a result, some institutions suffered significant losses and many experienced significant balance sheet pressures. Balance sheet pressures contributed to a tightening of firms' lending standards and terms for a wide range of borrowers, which in turn has contributed to the slowing of U.S. economic growth.

In some cases, *regulatory policies failed to mitigate those risk management weaknesses*. For example, existing capital requirements encouraged the securitization of assets through facilities with very low capital requirements and failed to provide adequate incentives for firms to maintain capital and liquidity buffers sufficient to absorb extreme system-wide shocks without taking actions that tended to amplify shocks. Further, supervisory authorities did not insist on appropriate disclosures of firms' potential exposure to off-balance sheet vehicles.

*Summary of Recommendations*

The PWG has carefully reviewed the weaknesses in markets, institutions, and regulatory and supervisory practices that have contributed to financial turmoil and has developed recommendations to address those weaknesses. In developing its recommendations, the PWG has sought to avoid exacerbating the current strains on markets and institutions or risking unintended consequences. As noted above, the market turmoil has not yet abated. Thus, the PWG or its member agencies may put forward additional recommendations as events unfold and new insights are gained. Although no single measure can be expected to place financial markets on a sound footing, the PWG believes that implementation of its comprehensive and complementary set of recommendations would constitute an effective response to the identified weaknesses. In general, the recommendations include measures to be implemented by government authorities or market participants that will:

- reform key parts of the mortgage origination process in the United States;
- enhance disclosure and improve the practices of sponsors, underwriters, and investors with respect to securitized credits, thereby imposing more effective market discipline;
- reform the credit rating agencies' processes for and practices regarding rating structured credit products to ensure integrity and transparency;
- ensure that global financial institutions take appropriate steps to address the weaknesses in risk management and reporting practices that the market turmoil has exposed; and
- ensure that prudential regulatory policies applicable to banks and securities firms, including capital and disclosure requirements, provide strong incentives for effective risk management practices.

Recommendations for *reforming key parts of the mortgage origination process* include:

- All states should implement strong nationwide licensing standards for mortgage brokers;
- Federal and state regulators should strengthen and make consistent government oversight of entities that originate and fund mortgages and otherwise interface with customers in the mortgage origination process. All states should work towards adopting the principles set forth in the guidance developed by the federal regulators for nontraditional and subprime mortgage lending and ensure that effective enforcement mechanisms are in place to deal with noncompliance with such standards; and
- The Federal Reserve should issue stronger consumer protection rules and mandate enhanced consumer protection disclosures, including disclosures that would make affordability over the life of the mortgage more transparent and that would facilitate comparison of the terms with those of alternative products. State and federal authorities should coordinate to enforce the rules evenly across all types of mortgage originators.

Recommendations for *improving investors' contributions to market discipline* include:

- Overseers of institutional investors (for example, the Department of Labor for private pension funds; state treasurers for public pension funds; and the SEC for money market funds) should require investors (and their asset managers) to obtain from sponsors and underwriters of securitized credits access to better information about the risk characteristics of such credits, including information about the underlying asset pools, on an initial and ongoing basis;
- Overseers should ensure that these investors (and their asset managers) develop an independent view of the risk characteristics of the instruments in their portfolios, rather than rely solely on credit ratings; and
- The PWG will engage the private sector to create a committee to develop best practices regarding disclosure to investors in securitized credits, including ABS and CDOs of ABS.

Recommendations for *reforming the ratings processes for and practices regarding structured credit and other securitized credit products* include:

- Credit rating agencies should disclose what qualitative reviews they perform on originators of assets that collateralize ABS rated by the CRA and should require underwriters of ABS to represent the level and scope of due diligence performed on the underlying assets;
- The CRAs should reform their ratings processes for structured credit products to ensure integrity and transparency. The PWG welcomes the steps already taken by the CRAs, and particularly encourages the CRAs to:
  - enforce policies and procedures that manage conflicts of interest, including implementing changes suggested by the SEC's broad review of conflict of interest issues;
  - publish sufficient information about the assumptions underlying their credit rating methodologies, so that users of credit ratings can understand how a particular credit rating was determined;
  - make changes to the credit rating process that would clearly differentiate ratings for structured products from ratings for corporate and municipal securities;
  - make ratings performance measures for structured credit products and other ABS readily available to the public in a manner that facilitates comparisons across products and credit ratings;
  - work with investors to provide the information investors need to make informed decisions about risk, including measures of the uncertainty associated with ratings and of potential ratings volatility; and
  - ensure that adequate personnel and financial resources are allocated to monitoring and updating ratings.
- The PWG will facilitate formation of a private-sector group (with representatives of investors, issuers, underwriters, and CRAs) to develop recommendations for further steps that the issuers, underwriters, CRAs, and policymakers could take to

ensure the integrity and transparency of ratings, and to foster appropriate use of ratings in risk assessment;

- PWG member agencies will reinforce steps taken by the CRAs through revisions to supervisory policy and regulation, including regulatory capital requirements that use ratings; and
- The PWG will revisit the need for changes to CRA oversight if the reforms adopted by the CRAs are not sufficient to ensure the integrity and transparency of ratings.

Recommendations to *strengthen global financial institutions' risk management practices* include:

- Global financial institutions should promptly identify and address any weaknesses in risk management practices that the turmoil has revealed;
- The PWG will support formation of a private-sector group to reassess implementation of the Counterparty Risk Management Policy Group II's (CRMPG II) existing guiding principles and recommendations regarding risk management, risk monitoring, and transparency, and to modify or develop new principles and recommendations as necessary to incorporate lessons from the recent turmoil, including lessons regarding valuation practices;
- Supervisors of global financial institutions should closely monitor the firms' efforts to address risk management weaknesses, taking action if necessary to ensure that weaknesses are addressed;
- U.S. banking regulators and the SEC should promptly assess current guidance and develop common guidance to address the risk management weaknesses revealed by the recent market turmoil, including improvements to:
  - management information systems, including procedures that ensure aggregation of exposures across all business lines and ensure rigorous valuations of instruments and exposures;
  - concentration risk management, liquidity risk management, stress testing and other risk management practices that are necessary to ensure that liquidity and capital cushions are sufficiently robust to absorb extreme system-wide shocks; and
  - governance of the risk management and control framework, including the development of, and adherence to, practices that address incentive problems in compensation policies.
- U.S. authorities should encourage other supervisors of global firms to make complementary efforts to develop guidance along the same lines.

Recommendations to *enhance prudential regulatory policies* include:

- Regulators should adopt policies that provide incentives for financial institutions to hold capital and liquidity cushions commensurate with firm-wide exposure (both on and off-balance sheet) to severe adverse market events. These cushions should be forward looking and adjust appropriately through peaks and valleys of the credit cycle;

- Regulators should enhance guidance related to pipeline risk management for firms that use an originate-to-distribute model;
- The Basel Committee on Banking Supervision (BCBS) should promptly complete the work it has initiated to update the Committee's 2000 guidance on liquidity management, including the sound practice guidelines to be followed by regulated financial institutions as well as the oversight principles for supervisors.
- The BCBS and IOSCO should review capital requirements for ABS CDOs and other re-securitizations and for off-balance sheet commitments, with a view toward increasing requirements on exposures that have been the source of recent losses to firms;
- Regulators should require financial institutions to make more detailed and comprehensive disclosures of off-balance sheet commitments, including commitments to support ABCP conduits and other off-balance sheet vehicles;
- Regulators should encourage financial institutions to improve the quality of disclosures about fair value estimates for complex and other illiquid instruments, including descriptions of valuation methodologies and information regarding the degree of uncertainty associated with such estimates;
- Regulators should review the current use of ratings in regulation and supervisory rules. At a minimum, regulators should distinguish, as appropriate, between ratings of structured credit products and ratings of corporate and municipal bonds in regulatory and supervisory policies; and
- Authorities should encourage FASB to evaluate the role of accounting standards in the current market turmoil. This evaluation should include an assessment of the need for further modifications to accounting standards related to consolidation and securitization, with the goal of improving transparency and the operation of U.S. standards in the short-term. Additionally, authorities should encourage FASB and IASB to achieve more rapid convergence of accounting standards for consolidation of ABCP conduits and other off-balance sheet vehicles.

Additionally, while the infrastructure of the financial markets thus far has coped quite well with heightened price volatility and surging trading volumes, the PWG believes that the supervisors of OTC derivatives dealers, who have been working together under the leadership of the Federal Reserve Bank of New York, should insist on further enhancements to the infrastructure for the rapidly growing OTC derivatives markets.

Recommendations to *enhance the OTC derivative market infrastructure* include:

- Supervisors should insist that the industry promptly set ambitious standards for the accuracy and timeliness of trade data submission and the timeliness of resolutions of trade matching errors for OTC derivatives;
- Supervisors should urge the industry to 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; and
- Supervisors should ask the industry to develop a longer-term plan for an integrated operational infrastructure supporting OTC derivatives that:

- captures all significant processing events over the entire lifecycle of trades;
- delivers operational reliability and scalability;
- maximizes the efficiencies obtainable from automation and electronic processing platforms by promoting standardization and interoperability of infrastructure components;
- enhances participants' ability to manage counterparty risk through netting and collateral agreements by promoting portfolio reconciliation and accurate valuation of trades;
- addresses all major asset classes and product types; and
- encompasses the buy side as well as the dealer community.

## **II. Comprehensive Review of Contributing Factors**

1. Underwriting standards for U.S. adjustable-rate subprime mortgages weakened dramatically between late 2004 and early 2007. As housing prices subsequently softened, the delinquency rate for such mortgages soared, exceeding 20 percent of the entire outstanding stock of adjustable-rate subprime mortgages in late 2007.<sup>2</sup>

2. Nearly all of these mortgages were packaged in residential mortgage-backed securities (RMBS) and a large share of the subprime RMBS were purchased by managers of CDOs of asset-backed securities (ABS), so-called ABS CDOs. The subprime RMBS and the ABS CDOs were structured in tranches and a very large share of the total value of the securities issued was rated AA or AAA by the credit rating agencies.

3. Both U.S. and international investors were eager purchasers of these securities. Indeed, the loosening of credit standards and terms in the subprime market was symptomatic of a broader erosion of market discipline on the standards and terms of loans to households and businesses. Following many years of benign economic and financial conditions, global investors had become quite complacent about risks, even in the case of new and increasingly complex financial instruments.

4. Many of the global investors in the AA and AAA tranches relied heavily on the ratings in making investment decisions or in communicating risk appetites to their investment managers, rather than undertaking their own independent credit analysis on instruments that often were quite complex. When it became apparent that even AAA tranches of some ABS CDOs could face large writedowns, investors lost faith in the ratings of complex structured products more broadly.

5. No longer willing to rely on ratings and unable to perform their own credit analyses, investors pulled back from a wide range of structured product markets. Issuance of all types of non-agency RMBS declined substantially. In addition, issuance of collateralized loan obligations (CLOs) became more difficult, at a time when a huge overhang of leveraged loan commitments

---

<sup>2</sup> By contrast, the delinquency rate on the stock of outstanding fixed-rate subprime mortgages increased by only three percentage points over the same period, to around 8 percent.

(\$225 billion in the U.S. alone) had already made investors reluctant to buy such loans at committed spreads and terms.

6. From 2004 to 2007, ABCP markets in the U.S. and abroad had grown very rapidly. Much of the growth was accounted for by conduits, including structured investment vehicles (SIVs) and CDOs, which purchased securities, including non-agency RMBS and CDOs, rather than by more traditional conduits that purchased short-term corporate and consumer receivables. As in the case of structured finance products, investors in ABCP, including money market funds, seem to have relied heavily on credit ratings rather than making their own assessments of the structure of these programs and the underlying collateral. As investors became aware that some of the underlying collateral was RMBS and CDOs, they pulled back from the ABCP market generally, and even, to some extent, from more traditional programs. In the United States alone, ABCP outstanding declined by about one-third, or \$370 billion, between early August 2007 and late December 2007. Since that time the amount of U.S. ABCP outstanding has changed little on balance.

7. The seizing up of structured credit markets and the contraction of ABCP markets imposed significant liquidity pressures on many of the largest U.S. and European financial institutions. These firms were the leading underwriters of non-agency RMBS and of ABS CDOs. When the structured credit markets shut down, the firms were left holding mortgages and RMBS that could not be sold off. Firms also were left holding exposures to leveraged loans that were in the process of being syndicated. Still more exposures were created when, in order to protect their reputations, some firms elected to purchase assets from, or extend credit to, off-balance sheet vehicles that they had organized and money market and other investment funds that they managed.

8. Many of these same firms were revealed to have concentrated exposures to subprime credit risk. While the business model of these firms with respect to subprime mortgages had been described as “originate to distribute,” it gradually became apparent that some had retained significant credit exposures to the subprime market by retaining super-senior CDO tranches and by providing credit and liquidity enhancements to ABCP programs that invested in super-senior tranches of RMBS and CDOs. As a result, some firms suffered significant losses.

9. Firms themselves struggled to determine the size of these exposures and the resulting losses. As the structured credit markets seized up, reliable market-based price discovery became much more difficult for an increasing share of firms’ portfolios; in many cases, models that were used for valuation in the absence of reliable market prices had not been adequately developed, or were not appropriate for the complex securities being evaluated. In addition, some firms had difficulty identifying and aggregating their exposures to subprime mortgage assets. As a result, they became concerned about the adequacy of their capital and the size of their balance sheets. They also became less confident of their assessments of the credit risk of other market participants that were known or suspected of holding such securities. In addition to concerns about counterparties’ valuation practices, information about their holdings of such securities generally was not publicly available.

10. The combination of liquidity and balance sheet pressures and heightened credit concerns made banks reluctant to provide others with term funding. Term premiums embodied in LIBOR



rates increased, at times to more than 100 basis points, and some other types of term funding became more difficult and costly. Traditional central bank liquidity tools were unable to bring term premiums in the interbank markets down. Changes to the primary credit program that the Federal Reserve announced in August 2007 – the narrowing of the spread of the primary credit rate relative to the target funds rate and increased scope to borrow at term – had little success, perhaps because they did not eliminate the stigma associated with borrowing from the central bank. Moreover, discount window facilities likely do not substantially reduce banks' concerns about balance sheet pressures or counterparty risk. With creditors skittish and banks' balance sheets increasing, conditions in term funding markets remained strained through year-end 2007.

11. More generally, uncertainty about asset valuations in illiquid markets and about financial institutions' exposures to asset price changes left investors and markets jittery. Of particular concern were the exposures of financial guarantors to protection they had provided on super-senior CDO tranches. Downgrades of these institutions' credit ratings could disrupt financial markets in which investors rely heavily on their guarantees, notably the U.S. municipal bond market. In addition, failure of one of the guarantors would impose additional losses on financial institutions that had purchased CDO protection from the guarantor.

12. Prior to year-end 2007, a new tool, the Term Auction Facility (TAF), was deployed by the Federal Reserve. It appears not to have been hindered by concerns about stigma and appears to have helped reduce term premiums. However, it is uncertain how much of the reduction in term premiums just after year-end 2007 resulted from the availability of the TAF and how much was the result of relieved concern following year-end.

13. By early 2008, the financial disorder had not abated. Issuance of RMBS remained very weak, issuance of commercial mortgage-backed securities (CMBS) was off substantially from the first half of 2007, and CLO issuance was running well below its levels of spring 2007. Term premiums declined with the turn of the year but subsequently have widened, reportedly on renewed concerns about bank balance sheet pressures and heightened uncertainty about the economic outlook. More recently, liquidity in the agency RMBS market has deteriorated, yields on municipal bonds have risen substantially relative to those on comparable-maturity Treasuries, and issuance of municipal bonds has declined noticeably. Costs of residential mortgage and business credit were up significantly compared to the summer of 2007, and survey evidence pointed to tighter standards for a broad range of loans. In part, the higher costs and tighter standards appeared to reflect concerns about the effects of the contraction in the housing sector and the developments in financial markets on the broader economy.

14. Losses from hedge fund defaults through year-end 2007 were negligible, but preliminary data indicate that hedge fund performance was poor in January, and in the last few weeks, a growing number of hedge funds have missed margin calls. Counterparties continue to monitor their exposures to hedge funds closely.

15. The infrastructure of the financial markets generally has coped quite well with the heightened price volatility and surging trading volumes. Backlogs of unconfirmed trades in credit derivatives increased substantially in July and August 2007 but subsequently receded. Although

liquidity in the credit derivatives markets has declined noticeably by some measures, those markets have continued to perform important price discovery and risk management functions.

### **III. Policy Issues and Recommendations**

#### ***A. Reforming the Mortgage Origination Process***

##### Issues

1. State-licensed mortgage brokers, who take loan applications and shop them to depository institutions or other lenders, had similarly weak incentives. Weak government oversight of these entities also contributed to the rise in unsound underwriting practices.
2. Originators had weak incentives to maintain strong underwriting standards, particularly at a time when securitizers, credit rating agencies, and mortgage investors did not conduct due diligence sufficient to align originator incentives with the underlying risks. Against this backdrop, limited government oversight of mortgage companies not affiliated with regulated depositories, which made about half of higher-priced mortgages in 2006, contributed to a rise in unsound underwriting practices in the subprime sector, including, in some cases, fraudulent and abusive practices.
3. Consumer protection rules and disclosure requirements did not sufficiently protect consumers against improper lending.

##### Recommendations to address issues

1. State financial regulators should implement strong nationwide licensing standards for mortgage brokers. As a first step, the CSBS and the American Association of Residential Mortgage Regulators (AARMR) have already created a nationwide licensing system and database for mortgage professionals; seven states began participating when the system was initially started, and dozens more committed to participate over time.
2. Federal and state regulators should strengthen and make consistent government oversight of all entities that originate and fund mortgages and otherwise interface with customers in the mortgage origination process. All states should work towards adopting the principles set forth in the guidance developed by the federal regulators for nontraditional and subprime mortgage lending and ensure that effective enforcement mechanisms are in place to deal with noncompliance with such standards. One key step that already has been taken is that the Conference of State Bank Supervisors (CSBS) issued principles-based underwriting guidance on subprime mortgages in July 2007 that was nearly identical to guidance issued earlier by federal supervisory agencies. In addition, a group of supervisors has launched a pilot program to review the underwriting standards and senior management oversight of risk management strategies for ensuring compliance with consumer protection laws and regulations at selected nondepository lenders with significant subprime mortgage operations.<sup>3</sup> The results of these reviews should be

---

<sup>3</sup> The Federal Reserve, the Office of Thrift Supervision, the Federal Trade Commission, the CSBS, and the American Association of Residential Mortgage Regulators (AARMR) are participating in the pilot program.

analyzed in order to determine whether to continue the project and, if so, how to focus future reviews.

3. The Federal Reserve should issue stronger consumer protection rules and mandate enhanced consumer protection disclosures that would make affordability over the life of the mortgage more transparent and that would facilitate comparison of the terms with those of alternative products. To this end, the Federal Reserve is currently engaged in a review of the Truth in Lending Act (TILA) rules for mortgage loans, including consumer testing, and plans to propose new mortgage disclosures based on the results. The Federal Reserve has already proposed changes to the TILA rules to address concerns about incomplete or misleading mortgage loan advertisements and solicitations and to require lenders to provide mortgage disclosures more quickly. Those changes should be enacted once appropriate account has been taken of feedback received over the 90-day comment period. In December 2007, the Federal Reserve used its authority under the Home Ownership and Equity Protection Act (HOEPA) to propose new rules that address abuses related to prepayment penalties, failure to escrow for taxes and insurance, stated-income and low-documentation lending, and failure to give adequate consideration to borrowers' ability to repay. These rules should be enacted once appropriate account has been taken of feedback received over the 90-day comment period.

4. State and federal authorities should coordinate to enforce consumer protection and disclosure rules evenly across all types of mortgage originators.

5. Federal and state authorities should pursue mortgage market participants who engaged in fraudulent transactions and any parties undertaking fraudulent schemes to take advantage of households facing foreclosure.

### ***B. Improving Investors' Contributions to Market Discipline***

#### Issues

1. Investors and asset managers failed to obtain sufficient information or to conduct comprehensive risk assessments. For many investors, the use of credit ratings in risk management systems has fallen behind innovation in financial markets. In particular, many investors seem to treat a credit rating as a "sufficient statistic" for the full range of risks associated with an instrument, when, in fact, credit ratings are assessments of creditworthiness, and not of liquidity, market, or other risks. Some investors also relied exclusively on ratings for valuation purposes.

2. In turn, originators, underwriters, and sponsors did not always supply investors with sufficient information related to assets they were selling, securitizing, or using as collateral for structured credit products.

3. Separately, firms that sponsor ABCP programs or provide liquidity or credit enhancements to such programs disclose to their own shareholders and creditors considerably less information about the nature and composition of risk characteristics of the underlying assets than they would if the assets were on their own balance sheets.

4. Although market participants had economic incentives to conduct due diligence and evaluate risk-adjusted returns, the steps they took were insufficient, resulting in a significant erosion of market discipline.

Recommendations to address issues

1. Overseers of institutional investors (for example, the Department of Labor for private pension funds; state treasurers for public pension funds; and the SEC for money market funds) should require investors (and their asset managers) to obtain from sponsors and underwriters of securitized credits access to better information about the risk characteristics of such credits, including information about the underlying asset pools, on an initial and ongoing basis.
2. Overseers should ensure that these investors (and their asset managers) develop an independent view of the risk characteristics of the instruments in their portfolios, rather than rely solely on credit ratings.
3. To limit rating shopping, underwriters and sponsors of structured finance products should publicly disclose whether, after submitting final data and information about a proposed structure to one or more CRAs and receiving preliminary ratings from the CRA(s) based on the information, they choose to publish some but not all of the preliminary rating(s) as final ratings. The disclosure should include the reason for not having any such preliminary ratings published as final ratings.
4. To enable investors to improve their due diligence for structured finance products, underwriters and sponsors should provide improved disclosures for RMBS, ABS CDOs, and other structured products. Asset managers and financial institutions, including those running conduits, should provide improved disclosures.
5. Investors should take account of differences in risk between different classes of instruments, rather than relying on generic credit ratings when making investment decisions, communicating investment mandates to investment managers, and evaluating investment managers.
6. Where investors utilize investment consultants, they should insist that the consultants develop an independent view of the broad range of risk characteristics of the types of instruments in the investor's portfolio, rather than solely relying on the credit ratings.
7. Building on its existing templates for disclosures by multi-seller ABCP conduits, the American Securitization Forum (ASF) should develop templates for disclosures to investors for other types of securitizations. Supervisors should encourage banks and other regulated entities that sponsor ABCP conduits to make disclosures consistent with the templates.
8. The PWG will engage the private sector to create a committee to develop best practices regarding disclosure to investors in securitized credits, including ABS and CDOs of ABS.

9. Consistent with their disclosures of on-balance sheet risk, public companies that sponsor or provide credit or liquidity enhancements to ABCP programs should disclose the distribution of assets underlying the programs by type, industry, and credit risk to the extent material to the company.

***C. Reforming the Ratings Agencies' Process for and Practices regarding Structured Credit and Other Securitized Credit Products***

Issues

1. Credit rating agencies contributed significantly to the recent market turmoil by underestimating the credit risk of subprime RMBS and other structured credit products, notably ABS CDOs.
2. With respect to subprime RMBS, in part the rating agencies underestimated the credit risk because they underestimated the severity and breadth of the softening in housing prices and the potential for fraud.
3. The rating agencies' models for rating ABS CDOs relied on assumptions about correlations between ABS that underestimated the degree of linkages between underlying securities.
4. As acknowledged by the rating agencies, structured products have quite different risk characteristics from corporate bonds. Nonetheless, they used the same rating categories for both types of instruments and many investors seem to have acted as if they did not understand or appreciate that the risk characteristics differed.
5. The methodologies that the rating agencies used to rate structured products are reasonably transparent. Nonetheless, greater transparency is both possible and desirable.

Recommendations to address issues

1. Credit rating agencies should disclose what qualitative reviews they perform on originators of assets that collateralize ABS rated by the CRA and should require underwriters of ABS to represent the level and scope of due diligence performed on the underlying assets.
2. The CRAs should reform their ratings processes for structured credit products to ensure integrity and transparency. The PWG welcomes the steps already taken by the CRAs, and particularly encourages the CRAs to: (a) enforce policies and procedures that manage conflicts of interest, including implementing changes suggested by the SEC's broad review of conflict of interest issues; (b) publish sufficient information about the assumptions underlying their credit rating methodologies and models, so that users of credit ratings can understand how a particular credit rating was determined; (c) make changes to the credit rating process that would clearly differentiate ratings for structured products from ratings for corporate and municipal securities; (d) make ratings performance measures for structured credit products and other ABS readily available to the public in a manner that facilitates comparison across products and credit ratings; (e) work with investors to provide the information investors need to make informed decisions

about risk, including measures of the uncertainty associated with ratings and of potential ratings volatility; and (f) ensure that adequate personnel and financial resources are allocated to monitoring and updating its ratings.

3. The rating agencies should be encouraged to conduct formal, periodic, internal reviews of criteria and methodologies for ratings of structured credit products.
4. The International Organization of Securities Commissions (IOSCO) should be encouraged to continue addressing credit rating issues through revisions to its “Code of Conduct.”
5. The PWG will facilitate formation of a private-sector group (with representatives of investors, issuers, underwriters, and CRAs) to develop recommendations for further steps that the issuers, underwriters, CRAs, and policy makers could take to ensure the integrity and transparency of ratings, and to foster appropriate use of ratings in risk assessment.
6. The PWG member agencies will reinforce steps taken by the CRAs through revisions to supervisory policy and regulation, including regulatory capital requirements that use ratings.
7. The PWG will revisit the need for changes to CRA oversight if the reforms adopted by the CRAs are not sufficient to ensure the integrity and transparency of ratings.

***D. Strengthening Global Financial Institutions’ Risk Management Practices***

Issues

1. The effectiveness of certain risk management practices was a key factor that differentiated institutions that sustained significant losses during the financial crisis from institutions that, while affected to some degree, avoided significant losses.
2. Firms that suffered significant losses tended to exhibit the following risk management weaknesses: (a) weak controls over potential balance sheet growth, including ineffective limits on the growth of business lines and poor monitoring of off-balance sheet exposures; (b) inadequate communications among senior management, business lines, and risk management functions; (c) dependence on a narrow range of risk measures that were based on assumptions that proved erroneous and on measurement processes that were difficult to alter once it became apparent that the underlying assumptions were wrong; and (d) insufficient attention to valuation issues, including excessive reliance on credit ratings and inadequate development of models for valuing complex or potentially illiquid securities.
3. These weaknesses were particularly evident with respect to the management of certain business lines: (a) CDO warehouses; (b) syndication of leveraged loans; and (c) conduit businesses (sponsorship or liquidity support for SIVs and other conduits that issued ABCP).
4. The root causes of valuation uncertainty were the failure of many financial institutions to develop sufficiently robust valuation models for complex, mortgage-related structured products and fundamental uncertainty about the ultimate performance of the underlying mortgage pools.

5. Losses from hedge fund defaults through year-end 2007 were negligible, but preliminary data indicate that hedge fund performance was poor in January, and in the last few weeks, a growing number of hedge funds have missed margin calls. Counterparties continue to monitor their exposures to hedge funds closely. Prior to the financial crisis, a multilateral review of major banks' and securities firms' counterparty risk management practices revealed some weaknesses with respect to the measurement of potential exposures and stress tests. In recent meetings with supervisors, financial institutions noted that some of those weaknesses remained.

Recommendations to address issues

1. Global financial institutions should promptly identify and address any weaknesses in risk management practices that the turmoil has revealed. These firms, and other financial institutions with similar types of weaknesses in their operations, should strongly reemphasize the importance of: (a) a strong, independent risk management function; (b) strategic planning with respect to balance sheet growth and utilization of capital and liquidity; (c) assessment of risks on an integrated basis across the enterprise; (d) ongoing communication among senior management, business lines, and risk management functions; and (e) the development of, and adherence to, strong operational and financial reporting controls over valuations.
2. The PWG will support formation of a private-sector group to reassess implementation of the Counterparty Risk Management Policy Group II's (CRMPG II) existing guiding principles and recommendations regarding risk management, risk monitoring, and transparency, and to modify or develop new principles and recommendations as necessary to incorporate lessons from the recent turmoil, including lessons regarding valuation practices.
3. Supervisors of global financial institutions should closely monitor the firms' efforts to address risk management weaknesses, taking action if necessary to ensure that weaknesses are addressed.
4. U.S. banking regulators and the SEC should promptly assess current guidance and develop common guidance to address the risk management weaknesses revealed by the recent market turmoil, including improvements to: (a) management information systems, including procedures that ensure aggregation of exposures across all business lines and ensure rigorous valuations of instruments and exposures; (b) concentration risk management, liquidity risk management, stress testing, and other risk management practices that are necessary to ensure that liquidity and capital cushions are sufficiently robust to absorb extreme system-wide shocks; and (c) governance of the risk management and control framework, including practices that address incentive problems in compensation policies.
5. U.S. authorities should encourage other supervisors of global firms to make complementary efforts to develop guidance along the same lines.

## ***E. Enhancing Prudential Regulatory Policies***

### Issues

1. Various regulatory policies failed to mitigate some of the risk management weaknesses that have been identified.
2. Minimization of regulatory capital requirements by banks is an important driver of bank behavior. The limited risk sensitivity of Basel I encouraged banks to securitize low-risk assets and to support securitizations through facilities having low mandated capital charges. The securitization framework in Basel II is a more risk-sensitive approach that addresses many (but not all) of Basel I's shortcomings in that area. Existing capital requirements are not designed to address non-contractual exposures such as those arising from sponsorship of SIVs or mutual funds that firms may assume for reputational reasons.
3. Once firms experienced losses, their desire to maintain a capital buffer above regulatory levels significantly increased the risk that they would restrict credit availability and thereby add to stress in credit markets, with the potential for feedback on the real economy.
4. Authorities did not insist on appropriate reporting and disclosures of off-balance sheet vehicles.

### Recommendations to address issues

1. Regulators should adopt policies that provide incentives for financial institutions to hold capital and liquidity cushions commensurate with firm-wide exposure (both on- and off-balance sheet) to severe adverse market events. These cushions should be forward looking and adjust appropriately through peaks and valleys of the credit cycle.
2. Regulators should enhance guidance related to pipeline risk management for firms that use an originate-to-distribute model.
3. Given the weak controls over balance sheet growth at some firms and the resulting liquidity pressures that those firms experienced, the Basel Committee on Banking Supervision (BCBS) should promptly complete its work to update the Committee's 2000 guidance on liquidity management, including the sound practice guidelines to be followed by regulated financial institutions as well as the oversight principles for supervisors.
4. The BCBS and IOSCO should review capital requirements for ABS CDOs and other resecuritizations and for off-balance sheet commitments, with a view toward increasing requirements on exposures that have been the source of recent losses to firms. In particular, they should reconsider the relationship between external credit ratings and capital charges under the "ratings based approach," especially for ABS CDOs and other securitizations of ABS, as well as



the relationship between external ratings and capital charges under the “internal assessment approach” for exposures to ABCP programs.<sup>4</sup>

5. Supervisors should review the adequacy of guidance on Basel II’s Pillar 2 with respect to the consideration of the reputational risks that conduit and asset management businesses entail and the implications for institutions’ need for economic capital and their liquidity contingency plans.
6. To promote the maintenance of strong capital cushions and to mitigate the possibility that a more risk-based capital regime will heighten the potential for capital requirements to amplify credit and economic cycles, supervisors should rigorously assess banks’ implementation of the Advanced Internal Ratings Based Approach to Basel II, especially the conservatism of estimates of losses from defaults during a downturn and the robustness of banks’ stress tests.
7. Regulators should require financial institutions to improve their internal reporting and make more detailed and comprehensive disclosures of off-balance sheet commitments, including commitments to support ABCP conduits and other off-balance sheet vehicles.
8. Regulators should encourage financial institutions to improve the quality of disclosures about fair value estimates for complex and other illiquid instruments, including descriptions of valuation methodologies and information regarding the degree of uncertainty associated with such estimates.
9. State insurance commissioners should review the appropriateness of capital requirements for financial guarantors in light of changes in the firms’ business lines. Financial guarantors should strengthen their models for assessing the risks of new activities.
10. Regulators should review the current use of ratings in regulatory and supervisory rules. At a minimum, regulators should distinguish, as appropriate, between ratings of structured credit products and ratings of corporate and municipal bonds in regulatory and supervisory policies.
11. Authorities should encourage FASB to evaluate the role of accounting standards in the current market turmoil. This evaluation should include an assessment of the need for further modifications to accounting standards related to consolidation and securitization, with the goal of improving transparency and the operation of U.S. standards in the short-term. Additionally, authorities should encourage FASB and IASB to achieve more rapid convergence of accounting standards for consolidation of ABCP conduits and other off-balance sheet vehicles.

#### ***F. Enhancements to the Infrastructure for OTC Derivatives Markets***

##### Issues

1. While the infrastructure of the financial markets generally has coped quite well with heightened price volatility and surging trading volumes, there have been issues with the accuracy and timeliness of trade data submission; the timeliness of resolutions of trade matching errors;

---

<sup>4</sup> In the internal assessment approach the bank assigns an internal rating to the exposure and then maps the rating to an equivalent external rating.

documentation and cash settlement; electronic post-trade processing; backlogs; integrated processing, and reconciliation and valuation.

2. Although the industry has made significant progress in automating the infrastructure of the OTC derivatives markets over the last two years, the industry has not achieved a “steady state” in which events do not increase operational problems. This was evident in July and August 2007 when a spike in credit derivatives trades resulted in substantial increases in backlogs of unconfirmed trades throughout the industry.

3. 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 disruption if one or more major market participants chose not to adopt the protocol following a credit event. Of particular concern is the market impact such choices could have if multiple credit events were to occur simultaneously.

#### Recommendations to address issues

1. Supervisors should insist that the industry promptly set ambitious standards for the accuracy and timeliness of trade data submission and the timeliness of resolutions of trade matching errors for OTC derivatives.

2. Supervisors should urge the industry to 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 cash settlement protocol that has been developed but not yet incorporated into standard documentation.

3. Supervisors should ask the industry to develop a longer-term plan for an integrated operational infrastructure supporting OTC derivatives that: (a) captures all significant processing events over the entire lifecycle of trades; (b) delivers operational reliability and scalability; (c) maximizes the efficiencies obtainable from automation and electronic processing platforms by promoting standardization and interoperability of infrastructure components; (d) enhances participants’ ability to manage counterparty risk through netting and collateral agreements by promoting portfolio reconciliation and accurate valuation of trades; (e) addresses all major asset classes and products types; and (f) encompasses the buy side as well as the dealer community.

#### ***Conclusion***

Market participants have begun taking steps to address many of the weaknesses that have contributed to the turmoil in global financial markets. Nonetheless, policy makers need to monitor their efforts closely and reinforce them where necessary. In most cases policy makers’ efforts to promote implementation of these recommendations will require domestic or international regulatory cooperation. The PWG will work to ensure that U.S. federal regulators cooperate effectively with each other and with the relevant state authorities. Internationally, the

PWG is working with foreign regulators, finance ministries, and central banks through the Financial Stability Forum (FSF) on a report to the G-7 Finance Ministers and Governors that will provide a diagnosis of the causes of global financial turmoil and an agreed-upon set of recommendations for addressing identified weaknesses in global markets and institutions. As part of that cooperative process, the PWG has shared with the FSF the diagnosis and recommendations set out in this statement.

The PWG plans to issue a follow-up statement in the fourth quarter of 2008 that will assess progress toward implementation of its recommendations and the FSF's recommendations and consider whether further steps are needed to address weaknesses in financial markets and institutions and related regulatory policies.