COMMITTEE ON CAPITAL MARKETS REGULATION

THE GLOBAL FINANCIAL CRISIS
A PLAN FOR REGULATORY REFORM

MAY 2009

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COMMITTEE ON CAPITAL MARKETS REGULATION

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PREFACE

This Report examines the regulatory shortcomings that have contributed to the ongoing global financial crisis. When the Committee began its research on improving financial regulation more than a year ago, policymakers scarcely recognized that ineffective regulation could lead to what is presently the worst economic crisis since the Great Depression. Before the crisis, our Members expressed concerns that research and recommendations in this field might simply fall on deaf ears. That is no longer the problem—in the wake of the present crisis policymakers are listening intently. The problem now is very much the opposite—there is a cacophony of voices urging reform. Indeed, it seems as if a new study on the financial crisis emerges with each passing day. Yet we believe the Committee has a uniquely independent and objective voice in this debate. Moreover, this Report goes beyond most insofar as it provides 57 specific recommendations for effective U.S. and global regulatory reform. While others have focused on fixing blame, we focus on solutions.

Although this Report represents the Committee's work, individual Committee Members have expressed varying degrees of comfort with several of our recommendations. In certain instances, we have noted where the Members have been unable to reach a clear majority on a particular issue. Nevertheless, the Report reflects a fair consensus of Committee Members' viewpoints taken as a whole. These viewpoints are not necessarily those of the institutions of which the Members are a part.

Our Executive Summary is just that—a summary. The issues and recommendations set forth there are addressed in further detail in the main body of the Report. We strongly urge you to read the full discussions, as they provide important context and data that illuminate the summary's necessarily broad treatment of complex issues and the Committee's nuanced recommendations.

We recognize that some of our recommendations may be met by disagreement. Establishing a comprehensive agenda for U.S. and global financial regulatory reform is by no means a science, and continued deliberation on these important matters is essential to achieving meaningful reform. Nevertheless, we believe the collective expertise and experience of the Committee brings an important perspective to the issues addressed and can serve as a leading voice in the discussion of how best to regulate our financial system post-crisis.

R. Glenn Hubbard	John L. Thornton	Hal S. Scott
CO-CHAIR	CO-CHAIR	DIRECTOR

OVERVIEW

This Report offers a comprehensive and detailed plan for regulatory reform in light of the global financial crisis. Some attribute the present crisis to a dearth of regulation. But that is simplistic at best, entirely inaccurate at worst. The truth is that the financial crisis is the result of—not so much a lack of regulation as—the lack of *effective* regulation. Indeed, those portions of the financial system hit the hardest by the crisis—such as traditional banks and thrifts—have historically been the most heavily regulated. We think that while more regulation is certainly needed in some areas, our overriding goal must be to make the present regulatory regime far more effective than it has been. That means that reforms should be based on solid principles—chief among them being the reduction of systemic risk. A second theme of this Report is the need for investor protection through greater transparency in the financial system. More information enables the market to more accurately price assets, risk, and other relevant inputs. Much of the present crisis can be attributed to a lack of critical information (and perhaps, in some cases, misinformation). The necessity of building a U.S. financial regulatory structure able to achieve these goals is a third theme of this Report. Simply put, our regulatory structure must be entirely reorganized in order to become more integrated and efficient. A final theme is that a global crisis demands a global solution. The U.S. financial system is best viewed as an integral part of the overall global financial system. No longer can the United States regulate in a vacuum. Coordination with other national regulators and cooperation with regional and international authorities is required.

Principles-Based Regulation Focused on Effectiveness

We believe as much attention should be paid to regulatory effectiveness as to regulatory coverage. Equally vital, we think meaningful reform must be based on fundamental principles rather than political expediency. The most important of these principles—particularly in light of the present crisis—is that regulation must reduce systemic risk. When a systemically important institution is in danger of failure, and its failure could trigger a chain reaction of other failures—the so-called interconnectedness problem—there may be no alternative other than to inject some public money into the institution. But the requisite amount of these injections has been significantly increased by several weaknesses in the current regulatory system. The Federal Reserve (Fed) financed the acquisition of Bear Stearns through a $29 billion loan, and the Fed and the Treasury have financed the survival of AIG with assistance amounting to more than $180 billion, largely because of the fear of what would have happened if such institutions had gone into bankruptcy. Similar fears may lie behind some of the TARP

injections. The Committee believes there is ample room for improvement in the containment of systemic risk.

Revision of Capital Requirements

Capital regulation performed poorly during the crisis. The failure of capital regulation was not just a product of the "100 year flood" or of events that could not be anticipated. Rather, it was a direct result of both the design and substance of the regulatory capital framework. The elaborate and detailed structure currently in place to regulate bank capital, the international Basel Accord, proved unable to live up to its basic job of preventing large and systemically important financial institutions from failing. Indeed, the crude leverage ratio—that was the object of scorn of many regulators—turned out to be a more reliable constraint on excessive risk taking than the complex Basel rules, and arguably saved us from worse problems in the banking sector than those we already have. The investment banking sector, which did not have a leverage ratio, was not as fortunate. The disparity demonstrates that more detailed regulation does not necessarily make for more effective regulation. Capital requirements are our principal bulwark against bank failure, a key trigger of systemic risk. Better conceived regulation, combined with more intense prudential supervision and market discipline, is the answer. Our Report accordingly sets out a series of specific recommendations to improve bank capital regulation.

Resolution Procedures

Second, we need a better process than bankruptcy for resolving the insolvency of financial institutions. In short, our framework for banks needs to be extended to other financial institutions and their holding companies. This process, unlike bankruptcy, puts the resolution of institutions in the hands of regulators rather than bankruptcy judges, and permits more flexible approaches to keeping systemically important institutions afloat. It also ensures a more sensible approach to handling the treatment of counterparty exposures to derivatives through the use of safe harbors. At the same time, it permits, like bankruptcy, the restructuring of an insolvent institution through the elimination of equity and the restructuring of debt, to prepare the institution for sale to new investors.

Regulation of Non-Bank Financial Institutions

Third, we must recognize that the current substantive framework also suffers from important gaps in the scope and coverage of regulation—gaps that can increase the risk of shocks to the financial system. Hedge funds and private equity firms have not been supervised or regulated. Government-sponsored enterprises (GSEs) like Fannie Mae and Freddie Mac were too lightly regulated; until the Housing and Economic Recovery Act of 2008, they were not subject to either meaningful capital or securities regulation. Investment bank regulation by the SEC proved entirely ineffective—major investment banks have failed, been acquired, or become bank

holding companies. We need a comprehensive approach to regulating risk in the financial sector, if we are to avoid similar threats to the financial system in the future. Casting a broader net does not mean that different activities should be regulated in the same way, but it does mean that the same activities conducted by different institutions should be regulated in the same way.

Our Report focuses specifically on regulatory coverage with respect to hedge funds and private equity. In general, we believe hedge funds (and banks that engage in hedge fund activity) should keep regulators informed on an ongoing basis of their activities and leverage. Private equity, however, poses no more risk to the financial system than do other investors. But these firms, if large enough, should be subject to some regulatory oversight and periodically share information with regulators to confirm they are engaged only in the private equity business. Indeed, private equity is a part of the solution to the problem of inadequate private capital in the banking system. We recommend that ill-conceived restrictions on the ability of private equity firms to acquire banks should be removed, not just relaxed. This is an instance where regulation is preventing a solution, not offering one.

In addition to hedge funds and private equity, our Report also addresses the need to improve the regulation of money market mutual funds (MMMFs), which comprise approximately $3.8 trillion of the more than $9 trillion mutual fund industry. The MMMF plays an important role in our financial system, serving as both an investment vehicle and a cash management device. Triggered by the "breaking of the buck" of the Reserve Primary Fund, which was largely attributable to the impact of the Lehman bankruptcy on MMMF holdings of that company's commercial paper, a run ensued on MMMFs. This run had to be halted by the Fed's injection of liquidity into the funds, e.g., by financing the purchase of MMMF sales of asset-backed commercial paper to fund redemptions, and federal guarantees of existing investments. We endorse further restrictions on the type of investments such funds can make and the adoption of new procedures for halting redemptions and providing an orderly liquidation in the event of runs in the future. If federal guarantees to certain shareholder accounts are likely to persist, either explicitly or implicitly, a method needs to be devised for the government to charge for such guarantees or for the MMMFs to protect themselves against such losses.

Clearinghouses and Exchanges for Derivatives

Finally, we need to reduce the interconnectedness problem of credit default swap (CDS) contracts by the use of clearinghouses and exchanges. If clearinghouses were to clear CDS contracts and other standardized derivatives, like foreign exchange and interest rate swaps, systemic risk could be substantially reduced by more netting, centralized information on the exposures of counterparties, and the collectivization of losses. To the extent certain CDSs could be traded on exchanges, price discovery and liquidity would be enhanced. Increased liquidity would not only be valuable to traders;

it would better enable clearinghouses to control their own risks through more informed margining and easier close-outs of defaulted positions.

Greater Transparency to Protect Investors

Many of the measures to reduce systemic risk advanced by this Report necessarily have the added benefit of protecting investors. However, we also believe greater transparency in various sectors of the financial system is necessary, if only to provide increased protection for investors. This Report focuses in particular on the securitization process and accounting standards.

Reform of the Securitization Process

Securitization has played an important and constructive role in the evolution of our financial system. It has brought new sources of finance to the consumer market, not only for mortgages, but also for auto loans and credit card purchases. It has permitted banks to diversify their risks. Imagine how much more devastating the impact of the fall in home prices would have been on the banking system if all mortgages had been held by banks rather than being mostly securitized (even taking into account the exposure some banks had from investments in the securitized debt itself). There is a great need to rebuild this market from the ground up now that the financial crisis has exposed critical flaws in its operation.

Originators, whether banks or brokers, need stronger incentives to originate loans that are in conformity with what they have promised. While we support efforts to improve the alignment of economic interests between originators and investors, we think a mandatory minimum retention of risk in respect of securitized assets must address a number of important issues in order to be practical and beneficial. Among other things, a minimum risk retention requirement would increase the risk of the banking sector and be difficult to enforce given the possibility of hedging. Furthermore, such a requirement would compel the originator to bear general economic risk, e.g., risk from interest rate changes, not just the risk of non-conforming assets. We believe the incentive problem should be fixed by strengthening representations, warranties, and repurchase obligations, and also by requiring increased disclosure of originators' interests in securitized offerings. Certain high-risk practices, such as "no doc" loans, should be prohibited outright. Moreover, we believe the current disclosure regime and underwriting practices can be improved. Specifically, we would increase loan-level disclosures, and encourage regulators to study ways of improving the standardized public disclosure package.

Finally, we believe an array of reforms relating to credit rating agencies (CRAs) is vital to reinvigorating the securitized debt markets. Until the crisis, CRAs had grossly underestimated the risk of loss associated with several types of structured finance securities. In order to restore confidence in the integrity of credit ratings and improve how the global fixed-income markets function in the future, we propose developing

globally consistent standards, ensuring unitary systems of enforcement, avoiding governmental interference in the rating determination process, reviewing references to credit ratings in regulatory frameworks, and increasing disclosure pertaining to ratings of structured finance and other securities.

Improvements in Accounting for Fair Value and Consolidation

Two accounting issues have risen to the fore in this crisis: the use of fair value and requirements for consolidating off-balance sheet exposures. We believe the current fair value methodology, as a whole, needs serious review by FASB and IASB on a joint basis. The problem has not been solved by FASB's April 2009 guidance (to which IASB did not subscribe). We have recommended substantial improvements in disclosures, which we believe will greatly benefit investors. The Committee believes reporting institutions should separately value Level 2 and Level 3 assets—where there is no liquid market in the assets being valued—by using market prices and fundamental credit analysis, with complete disclosure of how each of these values was determined. For market prices, this would require disclosing what market prices were relied on; for credit values it would require disclosure of all the parameters used in the credit model, including the discount rate. We also believe there should be separation of regulatory and financial reporting accounting, subject to a check on regulators not using accounting rules to avoid the recognition of clear losses, i.e., forbearance. Finally, we believe FASB is on the right track on revising its consolidation standards in Interpretation No. 46R, and endorse that approach.

Regulatory Structure

The U.S. financial regulatory framework can be summed up in four words: highly fragmented and ineffective. The fragmentation of regulators is not the product of careful design—it has evolved by layers of accretion since the Civil War. It has survived largely unchanged, despite repeated unsuccessful efforts at reform, not because it has been functional or effective but because it has served the interests of industry, regulators, and politicians—even though it has not served the interests of the overall economy or the American public. The current crisis has demonstrated that this dysfunctional system comes with a very high cost. The Committee's statement of January 14, 2009 entitled, "Recommendations for Reorganizing the U.S. Regulatory Structure," proposes a new consolidated structure, comprising the Fed, a newly created U.S. Financial Services Authority, the Treasury Department and possibly a consumer and investor protection agency. We believe this structure can substantially reduce the risk of future financial crises. We again call for regulatory structure reform in this Report.

International Coordination

The Committee believes that in all areas of reform dealt with in this Report, it is essential to have a coordinated international approach. A global financial system demands globally coordinated rules. We already have international capital rules requiring significant modification. Institutions like hedge funds and private equity operate internationally. Failures of international coordination can lead to the duplication of requirements and set the stage for regulatory arbitrage. The framework for handling failed financial institutions needs to take into account their multinational structure and clearinghouses and exchanges for derivatives need to handle internationally traded derivatives, which may be subject to different requirements in different countries. Securitized debt markets are global and thus standards for origination and disclosure, as well as the regulation of CRAs, require global coordination. Additionally, there obviously needs to be coordination and convergence between U.S. Generally Accepted Accounting Principles (GAAP) and International Financial Reporting Standards (IFRS) as we contemplate a single standard. While the world is not yet ready for a global regulator, the time has come to ensure greater global coordination.

EXECUTIVE SUMMARY

The Committee on Capital Markets Regulation offers this Report—a detailed plan for regulatory reform—in direct response to the most serious financial crisis of the past 80 years. The topics covered vary in degree of complexity, and wherever appropriate we have aimed to benefit our discussion with an empirical or otherwise objective analysis. Throughout each of these chapters, we make specific recommendations for critical changes in regulatory policy.

Several key themes emerge from our Report. The first theme is that our goal must be *effective* regulation. Although we recommend introducing regulation in some previously unregulated areas, the crisis has shown that the most precarious sectors of our financial system are those already subject to a great deal of regulation—regulation that has proven woefully ineffective. Our call to advance effective reform means that new or revised regulations should be based on solid principles—chief among them being the reduction of systemic risk. A second theme of this Report is the need to increase investor protection through greater transparency in the financial system. More information enables the market to price assets, risk, and other relevant inputs more accurately. Much of the present crisis can be attributed to a lack of critical information (and perhaps, in some cases, misinformation). The necessity of building a U.S. financial regulatory structure able to achieve these goals is a third theme of this Report. Simply put, our regulatory structure must be entirely reorganized in order to become more integrated and efficient. A final theme is that a global crisis demands a global solution. The U.S. financial system is best viewed as an integral part of the overall global financial system. No longer can the United States regulate in a vacuum. Coordination with other national regulators and cooperation with regional and international authorities is required.

This Report, however, is far more than a collection of abstract themes. Rather, we have designed the Report to serve as a clear roadmap for policymakers by setting forth 57 practical and specific recommendations for reform. We have noted in this Executive Summary where our recommendations are consistent with other recent and thoughtful proposals on financial regulatory reform.

Chapter 1: The Crisis and a Regulatory Approach

Before tackling the regulatory questions arising from the global financial crisis, we believe it is important to focus on two foundational matters. The first is the sheer gravity of the present crisis; the second is the overall regulatory approach the Committee believes policymakers should adopt going forward.

A. Severity of the Crisis

We are facing the most serious financial crisis since the Great Depression. The crisis has manifested itself in credit losses, writedowns, liquidity shocks, deflated property values, and a contraction of the real economy. We present data on the severity of the crisis in four broad categories: (1) U.S. loss estimates; (2) U.S. housing sector; (3) U.S. financial sector; and (4) global loss estimates.

In April 2009, the International Monetary Fund (IMF) estimated total near-term global losses on U.S. credit-related debt to be $2.7 trillion. Growth forecasts in 2009 are negative across the board. Costs directly attributable to the crisis include new spending by the federal government, including the Troubled Assets Relief Program (TARP) ($700 billion) and the stimulus package passed in February ($787 billion).

In the housing sector, banks took advantage of low interest rates and securitization opportunities to institute relaxed lending standards that drove mortgage lending throughout the early part of the decade. While the number of households in the United States increased only marginally between 1990 and 2008, the aggregate mortgage debt outstanding more than quadrupled during that same period. Increased borrowing by U.S. households was partially offset by climbing asset prices. However, the period of rising property values came to a close after reaching a peak in Q2 2006, with home prices eventually falling by 27% by Q4 2008. The burst of the housing bubble has virtually eliminated construction and sales activity. American homeowners are also in trouble, with the percentage of delinquent mortgages at an all-time high while 20% of all mortgages are in a negative equity position.

The financial sector is still very unstable. During the last nine months, some of the most prominent banks and other financial institutions have failed or been acquired, bailed out, or placed in conservatorship. The wreckage on Wall Street and elsewhere stems in part from the explosive growth in complex and mispriced mortgage-related securities. From 2001 to 2003, total residential mortgage-backed security (RMBS) issuance nearly doubled from $1.3 trillion to $2.7 trillion. As the RMBS market cooled, the collateralized debt obligation (CDO) market took off. Global issuance of CDOs—re-securitizations of other forms of debt—more than tripled in the two-year period between Q1 2005 and Q1 2007. As the housing bubble burst, the market for these securities dried up and their values have plummeted. Shrinking balance sheets and shaken confidence in the financial sector have in turn weakened the demand for other types of debt, such as corporate bonds and commercial paper. At the same time, the price of insuring bank debt through credit default swaps has skyrocketed, reflecting investors' skepticism toward the creditworthiness of banks. Forced to shrink their balance sheets to satisfy regulatory capital requirements, banks have constrained lending. The result has been devastating for businesses and consumers seeking loans.

Although the U.S. subprime mortgage and other domestic markets were the first to absorb the devastating effects of a bursting global asset bubble, it was only a short

while before foreign markets realized similar effects. Global market capitalization fell 53% since its peak on October 31, 2007. The effects on the real economy are similarly striking. From 2000 to 2008, global growth averaged 4.1% a year. In March 2009, the World Economic Outlook database projected world output to be -1.0 to -0.5%, a striking decrease from 2008, when output was 3.2%. Further losses associated with the crisis arose as businesses around the world were forced to write down their assets. Approximately $1.3 trillion has been lost since Q3 2007. The unemployment rate in the Euro zone was 8.9% in March 2009, compared to just 6.7% in March 2008. The global housing market has also suffered a sharp downturn. Since Q4 2007, the U.K. housing market has experienced a 17.6% decline. Total global CDO issuance peaked in Q2 2007 at $179 billion, but fell precipitously to just $5 billion in Q4 2008—a 97.2% drop. The data makes clear that the financial crisis has become a global concern. Our probe into the severity of the current financial crisis serves as a critical point of reference for the analysis and recommendations set forth in this Report. Before offering our recommendations for effective regulatory reform, we believe it is first necessary to set forth some key principles of regulation.

B. Regulatory Principles

Effective regulatory reform can occur only when policymakers take account of fundamental regulatory principles. In the Committee's view, the most important of these principles is that regulation should reduce externalities—namely systemic risk. Systemic risk is the risk of collapse of an entire system or entire market, exacerbated by links and interdependencies, where the failure of a single entity or cluster of entities can cause a cascading failure. We recognize that there are at least five key externalities particular to financial markets that contribute to systemic risk. First, the spread of speculative information through the market can create the perception that economic difficulties impacting one financial institution will affect similarly situated firms. Second, customers of failed institutions may subsequently find themselves in a less friendly market when looking to re-direct their business. Third, there is considerable inter-connectedness between the financial institutions participating in modern financial markets, so that the failure of one firm can affect many others. Fourth, a negative spiral may be created by falling asset prices and resulting liquidity constrictions. Fifth, falling asset prices and liquidity crises could cause institutions to become reluctant to extend credit.

Regulation may be legitimately imposed for a variety of other reasons. Disclosure is important for investor welfare, given the potential for an individual investor to undertake a less-than-adequate investigation before making an investment decision. Further, improving the quality and methods of information dissemination is important in protecting consumers from instances of unfair, predatory, and fraudulent behavior. Regulation is also useful in mitigating the risk associated with an investor giving money to an agent on his or her behalf, with only very limited control over how this investment is directed. Regulation is likewise important for opening up access to the financial markets, permitting new entrants to join established players, and thereby

increasing competition. Finally, regulation can be used effectively to limit the influence of moral hazard due to state-provided safety nets and, in particular, to ensure that firms and capital suppliers are not permitted to take advantage of taxpayer support and engage in undue risk-taking.

A final principle of regulation applies to all the other principles as well—the cost-benefit rule. That is, a given regulation should be promulgated only when its benefits outweigh its costs. Furthermore, if different kinds of regulation can achieve the same benefit, the regulation with the least cost should be adopted.

Specific Recommendations

1. Regulate on Principle. We believe market outcomes should not be overridden unless there is a specific justification for government regulation. Such justifications may include:

* externalities (the most important being systemic risk);
* correction of information asymmetries;
* principal-agent problems;
* preservation of competition; and
* limitation of moral hazard arising from government support of the financial system.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Reform (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009).[*]

2. Analyze the Costs and Benefits of Proposed Regulations. We believe a regulation should be promulgated only when its benefits outweigh its costs, and at the least possible cost.

This recommendation is broadly similar to reforms proposed in the following: Cong. Oversight Panel, Regulatory Reform (Jan. 2009); CRMPG III, Containing Systemic Risk (Aug. 2008).

[*] We have compared our 57 recommendations for regulatory reform with the proposals set forth in a number of other reports on financial regulation. A table reflecting our findings appears in Appendix 1.

Chapter 2: Reducing Systemic Risk

As mentioned in the previous chapter, the most compelling justification for financial regulation is the need to reduce externalities—particularly systemic risk. We now consider measures to reduce systemic risk across important sectors of the financial system. Specifically, we examine: (a) credit default swaps; (b) capital adequacy requirements; (c) the regulation of non-bank institutions (i.e., hedge funds, private equity firms, and money market mutual funds); and (d) the resolution process for insolvent financial institutions.

A. Credit Default Swaps

Credit derivatives are designed to measure and manage credit risks. Over the past decade, the international market for these instruments has grown dramatically. The principal instrument for credit derivatives is the credit default swap (CDS). CDS market participants pursue a number of objectives. First, CDSs allow lenders efficiently to hedge their exposure to credit losses. Second, a lender might decide to diversify the concentration of its loan portfolio by selling a CDS on a reference entity that it does not own. Finally, CDSs allow participants to take positive or negative credit views on specific reference entities.

Many assert the fall of Bear Stearns, the bankruptcy of Lehman Brothers, the government bailout of AIG, and the registration of several major broker/dealers as bank holding companies were in part a result of their activities in the CDS market. Consequently, some have questioned whether CDSs are bona fide financial instruments or merely a form of "gambling" that should be prohibited. In our view, CDSs are an important tool for measuring and diversifying credit risk. However, we recognize that the current CDS market has a significant potential for systemic risk through the chain reaction of counterparty defaults.

We believe centralized clearing is a crucial step toward reducing systemic risk on a global scale. In addition to limiting counterparty risk and eliminating obvious process and settlement problems, clearinghouses would enhance the liquidity and transparency of the CDS market by actively managing daily collateral requirements of—and the netting of positions between and among—clearinghouse members. In November 2008, the Federal Reserve Board, the CFTC, and the SEC signed a memorandum of understanding committing themselves to the establishment of centralized clearing organizations to consummate CDS transactions. The Treasury Department also recently pledged to subject all standardized OTC derivative contracts—particularly CDSs—to centralized clearing. Three U.S.-based entities are currently promoting centralized clearing solutions. European authorities have also undertaken centralized clearing efforts.

Although we support centralized clearing initiatives, key questions must be resolved. One of these is which particular CDSs would be subject to mandatory

clearing. In that regard, the Committee believes the most prudent course is erring on the side of over-inclusiveness. However, to the extent certain CDSs would remain outside the centralized clearing process, we agree with the Treasury Department's plans to subject them to robust disclosure and operational standards. Equally important, the Committee believes relevant counterparties should also compensate for the increased systemic risk of those contracts with a commensurate adjustment to their capital requirements. A second question is how many clearinghouses are optimal. Studies have demonstrated that, because of the systemic risk reduction due to multilateral netting, one or two centralized clearinghouses are more efficient than multiple clearinghouses. We therefore think that U.S., E.U., and other national policymakers should work to establish one or two clearing facilities that would operate globally.

A final question related to clearing is whether these global clearinghouses should be required to use transaction as well as quote data to mark the positions of their participants. The Committee believes that regulators, clearinghouses and other market participants deserve a complete picture of the market, made possible only when quotes are supplemented by post-trade transaction reporting in real-time. In short, we believe the quality of trade prices is a public good. To that end, the Committee recommends that regulators facilitate the adoption within the CDS market of an information-gathering computer model resembling the Trade Reporting and Compliance Engine (TRACE).

Apart from mandating centralized clearing for certain CDSs, the Treasury Department recently announced its intention to encourage greater use of exchange-traded instruments. This would aid in price formation and improve liquidity management for traders and the clearinghouse. The Committee would go even further, recommending that U.S., E.U., and other policymakers *require* the listing and trading of certain standardized high-volume CDSs, indexes, or single names on exchanges. We recognize, however, that there are several potential obstacles to the trading of CDSs on exchanges.

One issue is that CDSs traditionally have been customized products. This is particularly true with respect to size, maturity, and price. However, standardization has significantly increased and we would only recommend exchange trading for the most standardized contracts. There is the further problem that the trading volume in many single name CDSs may not be sufficient to support a trading business on an exchange, and we would thus only require the most heavily traded contracts to be traded on an exchange. Another concern is that the introduction of exchange-traded contracts would put CDSs into the hands of investors for whom credit derivatives are entirely inappropriate—CDSs may be perceived as far less complex and risky than they actually are. The potential loss of anonymity may be yet another obstacle to bolstering participation in an exchange-based CDS market. Finally, there could be resistance from the dealer community due to the likelihood of lower spreads resulting from exchange trading. Ultimately, we believe these hurdles can be surmounted.

We conclude that systemic risk arising from CDS transactions can be significantly reduced by a robust OTC market with centralized clearing and a TRACE-like reporting system that is complemented by a class of highly-liquid, exchange-traded CDSs. A complementary market for exchange-traded CDSs would provide a venue for broader participation for investors. Exchange trading would bring more price discovery, increased liquidity, and increased transparency to CDS transactions. While the clearinghouses have already made major strides in accomplishing these objectives, even more could be done through exchanges. With the real-time availability of both pre-trade quotes and post-trade contract prices, exchanges would provide an important source of price discovery that would complement the OTC market. Clearinghouses would additionally benefit from the increased liquidity stemming from exchanges in situations where members default and they are forced to close out their loss positions. Thus, exchanges would likely strengthen the role of clearinghouses in reducing systemic risk.

Specific Recommendations

3. Do Not Prohibit CDS Contracts. We strongly believe that CDSs are an important tool for measuring and diversifying credit risk. In that respect, a well-functioning CDS market can prevent—rather than produce—future global financial shocks. Consequently, we believe efforts by policymakers to prohibit CDS contracts altogether, or in part, would be counterproductive in reducing systemic risk. That said, we believe it is important for policymakers to study the impact of certain practices in the CDS market on corporate issuers and other relevant constituencies.

This recommendation is broadly similar to reforms proposed in the following: NASAA, Regulatory Reform Roundtable (Dec. 2008).

4. Mandate Centralized Clearing. We acknowledge that the CDS market has serious deficiencies—particularly when it comes to systemic risk. Among its shortcomings are its excessive counterparty risk, a lack of liquidity, and a lack of transparency in terms of transaction reporting. We therefore support the development of existing private sector initiatives, as well as the Treasury Department's recent recommendation, for greater centralized clearing. We also encourage thoughtful discussion of whether all, or only certain, CDSs should be subject to mandatory clearing.

This recommendation is broadly similar to reforms proposed in the following: NASAA, Regulatory Reform Roundtable (Dec. 2008); The de Larosière Group, EU Financial Supervision (Feb. 2009); ICMBS, Fundamental Principles (Jan. 2009); U.K. FSA, Turner Review (Mar. 2009); Group of 30, Financial Reform (Jan. 2009); PWG, Progress Update (Oct. 2008); G-20, Enhancing Sound Regulation (Mar. 2009); CRMPG III, Containing Systemic Risk (Aug. 2008); FSF, Enhancing Market and Institutional Resilience (Oct. 2008).

5. Increase Capital Requirements for Non-Centrally Cleared CDSs. To the extent some CDSs would remain outside the centralized clearing process, we believe relevant counterparties should compensate for increased systemic risk of these contracts with a commensurate adjustment to their capital requirements.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Reform (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009).

6. Improve Netting Capabilities. Although we think existing clearing initiatives represent an important first step toward the reduction of systemic risk, we suggest that policymakers consider applying mandatory clearing rules to other standardized types of derivatives beyond CDSs, as the clearing of all derivatives in one or two facilities is more efficient than the separate clearing of CDSs.

This recommendation is broadly similar to reforms proposed in the following: U.K. FSA, Turner Review (Mar. 2009).

7. Establish 1-2 International Clearing Facilities. We also believe that the establishment of one or two international clearing facilities subject to vigorous oversight would be the most effective means of reducing systemic risk on a global basis. We thus encourage U.S., E.U., and other national policymakers to work toward this common goal. Policymakers should consider whether there could be beneficial interactions between these global clearinghouses that would allow for even further netting.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Reform (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009).

8. Adopt a CDS Reporting System. The Committee shares the Treasury Department's goal of requiring volume and position data to be made publicly available. To achieve that objective, the Committee recommends that regulators facilitate the adoption within the CDS market of a transaction reporting system, similar to the TRACE system for corporate bonds.

This recommendation is broadly similar to reforms proposed in the following: Cong. Oversight Panel, Regulatory Reform (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009); CRMPG III, Containing Systemic Risk (Aug. 2008).

9. Require a Class of Exchange-Listed CDSs. Rather than eliminate the OTC market, the Committee recommends that legislation be passed *requiring*—not simply encouraging—the listing and trading of certain standardized, high-volume CDSs on exchanges.

This recommendation is broadly similar to reforms proposed in the following: Cong. Oversight Panel, Regulatory Reform (Jan. 2009).

B. Regulation of Capital

Historically, capital regulation has been the dominant regulatory mechanism for constraining bank risk taking. By providing a cushion against losses, capital is supposed to act as a first line of defense against bank failures and their knock-on consequences for systemic risk. Yet, the existing capital regime—effectively established by the Basel Capital Accords—failed to prevent several of the largest U.S. and European financial institutions from failing or becoming distressed to the point where they needed to be bailed out by the government. Accordingly, we consider major structural

weaknesses in the regulatory capital framework, focusing on institutional coverage, calibration, timing effects, the risks of large institutions, framework design, and capital composition.

Institutional Coverage. Until the crisis, it was well understood that firms that were not regulated as banks (or thrifts), and subject to capital regulation, were excluded from the Fed's safety net. The Fed's emergency measures during the crisis have upended this understanding. These measures may have been justified by the exigent circumstances of the crisis, but they have created structural moral hazards and level playing field impediments to the extent that institutions with access to the Fed safety net are not subject to capital regulation. Looking beyond the crisis, we need to realign the institutional costs and benefits of capital regulation.

Calibration. Despite the critical role capital plays in the regulatory framework, existing capital requirements were set without an explicit link to a target solvency standard for individual banks or for the system as a whole. While an understandable reaction to the over-leveraging of the system would be to raise capital requirements across the board, the lack of empirical research on capital calibration suggests that the costs and benefits of higher bank capital requirements are uncertain.

Timing Effects. Another feature of the current regulatory capital framework is that minimum capital levels are fixed, whereas bank losses (or adverse earnings events) vary considerably over the economic cycle. The implication is that solvency standards are not constant during an economic cycle but are dependent on the "state of the world." The solvency level of a given capital requirement depends critically on the period over which it is calibrated and assumptions of the state of the world going forward. Given the cyclical nature of bank losses, the impact of a fixed capital requirement is to force banks to raise capital in the downturn as losses mount and capital levels are depleted. A key revision to the existing capital framework should be a shift to time-varying capital requirements. An alternative to letting capital requirements fall during a downturn would be to allow, or require, banks to hold some form of contingent capital that would be callable as losses mount.

Systemically Important Institutions. The crisis, so far, has disproportionately affected the largest U.S. financial institutions. At the same time, the initial TARP capital injections were also concentrated on the largest U.S. banks. Large institutions pose unique risks to the government because of their systemic consequences. As a result, large or important banks should be required to hold a larger capital buffer.

Framework Design. While Basel II was designed as a three pillar framework, the overriding emphasis of Basel II to date has been on minimum capital charges for credit, market, and operational risks imposed under Pillar I. Ironically, at the moment when capital has become an issue of survival for U.S. banks, the regulators seem to have backed away from Pillar I and imposed a Pillar II stress test to determine how much additional capital banks need to withstand the current economic downturn. Given the

inherent limitations of a rules-based approach, an enhanced Pillar II approach is not only appropriate in a crisis situation, but reflects a necessary rebalancing of the Basel framework. At the same time, a case can be made for greater reliance on Pillar III market mechanisms such as mandatory issuance of subordinated debt that would not be bailed out combined with a more robust disclosure regime of bank risks.

Capital Composition. While most of the debate about the Basel framework has focused on the risk assessment of individual banks—which is reflected in the denominator of the Basel capital ratio—the crisis has also raised new concerns about what "counts" as capital in the numerator of the ratio. At present the regulatory definition of Tier I capital is inconsistent with tangible common equity (TCE), the key accounting measure of shareholders' exposure to losses. It is also different from Tier I Common, a new definition of capital used in the "stress test." We need a new and consistent definition of capital going forward. As we state in Chapter 4, *infra*, this standard need not be consistent with U.S. GAAP.

Specific Recommendations

10. Adopt Standards for Institutional Coverage. The Committee believes that institutions that have the ability to borrow from the Fed in its lender of last resort role should be subject to some form of capital regulation. Such rules should differ for different activities, e.g., insurance versus banking. Capital rules should be the quid pro quo for protection by the Fed safety net.

11. Leave "Steady State" Risk-Based Capital Calibration Unchanged Pending Further Study. The Committee cautions against drawing the hasty conclusion that overall levels of bank capital should be raised (aside from the stress test capital requirements). There is a dearth of empirical work on capital regulation, and the costs and benefits of raising capital are uncertain. On the "do no harm" theory, we believe the most prudent approach for the present is to leave the "steady state" capital calibration unchanged absent compelling evidence that an increase in overall capital levels is warranted.

This recommendation is broadly similar to reforms proposed in the following: G-20, Enhancing Sound Regulation (Mar. 2009); CRMPG III, Containing Systemic Risk (Aug. 2008).

12. Adopt Counter-Cyclical Capital Ratios. The Committee believes counter-cyclical capital ratios can be achieved in two ways. First, we would encourage dynamic provisioning. This could be done without conflicting with existing securities regulation or accounting standards by providing that additional reserves over "known" losses did not run through the income statement but rather constituted a special appropriation of retained earnings. Secondly, one could require some form of contingent capital. Two promising proposals for contingent capital should be explored—one for catastrophic

insurance based on a systemic trigger,[1] and another for reverse convertible debentures based on a bank-specific market value trigger.[2]

This recommendation is broadly similar to reforms proposed in the following: The de Larosière Group, EU Financial Supervision (Feb. 2009); Cong. Oversight Panel, Regulatory Reform (Jan. 2009); ICMBS, Fundamental Principles (Jan. 2009); U.K. FSA, Turner Review (Mar. 2009); Group of 30, Financial Reform (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009); FSF, Enhancing Market and Institutional Resilience (Oct. 2008).

13. Hold Large Institutions to Higher Solvency Standards. Given the concentration of risks to the government and taxpayer, we recommend that large institutions be held to a higher solvency standard than other institutions, which means they should hold more capital per unit of risk. As a starting point, we propose a progressive safety margin that would subject U.S. "core" banks (e.g., those with assets greater than $250 billion) to an additional capital buffer above current well-capitalized standards.

This recommendation is broadly similar to reforms proposed in the following: CFR, Reforming Capital Requirements (Apr. 2009); Cong. Oversight Panel, Regulatory Reform (Jan. 2009).

14. Focus Basel II Changes on Strengthening Pillars II and III. The Committee believes that enhancements to the Basel II framework should come primarily from bolstering Pillar II supervision and Pillar III disclosure and market mechanisms, rather than relying on Pillar I to "get it right." We also think that serious consideration should be given to requiring banks to issue truly subordinated debt (not capable of being bailed out) combined with more robust disclosure of bank risk.

This recommendation is broadly similar to reforms proposed in the following: G-20, Enhancing Sound Regulation (Mar. 2009); CRMPG III, Containing Systemic Risk (Aug. 2008); IIF, Market Best Practices (July 2008).

15. Maintain and Strengthen the Leverage Ratio. We recognize that in the run-up to the crisis, the capital requirement that arguably performed the best was also the simplest metric—the leverage ratio. The Committee thus believes that a simple leverage ratio constraint should be retained in the United States, and, as proposed by the U.K.'s Financial Services Authority and the Financial Stability Forum (now the Financial Stability Board), adopted internationally. Consideration should also be given to whether the leverage ratio should be recalibrated in terms of common equity rather than total Tier I capital, as presently formulated.

This recommendation is broadly similar to reforms proposed in the following: Cong. Oversight Panel, Regulatory Reform (Jan. 2009); U.K. FSA, Turner Review (Mar. 2009); Group of 30, Financial Reform (Jan. 2009).

[1] Anil K. Kashyap et al., *Rethinking Capital Regulation*, *prepared for* Fed. Res. Bank Kansas City symposium on "Maintaining Stability in a Changing Financial System," Jackson Hole, Wyo. (Aug. 21-23, 2008), *available at* http://faculty.chicagobooth.edu/anil.kashyap/research/rethinking_capital_regulation_sep15.pdf.
[2] Mark J. Flannery, *No Pain, No Gain? Effecting Market Discipline via Reverse Convertible Debentures*, *in* Capital Adequacy Beyond Basel: Banking Securities and Insurance (Hal S. Scott ed., Oxford Univ. Press 2005).

C. Regulation of Non-Bank Financial Institutions

Hedge Funds

Although hedge funds have been around for some sixty years, it was not until the 1990s that these private pools of capital became major players in the global financial markets. During that period, the hedge fund industry grew more than a dozen-fold, from $38.9 billion in 1990 to $536.9 billion in 2001. By the summer of 2008, the industry had reached an apex of some 10,000 hedge funds with approximately $2 trillion under management. We believe the key to considering hedge fund regulation is a non-superficial understanding of the role hedge funds play in the global financial markets—an understanding not only of the risks they pose, but also of the risks they mitigate.

The unique features of hedge funds have enabled them both to take on risks otherwise borne by traditional financial institutions, and to bring greater efficiency to the capital markets. On that account, hedge funds have in fact contributed to the overall stability of the financial system. Because hedge funds frequently bet against the market by shorting financial instruments and executing other contrarian strategies, they play a key role in reducing the emergence of financial bubbles that may culminate in market instability. Likewise, their active participation in the credit derivatives market enables them to reduce the risks borne by institutions closer to the center of the financial system. Finally, arbitrage strategies used by hedge funds and the sheer volume of their trading activity promote greater efficiency in the capital markets.

Nonetheless, we recognize that some hedge funds may pose a systemic risk to the financial system. That is particularly the case when a fund becomes very large, unsustainably levered, and exposes a number of large financial institutions to increased counterparty risk. Any effective regulatory regime should thus aim to curb this systemic risk while still enabling the hedge fund industry to continue to perform its critical role in providing liquidity, absorbing financial risks, and increasing the efficiency of the capital markets.

Specific Recommendations

16. Consider the Critical Role of Hedge Funds. The Committee believes any increased regulation of hedge funds for systemic risk must take into account the important role hedge funds play in providing liquidity, absorbing financial risks, and increasing the efficiency of the capital markets. Although we support hedge fund registration, we reject recent proposals seeking to force hedge funds publicly to disclose information that is otherwise proprietary. We likewise reject the imposition of bank-like capital requirements and other leverage requirements that would be ineffective and unsuitable for the diverse hedge fund industry.

This recommendation is broadly similar to reforms proposed in the following: NASAA, Regulatory Reform Roundtable (Dec. 2008); The de Larosière Group, EU Financial Supervision (Feb. 2009).

17. Adopt Confidential Reporting. The Committee recommends the adoption of a confidential reporting requirement pursuant to which each hedge fund would be required to register and provide a regulator with information relevant to the assessment of systemic risk. The statutory definition of "hedge fund" for purposes of this requirement should be consistent with existing statutory exemptions, and should include independently-operated funds as well as those that are part of or affiliated with investment banks and other financial institutions. Confidential reporting would involve information addressing, among other things, a fund's liquidity needs, leverage, return correlations, risk concentrations, connectedness, and other relevant sensitivities. However, the regulator would bear the burden of demonstrating its need for the required information as well as its ability to use that information effectively. The regulator also would have limited authority to take prompt action in extreme situations where a hedge fund poses a clear and direct threat to market stability.

This recommendation is broadly similar to reforms proposed in the following: G-20, Enhancing Sound Regulation (Mar. 2009).

18. Provide the Fed with Temporary Regulatory Authority. Until the establishment of the USFSA, as described in Chapter 6, we recommend the Fed be given temporary responsibility for receiving and evaluating confidential information supplied by hedge funds. We think the recent proposal by the Treasury Department to require confidential disclosures by regulated hedge funds is a step in the right direction.

19. Facilitate Information Sharing Among National and Supranational Regulators. We encourage non-U.S. authorities to adopt similar requirements for hedge funds and to facilitate regulatory cooperation since the sharing of information between and among national and supranational regulators will result in a more complete picture of the systemic risks posed by individual hedge funds.

This recommendation is broadly similar to reforms proposed in the following: G-20, Enhancing Sound Regulation (Mar. 2009); GAO, Hedge Funds (Jan. 2008).

20. Introduce Structural Reforms to the Industry. The Committee encourages research into structural reforms that would increase the effectiveness of hedge fund operations and reduce an individual fund's susceptibility to becoming an instability risk to the financial system.

This recommendation is broadly similar to reforms proposed in the following: ICMBS, Fundamental Principles (Jan. 2009); U.K. FSA, Turner Review *(Mar. 2009).*

Private Equity

Private Equity (PE) firms are partnerships that acquire ownership stakes in cash-generative commercial businesses like retailers, industrial companies, computer firms, and health care concerns. Because PE funds do not normally borrow, extend credit, serve as derivatives counterparties, or perform other functions normally associated with depository institutions, they could hardly be considered part of the oft-cited "shadow banking system." The shadow institutions—including largely unregulated broker-

dealers, insurance companies, and banks' own off-balance sheet vehicles—played a central role in the current crisis because of the sheer magnitude of their borrowing, the short-term nature of their funding, and the volatility of the financial assets that borrowing was used to finance. All of these features of the current crisis are absent when it comes to PE-sponsored operating companies and nonfinancial businesses more generally.

To be sure, PE sponsors made greater use of debt to finance deals during the 2005-2007 period than they had in previous years, a fact that has caused some analysts to express concern that defaults at PE-sponsored companies will increase dramatically in the coming years. While some defaults are inevitable considering the difficult macroeconomic environment and refinancing constraints facing all companies, these companies have several important advantages relative to their public (or non-PE) competitors. First, Moody's Investors Service has found that troubled firms "backed by private equity have access to capital sources unavailable to strategic operators facing similar market constraints." Secondly, recent research completed by the World Economic Forum found that during periods of acute financial stress, productivity growth at PE-sponsored companies was 13.5 percentage points higher than productivity growth at comparable non-PE businesses. PE-owned companies also have flexibility provided by heavily involved boards that can act decisively to avoid a crisis. Finally, it is important to recognize that the failure of a portfolio company is unlikely to have knock-on effects to the larger financial system. Portfolio companies are broadly diversified across industries and neither PE funds nor portfolio companies are cross-collateralized. These factors, taken as a whole, demonstrate that PE firms pose little in the way of systemic risk. Apart from an information collection requirement to demonstrate that a given fund operates as a traditional buyout fund, we do not see a need for further regulation of this industry.

In addition, given the need for more capital in the banking and thrift sectors (depositories), the Committee endorses further relaxation on the ability of PE firms to acquire depositories. Under the Bank Holding Company Act (BHCA) an entity cannot own more than 25% of any class of voting securities without becoming a regulated bank holding company. Moreover, there is the issue of the Fed's "source of strength" doctrine, whereby an acquirer—a bank holding company (BHC)—must agree to protect the capital position of the bank, even with capital from its non-banking subsidiaries. The Savings and Loan Holding Company Act (SLHCA), like the BHCA, prohibits companies from controlling a thrift when the acquiring entity is engaged in non-financial activities. Both statutes present substantial barriers to PE firms seeking to provide needed capital to banks.

Specific Recommendations

21. Limit Regulation to Information Collection. The Committee believes that any new regulation of PE—beyond an information collection requirement to demonstrate that

the fund operates as a traditional buyout fund—would be difficult to defend intellectually, and thus believes such regulation would be undesirable.

This recommendation is broadly similar to reforms proposed in the following: CRMPG III, Containing Systemic Risk (Aug. 2008).

22. Relax Acquisition Standards under the BHCA and SLHCA. Given the need for more capital and talented management in the banking and thrift sector, the Committee recommends approval of the acquisition of banks by one or more PE funds without the need for a source of strength commitment extending beyond the banking silo of the PE fund complex. We further recommend amending the BHCA and SLHCA to permit a PE firm, whether or not it is managing or investing in commercial companies, to acquire a thrift or bank, provided there is adequate separation between the banking and commercial activities of the PE firm.

Money Market Mutual Funds

Since they began operations in the 1970s, money market mutual funds (MMMFs) have come to play an increasingly important role in the U.S. money markets. Offering a very low-risk, stable investment mechanism for retail as well as sophisticated investors, MMMFs also provide a key source of short-term liquidity for the secondary markets. A distinguishing feature of MMMFs is their historically stable share price, usually $1.00 per share, which has facilitated their use as cash management devices as an alternative to banks. By law, MMMFs are limited to investing in high-quality, low risk assets with very short maturities, to best limit risks and thereby maintain this stable share price.

Despite their low-risk profile, the financial crisis, as it escalated in the wake of Lehman's collapse, created tremendous instability for money market funds, drying up the flow of short-term liquidity they provided to the market. The Primary Reserve Fund was shown to have been exposed to increasingly risky Lehman commercial paper that, while giving it the competitive advantage gained from offering higher yields to its investors, nevertheless set the stage for large losses once Lehman fell. Significantly, as a result of the losses and the rush by investors to redeem their investments, the Primary Reserve Fund "broke the buck," prompting further runs on other MMMFs. As a result of this increasing spread of systemic risk, the U.S. Government through the Treasury Department decided to guarantee the accounts of shareholders in MMMFs existing on the date the guarantee was issued.

The crisis has highlighted the need for a reform of the regulatory structure underpinning MMMFs. In particular, we recommend that MMMFs adopt better crisis management and more robust mechanisms for risk monitoring, transparency and analysis. In this regard, we endorse a number of proposals that recently have been put

forward by the Investment Company Institute.[3] In addition, we note the possibility that the government support that is currently provided to guarantee certain shareholder accounts in MMMFs could continue into the future—either explicitly or implicitly—in view of their collective systemic importance. We believe that MMMFs must ultimately be required to compensate the taxpayer for any such protection provided going forward, and we invite policymakers to give further thought to formulating a suitable fee structure. As an alternative, there is a need to explore whether MMMFs might protect themselves through purchasing credit derivatives on themselves or issuing credit-linked notes that would absorb losses up to a certain percentage of NAV.

Specific Recommendations

23. Introduce Mechanisms for Crisis and Risk Management. The crisis has highlighted the systemic impact that MMMF operations can have and the requirements for regulatory improvements to reduce this risk. Accordingly, we recommend that procedures be introduced for better crisis management, transparency, risk evaluations, and monitoring. In that regard, we endorse the proposals recently advanced by the Investment Company Institute.

This recommendation is broadly similar to reforms proposed in the following: ICI, Money Market Report (Mar. 2009).

24. Study How to Compensate for Potentially Ongoing Taxpayer Support. We recommend that policymakers give further thought as to whether explicit or implicit government guarantees provided to support certain shareholder accounts in MMMFs will be available going forward in the event of a systemic crisis and, if so, determine how an appropriate government compensation structure can be devised. We also recommend studying the possible alternative of MMMFs protecting themselves by purchasing credit derivatives or issuing credit-linked notes that would absorb losses up to a specified percentage of NAV.

D. Resolution Process for Failed Financial Institutions

Recent market events have demonstrated both the strengths and weaknesses of current financial company insolvency regimes. Certain insolvencies have had a far greater systemic effect than others, partially because the law that governs the insolvency of a financial company depends on the company's form of organization. Specifically, the insolvency of banks insured by the Federal Deposit Insurance Corporation (the FDIC) is governed by the Federal Deposit Insurance Act (the FDI Act), the insolvency of registered broker-dealers is governed by the Securities Investor

[3] Inv. Co. Inst., *Report of the Money Market Working Group* (Mar. 17, 2009).

Protection Act (SIPA), and the insolvency of most other financial companies is governed by the U.S. Bankruptcy Code (the Code).

The Committee believes the FDI Act enables regulators to more effectively combat systemic risk. Notably, it creates a flexible insolvency regime that provides for pre-resolution action, receivership and conservatorship, and many methods of resolution, including liquidation, open bank assistance, purchase and assumption transactions, and the establishment of bridge banks. This regime has been very successful in promoting stability in the banking system by reducing uncertainty for depositors and counterparties while successfully mitigating losses for banks, counterparties and the deposit insurance fund. However, the FDI Act regime is available only to resolve banks, excluding from coverage many systemically significant financial companies, including bank holding companies. One significant aspect of the FDI Act, as compared to the Code, is that it permits the transfer of certain derivatives and other qualified financial contracts (QFCs), to third parties, thus eliminating the downward spiral of prices that can result from a rush to liquidate collateral.

Recently, the Treasury proposed the creation of an additional insolvency regime with powers similar to those available under the FDI Act that can be invoked when a financial company's insolvency poses a systemic risk to market. A key feature of this proposal is its *ad hoc* determination of systemic risk. Companies are not designated as systemically significant in advance—instead, the relevant issue is whether the failure of a particular institution, at that particular point in time, would have systemic effects. This approach has the virtue of avoiding the moral hazard that would result from advance designation. But it also creates uncertainty as to which particular procedure would be used to deal with an insolvent institution.

While the Treasury proposal widens the scope of financial companies subject to an FDI Act-like resolution authority, it, too, excludes from coverage many systemically significant financial companies. Specifically, the proposed regime would apply to the holding companies of regulated entities (such as banks and broker-dealers) and many of their subsidiaries, but not the regulated entities themselves (which would continue to be covered by the FDI Act or SIPA). Also excluded from coverage are hedge funds, PE firms, and other non-holding company financial companies.

While we support Treasury's call for reform, we believe more is necessary. To that end, we recommend the implementation of a comprehensive Financial Company Resolution Act, applicable to all financial institutions, based on the FDI Act but drawing on important elements of the Code, SIPA and the Treasury proposal, that is applicable to *all* financial companies.

Similar national efforts to reform financial company insolvency regimes are underway abroad. However, attention also needs to be paid to the resolution of cross-border financial companies, particularly banks. International working groups at the World Bank, IMF, Bank for International Settlement, and elsewhere are currently

considering different approaches to the issue. An effective international framework for resolving cross-border banks would reduce the pressure on national banking regulators to ring fence the assets of a branch or subsidiary of a foreign bank in the event of its insolvency. This work is important and should be supported.

Specific Recommendations

25. Establish a Single Insolvency Regime Applicable to *All* Financial Companies. The Committee recommends the creation of a comprehensive Financial Company Resolution Act, which would be applicable to *all* financial companies—not just those whose failure would be systemically important. Entity-specific provisions from existing insolvency regimes, such as depositor preference for banks and protections for the customers of broker-dealers and commodity brokers, should be incorporated into the proposed regime.

26. Provide Adequate Regulatory Flexibility. A single regulator should be vested with these resolution powers, preferably a newly established U.S. Financial Services Authority, as described in Chapter 6. The full range of resolution powers provided for under the FDI Act should be available under the new regime. At the same time, financial companies now eligible for protection under the Code should continue to be able to petition for reorganization as provided for under Chapter 11 of the Code, provided that the regulator is always empowered to convert such a proceeding into a receivership or conservatorship.

27. Apply the Least Cost Test. All resolutions, other than those that pose a systemic risk, should be subject to a least cost test. QFC transfer, as a low- or no-cost resolution strategy, should also be available in most cases.

28. Authorize Enhanced Resolution Powers for Systemic Risk. Enhanced resolution powers, including recapitalization, extending loans or guarantees, and "open institution assistance," should be available to the designated regulator if the risk of insolvency of a particular financial company would pose a systemic risk.

29. Consider Financing Methods that Protect the Taxpayer. In creating a comprehensive insolvency regime of this kind, we urge policymakers to give adequate consideration to the methods of financing resolutions and creating incentives for cost effective resolutions. We think that, when enhanced resolution powers are employed for purposes of mitigating systemic risk, expenses incurred by the government should be recouped by imposing an *ex post* assessment on all covered financial companies. We believe this is the proper approach for financing systemically significant insolvency, the cost and occurrence of which are very difficult to predict. Under the Committee's proposed insolvency regime, we anticipate that most non-systemically significant resolutions will be low-cost (i.e., the financial company will be liquidated or purchased

by another institution). However, thought should be given to how any expenses incurred during such a resolution should be provided for.

30. Consolidate or Coordinate Cross-Border Insolvency Proceedings. The insolvency of cross-border, multi-entity financial companies should be subject to a special, global regime or the insolvency proceedings occurring in various jurisdictions should be tightly coordinated. We endorse the work in this regard by the World Bank, IMF, Bank for International Settlement's Cross-Border Bank Resolution Group, and others.

Chapter 3: Reforming the Securitization Process

Securitization has played a significant role in the evolution of consumer and business finance. As discussed in Chapter 1, however, the global financial crisis has largely devastated the markets for securitized debt. Perhaps more importantly, the crisis has exposed critical flaws in the current operation of the securitization process. We believe there are several important steps to restoring confidence in the securitized debt markets. The first is to ensure that the incentives of the originators of mortgages and other consumer loans are properly aligned with the incentives of other participants in the securitization process. Next, we believe that increasing loan-level disclosures represents another, critical step toward meaningful reform. A final, crucial step in restoring confidence in the securitization markets is to regulate credit rating agencies (CRAs) to ensure the quality and integrity of the ratings regime.

A. Incentives of Originators

Insufficient alignment of interests between originators and investors in securitized residential mortgage assets, coupled with widespread use of nontraditional mortgage products and high risk lending practices, played a central role in creating the financial crisis. Many fault the widespread use in the United States of the "originate-to-distribute" model—making residential mortgage loans to borrowers for the purpose of selling them to investors in the capital markets via securitization. According to this view, incentives between lenders and investors diverged markedly as the former were not required to retain a sufficient portion of the risk associated with the loans that they securitized. As a result, lenders created unproven new mortgage products, relaxed credit standards, increased loan volumes and focused on earning fees from their loan origination and servicing activities rather than making high-quality, profitable loans. These effects were most visible in the subprime market but extended to mid-prime (Alt-A) and prime borrowers as well, occurring in both first-lien and second-lien products. To bring incentives between lenders and investors back into alignment, many regulators, academics and other commentators have called for originators to have more "skin in the game" going forward. Although incentive alignment issues are common to all types of securitization, our primary focus is on residential mortgage securitizations.

We posit that the principal avenues for aligning the economic interests of originators more closely with those of investors are (1) restricting or prohibiting originators from using certain high risk mortgage products and lending standards, (2) strengthening originator representations, warranties, and repurchase obligations, and (3) increasing originator risk retentions.

In the United States, policymakers have taken substantial steps to curtail high-risk mortgage products and lending practices. Banking regulators have moved beyond mandating greater risk management techniques to requiring that depository institutions adopt more robust credit underwriting procedures. In 2008, the Fed adopted amendments to Regulation Z prohibiting lenders from making higher-priced loans, such as those to sub-prime customers, without regard to a borrower's ability to repay from income and assets other than the home's value. Legislation currently working its way through the House of Representatives, the Mortgage Reform and Anti-Predatory Lending Act of 2009, would go even further, creating strong incentives—in the form of expanded legal liability and mandatory minimum risk retentions—for lenders to avoid the high-risk mortgage products and lending practices that led to the financial crisis. Although many important issues remain open in connection with the proposed House legislation, central to reforming the mortgage credit process under all of these initiatives is the requirement that lenders assess, verify and document the ability of borrowers to repay the loans that they are seeking. Many other new requirements also would apply.

The representations, warranties, and repurchase obligations made or undertaken by originators in the agreements through, which securitization transactions are effected also constitute a potentially important alignment tool. Representations, warranties, and repurchase obligations serve a number of important purposes, including protecting the integrity of the data and other information on which securitizations are based. For a number of reasons, however, such contractual provisions have proven to be of little practical value to investors during the financial crisis as many originators went bankrupt or resisted efforts to enforce these provisions in order to preserve their own survival.

Mandating that originators retain a specified portion of the risk associated with the assets they are securitizing—keeping "skin in the game"—may be the farthest reaching and complex proposal currently under consideration. A growing body of empirical evidence supports the view that the ability to securitize residential mortgages, with relative ease prior to mid-2007, adversely affected lending standards as originators believed they would not be exposed to asset underperformance over the long term. To combat this misalignment, the European Commission and the U.S. House of Representatives have proposed different 5% minimum risk retention requirements. There are, however, a number of issues with any such proposals, including whether to tailor risk retentions to individual asset classes, to permit retentions to be hedged in some way, and to cast retentions as first loss layers, pro rata sharing of risk throughout a securitization's capital structure or some other form. The impact of minimum risk retention requirements on financial institutions and the economy is uncertain and

potentially significant given the large size of the securitized residential mortgage market. Lenders would be exposed to higher concentrations of risk to the housing sector and have to maintain additional capital in respect of their higher retentions, potentially limiting the supply of housing credit capacity and increasing its cost to consumers. Mandatory risk retentions also could lessen competition and consumer choice in mortgage providers. Many mortgage finance companies that recycle their capital and depend on warehouse or similar lines of credit—that must be repaid from securitization proceeds—may not be able to complete the progressive capital raises that would be necessary to remain in business.

Specific Recommendations

31. Prohibit or Restrict High-Risk Mortgage Products and Lending Practices from Entering the Securitization Market. Policymakers should prohibit or restrict high-risk mortgage products and lending practices, particularly insofar as access to the securitization markets is concerned. Regulators must go beyond merely pushing for better risk management practices and prescribe substantive rules governing residential mortgage products and underwriting. Such rules, however, should not eliminate product or lending practice diversity. Although important issues remain open, substantial progress is already being made by legislators and regulators. We believe no/low documentation residential mortgage loans—in which borrower income and assets are not adequately verified prior to the extension of credit—should be deemed unsafe and unsound practices, rendering them ineligible for securitization. In addition, we believe legislators and regulators should continue to assess the suitability of mortgage products and lending practices generally and for the securitization market. In particular, we recommend further study of approaches for better managing the risks associated with high loan-to-value ratios, home equity withdrawal through second-lien loans and risk layering to determine whether these practices should be prohibited or restricted in connection with securitization or otherwise.

This recommendation is broadly similar to reforms proposed in the following: NASAA, Regulatory Reform Roundtable (Dec. 2008).

32. Strengthen Representations, Warranties, and Repurchase Obligations. We support the development of broader, stronger representations, warranties, and repurchase obligations that represent a minimum industry standard, but this approach by itself is unlikely to achieve the desired alignment of interests between originators and investors. The principal limitation of relying on contractual rights to achieve such alignment is that they are contingent in nature, subject to potentially lengthy litigation to vindicate and highly dependent for their value on the originator's financial condition after events have already occurred. The ex post nature of contractual protections places inherent limitations on the degree of reliance that should be placed on them and their value as alignment tools.

33. Explore Minimum Risk Retention to Improve Incentive Alignment. We support efforts to explore measures to align the economic interests between originators and investors by requiring the former to retain a meaningful portion of the risk associated with the assets that they securitize. In our view, any minimum risk retention requirement must address (i) the risk and loss characteristics of the individual asset class to which it relates (i.e., not one standard for all asset classes), (ii) the amount of risk to be retained, (iii) where such retention resides in the securitization capital structure (e.g., first loss or pro rata), (iv) the duration such retention must be held, and (v) the extent to which the retained risk can be hedged. Allowing regulators the flexibility to modify and adapt minimum risk retention requirements over time as circumstances change is also desirable. To facilitate risk diversification, there should be coordination on such requirements at an international level so that institutions in one country can invest in securitizations originated in other countries. We do not believe, however, that present proposals for 5% net economic loss retention make sense for all securitizations. Further, they may have broad negative effects on the economy, including greater concentration of risk for financial institutions, higher capital requirements for lenders, increased borrowing costs for consumers, and reduced competition between depository institutions and finance company lenders.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Reform (Jan. 2009); The de Larosière Group, EU Financial Supervision (Feb. 2009).

34. Enhance Disclosure of Retained Economic Interests. To enable investors to assess the degree of alignment they have with originators, regulators should require sponsors and originators to disclose the following information in public and private securitization offerings:

* the amount of economic interest they will maintain in the securitization;
* the location in the capital structure of all such retained economic interest;
* the duration for which the economic interest will be retained;
* the extent to which the sponsor or originator is able and intends to hedge such retained economic interest during the holding period; and
* the amount of fee or other income to be earned by the sponsor or originator over the expected and legal life of the securitization.

B. Disclosure

The current financial crisis originated in the securitized debt markets, and securitized debt instruments issued and held by U.S. banks continue to drive significant writedowns. How did so many sophisticated investors—and issuers—so badly misprice the risk associated with securitized mortgage debt? One reason is that the disclosures made in connection with the issuance of mortgage-related securitized

debt—residential-mortgage backed securities (RMBS) and mortgage-related collateralized debt obligations (CDOs)—were inadequate, making it difficult for investors to independently assess credit risk. We analyze the availability of granular loan-level data both at issuance and on an ongoing basis with respect to RMBS and CDOs.

Under existing SEC regulation AB—addressing disclosure in connection with asset-backed securities—dealers issuing mortgage-backed securities may, but are not required to, provide granular loan-level data regarding the underlying mortgages. Using Inside Mortgage Finance, we identified the 3 largest issuances for each quarter of 2006 for three different types of RMBS—adjustable rate, Alt-A, and subprime. For each of the sample issues, we determined if a loan tape had been filed on EDGAR. We then compiled a list of the loan-level data fields required or recommended by ASF, Moody's, and S&P, and compared this with the data fields actually available on the loan tapes. The category with the most available information concerned loan-to-value. Having evaluated the availability of data on the loan tapes, we attempted to assess the significance to investors of the data that was not available by surveying analysts from money managers, hedge funds, insurers, GSEs, Wall Street banks, and mortgage insurers who specialize in RMBS. We conclude that numerous data fields considered essential by investors were simply not available to them.

In the secondary market, analysis of RMBS credit risk requires not just data regarding the underlying mortgages available at issuance, but also ongoing information regarding individual loan performance. Moody's only recently began requesting this information, and only limited loan-level data is made available on trustee websites and a few proprietary databases. CDOs present even more analytical complexity and the market for CDOs suffered an equally dramatic collapse as investors lost all confidence in their ability to price the risk associated with these instruments. We interviewed several CDO analysts regarding the possibility of drilling down to loan-level data for CDOs, and received somewhat conflicting assessments.

Based on our empirical research, we conclude that Regulation AB should be amended to require issuers of mortgage-backed securities to provide loan-level data. The SEC should set forth in its regulation the particular field of loan-level data that must be disclosed. This should be largely based on investor demand and inputs. The SEC should also immediately initiate a study to refine the standardized list of RMBS pool data required at inception and on an ongoing basis. This additional information would not only benefit investors in RMBS, but also investors in CDOs predicated on RMBS.

Because the enhanced disclosures we describe above will be useful only to the extent they are actually made, we also encourage the SEC to consider whether the less-than-300-holder exemption from the periodic reporting requirements of Section 15(d) of the Exchange Act was meant to apply to the typical RMBS issuance otherwise covered by Regulation AB. If so, it should seek a statutory change to remedy this problem. The

lack of ongoing disclosure of the value of RMBS pools significantly contributed to the financial crisis by making if difficult if not impossible for holders of RMBS securities to value their holdings. This contributed to systemic risk.

Finally, we acknowledge that the quality of disclosure is only as good as the veracity of the information presented—largely a function of the due diligence conducted by underwriters. The Committee intends to study how the due diligence process may be improved, and we encourage the SEC to do the same. Our call for improvements in the due diligence process should in no way be taken to imply that we believe existing standards of due diligence have not been satisfied in past offerings.

Specific Recommendations

35. Amend Regulation AB to Increase Loan-Level Disclosures. The Committee encourages policymakers to recognize the clear need and investor appetite for increased loan-level disclosures. More specifically, we recommend that Regulation AB be amended to require issuers of mortgage-backed securities to provide loan-level data. The SEC should set forth in its regulation the particular fields of loan-level data that must be disclosed. This should be largely based on investor demand and inputs.

36. Study Ways of Improving the Standardized Disclosure Package. We further recommend that the SEC immediately initiate a study to refine the standardized list of RMBS pool data required at inception and on an ongoing basis.

This recommendation is broadly similar to reforms proposed in the following: PWG, Progress Update (Oct. 2008); PWG, Policy Statement (Mar. 2008); CRMPG III, Containing Systemic Risk (Aug. 2008).

37. Revisit the Applicability of Section 15(d). We encourage the SEC to consider whether the less-than-300-holder exemption from the periodic reporting requirements of Section 15(d) was meant to apply to the typical RMBS issuance otherwise covered by Regulation AB and, if so, to seek statutory changes that would exempt RMBS issuance from its provisions.

C. Credit Rating Agencies

Credit rating agencies (CRAs) bear substantial responsibility for the current financial crisis. CRAs serve as gatekeepers to the global credit markets and consequently occupy a unique place in the financial system. The ratings provided by CRAs on structured finance securities facilitated the issuance of over $6.5 trillion into the global credit markets between 2005 and 2007. Failure by the CRAs to assess accurately the risk associated with fixed income securities tied to U.S. residential mortgages played a significant role in catastrophic losses for investors and others who relied on their ratings. Key criticisms leveled at the CRAs include a lack of transparency of the ratings process, widespread conflicts of interest, confusion over the meaning of structured finance ratings and excessive reliance placed on their ratings by

investors due, in part, to the incorporation of ratings into various regulatory frameworks. While originators, banks, regulators and investors misjudged the risks associated with structured credit products, the breakdown in the global credit markets could not have occurred if the CRAs had performed properly.

Regulatory initiatives directed toward CRAs have come mainly from the International Organization of Securities Commissioners (IOSCO), the United States and the European Union. IOSCO developed a voluntary code of conduct for CRAs aimed at safeguarding the quality and integrity of the ratings process, maintaining CRA independence, avoiding conflicts of interest, and promoting transparency and timeliness in ratings disclosure. The first regulatory regime applicable to CRAs was created in the United States with the passage of the Credit Rating Agency Reform Act of 2006 (Reform Act). Under the Reform Act, CRAs may register with the SEC as nationally recognized statistical rating organizations (NRSROs). In addition to overseeing compliance by the NRSROs with their own procedures and methodologies for issuing and maintaining credit ratings, the SEC prescribes rules to avoid conflicts of interest. The European Union adhered to the IOSCO code of conduct until recently.

The financial crisis has brought forth vocal calls for reform of the rating process and increased regulation of CRAs. The G-20 leaders, IOSCO, the SEC and the European Commission all have called for improved regulation of CRAs. Responses to date include IOSCO strengthening its code of conduct, the SEC adopting new regulations applicable to NRSROs, and the European Union approving in April 2009 a comprehensive new regulatory framework applicable to CRAs that goes well beyond IOSCO and SEC standards. Although varying in degree and specificity, all of these new regulatory initiatives generally call for better disclosure about credit ratings, thus eliminating conflicts of interest and improving corporate governance. As increased regulation of CRAs is a given, the main challenge that lies ahead is how to coordinate the different approaches to achieve a better functioning credit rating system. Multiple layers of enforcement also pose significant problems in the regulation of CRAs. Toward these ends, we believe there are several key principles that should guide development of policy in this area, especially in view of the global nature of the CRAs and the markets they serve.

Specific Recommendations

38. Develop Globally Consistent Standards. We recommend that policymakers and regulators develop and apply standards of conduct and regulatory frameworks for CRAs that are consistent on a worldwide basis. Such an approach reflects that CRAs, like the markets and investors they serve, operate globally and affect capital markets worldwide. While there appears to be general consensus on the broad parameters of CRA regulation—registration of CRAs with regulatory bodies, disclosure of key rating processes and methodologies, and rules governing conflicts of interest—important differences remain, particularly between the United States and the European Union.

Having globally consistent standards of conduct and regulatory frameworks also will facilitate CRA compliance, reduce costs, and minimize complications from the extraterritorial application of laws to the largest CRAs, which are headquartered in the United States. If globally consistent standards and regulatory frameworks cannot be achieved, regulators should develop workable rules for recognizing and giving effect to credit ratings issued outside their jurisdictions in order to avoid undue fragmentation of the capital markets, a reduction in the range of investment choices, and restrictions on diversification.

This recommendation is broadly similar to reforms proposed in the following: U.K. FSA, Turner Review (Mar. 2009); Group of 30, Financial Reform (Jan. 2009); SIFMA, CRA Recommendations (July 2008); G-20, Enhancing Sound Regulation (Mar. 2009).

39. Vest Enforcement of CRA Regulation at the Highest Governmental Level. We believe responsibility for enforcing regulatory laws and rules applicable to CRAs should be vested exclusively at the highest governmental level within a jurisdiction. With 50 states and 27 Member States in the United States and European Union, respectively, the potential for multiple layers of enforcement, however well-intentioned, gives rise to an unworkable patchwork of legal risks, complexities and compliance costs for CRAs that could threaten their viability. Placing enforcement powers with the highest level of government would promote consistent enforcement of the regulatory standards within a jurisdiction and accord with the broad nature and impact of the activities of CRAs.

40. Avoid Governmental Interference in the Rating Determination Process. We encourage governments not to interfere with how CRAs determine or express their rating opinions. For capital markets to function most efficiently, CRAs should be free to develop their rating processes and methodologies as they see fit and to express their opinions—both in form and substance—as they determine.

This recommendation is broadly similar to reforms proposed in the following: ICMBS, Fundamental Principles (Jan. 2009).

41. Review References to Ratings in Regulatory Frameworks. We recommend that lawmakers and regulators carefully review the appropriateness of references to credit ratings in various regulatory frameworks to determine whether relying on such ratings is appropriate as compared to other alternatives. We caution that summary removal of all references to, or reliance upon, credit ratings in regulatory statutes and rules, is unwarranted and potentially counterproductive. New standards could be far more subjective, difficult to apply in practice, and result in inconsistent outcomes for both regulators and regulated institutions. In the absence of persuasive evidence that using credit ratings in regulations promotes an unhealthy over-reliance on them by market participants, legislators and regulators should consider incorporating references to credit ratings into regulatory frameworks on a case-by-case basis.

This recommendation is broadly similar to reforms proposed in the following: ICMBS, Fundamental Principles (Jan. 2009); PWG, Progress Update (Oct. 2008); PWG, Policy Statement (Mar. 2008); FSF, Enhancing Market and Institutional Resilience (Oct. 2008).

42. Increase Disclosure as to How Ratings Are Determined. We endorse the promulgation of regulations that would require greater disclosure of additional factual and other information on which credit ratings—particularly those of structured finance securities—are based in order to enhance the ability of investors and other market participants to assess and monitor ratings accuracy. In particular, CRAs should be required to make extensive disclosure of the criteria, methodologies, models, processes, key assumptions, and scenario analyses that they employ in rating all types of securities. Allowing for diverse views on credit risk from a broad range of investors will enable a more effective check on ratings accuracy than relying solely upon unsolicited ratings from other CRAs.

This recommendation is broadly similar to reforms proposed in the following: IOSCO, Credit Rating Agencies (May 2008); Cong. Oversight Panel, Regulatory Reform (Jan. 2009); ICMBS, Fundamental Principles (Jan. 2009); PWG, Progress Update (Oct. 2008); SIFMA, CRA Recommendations (July 2008); PWG, Policy Statement (Mar. 2008); G-20, Enhancing Sound Regulation (Mar. 2009); FSF, Enhancing Market and Institutional Resilience (Oct. 2008); IIF, Market Best Practices (July 2008).

Chapter 4: Enhancing Accounting Standards

We have examined two accounting issues raised by the financial crisis—the use of fair value accounting (FVA) and the requirements for consolidation. Traditionally, investments have been accounted for under the historical cost method, under which an asset is recorded at its purchase price. Throughout the asset's life, it is held on the books without adjustments for inflation or temporary changes in valuation. In recent years, however, we have seen a shift to FVA in response to a need for more relevant financial information.

Under Financial Accounting Statement No. 157 (FAS 157), "fair value" is the price that would be received in an orderly transaction between market participants. Fair value can be determined using the market approach, the income approach, or the cost approach. Market approaches use prices and other data generated in transactions. Income approaches—aimed at deriving an asset's credit or intrinsic value—use valuation techniques to discount future cash or earnings flows. The cost approach is often based on current replacement cost. By incorporating to varying degrees market, credit, and historical values, many believe FVA promotes greater objectivity, transparency, and relevance. Yet some accountants oppose FVA on the grounds of conservatism. Still, others argue that FVA may promote instability in the financial sector because normal seesawing of security prices causes fluctuations in companies' balance sheets, which are amplified by the effects of leverage. Due to increasing concerns surrounding the utility of FVA in the current environment—particularly with respect to banks and financial institutions—several accounting academics, practitioners, and regulators have offered proposals to improve the approach.

The Committee believes FVA is itself a challenging concept, since it is very difficult to present a single "fair" value for an asset, particularly in inactive markets and distressed circumstances. When discussing or presenting "fair" value, regulators and

practitioners have traditionally referred to credit value, market value, or both. Credit value is an asset's intrinsic worth, as determined by the cash flow characteristics of the asset and its contractual provisions, while market value is the price at which an asset is trading in an observable exchange market. The concept of "fair value," as embodied in FASB's current guidance, conflates market value and credit value in a manner we believe is difficult for the investing public to comprehend. Both FASB and the International Accounting Standards Board (IASB) should jointly study how "fair value" accounting can be improved in the long-term.

Although it has not as yet revisited the concept of "fair value," FASB did recently formulate guidance for the use of FVA in valuing distressed assets in disorderly markets. However, FASB's guidance does not eliminate from FVA the merger of credit and market value inputs in a single presentation. Rather, the reporting entity would consider the weight of both kinds of inputs in valuing assets and liabilities in inactive or distressed markets.

The Committee believes that FASB should supplement its fair value standard by requiring preparers to disclose two additional balance sheet presentations that would enable investors to distinguish the influence of market and credit value inputs more explicitly. The dual presentation approach requires reporting institutions to disclose market value and credit value separately and independently of each other. The first presentation would reflect strict market value based on observable market inputs only, unadjusted for inactivity or distress. The second presentation would reflect credit value based on a fundamental appraisal of expected long-term performance established independently of market inputs. Investors can then use this information in reaching their own conclusions about a firm's financial position.

This dual-pronged presentation would supplement, not substitute for, FVA. Furthermore, it is responsive to the principle that disclosure should be more, not less, transparent and consistent in periods of financial crisis. With these two presentations, investors would receive the benefit of more transparent and detailed disclosure.

As for regulators, we think the Fed and the banking regulators should not be limited to following U.S. GAAP and should instead be free to choose another method (credit value, market value, or some combination of both) they deem appropriate. The rationale behind this approach is that regulators have a different objective than investors in their use of financial information and therefore different measurements of these assets for regulatory purposes may be appropriate. However, a third party determination should be made to insure that regulatory departures from U.S. GAAP are not undertaken for reasons of regulatory forbearance, as in the thrift crisis.

A second accounting issue we have examined involves the relevant rules on consolidation. Prior to, and during, the current crisis financial institutions used two different risky securitization vehicles for subprime debt, in order to remove it from their balance sheets: Qualified Special Purpose Entities (QSPEs), pursuant to FSP 140; and

Variable Interest Entities (VIEs), pursuant to FIN 46R. In response to the role played by these securitization vehicles in the financial crisis, FASB announced its intention to eliminate entirely the use of QSPEs as a method of avoiding consolidation and instead to focus on revising FIN 46R based on a "control" concept. The immediate impact of FIN 46R will be to increase the size of balance sheets and cause additional losses, as these consolidated assets are marked-to-market. This in turn will cause a deterioration in the leverage ratio of several banks. While the mark-to-market impact of consolidation will be limited by our first recommendation in this section, we fully support the effort to force consolidation where the bank controls the off-balance sheet vehicle.

Specific Recommendations

43. Study How FVA Can Be Improved. The Committee believes "fair value" accounting is a problematic standard in inactive or distressed markets because it conflates the concepts of market value and credit model value and may confuse investors. We do not believe the problem has been solved by FASB's latest guidance. We recommend continuing to study how "fair value" accounting can be improved. We further recommend that this be done on a joint basis by FASB and IASB, so the two major accounting standard setters are consistent in their approach.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Reform (Jan. 2009); PWG, Progress Update (Oct. 2008); G-20, Enhancing Sound Regulation (Mar. 2009).

44. Supplement FVA with Dual Presentation of Market and Credit Values. To supplement fair value reporting, the Committee proposes that FASB require an additional dual presentation of the balance sheet for Level 2 and Level 3 assets using credit value and market value independently of each other. Accompanying this dual presentation, firms should also disclose their underlying valuation methodologies. In the case of credit value, this includes sharing modeling techniques, estimates, assumptions, and risk factors. In the case of market value, the disclosures should reveal what market prices were actually relied on.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Reform (Jan. 2009).

45. Allow The Fed to Use a Non-GAAP Methodology. As for regulatory accounting, the Committee believes the Fed should not be limited to following U.S. GAAP and should instead be free to choose another method (credit value, market value, or some combination of both) it deems appropriate. To reduce the risk of regulatory forbearance inherent in this proposal—a risk that led to the adoption of the FDICIA stringency test—an independent body (whose identity has not been determined by the Committee) should be established to check on the regulators' choice of accounting methodology for purposes of judging capital adequacy.

46. Implement FIN46R. As for consolidation, we agree with the FIN 46R approach because it focuses on the issue of control.

Chapter 5: Regulation of Bank Activities

Banks and similar depositary institutions lie at the heart of the global financial crisis. In addition to rethinking capital requirements and reforming the securitization process, the regulatory debate over banks raises key questions relating to bank activities. This chapter addresses two such questions. The first is whether we should return to the Glass-Steagall regime that prohibited the combination of banking, insurance, and securities activities within a single institution. The second question is whether the government should use its new-found leverage over weakened banks to direct their lending activities. We answer in the negative on both counts.

A. Return of Glass-Steagall

The Gramm-Leach-Bliley Act of 1999 (GLB), strongly endorsed by the Clinton Administration, repealed the Glass-Steagall Act of 1933 (GS), which prohibited the combination of banking, insurance, and securities activities within a single financial institution. During senatorial debates, several benefits were identified in favor of GLB. First, many believed the Act would increase competition within the financial services industry. Second, many argued that GLB would allow U.S. financial institutions to compete with foreign firms. Third, many believed GS had grown obsolete due to the ability of banks to largely circumvent its restrictions. All of these benefits remain valid today. Moreover, GLB was careful to make sure that only well-capitalized and well-managed banking organizations could engage in the newly authorized securities and insurance activities. It is up to the regulators to make sure these well-capitalized and well-managed requirements are complied with.

In the midst of the present crisis, some are calling for a return of Glass-Steagall. In light of the points mentioned above, we think this is the wrong approach. As of March 27, 2009 there were 610 BHCs that elected to be FHCs, 54 of which were foreign BHCs. In addition, over the last year, major combinations of banking and securities businesses have resulted from the purchase of major securities firms by banks. It would be disruptive, risky, and impractical for the banking sector to undo these combinations. The better policy response is to make sure the risks of whatever activities banks engage in are adequately capitalized and supervised for risk—not to prohibit particular activities.

Specific Recommendation

47. Refrain from Reimposing Glass-Steagall. Because the Gramm-Leach-Bliley Act has led to increased competition within the financial services industry and with foreign firms, and because the separation of banking from insurance and securities is

impractical, the Committee recommends that policymakers leave the Gramm-Leach-Bliley Act largely intact.

B. Directed Lending

Pursuant to the Troubled Assets Relief Program (TARP), Congress has authorized capital infusions into struggling institutions, with the Treasury Department becoming an investor in preferred shares and warrants in the stockholding of recipient companies. In addition, the Fed has made available a number of liquidity facilities in an attempt to encourage banks to borrow at lower than market rates to meet their liquidity needs and eventually revive their balance sheets. While neither TARP nor the Fed currently mandates that recipient firms use the funds to free up credit for main street consumers and businesses, the Treasury has come under scrutiny for not requiring banks to increase their lending activity.

In a number of other countries, government policies designed to influence or otherwise control the flow of credit have been implemented with a view toward achieving greater discipline in managing market volatility and to further state-approved social objectives. This policy is generally referred to as "directed lending." While directed lending provides certain useful tools to policymakers, its longer-term use can prove problematic for the banking system and economy as a whole. In broad terms, the economic literature sets out three reasons why caution should be exercised in this area: (i) distorted allocation of resources and competition; (ii) potential agency risks and information asymmetries; and (iii) problematic exit strategies.

Specific Recommendation

48. Avoid Directed Lending. We believe regulators should not direct the lending policies of financial institutions.

Chapter 6: Reorganizing the U.S. Regulatory Structure

The Committee believes effective financial regulation going forward requires a reorganization of the current U.S. regulatory structure. Any decision regarding that structure must be uniquely tailored to the needs of the United States. However, it bears noting that the vast majority of other leading financial center countries have moved toward more consolidated financial oversight. A rapidly dwindling share of the world's financial markets is supervised under the fragmented, sectoral model still employed by the United States.

We summarize the relative responsibilities we believe appropriate for the regulatory bodies in a system of consolidated oversight.[4] The Fed would retain its exclusive control of monetary policy and its lender of last resort function as part of its key role in ensuring financial stability. As a consequence, we do not favor current proposals to vest systemic risk regulation in an interagency council comprising several existing regulatory agencies. We believe this important role should be retained by the Fed—and the Fed alone. One regulator needs the authority and accountability to regulate matters pertaining to systemic risk.

The U.S. Financial Services Authority (USFSA) would regulate all aspects of the financial system, including market structure and activities and safety and soundness for all financial institutions (and possibly consumer/investor protection with respect to financial products if this responsibility were lodged with the USFSA).

The Treasury Department would coordinate the work of the regulatory bodies. Treasury should also be responsible for the expenditure of public funds used to provide support to the financial sector. In addition, any existing Fed loans to the private sector that are uncollateralized or insufficiently collateralized should be transferred in an orderly fashion to the balance sheet of the federal government (through asset purchases by the Treasury from the Fed).

The United States should draw on the experiences of leading jurisdictions in devising a step-by-step regulatory consolidation process. We present three options for supervising financial institutions. The Fed could be placed in charge of supervising financial institutions determined to be "systemically important" and the USFSA could supervise all other institutions. Alternatively, the Fed could be placed in charge of supervising all financial institutions. Finally, the USFSA could be placed in charge of supervising all financial institutions. We also believe a vigorous consumer/investor protection body could exist either as a division within the USFSA or as a self-standing agency.

Specific Recommendations

49. Retain Two or Three Regulatory Bodies. We believe the United States should have only two, or at most, three independent regulatory bodies overseeing the financial

[4] The summary and recommendations in this Report were issued by the Committee earlier this year. *See* Comm. Cap. Mkts. Reg., *Recommendations for Reorganizing the U.S. Regulatory Structure* (Jan. 14, 2009), *available at* http://www.capmktsreg.org/index.html. Roel C. Campos joined the Committee after the release of our January 14, 2009 statement. As a consequence, the views expressed in this chapter do not reflect those of Mr. Campos.

system: the Fed, a newly-created independent USFSA, and possibly another new independent investor/consumer protection agency.

This recommendation is broadly similar to reforms proposed in the following: U.S. Treasury, Financial Regulatory Structure Blueprint (Mar. 2008); IIF, Market Best Practices (July 2008).

50. Increase the Role of the Fed. The Committee believes one regulator needs the authority and accountability to regulate matters pertaining to systemic risk, and that the one regulator should be the Fed. The Fed would retain its exclusive control over monetary policy and its lender of last resort function, as part of its key role in ensuring financial stability. In addition, because of its institutional expertise, its significant role in the Basel process and the demonstrated relation of capital requirements to financial stability, the Fed would set capital requirements for all financial institutions. It would also be responsible for other regulation directly related to systemic risk, like margin requirements. We oppose fragmentation of the "systemic risk regulator" into a council of regulators.

This recommendation is broadly similar to reforms proposed in the following: U.S. Treasury, Financial Regulatory Structure Blueprint (Mar. 2008); Group of 30, Financial Supervision (2008); ICMBS, Fundamental Principles (Jan. 2009); Group of 30, Financial Reform (Jan. 2009).

51. Establish the USFSA. The USFSA would regulate all aspects of the financial system, including market structure and activities and safety and soundness for all financial institutions (and possibly consumer/investor protection with respect to financial products if this responsibility were lodged with the USFSA). It would be comprised of all or part of the various existing regulatory agencies, such as the Office of the Comptroller of the Currency (OCC), the Office of Thrift Supervision (OTS), the Federal Deposit Insurance Corporation (FDIC), the Securities and Exchange Commission (SEC), and the Commodities Futures Trading Commission (CFTC). The possible divisions of responsibility between the Fed and USFSA with respect to supervision for safety and soundness are discussed below.

52. Enhance the Role of the Treasury Department. The Treasury Department would coordinate the work of the Fed and USFSA. The Treasury would also be responsible for the expenditure of public funds used to provide support to the financial sector, as in the TARP. In addition, to preserve the independence and credibility of the Fed, existing Fed lending against no or inadequate collateral would be transferred to the Treasury, and future lending of this type would be done only by the Treasury Department. All such lending would be on the federal budget.

53. Study Supervisory Options. There are three options with respect to the supervision of financial institutions: (1) the Fed supervises all financial institutions determined to be "systemically important" and the USFSA supervises all other institutions; (2) the Fed supervises all financial institutions; or (3) the USFSA supervises all financial institutions. While we agree there are significant advantages to consolidated supervision, we do not endorse any of the three options. Instead, we present the advantages and disadvantages of each.

54. Protect Consumers and Investors. A vigorous consumer and investor protection body with respect to financial products should exist, either as a division within the USFSA or as a self-standing third independent agency. If part of the USFSA, Senate confirmation of the division/agency head would help ensure strong Congressional oversight and rigorous enforcement. The Committee has not reached consensus on which of these two alternatives would be preferable.

This recommendation is broadly similar to reforms proposed in the following: Council of Inst. Investors, Investor Perspectives (Sept. 2008); NASAA, Regulatory Reform Roundtable (Dec. 2008).

Chapter 7: Facilitating International Regulatory Cooperation

Most of the issues addressed in this Report reach well beyond the borders of any one country. Indeed, the international dimensions of the current financial crisis are so important that it is difficult to characterize this crisis as anything but global. In such an interconnected world, there is a particular need for an effective system of international financial oversight. We believe such a system would perform three distinct tasks. First, it would provide the capacity to harmonize basic global rules. Second, it would serve as an early warning system that could coordinate swift responses to brewing crises with systemic implications. And third, it would provide some sort of process for efficient dispute resolution when conflicts among regulatory regimes arise. These tasks are further developed below.

While it would be theoretically possible to harmonize financial regulation across borders through a formal international treaty, regulators have instead turned to so-called "regulatory networks" to deal with the increasing globalization of finance. But these industry-specific networks have failed to perform effectively during the current crisis. Accordingly, the Obama Administration and G-20 have suggested entrusting international regulatory oversight to the Financial Stability Board—"a network of networks" with powers beyond those of its predecessor, the Financial Stability Forum. We believe a newly strengthened Financial Stability Board is a good idea, so long as it is flexible and expert enough to harmonize baseline rules for the regulation of international finance while still taking a broad view of all the markets in which modern financial conglomerates participate.

As the current crisis exemplifies, a rapid response is crucial to a sustained economic recovery. While the G-20 itself may play an important role in both pushing harmonization and in responding to financial crises as they arise, more is needed. We, therefore, endorse the G-20's plan to empower the IMF as a delegate agency that can do the work on the ground necessary to identify financial crises before they spread.

Regardless of the multi-lateral networks and institutions in place, problems are bound to arise when countries pursue different approaches to financial regulation, as evidenced most recently by Britain and Iceland's war of words over who should take responsibility for failed Icelandic banks doing business in the United Kingdom. Even if

a minimum level of harmonization were successful, issues would still come about when countries pursued different regulations to the same activity. When such conflicts inevitably occur, there must be some system for resolving them. In preparation for these expected disagreements, we believe governments ought to strengthen their "Regulatory Dialogues," if only to maintain open lines of communication between their high-level officials.

Specific Recommendations

55. Support Global Regulatory Forums. The Committee endorses the establishment of a newly strengthened Financial Stability Board, provided it is flexible and expert enough to harmonize baseline rules for the regulation of international finance while still taking a broad view of all the markets in which modern financial conglomerates participate.

This recommendation is broadly similar to reforms proposed in the following: Group of 30, Financial Supervision (2008); The de Larosière Group, EU Financial Supervision (Feb. 2009); Cong. Oversight Panel, Regulatory Reform (Jan. 2009); ICMBS, Fundamental Principles (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009); FSF, Enhancing Market and Institutional Resilience (Oct. 2008).

56. Enable the IMF to Play an Early Warning Role. The G-20 has indicated that it may delegate much of the task of early warning for financial crises to the IMF; we endorse this though we note that it will continue to require adequate resources if it is to perform this task well.

This recommendation is broadly similar to reforms proposed in the following: ICMBS, Fundamental Principles (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009); The de Larosière Group, EU Financial Supervision (Feb. 2009).

57. Strengthen Regulatory Dialogues. We believe the various regional "Regulatory Dialogues" and, in particular, that of the United States and Europe, need to be strengthened to resolve transnational regulatory disputes.

This recommendation is broadly similar to reforms proposed in the following: Cong. Oversight Panel, Regulatory Reform (Jan. 2009); G-20, Enhancing Sound Regulation (Mar. 2009); FSF, Enhancing Market and Institutional Resilience (Oct. 2008); The de Larosière Group, EU Financial Supervision (Feb. 2009).

THE GLOBAL FINANCIAL CRISIS

A Plan for Regulatory Reform

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INTRODUCTION

The Committee on Capital Markets Regulation offers this Report—a detailed plan for regulatory reform—in direct response to the most serious financial crisis of the past eighty years. To the extent possible, we have aimed to support our analysis with empirical studies or other objective analysis. Throughout each of these chapters, we make specific recommendations for critical changes in regulatory policy.

Chapter 1—*The Crisis and a Regulatory Approach*—details the severity of the current crisis and proposes a principled approach for effective regulation. We first assess and attempt to quantify, through several metrics, the sheer gravity of the crisis in the United States. The findings are staggering. Total U.S. losses from asset write-downs, plummeting stock markets, and decreased production measure in the trillions of dollars. And the crisis has not been strictly an American phenomenon. Global losses have essentially mirrored those sustained in the United States. The severity of this crisis serves as a critical reference point for the analysis and specific recommendations that follow.

The Committee's approach to regulation, set forth in Chapter 1, is based on fundamental principles. The most important of these principles is that regulation should reduce externalities—namely systemic risk. Systemic risk is the risk of collapse of an entire system or entire market, exacerbated by links and interdependencies, where the failure of a single entity or cluster of entities can cause a cascading failure. As we explain, other legitimate goals of regulation include increased transparency, resolution of principal-agent problems, enhanced competition, and the elimination of moral hazard. As a corollary principle, we conclude that a given regulation cannot be considered effective if there is a less costly means of achieving the same benefits. In short, any plan for regulatory reform in the wake of the present crisis must be based on sound principles, not on political expediency.

Chapter 2—*Reducing Systemic Risk*—considers various measures policymakers might take to lessen systemic risk across important sectors of the financial system. We begin with an examination of the credit default swap, known as the "CDS." Although some contend CDSs have played a major role in exacerbating the current crisis and should be largely eliminated, we believe CDSs bring many potentially positive benefits to the financial system. We conclude that the counterparty risk arising from CDS transactions—along with less-than-optimal liquidity and transparency in the CDS market—can be reduced substantially through centralized clearing facilities alongside exchange-traded products.

The next topic we address in Chapter 2 is capital requirements. Originally intended to provide a cushion against bank losses, the current capital regime has failed to prevent the collapse of some the world's largest financial institutions. The systemic effects of this failure are obvious. We conclude that the current capital adequacy framework is in serious need of reform. In that regard, we offer a number of suggestions where change should begin, including the adoption of counter-cyclical ratios, the enhancement of supervision and disclosure, and strengthening the existing leverage ratio.

Because the issue of systemic risk goes well beyond traditional banks, Chapter 2 also addresses the regulation of non-bank financial institutions. The first topic we cover is hedge funds. The Committee acknowledges the critical role of hedge funds in providing liquidity, absorbing financial risks, and increasing the overall efficiency of the capital markets. At the same time, we recognize that an individual hedge fund could pose, at a particular moment, a systemic threat for a number of reasons—extreme leverage, overall size, and degree of interconnectedness. We conclude that a confidential reporting requirement would allow regulators to gauge the systemic risk posed by these funds, and enable regulators to intervene when necessary to prevent shocks to the financial system.

Another topic we cover in this chapter is private equity (PE) firms, which played little, if any, role in bringing about the financial crisis. While such firms should register, so that regulators can determine that they are only PE firms, we do not believe these firms should be subject to any substantive regulation. We also explain that existing laws should be amended to make it easier for PE firms to inject needed capital into banks and thrifts. Finally, we address the systemic risk associated with money market mutual funds. In particular, we focus on the "breaking the buck" phenomenon and the specter of widespread redemption requests, offering several suggestions for reform.

The last part of Chapter 2 considers existing resolution processes for failed financial institutions. At present, there are no uniform insolvency procedures for financial firms. The insolvency of FDIC-insured banks is governed by the Federal Deposit Insurance Act (the FDI Act), the insolvency of registered broker-dealers is governed by the Securities Investor Protection Act, and the insolvency of most other financial companies is governed by the U.S. Bankruptcy Code. Of these, only the FDI Act provides regulators with the tools necessary to protect markets from the effects of a systemically significant bank's insolvency, particularly in times of market stress. We discuss the Treasury's recent proposal to authorize powers similar to those available under the FDI Act when a non-bank financial company's or holding company's insolvency poses a systemic risk to the market. We conclude that, in order to reduce systemic risk even further, additional steps must be taken to establish a flexible resolution process for all financial firms and their holding companies.

Chapter 3—*Reforming the Securitization Process*—addresses problems confronting the securitized debt markets. We begin by examining the critical role of loan

originators. Under the prevailing originate-to-distribute model, incentives between lenders and investors can diverge markedly as the former are not required to retain any risk on the loans they securitize. As a result, mortgage lenders prior to the crisis relaxed credit standards, increased loan volumes, and focused on earning fees from their loan origination and servicing activities at the expense of making high-quality, profitable loans. Apart from disallowing certain high-risk practices, we believe the incentives of originators must be brought in line with those of other participants in the securitization process. This can be done most readily by strengthening representations, warranties, and repurchase obligations, and by increasing the disclosure of originators' interests in securitized offerings. We believe other alternatives like mandatory minimum risk retention and the alteration of the fee structure for originators must be refined significantly if they are to be at all practical.

Chapter 3 also addresses the inadequacy of disclosures made in connection with the issuance of mortgage-related securitized debt. Following an analysis of the availability of granular loan-level data with respect to residential mortgaged-backed securities and collateralized debt obligations (CDOs), the Committee recommends amending Regulation AB to increase loan-level disclosures and supporting further studies to improve the standardized disclosure package. We ask the SEC to consider whether Section 15(d) of the Exchange Act was meant to apply to issuances covered by Regulation AB and if so, to seek statutory changes that would exempt residential mortgage-backed securities (RMBS) from its provisions.

An examination of the role of credit rating agencies (CRAs) brings Chapter 3 to a close. CRAs grossly underestimated the risk of loss associated with several types of structured finance securities that lay at the heart of the financial crisis. In order to restore confidence in the integrity of credit ratings and to improve the functioning of the fixed-income markets, we propose developing globally consistent standards, minimizing governmental interference in the ratings process, ensuring unitary systems of enforcement, and increasing disclosures pertaining to structured finance transactions. In addition, we examine—but ultimately reject—the premise that regulated financial institutions and other issuers should be required to fund CRAs.

Chapter 4—*Enhancing Accounting Standards*—explores two accounting issues raised by the crisis—the use of fair value accounting (FVA) and the requirements for consolidating off-balance sheet exposures. Under Financial Accounting Statement No. 157, "fair value" is the price that would be received in an orderly transaction between market participants on a particular date. By incorporating to varying degrees market, credit, and historical values, some have suggested that FVA promotes greater objectivity, transparency, and relevance. But FVA also has its weaknesses. A major concern is that the somewhat artificial concept of "fair value" may conflate market and credit value in a manner that is confusing to investors. Indeed, the Committee believes the Financial Accounting Standards Board (FASB) and the International Accounting Standards Board should jointly study whether FVA is the optimal means of ensuring accuracy and transparency in financial information. Until that review can be

undertaken, we believe reporting institutions should separately value Level 2 and Level 3 assets by using market prices and fundamental credit analysis. Issuers should further be required to disclose, in detail, how each of these values was determined. As for the second, less contentious issue addressed in the chapter—consolidation of off-balance sheet exposures—we briefly discuss and endorse FASB's approach under its Interpretation No. 46R.

Chapter 5—*Regulation of Bank Activities*—recognizes that, apart from rethinking capital requirements and the securitization process, the regulatory debate over banks also extends to questions relating to bank activities. We address two relevant issues in this chapter. The Committee first considers whether the United States should reinstate the Glass-Steagall Act (GS), which for six decades prohibited the combination of banking, insurance, and securities activities within a single financial institution. That statute was largely repealed by the Gramm-Leach-Bliley Act (GLB) in 1999. In discussing the current regime, we explore GLB's benefits for both banks and the public, and explain our rationale for avoiding any return to the GS era.

Directed lending is the second issue addressed in Chapter 5. Lending can be considered "directed" when governments pursue policies designed to influence or even regulate banks' decisions to extend credit. With Congress' recent enactment of the TARP and the Fed's creation of similar programs aimed at infusing capital into struggling financial institutions, some have called for the government to take measures to ensure that banks use much of that capital to revive lending to particular constituencies or industries. We observe that a number of other countries have enacted policies designed to control the flow of credit or further state-approved social objectives. Such policies have been uniformly unsuccessful in the long-term and have served to weaken the banking system.

The first five chapters inevitably lead to Chapter 6—*Reorganizing the U.S. Regulatory Structure*. In this chapter, the Committee explains that its previous recommendations can be implemented only by a regulatory structure that is well-integrated and operationally efficient. The vast majority of other leading financial center countries have moved toward more consolidated financial oversight, with a rapidly dwindling share of the world's financial markets supervised under the fragmented, sectoral model still employed by the United States. The Committee's proposal for reorganization includes the retention of two or three regulatory bodies, an increased role of the Fed, the establishment of a U.S. Financial Services Authority, an enhanced role for the Treasury, an exploration of various supervisory options, and the possible establishment of an independent agency charged with the protection of consumers and investors.

This Report concludes with Chapter 7—*Facilitating International Regulatory Cooperation*. All the issues we address throughout the Report, including the insolvency process, securitization, CDSs, the extension of regulation to hedge funds and private equity, the re-evaluation of capital requirements, and the debate on accounting

standards, necessarily have global dimensions. Consequently, we discuss in this chapter what we believe should be the attributes of an effective system of international financial oversight. Such a system should first and foremost provide the capacity to harmonize basic global rules, so that minimum levels of oversight and transparency are available in all the major markets, the inclination to regulatory arbitrage is minimized, and the capacity of emerging market regulators is developed. Second, it should serve as an early warning system that could coordinate quick responses to brewing crises with systemic implications. And third, it should provide some sort of capacity to resolve international differences in regulatory approach—particularly when those differences lead to jurisdictional and other disputes. In that regard, we endorse the establishment of a newly strengthened Financial Stability Board, and envision a large role for the IMF to help facilitate an early warning system. We also recommend strengthening existing bilateral and multilateral dialogues.

CHAPTER 1: The Crisis and a Regulatory Approach

Before tackling the torrent of regulatory questions arising from the global financial crisis, the Committee thinks it is important to focus on two foundational matters. The first is the sheer gravity of the present crisis; the second is the overall regulatory approach the Committee believes policymakers should adopt going forward.

A. Severity of the Crisis

We are now facing the most serious global financial crisis since the Great Depression. Confidence in the U.S. financial system has been badly shaken. Turmoil in the financial markets may adversely impact the real economy in a vicious feedback cycle. A weakening of general economic conditions may in turn accelerate credit deterioration as individuals and institutions default. Urgent action is needed to restore confidence. But urgency should not mean haste. Going forward, policymakers must give careful thought to the important policy questions relating to the global financial system that confront us at this critical point in time.

This section aims to provide a backdrop for the rest of the Report by summarizing key measures illustrating the severity of the financial crisis. We have gathered data from a variety of sources including both government agencies and private data vendors. These measures are presented in four broad categories: (1) U.S. loss estimates; (2) U.S. housing sector; (3) U.S. financial sector; and (4) global loss estimates.

1. U.S. Loss Estimates

a. Credit Losses

In recent months, estimates of credit losses relating to the crisis have been revised upwards across the board. In April 2009, the International Monetary Fund (IMF) updated its estimate of financial sector writedowns put forward in its October 2008 Global Financial Stability Report. Back in October, the IMF had estimated total near-term global losses on U.S. credit-related debt to be $1.4 trillion (up from its estimate of $945 billion in the April 2008 Global Financial Stability Report).[1] Of this $1.4 trillion, $425 billion represented losses on U.S. loans and $980 billion represented mark-to-market losses on related securities.

[1] Int'l Monetary Fund, *Global Financial Stability Report: Financial Stress and Deleveraging* (Oct. 2008).

Table 1: Estimates of Financial Sector Potential Writedowns (2007-2010) as of April 2009
$ billions

Estimated Writedowns

	Outstanding	Estimated loss April 2008 GFSR	Estimated loss October 2008	Estimated loss April 2009
Residential mortgage	5117	115	170	431
Commercial mortgage	1913	30	90	187
Consumer	1914	20	45	272
Corporate	1895	60	120	98
Total for loans	10839	225	425	988

	Outstanding	Estimated mark-to-market loss April 2008 GFSR	Estimated mark-to-market loss October 2008	Estimated mark-to-market loss April 2009
Residential mortgage	6940	450	580	990
CMBS	640	210	160	223
Consumer ABS	677	0	0	96
Corporate	4790	60	240	335
Total for securities	13047	720	980	1644
Tota for loans and securities	26554	945	1405	2712

Sources: IMF October 2008 Global Financial Stability Report, Table 1.9; Bank for Interntional Settlements; European Securitization Forum; Federal Reserve, Flow of Funds (Q3 2008); national central banks; and IMF staff estimates

By April 2009, the IMF had upwardly revised its estimate of losses on U.S.-originated credit assets held by banks and other institutions to a total of $2.7 trillion.[2] Of these losses, $988 billion are expected to arise from losses on loans,[3] and $1.6 trillion from losses on securities. This revision reflected a deterioration in the mark-to-market values of securitized loans as well as degradation in the loan books of banks. Overall, the IMF's estimates may be relatively conservative. In January 2009, Nouriel Roubini and Elisa Parisi-Capone released their own estimates of U.S. credit losses, drawing on the same data used by the IMF, but assuming a further 20% decrease in national housing prices and an unemployment rate of 9%.[4] The authors predict total loan losses for loans originated by U.S. financial institutions to be $1.6 trillion. On top of that, Roubini and Parisi-Capone add mark-to-market losses of approximately $2 trillion on securitized assets. In total, the authors estimate losses on loans and securities originated by the U.S. financial system at $3.6 trillion.

Roubini and Elisa-Capone also apply IMF weights to identify losses borne by the U.S. financial system. The authors estimate that the U.S. banking system (commercial banks and broker dealers) carries approximately 60-70%, or $1.1 trillion, of total

[2] Int'l Monetary Fund, *Global Financial Stability Report, Responding to the Financial Crisis and Measuring Systemic Risks* (Apr. 2009).
[3] The estimate of $988 billion excludes estimated losses on municipal loans.
[4] Nouriel Roubini & Elisa Parisi-Capone, *Total $3.6 Trillion Projected Loan and Securities Losses in the U.S., $1.8 Trillion of Which Borne by U.S. Banks/Brokers: Specter of Technical Insolvency for the Banking System Calls for Comprehensive Solution* (Jan. 2009), *available at* http://www.rgemonitor.com/roubini-monitor/255236/total_36t_projected_loans_and_securities_losses_18t_of_which_at_us_banksbrokers_the_specter_of_technical_insolvency.

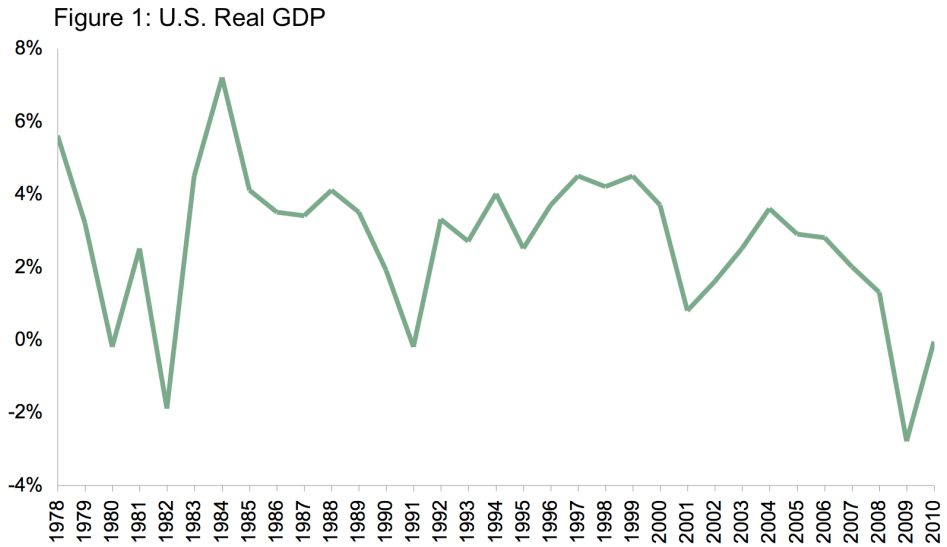
unsecuritized loan losses. Estimating that 40% of U.S.-originated securitizations are held abroad, Roubini and Elisa-Capone put mark-to-market losses borne by the U.S. banking system at $700 billion. In total, the authors estimate that the U.S. banking system will bear $1.8 trillion in credit losses.

Looking at a slightly narrower class of credit, Goldman Sachs has provided an estimate more in line with that of the IMF. In a January 2009 paper,[5] Jan Hatzius and Michael Marschoun assumed an additional fall in home prices of 10% and estimated credit losses on U.S. residential mortgage debt of $1.1 trillion, excluding commercial credit and securitized assets. Combining residential mortgage loss estimates with estimated losses on other types of private nonfinancial debt—commercial real estate, consumer credit, and corporate loans and bonds, the authors estimated total losses to be $2.1 trillion. Of these losses, the authors estimated that $962 billion will be suffered by U.S. banks. In March 2008, for instance, Goldman Sachs had estimated total credit losses to be $1.2 trillion.[6]

b. GDP Growth

As credit and equity values have plummeted, the crisis has spread via the banking system to the real economy. In December 2008, the National Bureau of Economic Research officially dated the onset of the recession to December 2007, marking the end of a 73-month expansion that had begun in November 2001.[7] After real growth of 1.1% in 2008, growth forecasts in 2009 are negative across the board. In April 2009, the IMF revised its forecast for real U.S. growth to -2.8%,[8] down from -1.6% in January 2009 and -0.7% in November 2008.[9] By contrast, Roubini estimates a 3.4% contraction in 2009,[10] which would be the most severe contraction since 1946, when GDP shrank by 11%.

[5] Jan Hatzius & Michael Marschoun, *Home Prices and Credit Losses: Projections and Policy Options*, Goldman Sachs Global Economics Paper No. 177 (Jan. 13, 2009).
[6] Richard Leong, *Goldman Sees Credit Losses Totaling $1.2 trillion*, Reuters, Mar. 26, 2008, *available at* http://www.reuters.com/article/bankingFinancial/idUSN2539260820080326.
[7] Nat'l Bureau of Econ. Research, *Determination of the December 2007 Peak in Economic Activity* (Dec. 11, 2008), *available at* http://www.nber.org/cycles/dec2008.pdf.
[8] Int'l Monetary Fund, *World Economic Outlook: Crisis and Recovery* (Apr. 2009), *available at* http://www.imf.org/external/pubs/ft/weo/2009/01/pdf/text.pdf.
[9] Int'l Monetary Fund, *World Economic Outlook Update: Global Economic Slump Challenges Policies* (Jan. 28, 2009), *available at* http://www.imf.org/external/pubs/ft/weo/2009/update/01/pdf/0109.pdf.
[10] Nouriel Roubini, *RGE Monitor-2009 Global Economic Outlook (Q1 Update)* (Mar. 11, 2009), *available at* http://www.rgemonitor.com/roubini-monitor/256514/rge_monitor__2009_global_economic_outlook_q1_update.



Source: Bureau of Economic Analysis (2009-10 Projections IMF)

Since 1978, U.S. trend growth has been 2.8%. Therefore, a contraction of 1.6% in 2009 would represent lost production of roughly $629 billion, or 4.4% of 2008 GDP ($14.3 trillion).

c. Fiscal Costs and Property Losses

A variety of other costs and losses are directly attributable to the crisis. These include new spending by the federal government, including the TARP ($700 billion) and the stimulus package passed in February 2009 ($787 billion). (We exclude new Fed and Treasury lending facilities, which may ultimately be repaid.) In addition, we add lost property values due to plummeting housing prices. Roubini estimates that the value of the U.S. residential housing stock has already declined by $4 trillion.[11]

d. Total U.S. Losses and Costs Associated with the Crisis

The table below shows a rough approximation of the losses and costs incurred by the U.S. as a result of the crisis. There are four components: (1) U.S.-originated credit losses incurred in the U.S. ($1.8 trillion per Roubini); (2) U.S. stock market losses ($9.1 trillion per Bloomberg)[12]; (3) lost U.S. production ($1.05 trillion); and (4) other losses and costs (including lost property values, TARP and the February 2009 stimulus package).

[11] *Id*. at 5.
[12] Of course, not all of these losses were incurred by U.S. investors.

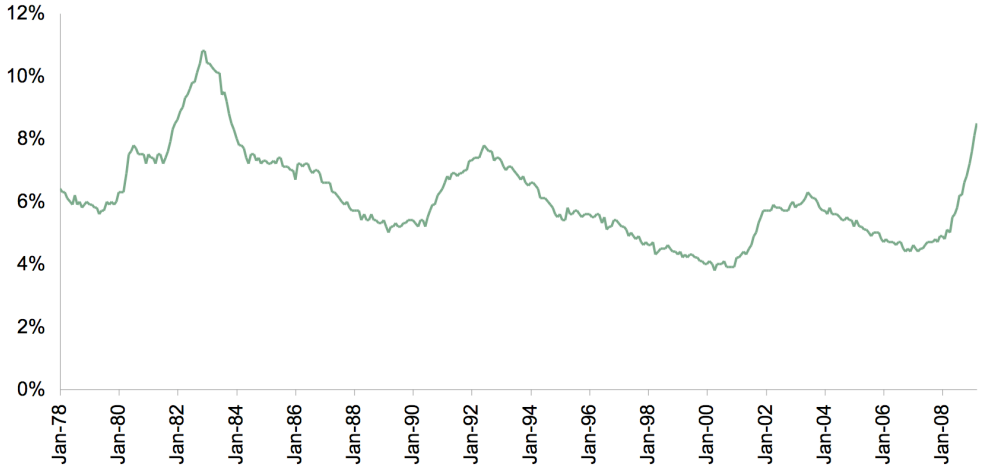
Table 2: Total U.S. Losses & Costs Associated with the Crisis $ trillions	
U.S.-Originated Credit Losses Borne by the U.S. Financial System	$1.80
U.S. Stock Market Losses	$9.10
Lost GDP in 2009	$1.05
Fiscal Costs & Property Losses (CCMR estimate)	$5.50

e. Unemployment and Personal Bankruptcy Filings

Other costs of the crisis are more difficult to quantify—namely, unemployment and personal bankruptcy filings.

As the economy has contracted, unemployment has skyrocketed in recent months, reaching 8.5% in March. As recently as October 2006, unemployment stood at just 4.4%. Although the current unemployment rate is still below the 30-year high of 10.8% reached in November and December of 1982, it has now matched the peak rate reached during the recession of the early 1990s.

Figure 2: U.S. Unemployment Rate



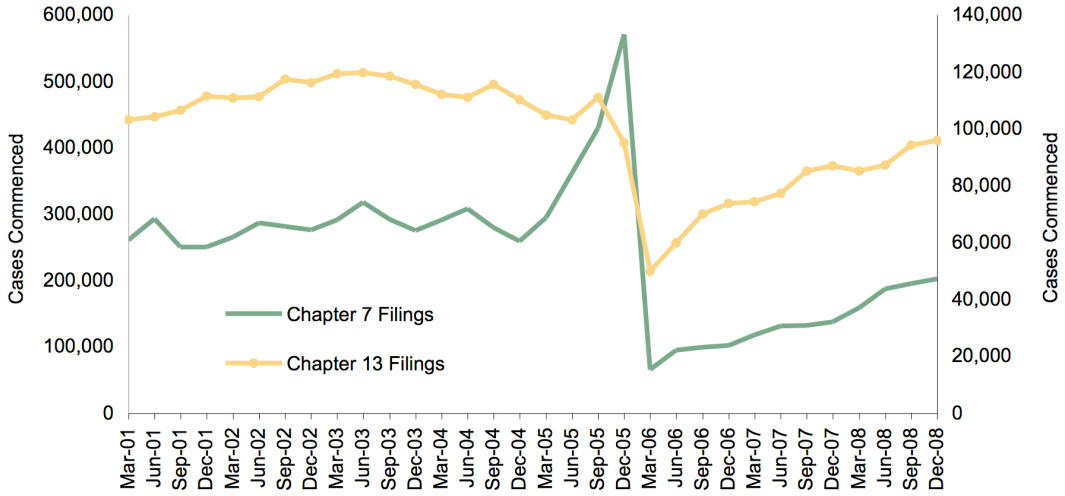
Source: Bureau of Labor Statistics

Faced with a pronounced economic contraction and higher unemployment rates, Americans have increasingly been forced to utilize the bankruptcy process to resolve their debts. After a steep fall in Q1 2006 following the passage of the Bankruptcy Abuse Prevention and Consumer Protection Act of 2005 (2005 Act)—intended to discourage frivolous filings—bankruptcy cases commenced under Chapter 7 (liquidation) and Chapter 13 (individual reorganization) have steadily climbed.[13] By Q4 2008, both

[13] Chapter 7 cases may include corporations.

Chapter 7 and Chapter 13 filings were approaching their pre-2005 Act levels. In that quarter, Chapter 7 filings reached 202,118, while Chapter 13 filings reached 95,905.

Figure 3: Chapter 7 and Chapter 13 Bankruptcy Filings



Source: U.S. Courts
Note: Chapter 7 bankruptcies may include corporations.

Even among those who have managed to avoid bankruptcy thus far, there has been a rise in the number of consumers who have fallen 30 days behind on their short-term loans. In Q4 2008, a record 4.2% of loans were delinquent and another 4% were in default.[14]

2. U.S. Housing Sector

The story of the housing sector in the decade leading up to the crisis is well known, involving the creation and burst of an asset price bubble.

a. The Mortgage Boom

Fueled by low interest rates, foreign capital inflows, securitization, and relaxed lending standards, mortgage lending climbed steadily throughout the early part of the decade. Total mortgage origination peaked at $3.9 trillion in 2003. As good credit risks were exhausted, subprime and Alt-A lending peaked in 2005 and 2006, when they hit $1.0 trillion. By 2008, all mortgage origination had plummeted, reaching pre-2001 levels.

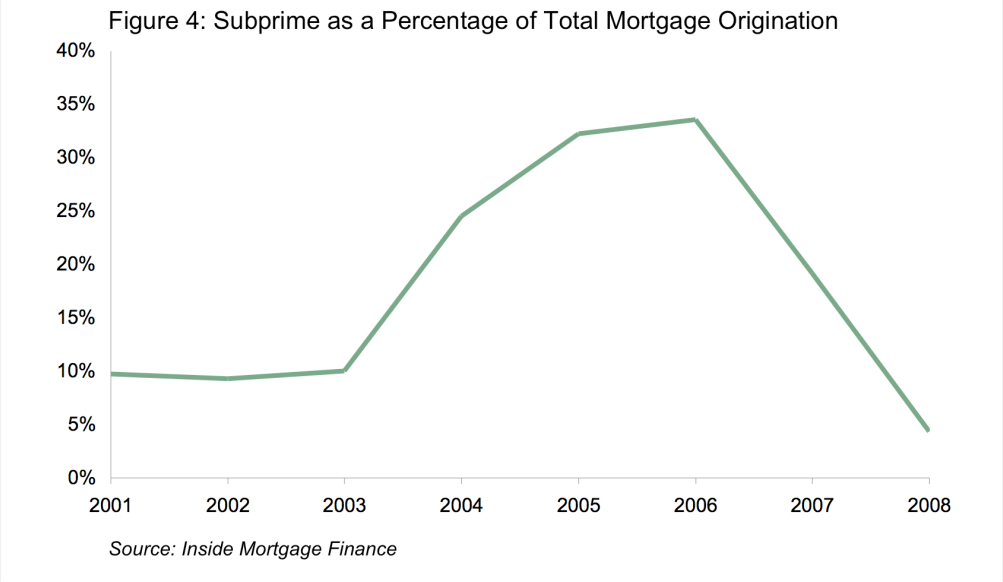
[14] FinReg21.com, *Delinquent Loans Hit Record in 2008, available at* http://www.finreg21.com/news/delinquent-loans-hit-record-2008 (last visited Apr. 29, 2009).

Table 3: Mortgage Origination by Type
$ billions

	Total	Conforming	Conforming as a % of Total	Prime Jumbo	Prime as a % of Total	Sub/AltA	Sub/AltA as a % of Total	Seconds	Seconds as a % of Total
2001	2215.00	1265.00	57.1	445.00	20.1	215.00	9.7	115.00	5.2
2002	2885.00	1706.00	59.1	571.00	19.8	267.00	9.3	165.00	5.7
2003	3945.00	2460.00	62.4	650.00	16.5	395.00	10.0	220.00	5.6
2004	2920.00	1210.00	41.4	5150.00	176.4	715.00	24.5	355.00	12.2
2005	3120.00	1092.00	35.0	570.00	18.3	1005.00	32.2	365.00	11.7
2006	2980.00	990.00	33.2	480.00	16.1	1000.00	33.6	430.00	14.4
2007	2430.00	1162.00	47.8	347.00	14.3	466.00	19.2	355.00	14.6
2008	1485.00	920.00	62.0	97.00	6.5	64.00	4.3	114.00	7.7

Source: Inside Mortgage Finance

As a percentage of total mortgage origination, the share of subprime mortgages also peaked in 2006 at 34%. By Q4 2008, subprime lending had essentially frozen, accounting for only 4.3 % of total mortgage origination.



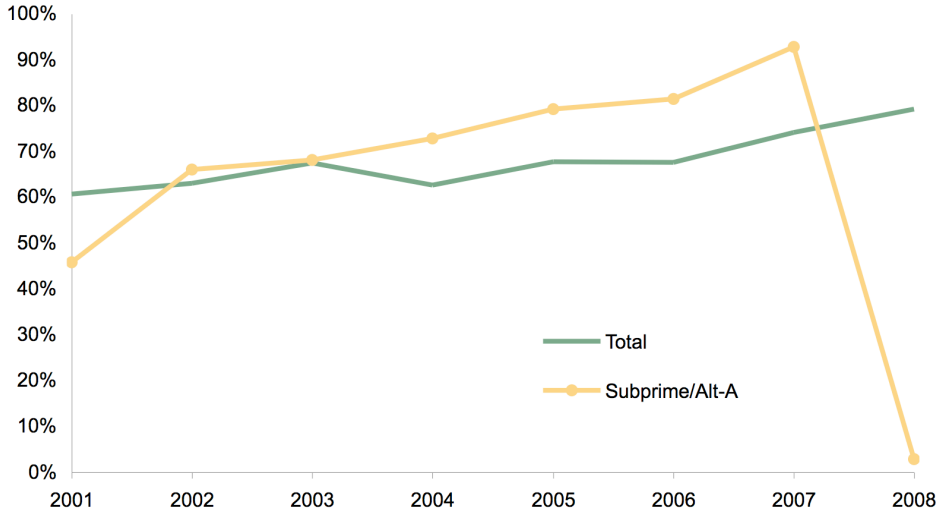
The boom in mortgage lending was driven in part by increased securitization, allowing banks to get loans off their books, which, in turn, freed up capital for additional lending. In 2001, 61% of home mortgages originated that year were securitized; by 2007, the securitization rate for home mortgages reached 74%. Likewise, in 2001, just 46% of subprime/Alt-A mortgages originated that year were securitized; by 2007, the securitization rate for those mortgages climbed to 93%. By 2008, 60.7% of all outstanding home mortgages were securitized, with 43.6% securitized by an agency, and the rest privately.[15]

[15] *See* Table 4: Securitization by Mortgage Type.

Table 4: Securitization by Mortgage Type				
	Total	Conforming	Prime jumbo	Sub/AltA
2001	60.70%	72.30%	32.00%	45.80%
2002	63.00%	74.50%	30.00%	66.00%
2003	67.50%	77.70%	36.50%	68.10%
2004	62.60%	73.70%	45.30%	72.90%
2005	67.70%	80.50%	49.20%	79.30%
2006	67.60%	82.50%	45.60%	81.40%
2007	74.20%	91.40%	51.30%	92.80%
2008	79.30%	97.80%	6.80%	2.90%

Source: Inside Mortgage Finance

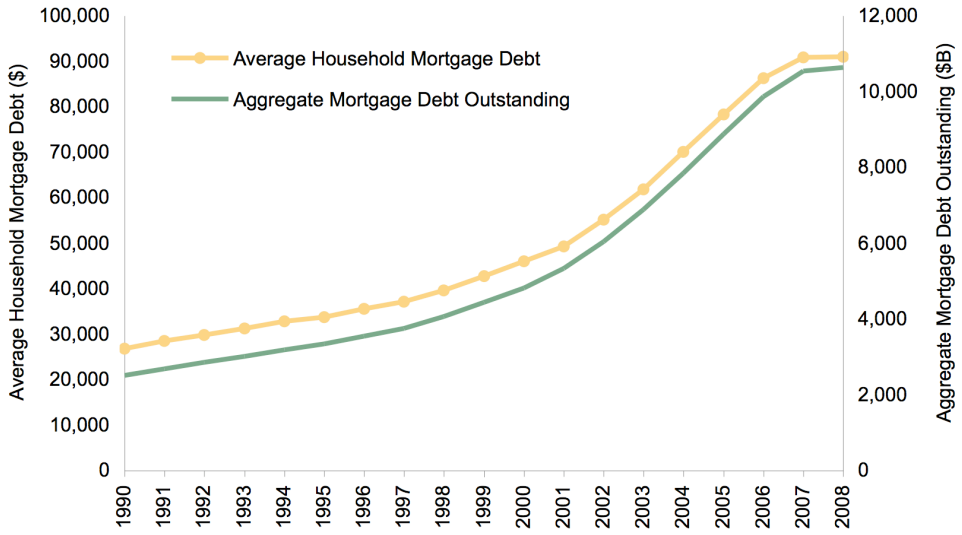
Figure 5: Securitization Rates for Home Mortgages



Source: Inside Mortgage Finance

Not surprisingly, the lending boom significantly increased the indebtedness of American households. While the number of households in the United States increased only marginally between 1990 and 2008, the aggregate mortgage debt outstanding more than quadrupled during that same period, reaching $10.6 trillion in 2008. As a consequence, the mortgage indebtedness of the average American household increased from approximately $26,800 in 1990 to $90,900 in 2008.

Figure 6: Mortgage Debt of American Households

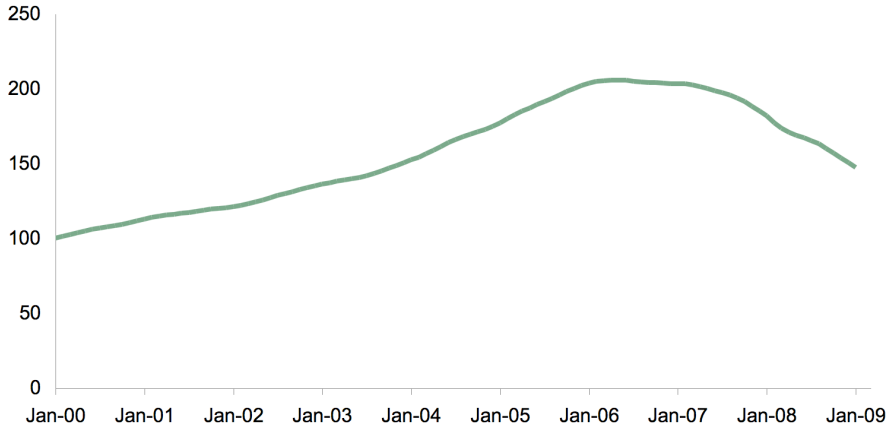


Source: Oppenheimer

b. The Housing Bust

Increased borrowing by U.S. households was partially offset by increased asset prices. As shown by the S&P/Case-Shiller national home price index, housing prices across the country had been rising for nine consecutive years prior to their peak in Q2 2006. The increase was especially steep in the seven years leading up to the peak, during which prices rose approximately 90%. In retrospect, the bubble is obvious. Its burst has been equally dramatic. From Q2 2006 to Q4 2008, national housing prices have declined 27%.

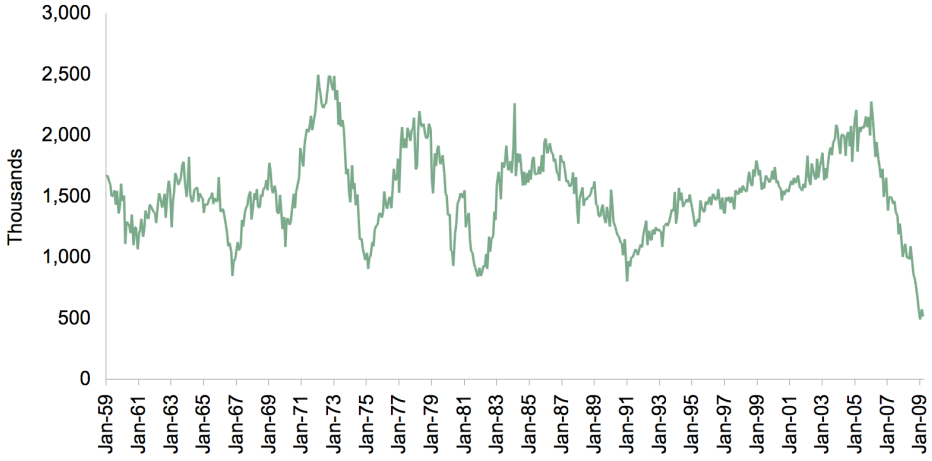
Figure 7: S&P/Case-Shiller U.S. National Home Price Index



Note: Data through January 2009

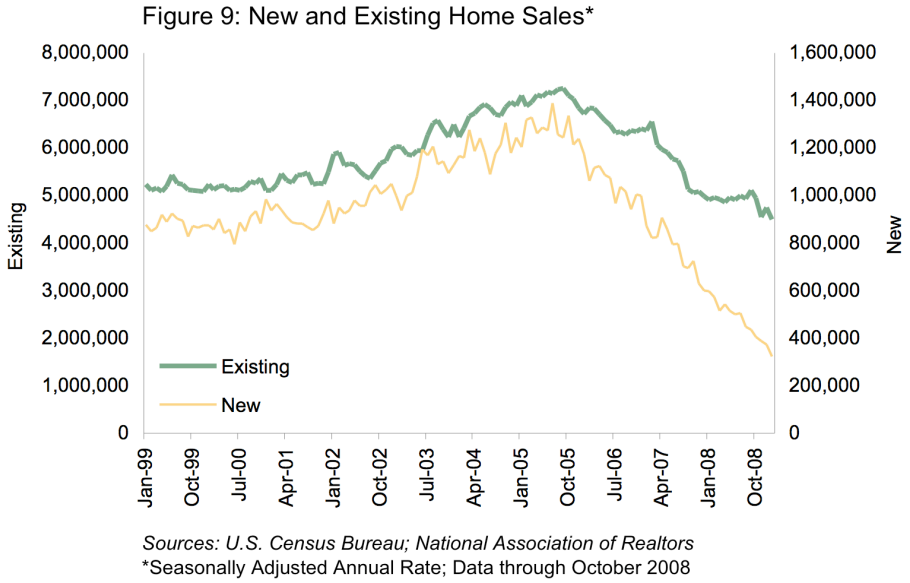
The burst of the housing bubble has all but eliminated home construction and sales activity. New privately owned housing starts have reached levels significantly below the lowest on record for a time series beginning in 1959. Since peaking at 2,273,000 in January of 2006 (seasonally adjusted annual rate), starts have plummeted to 625,000 in November 2008, representing a decline of 73%.

Figure 8: New Privately Owned Housing Units Started*



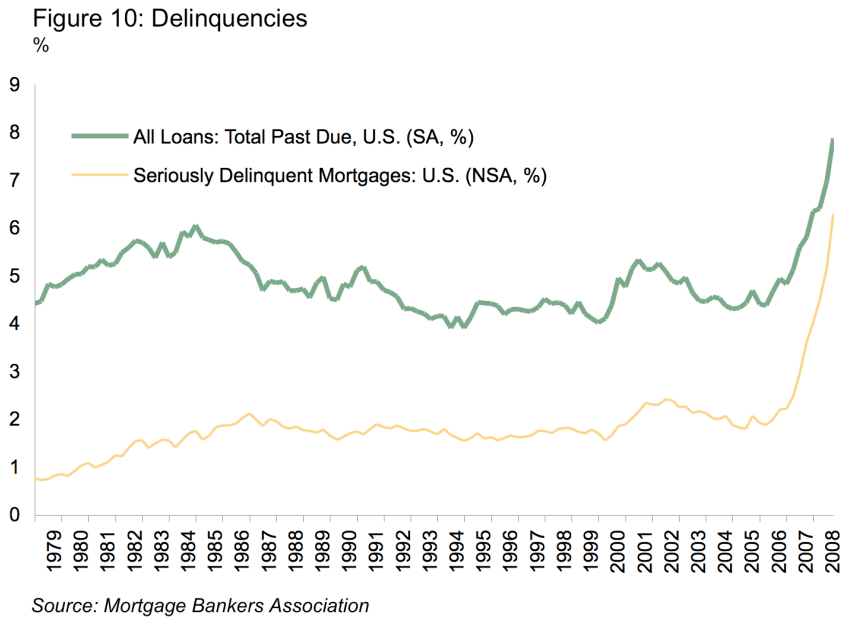
Source: U.S. Census Bureau
* Seasonally Adjusted Annual Rate; Data through January 2009

The construction slide reflects the fall-off in sales of new and existing homes. New home sales are at levels significantly below their all-time lows for a time series going back to 1963. After peaking at 1,389,000 in July 2005 (seasonally adjusted annual rate), new home sales have fallen to 419,000 in October 2008, representing a decline of 70%. Existing home sales have also been hard hit, approaching levels not seen since the late 1990s. After peaking at 7,250,000 in September 2005 (seasonally adjusted annual rate), existing home sales have fallen to 4,980,000 in October 2008, representing a decline of 31%.

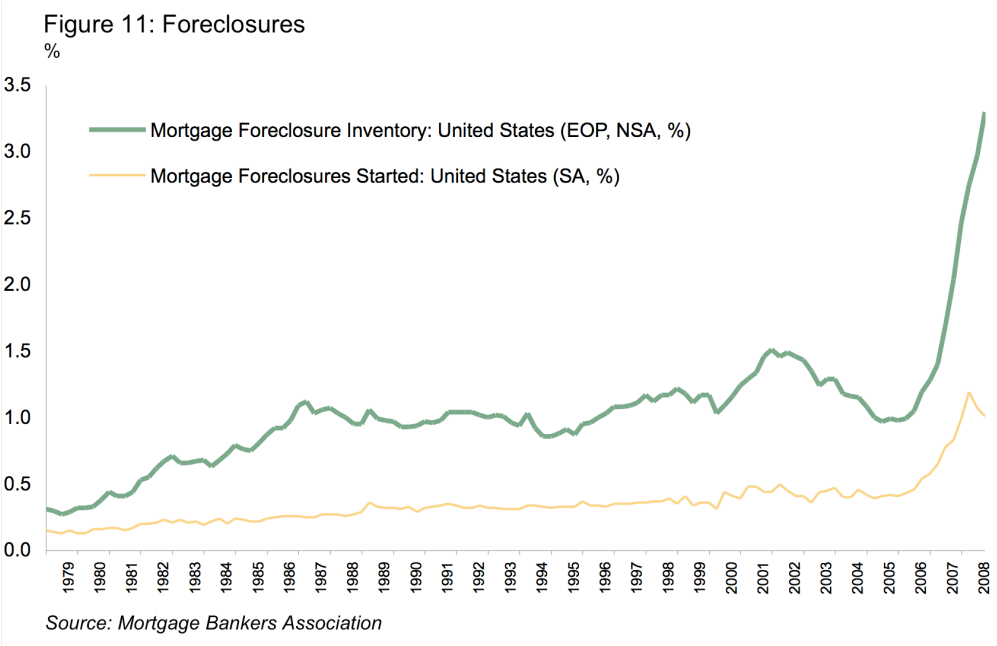


c. The American Homeowner in Crisis

Rising unemployment, increased household indebtedness, and plummeting housing prices have contributed to soaring mortgage delinquency and foreclosure rates. The percentage of delinquent mortgages is now significantly above all-time highs (for a time series going back to 1979). As of Q4 2008, 7.88% of all loans were past due, compared to just 4.4% as recently as Q2 2006. The percentage of seriously delinquent loans almost tripled during this period from 1.89% to 5.17%.



The rise in foreclosures has been even more dramatic. As of Q4 2008, foreclosures had been commenced with respect to 1% of all outstanding mortgages, compared to just 0.41% as recently as Q1 2006. By the end of 2008, the incidence of foreclosures started had more than doubled from 2005 levels while the foreclosure inventory tripled over this period.



The soaring delinquency and foreclosure rates partly reflect the brutal fact that many homeowners now have mortgages exceeding the value of their homes. As of December 2008, the number of mortgages in a negative equity position has increased to 8.3 million, representing 20% of all mortgages.[16] The distribution of negative equity is heavily skewed toward a small number of states, with Nevada (48% of mortgages) and Michigan (39%) producing truly traumatic figures.

3. The U.S. Financial Sector

An observer from early 2008, transported one year into the future, would find the financial landscape today scarcely recognizable. Some of the most prominent institutions in the banking and finance sector have failed, while others have been acquired, bailed out, or placed in conservatorship. Bear Stearns, AIG, Freddie Mac & Fannie Mae, Lehman Brothers, Merrill Lynch, Indy Mac, Washington Mutual and Wachovia have all fallen victim to the crisis. Other venerable investment banking

[16] First American CoreLogic, *First American CoreLogic's Negative Equity Data Report* (Mar. 4, 2009).

houses—Goldman Sachs and Morgan Stanley—have sought access to federal funding and converted to bank holding companies. In addition, numerous depository institutions have failed. In 2008 alone, the FDIC was appointed as receiver for 25 banks.

The wreckage on Wall Street stems in part from the explosive growth in complex and mispriced securitized mortgages, which the banks both issued and themselves held. Two particular classes of securitized debt—RMBS and CDOs[17]—illustrate the rapid growth in this asset class. From 2001 to 2003, total RMBS issuance almost doubled from $1.3 trillion to $2.7 trillion. Although total RMBS issuance declined after 2003, the portion representing subprime/Alt-A mortgages increased as a percentage of total issuance, peaking at 40% in 2006. The quality of RMBS issuances was rapidly declining.

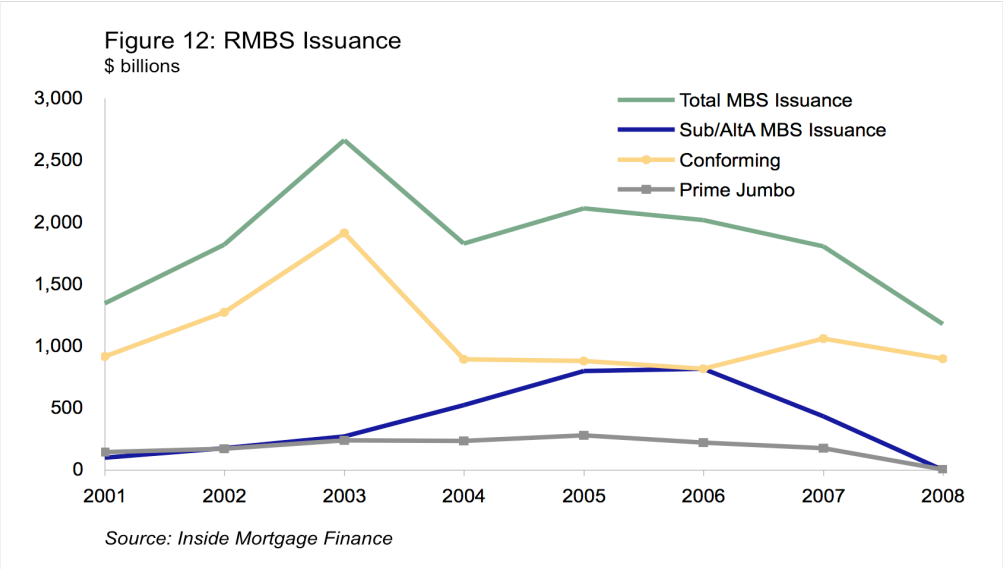


Table 5: RMBS Issuance Across Categories
$ billions

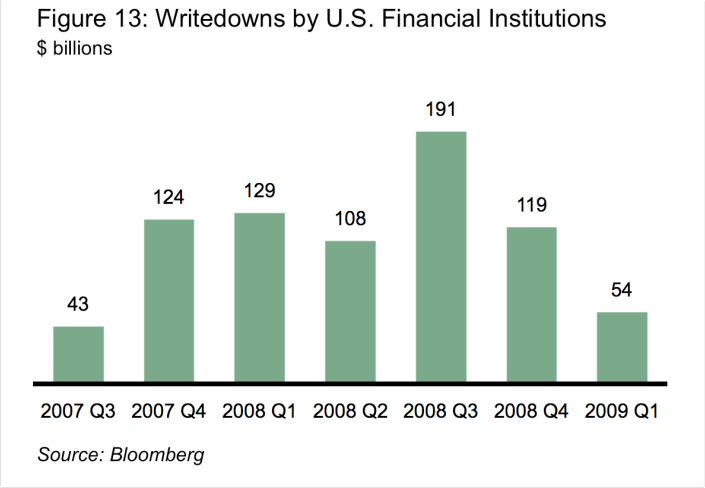
	Total RMBS Issuance	Conforming	Prime jumbo	Sub/AltA RMBS Issuance
2001	1344.70	914.90	142.20	98.40
2002	1817.40	1270.40	171.50	176.10
2003	2662.40	1912.40	237.50	269.10
2004	1826.80	892.30	233.40	521.10
2005	2111.80	879.10	280.70	797.40
2006	2016.00	816.90	219.00	814.30
2007	1804.20	1062.00	178.10	432.50
2008	1177.30	899.80	6.60	1.90

Source: Inside Mortgage Finance

[17] CDOs represented complex re-securitizations of already securitized debt, including mortgage-backed securities.

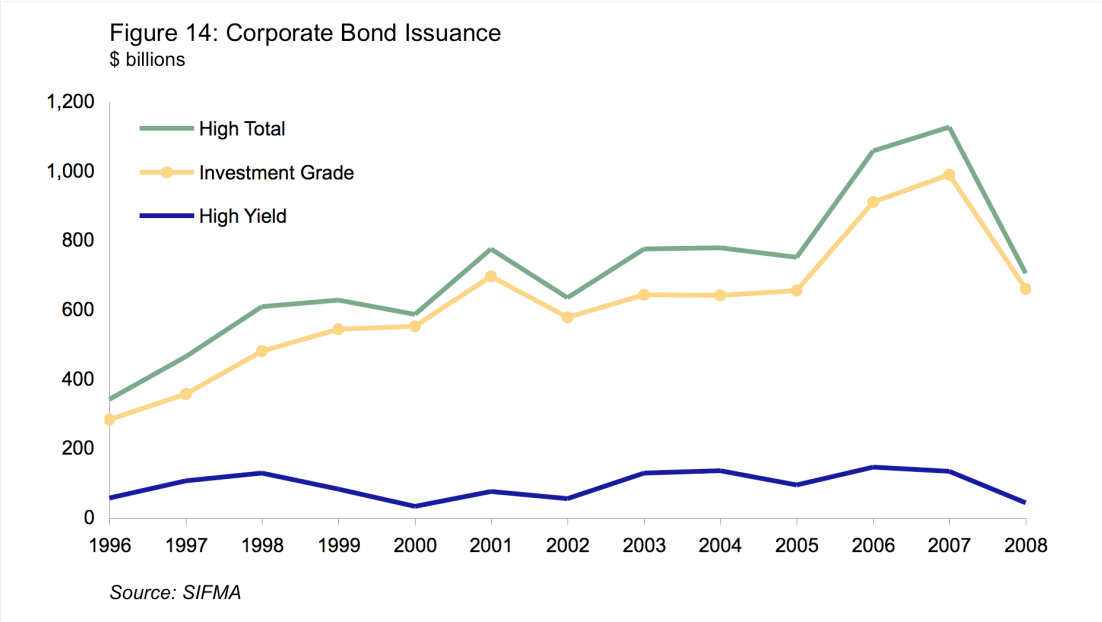
As the RMBS market cooled, the CDO market took off, peaking at $102 billion in Q2 2007. In Q4 2008, CDO issuances amounted to a mere $1.8 billion, representing a drastic 98.2% drop from the Q2 2007 peak. Structured finance issuances, which in 2005 had represented roughly two thirds of total CDO issuances, only accounted for approximately one third of total issuances in 2008.[18]

Although securitized debt was sold globally, much of it remained on the books of U.S. financial institutions. As the housing bubble burst, the market for these securities dried up and their value plummeted. Writedowns by U.S. financial institutions mounted. By Q3 2008, writedowns had reached $191 billion.

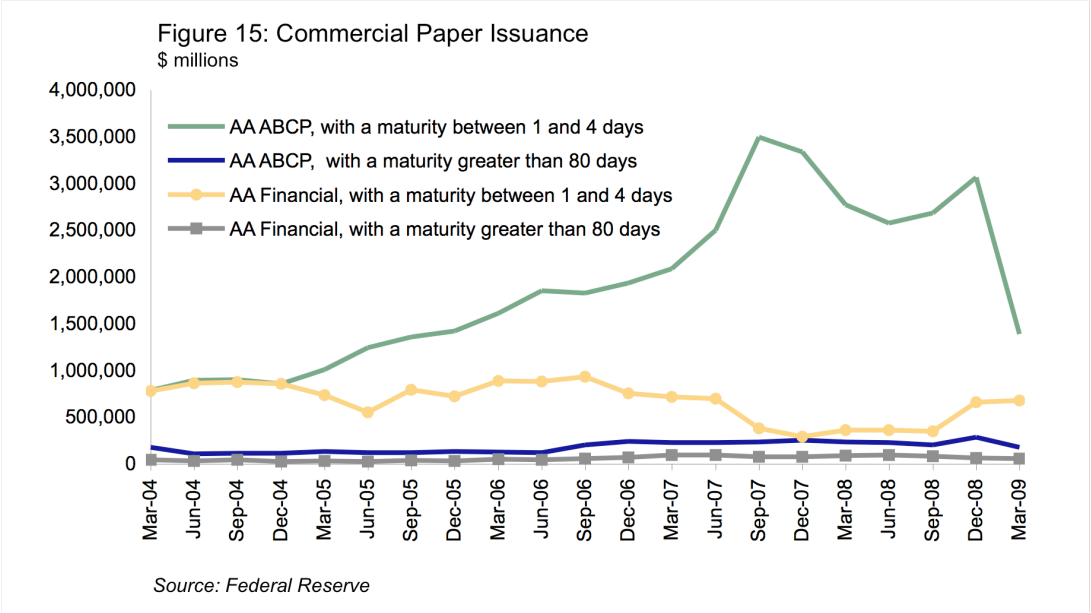


Shrinking balance sheets and shaken confidence in the financial sector in turn weakened the demand for other types of securitized debt, such as corporate bonds and commercial paper. Corporate bond issuance dropped precipitously from a peak of $1.1 trillion in 2007 to $706 billion in 2008, representing a 37% decline. Corporate bond issuance has shown continued weakness. In the first two months of 2009, there were just $138.7 billion in new issuances compared to $151.8 billion in the corresponding period for 2008.[19]

[18] *See* Figure 20: Global CDO Issuance Chart.
[19] Securities Industry and Financial Markets Association, *U.S. Corporate Bond Issuance – Investment-Grade and High-Yield*, *available at* http://www.sifma.org/research/pdf/Corporate_HY_IG.pdf.



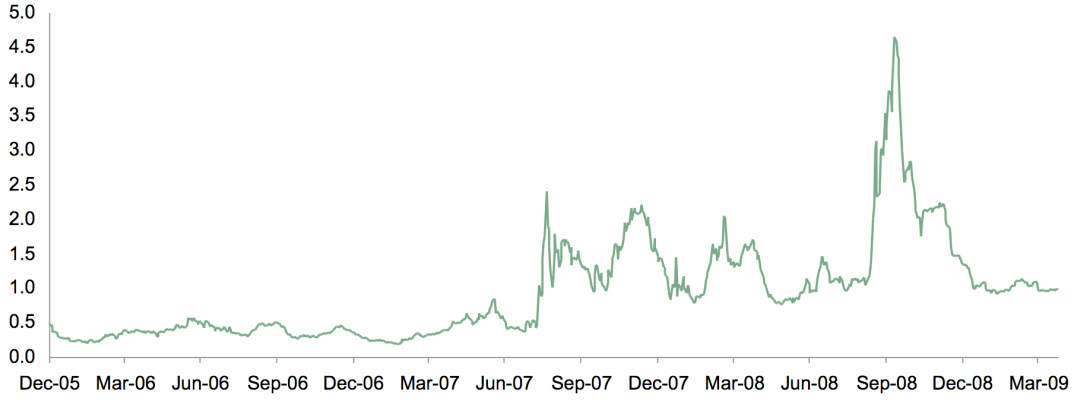
Issuance of asset-backed commercial paper (ABCP) with a maturity of 1-4 days took its first significant decline from a steep growth trend that began in 2004, dropping 26% (from $3.5 trillion to $2.6 trillion) during the period from Q3 2007 to Q2 2008. After showing signs of a possible recovery in late 2008, issuance dropped by more than 50% in Q1 2009. Issuance of ABCP with a maturity of more than 80 days has also fallen in Q1 2009, which arguably demonstrates low investor confidence in this class of security.



With massive amounts of toxic and difficult-to-value securities still on their books, the market regarded banks—and banks regarded each other—with great

suspicion. The so-called "TED" spread—the difference between the three-month T-bill interest rate and the three-month London Interbank Borrowing Offered Rate—reached an all-time high of 4.63% in October 2008, reflecting banks' heightened fear of lending to each other.

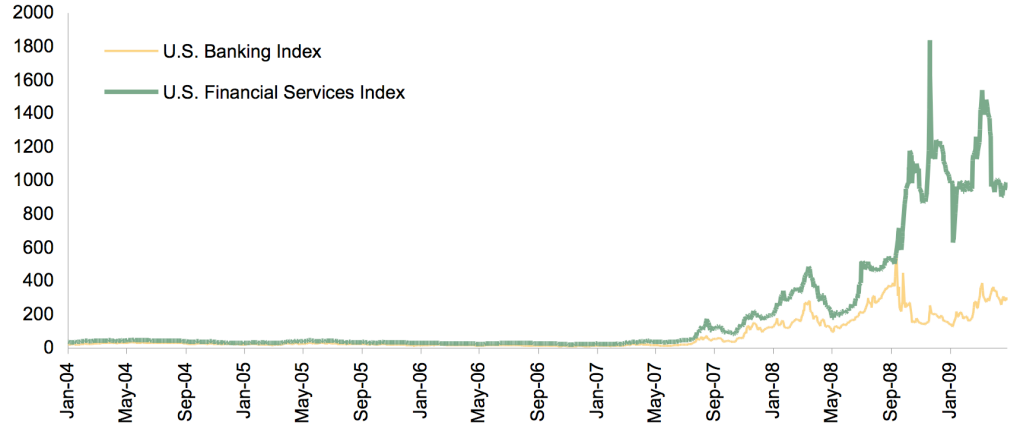
Figure 16: TED Spread
Percentage Points



Source: Bloomberg

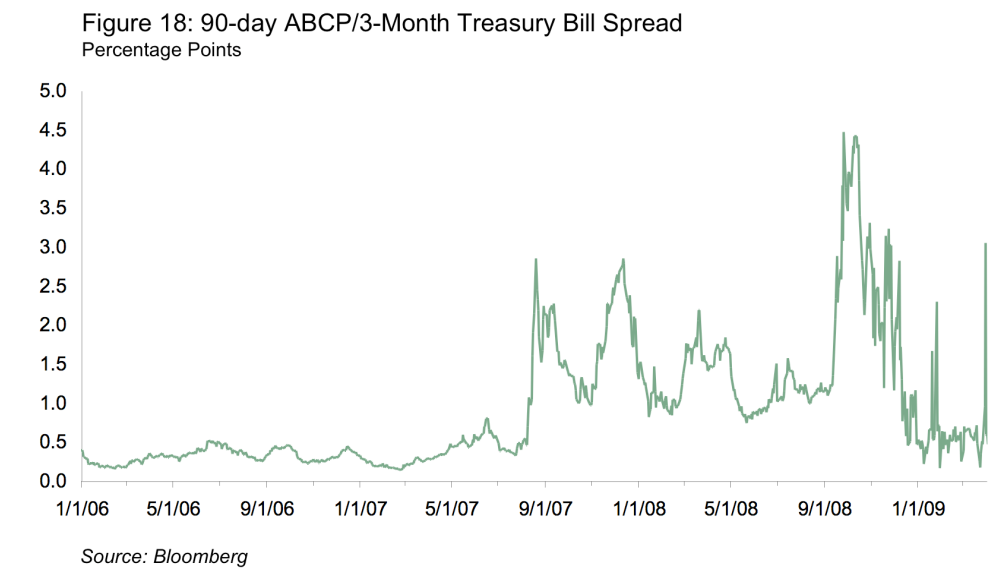
At the same time, the price of insuring bank debt has skyrocketed, reflecting investors' skepticism toward the creditworthiness of banks. From May 2007 to the end of January 2009, the average spread for the U.S. banking sector increased from approximately 14 bp to approximately 200 bp. The increase with respect to financial services firms has been even more dramatic. Astoundingly, from May 2007 to the end of January 2009, the average CDS spread for the U.S. financial services sector increased from approximately 36 bp to approximately 1200 bp, even exceeding 1800 bp during the end of November 2008.

Figure 17: U.S. Banking and Financial Services CDS Spreads
Basis Points



Source: Bloomberg

Forced to shrink their balance sheets to satisfy regulatory capital requirements, banks have constrained lending. Broad counter-party risk concerns have further exacerbated the credit crunch. As one consequence, the spread between rates on 90-day ABCP and 3-month treasury bills has widened and fluctuated dramatically since mid-2007, peaking at 4.5% in September 2008.



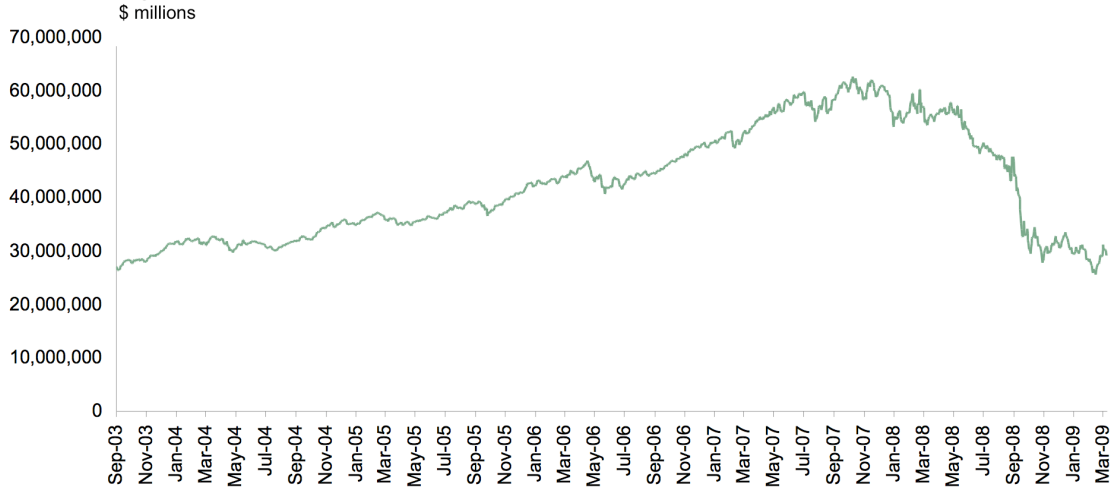
4. Global Losses

Thus far, we have mainly focused on the impact of the financial crisis on the United States, but this crisis is very much a global concern as well. The global economic outlook is similar to that of the United States, as leading indicators show that countries around the world are struggling with many of the same issues in the magnitude of total losses, the housing sector, and the financial sector.

a. Loss Estimates

Although the U.S. subprime mortgage market was the first to absorb the devastating effects of the bursting global asset bubble, the turmoil had directly impacted most equity markets by the summer of 2007. At the end of Q1 2009, global market capitalization had fallen 53% since its peak on October 31, 2007.

Figure 19: Global Market Capitalization



Source: Bloomberg

From 2000-2008, Global GDP growth averaged 4.1% each year.[20] With global output growth projections for 2009 below 3%, it appears that the world's economy has entered a global recession that will extend through 2010.[21] In March 2009, the WEO database projected world output to be -1.0 to -0.5%, a striking decrease from 2008, when output was 3.2%.[22] The WEO table below projects a decline of -3.2% in the Euro area and an even steeper decline in Japan, where projections sink to -5.8%.

Table 6: Overview of the *World Economic Outlook* Projections
(Percent change, unless otherwise noted)

						Q4 over Q4		
		Projections		Differences from January 2009 WEO Projections		Estimates	Projections	
	2008	2009	2010	2009	2010	2008	2009	2010
World Output	3.2	-1.0 to -0.5	1.5 to 2.5	-1.5 to -1.0	-1.5 to -0.5	0.2	-0.5 to 0.5	2.0 to 3.0
Advanced economies	0.8	-3.5 to -3.0	0.0 to 0.5	-1.5 to -1.0	-1.5 to -0.5	-1.7	-2.5 to -1.5	0.5 to 1.5
United States	1.1	-2.6	0.2	-1.0	-1.4	-0.8	-1.8	1.6
Euro area	0.9	-3.2	0.1	-1.2	-0.2	-1.3	-2.2	0.9
Japan	-0.7	-5.8	-0.2	-3.2	-0.8	-4.6	-3.1	0.5
Emerging and developing economies	6.1	1.5 to 2.5	3.5 to 4.5	-2.0 to -1.0	-1.5 to -0.5	3.3	2.5 to 3.5	4.0 to 5.0

Source: World Economic Outlook database, March 2009

[20] Int'l Monetary Fund, *World Economic Outlook, Financial Stress, Downturns and Recoveries* (Oct. 2008).
[21] *What is a global recession?*, BBC News, Feb. 10, 2009, *available at* http://news.bbc.co.uk/2/hi/business/7880592.stm.
[22] Int'l Monetary Fund, *World Economic and Financial Surveys, World Economic Outlook Database*, *available at* http://www.imf.org/external/pubs/ft/weo/2008/01/weodata/index.aspx (last visited Apr. 30, 2009).

Further losses associated with the crisis arose as businesses around the world were forced to writedown their assets. Approximately $1.3 trillion has been lost in writedowns since Q3 2007 worldwide.[23] Since Q3 2007, Europe has suffered approximately $388 billion in writedowns.[24] As corporate assets shrank, global unemployment rates rose. The unemployment rate in the Euro zone was 8.9% in March 2009, compared to just 6.7% in March 2008.[25]

Table 7: Writedowns (World)
$ billions

Period	Loss
2007 Q3	58
2007 Q4	215.8
2008 Q1	222.3
2008 Q2	169.3
2008 Q3	257.9
2008 Q4	358.2
2009 Q1	58.1

Source: Bloomberg Professional

b. Housing Sector

The global housing market has also suffered a sharp downturn. The *Economist* recently reported a large increase in the number of countries showing a decline in their housing market.[26]

[23] *See* Table 7: Writedowns (World).
[24] *Id*.
[25] News Release, Eurostat, "Euro area unemployment up to 8.9%" (Apr. 30, 2009) *available at* http://epp.eurostat.ec.europa.eu/cache/ITY_PUBLIC/3-30042009-BP/EN/3-30042009-BP-EN.PDF.
[26] *Caught in the Downward Current*, Economist, Mar. 19, 2009, *available at* http://www.economist.com/finance/displayStory.cfm?story_id=13337869.

Table 8: House-Price Indicator % Change			
	Latest *(on a year earlier)*	Q4 2007	1997-2008
China	-0.9	10.2	n/a
South Africa	-1.3	12.2	389
Sweden	-1.6	11.3	145
Japan	-1.8	-2.8	-33
Canada	-1.9	5.9	66
Germany	-2.5	-4.2	n/a
Spain	-3.2	4.8	184
Australia	-3.3	14.0	163
Singapore	-4.7	31.2	n/a
Denmark	-4.9	1.2	119
Netherlands	-5.2	2.8	90
New Zealand	-8.9	8.0	102
Ireland	-9.8	-6.0	193
Hong Kong	-14.0	21.4	-35
Britain	-17.6	7.1	150

Source: Economist; March 19, 2009 Issue

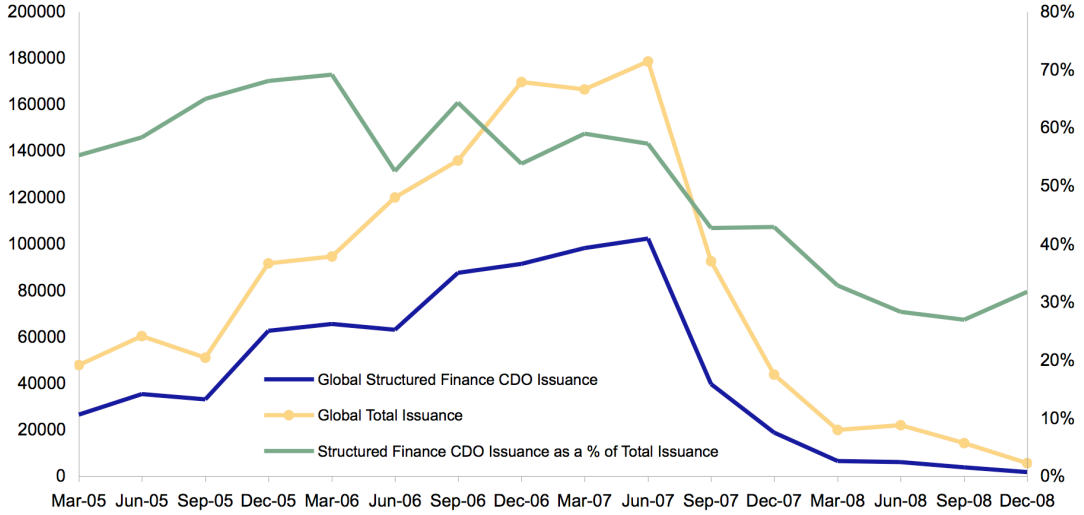
The table above shows that home prices in the United Kingdom grew by an astonishing 150% from 1997 to 2008.[27] Since Q4 2007, however, the U.K. housing market has experienced a 17.6% decline.[28] A recent report by Numis Securities estimates that before the end of the present crisis housing prices in the United Kingdom could fall by an additional 40-55%.[29]

c. Finance Sector

Global issuance of CDOs more than tripled in the two-year period between Q1 2005 and Q1 2007, as investors searched for higher yields and dealers sought to unload less desirable securitization tranches. Total Global CDO issuance peaked in Q2 2007 at $179 billion, but fell precipitously to just $5 billion in Q4 2008—a 97.2% drop.

[27] *Id*.
[28] *Id*.
[29] *Id*.

Figure 20: Global CDO Issuance
$ millions



Source: SIFMA/Thomson
Note: Structured Finance collateral includes assets such as RMBS, CMBS, CMOs, ABS, CDOs, CDS, and other securitized/structured products.

d. Conclusion

Our probe into the current crisis, accomplished through a summary of key measures illustrating its severity, serves as a critical point of reference for the analysis and recommendations set forth in this report. As shown above, the global crisis has manifested itself in credit losses, deflated property values, underwater home mortgages, and mounting writedowns for financial institutions. We believe that an important cause of this precipitous downturn stems from ineffective financial regulation. Before offering our recommendations for effective regulatory reform, we believe it is first necessary to set forth some key principles of regulation.

B. Regulatory Principles

This section considers whether new or different approaches to the regulation of financial markets are needed. At the outset, it is important to consider the justifications for regulation. Without sufficient justification, we believe there is generally no reason to override pure market outcomes. And, even if a justification for regulation does exist, this does not necessarily mean that a regulatory regime should be adopted. We believe a regulation should be promulgated only when its benefits outweigh its costs. Finally, if different kinds of regulation can achieve the same benefit, the regulation with the least cost should be adopted.

The economic literature establishes the following rationales for capital market regulation: (i) externalities, primarily systemic risk; (ii) correction of information asymmetries; (iii) agency problems; (iv) preservation of competition; and (v) limitation

of moral hazard arising from government support of the financial system. An excellent review of these rationales is presented by the International Center for Monetary and Policy Studies in its recent report entitled, "The Fundamental Principles of Financial Regulation"[30] and by Luigi Zingales in his paper, "The Future of Securities Regulation."[31]

1. Externalities: Systemic Risk and Liquidity

Regulation is necessary "where there are sufficient externalities that the social, and overall costs of market failure exceed both the private costs of failure and the extra costs of regulation."[32] Commentators have identified five key externalities particular to financial markets that, while often reinforcing and amplifying the effects of the other, can each contribute to the creation of systemic risk and liquidity risk.[33]

First, the spread of speculative information (whether correct or not) through the market can create the perception that economic difficulties impacting one financial institution also affect other similarly situated firms, prompting large-scale investor and creditor flight. Consequently, such firms may suffer sudden constrictions in liquidity, depressing the value of their assets through prospective fire sales, making access to funds more limited and expensive for them. The effects of this type of problem were recently observed after the collapse of Lehman Brothers, when emergency action was considered necessary to rescue other similarly situated investment houses (e.g., Merrill Lynch, Goldman Sachs, and Morgan Stanley).

Second, customers of failed institutions may subsequently find themselves in a less-friendly market when looking to re-direct their business. This may be most readily observed in the banking industry, where customers of a failed bank may face more stringent terms in dealing with other banks due to difficulties in transferring full customer information and history to new banks. More generally, the remaining banks may be reluctant to take on obligations in a panicked market.

Third, there is considerable inter-connectedness between the financial institutions participating in modern financial markets through the provision of lending, risk-management (e.g., using CDSs or mono-line insurance) and brokerage services to one another. Accordingly, failure of an institution active in the secondary market can create considerable uncertainty for others trading with it, necessitating emergency re-

[30] Markus Brunnermeier et al., Int'l Ctr. for Monetary & Pol'y Studies, *The Fundamental Principles of Financial Regulation: Preliminary Conference Draft* (Jan. 2009), *available at* http://www.voxeu.org/reports/Geneva11.pdf.
[31] Luigi Zingales, *The Future of Securities Regulation*, 47 J. Acct. Res. 391 (2009).
[32] Markus Brunnermeier et al., Int'l Ctr. for Monetary & Pol'y Studies, *The Fundamental Principles of Financial Regulation: Preliminary Conference Draft* (Jan. 2009), *available at* http://www.voxeu.org/reports/Geneva11.pdf.
[33] *Id.* at 2, 4-5.

assessment of risk-exposures, settlement of failed contracts and re-direction of investment. Such uncertainty can create widespread loss of confidence resulting in trading activity becoming more limited, which, in turn, affects overall liquidity in the market, depresses asset prices, and threatens the solvency of vulnerable institutions.

Fourth, and related to the third externality, regulation may be necessary to control the negative spiral created by falling asset prices and resulting liquidity constrictions. As observed in the current crisis, the falling value of bank assets can prompt runs on those banks. The resulting liquidity crisis decreases asset values even further because of the likelihood of fire sales. This self-reinforcing cycle can create solvency difficulties for financial institutions outside of any one firm's control.

Fifth, falling asset prices and liquidity crises could cause institutions to become reluctant to extend credit. An appreciable slow-down in lending can affect the economy as a whole, lowering output for businesses, decreasing customer purchasing power and potentially leading to further defaults on loans.

Some commentators have expressed skepticism as to the significance of particular systemic risks. Kaufman[34] and Benston et al.[35] have argued that there is little evidence to show that bank runs can lead to insolvencies across banks. They point to the banking crisis during the Great Depression, when depositors—despite not having the benefit of state-guaranteed deposit insurance—did not abandon solvent banks. Further, the difficulties facing Continental Illinois Bank did not lead to a widespread depositor flight from U.S. banks. Similarly, the rescue of Northern Rock Bank in the United Kingdom did not cause depositors to seek a return of their money from other U.K. consumer-oriented institutions. Nevertheless, as Greenspan[36] has argued, while the risk may be minimal, the potential contagion of a bank run could have devastating consequences for the system as a whole and therefore requires regulatory attention. We believe the current financial crisis has proven his point.

2. Information Asymmetry and Transparency

Regulation may be imposed to ensure the dissemination of high-quality information across the market that provides participants with data relating to the health and prospects of market players.

Disclosure is important for investor welfare, given the potential for investors to undertake less than adequate investigation before making investment decisions and paying a lower price as a result of uncertainty. This has the potential to skew rational

[34] G.G. Kaufman, *Bank Contagion: A Review of the Theory and Evidence*, 8 J. Fin. Serv. Res. 123 (1994).
[35] G.J. Benston et al., *Perspectives on Safe and Sound Banking: Past, Present, and Future* (MIT Press 1986).
[36] Alan Greenspan, Chairman, Fed. Res. Bd., Remarks at the VIIIth Frankfurt International Banking Evening (1996).

investment allocation, diverting funds away from sounder companies. The effect of information asymmetries is even more troubling for unsophisticated investors who suffer more acutely from difficulties in accessing good data about investments. To be sure, it can be argued that the Efficient Capital Markets Hypothesis obviates the requirement for mandatory disclosure, because the price of a company's publicly traded securities in effect "discloses" all publicly available information on that company. But that model depends on the extent to which such securities are in fact traded and on the quality of information released by an issuer in the first instance.[37]

Further, as highlighted by the recent report of the Congressional Oversight Panel, improving the quality and method of information provision is important in protecting consumers from instances of unfair, predatory, and fraudulent behavior.[38] In the context of the current crisis, the Panel has been highly critical of commercial practices where consumers were being sold mortgages without being provided sufficiently clear and concise information about their loans. Consequently, regulation has been recommended in the interest of consumers to curb unfair practices that may be prevented by better disclosure.

3. Agency Risks

The case for regulation has also been made to mitigate the risks inherent in an investor giving money to an agent on her behalf, with only very limited control over how this investment is directed and potentially misused by unscrupulous managers (e.g., the recent Madoff scandal). Thus, regulation may be needed to achieve better alignment of incentives. Since agency and asymmetric information problems may be combined, the regulations may have to establish risk mitigation mechanisms (e.g., monitoring by third parties such as auditors or lawyers) and ensure an optimal level of incentives for managers to perform well even without the opportunistic temptation to obtain excessive, and short-term, gain.[39] The corporate governance literature also addresses this problem.

4. Competition

Regulation may also be necessary to deal with the problems of monopolies and cartels. Commentators believe regulation is important for opening up access to the financial markets, permitting new entrants to join established players, and increasing

[37] Jonathan R. Macey & Geoffrey P. Miller, *Good Finance, Bad Economics: An Analysis of the Fraud-on-the-Market Theory*, 42 Stan. L. Rev. 1059, 1086 (1990).
[38] Cong. Oversight Panel, *Special Report on Regulatory Reform* 15-19 (Jan. 2009), *available at* http://cop.senate.gov/documents/cop-012909-report-regulatoryreform.pdf.
[39] Frank B. Cross & Robert A. Prentice, *The Economic Value of Securities Regulation*, 28 Cardozo L. Rev. 333, 339-340 (2006).

competition—all of which help to create a more efficient marketplace.[40] The United States' current 10% limit on bank deposits per state and the review of all mergers and acquisitions by bank regulators and the Department of Justice reflect this concern. The concern has also been voiced with respect to the high concentration in the auditing and credit rating industries.

In addition, from the consumer protection point of view, Benston argues that regulation promoting choice between financial services providers is important to the preservation of honesty, fairness, and standards in the financial markets (e.g., by promoting better disclosure practices to allow customers to compare firms, thereby reducing information asymmetries).[41]

Finally, one might argue that regulation providing for a competitive marketplace may be helpful in improving standards of supervisory oversight, with a broader range of firms under supervision reducing the risk of regulatory capture by a small number of firms.

5. Moral Hazard

The state can provide safety nets to protect investors and firms from the risks associated with their activities. Examples include deposit insurance or lender-of-last-resort facilities. These arrangements may be seen as creating a moral hazard, encouraging risk-taking and ill-informed decision-making by protected sectors of the economy.[42] Llewellyn has identified three key types of moral hazards that may arise through the provision of state safety-nets: (i) protections for failing banks may mean that consumers choose banks that offer higher rates of return and as a result may be high risk; (ii) conversely, knowing that it and its investors are protected, a firm may be more willing to enter into risk-taking behavior; and (iii) the provision of a taxpayer safety net may mean that deposits or otherwise protected investments are incorrectly priced, with a lower risk premium than should be the case.[43] Benston and Kaufman argue that the main justification for the regulation of banks is to counter the negative externalities that result from government-imposed deposit insurance.[44] Others (notably

[40] David Llewellyn, *The Economic Rationale for Regulation*, FSA Occasional Paper 46 (1999), *available at* http://www.fsa.gov.uk/pubs/occpapers/OP01.pdf.
[41] G.J. Benston, London Inst. of Econ. Affairs, Hobart Paper No. 135, *Regulating Financial Markets: A Critique and Some Proposals* (1998).
[42] Kevin Dowd, *The Case for Financial Laissez-Faire*, 106 Econ. J. 679 (1996).
[43] David Llewellyn, *The Economic Rationale for Regulation*, FSA Occasional Paper 31 (1999), *available at* http://www.fsa.gov.uk/pubs/occpapers/OP01.pdf.
[44] G.J. Benston & G.G. Kaufman, *The Appropriate Role of Bank Regulation*, 106 Econ. J. 688 (1996).

Kane) have emphasized the moral hazard associated with the mispricing of deposit insurance.[45]

Consequently, regulation is justified in order to limit the influence of moral hazard and, in particular, to ensure that firms and consumers are not permitted to take advantage of taxpayer generosity and engage in undue risk-taking and cavalier decision-making.

Specific Recommendations

1. Regulate on Principle. We believe market outcomes should not be overridden unless there is a specific justification for government regulation. Such justifications may include:

* externalities (the most important being systemic risk);
* correction of information asymmetries;
* principal-agent problems;
* preservation of competition; and
* limitation of moral hazard arising from government support of the financial system.

2. Analyze the Costs and Benefits of Proposed Regulations. We believe a regulation should be promulgated only when its benefits outweigh its costs, and at the least possible cost.

[45] David Llewellyn, *The Economic Rationale for Regulation*, FSA Occasional Paper 31 (1999), *available at* http://www.fsa.gov.uk/pubs/occpapers/OP01.pdf.

CHAPTER 2: Reducing Systemic Risk

As mentioned in the previous chapter, the most compelling justification for financial regulation is the need to reduce externalities—most notably, systemic risk. Simply put, effective regulation should minimize the possibility that certain events will trigger either the collapse of the financial system as a whole or a key component thereof, such as the banking sector. If the global financial crisis has taught us anything, it is that systemic risk is real. Accordingly, the Committee devotes this chapter to considering measures policymakers can take to reduce systemic risk across important sectors of the financial system. In so doing, we examine: (1) the CDS market; (2) the capital adequacy regime for banks; (3) the regulation of non-bank institutions (i.e., hedge funds, private equity firms, and money market mutual funds); and (4) the resolution process for insolvent financial institutions.

A. Credit Default Swaps

1. Overview

Credit derivatives are designed to measure and manage credit risks. Over the past decade, the international market for these instruments has grown dramatically. The principal instrument for credit derivatives is the credit default swap (CDS). A CDS is a bilateral contract negotiated between two counterparties called the "protection buyer" and the "protection seller." A CDS commits the protection buyer to pay a fixed periodic coupon to the protection seller; it commits the protection seller to compensate the buyer if a credit event is confirmed in the debt of the reference entity. A CDS is comparable to an insurance contract, but where the buyer does not necessarily have a direct interest in the insured asset. At present, CDSs are bought and sold exclusively on the over-the-counter (OTC) market.[46] According to the International Swaps Dealers Association (ISDA), there were approximately nominal $38.6 trillion of CDS contracts outstanding at year-end 2008,[47] down from a peak of $57.3 trillion in mid-2008.[48]

[46] Although the Chicago Mercantile Exchange (CME) and Eurex exchanges have listed CDS products, they have shown little to no activity to date. Further below, we discuss the potential obstacles to the trading of CDSs on exchanges.
[47] Press Release, ISDA, "ISDA Publishes Year-End 2008 Market Survey Results" (Apr. 22, 2009), *available at* http://www.isda.org/press/press042209market.html.
[48] Bank for Int'l Settlements (BIS), *Amounts outstanding of over-the-counter (OTC) derivatives-By risk category and instrument*, Quarterly Rev., BIS Semiannual OTC derivatives statistics at end-June 2008 (Dec. 2008), *available at* http://www.bis.org/statistics/otcder/dt1920a.pdf.

CDS market participants pursue a number of objectives when transacting. First, CDSs allow lenders to efficiently to hedge their exposure to credit losses. The limited liquidity in the corporate bond market often prevents the establishment of a short position to offset risk, and transferring a loan typically requires the consent of the borrower. Second, a lender might decide to diversify the concentration of its loan portfolio by selling a CDS on a reference entity that is underrepresented. Finally, CDSs allow participants to take positive or negative credit views on specific reference entities. Despite the benefits that CDSs provide, many argue these instruments exacerbated the global financial crisis. Consequently, we have examined whether the international CDS market can be improved through more effective regulation.

Although significant advancements in transparency, standardization, and risk management have been made by participants in the CDS market, the lack of centralized clearing for most CDSs continues to be a source of systemic risk. In addition, for the CDSs that are cleared, the absence of comprehensive daily trade reporting, as compared with quote reporting, limits the ability of the clearinghouse to accurately price positions. As detailed below, the Committee concludes that systemic risk arising from CDS transactions can be largely eliminated by a robust OTC market with centralized clearing. Further, we believe the OTC market should be enhanced with a TRACE-like system complemented by a class of highly-liquid CDSs that are required to be exchange-traded.

2. Regulatory Background

CDSs were designed to fall comfortably outside the SEC's mandate to regulate securities and the CFTC's exclusive jurisdiction over exchange-traded futures and commodity options. If CDSs are traded between sophisticated parties and are subject to negotiation, the transaction is excluded from CFTC jurisdiction by Section 2(g) of the Commodity Exchange Act[49] and placed outside the SEC's regulatory ambit through Section 206A of the Gramm-Leach-Bliley Act.[50] CDS contracts are, however, subject to anti-fraud provisions of federal securities law.[51]

Due in part to the unregulated, private nature of these agreements, CDS contracts traditionally have been highly customized—although, as discussed below,

[49] *See* 15 U.S.C. § 78c-1 ("The Commission is prohibited from registering, or requiring, recommending, or suggesting, the registration under this chapter of any security-based swap agreement (as defined in section 206B of the Gramm-Leach-Bliley Act).").
[50] *See* 7 U.S.C. § 2(g) ("No provision of this chapter shall apply to or govern any agreement, contract, or transaction in a commodity other than an agricultural commodity if the agreement, contract, or transaction is—(1) entered into only between persons that are eligible contract participants at the time they enter into the agreement, contract, or transaction; (2) subject to individual negotiation by the parties; and (3) not executed or traded on a trading facility.").
[51] CDSs are "securities based swap agreements" under § 10(b) of the Securities Exchange Act of 1934, which prohibits fraud, manipulation, or insider trading.

standardization is increasing. Counterparties can select terms from an extensive menu developed by ISDA.[52] ISDA's CDS contract terms cover such features as the precise definition of an event of default, the maturity of the contract, and the form of settlement. Single-name CDSs are referenced to the debt of a single "reference entity," which can be a corporation, a sovereign, or quasi-sovereign. Index CDSs are referenced to the debt of multiple reference entities that are components of an Index such as the CDX. NAIG Index.

Most ISDA master agreements under which CDSs are transacted provide for the posting of initial collateral by the protection seller. The amount of collateral depends on the credit quality of the reference entity and counterparty, the mark-to-market value of the trade, and the liquidity and volatility of the underlying credit spread. Thereafter, the contract is usually marked-to-market daily and collateral flows between the parties as appropriate. If a specified event of default occurs during the life of the contract, the protection seller is obligated to compensate the protection buyer for the loss through a specified settlement procedure. There are two types of settlement, physical settlement and cash settlement. In a physical settlement, upon a trigger event, the protection buyer delivers to the protection seller specified defaulted debt of the reference entity with a face value equal to the notional amount specified in the CDS. In return, the protection seller pays the face amount of the debt. The protection seller can then use the debt obligation to file a claim in the bankruptcy of the reference entity. In a cash settlement, an auction of specified bonds takes place in order to determine the post-default market value. The protection seller pays the buyer the difference between the par value and the post-default market value.[53] Today, most settlements are facilitated pursuant to ISDA's "hard wired" auction-based settlement process, allowing counterparties to choose between a physical settlement or liquidating a position in cash because the amount of the CDS contracts often exceeds by a significant factor the amount of bonds outstanding.[54]

Some claim that the fall of Bear Stearns, the bankruptcy of Lehman Brothers, the government bailout of AIG, and the registration of several major broker/dealers as bank holding companies were in part a result of their activities in the CDS market. Consequently, some have questioned whether CDS contracts are bona fide financial instruments or merely a form of "gambling" that should be prohibited.[55] Underlying

[52] *See* ISDA, ISDA Protocols, *available at* http://www.isda.org/protocol/prot_nav.html.
[53] Most cash positions in CDSs are settled through the CLS Bank, which also happens to be a leading settlement institution in the foreign currency and interest rate swaps markets. As settlement agent, CLS bank is able to net payment instructions across asset classes for a given market participant.
[54] As discussed later in this section, ISDA recently made this process more uniform across CDS contracts.
[55] Eric Dinallo, New York Insurance Superintendent, has described the CDS market as "legalized gambling." Shannon D. Harrington, *DTCC May Raise Credit-Default Swap Disclosure Amid Criticism*, Bloomberg, Oct. 31, 2008, *available at* http://www.bloomberg.com/apps/news?pid=20601087&sid=a1lF5ibQBk9w&refer=home.

the criticism that the CDS market is little more than a global casino is the assumption that CDS protection sellers are able to establish long credit positions without the need for capital to satisfy their obligations if a credit event were to occur. Of course, the requirement for collateral greatly mitigates this risk. Others contend that CDSs increase overall exposure to credit losses in the economy without any corresponding benefits. Such critics observe that when a reference entity defaults on its obligations, the losses are borne not only by the lender but also by any unassociated CDS sellers who have the equivalent of a long position in those obligations. Particularly germane are synthetic CDOs, structured products that establish long positions by selling protection via CDS contracts. Unlike traditional CDOs, the notional amount of synthetic CDOs is not limited by the size of any particular pool of reference securities. Over $600 billion of synthetic CDOs were issued in 2007, nearly six times the $104 billion issued in 2004.[56]

Yet another concern is the potentially adverse impact of certain practices in the CDS market on corporate issuers—specifically, the possible role of CDSs in the manipulation of stock prices. For example, some contend that the demise of Lehman Brothers and Bear Stearns was driven in part by traders confident their short sales would be profitable because they had concurrently entered into CDS positions designed to push the equity price down.[57] What is more, just as CDSs can be fashioned into synthetic CDOs, they can be employed to obtain a position equivalent to the short sale of stock. SEC Commissioner Luis Aguilar has noted that these synthetic shorts could limit the effectiveness of a proposed rule aimed at reining in short sales.[58] Moreover, the increased volatility and lack of transparency stemming from such practices has led some legislators to propose far-reaching measures designed to limit CDS transactions.

Earlier this year, the Agriculture Committee of the U.S. House of Representatives distributed bill H.R. 977, entitled "The Derivatives Markets Transparency and Accountability Act of 2009." Section 16 of the bill would have made it "unlawful for any person to enter into a credit default swap unless the person would experience financial loss if an event that is subject of the credit default swap occurs." In short, H.R. 977 would make it illegal to purchase a CDS unless the protection buyer owned or otherwise had financial exposure to the underlying reference asset. The bill would also authorize the CFTC to establish limits on the amount of exposure "other than bona fide hedge positions" on buyers and sellers alike.[59] Consequently, some believe the enactment of H.R. 977 into law could shrink the CDS market by 80%.[60]

[56] Creditflux Data, *CDO Issuance*, *available* at http://www.creditflux.com/Data/.
[57] Luis A. Aguilar, Commissioner, SEC, Statement before the Commission Open Meeting (Apr. 8, 2009), *available at* http://www.sec.gov/news/speech/2009/spch040809laa.htm.
[58] *Id*.
[59] H.R. 977, 111th Cong. § 6 (2009).
[60] Matthew Leising, *U.S. Draft Law Would Ban Most Trading in Credit Swaps*, Bloomberg, Jan. 28, 2009.

We reject the notion that CDSs provide no benefit to market participants or the overall economy. To be sure, CDSs have played a role in the financial crisis, but in most instances that role has been overstated. For example, it is not clear that CDSs hastened the collapse of Lehman Brothers. On the Friday before Lehman declared bankruptcy, CDS contracts referencing Lehman's debt were trading at a spread of around 300bp, similar to other large financial institutions at the time and since that time.[61] Of course, AIG has become a poster child for the problems associated with private clearing house arrangements, inadequate collateral,[62] undue reliance on agency ratings, and an overall lack of transparency.

But this lack of transparency seems to have been rooted in AIG's own internal risk management oversight. In short, it was not the CDS market that brought down AIG so much as the company's poor risk management of its exposures over a wide range of instruments, including CDSs.

It is certainly the case that CDSs may be used for reasons other than the direct hedging of credit risk. But critics fail to recognize that CDSs—even those contracts entered into for indirect hedging and speculation—have the potential to be beneficial to the global financial system. To start, the CDS is the only financial instrument fully to isolate credit risk.[63] For nearly all corporate and sovereign bondholders, there is no other readily available form of private insurance against default.[64] CDS spreads can offer an accurate reflection of credit risk that is useful for potential financiers, suppliers, and other parties who contemplate transacting with the reference entity.[65] Spreads can also serve as a useful gauge on the accuracy of credit rating agencies, whose performance in recent years—as we discuss in Chapter 3—leaves much to be desired. But perhaps more than anything else, the CDS market can serve as a check on the reference entities themselves, constantly disciplining them to maintain their creditworthiness. In many cases, that discipline in turn benefits reference entities by lowering their borrowing costs.

[61] *Lehman's Loss: More Than $200 Billion*, Seeking Alpha, Oct. 13, 2008, *available at* http://seekingalpha.com/article/99653-lehman-s-loss-more-than-200-billion.
[62] Because of its AAA rating, AIG normally posted no collateral at all. Instead, its collateral obligations were triggered only by a downgrade in the company's rating, which is in part what precipitated AIG's eventual meltdown. *See* Joe Nocera, *Propping Up a House of Cards*, N.Y. Times, Feb. 27, 2009 (discussing AIG's "collateral triggers . . . that have since cost AIG many, many billions of dollars. Or, rather, they've cost American taxpayers billions.").
[63] David Mengle, *Credit Derivatives: An Overview*, presented at Federal Reserve Bank of Atlanta's Financial Markets Conference, "Credit Derivatives: Where is the Risk?" 3 (May 15, 2007), *available at* http://www.frbatlanta.org/filelegacydocs/erq407_mengle.pdf.
[64] John Ammer, *Sovereign CDS and Bond Pricing Dynamics in Emerging Markets: Does the Cheapest-to-Deliver Option Matter?* 4, Fed. Res. Bd., Int'l Fin. Discussion Paper No. 912 (Dec. 9, 2007).
[65] Annemette Skak Jensen, *Credit Default Swaps* 110, Den. Nationalbank, Monetary Review – 3rd Quarter 2008 (2008).

What is more, the isolation of credit risk can lead to more accurate pricing in other spheres—particularly the debt markets. Indeed, one potentially useful way to conceptualize the CDS market is to view it as a futures market for debt instruments. That is to say, a five-year term CDS contract referencing a particular borrower is essentially identical to buying a five-year term futures contract on the five-year floating rate note of that borrower. Given that corporate debt trading is obviously beneficial, it follows that a futures market in corporate debt is also beneficial, in that the same risk is being traded. Like the market for commodities futures, the CDS market is not redundant for a variety of reasons. Because neither CDSs nor commodities futures require physical delivery, a given contract can trade without reference to the immediately available physical supply of the underlying asset. A CDS or commodity futures contract also lowers the cash requirement necessary to take an equivalent risk position, making it easier to hedge, invest, or speculate in the risk of the underlying asset. Perhaps most significant, the liquidity of the contract feeds back on the liquidity of the cash market for the underlying asset as well as any related assets. Indeed, this final point warrants further explanation. A commodity futures contract usually focuses on a single grade of commodity, which then acts as a reference pricing point for other grades of the same commodity. By reducing pricing uncertainty, the trading liquidity of these other commodities is also enhanced. The same process occurs with single-name corporate CDSs; all debt instruments of the referenced borrower are not just more accurately priced, they are also more liquidly traded as a result of the CDS market.

In sum, the Committee strongly believes that CDSs are an important tool for measuring and diversifying credit risks. In that respect, a well-functioning CDS market can prevent—rather than produce—future global financial shocks.[66] Consequently, we believe efforts by policymakers to eliminate CDSs altogether, or in part, would be ineffective at reducing systemic risk. Such proposals may even be counterproductive in that regard. However, we do believe it is important for policymakers to study the impact of certain practices in the CDS market on corporate issuers and other relevant constituencies. Moreover, although we think CDSs are legitimate financial instruments, we acknowledge that the current CDS market has a number of important shortcomings—shortcomings that may limit or prevent CDSs from yielding the benefits outlined above.

3. Shortcomings of the CDS Market

We acknowledge that the CDS market has serious deficiencies—particularly when it comes to reducing systemic risk. We believe the following three shortcomings have contributed to global financial instability.

[66] As another example, short-selling engendered by widening CDS spreads may effectively deflate an asset bubble before it grows so large as to become a systemic threat.

a. Counterparty Risk

The principal source of systemic risk in the CDS market is counterparty risk. The bilateral nature of the market exposes both parties to counterparty risk.[67] Protection buyers are essentially substituting the counterparty risk of the protection seller for the protection risk of the referenced entity. As a result, only the most creditworthy institutions can reasonably function as protection sellers. Even these institutions have limitations on how much risk they can assume, enhanced by the present financial crisis. Counterparty risk translates into systemic risk when chains of counterparties form as a result of CDS buyers and sellers continually covering their initial long or short positions by entering into complementary transactions (e.g., protection buyer to one counterparty subsequently becomes a protection seller to another). The failure of a single large counterparty to fulfill its obligations may result in the oft-termed "domino effect," whereby institutions once considered fully hedged face substantial losses and lack sufficient liquidity to cover them. Repeated counterparty non-performance can rapidly amplify into a financial contagion.

Further, even when a party is fully protected by collateral, the default of a counterparty can lead the party to liquidate its collateral, driving down the price of the securities held as collateral or, in the extreme, disrupting markets. This was a major concern in the Long-Term Capital Management debacle.

b. Lack of Liquidity

Fueling counterparty risk is the comparative illiquidity of the CDS market. The CDS market comprises little more than a dozen dealers (primarily large global banks),[68] a few interdealer brokers, and some actively involved hedge funds. The notional value of a typical CDS contract is large, typically $5 or $10 million, with contracts in some of the more liquid single-name and investment grade index CDSs reaching between $50 and $200 million. Additionally, most CDS contracts have relatively long durations. The combination of these factors has caused the cumulative notional value of contracts outstanding to get quite large, though recently market trends have begun to compress gross notional amounts on a risk neutral basis.[69] Although there is a respectable degree

[67] One should bear in mind that this risk is a function of exposure to all other OTC derivatives trades and collateral agreements in place with the same counterparty. This is the reason we propose that clearinghouses enable multilateral netting among classes of derivatives.

[68] As of March 2009, there were 14 major dealers in the credit derivatives marketplace: Bank of America, BNP Paribas, Barclays Capital, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, J.P. Morgan, Merrill Lynch (now part of Bank of America), Morgan Stanley, RBS Greenwich Capital, UBS, and Wells Fargo.

[69] It should be noted, however, that due to the absence of central clearing parties to many CDS transactions (a topic we address *infra*), exposures that have been eliminated by offsetting trades may continue to show up as open interest, as do the offsetting trades, resulting in open interest that may be greatly in excess of true risk exposure.

of liquidity in the trading of index CDSs and the top 200-300 single-name CDSs, a significant portion of the market tends to be illiquid with wide bid-ask spreads. This, in turn, makes it more difficult for parties to cover their exposures.

c. Lack of Transparency

Historically, the decentralized and customized nature of the CDS market has led to a lack of timely and reliable data. Until the last few years, little information had been available regarding the current market or value of positions outstanding. At present, there is no universally-accepted or centralized system for reporting and aggregating quotes or transactions to reflect the current market. Nevertheless, our survey of the CDS market reveals that several private sector firms have made significant progress in filling this void by offering aggregate pricing and other data to market participants.

Markit, founded in 2001 and owned by 15 large banks and several hedge funds, is the daily recipient of CDS data from at least 35-40 of the leading financial institutions in the market, among others. Markit obtains the marked-to-market valuations for every position these institutions have in index and single-name CDSs. Markit subjects this data to an analytical process involving multiple algorithms, which in turn results in end-of-day pricing information for end users.[70] Markit also offers investors intraday pricing information through a real-time quote service based on the parsing of emails.[71] Advanced technology allows for the continual extraction and systematizing of dealer quotes from millions of emails throughout a given day. Users of Markit's services are able to see the latest quotes from multiple dealers on a given index or single-name CDS in virtually real time. Presently, Markit does not incorporate trade data (i.e., actual transaction prices) into its information services.[72]

Credit Market Analysis (CMA), headquartered in London, offers many of the same services to investors as Markit. CMA claims that it was the first firm to "[e]nable traders to *view*, *organize* and *store* the quotes that they receive in real-time, regardless of format" through its QuoteVision product.[73] QuoteVision processes over 10 million quotes each day. It also offers end-of-day pricing information based on mark-to-market and other data through its DataVision product, which has been made available to Bloomberg users. Unlike Markit, CMA contends that its ownership has been traditionally comprised of buy-side as well as sell-side participants in the CDS market. CMA officials also stated that they used "some" actual trade information in conjunction

[70] *See generally* Markit, *Markit CDS Pricing*, *available at* http://www.markit.com/en/products/data/cds-pricing/cds-pricing.page.
[71] *See generally* Markit, *Markit Sameday*, *available at* http://www.markit.com/en/products/data/cds-pricing/same-day.page?.
[72] According to industry sources, Markit is exploring the possibility of a joint venture with DTCC that would encompass trade reporting.
[73] Credit Market Analysis, *About Us*, *available at* http://www.creditma.com/index.php/about/.

with dealer quotes and marked-to-market positions. CMA was acquired by the Chicago Mercantile Exchange (CME) Group in March 2008.[74]

As noted above, certain of CMA's products are available through Bloomberg. Bloomberg also houses technology enabling it to parse emails for quotes that can be used for intraday pricing updates. In the early stages of the CDS market, Bloomberg worked with JP Morgan to host the bank's analytical pricing tool, known as the CDSW model. Under the model, a CDS contract made at market is valued at zero. When the CDS is later assigned to another party, the CDSW model is used to calculate the price looking at real-time interest rates as discount factors. Trades and positions could thus be valued intraday using CDSW alongside other Bloomberg data. Recently, JP Morgan worked to have this model open-sourced and transferred to ISDA for use by the general public.[75] Markit serves as the administrator of the model, providing the necessary support and maintenance for the project.[76]

Of the informational sources on the CDS market, it appears that only the Depository Trust & Clearing Corporation's (DTCC) Deri/SERV Trade Information Warehouse contains actual trade reporting information. The DTCC Warehouse has undertaken efforts to increase transparency by listing and updating all new CDS trades on a weekly basis. The listings act as a legal record by maintaining agreed upon trade terms and up-to-date contract information. Based on our research, approximately 60% of trade prices are reported to DTCC the same day of the transaction. While only general CDS trade information is public, more detailed information can be accessed by counterparties and regulators. Although registration and reporting of CDS transactions has been automatic since late 2006, DTCC is currently in the process of backloading contracts entered into prior to the establishment of the warehouse.[77]

In sum, the CDS market is far more transparent today than it was several years ago. The credit for these positive developments is due in no small part to the dealer community's willingness to disseminate mark-to-market and other data and the ingenuity of service providers such as Markit, CMA, and Bloomberg in parsing tens of millions of emails daily for quote information and systemizing that along with other market data into user-friendly formats. Transparency in the CDS market has also been increased by DTCC's efforts in warehousing actual trade reporting. Despite these advancements, a continued lack of readily-available, authentic trade prices continues to make the CDS market highly-deficient from a transparency standpoint. We believe that

[74] Credit Market Analysis, *News*, *available at* http://www.cmavision.com/News/CME_Group_to_Acquire_Credit_Market_Analysis/.
[75] Press Release, ISDA, "ISDA Launches CDC Standard Model as Open Source, Appoints Markit as Administrator" (Feb. 26, 2009), *available at* http://www.isda.org/press/press022609.html.
[76] *See* ISDA, *ISDA CDS Standard Model*, *available at* http://www.cdsmodel.com/information/cds-model.
[77] DTCC, *Deriv/SERV Brochure* (Mar. 2008), *available at* http://www.dtcc.com/downloads/brochures/derivserv/DerivSERV%20Brochure.pdf.

while quotes and mark-to-market data submitted by dealers may be helpful in providing a picture of the CDS market, significant additional value is provided by transaction prices. In terms of quality and reliability, nothing can provide regulators and market participants with a more complete picture of the market than the real-time dissemination of transaction prices—something we believe is truly a "public good" and a necessity for reducing systemic risk.

4. Centralized Clearing

We believe centralized clearing is a crucial step toward resolving most shortcomings of the CDS market that contribute to systemic risk on a global scale. We are not alone. This issue has been the chief concern of regulators including the Fed, the SEC, the CFTC, and the President's Working Group, as well as authorities in Europe. The Treasury also recently pledged to "force all standardized OTC derivative contracts to be cleared through appropriately designed central counterparties."[78] Centralized clearing reduces systemic risk by providing for multilateral netting and eliminating counterparty risk—the clearinghouse itself becomes the counterparty to every CDS transaction through its relationship to its members, whose robust risk management and credit worthiness shield the central counterparty. If subject to proper oversight, the collectivization of risk will lead to more efficient and effective monitoring. Rather than overseeing the activities of all CDS market participants, regulators will have to ensure only that the designated clearinghouses are sufficiently liquid and well-capitalized. In addition to limiting counterparty risk, clearinghouses would enhance the liquidity and transparency of the CDS market by actively managing daily collateral requirements of—and the netting of positions between and among—clearinghouse members.[79] In that regard, clearinghouses reduce systemic risk even further by ensuring that dealer-members post margins and that all initial margins are segregated by customer.[80]

a. Clearing Initiatives

Following dealer initiatives to create a central counterparty for CDSs, the Fed, the CFTC, and the SEC signed a memorandum of understanding in November 2008, committing themselves to the establishment of centralized clearing organizations to

[78] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.
[79] U.S. Gov't Accountability Office, *Systemic Risk: Regulatory Oversight and Recent Initiatives to Address Risk Posed by Credit Default Swaps* 21 (Mar. 5, 2009), *available at* http://www.gao.gov/new.items/d09397t.pdf.
[80] At present, dealers in the OTC market collect initial margins from customers but often those amounts are not segregated into bankruptcy insulated accounts. If a dealer defaults, initial margin posted by customers that is not so segregated is treated in bankruptcy as a general unsecured claim of the customer. As a result, customers who are counterparties to that dealer stand to incur significant losses, regardless of the current value of their derivatives contracts. The risk of being an unsecured creditor on posted initial margin is very real, and because the size of these exposures can be quite significant, a lack of segregated initial margins ostensibly increases systemic risk.

consummate CDS transactions.[81] The agencies agreed to coordinate efforts in order to facilitate creation of a centralized clearinghouse for the CDS market. In response, regulators have pressed for, and dealers have agreed to, the movement of these contracts to centralized clearing and settlement facilities. Three U.S.-based entities are currently promoting centralized clearing solutions for CDSs: The CME in partnership with the hedge fund Citadel; the Intercontinental Exchange (ICE) in partnership with nine existing CDS dealers; and Liffe, a subsidiary of NYSE Euronext, through LCH Clearnet. In the broader OTC space, NASDAQ OMX (through an 80% ownership interest) has partnered with the International Derivatives Clearing Group, a CFTC-approved facility, to offer clearing services for interest rate swap contracts.

In conjunction with Citadel Investment Group, the CME Group has created the CDMX—an exchange platform for trading and clearing of CDSs. In December 2008, the joint venture received the requisite approvals from the Federal Reserve Bank of New York and the CFTC, and was recently approved by the SEC.[82] CME Clearing greatly reduces the risk of counterparty default by having the CMDX, through its members, serve as buyer to every seller and seller to every buyer for all CDS contracts executed, booked, or migrated via CMDX, in its capacity as a central clearingparty.[83] Specifically, CME Clearing guarantees the performance of both sides of every transaction, settles all involved accounts, clears trades, collects and maintains performance bonds, regulates delivery, and ultimately reports trading data.[84]

Additionally, ICE has partnered with a group of nine existing dealers to clear existing products.[85] Initially, ICE U.S. Trust, ICE's planned clearinghouse, would serve a limited segment of the CDS dealer market by only allowing participation by dealers with net worth of at least $1 billion.[86] According to ICE's press releases, as the first global central counterparty, ICE Trust cleared $70 billion in CDSs in its first month of operation. It is currently clearing North American Markit CDX indexes to be followed by liquid single-name CDSs in the following months.[87] ICE Trust has entered into an agreement with Markit to produce daily settlement prices required for mark-to-market

[81] Press Release, U.S. Dep't of the Treasury, "PWG Announces Initiatives to Strengthen OTC Derivatives Oversight and Infrastructure" (Nov. 14, 2008), *available at* http://www.ustreas.gov/press/releases/hp1272.htm.
[82] Order Granting Temporary Exemptions Under the Securities Exchange Act of 1934 in Connection with Request of Chicago Mercantile Exch. Inc. and Citadel Investment Group, L.L.C. Related to Central Clearing of Credit Default Swaps, Exchange Act Release No. 34-59578 (Mar. 13, 2009).
[83] CME Group, *Financial Safeguards* 5 (2007), *available at* http://www.cmegroup.com/clearing/files/financialsafeguards.pdf.
[84] *Id.*
[85] The nine dealers are Bank of America, Citigroup, Credit Suisse, Deutsche Bank, Goldman Sachs, J.P. Morgan, Merrill Lynch (now part of Bank of America), Morgan Stanley, and UBS.
[86] Editorial, *Credit Default Swamp*, Wall St. J., Jan. 3, 2009.
[87] Press Release, ICE, "ICE Trust Clears $70 Billion in North American CDS Indexes in First Month" (Apr. 6, 2009), *available at* http://ir.theice.com/releasedetail.cfm?ReleaseID=375716.

pricing, margining, and clearing.[88] This arrangement is now operational. According to our research, participants with open interests provide mark-to-market prices to ICE. Markit runs these numbers to create auction-like prices. ICE runs a parallel in-house algorithm against Markit's numbers. After a review by ICE's risk department, settlement prices are posted. Collateral and margin requirements are also made end-of-day via this mock auction process. ICE believes it has the capacity to run this process on an intraday basis as well, as needed.

LIFFE, a subsidiary of NYSE Euronext, has been approved to clear contracts through LCH Clearnet. Largely in response to specific requests from LIFFE A&M and LCH Clearnet, the SEC granted temporary exemptions from Sections 5 and 6 of the Securities Exchange Act of 1934 for broker-dealers and exchanges effecting transactions in CDSs.[89] The temporary exemption went into effect on December 24, 2008. The exemptions eliminate the requirement to register as a national securities exchange before effecting CDS transactions.[90] The exemptions will remain in effect until September 25, 2009. LIFFE and LCH Clearnet subsequently launched an exchange and centralized clearing operation for CDS index contracts. These contracts are negotiated away from the exchange, processed through Bclear, and then cleared through LCH Clearnet.[91] LIFFE, however, has not cleared any trades to date due to purported trader concerns over the adequacy of its risk management methodology and its alleged inability to clear existing portfolios.[92] At the time of this Report, a consortium of banks, led by JPMorgan and Deutsche Bank, has made a bid for LCH Clearnet.[93]

The United States is not alone in moving toward centralized clearing for CDS transactions. European authorities have undertaken similar efforts. Specifically, the U.K.'s Financial Services Authority and the European Central Bank are persuading dealers to adopt centralized clearing solutions. ISDA recently announced that nine of its major dealer members pledged to begin clearing eligible European CDS contracts

[88] *Id.*; Press Release, ICE, "ICE Trust to Begin Processing and Clearing Credit Default Swaps" (Mar. 6, 2009), *available at* http://ir.theice.com/releasedetail.cfm?ReleaseID=369373.
[89] Order Pursuant to Section 36 of the Securities Exch. Act of 1934 Granting Temporary Exemptions from Sections 5 and 6 of the Exch. Act for Broker-Dealers and Exchanges Effecting Transactions in Credit Default Swaps, Exchange Act Release No. 34-59165 (Dec. 24, 2008).
[90] *Id.*
[91] NYSE Euronext, *CDS on Bclear: A safer, clearer route for OTC* (2009), *available at* http://www.euronext.com/fic/000/043/766/437668.pdf.
[92] Futures and Options Intelligence, *ICE leaves rivals in the dust with $71bn of CDS cleared* (Apr. 7, 2009), *available at* http://www.fointelligence.com/Article/2176962/ICE-leaves-rivals-in-the-dust-with-71bn-of-CDS-cleared.html.
[93] Neil Shah, *LCH Clearnet Faces Tough Call on Consortium Bid*, Wall St. J., May 10, 2009, *available at* http://online.wsj.com/article/SB124188652092503881.html.

through a European central clearing entity by August 2009.[94] Each firm will make an individual choice on which central clearinghouse(s) best meets its risk management objectives, subject to regulatory approval.[95] The eligible contracts will primarily begin with liquid, index-listed CDSs (e.g., Itraxx), before moving on to single-name contracts, as has been the case in the United States. In addition to this intergovernmental effort, Eurex Clearing, as discussed below, is in the early stages of developing its own solution.[96]

b. Open Issues

Although we strongly support initiatives for centralized clearing, such as those described above, we note that going forward several key questions must be resolved. At the outset, there is the issue of which particular CDSs and market participants would be subject to mandatory clearing.

(1) Eligible CDSs

Participants in the government-approved, CME-Citadel clearing system must be registered futures commission merchants or broker-dealers, who will be able to clear CDS trades on behalf of their qualified customers. CME proposes using its current portfolio-based margin methodology for determining index and single-name margin requirements, as opposed to blanket contributions by participants. CME offers protection through its financial safeguards package of approximately $7 billion.[97] Although no formal plan has been made public, CME has stated that its clearing process will extend to "all major CDS indices and single-names."[98]

For its part, ICE grants a non-exclusive, non-transferable, revocable license providing participants access to the exchange. Participants must be an "eligible commercial entity" as defined in Section 1a of the Commodity Exchange Act. Participants enter into transactions on the system solely as a principal to the trade. ICE has contributed an initial $10 million to the guaranty fund, and expects to increase its contribution to a total of $100 million within two years.[99] Each member must make a $20

[94] News Release, ISDA, "Major Firms Commit to EU Central Counterparty for CDS" (Feb. 19, 2009). The nine dealers are Barclays Capital, Citigroup Global Markets, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, J.P. Morgan, Morgan Stanley, and UBS.
[95] Shannon D. Harrington, *Banks Agree to EU Demand for Credit-Swaps Clearing*, Bloomberg, Feb. 19, 2009, *available at* http://www.bloomberg.com/apps/news?pid=20601102&sid=acA0HAPjCnAk&refer=uk.
[96] Nikki Tait, *Agreement reached over European CDS clearance*, Fin. Times, Feb. 19, 2009, *available at* http://www.ft.com/cms/s/0/d43b0bfe-fead-11dd-b19a-000077b07658.html.
[97] Press Release, CME Group, "SEC Grants CME Group Special Exemption to clear and Trade on Default Swaps" (Mar. 13, 2009), *available at* http://cmegroup.mediaroom.com/index.php?s=43&item=2824.
[98] *Id.*
[99] Press Releases, IntercontinentalExchange (ICE), *available at* http://ir.theice.com/releases.cfm.

million initial contribution.[100] Nevertheless, ICE plans to restrict its initial clearing process only to liquid CDS contracts that are based on certain indices.[101] Based on our research, ICE plans to clear single-names in the "near future."

Compare these clearinghouses with their European counterpart, Eurex Clearing. Eurex Clearing, a subsidiary of Deutsche Börse, provides clearing and risk management services for international exchanges and marketplaces across multiple asset classes.[102] Members of Eurex Clearing are categorized as either Direct Clearing Members or General Clearing Members. General Clearing Members, which number 58 firms, are the only members who may clear on behalf of nonaffiliated non-clearing members, through whom most Eurex members in the United States clear their trades. General Clearing Members must have at least €125 million in equity capital. Only credit institutions, banks, and other financial institutions that are regulated by a country in the European Union or Switzerland may become clearing members. Eurex Clearing's collateral pool was recently valued at more than €70 billion.[103] Yet, Eurex has indicated it will clear only certain highly liquid CDSs for the near future.

A fundamental question is whether it should be mandatory to go through a clearinghouse to clear CDS contracts. The most encompassing position would be that all CDSs should be cleared, with regulations making it illegal to facilitate CDS contracts in the absence of a centralized clearing party. We can see the obvious advantages of this option. Arguably, this would greatly reduce systemic risk. Furthermore, regulators would be able to supervise the entire CDS market by simply monitoring government-approved, centralized clearing entities. However, over-inclusiveness could destroy the development of any future CDS markets or markets in any not yet widely traded credits, since the margining for less standardized (and hence less liquid) CDSs might be so high as to be economically punitive. Indeed, as a recent report by the Government Accountability Office suggests, centralized clearing is likely to be possible in the near future only for "certain standardized trades."[104] The Treasury has proposed that "standardized OTC derivative contracts" be subject to mandatory centralized clearing, and that non-standardized contracts be required to meet "robust standards for documentation and confirmation of trades; netting; collateral and margin practices; and close-out practices."[105]

[100] Fed. Res. Bd., *Order Approving Application for Membership for ICE US Trust LLC* (Mar. 4, 2009).
[101] *Id*.
[102] Eurex Clearing, *Clear to Trade*, *available at* http://www.eurexclearing.com/markets_en.html.
[103] Thomas Book, Member of Executive Bd. of Eurex and Eurex Clearing, Testimony before the House Committee on Agricultre (Dec. 8, 2008).
[104] Gov't Accountability Office, *Systemic Risk: Regulatory Oversight and Recent Initiatives to Address Risk Posed by Credit Default Swaps* 22 (Mar. 5, 2009), *available at* http://www.gao.gov/new.items/d09397t.pdf.
[105] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.

We understand that it may be impractical for centralized clearing to be required immediately for all CDSs. We would therefore favor beginning with those CDSs with greater liquidity. As the liquidity of all CDSs increases due to greater standardization of terms produced by, *inter alia*, ISDA's recent initiatives, the ambit of the clearing can be expanded.[106] However, to the extent some CDSs would remain wholly outside the centralized clearing process in the years to come, we agree with the Treasury's plans to subject them to robust disclosure and operational standards. Equally important, the Committee believes relevant counterparties should also compensate for the increased systemic risk of those contracts with a commensurate adjustment to their capital requirements. We thus urge the Treasury and the Fed to consider this additional safeguard.

An additional related question is whether mandatory central clearing rules, directed *solely* to CDS transactions, is itself an under-inclusive regulatory solution. A recent study by two Stanford academics demonstrates that requiring centralized clearing for CDSs while exempting other derivative transactions may "actually reduce netting efficiency and thereby lead to an increase in collateral demands and average exposure to counterparty default."[107] We agree with that assessment. We caution policymakers to consider this issue in greater detail before promulgating CDS-specific clearing rules that could—somewhat counter-intuitively—actually increase systemic risk. We also concur in the study's conclusion that centralized clearing "is only effective if the opportunity to achieve multilateral netting in that asset class dominates the resulting loss in bilateral netting opportunities across other asset classes, including OTC derivatives for equities, interest rates, commodities, and foreign exchanges."[108] Consequently, we recommend that mandatory clearing regulations—to the extent they are applied—be applied across a broader asset class than just credit derivatives.

(2) Number of Clearinghouses

We also urge policymakers to consider an additional issue—the potential inefficiencies of having multiple clearing entities, each of which would operate exclusively on a national or regional basis. As mentioned at the outset of this Report, we believe that neither national nor regional reforms are sufficient for what is fundamentally a global challenge. Often, a single chain of counterparties to a series of

[106] Although we would err on the side of subjecting more CDS contracts to centralized clearing, we do not believe contracts that fail to comply with a mandatory, centralized clearing requirement should be voided or otherwise cancelled. Such a result might increase systemic risk when the CDS contract subsequently becomes a link in a large chain of transactions. The appropriate remedy would thus be to fine or otherwise sanction the offending parties individually but not dissolve any resultant contractual obligations.
[107] Darrell Duffie & Haoxiang Zhu, *Does a Central Clearing Counterparty Reduce Counterparty Risk?* 2, Stan. Univ. Working Paper (Feb. 27, 2009).
[108] *Id.*

related CDS transactions can span several continents. Yet presently there are no proposals for centralized clearing entities that would span the U.S.-E.U. divide, much less provide clearing to CDS buyers and sellers elsewhere, such as Asia. In addition to demonstrating that centralized clearing is more efficient when it involves multiple instruments, the study cited above also demonstrates that one or two centralized clearinghouses are more efficient than multiple clearinghouses.[109] Accordingly, we recommend that U.S., E.U., and other national policymakers work to establish one or two clearing facilities that would operate globally. We also encourage policymakers to consider whether there could be beneficial interactions between these global clearinghouses that would allow for even further netting.[110]

We make these recommendations notwithstanding our awareness of the obstacles to such a level of international regulatory cooperation. To be sure, these mega-concentrations of counterparty risk would demand vigilant regulatory oversight. But once this hurdle is surmounted, we believe these well-functioning international facilities would be the most effective means of reducing systemic risk on a global basis.

(3) Reporting of CDS Transaction Data

Finally, there is the question whether these global clearinghouses should be required to use transaction as well as quote data to mark the positions of their participants. As noted above, the Committee believes that quotes and mark-to-market data are no substitute for actual CDS contract prices. DTCC receives trade information, but only 60% or so of CDS trades are reported on the day they are executed. That is insufficient. Regulators and market participants deserve a complete picture of the market made possible only when quotes are supplemented by post-trade transaction reporting in real-time. In short, we believe the quality of trade prices is a public good. The Treasury Department recently proposed, without going into detail, that CDS clearinghouses and other trade repositories "be required to make aggregate data on trading volumes and positions available to the public."[111] The Department even more recently stated that those entities should additionally "make data on individual counterparty's trades and positions available to federal regulators."[112] We agree and think this should be done on a real-time basis.

[109] *Id.*
[110] We recognize that a potential obstacle to effective multilateral netting is that insolvency regimes differ from country to country. Reconciling obstacles to cross-border cooperation due to differing national bankruptcy regimes is addressed later in this chapter, in the section entitled "Resolution Process for Failed Financial Institutions."
[111] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.
[112] Press Release, U.S. Dep't of the Treasury, "Regulatory Reform Over-The-Counter (OTC) Derivatives" (May 13, 2009), *available at* http://www.ustreas.gov/press/releases/tg129.htm; *see also* Letter from Timothy F. Geithner, Secretary of the Treasury, to Harry Reid, Senate Majority Leader (May 13, 2009).

To that end, the Committee recommends that regulators facilitate the adoption within the CDS market of an information-gathering computer model resembling the Trade Reporting and Compliance Engine (TRACE). TRACE was created by the National Association of Securities Dealers (NASD) (now the Financial Industry Regulatory Authority (FINRA)) in 2001 to enhance the transparency and the integrity of the corporate debt market.[113] The SEC approved NASD's proposed rules requiring its members to report OTC secondary market transactions in eligible fixed income securities and subjecting members to certain transaction reports for dissemination, with TRACE facilitating this mandatory reporting.[114] Like TRACE, this system would capture and disseminate consolidated information on CDSs—the market aggregate statistics would provide recaps of real-time CDS transactional activity, including the number of CDSs and total notional amount traded, as well as advances, declines, and 52-week highs and lows.[115] It would also provide more meaningful price transparency for individual CDSs, and possibly lower transaction costs for investors. Several studies have concluded that TRACE lowered transaction costs in the corporate bond market.[116] Although there is a question as to whether TRACE has substantially reduced liquidity in the corporate bond market, available market data suggests this is not the case.[117]

At the eve of this Report's issuance, the Treasury announced its support for "the development of a system for the timely reporting of trades and prompt dissemination of prices and other trade information" for CDSs and similar instruments.[118] SEC Chairwoman Mary Schapiro has also called for increased transparency in the markets for OTC derivatives, plainly stating that TRACE is "something we'll look at very closely

[113] TRACE is currently operated by FINRA, which was established through a merger of the NASD with the member regulation, enforcement, and arbitration functions of the New York Stock Exchange. The SEC approved the formation of FINRA on July 26, 2007. *See* Order Approving Proposed Rule Change to Amend the By-Laws of NASD to Implement Governance and Related Changes to Accommodate the Consolidation of the Member Firm Regulatory Functions of NASD and NYSE Regulation, Inc., Exchange Act Release No. 34-56145 (July 26, 2007).
[114] FINRA, *Market Transparency*, *available at* http://www.finra.org/Industry/Compliance/MarketTransparency/index.htm.
[115] *Id*.
[116] *See* Amy K. Edwards et al., *Corporate Bond Market Transaction Costs and Transparency*, 62 J. Fin. 3 (June 2007) (finding that transaction costs decreased after price information became available via TRACE); Hendrik Bessembinder et al., *Market Transparency, Liquidity Externalities, and Institutional Trading Costs in Corporate Bonds*, 82 J. Fin. Econ. 2 (Nov. 2006) (finding that transaction costs fell 50% for TRACE bonds but only 20% for non-TRACE bonds).
[117] *See, e.g.*, Hendrik Bessembinder & William Maxwell, *Transparency and the Corporate Bond Market*, J. of Econ. Perspectives (2008) (explaining that although some contend "there is less liquidity, in that market makers carried less 'product,' and it has become more difficult to locate bonds for purchase in the post-TRACE environment," market data from 2001 though 2006 evidencing "a slight uptrend" in trading activity demonstrate that the "corporate bond market continues to find ways to complete trades, even if transacting is no longer as simple as it was pre-TRACE").
[118] Press Release, U.S. Dep't of the Treasury, "Regulatory Reform Over-The-Counter (OTC) Derivatives" (May 13, 2009), *available at* http://www.ustreas.gov/press/releases/tg129.htm.

as a potential model."[119] We view these recent sentiments as an encouraging development, and recommend that policymakers move swiftly to achieve the establishment of a TRACE-like system for CDSs and other OTC derivatives, as appropriate.

5. Exchange-Traded CDSs

Apart from mandating centralized clearing for certain CDSs, the Treasury recently announced its intention to "encourage greater use of exchange traded instruments."[120] We would go even further. The Committee recommends that U.S., E.U., and other national policymakers *require* the listing and trading of certain standardized high-volume CDSs on exchanges. Exchanges can disseminate full and real-time information on transaction prices and volumes in addition to quotes—something the OTC market has not been able to fully accomplish to date. The result of such enhanced transparency is more competitive pricing, greater liquidity and information on open interest. All of these benefits combine to produce another: greater accuracy (from more competitively set prices available on an intra-day basis) in margin requirements that, in turn, leads to a more efficient and less risky clearing process. Clearinghouses would additionally benefit from the increased liquidity stemming from exchanges in situations where members default and they are forced to close out their loss positions. Apart from lessening systemic risk, exchange-traded products and their associated clearing would allow greater institutional investor participation in the CDS market. Despite these potential benefits, we recognize there are several potential obstacles to the trading of CDSs on exchanges.

a. Customization

Traditionally, CDSs have been customized products. This is particularly true with respect to size, maturity, and price. Fully standardizing CDSs for listing on an exchange may prevent market participants from meeting specific hedging or investment objectives. Indeed, the very reason for the emergence of the OTC market was likely because exchange-traded derivatives failed to meet customers' individualized needs for credit risk management. ISDA has expressed its concern that the classification of these privately negotiated contracts as "securities" or the application of other "ill-fitting regulatory regimes" would hamper economic activity and push the CDS market further from regulatory oversight.[121] We agree with ISDA that the CDS market will survive so long as it continues to meet individualized needs.

[119] Matthew Leising, *Regulators Seek Trace-like Reporting for Derivatives*, Bloomberg, May 14, 2009, *available at* http://www.bloomberg.com/apps/news?pid=20601103&sid=a.e5Xpc90Q0Q&refer=news.
[120] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.
[121] Press Release, ISDA, "ISDA Comments on Chairman Cox's Testimony to the Senate Banking Committee" (Sept. 23, 2008), *available at* http://www.isda.org/press/press092308.html.

Consequently, we oppose legislative measures intended to force *all* CDS contracts onto an exchange.[122]

At the same time, we have observed that CDS market participants have begun to further standardize contract provisions to facilitate processing and clearing. As of May 1, 2009, for example, of the total $27.7 trillion in nominal CDS contracts warehoused in DTCC, nearly $9 trillion—almost one-third—were highly standardized index contracts.[123] A number of single CDSs are also highly standardized. Nonetheless, significant differences remain. While for corporate CDSs, the definition of a Credit Event has been narrowed down to a choice of (a) failure to pay (i.e., make payments due on debt interest or principal), (b) bankruptcy, and sometimes (c) debt restructuring, contracts on the same reference entity could have a different definition of "Credit Event" in a different contract. However, the choice of "Credit Events" is also becoming more standard. Additional standardization has included five-year terms, and expiration dates in March or September. Pressure from regulators and the imminent move to centralized clearing is only accelerating the trend toward standardization. Indeed, industry insiders now estimate that nearly 80% of CDS contracts are standardized.

Last month, ISDA implemented a series of initiatives designed to bring further standardization to the CDS market. In particular, single-name CDSs that are investment grade will now have a standard fixed rate of 1%, while other single-name CDSs will have a fixed coupon of 5%.[124] In addition, ISDA published an Auction Settlement Supplement to its existing set of Credit Derivatives Definitions.[125] The supplement effectively "hardwires" ISDA's current auction settlement procedures, thereby making them standard across all CDS transactions.[126] The supplement also creates several regional Determination Committees that make binding determinations on the occurrence, nature, and timing of credit events that apply to all relevant CDSs.[127] Finally, ISDA has promulgated a Big Bang Protocol that has enabled CDS

[122] In November 2008, Senator Tom Harkin unsuccessfully attempted to enact S. 272, the "Derivatives Trading Integrity Act of 2009." Harkin's bill would amend the Commodity Exchange Act to force certain derivatives, including CDSs, onto an exchange subject to CFTC regulatory authority.
[123] DTCC, *Deriv/SERV Trade Information Warehouse Data, Table 1: All Credit Products by Customer Type and Breakout by Product Type* (Week ending May 1, 2009), *available at* http://www.dtcc.com/products/derivserv/data_table_i.php.
[124] *See* ISDA, *Credit Derivatives Physical Settlement Matrix 20090408* (Apr. 8, 2009), *available at* http://www.isda.org/c_and_a/Credit-Derivatives-Physical-Settlement-Matrix.html.
[125] ISDA, *2009 ISDA Credit Derivatives Determinations Committees and Auction Settlement Supplement to the 2003 ISDA Credit Derivatives Definitions* (Mar. 12, 2009), *available at* http://www.isda.org/.
[126] Press Release, ISDA, "*ISDA Announces Hardwiring Schedule*" (Mar. 2, 2009).
[127] ISDA, *2009 ISDA Credit Derivatives Determinations Committees and Auction Settlement Supplement to the 2003 ISDA Credit Derivatives Definitions* (Mar. 12, 2009), *available at* http://www.isda.org/.

counterparties to existing CDS transactions to adopt the supplement as binding on those contracts.[128]

b. Propriety of CDSs for Exchange Users

Another major concern is that the introduction of exchange-traded contracts would put CDSs into the hands of investors for whom credit derivatives are entirely inappropriate. In other words, by listing CDSs on exchanges—where customers are generally less sophisticated than OTC market participants—CDSs may be perceived as far less complex and risky than they actually are. This fear has led some to contend that, rather than mandate or encourage the listing of CDSs on exchanges, regulators should take measures to prevent that from happening. To be sure, we acknowledge that CDSs are not appropriate for all—or indeed many—participants in the financial markets. But we think it noteworthy that the potential for misperceiving complexity and risk exists with many successful exchange-traded products, such as futures and options. Exchanges generally address this concern through rules relating to sales practice and risk disclosure. Brokers control who has access to exchange-traded products and maintain strict suitability requirements.

On balance, we believe the availability of CDSs on exchanges would open this market to a far more diversified audience of qualified participants. This expanded user base would also allow the market to grow without creating greater systemic risk, as has occurred with the concentration of positions among existing participants.

c. Execution Efficiency

A third obstacle to exchange-listed CDSs is the potential for inefficiencies in trade execution. At bottom, the issue is whether exchange execution of CDS contracts would be inefficient due to the large size of these transactions. Prior to the crisis, the round lot transaction size of the OTC market was, on average, $5-$10 million. Moreover, transactions of $100 million were not uncommon. Whether these trends will continue is unclear. Equally uncertain is whether exchanges would be able to accommodate very large trades. Nonetheless, we believe the ability to accommodate all large CDS transactions should not be a prerequisite to introducing exchange-traded CDSs. As discussed below, we think that exchange-listed CDSs are a useful complement to—and not a substitute for—the OTC market. Thus, large transactions unable to be facilitated through an exchange could still be consummated on the OTC market and centrally cleared. We also believe that certain privately-negotiated transactions and block trades in standardized CDSs could also be effectively consummated off the exchange.

[128] Press Release, ISDA, "*ISDA Announces Successful Implementation of 'Big Bang' CDS Protocol*" (Apr. 8, 2009), *available at* http://www.isda.org/press/press040809.html.

d. Anonymity

The potential loss of anonymity may be yet another obstacle to bolstering participation in an exchange-based CDS market. In the OTC market, dealers often trade through interdealer brokers to avoid revealing to other parties who they are and what they are attempting to do. They do this out of the legitimate fear that others will take advantage of this information. In an exchange setting, the increased transparency of price and open interest normally also extends to the identities of the parties trading there. Although exchanges offering electronic trading may preserve parties' anonymity, there is still the risk of exposing large orders to the market. We observe, however, that exchange rules can provide for crossing and exemptions for block trading to address this problem.

e. Resistance from the Dealer Community

A final obstacle to exchange-based CDSs is resistance from the dealer community. The CDS market has been highly-concentrated, comprising approximately 15 major dealer banks. To retain control and ensure the quality of CDS transactions, dealers have maintained substantial influence over contract terms. Their specialized knowledge of the market has enabled them to enjoy highly profitable bid-ask spreads. Because the listing of CDSs on exchanges will inevitably reduce spreads, it is understandable that the dealer community would oppose the development.

Although it is possible that dealers could collectively threaten interdealer brokers with a boycott if they seek to share information with investors as to order flow or transactions, a more likely scenario is that dealers could simply engage in "predation" of an exchange. If dealers are able to identify liquidity-motivated rather than speculative traders, they can offer tighter bid-ask spreads to those traders. This would seem to confer a social benefit, but it does not. Rather, it siphons the liquidity trades off the exchange, leaving the speculative traders to whom a higher bid-ask spread must be charged. This reduces the liquidity and the pricing accuracy of the exchange, but more importantly, it undercuts the economics of the exchange and can drive it out of business.[129]

To be sure, resistance from the dealer community is not based entirely on pecuniary interests. As highlighted above, there have been a number of positive developments over the past few years in reducing systemic risk through more centralized clearing and the increased sharing of price and volume information. These developments have engendered many of the same benefits that an exchange would

[129] *See generally* Bruno Biais & Richard C. Green, *The Microstructure of the Bond Market in the 20th Century* 26-28, Tepper School of Business, Carnegie Mellon University Working Paper (Aug. 29, 2007) (discussing possible reasons for decline corporate bond trading on exchanges vis-à-vis the OTC market during the 1940s).

bring. As we explain further below, we agree with the dealer community that the OTC market should not be eliminated. Nevertheless, we think a class of highly-standardized, exchange-traded products could complement and strengthen that market.[130] The Committee believes the best way to achieve that result is to require through legislation the listing of those products on an exchange, and we would allow certain privately-negotiated transactions and block trades in those CDSs to be consummated off the exchange.

6. Complementary CDS Markets

Earlier in this section, we discussed how a given CDS is the economic equivalent of a futures contract on the reference entity's debt. Like commodities futures, CDSs do not require delivery of the underlying asset and can trade without reference to the immediately available supply of that asset. The similar features of CDSs and commodities futures raises an important question—namely whether these instruments be regulated the same way. As a general matter, the Commodity Exchange Act requires that transactions involving commodity futures be made "on or subject to the rules of a board of trade which has been designated by the [CFTC] as a 'contract market' for such commodity."[131] Subject to certain narrow exceptions, the Act thus requires commodities futures to be traded *exclusively* on an exchange. This requirement reflects Congress' long-held view that moving such transactions to an exchange would reduce unwarranted speculation and, at the same time, encourage bona fide hedging.[132] Some contend the same requirement should apply to CDSs. Indeed, Nobel Laureate Myron Scholes has stated that "[t]he solution is really to blow up or burn the OTC market, the CDSs and swaps and structured products, and let us start over."[133] To that end, he has recommended forcing OTC derivatives like CDSs to exchanges to enable "a correct repricing" of those assets.[134]

The Committee rejects the view that the OTC market should be eliminated in its entirety. Almost all of us believe that its current shortcomings—significant counterparty risk as well as the lack of liquidity and transparency—can be largely eliminated by encouraging a robust OTC market with centralized clearing that is complemented by a class of highly-liquid, exchange-traded CDSs. One or more

[130] Again, a relevant analogue may be the equity options market, where the compression of bid-ask spreads has arguably been offset by exponential increases in total equity options contact trading volume, both of these phenomena an outgrowth of standardization. From 1999 to 2008 total trading volume increased 605% (from 507,920,664 to 3,582,572,581). Chicago Board of Options Exchange, *2008 Market Statistics* 139 (2008), *available at* http://www.cboe.com/Data/marketstats-2008.pdf.
[131] 7 U.S.C. § 6(a).
[132] *See* H.R. Rep. No. 44, 67th Cong., 1st Sess. 2 (1921) (legislative history of the The Grain Futures Act of 1922, the forerunner to the Commodity Exchange Act).
[133] Christine Harper, *Scholes Advises 'Blow Up' Over-the-Counter Contracts*, Bloomberg, Mar. 6, 2009, *available at* http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aNRppMJqgURA.
[134] *Id.*

centralized, global clearinghouses, subject to strict oversight by national and multinational regulators, will severely reduce counterparty exposures, which are the chief driver of systemic risk in the CDS market. They will do so primarily by serving as the counterparty to each regulated CDS contract purchased on the OTC market. Better maintenance of margins along with multilateral netting—possibly among a number of derivative instruments—will be additional benefits of centralized clearing.

Alongside the OTC market, a class of exchange-traded CDSs would provide a venue for broader participation by investors requiring less-customized products. It would also allow current buy-side participants in the CDS market to play a greater role going forward. Based on our research, there is reason to believe that several exchanges are willing to list alternative credit products—including CDSs—that would supplement and support the OTC market. Indeed, several exchanges have begun this process. We believe such products would have the potential to complement the OTC market in a manner similar to interest rate swap futures and exchange-traded equities. Furthermore, on an exchange, the bid and ask prices can aggregate the quotes of dealers and other participants to find the best price for either party to a CDS contract. With the real-time availability of both pre-trade quotes and post-trade contract prices, an exchange would thus provide an important source of price discovery that would complement the OTC market and enhance its liquidity.[135] It would assist clearinghouses in more accurately gauging collateral requirements. Moreover, clearinghouses would benefit from the increased liquidity stemming from exchange-traded products in situations where members default and they are forced to close out their loss positions. By enabling clearinghouses to do so with greater ease, the complementary exchange market would thus strengthen the role of clearinghouses in reducing systemic risk. Conversely, the OTC market would provide arbitrage opportunities that would increase the overall liquidity of exchange-traded products.

In sum, the Committee concludes that two or more CDS markets, one OTC, others on an exchange, are better than one—complementary markets for CDSs can provide risk management tools to a broad audience for control of credit risks. Most importantly, they can do so in ways that reduce global systemic risk.

[135] Even at present, the indices of single-name CDSs, CDX, serve to enhance the liquidity of the underlying single-names. This would only increase when many of these highly-standardized and liquid CDSs would be exchange-listed. An appropriate analogy is the relationship between stock index futures trading and individual stock trading. The enhancement occurs because there is an arbitrage relationship between the index and its components, but there is a different mix of trading motives at the index level which leads to greater liquidity in the index. This liquidity is then "inherited" by the single-name contracts via the arbitrage relationships. *See generally* Kathy Yuan, *The Liquidity Service of Benchmark Securities*, 3 J. Eur. Econ. Ass'n 1156-80 (2005).

Specific Recommendations

3. Do Not Prohibit CDS Contracts. We strongly believe that CDSs are an important tool for measuring and diversifying credit risk. In that respect, a well-functioning CDS market can prevent—rather than produce—future global financial shocks. Consequently, we believe efforts by policymakers to prohibit CDS contracts altogether, or in part, would be counterproductive in reducing systemic risk. That said, we believe it is important for policymakers to study the impact of certain practices in the CDS market on corporate issuers and other relevant constituencies.

4. Mandate Centralized Clearing. We acknowledge that the CDS market has serious deficiencies—particularly when it comes to systemic risk. Among its shortcomings are its excessive counterparty risk, a lack of liquidity, and a lack of transparency in terms of transaction reporting. We therefore support the development of existing private sector initiatives, as well as the Treasury Department's recent recommendation, for greater centralized clearing. We also encourage thoughtful discussion of whether all, or only certain, CDSs should be subject to mandatory clearing.

5. Increase Capital Requirements for Non-Centrally Cleared CDSs. To the extent some CDSs would remain outside the centralized clearing process, we believe relevant counterparties should compensate for increased systemic risk of these contracts with a commensurate adjustment to their capital requirements.

6. Improve Netting Capabilities. Although we think existing clearing initiatives represent an important first step toward the reduction of systemic risk, we suggest that policymakers consider applying mandatory clearing rules to other standardized types of derivatives beyond CDSs, as the clearing of all derivatives in one or two facilities is more efficient than the separate clearing of CDSs.

7. Establish 1-2 International Clearing Facilities. We also believe that the establishment of one or two international clearing facilities subject to vigorous oversight would be the most effective means of reducing systemic risk on a global basis. We thus encourage U.S., E.U., and other national policymakers to work toward this common goal. Policymakers should consider whether there could be beneficial interactions between these global clearinghouses that would allow for even further netting.

8. Adopt a CDS Reporting System. The Committee shares the Treasury Department's goal of requiring volume and position data to be made publicly available. To achieve that objective, the Committee recommends that regulators facilitate the adoption within the CDS market of a transaction reporting system, similar to the TRACE system for corporate bonds.

9. Require a Class of Exchange-Listed CDSs. Rather than eliminate the OTC market, the Committee recommends that legislation be passed *requiring*—not simply

encouraging—the listing and trading of certain standardized, high-volume CDSs on exchanges.

B. Regulation of Capital*

1. Overview

The regulatory capital framework has been badly shaken by the financial crisis. Historically, capital regulation has been the dominant regulatory mechanism for constraining bank risk taking. By providing a cushion against losses, capital is supposed to act as a first line of defense against bank failures and their knock-on consequences for systemic risk.

Yet the existing capital regime failed to prevent several of the largest U.S. and European financial institutions from failing or becoming distressed to the point where they needed to be bailed out by the government. At the same time, capital firewalls proved inadequate to prevent the contagion from spreading throughout financial markets. To the extent that regulatory breakdowns are to blame for the financial crisis, capital regulation is an obvious culprit.

Ironically, the financial crisis occurred just as Basel II was being adopted as the new standard for international bank capital regulation. The 10-year plus effort to implement Basel II—at an estimated cost of more than $30 billion globally[136]—affirms the central role of capital in the regulatory rulebook. Basel II was intended to align the regulatory costs of capital with the internal costs of risk-taking. While some may argue that it is premature to judge the effectiveness of Basel II since it was not in force during the run-up to the crisis, the core concepts of Basel II had already been embedded in the risk practices of many banks at the center of the storm.

In this section, we consider major structural weaknesses in the regulatory capital framework exposed by the crisis, focusing particularly on bank capital regulation. The objective is not to identify immediate steps that can be taken to help stabilize the banking system, but to provide a roadmap of medium-term fixes that can make the regulatory capital framework more resilient for the future.

* The primary author of this section is Andrew Kuritzkes, Partner of Oliver Wyman and Senior Advisor to the Committee.

[136] Accenture, *Banks Report Widespread Challenges Remain in Their Basel II Preparations, According to Global Survey* (June 28, 2004), *available at* http://newsroom.accenture.com/article_display.cfm?article_id=4123; Oliver Wyman Risk Technology Roundtable (June 6, 2007), *available at* http://www.oliverwyman.com/ow/5802.htm.

In particular, we assess structural issues along six key dimensions:

* *Institutional coverage*: What types of institutions should be subject to a common regime of bank capital regulation?

* *Calibration:* How much regulatory capital should be required for the system as a whole?

* *Timing effects:* Should capital requirements vary over the economic cycle?

* *Systemically important institutions:* Should large, systemically important institutions be required to hold more capital per unit of risk, and thus be held to a higher solvency standard than other institutions?

* *Framework design:* To what extent should enhancements to the existing Basel II framework be based on rules (Pillar I) versus supervision of a firm's internal capital management practices (Pillar II) or increased disclosure and reliance on market mechanisms (Pillar III)? And how should holes in the existing Basel II framework be filled?

* *Capital composition:* What financial resources should count as "capital" for regulatory purposes? To what extent should regulatory definitions of capital be aligned with accounting and market definitions?

At the outset, it is worth acknowledging that capital is not a cure-all. Bear Stearns, Washington Mutual, Lehman Brothers, Wachovia, and Merrill Lynch each had capital levels well in excess of regulatory minimums, up until they failed, or were sold with government assistance (*see* Table 12: CDS Rates and Capital Ratios Table). Sophisticated internal capital measurement systems also failed to prevent huge losses at UBS, Citigroup, and AIG. The implication may be that we are asking capital to do too much. Even the best capital regime will not prevent individual bank failures or financial crises from recurring. We need to sharpen other policy tools to complement the role of capital, such as re-aligning compensation and incentive structures with risk; strengthening the risk governance standards for Boards and top-level executives; heightening scrutiny on funding and liquidity practices; and, perhaps most importantly, improving the resolution regime to lower the systemic costs of financial institution failure, a matter dealt with in Section D of this chapter.

2. Policy Discussion

a. Institutional Coverage

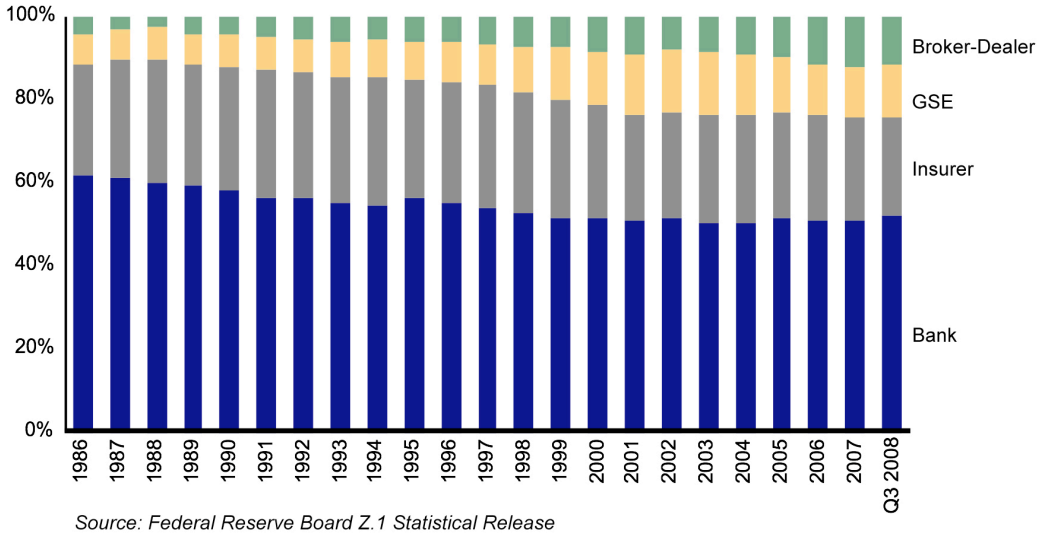
The defining feature of U.S. capital regulation is a proliferation of different capital regimes. Capital regulation is based on charter, not on functional activity, with different capital rules applying to commercial banks and thrifts, broker-dealers, government sponsored entities (GSEs), federal home loan banks, insurance companies,

and financial guarantors, as well as unregulated firms such as finance companies and hedge funds.

While the focus here is on bank capital regulation, it is important to note that banks constitute only about half of regulated financial activity.

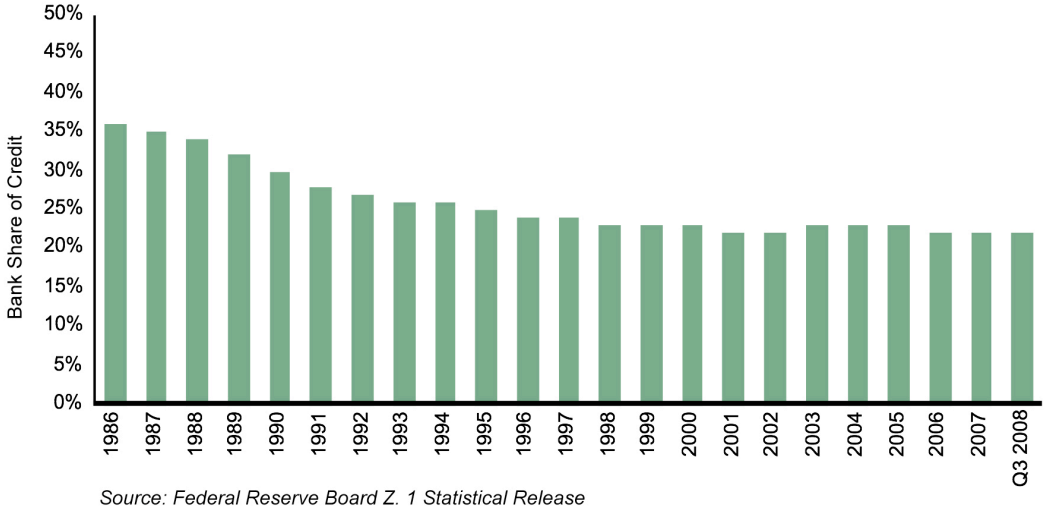
The figure below shows bank assets as a percentage of the total assets of regulated financial institutions. As of year-end 2007, banks accounted for 50% of the regulated total. More significantly, banks account for a small and declining share of U.S. credit markets. The following figure shows that the bank share of total U.S. credit liabilities has dropped from 37% in 1986 to 22% in 2007.

Figure 21: Bank Assets as a Percentage of Total Assets of Regulated Financial Institutions



Source: Federal Reserve Board Z.1 Statistical Release
Note: GSEs include the Federal Home Loan Banks, Fannie Mae, Freddie Mac, the Federal Agricultural Mortgage Corporation, the Farm Credit System, the Financing Corporation, and the Resolution Funding Corporation, as well as Sallie Mae until it was fully privatized in 2004. Banks includes commercial banks and savings institutions.

Figure 22: Credit Supplied by Banks as a Percentage of Total Credit Liabilities in the U.S.



Source: Federal Reserve Board Z. 1 Statistical Release

At the same time, institutions that are not subject to bank capital regulation are allowed to operate with different degrees of leverage. A clear example of this is the leverage ratios of the U.S. bulge bracket investment banks prior to the crisis. The table below shows the gross leverage ratio for the five bulge bracket firms as of year-end 2007, compared to the top five U.S. commercial banks. Although the investment banks were subject to a form of Basel II under the SEC's consolidated supervision, they were not subject to the FDIC 5% leverage ratio applicable to commercial banks. As a result, the bulge bracket firms were able to operate with more than twice the gross leverage of commercial banks.

Table 9: Leverage Ratios of Top Five Commercial and Investment Banks

Investment Banks		*Commercial Banks*	
Bank Name	*Gross Leverage*	*Bank Name*	*Gross Leverage*
Goldman Sachs	26	Citigroup	19
Morgan Stanley	33	Bank of America	12
Merrill Lynch	32	JPMorgan Chase	13
Lehman Bros	31	Wachovia	10
Bear Stearns	34	Wells Fargo	12
Average	31	Average	13

Source: SNL. Gross Leverage is defined as total assets divided by total equity

The key issue in terms of institutional coverage is not that different firms operate under different leverage requirements—it is neither practical nor desirable to create a single capital regime that would cover all financial firms exposed to similar risks. Differences in liability structure may well warrant differences in capital treatment. For example, both life insurers and banks are important lenders to the corporate sector, but the long-term liability structure of life insurers may suggest a different time horizon for

evaluating capital requirements than for a bank dependent on short-term deposits. Therefore, if a single capital regime is impractical, the question should be what the consequences are of being outside the bank capital framework.

Until the recent crisis, it was well understood that firms that were not regulated as banks (or thrifts), and subject to bank capital regulation, were excluded from the Fed's safety net. Specifically, nonbanks could not borrow from the Fed's discount window or otherwise obtain access to emergency liquidity from the Fed.

The Fed's emergency measures during the crisis have upended this understanding. The Fed's invocation of "unusual and exigent circumstances" under Section 13.3 of the Federal Reserve Act resulted in the Fed extending loans or guarantees to Bear Stearns and AIG. The Fed has also allowed the nonbank investment banks to obtain emergency liquidity through the Primary Dealer Credit Facility. And more recently, the Fed approved conversions of nonbank firms to bank holding company status so that they could obtain the implicit and explicit support of the Fed safety net. The list of bank holding company conversions includes investment banks Goldman Sachs and Morgan Stanley; auto finance company GMAC; industrial loan company CIT; and credit card company American Express.

The Fed's emergency measures may have been justified by the exigent circumstances of the crisis, but they have created structural moral hazards and level playing field impediments to the extent that institutions with access to the Fed safety net are not subject to capital regulation. Access to Federal Reserve liquidity and other emergency lending facilities is a valuable option for a firm's debtholders (so far, it has prevented losses to counterparties and creditors of failed firms such as Bear Stearns and AIG). But this option should not be free. If regulation as a bank or bank holding company imposes additional capital costs, nonbanks have no incentive to bear those costs if the Fed is willing to rescue their debtholders at the moment that matters—when the firm experiences financial distress. The same rationale holds if nonbanks are allowed to convert to bank holding company status as they are falling into crisis. The extension of the Fed safety net to nonbanks not only encourages firms to avoid paying the costs of bank regulation, but, if debtholders have a reasonable expectation of being bailed out, creates an incentive to gear up the firm as much as possible to maximize returns to equity holders.

Looking beyond the crisis, we need to realign the institutional costs and benefits of capital regulation. Consistent with regulatory principles on moral hazard and competition, a starting point for doing so should be to restrict access to Fed liquidity to firms that are subject to a common regime of capital regulation. New rules should be established to make such a restriction credible.

b. Calibration

Despite the critical role capital plays in the regulatory framework, existing capital requirements were set without an explicit link to a target solvency standard for individual banks or for the system as a whole. Basel II's core capital requirement—that banks hold a minimum of 8% Tier I plus Tier II capital to risk weighted assets—was a holdover from Basel I (which itself was based on maintaining but not increasing pre-Basel I capital levels), and the Basel II risk weights were calibrated to leave the overall level of capital in the banking system unchanged.[137] The fundamental question of "how much capital is enough" was not addressed by the Basel Committee. Rather, there was an assumption that existing capital levels were adequate for prevailing levels of risk.

Given the extensive empirical work done for establishing the relative risk weights under Basel II's Pillar I, it is surprising how little empirical research there is on Basel II's overall calibration. One of the few empirical studies to address Basel II's calibration is Kuritzkes and Schuermann, which looks at bank earnings volatility for a large sample of U.S. bank holding companies over the 24-year period from 1981 to 2004.[138] As summarized in the following table, Kuritzkes and Schuermann find that the Basel 8% minimum capital ratio is sufficient to protect individual banks against approximately 99.7% of adverse earnings events over a one-year horizon. Put another way, this means that a bank holding the 8% minimum capital requirement would be expected to have an annual default risk of about 30 bp—the same default risk implied by a BBB credit rating.

Table 10: Kuritzkes-Schuermann Bank Earnings Volatility Analysis, 1981-2004

Tail Quantile (VAR %)	0.05/99.95	0.1/99.9	0.3/99.7	0.5/99.5	1/99
Implied Rating	A	A-	BBB	BB+	BB
Earnings % RWA	-14.74%	-10.81%	-8.00%	-6.00%	-4.38%

Note: Earnings volatility (measured as deviation in return on risk weighted assets at the bank level) at select quantiles from Kuritzkes-Schuermann analysis. Results are for bank holding companies >$1 billion in assets from 1981-2004 (7,397 bank-year observations). Earnings volatility expressed as percentage of risk weighted assets.

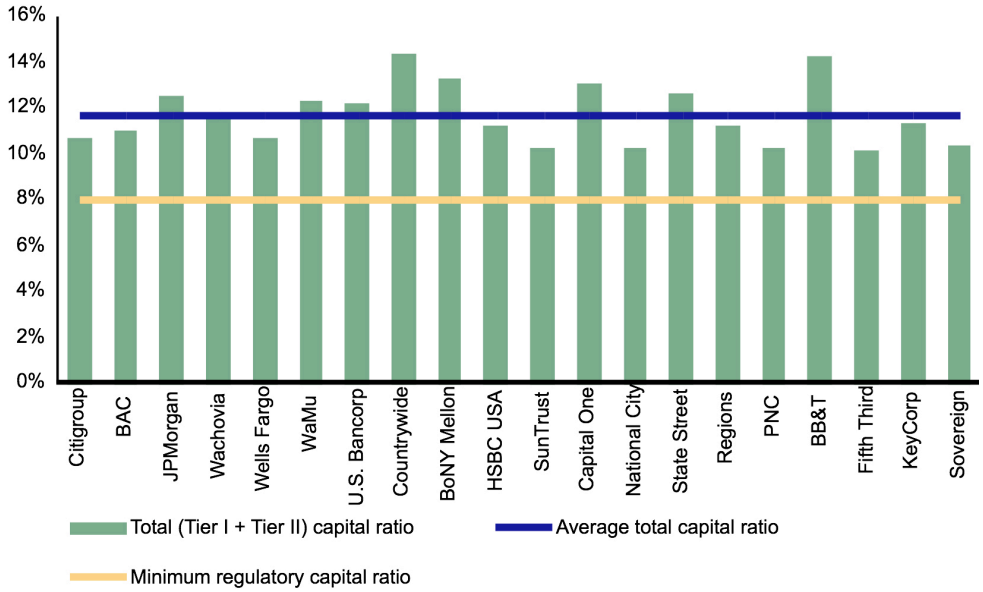
A BBB rating is not a high solvency standard. Of the top 20 U.S. banks in 2007 (accounting for 64% of total bank assets), only one had a credit rating as low as BBB,

[137] Bank for Int'l Settlements, *Basel Comm. on Banking Supervision, International Convergence of Capital Measurement and Capital Standards: A Revised Framework* 2 (June 2006), *available at* http://www.bis.org/publ/bcbs128.pdf.

[138] Andrew Kuritzkes & Til Schuermann, *What We Know, Don't Know and Can't Know about Bank Risk: A View from the Trenches*, Wharton Fin. Inst. Center, Working Paper No. 06-05 (2006), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=887730; *see also* Francis X. Diebold, Neil A. Doherty & Richard J. Herring, *The Known, The Unknown and The Unknowable in Financial Risk Management* (June 2008), *available at* http://www.ssc.upenn.edu/~fdiebold/papers/paper82/ddh.pdf.

and the asset-weighted average credit rating was AA-.[139] This explains why most large banks maintain significant capital buffers relative to regulatory minimums. As shown below, in 2007, the average Tier I plus Tier II capital ratio for the top 20 banks was 11.7%—or 3.7 percentage points above the Basel II minimum. This is also 17% above the regulatory "well capitalized" standard of 10%.[140]

Figure 23: Total Capital Ratio for Top 20 U.S. Banks in 2007



Source: SNL data for U.S.-based public banks and thrifts, company 10-Ks

The crisis can be read to suggest that there is too much leverage in the system and that overall levels of bank capital should be raised. The question is not whether the banking system currently needs additional capital to replenish depleted capital levels from losses, but what the post-crisis "steady-state" requirement for bank capital should be.

While an understandable reaction to the over-leveraging of the system would be to raise capital requirements across the board, the lack of empirical research on capital calibration suggests that the costs and benefits of higher bank capital requirements are uncertain. As noted above, banks are a small part of the system-wide balance sheet, so controlling bank leverage will only have a limited effect on overall leverage. It may

[139] *See* SNL Financial, *available at* http://www.snl.com (for bank assets); Bloomberg, *available at* http://www.bloomberg.com (for bank ratings) at year end 2007. SNL Financial is a business intelligence aggregator of information that companies report in 10-Ks and other regulatory filings.
[140] *See* Allen N. Berger et al., *How Do Large Banking Organizations Manage Their Capital Ratios* (Feb. 1, 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1098928 (providing additional evidence of bank capital buffers relative to regulatory minimums).

make more sense to target capital requirements for highly leveraged vehicles—such as SIVs and conduits—to reduce pockets of extreme leverage.[141] At the same time, setting bank capital requirements too high will encourage regulatory arbitrage and shift assets off bank balance sheets into other unregulated vehicles, as was the case with SIVs and conduits.

Further, it is unclear that raising bank capital requirements would have much of an effect during boom periods (when concerns about over-leverage are acute), since this is when alternative sources of funding are most readily available. The bigger impact is likely to be felt during downturns, exacerbating the pro-cyclical effects of capital requirements (see below).

For these reasons, the best approach to capital levels is to proceed with caution. Additional empirical work is required to assess the costs and benefits of raising or lowering capital requirements—for banks (what is the impact of changes to capital requirements on solvency levels?); for non-banks (will higher capital requirements for banks push financing activity out of the banking system?); and for the extension of credit to the rest of the economy. The overall bank capital calibration should not be changed absent compelling evidence that an increase (decrease) in capital levels is warranted. Furthermore, if capital requirements are extended to non-banks, there is also a need to determine what the correct amount of capital is for these institutions, which may have a very different risk and funding profile than banks.

c. Timing Effects

(1) Solvency Standard

A key feature of the current regulatory capital framework is that minimum capital levels are fixed, whereas bank losses (or adverse earnings events) vary considerably over the economic cycle. The variability of bank losses can be demonstrated by looking at split sample periods from the Kuritzkes-Schuermann earnings volatility analysis. The following table reports the amount of capital required to achieve a given solvency level during a "bad" period, from 1981 to 1992 (encompassing the late 1980s banking crisis and culminating in the passage of the Federal Deposit Insurance Corporation Improvement Act (FDICIA)), and a "good" period, from 1993 to 2004. At the 99.9% level of earnings protection (equivalent to an A-rating), banks needed 14.74% capital in the bad period, versus only 4.58% capital in the good period (and 10.81% capital across the two sample periods combined).

[141] For the eight U.S. bank-sponsored conduits that disclosed information, third party sub-debt (which allows the conduits to be held off-balance sheet) averaged just 0.15% of conduit assets—in effect amounting to a leverage ratio of more than 600 to 1.

The implication is that solvency standards are not constant during an economic cycle but are dependent on the "state of the world." Bank defaults are lumpy. During "good" years, an 8% capital ratio may actually protect banks at much more than a BBB level, with few, if any, banks defaulting. During "bad" years, there is a concentration of extreme earnings events, and the same 8% standard may lead to a much higher default rate. The solvency level of a given capital requirement depends critically on the period over which it is calibrated and assumptions of the state of the world going forward.

Table 11: Kuritzkes-Schuermann Bank Earnings Volatility; Split Sample Analysis

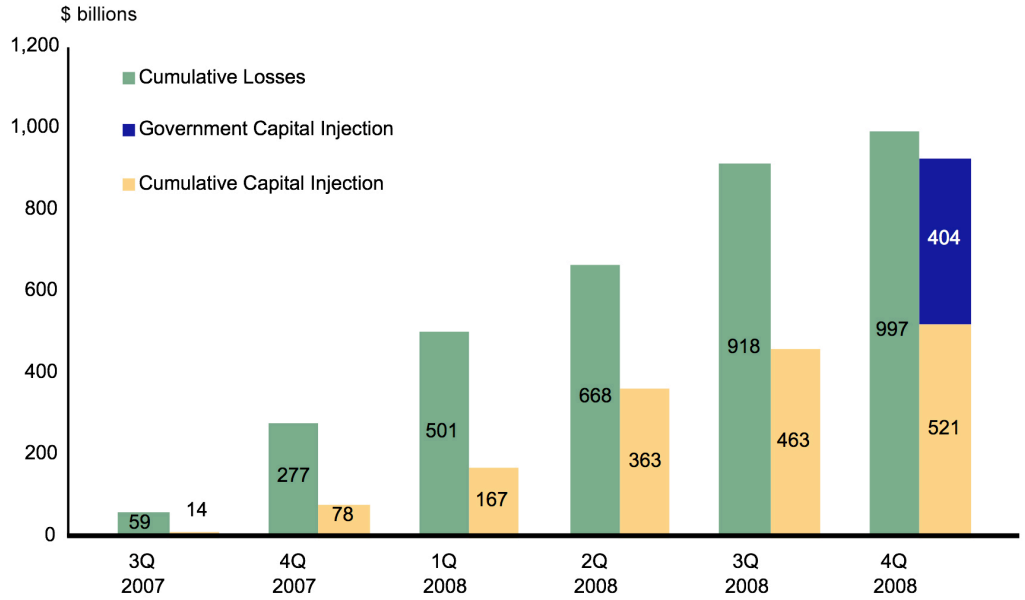
Tail Quantile (VAR %)	# of observations	0.05/99.95	0.1/99.9	0.5/99.5	1/99
Implied Rating		A	A-	BB+	BB
Earnings % RWA					
1981-2004	7,397	-14.74%	-10.81%	-6.00%	-4.38%
1981-1992	3,680	-16.79%	-14.74%	-7.89%	-5.34%
1993-2004	3,717	-8.32%	-4.58%	-3.20%	-2.31%

Note: Earnings volatility (measured as deviation in return on risk weighted assets at the bank level) at select quantiles from Kuritzkes-Schuermann analysis. Results are for bank holding companies >$1 billion in assets. Earnings volatility expressed as percentage of risk weighted assets.

(2) Time-Varying Capital Requirements

Given the cyclical nature of bank losses, the impact of a fixed capital requirement is to force banks to raise capital in the downturn as losses mount and capital levels are depleted. This is what has happened during the current crisis: the following figure shows a Bloomberg analysis of the cumulative losses and associated capital raising, by quarter, for global financial institutions, from Q3 2007 through Q4 2008, when TARP capital injections (and similar government support in other countries outside the United States) became available. Cumulatively, through the end of 2008, banks raised $925 billion of capital relative to $997 billion of writedowns and losses—leaving a loss overhang of $72 billion. Most of the Q4 capital injections, however, consisted of government capital—in the United States alone, over $250 billion of TARP capital was directed toward banks. At the end of Q3, before the government capital investments, the loss overhang was $455 billion.

Figure 24: Global Cumulative Industry Losses and Capital Raised



Source: Bloomberg
Note: Government capital injections occurred in 4th quarter in U.S.; assumed to be in fourth quarter for rest of world. Losses include reported writedowns and credit losses.

The need to meet a constant capital ratio during a downturn can have serious knock-on effects for the financial system and the macro economy. As Anil Kashyap, Raghuram Rajan, and Jeremy Stein describe, there is a vicious cycle of losses and writedowns contributing to balance sheet contraction, downward price pressure on financial assets, and further losses: the starting point is that losses and writedowns deplete capital levels.[142] In order to meet a fixed capital requirement, banks are forced either to raise capital when it is most expensive, or to shrink balance sheets and contract lending. The sale of assets from bank portfolios contributes to a spiral, which can depress prices below fundamental levels. This leads to further losses and writedowns, exacerbating the need for more capital or another round of balance sheet reduction.

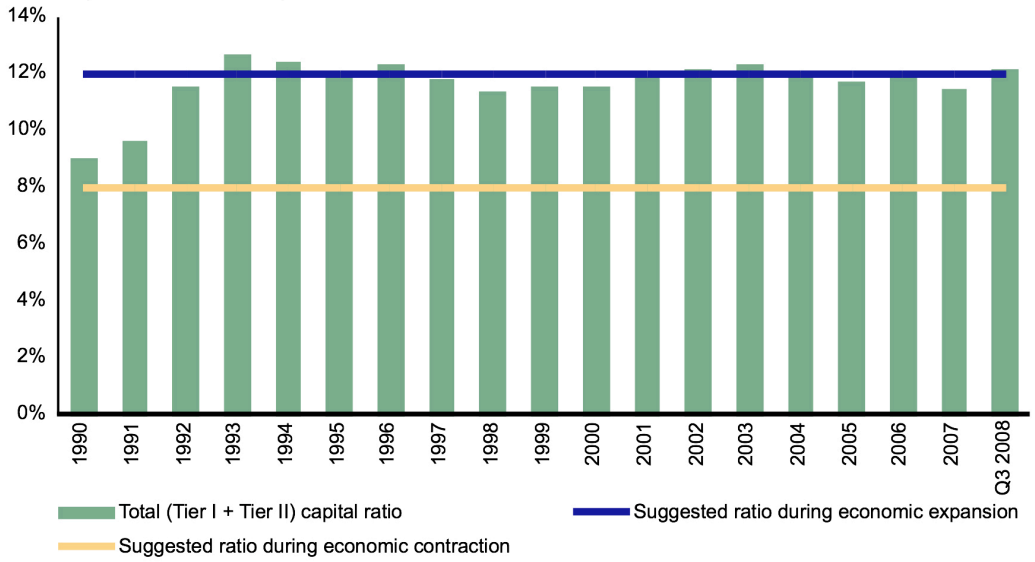
Given this dynamic, the U.S. Treasury Department,[143] along with the U.K. FSA[144] and the Financial Stability Forum,[145] have all endorsed moving to a system of pro-

[142] Anil K. Kashyap, Raghuram G. Rajan & Jeremy C. Stein, *Rethinking Capital Regulation* 13-14, *prepared for* Fed. Res. Bank Kansas City symposium on "Maintaining Stability in a Changing Financial System," Jackson Hole, Wyo. (Aug. 21-23, 2008), *available at* http://faculty.chicagobooth.edu/anil.kashyap/research/rethinking_capital_regulation_sep15.pdf.
[143] *See* Timothy Geithner, Secretary of the Treasury, Testimony before the House Financial Services Committee (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg71.htm.
[144] *See* Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 62 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf ("*[T]he position in principle is clear.* The capital adequacy regime, in addition to requiring more and better quality capital, should include the

cyclical capital levels. Under their proposals, banks would be required to maintain substantial capital buffers during "good" periods, but be allowed to deplete the buffers and maintain lower capital levels during a downturn.

For time-varying capital requirements to matter, the capital buffer during the good years would have to be higher than banks currently maintain, or the floor would have to be lower during the bad years (or both). A plausible range for well-capitalized banks might be to increase the well-capitalized standard to 12% during "good" years, when losses are below expected levels, and decrease the standard to 8% during "bad" years, when losses are above expected levels. A backward-looking illustration of how such a range would have affected the capital levels of top 20 U.S. banks is shown in Figure 25.

Figure 25: Time-varying Capital Requirements Versus Average Regulatory Capital Ratios for Top 20 Banks



Source: SNL
Note: The average regulatory capital ratios is calculated for the top 20 U.S.-based public banks by asset size each year by dividing the sum of the banks' risk-based capital by the sum of their risk weighted assets.

A partial solution could also be to move toward a dynamic provisioning system, such as has been adopted in Spain. In the Spanish system, banks maintain a funded

creation of countercyclical capital buffers which are built up in periods of strong economic growth and available for use in downturns.") (emphasis in the original).

[145] *See* Fin. Stability Forum, *A Report of the Financial Stability Forum on Addressing Procyclicality in the Financial System* 2 (2009) (Recommendation 1.1, "The [Basel Committee on Banking Supervision] should strengthen the regulatory capital framework so that the quality and level of capital in the banking system increase during strong economic conditions and can be drawn down during periods of economic and financial stress.").

reserve, calculated by asset type, based on expected losses over an economic cycle.[146] In years with low losses, the reserve is built up, and in years with higher than expected losses, the reserve is drawn down. The reserve, in effect, is a buffer mechanism that sits on top of capital. Because of concerns with earnings manipulation, such a statistically-based general provision is not allowable under U.S. GAAP. But a counter-cyclical reserving mechanism could be structured so as not to conflict with existing securities regulations or accounting standards by providing that additional reserves over "known" losses not be run through the income statement but be held as a form of partitioned capital on the balance sheet.[147] The U.K. FSA has called for consideration of whether an expected-loss based provisioning system should be adopted to dampen the pro-cyclical effects of accounting provisions.[148] Similarly, the Financial Stability Forum has recommended that both the FASB and IASB consider alternatives to existing loss recognition principles, including dynamic provisioning.

Although different methods should be explored, and calibration remains an issue, the ultimate objective seems clear: The system as a whole would benefit from pro-cyclical capital levels. A critical reform of the existing capital framework should be to shift to time-varying capital requirements.

(3) Contingent Capital

An alternative to letting capital requirements fall during a downturn would be to allow, or require, banks to hold some form of contingent capital that would be callable as losses mount. Kashyap, Rajan, and Stein propose catastrophic insurance as a form of contingent capital, which would pay out in the event that system-wide losses exceed a pre-defined trigger. In their proposal, the contingent capital would be fully funded by non-financial institution investors (such as sovereign wealth funds) as a net injection of funds, to avoid exacerbating a financial contraction. The funds would also be held in a lock-box, to mitigate concerns over counterparty risk.

Mark J. Flannery, meanwhile, proposes that banks (or at least large banks) hold reverse convertible debentures that would convert to equity in the event the market

[146] *See* Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 63 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf (for the discussion on the Spanish dynamic provisioning system).
[147] The reserve could also be set at a multiple of expected loss or to cover losses under stress conditions, e.g., as suggested by Eric S. Rosengren, CEO, Fed. Res. Bank Boston, Addressing the Credit Crisis and Restructuring the Financial Regulatory System: Lessons from Japan, Address Before the Institute of International Bankers Annual Washington Conference (Mar. 2, 2009).
[148] Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf.

value of the bank's equity relative to its assets falls below a target ratio.[149] The reverse convertible debentures would, in effect, be pre-subscribed equity that would convert to common stock when a bank's market value is low—and, hence, capital raising is most expensive. The debentures would also provide an actively priced market signal that is closely linked to a bank's default risk.

While there are important differences between the Kashyap-Rajan-Stein and Flannery proposals, both forms of contingent capital can act as automatic stabilizers: they inject capital into the banking system when it is needed, and help dampen a contraction in lending that might otherwise take place if banks had to raise new capital to maintain regulatory ratios.

These proposals are innovative ideas for mitigating the pro-cyclical effects of bank capital regulation. Although significant details need to be worked out—how would systemic losses be defined under the Kashyap-Rajan-Stein proposal? how would the catastrophic insurance be priced? how deep would the market be for reverse convertible debentures?—these proposals should be at the top of the agenda for structural improvements to the existing capital framework.

d. Systemically Important Institutions

The crisis, so far, has disproportionately affected the largest U.S. financial institutions. Of the top 20 U.S. financial institutions by asset size at year-end 2007, eight firms—including Bear Stearns, Washington Mutual, Fannie Mae, Freddie Mac, Lehman Brothers, AIG, Merrill Lynch, and Wachovia—either failed or needed to be taken over by the government or by another institution in a government-assisted merger. The financial assets of these eight institutions totaled $5.7 trillion[150]—nearly one-quarter of the total assets of all regulated financial institutions.[151]

At the same time, the initial TARP capital injections were also concentrated on the largest U.S. banks. The first $125 billion of TARP capital was targeted at the nine largest U.S. banks.[152] In the meantime, two of the three largest U.S. banks—Citigroup

[149] Mark J. Flannery, "No Pain, No Gain? Effecting Market Discipline via Reverse Convertible Debentures," *in* Capital Adequacy Beyond Basel: Banking Securities and Insurance (Hal S. Scott ed., Oxford Univ. Press 2005).
[150] *See* SNL Financial, *available at* http://www.snl.com. For banks and GSEs, the total financial asset value is calculated as the sum of all cash and securities, net loans, and servicing rights. For security broker-dealers and insurers, the total financial asset value is calculated as the total assets less the sum of net fixed assets and intangible assets.
[151] *See* Fed. Res. Bd. Z.1 Statistical Release, *available at* http://www.federalreserve.gov/releases/z1/. The total financial assets of regulated financial institutions include financial assets of insurers, GSEs, broker-dealers, commercial banks, and savings institutions.
[152] The $10 billion injection into Merrill Lynch was delayed by the Bank of America acquisition.

and Bank of America—have had to return to the TARP well for a second round of government funding.

Large institutions pose unique risks to the government because of their systemic consequences. The decision to allow Lehman Brothers to fail without a government rescue has been roundly criticized as having triggered the near meltdown of the financial system in mid-September 2008. Government actions since Lehman are consistent with the view that no other large, systemically important financial institution will be allowed to fail—at least not while financial markets remain fragile.

The problem has also been compounded by the mergers that have taken place as a result of the crisis. In 2008, Bank of America acquired Countrywide and Merrill Lynch; JPMorgan Chase acquired Bear Stearns and Washington Mutual; and Wells Fargo acquired Wachovia. The total assets of the top 5 banking institutions increased by $1.4 trillion—over 20%—from the end of 2007 to 2008.[153]

Firms that are too big, too interconnected, or too complex to fail impose added costs to the government and, ultimately, the taxpayer in the form of the government assistance that might be needed to rescue large, distressed institutions. Given the concentration risks to the government, it is reasonable to question whether "systemically important" firms should be held to a higher solvency standard—should they be required to hold more capital per unit of risk?

Although we caution against identifying which institutions are "systemically important," a case can be made that large banks should be required to hold a larger capital buffer than smaller banks that are not "too big to fail." A capital surcharge could be designed as a progressive safety margin. Similar to a progressive tax, the rate of the surcharge could increase with size, as a proxy, albeit imperfect, for increased systemic risk. According to the Kuritzkes-Schuermann analysis, a 25% capital surcharge would be the equivalent of tightening bank solvency standards by one to two rating notches, depending on the starting point (*see* Kuritzkes-Schuermann Bank Earnings Volatility Tables 10 & 11). Lasse Pedersen and Nouriel Roubini propose a similar systemic risk charge that would be paid into a government insurance fund.[154] A capital surcharge might also act as a disincentive to large bank mergers and help counteract the rising trend of bank concentration.

While careful thought needs to go into how such a surcharge would be calibrated, a starting point might be to consider a progressive capital surcharge for

[153] *See* SNL Financial, *available at* http://www.snl.com. While the Bank of America acquisition of Merrill Lynch did not complete until January 1, 2009, the acquisition is included in the estimated numbers.
[154] Lasse Pedersen & Nouriel Roubini, *A Proposal to Prevent Wholesale Financial Failure*, Fin. Times, Jan. 29, 2009, *available at* http://www.ft.com/cms/s/0/4d0add58-ee27-11dd-b791-0000779fd2ac.html?nclick_check=1.

"core" U.S. banks subject to Basel II. Core banks are defined as banks with greater than $250 billion in total assets (or more than $10 billion in foreign assets). The core banks already operate under a capital framework that is markedly different from that for non-core banks, on the theory that their size and complexity justify a more rigorous framework.

e. Framework Design

While Basel II was designed as a three pillar framework—with rules-based capital charges under Pillar I supplemented by internal supervisory processes under Pillar II and market disclosure under Pillar III—not all pillars were created equal. The overriding emphasis of Basel II to date has been on minimum capital charges for credit, market, and operational risks imposed under Pillar I.

(1) Pillar I

Pillar I was intended to close the gap between the regulatory and internal costs of capital by relying on banks' internal risk models as the key inputs for calculating regulatory capital for credit, market, and operational risks. However, misestimation of risk was a defining feature of the crisis—particularly of the "tail" risks relevant for capital. There are many examples where internal risk estimates were off by several multiples:

* For market risk, Merrill Lynch's reported daily value-at-risk (VAR) at the 95% level averaged $57 million from Q4 2007 through Q3 2008. Its cumulative losses (on trading assets, liabilities, and investment securities) over the same period amounted to over $20 billion—nearly 400 times daily VAR and well beyond the risk outcomes implied by VAR models.[155] The many shortcomings of VAR models for estimating capital are well documented in the U.K. FSA's Turner Review.[156]

* For credit risk, as recently as May 2008, Moody's estimated lifetime losses on 2006 Alt-A mortgages to be 5.5%. Eight months later, Moody's nearly quadrupled the lifetime loss estimate to 19.8%,[157] while other observers forecast losses as high as 27% for Alt-A Option ARM mortgages.[158]

[155] Merrill Lynch 10-Q Quarterly Reports from Q1, Q2, and Q3 2008 and 10-K Annual Report from 2007, *available at* http://www.ir.ml.com/sec.cfm.
[156] *See* Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 62-63 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf.
[157] Moody's Investors Service, *Structured Finance Rating Methodology, Alt-A RMBS Loss Projection Update* (Jan. 22, 2009).
[158] Goldman Sachs Global ECS Research, *U.S. Economics Analyst, Issue No. 09/03, Rebooting the Financial System* (2009).

* For operational risk, the crisis created new forms of operational exposures associated with extreme market disruptions not previously contemplated in internal frameworks. Examples include fiduciary risks relating to losses on money market mutual funds and other guaranteed investment products; legal risks stemming from the suspension of the auction rate securities market; and lender liability relating to loan securitizations. The full losses from these latent risks will not be known for several years.

Although model parameters can be re-estimated in light of recent experience, they will never be able to catch up with extreme loss events that have yet to occur—what Nassim Taleb refers to as "black swans," which cannot be perceived until they happen.[159] The key issue highlighted by the current crisis is that we are over-confident in our ability to estimate tail risks (and hence capital) accurately under Pillar I. Similarly, the Pillar I rules for translating internal metrics to capital inevitably lag innovation and changes in market structure, such as the shift from a "buy-and-hold" to "originate to distribute" business model. New rules (by definition) will be unable to anticipate the next crisis.

At the same time, no single metric or rule can capture the complexity of risks for all financial institutions. The crisis has made clear that risk cannot be collapsed into a single statistic. This explains why the bank supervisors are now relying on a multi-faceted stress test, rather than traditional capital metrics, for determining how much additional capital banks need to weather the current storm (see below).

The existence of a rule-based system also creates incentives for arbitrage. The shift of banking assets off-balance sheet into SIVs and conduits is perhaps the most egregious example of how rules can be exploited to circumvent capital requirements. Also, lower capital requirements for insurance holding companies and investment banks resulted in much of the credit default swap business being done outside the banking system.

Ultimately, the actual level of capital held by large financial institutions is not determined by regulatory minimums, but by strategic considerations, rating agency guidelines, counterparty requirements, and investor expectations. To the extent that regulatory capital is not the binding constraint, the internal price of capital is not determined by regulatory costs, but by internal capital allocation processes (and, significantly, how these are reflected in internal profitability measures and incentive structures). This is not to say that regulatory capital requirements are unimportant or that regulatory capital arbitrage has not played a large role in balance sheet structuring. The point, though, is that a Pillar I-based framework fails to capture major influences on a bank's capital decision-making process.

[159] Nassim Nicholas Taleb, *The Black Swan: The Impact of the Highly Improbable* (Random House 2007).

(2) Pillar II

Ironically, at the moment when capital has become an issue of survival for U.S. banks, the regulators seem to have backed away from Pillar I and imposed a Pillar II stress test to determine how much additional capital banks need to withstand the current economic downturn. The stress test, announced by Treasury Secretary Geithner in February 2009, whose results were announced on May 7, 2009, as a key part of the Administration's Financial Stability Plan, was administered by the Fed to all bank holding companies with more than $100 billion in assets.[160] The stress test is a forward-looking assessment of a bank's capital adequacy under two macro scenarios specified by the Fed. Rather than rely on internal models and Pillar I rules for the scenarios, the Fed established a range of losses for asset classes that it believes are representative of bank exposures under the scenarios. The projected losses were used to determine whether a bank failed the Fed's stress test capital standard—irrespective of whether the bank has sufficient capital under established regulatory metrics. What this says is that when capital *really* matters, the regulators are prepared to override the traditional rules-based approach in favor of a flexible test designed for current economic conditions.

Given the inherent limitations of a rules-based approach, an enhanced Pillar II approach is not only appropriate in a crisis situation, but reflects a necessary rebalancing of the Basel framework. Going forward, we should rely more heavily on Pillar II supervisory assessments. A key part of the Pillar II analysis should be based on forward-looking stress testing and scenario analysis—as opposed to the rear-view mirror based view of traditional risk metrics under Pillar I. Such a judgment-based process should adopt a comprehensive view of risk and be sensitive to rules-based arbitrage. Somewhat reassuringly, this is the direction that recent oversight was moving in pre-crisis, through the ICAAP process in Europe and similar reviews in the United States. The case for emphasizing the role of Pillar II has been dramatically strengthened by the crisis.

(3) Pillar III

At the same time, a case can be made for greater reliance on Pillar III market mechanisms. Significantly, for distressed institutions, market expectations rather than regulatory minimums are likely to serve as the binding capital constraint. The table below shows the regulatory capital levels and CDS spreads for Bear Stearns, Lehman Brothers, Washington Mutual, Wachovia, and Merrill Lynch[161] as of the latest quarterly

[160] Press Release, U.S. Dep't of the Treasury, "Statement from Treasury Secretary Tim Geithner Regarding the Treasury Capital Assistance Program and the Supervisory Capital Assessment Program" (May 7, 2009), *available at* http://www.ustreas.gov/press/releases/tg123.htm.
[161] Although Merrill Lynch and Wachovia were acquired by Bank of America and Wells Fargo, respectively, without initial government assistance, Bank of America needed to obtain additional TARP capital injections to complete the Merrill transaction, and the government had been prepared to assist

disclosure before these firms either failed or were forced into mergers with government assistance. In each case, the firm was operating with a significant regulatory capital buffer—of at least 2.3 percentage points above the "well-capitalized" minimum—yet the CDS spread shows there were high expectations for default. These firms were forced to explore alternatives for market recapitalization long before hitting regulatory minimums—in fact, their inability to successfully recapitalize was a proximate cause of failure. This suggests that market discipline may ultimately be a more powerful force for controlling bank leverage than regulatory capital.

Table 12: CDS Rates and Capital Ratios Prior to Acquisition or Failure

Institution	*Date of Announcement*	*Last Reported Capital Ratio*	*CDS Rate at End of 2006*	*CDS Rate at End of Period Prior to Failure or Acquisition*
Bear Stearns	March 14, 2008	14.4%	22	176
Merrill Lynch	September 15, 2008	12.3%	17	250
Lehman Brothers	September 15, 2008	16.1%	22	276
WaMu	September 25, 2008	12.3%	22	590
Wachovia	September 29, 2008	12.4%	12	215

These points can be tied to the earlier discussion of contingent capital. To the extent that (i) Pillar I rules-based minimum capital requirements fail to accurately reflect tail risks and are unable to anticipate the next crisis; (ii) regulatory minimums are not the binding constraint on the amount of capital banks hold; and (iii) the market may require rapid recapitalization of firms under distress even though they maintain high regulatory capital ratios, then the focus should be to ensure that banks have pre-committed sources of contingent capital. Contingent capital can be called upon in a crisis to restore confidence and prevent a downward spiral leading to failure of the business model—irrespective of whether the firm is solvent from a regulatory perspective.

Alternatively, given the evidence in support of market discipline, serious consideration should be given to requiring banks to issue truly subordinated debt—debt that is subordinate to deposits and other senior claims and that (by law) is not capable of being bailed out. Creating a class of debtholders whose claims would be at risk in the event of bank failure would provide powerful incentives to monitor bank risk taking. Along with the monitoring incentives would come a market price signal on the subordinated debt that arguably would be less subject to manipulation than CDS prices. Increased transparency—through improved disclosure rules—would further

Citigroup with a guarantee of Wachovia's bad assets in order to complete the acquisition of Wachovia until Wells Fargo stepped in. Wells and Bank of America were also among the first banks to receive TARP capital injections, shortly after the Merrill Lynch and Wachovia mergers were announced.

enhance the ability of subordinated debtholders to monitor firms and the value of the price signal.[162]

(4) Gaps in the Existing Basel Framework

As noted above, the existing Basel framework singles out credit, market, and operational risks for Pillar I capital charges but ignores asset/liability risks, business risks, and reputation effects, each of which played a prominent role in the crisis.[163] Maturity transformation, asset/liability mismatches, and resultant basis risk were critical features of off-balance sheet conduits and SIVs that were ignored under the regulatory framework (and also in the internal risk models of many bank sponsors). Similarly, reputational concerns that led, for example, Citigroup (and others) to consolidate their SIVs on balance sheet, Goldman Sachs to inject capital to prop up an ailing hedge fund, and Bank of America to backstop money market mutual funds at risk of "breaking the buck," all imposed significant costs that are disregarded under Pillar I. And business risk—in particular, lack of diversification of the business model—created unique vulnerabilities for firms that were dependent on mortgage securitization (e.g., Bear Stearns, Washington Mutual, and Countrywide), yet this risk too was ignored under Pillar I.

The question is how these "holes" in the framework should be filled. We should be wary of adding to the complexity of Pillar I by imposing explicit modeling requirements for diffuse business and reputation risks. Nevertheless, these risks should be addressed elsewhere in the regulatory framework—reinforcing the case for strengthened Pillar II oversight (where such risks could be reflected in scenario analysis and stress testing) and Pillar III disclosure.

(5) Leverage Ratio Backstop

The capital requirement that arguably performed best in the run-up to the current crisis was the simplest metric—the leverage ratio, which constrains total assets (for well capitalized banks) to 20 times Tier I capital. The leverage ratio was a

[162] Oliver Hart & Luigi Zingales propose another market-based mechanism. They would require that large financial institutions (those deemed to be too big to fail) hold sufficient capital to maintain their CDS pricing below some target threshold. If CDS pricing rises above the threshold, regulators would force firms to raise equity until the CDS price dropped below the critical level. If firms were unable to restore CDS pricing below the threshold, regulators would intervene. *See* Oliver Hart & Luigi Zingales, *A New Capital Regulation for Large Financial Institutions* (Apr. 2009), *available at* http://faculty.chicagobooth.edu/brian.barry/igm/anewcapitalregulation3.pdf.

[163] Andrew Kuritzkes & Til Schuermann, *What We Know, Don't Know And Could Know About Bank Risk: A View From The Trenches*, Wharton Financial Institutions Center Working Paper No. 06-05 (Mar. 2006) (estimating that credit market and operational risks account for only 64% of total bank "risk" or earnings volatility. The "excluded" risks under Pillar I—ALM and non-financial risks that are not considered as part of "operational" risk—account for the remaining 36%).

controversial measure before the crisis: It was advocated by the FDIC yet disparaged by other regulators (and many banks) because of its lack of risk sensitivity. Yet a key lesson of the crisis is that overall leverage matters: leverage determines the absolute funding requirements for a firm—and for firms in financial distress, such as Bear Stearns and Lehman Brothers, absolute leverage may matter more than risk-based capital ratios. At the same time, constraints on total leverage limit the potential for regulatory arbitrage and help fill holes in the capital framework.

In the United States, the leverage ratio is an important safeguard and should be retained as a backstop to Basel II and strengthened. Consideration, however, should also be given to whether the leverage ratio should be recalibrated in terms of common equity rather than Tier I capital, as presently formulated (*see* discussion of Capital Composition, below). Meanwhile, outside the United States, it is significant that both the U.K. FSA and the Financial Stability Forum now call for the introduction of a supplementary leverage ratio constraint outside of the Basel framework.[164] These efforts should be endorsed and harmonized with the U.S. leverage ratio requirement.

(6) Capital vs. Liquidity

The credit crunch that began with losses on U.S. subprime mortgages has devolved into a full-blown funding and liquidity crisis. This raises questions about the interplay between capital and liquidity.

As noted above, a major accelerant of the crisis was the role of maturity transformation—the funding of long-term mortgages and other securitized assets with short-term liabilities. This was a critical feature not only of SIVs and conduits, but also of investment banks dependent on repo and wholesale funding, and of commercial banks prone to seizing up of the interbank market and the flight of uninsured deposits. The dependence on short-term funding created inherently fragile business models that were the ones that failed during the crisis.

There is a lesson here that dates back to the renaissance and is as old as banking itself: a feature of every banking panic is that problems that begin on the asset side of the balance sheet end on the liability side.

The existing regulatory capital framework missed the overriding importance of funding and liquidity to the current crisis.[165]

[164] Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 2 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf.
[165] *See, e.g.*, Susanne Craig et al., *AIG, Lehman Shock Hits World Markets*, Wall St. J., Sept. 16, 2008, *available at* http://online.wsj.com/article/SB122152314746339697.html.

Nevertheless, funding and liquidity are not the same as capital and solvency, and capital is not a substitute for liquidity. A firm that is adequately capitalized can still fail if it enters a liquidity death spiral: the end game for Bear Stearns and Lehman Brothers came from an implosion of confidence that led to a sudden withdrawal of customer business, a flight of repo and other counterparties, and an inability to access the wholesale funding markets. Both Bear Stearns and Lehman Brothers had regulatory capital ratios in excess of 12% at the time they failed. It is unlikely that higher capital requirements would have prevented the loss in confidence that triggered the liquidity crisis. And capital is powerless to stop a run-on-the-bank once it has begun.

Traditionally, we have relied on the Fed, in its role as lender of last resort, to prevent an otherwise solvent bank from failing because of a lack of liquidity. But access to Fed borrowing does not guarantee that a firm can weather a liquidity storm. Firms must be able to post eligible collateral with haircuts to receive funding from the Fed or the Fed must expose itself to more risk.

For these reasons, maturity transformation, liquidity mismatches, and funding practices require separate oversight through rules and guidelines that complement—but are distinct from—regulatory capital. The FSA has issued new liquidity guidelines that recognize this, and the Institute of International Finance Committee on Market Best Practices (IIF) has similarly called for new liquidity policies to complement the role of capital. Without commenting on the specific guidelines proposed by the U.K. FSA and IIF, a separate approach to liquidity management is the appropriate regulatory response.

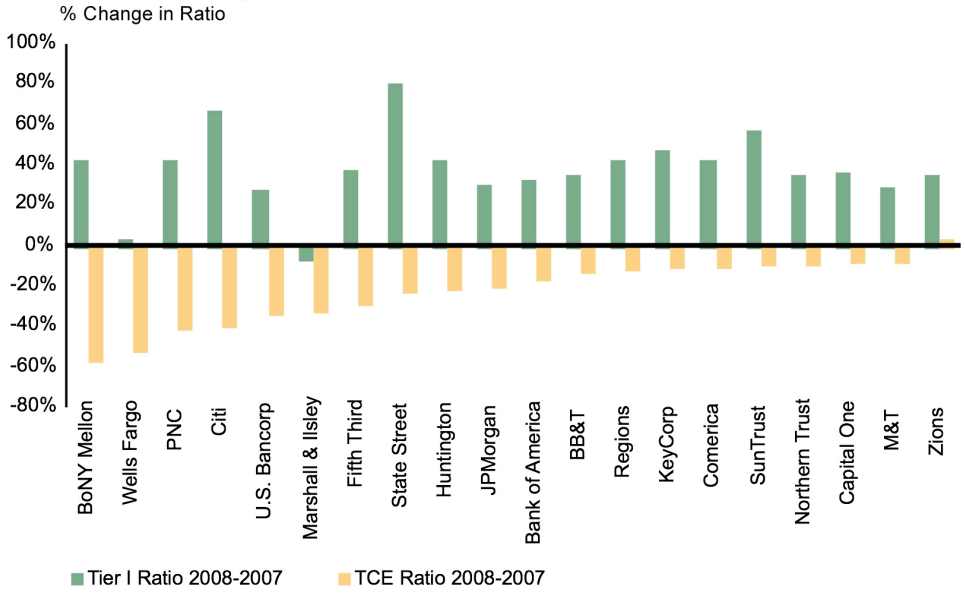
f. Capital Composition

While most of the debate about the Basel framework has focused on the risk assessment of individual banks—which is reflected in the denominator of the Basel capital ratio—the crisis has also raised new concerns about what "counts" as capital in the numerator of the ratio. In particular, the regulatory definition of Tier I capital is inconsistent with Tangible Common Equity (TCE), the key accounting measure of shareholders exposure to losses. As a result, regulatory and accounting metrics are sending very mixed signals about bank solvency.

Table 13: Tier I, Tier II, and Tangible Common Equity Components		
Regulatory Capital		Tangible Common Equity
Tier 1 Capital	Common equity (including retained earnings)	Common equity (including retained earnings)
	PLUS: Qualifying perpetual preferred stock and trust preferred securities (initial TARP investments fall into this category)	-
	PLUS: Qualifying minority interests in consolidated subsidiaries	-
	LESS: Net unrealized gains (losses) on AFS securities	-
	LESS: Goodwill	LESS: Goodwill
	LESS: Other (disallowable) intangible assets	LESS: Other intangible assets
	LESS: Deferred tax assets in excess of regulatory limits	-
	LESS: Unamortized debt issuance costs	-
Tier 2 Capital	Qualifying subordinated debt and intermediate term preferred stock	-
	PLUS: Perpetual preferred stock allowable in Tier 2 only or exceeding Tier 1 limits	-
	PLUS: Allowance for loan and lease losses (ALLL) includable in Tier 2	-
Source: Instructions for preparation of consolidated financial statements for bank holding companies, U.S. Federal Reserve. Elements of Tier I and Tier II capital have been simplified for the purposes of this discussion. Tangible common equity definition based on market practices; see, e.g., SNL definitions.		

The table above summarizes the major components of Tier I and Tier II capital and TCE. To simplify, Tier I capital consists of common equity less goodwill plus perpetual non-cumulative preferred stock—but adds back the negative (positive) mark-to-market on Available for Sale (AFS) portfolios that is otherwise deducted from shareholders' equity through the Other Comprehensive Income adjustment. The treatment of the AFS mark means that Tier I equity is not sensitive to unrealized losses on AFS securities. TCE, however, does reflect unrealized AFS losses. At the same time, the initial round of TARP capital injections are treated as eligible preferred stock for purposes of calculating Tier I capital ratios, but are excluded from TCE. In other respects, Tier I capital may be stricter than TCE, e.g., in placing a limit on the amount of deferred tax assets that can be included.

Figure 26: Change in Tier I and TCE Ratios of Select Top 20 Banks, 2007- 2008



Source: SNL data for public banks in U.S.

The net effect of the exclusion of the AFS mark and the inclusion of TARP preferred shares in Tier I equity has been to drive the TCE and Tier I ratios in different directions. The figure above shows the change in Tier I equity and TCE for top 20 banks from year-end 2007 to 2008. Significantly, for 19 out of 20 banks, the Tier I ratio improved while the TCE ratio deteriorated. Not surprisingly, the difference in the ratios is most pronounced for banks that received large TARP capital injections. At Citibank, for example, the Tier I ratio actually increased during 2008 to 11.9%, while the year-end TCE ratio dropped to 1.8 %. Fear of dilution of Citi's common shareholders by the need to raise more equity capital to replenish TCE was reported to be a major factor driving Citi's stock price down to historic lows.[166] The Tier I capital ratio, by contrast, gave no indication that dilution might be imminent.

The problem is not cured in the regulatory leverage ratio test. Although the leverage ratio adopts the same denominator as the TCE ratio (tangible assets), the numerator is Tier I capital. So while the 5% Tier I leverage test restricts the ability of banks to gear their balance sheet to no more than 20 times Tier I capital, it does not limit the ability to gear up relative to TCE.

[166] Jeremy Bogaisky et al., *Dilution Fears Rattle Citi*, Forbes, Feb. 27, 2009, *available at* http://www.forbes.com/2009/02/27/citigroup-treasury-bailout-markets-equity-capital_downgrade_bac_wells_31.html.

Tier II capital, meanwhile, recognizes loan loss provisions up to 1.25% of risk-weighted assets, and certain hybrid debt instruments. While the well-capitalized standard for banks is 10% of combined Tier I and Tier II capital relative to risk-weighted assets, Tier I is typically the binding constraint. There is also a standalone requirement that well capitalized banks maintain a minimum of 6% Tier I capital relative to risk-weighted assets.

Despite the existing capital requirements, the Fed, in the current stress tests of large bank holding companies, has made a point to emphasize not just Tier I capital, but the "quality of capital" with an expectation that a "preponderance" of Tier I capital be held as common equity. To address the quality of capital, the Fed introduced a new capital concept, called Tier I Common, in the stress tests. Tier I Common is synonymous with voting common stockholders equity, and excludes from traditional Tier I capital preferred shares (including TARP preferred shares), trust preferreds and other hybrid instruments.[167] Under the stress tests, the Fed has required that bank holding companies maintain capital ratios of at least 6% Tier I/RWA and 4% Tier I Common/RWA in the Fed's more adverse economic scenario. For most banks, the Tier I Common ratio is expected to be the binding constraint—which is why the Treasury will allow banks to convert the original TARP preferred shares into common equity to address capital shortfalls identified by the stress test. It is important to note that the Fed's new Tier I Common is not the same as TCE. As with Tier I capital, Tier I Common adds back the AFS mark that is deducted from Tangible Common Equity through the Other Comprehensive Income adjustment, and thus preserves this difference between regulatory and accounting measures.

We need a new and consistent definition of capital going forward. As we state in Chapter 4, this standard need not be consistent with U.S. GAAP.

Specific Recommendations

10. Adopt Standards for Institutional Coverage. The Committee believes that institutions that have the ability to borrow from the Fed in its lender of last resort role should be subject to some form of capital regulation. Such rules should differ for different activities, e.g., insurance versus banking. Capital rules should be the quid pro quo for protection by the Fed safety net.

[167] *See* Joint Statement by Timothy F. Geithner, Secretary of the Treasury, Ben S. Bernanke, Chairman of the Fed. Res. Bd., Sheila Bair, Chairman of the Federal Deposit Insurance Corporation, and John C. Dugan, Comptroller of the Currency, *The Treasury Capital Assistance Program and the Supervisory Capital Assessment Program* (May 6, 2009), *available at* http://www.federalreserve.gov/newsevents/press/bcreg/20090506a.htm.

11. Leave "Steady State" Risk-Based Capital Calibration Unchanged Pending Further Study. The Committee cautions against drawing the hasty conclusion that overall levels of bank capital should be raised (aside from the stress test capital requirements). There is a dearth of empirical work on capital regulation, and the costs and benefits of raising capital are uncertain. On the "do no harm" theory, we believe the most prudent approach for the present is to leave the "steady state" capital calibration unchanged absent compelling evidence that an increase in overall capital levels is warranted.

12. Adopt Counter-Cyclical Capital Ratios. The Committee believes counter-cyclical capital ratios can be achieved in two ways. First, we would encourage dynamic provisioning. This could be done without conflicting with existing securities regulation or accounting standards by providing that additional reserves over "known" losses did not run through the income statement but rather constituted a special appropriation of retained earnings. Secondly, one could require some form of contingent capital. Two promising proposals for contingent capital should be explored—one for catastrophic insurance based on a systemic trigger,[168] and another for reverse convertible debentures based on a bank-specific market value trigger.[169]

13. Hold Large Institutions to Higher Solvency Standards. Given the concentration of risks to the government and taxpayer, we recommend that large institutions be held to a higher solvency standard than other institutions, which means they should hold more capital per unit of risk. As a starting point, we propose a progressive safety margin that would subject U.S. "core" banks (e.g., those with assets greater than $250 billion) to an additional capital buffer above current well-capitalized standards.

14. Focus Basel II Changes on Strengthening Pillars II and III. The Committee believes that enhancements to the Basel II framework should come primarily from bolstering Pillar II supervision and Pillar III disclosure and market mechanisms, rather than relying on Pillar I to "get it right." We also think that serious consideration should be given to requiring banks to issue truly subordinated debt (not capable of being bailed out) combined with more robust disclosure of bank risk.

15. Maintain and Strengthen the Leverage Ratio. We recognize that in the run-up to the crisis, the capital requirement that arguably performed the best was also the simplest metric—the leverage ratio. The Committee thus believes that a simple leverage ratio constraint should be retained in the United States, and, as proposed by the U.K.'s FSA and the Financial Stability Forum (now the Financial Stability Board),

[168] Anil K. Kashyap et al., *Rethinking Capital Regulation*, *prepared for* Fed. Res. Bank Kansas City symposium on "Maintaining Stability in a Changing Financial System," Jackson Hole, Wyo. (Aug. 21-23, 2008).
[169] Mark J. Flannery, "No Pain, No Gain? Effecting Market Discipline via Reverse Convertible Debentures," in Capital Adequacy Beyond Basel: Banking Securities and Insurance (Hal S. Scott ed., Oxford Univ. Press 2005).

adopted internationally. Consideration should also be given as to whether the leverage ratio should be recalibrated in terms of common equity rather than total Tier I capital, as presently formulated.

C. Regulation of Non-Bank Financial Institutions

1. Hedge Funds

a. Overview

Although hedge funds have been around for some 60 years,[170] it was not until the 1990s that these private pools of capital became major players in the global financial markets. During that period, the hedge fund industry—which almost exclusively serves non-retail investors—grew more than a dozen-fold, from $38.9 billion in 1990 to $536.9 billion in 2001.[171] The present decade has been very much the same story. By the summer of 2008, the industry had reached an apex of some 10,000 hedge funds with approximately $2 trillion under management.[172] Despite having several common characteristics—such as the use of leverage, short-selling, and arbitraging, hedge funds vary significantly in their portfolio and trading strategies (though a number of studies suggest that the correlation risk among hedge funds is greater than previously imagined).[173] Collectively, hedge funds have a presence in nearly every market around the world. In the midst of the current financial crisis, government policymakers are reconsidering the subject of hedge fund regulation—particularly in respect of the potential systemic risk posed by the industry.

The Committee supports the effort by policymakers to reduce the risks posed by all market participants, including hedge funds. At the same time, however, we caution that the overregulation of hedge funds could in fact undermine the very stability policymakers seek to restore. The key to effective hedge fund regulation is a non-superficial understanding of the role hedge funds play in the global financial markets—an understanding not only of the risks they pose, but also of the risks they mitigate.

[170] Alexander Ineichen, *Alternative Inv. Mgmt. Ass'n, Roadmap to Hedge Funds* 132 (2008), *available at* http://www.aima.org/download.cfm/docid/6133E854-63FF-46FC-95347B445AE4ECFC.
[171] Alexander Ineichen, *Absolute Returns: The Risk and Opportunities of Hedge Fund Investing* 38 (Wiley 2003).
[172] Eric Jackson, *The Good, Bad, and Ugly in Hedge Funds: A Manager's View*, BusinessWeek, Mar. 5, 2009, *available at* http://www.businessweek.com/bwdaily/dnflash/content/mar2009/db2009034_057440.htm.
[173] *See* John Kambhu et al., *Hedge Funds, Financial Intermediation, and Systemic Risk*, Staff Report No. 291, at 21 (July 2007) (noting that "the [European Central Bank] documents that hedge funds have become more correlated with each other") (citing European Central Bank, *Financial Stability Review* 134) (June 2006), *available at* http://www.ecb.int/pub/pdf/other/financialstabilityreview200606en.pdf; *see also* Tomas Garbaravicius & Frank Dierick, *Hedge Funds and their Implications for Financial Stability*, European Central Bank, Occasional Paper Series, No. 34, 2005 (finding increasing correlation among hedge fund returns).

b. Systemic Risk

Central to the debate over hedge fund regulation is the question whether hedge funds—by virtue of their perceived lack of transparency and investment strategies—unduly put the financial system at risk.[174] The threat of systemic risk in this context is essentially twofold. First, the insolvency of firms that are counterparties to a vast number of transactions may trigger a domino-like chain of defaults. Second, when highly-leveraged entities are devastated by illiquidity or market distress, their forced selling can drive markets down and destabilize other entities that hold similar positions.

The severity of the systemic risk posed by hedge funds relative to others in the marketplace is difficult, if not impossible, to generalize. The inquiry must be made with respect to each particular hedge fund—just as the systemic evaluation of banks and securities firms is done on an individual basis. A small, moderately leveraged hedge fund that goes short and long in common equities poses virtually no systemic risk; a large, highly leveraged fund with extensive exposure to over-the-counter derivatives may be a different story. Nevertheless, some contend that the aforementioned common features of hedge funds make them fundamentally different from other financial institutions in terms of the threat they pose to capital markets stability. We believe the opposite is true: the unique features of hedge funds have enabled them both to take on risks otherwise borne by traditional financial institutions, and to bring greater efficiency to the capital markets. On that account, hedge funds have in fact contributed to the overall stability of the financial system.

Compared to traditional financial institutions and investment funds, private pools of capital generally enjoy greater investment flexibility and the ability to take on more risk. Such attributes permit hedge funds to serve more readily as a source of liquidity to the financial system. Although banks continue to be crippled by the illiquid assets remaining on their balance sheets, many hedge funds in fact purchased from banks subprime mortgages, CDOs and other similar, now-distressed assets. And it will likely be private pools of capital, along with the government, that eventually purchase the rest of those assets and contribute to an economic recovery. Furthermore, because hedge funds frequently bet against the market by shorting financial instruments and executing other contrarian strategies, they play a key role in reducing the emergence of financial bubbles that eventually culminate in market instability. Likewise, their active participation in the credit derivatives market enables them to reduce the risks borne by institutions closer to the center of the financial system. Indeed, it is unclear how severe the global financial crisis would have been had hedge funds and other private pools of capital not played this tempering role. Finally, arbitrage strategies used by hedge funds

[174] Nicholas Chan et al., Fed. Res. Bank Atlanta, *Do Hedge Funds Increase Systemic Risk?*, 91 Econ. Rev. 49 (2006), *available at* http://www.frbatlanta.org/filelegacydocs/erq406_lo.pdf.

and the sheer volume of their trading activity promote greater efficiency in the capital markets. Hedge funds are responsible for generating over 22% of all trading volume on the NYSE and over 55% of credit derivatives trading.[175] The result is greater market depth, which translates directly into increased liquidity and transparency. In light of these considerations, we must reject the conclusion that hedge funds, as an industry, are a destabilizing element of the global financial system.

Yet this is not to say that each and every hedge fund stabilizes the system. We recognize that a given hedge fund may in fact pose a systemic risk to the financial system. That is particularly the case when a fund becomes very large, unsustainably levered, and exposes a number of large financial institutions to increased counterparty risk. The most prominent historical example is Long-Term Capital Management (LTCM). During much of its brief trading life, between 1994 and 1998, LTCM's leverage ratio approached 30 times capital. What is more, LTCM's leverage was increased nearly tenfold by its off-balance sheet dealings, the estimated principal of which loomed at approximately $1 trillion.[176] But the LTCM example appears to be the exception rather than the rule, as the President's Working Group on Financial Markets has acknowledged.[177] A study released as recently as December 2008 found that more than a quarter of all hedge funds surveyed had no leverage at all.[178] Indeed, between 2005 and 2008, nearly 3,000 U.S. hedge funds dissolved, none of which to our knowledge required the government to bail it out—a fact that is more than just a coincidence.[179]

The lack of any taxpayer bailout may be due partly to the fact that the hedge fund industry has had far lower levels of concentration vis-à-vis other financial sectors. Whereas the top 10 U.S. hedge funds account for only 20.8% of the entire U.S. industry, the top 10 U.S. banks, for example, account for nearly 78.5% of the assets of the banking sector. What is more, in terms of value, the collective $8.6 trillion balance sheets of the top 10 U.S. banks dwarf the $250 billion in assets of the top 10 U.S. hedge funds.[180] Thus, it becomes hard to contend that the "too-big-to-fail" concern—one important

[175] Randall Dodd, *Public Interest Demands Hedge Fund Rules*, Global Pol'y Forum, Jan. 12, 2007, *available at* http://www.globalpolicy.org/globaliz/econ/2007/0112hedgefundrules.htm.
[176] Franklin Allen, *Financial Stability Review No. 12 – Valuation and Financial Stability, Should financial institutions mark-to-market?* 2 (2008), *available at* http://www.banque-france.fr/gb/publications/telechar/rsf/2008/etud1_1008.pdf.
[177] Press Release, Presidential Working Group on Fin. Markets, "Hedge funds, Leverage, and the Lessons of Long-Term Capital Management" 23 (1999), *available at* http://www.ustreas.gov/press/releases/reports/hedgfund.pdf.
[178] *See Enhancing Investor Protection and the Regulation of Securities Markets – Part II* Before the S. Comm. on Banking, Housing & Urban Affairs, 111th Cong. (2009) (testimony of Richard H. Baker, President & CEO, Managed Funds Association) (citing PerTrac Financial Solutions studying indicating that 26.9% of hedge fund managers surveyed reported using no leverage).
[179] *See* Hedge Fund Research, *available at* http://www.hedgefundresearch.com (visited Mar. 6, 2009).
[180] *See* Bloomberg, *available at* http://www.bloomberg.com (Bank Data and Hedge Fund Data for Absolute Return) (last visited Mar. 6, 2009).

gauge of systemic risk—is as endemic to the hedge fund industry as it is to the banking sector. The lack of concentration in the hedge fund industry also translates into decreased counterparty exposures posed by any particular fund. While policymakers should not be myopic in their approach to regulation, they also should not misplace their priorities. The Committee believes that restoring the safety and soundness of banks and other traditional financial institutions must take precedence if we are successfully to emerge from the current crisis.

c. Regulatory Proposals

What the above discussion on systemic risk should make clear is that any effective regulatory regime should aim to enable the hedge fund industry to continue to perform its critical role in providing liquidity, absorbing financial risks, and increasing the efficiency of the capital markets. Before examining the various regulatory options, we must consider the threshold question of how the term "hedge fund" should be defined.

The Committee believes that the regulatory definition of "hedge fund" should be consistent with existing statutory provisions, such as relevant exemptions in the Investment Company Act of 1940. Furthermore, the definition should be broad and flexible in recognition of the wide range of strategies and organizational structures that hedge funds can take on. We believe the term "hedge fund" can be generally defined as a pool of capital that has significant operations in the United States, the shares of which are offered only to qualified purchasers[181] or are otherwise beneficially owned by less than 100 persons.[182] Furthermore, the definition should distinguish hedge funds from private equity and other funds that do not primarily engage in trading financial instruments and thus do not present similar forms of systemic risk. Along the same lines, only those pools of capital from which investors may freely withdraw assets after an initial lock-up period should be included. Moreover, to the extent size is the dispositive factor in an entity's potential for producing systemic risk, regulators may additionally consider including in the definition a minimum threshold for assets under management, as has been recently suggested by the Treasury.[183] Finally, to ensure equal treatment among all hedge funds, the regulatory definition should include independently operated funds as well as those that are part of or affiliated with investment banks and other financial institutions.

[181] As defined by the Investment Company Act of 1940.
[182] *See* Securities Act of 1933, 15 U.S.C. §§ 77 et seq. (1933); §§ 3(c)(1) and 3(c))(7) of the Investment Company Act of 1940.
[183] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.

The following are some of the more prominent examples of recent proposals to regulate hedge funds. Some of them adequately address the issue of systemic risk, while others fall short of the mark.

(1) Registration and Public Disclosure

Because many hedge funds fall within certain exemptions of the Investment Company Act of 1940 and the Investment Advisers Act of 1940, those hedge funds—unlike mutual funds, for example—are required neither to register with the SEC nor to disclose publicly all their investment positions.[184] Nevertheless, there have been numerous attempts to submit hedge funds to some form of SEC oversight. The SEC took the first step in this direction in 2004 with the issuance of a rule change requiring hedge fund managers to register with the SEC by February 1, 2006, as investment advisers pursuant to the Investment Advisers Act.[185] But a federal appeals court later vacated and remanded the rulemaking upon determining the SEC failed to explain adequately how the relationship between hedge fund investors and advisers was of the kind that fell outside existing statutory exemptions.[186]

At least one proposal presently before Congress—The Hedge Fund Transparency Act of 2009—would eliminate those statutory exemptions and impose registration and periodic disclosure requirements on hedge funds essentially pari passu with the regulation of traditional investment companies.[187] Introduced in the Senate, the bill would require hedge funds to register with the SEC, file an annual public disclosure form with basic information, and cooperate with any SEC information request or examination. Public disclosures pursuant to the Act would include a listing of beneficial owners, a detailed explanation of the fund's structure, an identification of affiliated financial institutions, as well as the number of investors and the fund's value and assets under management.

Even more recently, the Treasury has recommended requiring the registration of all hedge funds with assets exceeding a certain, yet-to-be-defined threshold. All such funds advised by an SEC-registered investment adviser would then be subject to investor and counterparty disclosure requirements and regulatory reporting requirements.[188] In the United Kingdom, a similar registration requirement is already in place for hedge fund managers, who must be FSA authorized and whose businesses

[184] Hedge Fund Rule, 69 Fed. Reg. 72,073 (Dec. 10, 2004).
[185] Registration Under the Advisers Act of Certain Hedge Fund Advisers, SEC Release No. IA-2333 B (Feb. 10, 2005), *available at* http://sec.gov/rules/final/ia-2333.htm.
[186] *See* Goldstein v. SEC, 371 U.S. App. D.C. 358, 368 (2006).
[187] The Hedge Fund Transparency Act of 2009, Draft, 111th Cong. (1st Sess. 2009), *available at* http://grassley.senate.gov/private/upload/01292009-2.pdf.
[188] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.

are subject to FSA regulation and supervision. Proposals are being advanced that would subject hedge funds themselves (which are not usually U.K.-domiciled) to registration and disclosure requirements.[189]

The Committee has serious doubts about the overall effectiveness of this kind of regulation. At the outset, we question how the dissemination of dated—indeed stale—information will serve to reduce systemic risk. The enormity of daily trading activity alone makes periodic disclosure a futile method for gauging the risks posed by individual hedge funds at any given moment. Furthermore, as noted above, hedge funds bring greater efficiency and discipline to the capital markets by engaging in arbitrage and various other alternative investment strategies. Mandatory public disclosure would, at bottom, force hedge funds to be something other than hedge funds. That, of course, would divest the financial system of their benefits. The screen of privacy shielding investors and fund managers' strategies is what draws billions of dollars in private capital yearly from sophisticated investors. If such proprietary and otherwise confidential information (such as beneficial owners) is publicly disclosed, a fundamental distinction between private pools of capital and other registered investment funds will be undermined. The pools will be less deep as a result. Indeed, proprietary investment strategies are the very foundation of the hedge fund business model. These strategies, more than anything else, enable individual hedge funds to differentiate themselves from other investment firms—and from each other.

Aside from diminishing the overall value of hedge funds, a public disclosure regime would completely fail to address systemic risk. At best, such historical information would be useless; at worst it would be misleading. Financial institutions transacting with hedge funds and regulators might benefit from the receipt of such information on a real-time or otherwise regular basis, but even so there is little or no evidence the general pubic would. After all, the real purpose behind a disclosure regime is not really systemic risk reduction. Rather, it is consumer protection and fraud prevention. Yet the securities laws already prohibit hedge funds from engaging in insider trading and perpetrating frauds. Strengthening SEC resources for greater investigatory and enforcement work is a better-tailored solution to the problem of isolated, albeit large-scale, crimes like the recent Madoff Ponzi scheme.

(2) Confidential Reporting to Regulators

As an alternative to public disclosure and its potentially deleterious effect on the formation of private pools of capital, hedge funds could be required to register and report the same—or possibly more—information to one or more governmental authorities responsible for managing the stability of the financial system. In this way,

[189] Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 2 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf.

proprietary information would remain confidential, but the reporting requirement would permit regulators to monitor the activities of individual hedge funds to ensure their activities did not unduly place the financial system at risk. The regulatory agency's authority over hedge funds would extend only to information gathering, though we envision that the agency would have limited authority to take prompt action in extreme situations where a given hedge fund poses a clear and direct threat to market stability. Overall, the reporting process would enable the regulator better to gauge the capital, liquidity, and other requirements of those financial institutions within its direct supervisory authority. Thus, risks posed by a particular hedge fund could be primarily counteracted by strengthening the financial position of a regulated counterparty.

In order to be effective, such a reporting requirement would enable the regulator to evaluate systemic risk by examining a hedge fund's real-time liquidity needs, leverage, return correlations, risk concentrations, connectedness, and other relevant sensitivities.[190] We believe that a regulatory agency could benefit from the following information, updated on a regular basis:

* Total assets under management
* Relative measures of leverage
* Portfolio returns
* Portfolio holdings
* List of credit counterparties
* Outline of trading strategy
* Description of redemption policy

We think a confidential disclosure approach of this kind would safeguard the proprietary nature of hedge fund strategies while concurrently meeting the regulatory need for increased transparency for purposes of gauging systemic risk. To ensure this

[190] *See generally* Hedge Funds, Systemic Risk, and the Financial Crisis of 2007–2008: Hearing on Hedge Funds Before the H. Comm. on Oversight & Gov't Reform, 110th Cong. (Nov. 13, 2008) (written testimony of Andrew W. Lo); Andrew W. Lo, *Risk Management for Hedge Funds: Introduction and Overview*, 57 Fin. Analysts J. 16 (2001); Nicholas Chan et al., *Do Hedge Funds Increase Systemic Risk?*, Fed. Res. Bank Atlanta Economic Review Q4, at 49–80 (2006); Tobias Adrian, *Measuring Risk in the Hedge Fund Sector*, Current Issues in Econ. & Fin. (Mar./Apr. 2007); Kambhu, J. et al., *Hedge Funds, Financial Intermediation, and Systemic Risk*, FRBNY Economic Policy Review (Dec. 2007); R. Cole et al., *Hedge Funds, Credit Risk Transfer, and Financial Stability*, Banque de France, Financial Stability Review-Special Issue on Hedge Funds (Apr. 2007); K. Soramäki et al., *The Topology of Interbank Payment Flows*, Physica A 379, 317–333 (2007).

requirement does not impose unnecessary costs on hedge funds, we believe the relevant regulator must detail its plans for using the information it seeks as well as demonstrate that it has the technical expertise and operational capacity to carry out those plans. It is equally important that the regulator ensure that the categories of reportable information are defined with sufficient precision and that common standards are applied across hedge funds to ensure the confidential disclosures are meaningful.

To be sure, we acknowledge that a confidential reporting requirement may be duplicative to some degree. A bank or other financial institution that lends, or serves as counterparty, to a hedge fund normally undertakes an analysis of the fund's wherewithal to satisfy its own obligations. Financial institutions are thus granted access to much of the information relevant to a systemic risk evaluation. And because the financial institutions themselves are subject to prudential supervision, a reasonable argument can be made that hedge funds are already supervised (at least indirectly) by banking and other regulators. Therefore, a direct reporting regime is arguably duplicative. This point is buttressed by the fact that the Federal Reserve Banks—particularly the New York Fed—have made it their practice frequently to engage individual hedge funds in dialogue.[191]

Nevertheless, the fact that a reporting procedure may be somewhat duplicative does not necessarily outweigh the potential benefits to the financial system of having such a requirement. We believe that a confidential reporting requirement would be an important step toward: (i) formalizing present arrangements of information transfers between hedge funds and regulators; (ii) ensuring supervisory authorities have direct access to information on individual funds; (iii) allowing regulators to curb hedge fund practices unduly placing the financial system at risk; and (iv) enabling better supervision and systemic risk management of the financial institutions that transact with hedge funds on a daily basis.

Consistent with our approach, the Treasury recently recommended that newly regulated hedge funds be required to report to the SEC—on a confidential basis—information necessary to assess whether a particular fund or fund family is so large or highly-levered that it poses a threat to financial stability.[192] This information would be shared with a systemic risk regulator, which would then determine whether a given hedge fund should be subject to certain prudential standards.[193] At this time, the Treasury has not offered any specifics as to what information would be required to be disclosed confidentially.

[191] *See, e.g.*, Joanne Morrison, *N.Y. Fed's Private OTC actions under Fire*, Reuters, June 15, 2008.
[192] Press Release, U.S. Dep't of the Treasury, "Treasury Outlines Framework for Regulatory Reform" (Mar. 26, 2009), *available at* http://www.ustreas.gov/press/releases/tg72.htm.
[193] *Id.*

The Treasury's recent recommendation raises the further question of which particular U.S. governmental entity or entities would be in the best position to receive and evaluate hedge fund information. As noted above, the Treasury envisions the SEC as the initial recipient of such information. Until the establishment of the USFSA, further described in Chapter 6, we recommend that the Fed be given this authority.

As is a common theme throughout this Report, the Committee also proposes increased cooperation among national and supranational regulators in facilitating confidential disclosures by hedge funds. In Europe, the de Larosière Group (an advisory group to the European Commission) supports the identification of funds that are of systemic importance, and reporting requirements that provide "a clear ongoing view on the strategies, risk structure and leverage" of these systemically-important funds.[194] In the United Kingdom, the Turner Review (a report commissioned by the Chancellor of the Exchequer) similarly highlights the need to gather much more extensive information on hedge fund activities in order to understand overall macro-prudential risks. Although neither report explicitly calls for the promulgation of confidential reporting rules, the concept is a logical extension of their analyses.[195] What is more, the sharing of information between and among national and supranational regulators will result in a more complete picture of the systemic risks posed by individual hedge funds.[196]

(3) Leverage/Capital Requirements

A third way to regulate the systemic risk of hedge funds would be simply to impose on them leverage and capital requirements similar to those applicable to banks and other depository institutions. The rationales underlying current capital adequacy rules surely have some relevance to hedge funds. As is the case with a bank, a sufficient amount of capital held by a hedge fund can serve as a cushion against existing obligations when asset values sharply decline. By limiting the degree to which a hedge fund may lever its private capital, a regulator might prevent the kind of meltdown that resulted from LTCM's abuse of leverage. Although no serious proposal of this kind has been advanced in the United States, the European officials have been considering the question whether the capital adequacy regime of Basel should be extended to hedge funds,[197] though it appears the European Commission has largely rejected this approach

[194] The de Larosière Group, *The High-level Group on Financial Supervision in the EU* (Feb. 25, 2009), *available at* http://ec.europa.eu/commission_barroso/president/pdf/statement_20090225_en.pdf.
[195] Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 2 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf.
[196] But this is not to say regulators would ever be able to obtain an entirely complete picture. Systemic risk is very difficult to gauge, especially when it crosses national boundaries with ease. *See, e.g.*, Sebastian Mallaby, *A Risky 'Systemic' Watchdog*, Wash. Post, Mar. 2, 2009 (noting that "Even if foreign regulators joined in the effort, no international dragnet could be expected to capture trades placed by an obscure Thai trading company, a Russian oil outfit or an Arab sovereign wealth fund.").
[197] Eur. Comm'n, *Consultation on Hedge Funds* (Dec. 18, 2008).

for the time being.[198] For its part, the U.K.'s Turner Review has recommended empowering regulators to apply appropriate prudential regulation (e.g., capital and liquidity rules) to hedge funds, if the fund's activities become bank-like in nature or systemically important.[199] In any event, these developments demonstrate once again the need for international regulatory harmonization, the subject of Chapter 7.

Yet even with international regulatory cooperation, the Committee cautions against the adoption of Basel-like capital and leverage requirements for hedge funds. We believe that such requirements not only will fail to reduce the systemic risk posed by hedge funds, but also that such rules may altogether increase systemic risk. As demonstrated in Section B of this chapter, the current Basel framework governing banks and other financial institutions is wanting greatly of reform. Applying similarly flawed rules to hedge funds will only increase the amount of global regulatory arbitrage already arising from capital adequacy requirements.

Moreover, even with some of its more patent flaws removed, the Basel regime—with its one-size-fits-all approach to ratios—is generally ill-suited for an industry with capital structures far more diverse than the banking sector. Whereas the banking sector can arguably (though not necessarily) be divided into neatly-defined categories of "well-capitalized," "adequately-capitalized," "undercapitalized," and "significantly undercapitalized," based on respective ratios of 10.0, 8.0, 6.0, and 4.0,[200] it seems highly implausible that hedge funds could be so classified. Hedge funds use a myriad of risk-return strategies—a capital ratio of 8.0 might provide an adequate capital buffer for one hedge fund, but for another fund employing differing strategies that ratio might be severely insufficient. Apart from the sheer number of hedge funds, the intricateness and complexity of individual fund strategies make it nearly impossible for regulators to assess the risk of each fund's assets for purposes of the capital and leverage ratios. Consequently, we believe there are more effective ways to police the risk to the financial system posed by individual hedge funds—such as a confidential reporting requirement as discussed above or perhaps certain structural reforms as outlined below.

[198] Commission Proposal for a European Parliament and Council Directive on Alternative Investment Fund Managers and Amending Directives 2004/39/EC and 2009/…/EC, COM(2009) 207 final, Sec.2, Art. 14 (Apr. 30, 2009) (requiring fund managers only to set aside capital or funds for investor protection reasons); *see also* Press Release, European Commission—Directorate General Communication, "Directive on Alternative Investment Fund Managers (AIFMs): Frequently Asked Questions" (Apr. 29, 2009), *available at* http://europa.eu/rapid/pressReleasesAction.do?reference=MEMO/09/211&format=HTML&aged=0&language=EN&guiLanguage=en ("The draft proposal does not provide for any capital requirements for the fund . . . . The rationale for capital retentions for banks does not extend [to hedge funds]").
[199] Fin. Serv. Auth., *The Turner Review: A Regulatory Response to the Global Banking Crisis* 2 (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf.
[200] 12 C.F.R. § 325.103(a).

(4) Structural Reforms

Various structural reforms represent a final category of potential regulations aimed at reducing the systemic risk posed by individual hedge funds. For example, the Madoff scandal—although not itself a source of systemic risk—demonstrates that, even for an investment fund formally registered with the SEC, operations can break down when structural controls are removed. The lack of a competent, independent auditor, combined with weak internal controls within the fund's management and its broker-dealer arm enabled Madoff and his co-conspirators to perpetrate the largest Ponzi scheme in U.S. history. The presence of external and internal controls can do more than simply prevent widespread fraud—such controls can also prevent the kind of intentional or reckless behavior that gives rise to systemic effects. A regulation requiring hedge funds to adopt industry best practices for internal controls could go a long way in obviating hedge fund mismanagement and malfeasance.

Another structural issue concerns the affiliation of hedge funds with investment banks. As hedge funds began booming in the 1990s, many investment banks sought to ride the wave by starting their own funds. These internal funds trade using leverage, short-sales, and other techniques typically used by independent hedge funds. The Wall Street brand names appended to these funds have no doubt contributed to their success in attracting vast amounts of capital. But this phenomenon begs the question whether the presence of an internal hedge fund within a traditional financial institution magnifies its systemic risk, particularly given that investment banks (now reconstituted as subsidiaries of bank-holding companies) also run proprietary trading desks that manage the firms' own capital. All things being equal, internal hedge funds and proprietary trading desks are likely to have a much higher degree of "connectivity" and be located closer to the heart of the financial system. Furthermore, certain of these internal hedge funds suffered catastrophic or near catastrophic losses in recent months. When catastrophic losses have occurred, counterparties that have incurred losses in the financing of collateral or in derivative positions have looked to the sponsoring financial institutions to reimburse them for such losses. The expectation that financial institutions will provide financial support to their hedge funds in periods of market turmoil creates a form of systemic risk not currently captured by regulatory capital requirements. As a result, some policymakers have asserted that systemic risk as well as market manipulation can be decreased by prohibiting commercial and investment banks from engaging in proprietary trading.[201] The same argument could be made with respect to investment banks having or otherwise sponsoring hedge funds. To the extent such funds are to remain a part of the financial landscape, we note that FIN 46R, as discussed in Chapter 4, would likely ensure such funds and the financial institutions

[201] *See* Group of Thirty, *Financial Reform: A Framework for Global Stability* (2009) ("Sponsorship and management of commingled private pools of capital (that is, hedge and private equity funds in which the banking institutions own capital is commingled with client funds) should ordinarily be prohibited…").

that house or otherwise sponsor them are properly consolidated for accounting and regulatory capital purposes.

At present, none of these potential structural reforms have been thoroughly researched and critically debated. We encourage further research on how various structural improvements could be made to the hedge fund industry to reduce systemic risk as well as increase investor and public confidence in this valuable sector of the financial system.

Specific Recommendations

16. Consider the Critical Role of Hedge Funds. The Committee believes any increased regulation of hedge funds for systemic risk must take into account the important role hedge funds play in providing liquidity, absorbing financial risks, and increasing the efficiency of the capital markets. Although we support hedge fund registration, we reject recent proposals seeking to force hedge funds to disclose publicly information that is otherwise proprietary. We likewise reject the imposition of bank-like capital requirements and other leverage requirements that would be ineffective and unsuitable for the diverse hedge fund industry.

17. Adopt Confidential Reporting. The Committee recommends the adoption of a confidential reporting requirement pursuant to which each hedge fund would be required to register and provide a regulator with information relevant to the assessment of systemic risk. The statutory definition of "hedge fund" for purposes of this requirement should be consistent with existing statutory exemptions, and should include independently-operated funds as well as those that are part of or affiliated with investment banks and other financial institutions. Confidential reporting would involve information addressing, among other things, a fund's liquidity needs, leverage, return correlations, risk concentrations, connectedness, and other relevant sensitivities. However, the regulator would bear the burden of demonstrating its need for the required information as well as its ability to use that information effectively. The regulator also would have limited authority to take prompt action in extreme situations where a hedge fund poses a clear and direct threat to market stability.

18. Provide the Fed with Temporary Regulatory Authority. Until the establishment of the USFSA, as described in Chapter 6, we recommend the Fed be given temporary responsibility for receiving and evaluating confidential information supplied by hedge funds. We think the recent proposal by the Treasury Department to require confidential disclosures by regulated hedge funds is a step in the right direction.

19. Facilitate Information Sharing Among National and Supranational Regulators. We encourage non-U.S. authorities to adopt similar requirements for hedge funds and to facilitate regulatory cooperation since the sharing of information between and among

national and supranational regulators will result in a more complete picture of the systemic risks posed by individual hedge funds.

20. Introduce Structural Reforms to the Industry. The Committee encourages research into structural reforms that would increase the effectiveness of hedge fund operations and reduce an individual fund's susceptibility to becoming an instability risk to the financial system.

2. Private Equity

a. Overview

Private equity (PE) firms are partnerships that acquire ownership stakes in cash-generative commercial businesses like retailers, industrial companies, computer firms, and health care concerns, as well as some financial firms. Typically, these transactions depend on a mix of equity supplied by the partnership and debt provided to the acquired companies by external investors like banks or bondholders. While operating companies could fail to generate the operating earnings necessary to meet their obligations to creditors, the failure of a nonfinancial business like a retailer or restaurant chain is unlikely to trigger a systemic crisis.

Private equity general partners (GPs) raise capital commitments from limited partners (LPs)—institutional investors like pension funds and high net worth individuals—to acquire businesses with untapped potential or appealing growth prospects. Once the acquired business' operations have been improved, the PE partnership sells the business through an initial public offering (IPO) or private sale. The financial returns generated by these transactions depend almost entirely on the financial performance of the acquired business; the more successful the company is, the greater the returns to its PE investors.

Of course, the inverse is equally true: if the companies involved in these transactions fail, so too does the PE investment (including the capital provided by the GP, which is often quite sizeable). PE investors sit at the bottom of a company's capital structure and get paid after all other suppliers of capital—banks, public bondholders, etc. That means that PE investors stand to lose all of their investment if the business they acquire files for bankruptcy. This is even true in cases where a company defaults due to financial distress even though its operating profit and enterprise value increased as a result of PE management.[202]

[202] Gregor Andrade & Steven N. Kaplan, *How Costly Is Financial (Not Economic) Distress? Evidence from Highly Leveraged Transactions That Became Distressed*, 53 J. Fin. 1443 (1998) (The authors explain that "the net effect of [PE acquisitions] and distress is to leave value higher" even in cases where the company acquired in the PE transaction defaulted).

As a consequence, PE GPs strive to ensure that the companies they own can withstand whatever financial and operational difficulties they face. PE-sponsored companies' boards of directors are populated by people with relevant financial and operational expertise and a clear focus on the business' overarching strategic objectives.[203] Instead of quarterly meetings to review quarterly performance targets, PE directors meet more frequently and tend to be much more engaged than their publicly listed counterparts.[204] As a result, PE-sponsored businesses are able to pursue longer-term strategies and tend to be more thoughtful in their response to crises than non-PE companies.

The performance of portfolio companies not only determines the returns on currently-invested capital, it also governs the extent to which PE GPs are able to raise funds in the future.[205] PE partnerships differ from other alternative investment funds by the length of the financial commitment involved. LPs are generally not permitted to redeem their investments prior to the expiration of the fund; in exchange, the "carried interest" the GPs retain at the formation of the partnership is based on profits over the lifetime of the partnership (often ten years) and subject to forfeiture in the event that the partnership incurs losses on later transactions (the so-called "clawback" clause) through exits that do not return sufficient capital to the LPs.[206] And by reducing returns, failures of portfolio companies reduce LPs' willingness to commit future capital to future funds—the lifeblood of the PE industry.

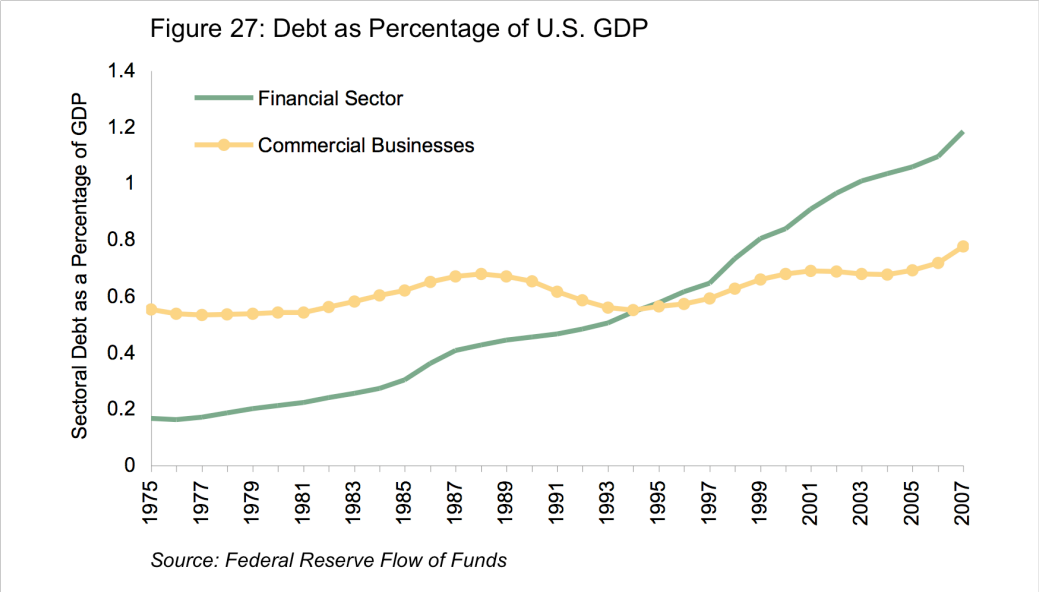
Finally, research has shown that private equity firms able to build reputations as being skilled in selecting and operating portfolio companies are not only able to raise more capital commitments in the future, but are also able to get better terms on future financing.[207] Portfolio companies acquired by reputable PE sponsors are able to borrow on better terms because deals sponsored by these firms are far less likely to experience financial distress (default or bankruptcy). A string of defaults could quickly erode these reputational advantages that took decades to build.

[203] Malcolm Salter, *Enron's Legacy: Governance Lessons from Private Equity Boards*, 82 Harv. Bus. School Alumni Bulletin 4 (Dec. 2006), *available at* http://hbswk.hbs.edu/pdf/item/5586.pdf.
[204] Viral Acharya et al., *The Voice of Experience: Public Versus Private Equity*, McKinsey Quarterly, Dec. 2008, *available at* http://www.permira.com/Upload/CMS/Doc/AB%20Public%20vs%20Private%20Equity.pdf.
[205] Steven N. Kaplan & Per Strömberg, *Leveraged Buyouts and Private Equity,* Nat'l Bureau of Econ. Research, Working Paper No. 14207, 2008 ("capital commitments are positively and significantly related to lagged private equity returns.").
[206] Adam H. Rosenzweig, *Not All Carried Interests are Created Equal*, 30 Nw. J. Int'l L. & Bus. (2009).
[207] Cem Demiroglu & Christopher James, *Lender Control and the Role of Private Equity Group Reputation in Buyout Financing* (May 22-24, 2008) (*presented at* Conference on the Corporate Finance and Governance of Privately Held Firms, BI Norwegian School of Management, Oslo, Norway), *available at* http://www.bi.no/OsloFiles/ccgr/Demiroglu_James.pdf.

For all of these reasons, PE firms have important incentives to ensure the businesses they acquire do not borrow more than they can service. Although the institutional arrangements do not guarantee that all PE deals will create value, they do provide important checks on risk-taking and ensure that PE managers do not profit from investments in overleveraged companies that later experience distress.

b. Portfolio Company Borrowing

The PE GP does not come into possession of the capital committed by the LPs until it identifies an appealing investment opportunity. Only when an attractive business is found does the GP "call" the capital from the LPs and seek additional, third-party debt financing from banks or the public debt markets on behalf of the targeted operating company. As such, "private equity leverage" is a misnomer; the borrowing in PE transactions comes only after a target has been identified and is the legal obligation of the acquired portfolio company.



PE partnerships generally do not assume debt, and the PE parent firms that sponsor these partnerships generally do not borrow much either.[208] According to its most recent quarterly filing with the SEC, the Blackstone Group reported a debt-to-equity ratio of just 0.09,[209] a figure in line with the rest of the industry. If excessive

[208] Steven N. Kaplan & Per Strömberg, *Leveraged Buyouts and Private Equity*, Nat'l Bureau of Econ. Research, Working Paper No. 14207, 2008.
[209] Form 10-Q Quarterly Report, Filed Aug. 8, 2008 ($378 million of debt compared to $4 billion in total partners' capital).

leverage presents a risk for PE, it is not systemic or even industry-wide, but rather specific to each portfolio company's ability to generate the cash flow necessary to service its debts.[210] Moreover, PE capital commitments tend to be of ten-year duration with no redemption opportunities.[211] As a consequence, PE funds are not exposed to forced selling, or a "run," and are under no obligation to sell companies in a bad market to fund redemptions.

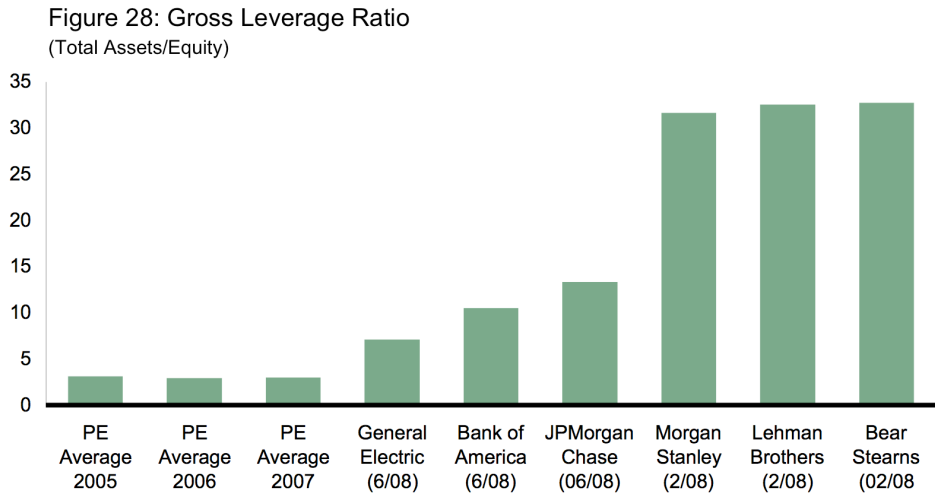
c. Differences Made Apparent by the Current Financial Crisis

For these reasons, PE funds are ontologically different from financial institutions or other pools of private capital. Because PE funds do not borrow, extend credit, serve as derivatives counterparties, or perform other functions normally associated with depository institutions, they could hardly be considered part of the oft-cited "shadow banking system." The shadow institutions—including largely unregulated broker-dealers, insurance companies, and banks' own off-balance sheet vehicles—played a central role in the current crisis because of the sheer magnitude of their borrowing, the short-term nature of their funding, and the volatility of the financial assets that borrowing was used to finance. All of these features of the current crisis are absent when it comes to PE-sponsored operating companies and nonfinancial businesses more generally.

d. Portfolio Company Default Risk

The amount of leverage assumed by portfolio companies is much smaller relative to financial firms, even during the peaks of market cycles. The gross leverage ratio of PE-sponsored acquisitions from 2005-2007 was less than one-tenth that of investment banks.[212] Even General Electric—a conglomerate whose wide array of businesses could be thought to approximate the holdings of private equity—had a gross leverage ratio over two times as large as the 2005-2007 PE average, as shown in Figure 28.[213]

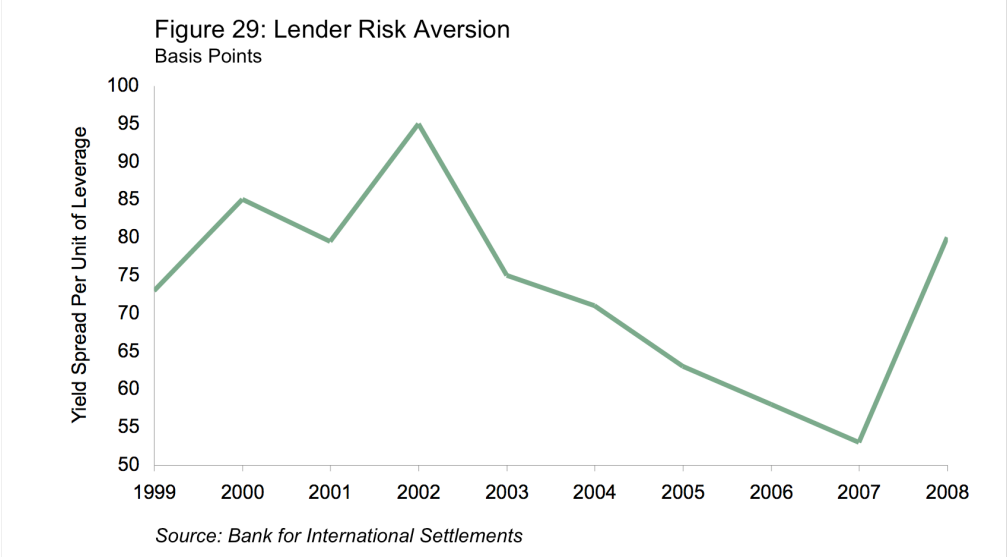
[210] Robert J. Shapiro & Nam D. Pham, *The Role of Private Equity in U.S. Capital Markets*, Sonecon (Oct. 2008).
[211] According to Shapiro and Pham, banks provide only 12.5 cents of every dollar of equity capital committed to PE partnerships.
[212] Per Strömberg et al., *Leverage and Pricing in Buyouts: An Empirical Analysis*, Nat'l Bureau of Econ. Research, 2008).
[213] *See* Vyvyan Tenorio, *Anatomy of a Cycle*, The Deal, M&A Quarterly Review, Jan. 25, 2008, at 48 (citing S&P leveraged commentary & data) (Public company data from 10-Q filings).



Although PE acquisitions involve low amounts of leverage relative to financial institutions, and involve completely different risks, PE sponsors made greater use of debt to finance deals during the 2005-2007 period than they had in previous years.[214] Lenders became less risk averse and more willing to provide more debt to finance transactions at lower interest rates. This, in turn, pushed up the prices of target businesses.

In general, the more leverage in a transaction, the more creditors will charge in interest expense to compensate for the heightened risk of default. However, the amount of compensation creditors charge varies over time. During times of low risk aversion, the compensation required by lenders falls and more debt can be assumed with a marginal increase in interest payments. As the chart below depicts, the amount of compensation lenders demanded per unit of leverage declined markedly from 2002 to 2007.[215] As a result, PE deals relied on more debt financing per unit of cash flow (earnings before interest, taxes, depreciation, and amortization) than in previous years.

[214] Bank for Int'l Settlements, *Private Equity and Leveraged Finance Markets*, Comm. Global Fin. System, Paper No. 30 (2008), *available at* http://www.bis.org/publ/cgfs30.pdf?noframes=1.
[215] Bank for Int'l Settlements' and the Committee's calculations. The figure could be computed by dividing the credit spread by the leverage ratio. For example, 80 could mean that the weighted average spread over Treasury was 240 bp and the average total leverage ratio 3-to-1.



The relatively high debt burdens have caused some analysts to express concern that defaults at PE-sponsored companies will increase dramatically in the coming years. While some defaults are inevitable considering the difficult macroeconomic environment and refinancing difficulties facing all companies, the debt provided in the 2005-2007 period provides important protections for portfolio companies. These borrower-friendly loans give companies flexibility because they lack rigorous covenants referencing certain financial ratios (EBITDA, debt service coverage, or minimum net worth) that may have been required in previous years.[216] In addition, many debt facilities contain options that provide the companies with the right to extend the terms of loans, exchange existing debt, or alter the balance of outstanding loans. This flexibility will provide management with greater latitude to weather the economic storm.

Even with these protections, private equity-sponsored businesses will have to contend with the risk that the struggling economy will cause operating earnings to be inadequate to meet debt service obligations or satisfy leverage ratio covenants. Thankfully, these portfolio companies have several important advantages relative to their public (or non-PE) competitors. First, Moody's Investors Service found that troubled firms "backed by private equity have access to capital sources unavailable to strategic operators facing similar market constraints."[217] In many cases, PE firms have stepped in to avoid defaults by providing equity injections to embattled firms. While this does not occur in all circumstances, and can often be limited by allocation caps

[216] Standard & Poor's, *CDO Spotlight*, June 12, 2007.
[217] Moody's Investors Service, *The Private Equity Advantage* (Dec. 2008), *available at* http://www.privateequitycouncil.org/wordpress/wp-content/uploads/moodys-report-2008-the-pe-advantage.pdf.

contained in partnership agreements, default analysts recognize that this feature of PE ownership can dramatically reduce the risk of default.

Secondly, recent research completed by the World Economic Forum found that during periods of acute financial stress, productivity growth at PE-sponsored companies was 13.5 percentage points higher than productivity growth at comparable non-PE businesses.[218] The study found that the productivity growth differential at PE portfolio companies relative to peers is larger in two-year periods where risk aversion is unusually high, as measured by the spread between AAA-rated and BB-rated corporate bonds. This is significant for predicting portfolio company performance in the current environment, as the credit spreads in December 2008 were the highest on record. The higher productivity growth at PE-sponsored companies during periods of higher credit risk spreads reflects greater reallocation of activity to more productive establishments and a higher rate of closure at less productive ones.

PE-owned companies also have the flexibility to act decisively to avoid a crisis. Research has found that the boards of PE-sponsored firms are more engaged with the business and have greater clarity of, and focus on, key strategic and performance priorities than their public counterparts.[219] When a crisis—like the current economic downturn—strikes, PE sponsors use their positions on the boards of portfolio companies to provide sophisticated, hands-on management and strategic advice to eliminate any operational or capital structure inefficiencies. In addition, PE firms' longstanding relationship with lenders allows them to assist their portfolio companies when they seek to renegotiate the terms of outstanding debt.[220]

Finally, and most importantly, it is important to recognize that the failure of a portfolio company is very unlikely to have knock-on effects to the larger financial system. Portfolio companies are broadly diversified across industries and neither PE funds nor portfolio companies are cross-collateralized. This means that the failure of one portfolio company will have absolutely no impact on another company held in the same fund portfolio and may not even have a material impact on the performance of the PE fund that held it, as each individual investment a PE fund makes is generally limited to less than 10% of total fund assets.

e. Investments in Banks

Given the need for more capital in the banking and thrift sectors (depositories), the Committee endorses further relaxation on the ability of PE firms to acquire

[218] World Econ. Forum, *The Global Economic Impact of Private Equity Report 2009*, at 25-45 (Globalization of Working Investments, Working Paper vol. 2, 2009).
[219] Viral Acharya et al., *The Voice of Experience: Public Versus Private Equity*, McKinsey Quarterly (Dec. 2008).
[220] *See* Moody's Investors Service, *available at* http://www.moodys.com.

depository institutions. Further, the PE management model, which more closely aligns the interests of managers and shareholders, may bring needed management skill to the depository sector. The Committee believes that the "commercial" activities of the private companies can be adequately separated from the depositories so that there is no real threat of mixing the two businesses. Further, we see no need to make PE management companies a "source of strength" for the depositories. The efficacy of this policy has been disputed even in normal times. But in the midst of this crisis, it particularly makes little sense to deny the depository sector needed capital because acquirers will not agree to supply even more capital if the depositories get into trouble.

(1) Current Legal Framework

(a) Banking

Under the Bank Holding Company Act (BHCA), a "company" cannot own more than 25% of any class of voting securities without becoming a regulated "bank holding company."[221] The BHC Act, however, does not impose a limit on ownership of *nonvoting* equity. In a September 22, 2008, policy statement (Policy Statement),[222] the Board of Governors of the Federal Reserve (Fed Board) suggested a company could control a combination of voting and nonvoting shares aggregating up to one-third of the total equity of the organization without becoming a regulated bank holding company. The Board would also have to determine that the company had not acquired "a controlling influence over the management or policies of the bank or company."[223]

Given the language of the BHCA, the Board cannot allow a single PE company to control a bank; at best the private equity company can get a sizeable minority position. This is unlikely to draw much capital from the PE sector whose business model requires control.

The Board could revise its policy, increasing the limit on nonvoting equity, but the Board could not increase the 25% limit on voting equity without amending the BHCA. Even if the Board did increase the policy limit on nonvoting equity, it would have to conclude, under the third-prong of the BHCA's control test, that the new limit did not allow "a controlling influence over the management or policies of the bank or company,"[224] the very condition that PE seeks to attain. There is also a problem with the Board's "source of strength" doctrine, whereby an acquirer must agree to protect the capital position of the bank. Specifically, the source of strength doctrine requires that a BHC use resources in both its banking and non-banking subsidiaries to support a

[221] 12 U.S.C. § 1841(a)(2).
[222] 12 C.F.R. § 225.144.
[223] 12 U.S.C. § 1841(a)(2)(C); 12 C.F.R. § 225.143 ("Policy statement on non-voting equity investments by bank holding companies").
[224] 12 U.S.C. § 1841(a)(2)(C).

distressed banking subsidiary. The Board enjoys the authority to order the divesture of a non-banking subsidiary to ensure that a BHC meets its obligations under the doctrine.[225]

(b) Thrifts

1) Legal Framework

In general, the Savings and Loan Holding Company Act (SLHCA), like the Bank Holding Company Act, prohibits companies from controlling a thrift when the acquiring entity is engaged in non-financial activities. Specifically, the SLHCA prohibits a company from controlling a savings institution unless the controlling company is engaged only in activities that are "financial in nature or incidental to such financial activity" or are "complimentary to financial activity and do[ ] not pose a substantial risk to the safety or soundness of depository institutions or the financial system generally."[226] OTS, unlike the Board, has not formally promulgated source of strength requirements, and it has been far more accommodating in allowing PE firms to invest in financial institutions.[227]

2) IndyMac Transaction

On January 9, 2009, the FDIC, as conservator of IndyMac, signed a letter of intent to sell the thrift to IMB HoldCo LLC for $13.9 billion.[228] The transaction was finalized on March 19, 2009.[229] In fact, the FDIC sold IndyMac to OneWest Bank, a subsidiary of the OneWest Bank Group LLC, a thrift holding company. The investors involved in the consortium include:

[225] 12 C.F.R. § 225.4(a) ("Bank holding company policy and operations"). The regulation states as follows:

> (1) A bank holding company shall serve as a source of financial and managerial strength to its subsidiary banks and shall not conduct its operations in an unsafe or unsound manner.
> (2) Whenever the Board believes an activity of a bank holding company or control of a nonbank subsidiary (other than a nonbank subsidiary of a bank) constitutes a serious risk to the financial safety, soundness, or stability of a subsidiary bank of the bank holding company and is inconsistent with sound banking principles or the purposes of the BHC Act or the Financial Institutions Supervisory Act of 1966, as amended (12 U.S.C. § 1818(b) et seq.), the Board may require the bank holding company to terminate the activity or to terminate control of the subsidiary, as provided in section 5(e) of the BHC Act.

[226] 12 U.S.C. § 1467a(c)(9)(A)(ii); 12 U.S.C. § 1843(k).

[227] Jonathan Keehner & Jason Kelly, *Buyout Firms Elude Fed as OTS Lets Private Equity Acquire Banks*, Bloomberg, May 18, 2009 (explaining that the OTS "is opening a door the Federal Reserve has closed, allowing leveraged buyout firms to take control of banks amid the worst financial crisis since the Great Depression").

[228] FDIC, *Fact Sheet: FDIC Sale of IndyMac FSB*, *available at* http://www.fdic.gov/news/news/press/2009/pr09001a.pdf.

[229] Press Release, FDIC, "FDIC Closes Sale of Indymac" (Mar. 19, 2009), *available at* http://www.fdic.gov/news/news/press/2009/pr09042.html.

* Steven Mnuchin, Chairman, and co-CEO of Dune Capital Management.[230]

* J.C. Flowers & Co.: Global investment advisory firm run by J. Christopher Flowers.[231]

* Paulson & Co.: Investment advisory firm run by John Paulson.[232]

* MSD Capital, L.P.: Investment firm that exclusively manages the wealth of Michael S. Dell.[233]

* Stone Point Capital: Private equity firm that manages the Trident Funds.[234]

* SSP Offshore LLC: Investment fund managed by Soros Fund Management.[235]

* SILAR MCF-I LLC: Investment advisory firm founded by Robert Leeds.[236]

Equity ownership was distributed such that no equity investor had greater than 24.9% ownership—a structure designed to prevent companies with commercial activities from controlling a thrift. Indeed, the transaction was approved under SLHCA largely because the FDIC and OTS deemed each of the investors to be a separate company, none of which would solely control IndyMac. (Of course, a PE firm only involved in financial activities would not have this problem). The transaction was also structured so that each equity investor would enjoy board representation at both the bank and the bank holding company levels. It seems that this syndicate model for PE firms involved in commerce could be repeated for other acquisitions.

f. Future Bank Acquisitions

If PE firms were to seek to acquire a bank, there could well be more problems. First, the application of the source of strength doctrine would make it prohibitively risky for a company with substantial assets that have no relationship to the acquired bank, to make the acquisition. It seems unreasonable to make investors in other private companies, whether financial or not, to guarantee the solvency of the newly acquired

[230] *Id.*
[231] *Id.*; *see also* Gretchen Morgenson, *Beyond the Boldface Names in the IndyMac Deal*, N.Y. Times, Jan. 10, 2009.
[232] FDIC, *Fact Sheet: FDIC Sale of IndyMac FSB*, *available at* http://www.fdic.gov/news/news/press/2009/pr09001a.pdf.
[233] *Id.*
[234] *Id.*
[235] *Id.*
[236] *Id.*; Gretchen Morgenson, *Beyond the Boldface Names in the IndyMac Deal*, N.Y. Times, Jan. 10, 2009.

bank. Insisting on such a requirement is effectively denying needed capital to insolvent banks, a classic example of cutting off your nose to spite your face. Some capital is better than no capital.

Second, the Board might aggregate the shares of separate investors for the purposes of determining whether they are acting in concert under the Change in Bank Control Act,[237] or otherwise constitute a single association for purposes of the BHCA.[238] According to regulations, "acting in concert includes knowing participation in a joint activity or parallel action towards a common goal of acquiring control of a state member bank or bank holding company whether or not pursuant to an express agreement."[239] Additionally, "persons that are parties to any agreement, contract, understanding, relationship, or other arrangement, whether written or otherwise, regarding the acquisition, voting or transfer of control of voting securities" of a bank are presumed to be acting in concert.[240] The OTS has a similar definition for when investors will be deemed to be "acting in concert,"[241] but was clearly comfortable that such was not the case with IndyMac. The Board might take a different view.

In "Final Enforcement Decisions Issued by the Board of Governors in the Matter of Carl v. Thomas, et al.,"[242] the Board determined that Carl Thomas and his son, Stephen Thomas, who persuaded approximately 40 individuals and businesses ("purchasing group") to acquire shares in First Western Bank acted in concert and acquired control of the bank when (1) the Thomas family acquired a greater than 10% stake in the bank, and (2) the purchasing group, who communicated entirely through the Thomases, acquired a greater than 29% stake.

There are contrary examples, however, where the Board has found that a consortium of PE investors did not act in concert so as to constitute a single association for purposes of the BHCA. Most notably, the Board recently declined to find that a consortium of investors would exercise a controlling influence over the management or policies of Doral Financial Corporation in recapitalizing that entity.[243] The Board refused to aggregate interests because, among other things, the investor funds were unaffiliated, had made independent decisions to invest without side agreements, and resolved not to consult with one another in voting. Not only does the Committee believe that was the correct result, but we question the very logic of the Fed's

[237] 12 U.S.C. § 1817(j).
[238] *See* Board Ruling, Fed. Res. Reg. Serv. 4-415 (Aug. 19, 1966) (ruling that an investing group of individuals and organizations acting in concert will not be considered a "company" under the BHCA unless it has the structural characteristics making it equivalent to an "association").
[239] 12 C.F.R. § 225.41(b)(2).
[240] 12 C.F.R. § 225.41(d)(4).
[241] 12 C.F.R. § 574.2.
[242] Final Decisions Issued by the Board of Governors *In re* Thomas et al., 91 Fed. Res. Bull. 446 (2005).
[243] *See* Scott G. Alvarez, Fed. Reserve Bd. General Counsel Opinion, July 18, 2007.

underlying premise that a group of otherwise independent entities or individuals, when taken together, are assumed to somehow become the equivalent of a single BHC controlling and directing the operations of a subsidiary bank. We believe this legal fiction strains credulity, serves no purpose in most instances, and should be reevaluated—particularly in light of the present financial crisis.

However, at best the consortium of PE approach may be difficult to organize. The Committee thus recommends amendments to the BHCA and SLHCA that permit one PE firm to acquire a bank or thrift provided there is adequate separation between the banking and commercial activities of the PE firm. We believe the source of strength requirement should be applied selectively, and only to the banking silo of the PE fund complex.

Specific Recommendations

21. Limit Regulation to Information Collection. The Committee believes that any new regulation of PE—beyond an information collection requirement to demonstrate that the fund operates as a traditional buyout fund—would be difficult to defend intellectually, and thus believes such regulation would be undesirable.

22. Relax Acquisition Standards under the BHCA and SLHCA. Given the need for more capital and talented management in the banking and thrift sector, the Committee recommends approval of the acquisition of banks by one or more PE funds without the need for a source of strength commitment extending beyond the banking silo of the PE fund complex. We further recommend amending the BHCA and SLHCA to permit a PE firm, whether or not it is managing or investing in commercial companies, to acquire a thrift or bank, provided there is adequate separation between the banking and commercial activities of the PE firm.

3. Money Market Mutual Funds

Since their creation in the 1970s, money market mutual funds (MMMFs) have sought to offer households as well as sophisticated investors an entry-point into the securities market through a traditionally very low-risk and stable-priced investment mechanism.[244] This has permitted MMMFs to be used as cash management devices giving investors access on demand to the value of their contributions in the funds, with better returns than available on demand deposit accounts in banks. It has been estimated that the value of assets held in U.S. MMMFs has grown from $180 billion in

[244] Inv. Co. Inst., *Report of the Money Market Working Group* (2009) (This section draws heavily on the factual overview of MMMFs provided in this Report).

1983 to $3.9 trillion as of 2009, accounting for 20% of the liquid cash balances of households, and more than 30% of the short-term assets of non-financial businesses.[245]

MMMFs are governed by the SEC as registered investment companies under the Investment Company Act of 1940 and regulated in accordance with Rule 2a-7 of that Act.[246] Rule 2a-7 sets out numerous restrictions limiting the risk, quality, and portfolio characteristics of the assets that MMMFs can invest in.[247] Additionally, Rule 2a-7 stipulates a weighted-average 90-day maturity on the investments that can be made by the funds. Nevertheless, unlike banks, contributions by investors to MMMFs have historically not been underwritten by a government guarantee, akin to the FDIC insurance for bank deposits.

MMMFs strive to maintain a stable net asset value (NAV), usually $1.00 per share, to facilitate use of these funds as vehicles for money management and to more generally compete with bank deposits whose value does not dip below the funds deposited. In this regard, they are assisted by Rule 2a-7, which exempts them from using the standard Investment Company Act provisions for the calculation of NAV based on the market price of the investment portfolio at a given time. Accordingly, under Rule 2a-7, MMMFs use either the amortized cost or the penny rounding method for portfolio pricing. The amortized cost method requires that money market funds value their portfolio securities by reference to their acquisition cost, as adjusted for amortization of premium or accretion of discount. Under penny rounding, MMMFs value their securities at market value, fair value, or amortized cost, rounding the per share NAV to the nearest cent on the dollar share price.[248] MMMFs are nevertheless required periodically to value their assets to market to ensure that the actual value of the fund does not deviate from $1.00 per share by more than one-half of one percent.

a. Systemic Risk

Historically, the securities offered by MMMFs as well as the ability of investors to withdraw their money on demand has led to comparisons between MMMFs and bank deposits.[249] This raises the question whether MMMFs may be susceptible to similar risks as banks and more particularly, whether these risks could have systemic impact. In the case of MMMFs, systemic risks may arise in three scenarios. First, sharp and sudden losses suffered by one MMMF could lead to the market perception that

[245] *Id.*
[246] MMMFs are also subject to the Securities Act of 1933 and the Securities Exchange Act of 1934 as with all mutual funds.
[247] *See also* Mercer E. Bullard, *Federally-Insured Money Market Funds and Narrow Banks: The Path of Least Insurance* 10 (Mar. 2, 2009).
[248] Inv. Co. Inst., *Report of the Money Market Working Group* (2009).
[249] Mercer E. Bullard, *Federally-Insured Money Market Funds and Narrow Banks: The Path of Least Insurance* 10 (Mar. 2, 2009).

other such funds are equally vulnerable, driving down prices and the value of funds across MMMFs. Given that MMMFs are restricted to a similar pool of high-quality, low-risk instruments, with the result of a high correlation of risks across firms, this inference is likely to be naturally drawn. Secondly, as investors are entitled to withdraw their holdings on demand, the risk of a run on a fund is ever-present, spreading to other funds and further driving down the value of fund assets through asset fire-sales required to fund the withdrawals.[250] The historical absence of FDIC-type insurance for MMMF funds may further stoke investor panic. Thirdly, MMMFs represent an important source of short-term funding in the market, particularly the commercial paper market.[251] A shock affecting MMMFs, limiting their investment capacity, could extend to create a liquidity squeeze through the market, with yet more losses and panicked sell-offs.

Nevertheless, MMMFs have certain structural buffers to safeguard against undue accumulation of risk. Importantly, as a result of Rule 2a-7, MMMFs can only invest in high-quality assets with very short maturities,[252] making their investments more liquid and therefore better able to meet liabilities owed by MMMFs to investors. By contrast, banks can find themselves faced with a mismatch in maturity between the longer-term assets that they have invested in and their potentially immediate obligation to repay depositors on demand. In addition, MMMFs operate within a much less risky balance sheet structure, without reliance on leverage. Indeed, empirically, MMMFs have proved much safer players in the financial markets than banks, with approximately 3000 bank failures reported between 1980 and 2009,[253] compared with only one small institutional MMMF to have "broken the buck" prior to the global economic crisis.[254]

The current crisis, however, has provided an opportunity to measure more concretely the risk profile and regulatory vulnerabilities of MMMFs to determine the systemic consequence of MMMF failures.

The full force of the crisis was brought to bear on MMMFs by the collapse of Lehman Brothers. Notwithstanding the requirement that MMMFs invest in high-quality assets, the search for more competitive higher yields had resulted in certain MMMFs holding large portions of ever-riskier Lehman commercial paper.[255] It has been

[250] *See generally* Douglas W. Diamond & Philip H. Dybvig, *Bank Runs, Deposit Insurance, and Liquidity*, 91 J. Pol. Econ. 401 (1983).
[251] Aline van Duyn et al., *The Lehman Legacy: Catalyst for the Crisis*, Fin. Times, Oct. 12, 2008, *available at* http://www.ft.com/cms/s/0/ea92428c-9887-11dd-ace3-000077b07658.html.
[252] Inv. Co. Inst., *Frequently Asked Questions about Money Market Funds* (Mar. 2009), *available at* http://www.ici.org/home/faqs_money_funds.html (2,993 banks failed from 1980 through 2007).
[253] Federal Deposit Insurance Corporation, *Historical Statistics on Banking*, at Table BF02, *available at* http://www2.fdic.gov/hsob/SelectRpt.asp?EntryTyp=30.
[254] *See generally* In the Matter of Craig Vanucci, Admin. Proc. File No. 3-9804 (Jan. 11, 1999).
[255] CDS spreads from at least a year before Lehman's failure show that its spreads against the other major banks and investment banks (with the notable exception of Bear Stearns) were overall noticeably higher.

reported that by September 2008, the $64 billion Primary Reserve Fund held investments of $785 million (1.2% of its assets) in commercial paper issued by Lehman Brothers. Just a year before, however, the Fund had no Lehman debt on its books. Its holding of increasingly larger pools of commercial paper through 2007 and 2008 may be said to have given the Fund a noticeable advantage against its competitors, such that by February 2008, its yields were 50 bp ahead of its peers.[256] After the Lehman Brothers collapse, the Reserve Fund had $25 billion in redemption requests, of which only $10.7 billion was actually paid out to investors, and NAV fell to 97 cents a share, effectively crossing the symbolic Rubicon to "break the buck." Overall, it was estimated that MMMFs shrank by about $210 billion in the two days after the Reserve Fund broke the buck.[257] In addition to the impact on fund investors, the investor and capital flight from MMMFs resulted in a severe constriction in liquidity for the market in assets held by MMMFs, with MMMF investment in short-term commercial paper coming to a virtual halt.[258]

To contain the impact of the systemic risk spreading through the MMMF market and to stem the deluge of redemption requests, the Treasury provided a federal guarantee for those accounts of shareholders in MMMFs up to the balance in such accounts at the time the guarantee was issued. This Treasury protection expires on September 18, 2009.[259] However, despite the losses and market panic, MMMFs have not yet had occasion to draw upon the Treasury's approximately $50 billion currency stabilization fund that supports the guarantee. In addition, the Fed set up emergency liquidity facilities to thaw frozen credit markets and assist MMMFs with the liquidity crisis resulting from the surge in redemption requests. The Asset Backed Commercial Paper Money Market Mutual Fund Liquidity Facility (AMLF), established on September 19, 2008, provided depository institutions and bank holding companies with non-recourse loans from the Fed at the primary credit rate to invest in asset-backed commercial paper held by MMMFs. In addition, the Fed's Money Market Investor Funding Facility (MMIFF) was put in place in October 2008 to provide loans to a series of special purpose vehicles to invest in a range of assets held by MMMFs. Both are due

For example, in the weeks and months before Lehman's fall, Lehman's CDS spreads were more than double those of JP Morgan Chase. JP Morgan spreads in April 2008 were 78 bp, increasing by 34 bp by the end of August 2008 to reflect general market conditions. For Lehman, spreads increased by 177 points between April to August 2008, showing that the market recognized its increasingly risky condition. *See* Bloomberg, *available at* http://www.bloomberg.com.

[256] Inv. Co. Inst., *Report of the Money Market Working Group* 53-57 (2009).

[257] *Id*. at 3.

[258] Aline van Duyn et al., *The Lehman Legacy: Catalyst for the Crisis*, Fin. Times, Oct. 12, 2008, *available at* http://www.ft.com/cms/s/0/ea92428c-9887-11dd-ace3-000077b07658.html.

[259] U.S. Dep't of the Treasury, "Treasury's Temporary Guarantee Program for Money Market Funds," *available at* https://treas.gov/offices/domestic-finance/key-initiatives/money-market-fund.shtml; *see also* Press Release, U.S. Dep't of the Treasury, "Treasury Announces Extension of Temporary Guarantee Program for Money Market Funds" (Mar. 31, 2009), *available at* http://www.ustreas.gov/press/releases/tg76.htm.

to remain in place until October 2009. [260] The latter facility does not appear to have been used to date.[261]

b. Regulatory Proposals

The above discussion on systemic risk and MMMFs focuses attention on the following vulnerabilities that need to be addressed through regulatory reform:

* Crisis management mechanisms for MMMFs.

* Greater transparency in risk-assessment of investment products together with measures to better monitor investment standards and more thoroughly analyze the credit risks undertaken by MMMFs.

In this regard, the Investment Company Institute (ICI) has produced a set of regulatory proposals to better safeguard MMMFs against the above problems and to reduce the systemic risk arising out of MMMF operations.

In the area of crisis management, the ICI proposes measures to reduce the potential for runs on funds and their spread to other MMMFs. As identified in the present crisis, MMMFs came under unexpected and overwhelming strain through mass redemption requests, placing the solvency of the funds at risk and severely depressing the value of their investment portfolios. To prevent this source of systemic risk, the ICI has proposed that funds have the power to suspend fund redemptions and purchases for a period of 5 business days in cases of severe crisis (e.g., where a fund has already or may reasonably "break the buck") to allow time to quell panic and address the reasons for the crisis event. Further, to create greater certainty and fairness for shareholders during crisis, the ICI has outlined a liquidation procedure for MMMFs that would permit MMMFs to suspend redemptions and draw up a liquidation plan once a fund decides to liquidate.

In respect of MMMF assets, the ICI has put forward proposals that seek to create more robust internal mechanisms for monitoring credit risks and enhancing the standards by which these risks are measured. First, the ICI suggests that there should be

[260] Fed. Res. Bd., Asset Backed Commercial Paper (ABCP) Money Market Mutual Fund (MMMF) Liquidity Facility, updated Apr. 22, 2009, *available at* http://www.frbdiscountwindow.org/mmmf.cfm?hdrID=14; Fed. Res. Bd., *Money Market Investor Funding Facility*, updated Mar. 31, 2009, *available at* http://www.federalreserve.gov/monetarypolicy/mmiff.htm. *See also* Inv. Co. Inst., *Report of the Money Market Working Group* Appendix G (2009).
[261] *See* Fed. Res. Bd., Federal Reserve Statistical Release H.4.1, May 7, 2009, *available at* http://www.federalreserve.gov/releases/h41/Current/; Fed. Res. Bd., Credit and Liquidity Programs and the Balance Sheet, Other Lending Facilities: Money Market Investor Funding Facility, as updated Apr. 24, 2009, *available at*: http://www.federalreserve.gov/monetarypolicy/bst_lendingother.htm.

enhanced credit analysis to establish whether investments meet Rule 2a-7 criteria for quality and risk. In this regard, MMMFs should be obliged to establish a "new products" committee for assessing the credit risk arising from new investment products entering the market. Further, advisers to MMMFs would be required to designate and disclose to shareholders at least three credit rating agencies that the advisers would monitor for purposes of determining the eligibility of portfolio securities under Rule 2a-7, in addition to being encouraged to follow industry best practice standards in their own internal assessments of measuring credit risk. Secondly, reform proposals seek to bolster transparency with a view to giving investors a clearer picture of fund performance, risk, and overall function. The ICI also proposes a non-public reporting regime for institutional investors in the money markets, including money market funds. It is also suggested that regulators be charged with scrutinizing more carefully those funds whose performance is seen to markedly exceed that of its peers. Thirdly, to enhance fund liquidity, the ICI has suggested that taxable MMMFs be required to keep 5% of their investment in assets that can be made available within one day, and all MMMFs be required to keep 20% in assets accessible within 7 days. Related to this, the ICI has suggested reducing the overall weighted average maturity of assets to an upper limit of 75 days and adding a new portfolio maturity limit, closing still further the mismatch between fund obligations to investors and the accessibility of assets.[262]

The Committee endorses the proposals that have been put forward by the ICI for regulatory reform in this area. To address the vulnerabilities identified by the Committee, the policy positions advanced by the ICI are helpful in setting the general tenor for reform, in suggesting improvement of the regulatory framework for MMMFs without necessarily effecting radical changes that may reduce investor confidence and create undue disruption for the credit markets.

Some have proposed more far-reaching proposals to address the systemic risks posed by MMMFs.[263] In particular, these proposals suggest that (i) MMMFs take out private insurance to cover losses and thus enhance investor confidence; and (ii) MMMFs ensure that they have capital reserves to meet the liquidity demands arising from unexpected losses and excess risk. The Committee feels that both proposals are unsound.

[262] *See* Inv. Co. Inst., *Report of the Money Market Working Group* 69-101 (2009).
[263] *See, e.g.,* Group of Thirty, *Financial Reform: A Framework for Global Stability* (2009) (recommendations put forward by the report into financial stability recently published by the Group of Thirty's Working Group on Financial Reform. In respect of MMMFs, the Report recommends that money market funds offering on demand withdrawals and stable net asset value be regulated as banks, with appropriate capital requirements, government insurance and access to central bank funds as a lender-of-last-resort); *see also* Mercer E. Bullard, *Federally-Insured Money Market Funds and Narrow Banks: The Path of Least Insurance* 10 (Mar. 2, 2009).

In respect of private insurance, the Committee believes, based on the ICI Report, that private insurers will not be able to provide reliable coverage to MMMFs through unlimited "break the buck" insurance. Given the high correlations between the returns of different funds, and the potential that a run on one fund might spread to others, the ICI estimates that insurers would need approximately $40 billion in capital to support such an insurance program, making its provision unfeasible for private providers.[264] Furthermore, relying on private insurers to cover losses creates risk for the market if these insurers fail and are unable to provide protection.

In respect of public insurance, we note that an important precedent has been set by the government in providing an emergency guarantee to cover certain MMMF losses during the crisis. Even after express Treasury support has ended, some believe that, in view of the systemic risks attaching to their operations, MMMFs are likely to receive government protection to cover their losses should another crisis occur, such that MMMF operations going forward may be characterized as being supported by an implicit government guarantee. This may or may not be the case. However, to the extent public insurance (through guarantees) would be provided going forward—either explicitly or implicitly—for such accounts, we believe that such funds should be charged appropriately. Under the Treasury's current program, MMMFs can purchase protection from the government for a payment of a quarterly fee of 1 to 2.3 bp of assets under management.[265] Looking ahead, we recommend that policymakers give thought to the formulation of a more formal fee structure to charge MMMFs for the provision of public protection for their losses, if policymakers conclude that such ongoing protection, whether implicit or explicit, is a reality. As an alternative, there is a need to explore whether MMMFs might protect themselves through purchasing credit derivatives on themselves or issuing credit-linked notes that would absorb losses up to a certain percentage of NAV.

Proposals that suggest that MMMFs keep a capital cushion are similarly problematic. As already mentioned, these funds have no leverage and low levels of maturity mismatch, and thus interest rate risk. The ICI proposals will further reduce this risk. One must also acknowledge, as discussed in Section B of this chapter, that the Basel approach to setting capital has been found seriously wanting. It would not make sense to expand its ambit to MMMFs.

Specific Recommendations

23. Introduce Mechanisms for Crisis and Risk Management. The crisis has highlighted the systemic impact that MMMF operations can have and the requirements

[264] *See* Inv. Co. Inst., *Report of the Money Market Working Group* 113 (2009); *see also* Press Release, U.S. Dep't of the Treasury, "Treasury Announces Extension of Temporary Guarantee Program for Money Market Funds" (Mar. 31, 2009), *available at* http://www.ustreas.gov/press/releases/tg76.htm.
[265] Inv. Co. Inst., *Report of the Money Market Working Group* 112 (2009).

for regulatory improvements to reduce this risk. Accordingly, we recommend that procedures be introduced for better crisis management, transparency, risk evaluations, and monitoring. In that regard, we endorse the proposals recently advanced by the Investment Company Institute.

24. Study How to Compensate for Potentially Ongoing Taxpayer Support. We recommend that policymakers give further thought as to whether explicit or implicit government guarantees provided to support certain shareholder accounts in MMMFs will be available going forward in the event of a systemic crisis and, if so, determine how an appropriate government compensation structure can be devised. We also recommend studying the possible alternative of MMMFs protecting themselves by purchasing credit derivatives or issuing credit-linked notes that would absorb losses up to a specified percentage of NAV.

D. Resolution Process for Failed Non-Bank Institutions*

1. Overview

Recent market events have demonstrated both the strengths and weaknesses of current financial company insolvency regimes. Certain insolvencies have had a far greater systemic effect than others, partially because the law that governs the insolvency of a financial company depends on the company's form of organization. Specifically, the insolvency of banks insured by the Federal Deposit Insurance Corporation (the FDIC) is governed by the Federal Deposit Insurance Act (the FDI Act),[266] the insolvency of registered broker-dealers is governed by the Securities Investor Protection Act (SIPA),[267] and the insolvency of most other financial companies is governed by the U.S. Bankruptcy Code (the Code).[268]

Each of these insolvency regimes has been applied to manage the insolvency of financial companies, though none is perfect. In particular, the Code and SIPA fail to provide regulators with the tools necessary to protect markets from the effects of a systemically significant financial company's insolvency, particularly in times of market stress. We believe the FDI Act, with its flexible regime and myriad of resolution strategies, is more effective at combating systemic risk. However, its scope is limited to banks, excluding from coverage many financial companies, and it lacks certain beneficial features of the Code and SIPA.

* The primary author of this section is Seth Grosshandler, Partner, Cleary Gottlieb Steen & Hamilton LLP. Mr. Grosshandler was assisted by Associates Allison H. Breault and Knox L. McIlwain.

[266] 12 U.S.C. § 1811 et seq.

[267] 15 U.S.C. § 78aaa et. seq.

[268] 11 U.S.C. § 101 et. seq. (For more on the financial companies subject to the Code, see section B.1 below)

Recently, the Treasury proposed the creation of an additional insolvency regime with powers similar to those available under the FDI Act that can be invoked *only* for a financial company whose insolvency poses a systemic risk. A key feature of this proposal is its *ad hoc* determination of systemic risk. Companies are not designated as systemically significant in advance—instead, the relevant issue is whether the failure of a particular institution, at that particular point in time, would have systemic effects. This approach has the virtue of avoiding the moral hazard that would result from advance designation, but it also creates uncertainty as to which particular procedure would be used to deal with an insolvent institution.

While we support the Treasury's call for reform, we believe more is necessary. To that end, we recommend the implementation of a comprehensive Financial Company Resolution Act, based on the FDI Act but drawing on important elements of the Code, SIPA, and the Treasury proposal, that is applicable to *all* financial companies and their holding companies. As part of this approach, regulators would be provided with enhanced resolution powers on an *ad hoc* basis in order to address insolvencies that pose systemic risk.

2. Existing Insolvency Regimes for Financial Companies

a. Insolvency of Financial Companies Under the Bankruptcy Code

Many financial companies are subject to the Code.[269] The insolvencies of "unregulated" financial companies, such as bank holding companies, financial holding companies, their unregulated subsidiaries, hedge funds, private equity funds, and special purpose entities, are generally governed by the Code.[270] Insolvency proceedings under the Code are judicial proceedings, occurring in specialized federal bankruptcy courts under the supervision of the federal district courts.[271] Proceedings are initiated either by the insolvent financial company through a voluntary filing or by its creditors in an involuntary proceeding.[272] Financial regulators generally do not have the

[269] 11 U.S.C. § 109 (excluding from the definition of "debtor" under the Code certain entities whose insolvency is covered by other State or Federal insolvency law).
[270] Most "regulated" entities, such as banks, broker-dealers, certain commodities entities, and insurance companies, are subject to separate state or federal insolvency regimes. Banks and broker-dealers are discussed in further detail below.
[271] 28 U.S.C. § 151 (designating bankruptcy courts as "unit[s] of the district court" in which they are located).
[272] *See* 11 U.S.C. § 301 (providing for voluntary petitions); 11 U.S.C. § 303 (providing for involuntary petitions).

authority under the Code to initiate proceedings or to take pre-insolvency actions with respect to a failing financial company.[273]

Under the Code, a financial company can generally pursue either liquidation in a Chapter 7 proceeding or reorganization in a Chapter 11 proceeding. In a Chapter 7 proceeding, a trustee liquidates the assets of the debtor and distributes the proceeds to creditors according to a statutory priority scheme. In a Chapter 11 proceeding, the debtor usually continues to operate as a "debtor in possession." Under court supervision, the debtor and its creditors negotiate a plan for reorganization that usually involves eliminating the existing equity interests in the debtor and converting certain creditor claims into equity interests in the newly reorganized debtor. As a practical matter, though, we believe that Code-style reorganization typically is not a viable option for most financial institutions. Financial institutions depend on confidence and liquidity more than non-financial institutions and, once they become subject to insolvency proceedings, such confidence and liquidity typically evaporates.

Once a liquidation or reorganization proceeding has been initiated under the Code, creditors are generally "stayed" or prohibited from exercising rights against the debtor.[274] This stay preserves the assets of the debtor during the insolvency proceedings. However, certain derivatives and related contracts (collectively, "qualified financial contracts" or QFCs)[275] are exempted or "safe harbored" from the automatic stay, meaning that certain counterparties to these contracts are permitted to terminate their QFCs, close out all positions thereunder, set off and net resulting exposures to determine a single net payment obligation, and liquidate any collateral securing exposures under the terminated contracts (collectively, Closing Out or Close Out).[276] These safe harbors are designed to prevent the insolvency of one company (financial or otherwise) from destabilizing its financial contract counterparties. Subjecting QFCs to the stay could immobilize related collateral for significant periods of time pending distribution by the bankruptcy court upon final resolution, disrupting the markets for these assets. Furthermore, counterparties that had hedged their QFC exposures or maintained a balanced book (i.e., where obligations owed by the counterparty under QFCs are offset by equal and opposite obligations owing to the counterparty under other QFCs) would immediately become exposed to market

[273] *See* 11 U.S.C. §§ 781–84 (With respect to certain "clearing banks" (certain uninsured banks that serve as a multilateral clearing organization), a regulator acting as conservator or receiver can initiate Code proceedings).
[274] 11 U.S.C. § 362.
[275] The covered contracts include certain swap agreements, forward contracts, repurchase agreements, commodities contracts, and securities contracts. Under the Code, these contracts are typically referred to as "safe harbored contracts;" the term QFC, or "qualified financial contract," is the term used for these contracts under the FDI Act.
[276] 11 U.S.C. § 555 (securities contracts); 11 U.S.C. § 556 (commodities and forward contracts); 11 U.S.C. § 559 (repurchase agreements); 11 U.S.C. § 560 (swap agreements); 11 U.S.C. § 561 (master netting agreements).

movements. The debtor's financial instability would thus be transmitted directly to its counterparties, creating a risk of cascading insolvencies. Therefore, to protect themselves, QFC counterparties almost always exercise their safe harbored Close Out rights against the debtor immediately upon its insolvency in order to crystallize gains and losses, obtain access to existing collateral (which can be used to secure replacement contracts), and to prevent any further losses.

b. Insolvency of Broker-Dealers Under SIPA

The insolvency of a securities broker-dealer with customers is governed by SIPA.[277] SIPA provides an overlay for a proceeding otherwise governed by the Code.[278] Broker-dealers differ from many other financial companies in that they hold securities and cash for the account of their customers (as opposed to for their own account). To that extent, SIPA, among other things, addresses the distribution of property held by the broker-dealer on behalf of its customers; in particular, customer property is returned to customers.[279]

Under SIPA, QFCs are subject to the Code safe harbors. However, a limited stay prevents counterparties to QFCs from exercising rights with respect to certain securities loaned, pledged, or sold under a repurchase agreement by the debtor.[280] This limited stay does not prevent the debtor's counterparties from exercising other Close Out rights under QFCs. SIPA does not provide for the transfer of the debtor's QFCs, as provided for under the FDI Act (described below). Accordingly, a broker-dealer's QFC counterparties almost always exercise their Close Out rights and do so immediately upon the broker-dealer becoming subject to SIPA proceedings.

c. Insolvency of FDIC-Insured Banks Under the FDI Act

Banks play a unique role in the market and are thus subject to a specially tailored insolvency regime governed by the FDI Act. Banks are viewed as special and different from other financial companies because of the vital role they play in the economy in issuing federally insured deposits that serve as money, extending credit, and processing payments. The central premise of the FDI Act is that the failure of a bank and the resulting interruption in these activities present a severe public policy danger, not only because they impose losses, anxiety, and inconvenience on depositors and others but, more importantly because the failure of one bank may spread to others, creating the danger of widespread banking panics.

[277] 15 U.S.C. § 78eee.
[278] 15 U.S.C. § 78fff(b) ("To the extent consistent with the provisions of this chapter, a liquidation proceeding shall be conducted in accordance with, and as thought it were being conducted under chapters 1, 3, and 5 and subchapters I and II of chapter 7 of Title 11.").
[279] *See, e.g.*, 15 U.S.C § 78fff-2(c).
[280] 15 U.S.C. § 78eee(b)(2)(B).

The FDI Act establishes a flexible administrative (i.e., not judicial in nature) insolvency regime, providing for pre-insolvency action, receivership and conservatorship, and many methods of resolution, including liquidation, open bank assistance, purchase and assumption transactions, and the establishment of bridge banks. The FDI Act requires a bank's primary regulator to closely monitor the bank's financial condition as its capital ratios decline through a series of five pre-specified capital tripwires for implementing "prompt corrective action" (PCA).[281] The FDI Act also authorizes a bank's regulator to take certain disciplinary actions, in addition to its general enforcement powers, for banks that are no longer adequately capitalized, including requiring a recapitalization plan guaranteed by the bank's parent company(ies), and restricting the bank's affiliate transactions, asset growth, and activities. When a bank reaches the lowest capital category in the PCA framework and becomes classified as "critically undercapitalized," the bank is generally placed promptly into receivership.[282] Under the FDI Act, only a bank's regulators, and not the bank itself, can initiate resolution. The FDI Act provides a bank's primary regulator broad discretion to appoint a conservator or receiver on numerous grounds, including, among others, insolvency, insufficient liquidity, unsafe or unsound condition, or substantial dissipation of assets or earnings.[283]

By the time—indeed, before—a bank is placed into receivership, the primary regulator and the FDIC should be sufficiently familiar with the bank both promptly to identify the eligible insured depositors and to estimate the market or recovery value of its assets. As a result, regulators are able to prepare and quickly distribute necessary information to potential bidders for the bank or its assets, so as to maximize recovery values and distributions to the failed bank's depositors and other creditors. To provide additional time to complete the resolution and reduce interruptions in the provision of banking services, banks are generally placed in receivership at the close of business on a Friday. The banks' assets are sold either immediately or through time, and the depositors and other creditors are paid or provided for by the following Monday.

The most common method of selling assets and satisfying liabilities is the "purchase and assumption" transaction (P&A). In a P&A, a solvent bank (including one that was established for such a purpose) purchases certain assets and assumes certain liabilities of the failed institution. The FDIC may provide cash assistance to make up for any shortfall between the purchase price and the going concern value of the bank. Another resolution option is a "bridge bank."[284] These are temporary institutions organized by the FDIC to take over the operations of a failed bank and preserve its going concern value while the FDIC seeks a permanent solution to its

[281] 12 U.S.C. § 1831o.
[282] 12 U.S.C. § 1831o(h)(3).
[283] 12 U.S.C. § 1821(c)(5).
[284] 12 U.S.C. § 1821(d)(2)(F).

problems. The FDIC operates the bridge bank and provides it with sufficient capital to cover the insured deposits and its operating expenses. The FDIC generally must resolve a bridge bank within two years after the date of its organization through either solicitation of private capital through a stock offering, a P&A transaction, or a wind up of the affairs of the bridge bank.[285]

To prevent the failure of a troubled bank, the FDIC may also provide cash contributions or loans to purchase assets of a failing bank or may place deposits in the bank—a resolution method known as open bank assistance.[286] Unlike other bank resolution procedures, an open bank assistance transaction does not require the appointment of a receiver or conservator. The bank is never "closed," rather it is rescued on an "open bank" basis through the infusion of new funds. However, open bank assistance has become increasingly uncommon since the FDI Act was amended to prohibit the FDIC from using deposit insurance fund money to benefit shareholders of an assisted institution (subject to a narrow exception discussed below for bank failures that would pose a "systemic risk").[287] Like open bank assistance, conservatorships of banks are relatively rare.[288] A conservatorship (when not accompanied by another form of resolution or assistance) merely serves to change the management of the bank, and is thus usually only a temporary measure.

The FDI Act provides that the FDIC must choose the means of resolution that is least costly to the deposit insurance fund.[289] However, a "systemic risk" exception in the FDI Act allows the FDIC to choose another resolution if the least costly resolution would have "serious adverse effects on economic conditions or financial stability" and an alternative resolution would "avoid or mitigate such adverse effects".[290] A "systemic risk" determination requires the consent of the Secretary of the Treasury (in consultation with the President) and two-thirds of boards of the FDIC and the Fed. As a result, the systemic risk exception is generally only available where a bank is too large or too interconnected to fail. The FDIC has on occasion invoked the "systemic risk" exception to offer open bank assistance—most recently, in its initial approval of Citigroup's proposal to acquire Wachovia. Any losses to the FDIC insurance fund stemming from use of the "systemic risk" exception must be expeditiously recovered

[285] 12 U.S.C. § 1821(n)(9).
[286] 12 U.S.C. § 1823(c)(8).
[287] 12 U.S.C. § 1823(c)(4)(E).
[288] However, the National Credit Union Administration (NCUA), the primary regulator of credit unions placed two credit unions, U.S. Central Credit Union and Western Corporate Credit Union, into conservatorship in March 2009. The Federal Credit Union Act provides NCUA with authorities to act as a conservator or receiver for a failed credit union that are similar to the FDIC's authorities with respect to failed banks.
[289] 12 U.S.C. § 1823(c)(4).
[290] 12 U.S.C. § 1823(c)(4)(G).

out of a special assessment on the members of the fund, and any such rescue must be investigated by the General Accounting Office.

The FDI Act provides for special treatment of QFCs.[291] If the FDIC is appointed as conservator of a failed bank, the conservatorship alone is not an enforceable event of default for QFCs, as long as the conservator continues to perform on the contracts. In the event of a receivership, the FDI Act requires the FDIC (as receiver) to transfer all of the QFCs between a counterparty, its affiliates, and a failed bank (determined on a counterparty by counterparty basis) to either a third party acquirer (in the context of a liquidation or a P&A) or a bridge bank or to transfer no such contracts.[292] In other words, with respect to a particular counterparty and its affiliates, the receiver cannot "cherry pick" certain QFCs to transfer—it must transfer all of them or none of them.[293] This transfer requirement is designed to preserve cross-collateralization, setoff and netting rights, and to provide for the orderly settlement or continuation of these contracts. If the FDIC does not transfer the QFCs within one business day after its appointment as receiver, the bank's counterparties may exercise their Close Out rights. Thus, the FDI Act strikes a fine balance between the need for regulators to be able to resolve a bank's derivatives and financial markets contracts portfolio—by transferring QFCs and preserving value—and the need for counterparties to have certainty with regard to their ability to liquidate and net promptly if there is no such transfer. We think this is crucial to reducing potential knock-on effects in volatile and interconnected markets.

The FDIC, when acting as a receiver, has almost always transferred a failed bank's QFCs to a bridge bank, or to an acquirer in a P&A transaction. As a result, there has been no significant dislocation in the markets for QFCs as a consequence of any bank failure.

The FDI Act's resolution regime for failed banks generally, and its special provisions for QFCs specifically, have promoted the stability of the banking system by reducing uncertainty for depositors and counterparties while successfully mitigating losses for banks, counterparties, and the deposit insurance fund. This regime has

[291] 12 U.S.C. § 1821(e)(8).

[292] Counterparties to transferred QFCs are not permitted to challenge the receiver's transfer based on the credit quality of the transferee. However, the FDIC may only transfer QFCs to a transferee that is not the subject of a receivership, conservatorship, or insolvency proceeding. *See* 12 U.S.C § 1821(e)(9). Accordingly, the transferee should always be of superior credit quality than the failed bank. Whether a counterparty can demand more collateral from a transferee depends on the QFC documentation and is not governed by the FDI Act.

[293] 12 U.S.C. § 1821(e)(9) (This all-or-none transfer requirement could be viewed as creating a moral hazard by encouraging counterparties to enter into higher-risk contracts with a bank on the reliance that all QFCs are generally transferred in the event of a receivership. However, the FDIC has recently enacted recordkeeping requirements for QFCs that may address this concern by enabling the FDIC to better monitor the QFCs of banks in troubled condition and, presumably, choose not to transfer some QFCs).

helped the U.S. economy withstand the banking crises of the past, such as the rash of savings and loan failures in the 1980s and early 1990s, and weather the current crisis without any significant disruptions to the markets for QFCs due to bank failures.

With the passage of the Housing and Economic Recovery Act of 2008 (HERA), Congress established a resolution regime for the GSEs, including Fannie Mae, Freddie Mac, and the Federal Home Loan Banks, that effectively mirrors the FDI Act's resolution regime for failed banks, including the treatment of Safe Harbored Contracts.[294] Prior to HERA, there was no adequate insolvency mechanism for the GSEs, which could not liquidate or reorganize under the Code and whose regulator had no power to appoint, or act as, a receiver.

Shortly after HERA's enactment, the Federal Housing Finance Agency appointed itself as conservator under HERA for Fannie Mae and Freddie Mac. (This was coupled with the substantial backing of both GSEs by the Treasury.) Fannie Mae's and Freddie Mac's significant Safe Harbored Contract portfolios were neither repudiated nor transferred as a result of the conservatorship. Like under the FDI Act, the appointment of a conservator under HERA is not an enforceable event of default. Accordingly, there was no significant adverse effect on the markets for Safe Harbored Contracts as a result of these GSEs' conservatorship.

3. Insolvency Regimes Outside the United States

Until very recently, the United Kingdom did not have a specialized bankruptcy regime or an effective set of statutory powers that could be used, in the event of a crisis, to address bank failures. The banking business transfer powers, under Part VII of the Financial Services and Markets Act 2000, are too slow moving to be useful when a bank collapse is imminent and provide for the transfer of bank assets, but not of shares. Accordingly, bank insolvencies were traditionally dealt with under the same rules that applied to all other corporations. However, recent events, including the Northern Rock failure, have highlighted the disadvantages of this lack of a specialized regime. As a result, the United Kingdom adopted a "special resolution regime" under the Banking (Special Provisions) Act 2008 in February 2008 to address the failure of Northern Rock. This Act was replaced by the Banking Act 2009 (the Banking Act) in February 2009, which provides for the resolution of failed banks and incorporates provisions for dealing with QFCs that are similar to those in the FDI Act.[295]

The Banking Act gives each of the Financial Services Authority (the FSA), the Bank of England, and the U.K. Treasury "stabilization powers" to transfer shares, other securities, property, and liabilities of a failing bank through the exercise of one of three "stabilization options": (i) a full or partial purchase and assumption transaction; (ii) a

[294] 12 U.S.C. § 4617(d)(8).
[295] Under the Banking Act, banks are generally defined as institutions that accept deposits.

bridge bank; or (iii) temporary public ownership. The regulations implementing the Banking Act prohibit the transfer of some but not all protected contracts between the bank and any particular counterparty.[296] These regulations are analogous to the FDI Act provision governing the transfer of QFCs, which requires the FDIC (as receiver) to transfer all of the QFCs on a counterparty-by-counterparty basis of a failed bank.[297]

At the international level, many groups are considering how to implement an international framework for cross-border bank resolution.[298] Two approaches are under consideration: the development of a special insolvency regime applicable to banks that operate in multiple jurisdictions or a method of closely coordinating the insolvency proceedings of the jurisdictions in which a failed bank is present. Regardless of its form, an effective international framework would reduce the pressure on national banking regulators to ring fence the assets of a branch or subsidiary of a foreign bank in the event of its insolvency, i.e., to use these assets to satisfy the claims of local creditors. It should be noted that U.S. banking law currently takes a ring-fencing approach to the insolvency of U.S. branches of non-U.S. banks.[299] This is further discussed below.

4. Problems with the Existing Insolvency Regimes

Recent market events have helped to highlight the shortcomings of the existing insolvency regimes in protecting financial markets from the insolvency of key financial companies. While each of the regimes discussed above have successfully been applied to manage the insolvency of financial companies, each also has its deficiencies.

a. Inability to Resolve Families of Financial Companies

In particular, neither the Code nor SIPA is structured to effectively resolve large families of financial companies. An insolvent holding company frequently has solvent subsidiaries. However, under the Code and SIPA, there is no analog to the FDI Act's

[296] Specifically, the Banking Act's transfer provisions apply to certain rights and liabilities under specified set-off, netting, and title transfer financial collateral arrangements.
[297] While this legislation is intended to provide for the smooth transfer of derivatives contracts, it is important to note that these stabilization options are available only in respect of banks and not other financial companies. Accordingly, these powers would not have been available to resolve, for example, Lehman Brothers International (Europe), which was not a deposit-taking institution.
[298] *See, e.g.*, Press Release, Staffs of the Int'l Monetary Fund & World Bank, "An Overview of the Legal, Institutional, and Regulatory Framework for Bank Insolvency" (Apr. 17, 2009) (mentioning a forthcoming report on the issue); Group of Twenty, *Working Group on Reinforcing International Cooperation and Promoting Integrity in Financial Markets (WG2)*, Final Report 19 (2009), *available at* http://www.g20.org/Documents/g20_wg2_010409.pdf; Bank for Int'l Settlements, *Basel Comm. on Banking Supervision Cross-Border Bank Resolution Group*, *available at* http://www.bis.org/bcbs/.
[299] *See, e.g.*, International Banking Act of 1978, Pub. L. No. 95-369, 97 Stat. 607 (codified in scattered sections of 12 U.S.C.); NYBL § 605; *see also* Hal S. Scott, *Multinational Bank Insolvencies: The United States and BCCI, in* Current Developments in International and Comparative Corporate Insolvency Law (Jacob S. Ziegel ed., Oxford Univ. Press 1994).

bridge bank authority that would enable a quick sale of solvent subsidiaries to a federally chartered entity to preserve their value and stabilize markets. Likewise, the requirements for a P&A type sale under the Code and SIPA are much more cumbersome. Accordingly, a parent's insolvency frequently leads to insolvency proceedings in respect of its subsidiaries, either because of defaults under parent guarantees or financing arrangements or because of a loss of confidence in the subsidiary. The resolution methods available under the Code and SIPA unnecessarily limit regulators' options.

b. Inadequate Protection During Periods of Market Stress

Furthermore, the QFC safe harbors under the Code and SIPA have been effective in promoting market stability during the insolvency of financial companies in the past, but, during recent times of market stress, they have failed to adequately protect markets. As mentioned above, QFC counterparties almost always exercise their safe harbored Close Out rights against a debtor immediately upon its insolvency. While a rational choice for any individual firm, in times of market stress, the net effect of all counterparties simultaneously Closing Out QFCs with a financial company can be destabilizing to volatile and interconnected markets. In connection with QFC Close Out, counterparties typically attempt to sell assets held as collateral or a hedge and terminate offsetting positions. In the insolvency of a major financial company subject to the Code or SIPA, the simultaneous market activity of thousands of counterparties can cause the price of such assets to collapse, particularly where such assets were already illiquid or hard to price. Furthermore, counterparties may be required to use the asset values determined in Closing Out QFCs to establish market prices for similar assets subject to contracts with third parties, thus transmitting the debtor's instability far beyond its counterparties. In times of market stress, markets would be better protected by transferring the insolvent financial company's QFCs to a solvent third party, as provided under the FDI Act.

We believe the FDI Act insolvency regime generally enables regulators to protect markets more effectively in times of stress. In particular, the ability for regulators to take pre-insolvency action and the wide variety of resolution methods available to resolve troubled institutions are particularly effective. It is important that regulators, rather than bankruptcy judges, control this process. Similarly, the ability under the FDI Act to transfer QFCs to a solvent third party has helped to promote stability in the markets, even during recent extreme market events. The absence of mass Close Outs and the orderly transfer of QFCs have meant that bank insolvencies have had much less adverse effect on QFC and related asset markets. The FDI Act's major limitation is the narrow scope of its applicability—the superior resolution powers available under the FDI Act are available to resolve only FDIC-insured banks and not the myriad other financial companies or families of companies. As FDIC Chairman Sheila Bair recently

stated, "the bulk of the financial activity which has driven the current crisis falls outside of FDIC insured banks" and, thus, outside the reach of the FDI Act.[300] The Committee believes that the FDI Act's wide variety of resolution methods should be available to resolve all financial companies.

c. Lack of Cross-Border Coordination

Furthermore, none of the existing insolvency regimes provides for the effective resolution of multi-entity, cross-border families of financial companies. Large financial conglomerates typically have affiliates located in various jurisdictions around the world, the insolvencies of which will likely be governed by local laws. Chapter 15 of the Code enables limited coordination of insolvency proceedings occurring in various jurisdictions, but only in respect of the same entity. When multiple entities within a family of financial companies become insolvent in different jurisdictions, as during the collapse of Lehman Brothers, there is no effective mechanism to coordinate the insolvency proceedings of the various entities, nor is there a mechanism to subject all proceedings globally to a single insolvency regime. In the case of Lehman Brothers, an *ad hoc* protocol is being negotiated, which addresses information sharing, the treatment of assets when a controlling party believes another may have an interest in such assets, the filing of claims in multiple proceedings, and intercompany claims.[301] However, as of the date of publication, more than eight months after the first insolvency filing, no protocol has been adopted.

This problem of international coordination is particularly acute in the case of cross-border banks. For instance, over the last 5 years, Icelandic banks took significant deposits from U.K. retail customers through their U.K. branches. When the banks ultimately failed and the Icelandic deposit insurance fund proved insufficient to protect depositors, U.K. regulators seized the assets of the local branches to satisfy domestic depositors. The New York banking law similarly ring-fences branch assets in the insolvency of a non-U.S. bank, treating both the assets of the branch and any assets of the non-U.S. bank in New York as being subject first to the claims against the New York branch. Of course, the assets of a subsidiary of a foreign bank or financial corporation are structurally ring fenced; because a subsidiary (as opposed to a branch) is a domestic corporation, its insolvency (and the disposition of its assets) would be subject to a local proceeding.

[300] Sheila Bair, Chairman, FDIC, Speech before The Economic Club of New York (Apr. 27, 2009) (transcript available at http://www.fdic.gov/news/news/speeches/chairman/spapr2709.html).
[301] For more information, see http://www.lehmanbrothersestate.com//InternationalProtocolProposal--background.pdf.

5. Proposals for Reform

a. Treasury's Proposed Enhanced Resolution Powers

In March of 2009, the U.S. Department of the Treasury released draft legislation entitled the Resolution Authority for Systemically Significant Financial Companies Act of 2009.[302] The Draft Resolution Authority, closely modeled on the resolution provisions of the FDI Act and HERA, would grant the FDIC virtually the same resolution powers it has under the FDI Act to resolve certain financial companies, including bank holding companies that would otherwise be subject to the Code. However, these enhanced powers would not be available to resolve all insolvencies of the covered financial companies; instead, the FDIC would only be empowered to act when the failure of a particular covered financial company under another insolvency regime would have negative *systemic effects*. In other words, if the Code would be insufficient to protect markets from the effects of a covered financial institution's insolvency, the FDIC may exercise its enhanced powers under the Draft Resolution Authority.

The FDIC may only exercise powers under the Draft Resolution Authority upon a determination by the Secretary of the Treasury (in consultation with the President and based upon the recommendations of both the Federal Reserve Board and the relevant primary regulator) that:

* the financial company is in default or is in danger of default;
* the *failure* of the financial company and its resolution under otherwise applicable Federal or State law would have *serious adverse effects on financial stability or economic conditions* in the United States; and
* any actions or assistance under this section would avoid or mitigate such adverse effects.[303]

Thus, the critical question under the Draft Resolution Authority is not whether a given institution is systemically important in the broader sense, but whether the failure of the institution, at that particular point in time, would have systemic effects. While this approach avoids advance labeling of a bank as systemically important, thus making it implicitly subject to government rescue and effectively relegating other institutions to

[302] Press Release, U.S. Dep't of the Treasury, "Resolution Authority for Systemically Significant Financial Companies Act of 2009" (Mar. 2009), *available at* http://www.ustreas.gov/press/releases/reports/032509%20legislation.pdf.
[303] § 2(b)(2) Draft Resolution Authority, *available at* http://www.ustreas.gov/press/releases/reports/032509%20legislation.pdf (emphasis added). If such a determination is made, the company would be ineligible to petition for bankruptcy protection under the Code and could only be resolved under the Draft Resolution Authority. § 4(a) Draft Resolution Authority.

second-class status (i.e., not important enough to attract federal intervention), it also means one counterparty does not know how its non-bank counterparty, if it becomes insolvent, will be handled.

As noted above, only certain financial companies currently subject to the Code are covered by the Draft Resolution Authority. Specifically, the authority applies to holding companies of regulated entities (such as banks and broker-dealers) and many of their subsidiaries, but not to the regulated entities themselves.[304] Also excluded from coverage are hedge funds, private equity funds, and other non-holding company financial companies.[305] The financial companies excluded from coverage under the Draft Resolution Authority would thus be resolved not under the Draft Resolution Authority but under the otherwise applicable regime—i.e., banks under the FDI Act, broker-dealers under SIPA, hedge-funds under the Code, etc. Accordingly, numerous financial companies, whose insolvencies could be systemically significant, are not subject to either the Draft Resolution Authority or the FDI Act, and would be resolved under the Code. We believe the scope of the authority is unnecessarily narrow.

b. Toward a Comprehensive Financial Company Insolvency Regime

The Committee recommends creating a single, comprehensive insolvency regime applicable to *all* financial companies and their holding companies that draws on the proposals discussed above. Specifically, we recommend creating an insolvency regime, a Financial Company Resolution Act, with the following features:

* All financial companies, regardless of their regulatory status or form of incorporation, should be covered by the new regime. Entity-specific provisions from existing insolvency regimes, such as depositor preference for banks and protections for the customers of broker-dealers and commodity brokers, should be incorporated into the proposed regime.

* A single regulator should be vested with all resolution powers, preferably the U.S. FSA described in Chapter 6.

[304] The financial companies that would be subject to resolution powers under the Draft Resolution Authority Act include the following U.S. organized entities: (i) Bank holding companies and savings and loan holding companies (each as defined in the FDI Act); (ii) Financial holding companies (as defined in the Bank Holding Company Act of 1956); (iii) Holding companies that hold an insurance company or registered broker-dealer; (iv) Any subsidiary of the above other than a subsidiary that is (a) an FDIC-insured depository institution, or subsidiary thereof, (b) a registered broker-dealer or (c) an insurance company; and (v) Holding companies that hold a futures commission merchant or commodity pool operator. *See* Draft Resolution Authority Act § 2(a)(10).
[305] Hedge funds and private equity funds could be subject to resolution under the Draft Resolution Authority if, due to their equity interest in a relevant financial company (such as a broker-dealer or an insurance company), they could be characterized as a "holding company" of such company.

* The full range of resolution powers provided for under the FDI Act should be available under the new regime, including receivership, conservatorship, QFC transfer, P&A, and the ability to charter bridge institutions.

* Bank resolutions should be initiated by the bank's primary regulator, as provided under the FDI Act. Resolution proceedings in respect of all other financial companies should be initiated either by the relevant regulator or by the company or its creditors, as provided under the Code, provided that the designated regulator is always empowered to convert such proceedings to a receivership or conservatorship.

* Financial companies now eligible for protection under the Code should continue to be able to petition for reorganization as provided for under Chapter 11 of the Code, provided that the designated regulator is always empowered to convert such a proceeding to a receivership or conservatorship. While it is unlikely that many troubled financial companies would be able to take advantage of such a provision, the ability to reorganize in a way that preserves value for general or subordinated creditors or shareholders is important.

* In the event that QFCs are not transferred, QFC counterparties should be entitled to exercise rights as provided for under the FDI Act safe harbors.

* Enhanced resolution powers, including recapitalization, extending loans or guarantees, and other forms of pre-insolvency "open institution assistance," should be available to the designated regulator if the risk of insolvency of a particular financial company would pose a systemic risk, determined as provided under the Draft Resolution Authority.

* All resolutions, other than those that pose a systemic risk, should be subject to a least cost test. Typically, the least cost resolution strategy will be liquidation or P&A. QFC transfer, as a low- or no-cost resolution strategy, should also be available in most cases.

A comprehensive approach to financial company insolvency is crucial—the most effective resolution powers should be available to address the resolution (systemically significant or not) of all financial companies. Furthermore, a revised regime must provide the tools necessary to protect markets in times of crisis without creating incentives for excessive risk taking due to implicit (or explicit) federal guaranties of intervention. We believe the insolvency regime we propose accomplishes these goals.

However, a number of open issues remain. The first issue is how resolution expenses should be paid for. Under the FDI Act, resolution expenses are paid for out of the deposit insurance fund. Under the Draft Resolution Authority, the FDIC may draw

on funds from the Treasury; expenses incurred are recouped by imposing an *ex post* assessment on all covered financial companies. We believe that this is the proper approach for financing systemically significant insolvency, the cost and occurrence of which are impossible to predict. Under the Committee's proposed insolvency regime, we anticipate that most non-systemically significant resolutions will be costless (i.e., the financial company will be liquidated or purchased in a P&A). However, thought should be given to how any expenses incurred during such a resolution should be provided for.

Second, consideration should be give to creating incentives for the designated regulator to resolve financial companies in a cost effective manner. Under the FDI Act, the FDIC has built-in incentives (in addition to its "least cost" mandate) to resolve banks cost-effectively and achieve greater value for stakeholders—namely, its management of the deposit insurance fund that both finances resolutions and protects depositors. This incentive is present whether or not the FDIC is subject to the "least cost" resolution mandate. Consideration should be given to how to create similar incentives for the designated regulator under the Committee's proposed insolvency regimes.

Specific Recommendations

25. Establish a Single Insolvency Regime Applicable to *All* Financial Companies. The Committee recommends the creation of a comprehensive Financial Company Resolution Act, which would be applicable to *all* financial companies—not just those whose failure would be systemically important. Entity-specific provisions from existing insolvency regimes, such as depositor preference for banks and protections for the customers of broker-dealers and commodity brokers, should be incorporated into the proposed regime.

26. Provide Adequate Regulatory Flexibility. A single regulator should be vested with these resolution powers, preferably a newly established U.S. Financial Services Authority, as described in Chapter 6. The full range of resolution powers provided for under the FDI Act should be available under the new regime. At the same time, financial companies now eligible for protection under the Code should continue to be able to petition for reorganization as provided for under Chapter 11 of the Code, provided that the regulator is always empowered to convert such a proceeding into a receivership or conservatorship.

27. Apply the Least Cost Test. All resolutions, other than those that pose a systemic risk, should be subject to a least cost test. QFC transfer, as a low- or no-cost resolution strategy, should also be available in most cases.

28. Authorize Enhanced Resolution Powers for Systemic Risk. Enhanced resolution powers, including recapitalization, extending loans or guarantees, and "open institution

assistance," should be available to the designated regulator if the risk of insolvency of a particular financial company would pose a systemic risk.

29. Consider Financing Methods that Protect the Taxpayer. In creating a comprehensive insolvency regime of this kind, we urge policymakers to give adequate consideration to the methods of financing resolutions and creating incentives for cost effective resolutions. We think that, when enhanced resolution powers are employed for purposes of mitigating systemic risk, expenses incurred by the government should be recouped by imposing an *ex post* assessment on all covered financial companies. We believe this is the proper approach for financing systemically significant insolvency, the cost and occurrence of which are very difficult to predict. Under the Committee's proposed insolvency regime, we anticipate that most non-systemically significant resolutions will be low-cost (i.e., the financial company will be liquidated or purchased by another institution). However, thought should be given to how any expenses incurred during such a resolution should be provided for.

30. Consolidate or Coordinate Cross-Border Insolvency Proceedings. The insolvency of cross-border, multi-entity financial companies should be subject to a special, global regime or the insolvency proceedings occurring in various jurisdictions should be tightly coordinated. We endorse the work in this regard by the World Bank, IMF, Bank for International Settlement's Cross-Border Bank Resolution Group, and others.

CHAPTER 3: Reforming the Securitization Process

Securitization has played a significant role in the evolution of consumer and business finance. As illustrated in Chapter 1, however, the global financial crisis has largely devastated the markets for securitized debt. Perhaps more importantly, the crisis has exposed critical flaws in the current operation of the securitization process. We believe there are several important steps to restoring confidence in the securitized debt markets. The first is to ensure that the incentives of the originators of mortgages and other consumer loans are properly aligned with the incentives of other participants in the securitization process. Next, we believe that increasing loan-level disclosures represents another, critical step toward meaningful reform. A final, crucial step in restoring confidence in the securitization markets is to regulate CRAs effectively to ensure the quality of the ratings regime.

A. Incentives of Originators*

1. Overview

We believe that insufficient alignment of interests between originators and investors in securitized residential mortgage assets, coupled with the widespread use of nontraditional mortgage products and high risk lending practices, played a central role in creating the current crisis. Many reports[306] on the crisis fault the widespread use in the United States of the "originate-to-distribute" (OTD) model—making residential mortgage loans to borrowers for the purpose of selling them to investors in the capital markets via securitization. According to this thesis, incentives between lenders and investors diverged markedly as the former were not required to retain a sufficient portion of the risk associated with the loans that they securitized. As a result, mortgage lenders created unproven new mortgage products, relaxed credit standards, increased loan volumes and focused on earning fees from their loan origination and servicing activities rather than making high-quality, profitable loans. These effects were most visible in the subprime market but extended to Alt-A and prime borrowers, and across both first-lien and second-lien mortgage products. To bring incentives between lenders

* The primary author of this section is Paul S. Giordano, Senior Advisor to the Committee and a Director of Primus Guaranty, Ltd.

[306] *See, e.g.,* European Central Bank, *The Incentive Structure of the 'Originate and Distribute' Model* (2008), *available at* http://www.ecb.europa.eu/pub/pdf/other/incentivestructureoriginatedistributemodel200812en.pdf; Group of Thirty, *Financial Reform, A Framework for Financial Stability* (2009), *available at* http://www.group30.org/pubs/recommendations.pdf.

and investors back into alignment, many regulators, academics, and other commentators have called for originators to have more "skin in the game" going forward.

Before examining this issue more closely, one broad point is worth noting. While the weaknesses of the OTD model are generally viewed as a leading cause of the global financial crisis, some market observers attribute greater significance to other factors. For example, one leading academic commentator believes that the lack of information about the risks embedded in complex securitized products such as collateral debt obligations (CDOs) led to the systemic crisis in the credit markets.[307] Placing too much responsibility for the market's failure on the OTD model ignores the fact that originators and other financial institutions active in the mortgage securitization chain suffered massive losses, often resulting in their actual or near bankruptcy, as a result of their direct and indirect exposure to catastrophic levels of asset underperformance.

Calls to increase the alignment of interests between originators and investors in securitization transactions focus on originators maintaining sufficient economic exposure to the performance of the assets that they securitize. Non-economic forms of alignment, such as reputational risk, also exist but are less tangible. In an ideal world, an appropriate balance would be struck between the benefits of originators having a greater economic stake in what they securitize and the effects on the availability and cost of credit stemming from the additional capital that originators would have to maintain to support the retained exposure. In practice, however, it is difficult to strike the right balance.

We posit that the principal avenues for aligning the economic interests of originators more closely with those of investors are: (a) restricting or prohibiting originators from using certain high risk mortgage products and lending practices; (b) strengthening originator representations, warranties, and repurchase obligations; and (c) increasing originator risk retentions. Although common to all securitizations, concerns over the inadequate alignment of incentives between originators and investors have been most pronounced in the area of residential mortgage securitizations, which is our primary focus.

2. Prohibited Lending Practices in Connection with Securitizations

Weak incentive alignment between originators and investors spawned a dramatic rise in the number and complexity of residential mortgage products aimed at increasing the affordability, and thus the supply, of such loans available for securitization. Interest-only and payment option adjustable-rate mortgages (ARMs), including those with potential negative amortization in which interest could be added

[307] *See* Gary Gorton, *The Panic of 2007* (2008), *available at* http://ssrn.com/abstract=1255362.

to principal, are leading examples of such products. The complexity of such products made it difficult for many borrowers to understand the risks that they were assuming. Originators frequently employed aggressive credit underwriting techniques in conjunction with these higher risk mortgage loans. Chief among these were:

* origination through mortgage brokers and other volume-driven intermediaries;
* no/low documentation lending, in which borrower income and general repayment capacity were not verified prior to extending credit;
* high loan-to-value ratios;
* high debt-to-income ratios;
* reliance on home price appreciation and the ability of borrowers to refinance or sell properties to meet their repayment obligations;
* permitting home equity to be removed through second-lien loans, frequently simultaneous with the closing of a home purchase;
* loans to investors rather than owner-occupiers; and
* combining several of these high-risk features in a single loan—a practice known as risk layering.

In September 2006, U.S. bank, thrift, and credit union regulators issued interagency guidance clarifying how such institutions could offer nontraditional mortgage products in a safe and sound manner as well as clearly disclose to borrowers the risks that they would assume under such products (Guidance).[308] For purposes of the Guidance, nontraditional mortgage products comprise residential mortgage loans that allow borrowers to defer repayment of principal and, sometimes, interest. The majority of depository institutions and industry groups participating in the public comment process argued against a prescriptive approach and in favor of greater flexibility and product innovation. A minority of commentators, who stated that the Guidance did not go far enough in regulating or restricting nontraditional mortgage products, proved to be particularly prescient:

> Several stated these products contribute to speculation and unsustainable appreciation in the housing market. They

[308] Interagency Guidance on Nontraditional Mortgage Product Risk, 71 Fed. Reg. 58609 (Oct. 4, 2006).

> expressed concern that severe problems will occur if and when there is a downturn in the economy.[309]

The regulators sided with the mortgage industry in finalizing the Guidance and opted for requiring institutions to maintain heightened risk management practices to address the risks posed by nontraditional mortgage products, rather than restricting or prohibiting them outright.

In July 2007, concerns over the growing use of ARMs and their associated payment shock risk to borrowers led U.S. banking regulators to publish a statement on subprime mortgage lending (Subprime Statement).[310] Like the Guidance, the Subprime Statement identified how depository institutions should manage the risks associated with subprime residential mortgage lending and provide better disclosure to borrowers—it did not restrict or prohibit certain types of mortgage products or lending practices. For example, the Subprime Statement indicated that stated income or reduced documentation loans to subprime borrowers should be accepted only if there are mitigating factors, but did not ban such lending practices outright.

In July 2008, the Federal Reserve Board adopted amendments to Regulation Z under the Truth in Lending Act that are due to take effect in October 2009.[311] The amended regulation will place substantive limits on certain mortgage lending practices deemed unfair and deceptive. Among other things, the new regulations will prohibit lenders from making higher-priced residential mortgage loans, which capture virtually all subprime loans and generally exclude prime loans, without regard to the borrower's ability to repay from income and assets other than the home's value. Lenders must verify the income and assets on which they rely to determine repayment ability for such loans. Other rules governing real estate appraisals, mortgage servicing, disclosure to borrowers, and advertising apply to all types of mortgage loans. The new regulations will apply to all mortgage lenders.

If enacted, legislation currently under consideration by the House of Representatives would introduce extensive new requirements for residential mortgage products and lending practices used in the United States. The Mortgage Reform and Anti-Predatory Lending Act of 2009[312] (Mortgage Reform Act), reported out of the House Financial Services Committee in April 2009, would require a lender to make a reasonable, good faith determination based on verified and documented information that, at the time a loan is consummated, a borrower has a reasonable ability to repay the loan, according to its terms, and pay all applicable taxes, insurance and assessments.

[309] *Id.* at 58610.
[310] Statement on Subprime Mortgage Lending, 72 Fed. Reg. 37569 (July 10, 2007).
[311] Truth in Lending, 73 Fed. Reg. 44522 (July 30, 2008) (to be codified at 12 C.F.R. pt. 226).
[312] H.R. 1728, 111th Cong. (2009) (The Mortgage Reform Act generally expands on the earlier version of the bill introduced as H.R. 3915, 110th Cong. (2007)).

Also, any refinancing of a mortgage would need to show a net tangible benefit to the borrower. Penalties for violating the Mortgage Reform Act would apply to lenders, assignees and securitizers and include rescission of the loan, recovery of costs (including attorney's fees), and defense to foreclosure. Central to the statutory framework is a safe harbor provision for "qualified mortgages," which are presumed to comply with the ability to pay and net tangible benefit requirements. When coupled with the Mortgage Reform Act's minimum risk retention requirement discussed below, lenders and others with potential liability would have a strong incentive to extend housing credit, perhaps exclusively, in the form of qualified mortgages.

The definition of a qualified mortgage would eliminate or restrict many of the most problematic loan products and lending practices that contributed to the present crisis. Qualified mortgages are those that:

* do not permit deferred payment of principal or interest, or are not otherwise considered "non-traditional mortgages" by Federal banking regulators;
* do not provide for negative amortization at any time;
* are fully amortizing and do not result in a "balloon payment";
* have an interest rate within a predefined spread to an average prime offer rate;
* are underwritten with income and financial resource verification and documentation;
* meet specified amortization and indexing requirements for fixed-rate and adjustable-rate loans;
* comply with a maximum debt-to-income ratio to be specified by regulation;
* have total points and fees of no more than 2% of the total loan amount; and
* have a term not in excess of 30 years.

Federal banking regulators, acting jointly, would prescribe regulations to implement the qualified mortgage provisions and have the authority to revise, add to, or subtract from the criteria used to define them. Federal housing agencies would also prescribe rules defining the types of loans that they insure, guarantee, or administer that would be qualified mortgages.

Going forward, we believe that no/low documentation residential mortgage loans should be banned from the securitization market. Recent regulation and pending legislation reflect a broad consensus that residential mortgage lending requires, at a minimum, verification and documentation of income and financial resources in order to assess a borrower's ability to repay. To the extent not otherwise addressed, no/low documentation loans should not be eligible for inclusion in future securitizations due to the inherent unreliability of the information on which they are based and the considerable barriers that they pose to investors seeking to assess the risks in underlying asset pools. As mentioned below, one academic study has found that full documentation credit underwriting had a favorable impact on the performance of securitized mortgages. Failure to follow appropriate income, asset, and general repayment capacity verification procedures for residential mortgage loans to be included in securitizations should be deemed an unsafe and unsound practice.

While we regard excluding no/low documentation loans from the securitization market as straightforward, nontraditional mortgage products and other high-risk lending practices should be reviewed for their overall and securitization market suitability. The Federal Reserve Board's recent amendments to Regulation Z and the proposed Mortgage Reform Act represent substantial steps in this direction. We believe that legislators and regulators should continue to assess the suitability of mortgage products and lending practices generally and for the securitization market. In particular, we recommend further study of approaches for better managing the risks associated with high loan-to-value ratios, home equity withdrawal through second-lien loans and risk layering to determine whether these practices should be prohibited or restricted in connection with securitization or otherwise.

3. Strengthening Representations, Warranties, and Repurchase Obligations

Originators of residential mortgage loans have customarily assumed legal responsibility for certain risks through the representations, warranties, and repurchase commitments they make in the contracts through which securitizations are effected. Representations and warranties, while not standardized across the industry today, typically address in some fashion topics such as the legality and enforceability of underlying loans, information (usually limited) about the loan pool, and adherence by the originator to its credit underwriting guidelines. Repurchase obligations typically relate to loans that default shortly after the closing of the securitization, usually within 60 to 90 days. The strength of these contractual provisions benefiting investors varied based on a number of factors, including investor familiarity with the originator and the originator's asset performance track record and market power. Due to the nature of capital markets transactions, representations and warranties were not actively negotiated by investors directly with originators. Instead, sponsors, originators, and underwriters would determine the minimum package of representations, warranties, and repurchase obligations that they believed would be acceptable to investors and enable the deal to be completed. In the event of a breach, the trustee on behalf of investors would be able to recover damages or put loans back to the originator either

pursuant to procedures specified in the relevant agreements or, if necessary, through litigation. So went the theory.

For a number of reasons, however, contractual provisions have proven to be of little practical value to investors during the crisis. Many of the originators that made such commitments are now bankrupt. As originators came under stress and began to see liquidity and cash flow dry up, many adopted a deliberate, or even adversarial, approach when responding to claims that they had breached their representations and warranties. Investor requests for information to assess originator compliance with such contractual provisions were not addressed promptly, either as part of an intentional strategy of delay to preserve liquidity or due to many originators being overwhelmed by such requests on a large number of their securitization transactions. Litigation has ensued. Repurchase obligations in respect of so-called "early payment defaults" have been more effective when triggered, but by definition are limited in scope by the short periods of time in which they are operative. Although easier to establish than a breach of representation and warranty, the process for obtaining payment under such provisions is cumbersome, as it must be done on a loan-by-loan basis. As with representations and warranties, many originators sought to delay loan repurchases in order to preserve cash balances for as long as possible.

In light of these experiences, leading industry trade groups and major credit rating agencies are seeking to standardize and strengthen representations, warranties, and early payment default repurchase obligations.[313] For instance, Moody's has stated that it may not assign its highest investment grade ratings or may decline to rate transactions if the originator does not make the broader, stronger representations and warranties which it has outlined or if the originator lacks meaningful financial resources with which to honor its contractual obligations.

Representations, warranties, and repurchase obligations serve a number of important purposes, including protecting the integrity of the data and other information on which a securitization is based. New or less seasoned originators may need to provide representations and warranties that go beyond minimum industry standards. Agreements should provide for the prompt sharing of all information relevant to assessing the originator's compliance with its contractual obligations. They should also allow for an expedited process for resolving disputes between the parties. Originator representations, warranties, and repurchase obligations are, however, likely to be of limited value in periods of broad systemic distress.

[313] *See* Am. Securitization Forum, *Restoring Confidence in the Securitization Markets* (2008), *available at* http://www.sifma.org/capital_markets/docs/Survey-Restoring-confidence-securitization-markets.pdf; Moody's Investors Service, *Moody's Proposed Enhancements to U.S. Residential Mortgage Securitizations: Call for Comments* (2008), *available at* http://www.americansecuritization.com/uploadedFiles/Moody%27s_RMBS%203%2026%2008.pdf.

4. Upfront Retention of Economic Risk

Originator retention of one or more parts of a securitization's capital structure is an effective way to align incentives with investors. Broadly speaking, securitization capital structures are divided into equity, mezzanine, and senior layers, with losses being absorbed first by the equity layer before working their way up the chain to the senior-most securities. There are two basic alternatives to the many ways of sharing risk within a securitization's capital structure: (a) participation by originators in the equity, or first loss position; and (b) pro rata participation by originators in all levels of a securitization's capital structure. The principal question is whether originators should be required by regulation to retain a portion of the capital structure as a means of ensuring that they maintain adequate "skin in the game" or whether this could best be accomplished through market forces. Before reaching this issue, however, it is necessary first to consider whether there is a need to increase each originator's economic stake in the long-term performance of their securitizations.

A growing body of empirical evidence supports the proposition that the ability to securitize residential mortgages, with relative ease prior to mid-2007, adversely affected loan origination standards. Residential mortgage performance for subprime, Alt-A, and even prime loans, has been substantially worse than at any other time since the Great Depression.

Academic research is beginning to show that there was a dramatic misalignment of incentives in recent vintage residential mortgage securitizations. One recent study of subprime neighborhood zip code data across a number of U.S. cities found strong growth in mortgage credit between 2002 and 2005, despite negative relative—and in some cases absolute—income growth in such neighborhoods.[314] This is the only period during the last 18 years in which the correlation between mortgage credit growth and income growth is negative. After addressing other potential explanations, the study attributes this result to the dramatic increase in residential mortgage securitization. Another study has examined recent default experience for subprime loans just above a key eligibility threshold for securitization and those falling just below it.[315] It found that pools of subprime borrowers with 621 FICO scores, just above the 620 securitization eligibility cut-off used in government-sponsored entity (GSE) underwriting guidelines, experienced about a 10-25% increase in defaults compared to pools of borrowers with FICO scores of 619, just below the GSE threshold. The study concluded that lenders who knew they would likely have to retain loans made to the 619 FICO score pool employed more rigorous credit underwriting, or screening, procedures than for the slightly higher credit quality pool of 621 FICO score borrowers whose loans were likely

[314] Atif Mian & Amir Sufi, *The Consequences of Mortgage Credit Expansion: Evidence from the 2007 Mortgage Default Crisis*, Nat'l Bureau of Econ. Research, Working Paper No. 13936 (2008).
[315] Benjamin Keys et al., *Did Securitization Lead to Lax Screening? Evidence from Subprime Loans* (2008), *available at* http://ssrn.com/abstract=1093137.

to be securitized. In particular, lenders to the 621 FICO pool had less incentive to screen for so-called "soft information," such as the future income stability of the borrower. Interestingly, however, full documentation underwriting tended to eliminate differences in default experience between the readily securitizable and less securitizable portfolios. These results support the conclusion that robust underwriting practices, in contrast to low/no documentation lending, can eliminate the distorted incentives sometimes created by securitization as well as obviate the need for mandatory minimum risk retentions.

To combat the potential for misalignment of incentives inherent in securitization generally, and the OTD model in particular, some policymakers and market observers are calling for regulators to require that originators retain some minimum level of economic interest in the assets which they securitize.[316] Initiatives are currently under active consideration in both Europe and the United States.

The European Union is at an advanced stage in developing a "skin-in-the-game" requirement that would extend to all E.U. credit institutions. Under a proposed directive approved by the European Parliament in May 2009,[317] credit institutions could be exposed to credit risk from securitization positions in their trading and non-trading books only if the originator, sponsor, or original lender has explicitly disclosed that it will retain a material net economic interest of not less than 5% on an ongoing basis. The minimum 5% retention requirement could be satisfied by keeping (a) at least 5% of each tranche in a securitization (i.e., a pro rata approach), (b) not less than 5% of securitizations of revolving exposures, (c) randomly selected exposures equal to at least 5% of the amount securitized, or (d) a first loss tranche and, if necessary, other tranches having the same or more severe risk and maturity profile equal to at least 5% of the securitization. Net economic interest would be measured at the time of origination, maintained on an ongoing basis and not subject to any credit risk mitigation, short positions, or other hedging. Regulators would be authorized to suspend temporarily the minimum risk retention rules during periods of general market liquidity stress. Market participants had opposed earlier proposals for minimum risk retentions, which began at 15% before being reduced to 10% and ultimately to the current 5% level. Once finalized, the proposed directive would go into effect for new securitizations issued from year-end 2010.

[316] *See, e.g.*, Group of Thirty, *Financial Reform, A Framework for Financial Stability* 15 (2009), *available at* http://www.group30.org/pubs/recommendations.pdf ("[R]egulators should require regulated financial institutions to retain a meaningful portion of the credit risk they are packaging into securitized and other structured credit products.").

[317] *See* European Parliament legislative resolution of May 6, 2009 on the proposal for a directive of the European Parliament and of the Council amending Directives 2006/48/EC and 2006/49/EC as regards banks affiliated to central institutions, certain own fund items, large exposures, supervisory arrangements, and crisis management (COM (2008)0602 – (C6-0339/2008 – 2008/01919(COD)), *available at* http://www.europarl.europa.eu/oeil/FindByProcnum.do?lang=en&procnum=COD/2008/0191.

The proposed Mortgage Reform Act would require Federal banking agencies to prescribe regulations mandating that residential mortgage lenders retain an economic interest in a material portion of the credit risk—expressed to be at least 5%—for any non-"qualified mortgage" that is transferred, sold, or conveyed to a third party, including through securitization. Lenders would be prohibited from directly or indirectly hedging or otherwise transferring their minimum 5% risk retention. No minimum retention requirement would exist in respect of qualified mortgages as defined under the Mortgage Reform Act (see above). Federal banking regulators would have the authority to provide exceptions or adjustments to the minimum risk retention provision, including the ability to reduce the 5% threshold and the hedging prohibition if certain requirements are met. Regulators also must specify the permissible forms that the required risk retention can take (for example, a first loss position or pro rata vertical slice of the risk) and the minimum duration for which it must be held.

5. Open Issues

There are a number of issues with legally mandated minimum risk retentions for originators. These are illustrated in different ways by both the EC's 5% proposal and the 5% minimum risk retention for non-qualified residential mortgages contained in the Mortgage Reform Act.

First, any fixed-percentage approach applicable to all or a broad range of securitization transactions, like the EC's proposal, cannot adequately account for the distinct nature of securitization markets pertaining to credit card, student loan, automobile finance, residential mortgage, commercial mortgage, and corporate loan assets. An alternative to a uniform approach for all asset classes would be to develop specific minimum retention requirements by individual asset class. The Mortgage Reform Act would apply only to non-qualified residential mortgages, which generally encompass higher risk mortgage products and lending practices. As a further example, in the United States, a requirement that securitizers of federally guaranteed small business loans retain for six years a first loss position equal to the greater of two times the securitizer's multi-year average loss rate or 2% of the principal balance was generally welcomed by the market when it was introduced because it rewarded good loan performance and was based on common industry practice.[318] Risk retentions tied to actual loss experience and industry practice in particular asset classes are likely to be more effective than arbitrarily selected percentages applicable to all or many types of securitizations. While empirically more straightforward for asset classes with a long history of low volatility, tying minimum risk retentions to historical loss experience and industry practice for higher volatility asset classes may be far more challenging.

[318] *See* 13 C.F.R. § 120.424(b).

Second, to be effective in aligning the interests of originators and investors, a minimum risk retention requirement must prohibit or be net of hedging. Both the proposed E.U. directive and the Mortgage Reform Act expressly prohibit hedging and other forms of risk mitigation in connection with their respective 5% minimum risk retention requirements, subject to the ability of regulators to suspend or make exceptions to them. Even if regulators are authorized to relax prohibitions against hedging in certain circumstances, their ability to do so in time to allow lenders to mitigate their exposures effectively should be viewed with caution, or even skepticism, given the inherent limitations on accurately forecasting economic or financial market distress. Having a net retention that generally cannot be mitigated runs counter to a central theme in regulatory regimes around the world that financial institutions must be permitted to manage risk on a dynamic basis and should be rewarded for reducing risk. Requiring financial institutions to bear an irreducible amount of risk and attendant capital costs under all or most circumstances may lead to unintended consequences, such as increased housing concentration risk. Residential real estate loans held by all FDIC-insured institutions at year-end 2008 comprised approximately $3 trillion, or just over 20%, of their $14 trillion in total assets.[319] Community and regional banking institutions in particular could develop unhealthy risk concentrations given their limited ability to diversify their exposures geographically, potentially forcing them to curtail credit availability in their markets. Monitoring and enforcing a prohibition against hedging—especially indirect hedging tied to broad indices or macroeconomic factors rather than to specific transactional exposures—could be very difficult to achieve.

Third, the economic impact of minimum risk retention requirements on financial institutions and the broader economy is uncertain and potentially far-reaching. Banks and other mortgage lenders would have to maintain additional capital in respect of their mandatory risk retentions. Residential lending traditionally has been a low margin business for many banks and thrifts, not least of all due to the many governmental policies aimed at making home ownership more affordable. Additional capital would come at a cost—particularly after the crisis—that could render home lending less attractive, or even uneconomic, for many lenders. Alternatively, lenders may need to charge higher interest rates for home mortgages to offset the cost of additional capital on retained exposures. Mandatory risk retentions also could lessen competition and consumer choice in mortgage providers, as many mortgage finance companies that recycle their capital and depend on warehouse or similar lines of credit that must be repaid from securitization proceeds may not be able to complete the progressive capital raises that would be necessary to remain in business. The vast size of the residential mortgage market in the United States—approximately $12 trillion of residential mortgage debt was outstanding at year-end 2008, of which approximately $7

[319] *See* Federal Deposit Insurance Corporation, *Statistics on Depository Institutions Report*, *available at* http://www2.fdic.gov/sdi/main.asp.

trillion was held in securitized pools[320]—means that even small changes to the economics of mortgage finance could have potentially large effects on access to housing credit and the economy as a whole.

Fourth, the location in the capital structure as well as the amount of minimum risk retention are critical to aligning incentives between originators and investors properly. The E.U. directive provides that the 5% requirement can be satisfied in one of several ways—for example, pro rata retention, first loss layers, or retention of randomly selected exposures—but expresses no preference for one form of retention over another. The Mortgage Reform Act would require that Federal banking regulators specify the form that the 5% minimum retention take within a securitization's capital structure, citing a first loss position or a pro rata vertical slice as examples. Originator participation in first loss or subordinated parts of securitization capital structures are considered by some observers to mitigate the risks of adverse selection and moral hazard that arise from superior knowledge of the underlying asset portfolio, while the senior parts of the capital structure function primarily to absorb losses driven by macroeconomic events beyond an originator's ability to control.[321] Assuming exposures in practice truly could be retained on a randomly selected basis, such an approach would force originators to be comfortable with the risks at all levels of a securitization's capital structure. Where originators should participate in securitization capital structures to achieve optimal alignment with investors is largely an empirical question that remains open pending further study and should be determined only after careful analysis.

Fifth, as a practical matter, the compliance costs and complexities associated with administering legally mandated minimum risk retentions for originators are likely to be substantial. Such concerns were expressed to the European Commission during the consultation phase for the E.U. directive.

Finally, the impact of more economically neutral reforms has yet to be fully examined. For example, one research study—despite finding that some lenders may have had insufficient "skin in the game"—concludes that "[w]ith enough hard [credit underwriting] information, as in the full documentation market, there may be less value in requiring market participants to hold additional risk to counteract the potential moral hazard of reduced screening standards."[322] The broad movement by legislators and regulators to require that residential mortgage lenders verify and document

[320] Fed. Reserve Bd., *Mortgage Debt Outstanding*, First Quarter 2009, *available at* www.federalreserve.gov/econresdata/releases/mortoutstand/mortoutstand20090331.htm.
[321] *See* Günter Franke & Jan Pieter Krahnen, *Default Risk Sharing Between Banks and Markets: The Contribution of Collateralized Debt Obligations*, Nat'l Bureau of Econ. Research, Working Paper No. 11741 (2005).
[322] Benjamin J. Keys et al., *Did Securitization Lead to Lax Screening? Evidence From Subprime Loans* 28 (2008), *available at* http://ssrn.com/abstract=1093137.

borrower income and financial resources, coupled with the elimination or restriction of other product features and credit underwriting procedures deemed to pose unreasonably high risk, may obviate the need for imposing economically sensitive risk retentions.

Although investors, bankers, and regulators clearly failed to understand the extent to which incentives had become dangerously misaligned in the residential mortgage securitization market, the incentive structures in other securitized asset classes generally have held up well, despite enormous pressure from the current crisis. As in past crises, the market will learn from recent mistakes and improve the incentive alignment mechanisms going forward. A catalyst for accelerating this process is to require originators to disclose more information about the extent and nature of the economic interests that they intend to retain in their securitizations.

Some have also advocated that originators not be able to get fully paid for their originations, or securitizers get full payment of fees, until there is adequate time to assess the performance of the securitized portfolio. This approach would have to determine the appropriate percentage of fees to hold back, which might be even more difficult than determining the appropriate percentage of risk retention. Further, there would be significant difficulties in determining what performance criteria would have to be satisfied. Some negative performance might have nothing to do with the efforts of the originators or sponsors (for instance, performance affected by increases in interest rates). More generally, this approach would only make sense in a broader framework for regulating firm or individual compensation.

Specific Recommendations

31. Prohibit or Restrict High-Risk Mortgage Products and Lending Practices from Entering the Securitization Market. Policymakers should prohibit or restrict high-risk mortgage products and lending practices, particularly insofar as access to the securitization markets is concerned. Regulators must go beyond merely pushing for better risk management practices and prescribe substantive rules governing residential mortgage products and underwriting. Such rules, however, should not eliminate product or lending practice diversity. Although important issues remain open, substantial progress is already being made by legislators and regulators. We believe no/low documentation residential mortgage loans—in which borrower income and assets are not adequately verified prior to the extension of credit—should be deemed unsafe and unsound practices, rendering them ineligible for securitization. In addition, we believe legislators and regulators should continue to assess the suitability of mortgage products and lending practices generally and for the securitization market. In particular, we recommend further study of approaches for better managing the risks associated with high loan-to-value ratios, home equity withdrawal through second-lien loans, and risk layering to determine whether these practices should be prohibited or restricted in connection with securitization or otherwise.

32. Strengthen Representations, Warranties, and Repurchase Obligations. We support the development of broader, stronger representations, warranties, and repurchase obligations that represent a minimum industry standard, but this approach by itself is unlikely to achieve the desired alignment of interests between originators and investors. The principal limitation of relying on contractual rights to achieve such alignment is that they are contingent in nature, subject to potentially lengthy litigation to vindicate and highly dependent for their value on the originator's financial condition after events have already occurred. The ex post nature of contractual protections places inherent limitations on the degree of reliance that should be placed on them and their value as alignment tools.

33. Explore Minimum Risk Retention to Improve Incentive Alignment. We support efforts to explore measures to align the economic interests between originators and investors by requiring the former to retain a meaningful portion of the risk associated with the assets they securitize. In our view, any minimum risk retention requirement must address (i) the risk and loss characteristics of the individual asset class to which it relates (i.e., not one standard for all asset classes), (ii) the amount of risk to be retained, (iii) where such retention resides in the securitization capital structure (e.g., first loss or pro rata), (iv) the duration such retention must be held, and (v) the extent to which the retained risk can be hedged. Allowing regulators the flexibility to modify and adapt minimum risk retention requirements over time as circumstances change is also desirable. To facilitate risk diversification, there should be coordination on such requirements at an international level so that institutions in one country can invest in securitizations originated in other countries. We do not believe, however, that present proposals for 5% net economic loss retention make sense for all securitizations. Further, they may have broad negative effects on the economy, including greater concentration of risk for financial institutions, higher capital requirements for lenders, increased borrowing costs for consumers, and reduced competition between depository institutions and finance company lenders.

34. Enhance Disclosure of Retained Economic Interests. To enable investors to assess the degree of alignment they have with originators, regulators should require sponsors and originators to disclose the following information in public and private securitization offerings:

* the amount of economic interest they will maintain in the securitization;
* the location in the capital structure of all such retained economic interest;
* the duration for which the economic interest will be retained;
* the extent to which the sponsor or originator is able and intends to hedge such retained economic interest during the holding period; and

* the amount of fee or other income to be earned by the sponsor or originator over the expected and legal life of the securitization.[323]

B. Disclosure

1. Overview

Apart from an improper alignment of incentives between originators and other market participants, the securitization process also suffers from a lack of adequate disclosures to investors. Indeed, the global financial crisis has raised many relevant questions. How did so many sophisticated investors—and issuers—so badly misprice the risk associated with securitized mortgage debt? Why did these same investors rely so heavily on the assessments of credit rating agencies? What accounts for the wide bid-ask spread in the failed market for securitized mortgage debt, a gap that is impeding efforts by both the government and the banks to remove these assets from bank balance sheets?

One answer, which we explore in this section, is that the disclosures made in connection with the issuance of mortgage-related securitized debt—residential-mortgage backed securities (RMBS) and mortgage-related collateralized debt obligations (CDOs)—was inadequate, making it difficult for investors to independently assess credit risk. Specifically, we test the hypothesis that granular loan-level data necessary to evaluate credit risk was not widely available, or not available in a standardized form, for these instruments. Although the sheer complexity of these instruments would have complicated risk modeling in any event, the absence of relevant loan-level data would have made it almost impossible. We analyze both the availability of such data at issuance and on an ongoing basis with respect to RMBS and CDOs.

We are not the first to undertake such a project. In July 2008, the American Securitization Forum (ASF) launched its Project on Residential Securitization Transparency and Reporting (Project RESTART), aimed at developing a standardized disclosure package for use in the initiation of RMBS transactions. The initial disclosure package, also released in July, included 135 data fields of pool and loan-level information for the residential mortgages underlying RMBS.[324,325] Data fields included

[323] Günter Franke & Jan Pieter Krahnen, *The Future of Securitization*, Center for Financial Studies, Working Paper No. 31 (2008), *available at* http://www.ifk-cfs.de/fileadmin/downloads/publications/wp/08_31.pdf ("[W]e predict that substantial first loss piece retention will be the model of choice whenever the underlying assets are highly information-sensitive.").
[324] Am. Securitization Forum, *Project RESTART Request for Comment* 5-7 (July 16, 2008), *available at* http://www.americansecuritization.com/uploadedFiles/Project_RESTART_RFC_%207_16_%2008.pdf.
[325] In December 2008, the Eur. Securitization Forum released its "Prime RMBS Standardized Reporting Template" including 85 mandatory and optional security of bond-level, pool-level and individual loan-level data fields.

information relating to loan type, lien position, loan term and amortization type, adjustable-rate features, pledged prepayment penalties, borrower information, borrower qualification, subject property characteristics and value, loan-to-value, and HUD-1 status. In February 2009, ASF proposed a revised package of data fields to be updated on a monthly basis by RMBS servicers throughout the life of an RMBS transaction.[326]

Although Project RESTART is forward-looking, it was established due to the lack of historical loan-level data in any standardized form. A review of the recent revisions to data requested by the credit rating agencies (CRAs) is consistent with this premise. In April 2007, Moody's released a publication titled "Moody's Revised U.S. Mortgage Loan-by-Loan Data Fields," requesting 36 newly requested data fields.[327] Moody's noted:

> The data fields essential for running [Moody's proprietary risk analysis] model were established when the model was first introduced in 2002. Since then, the mortgage market has evolved considerably, with the introduction of many new products and expansion of risks associated with them. To allow for a more consistent process for assessing these risks, Moody's is expanding its loan level data request for all residential mortgage loans. The new tape format will enable us to perform a granular credit analysis of the various loan attributes.[328]

In September 2007, a Moody's publication—"Moody's Proposes Enhancements to Non-Prime RMBS Securitization"[329]—acknowledges that Moody's had not received, on an ongoing basis, monthly loan level performance information.

> Moody's historically has received loan level information prior to the closing of a mortgage-backed transaction and monthly summary information on mortgage pool performance thereafter. More recently, Moody's has begun receiving monthly loan level performance information. *Prospectively*, Moody's will look for servicers to provide us

[326] Am. Securitization Forum, *Project RESTART Request for Comment*, Feb. 9, 2009, *available at* http://www.americansecuritization.com/uploadedFiles/ASF_2_9_09_RESTART_RFC.pdf.
[327] Moody's Investors Service, Moody's Database (April 3, 2007), *available at* http://v2.moodys.com/moodys/cust/research/MDCdocs/03/2006600000426115.pdf?frameOfRef=structured.
[328] *Id*. at 1.
[329] Moody's Investors Service, Moody's Database (Sept. 25, 2007), *available at* http://v2.moodys.com/moodys/cust/research/MDCdocs/25/2007000000442803.pdf?frameOfRef=structured.

> such monthly loan level performance information for all newly originated RMBS transactions (emphasis added).[330]

In March 2008, Moody's yet again requested expanded loan-level data reporting of initial mortgage pool and ongoing loan performance, including an additional 74 "new" and 53 "modified" data fields.[331]

The CRAs are not the only players to express an interest in improved disclosures. A recent investor survey conducted on behalf of ASF by McKinsey confirms investor interest in improved disclosures.[332] The survey asked a broad group of market participants to evaluate how important six issues were to restoring confidence in the securitization markets. The issues were: (1) enhanced disclosure and standardization of information; (2) restored confidence in CRAs; (3) greater price transparency and/or valuation certainty; (4) better ability to evaluate, measure, and manage risk; (5) better alignment of incentives between stakeholders across the securitization value chain; and (6) revisions to accounting rules and capital treatment. The respondents ranked enhanced disclosure and standardization of information as the most important issue.[333] The survey next asked respondents to evaluate the relative importance of specific issues within the broader six categories. Disclosure of information on underlying assets was ranked the single most important issue.[334]

2. Availability of Loan-Level Data for RMBS Transactions—At Issuance

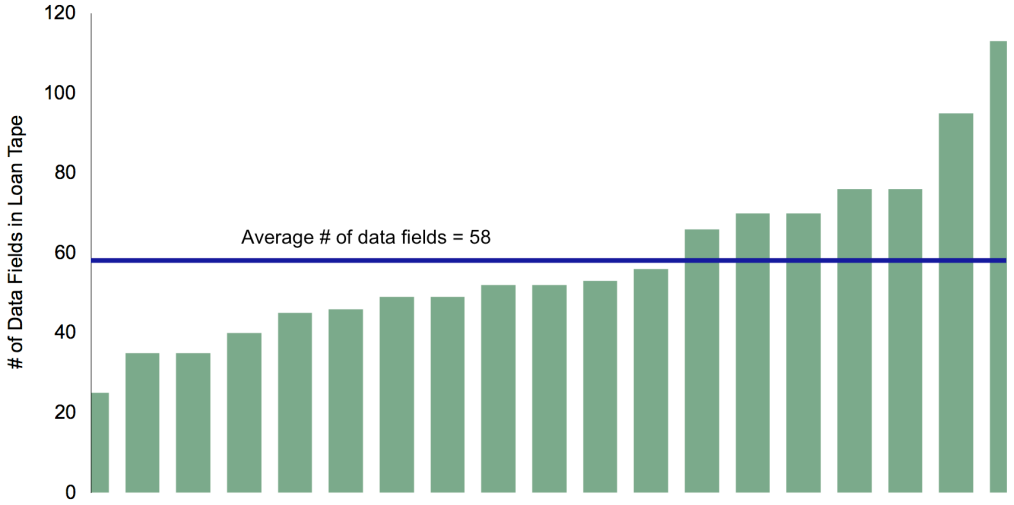
Under existing SEC regulation AB—addressing disclosure in connection with asset-backed securities—dealers issuing mortgage-backed securities may, but are not required to, provide granular loan-level data regarding the underlying mortgages. Nonetheless, the banks arranging these offerings often filed loan tapes with the SEC containing loan-level information.[335] Typically, these tapes were filed as attachments to the free writing prospectus or the pooling and servicing agreement.

[330] *Id*. at 1-2.
[331] *Moody's Proposed Enhancements to U.S. Residential Mortgage Securitizations: Call for Comments* (March 26, 2008), *available at* http://v2.moodys.com/moodys/cust/research/MDCdocs/26/2007100000485953.pdf?frameOfRef=structured.
[332] *See* Am. Securitization Forum, *Restoring Confidence in the Securitization Markets* (2008), *available at* http://www.sifma.org/capital_markets/docs/Survey-Restoring-confidence-securitization-markets.pdf.
[333] *Id*. at 39-40.
[334] *Id*. at 40-41.
[335] The availability of loan tapes was often determined by negotiations between investors and dealers. Because the CRAs required loan tapes to rate the deals, large institutional investors were able to bargain for access to the tapes provided to the CRAs. By regulation, once information had been provided to one investor, it had to be provided to all investors and was therefore often filed with the SEC.

Using *Inside Mortgage Finance*, we identified the 3 largest issuances for each quarter of 2006 for three different types of RMBS—adjustable rate, Alt-A, and subprime. For each of the sample issues, we determined if a loan tape had been filed on EDGAR. Out of our sample of 29 issues (the adjustable rate and Alt-A categories overlap), we were able to obtain 19 loan tapes.[336] Of the 12 ARM issues we looked at, loan tapes were available for 9; of the 12 Alt-A issues we examined, loan tapes were available for 6; and of the 12 subprime issues we looked at, loan tapes were available for all 12.

We then compiled a list of the loan-level data fields required or recommended by ASF, Moody's, and S&P. The list numbered 165 fields falling into the following categories: general information (9 data fields), loan type (18), mortgage lien (7), loan-to-value (3), loan term and amortization type (23), ARM features (15), negative amortization features (12), prepayment penalties (6), borrower qualification (46), subject property (18), and mortgage insurance (8). Next, we created a matrix with possible data fields and our sample loan tapes to determine the completeness of the data on each tape.[337] Of the 19 loan tapes we reviewed, the average number of available data fields was 58, or 35% of total possible fields. The tape with the most data fields had 113 (or 68% of total possible fields), while the tape with the least had 25 (15%).

Figure 30: # of Data Fields Available for Sample 2006 RMBS Issues with Publicly Filed Loan Tapes

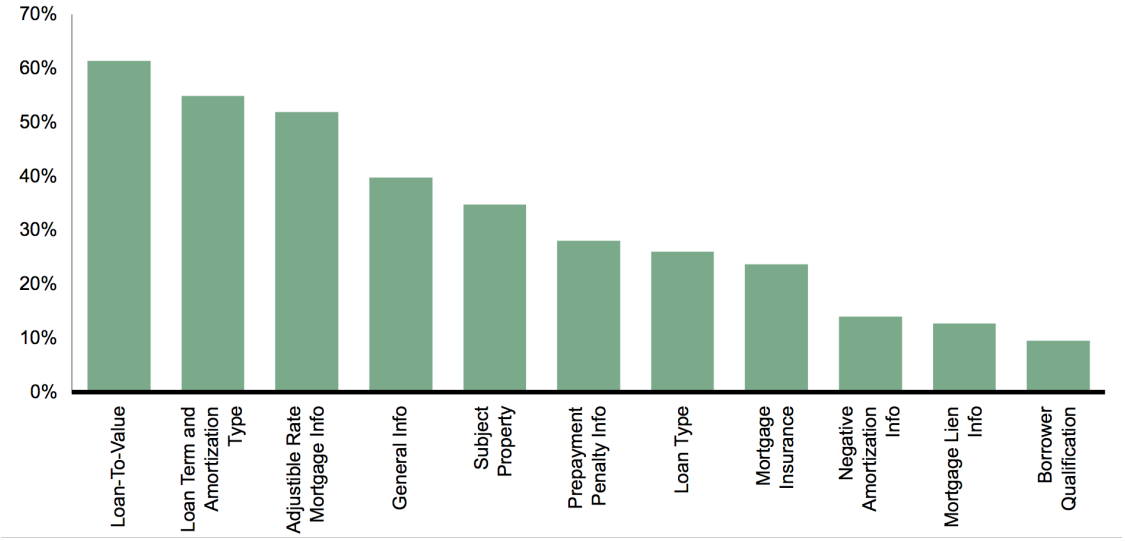


The category with the most available information concerned loan-to-value. For the three loan-to-value data fields, on average 11.7 of the 19 loan tapes contained such data. The category of information that was least available related to borrower qualification. On average, each of the 46 borrower qualification fields was available on

[336] Three of the tapes were too large to download.
[337] We made no attempt to evaluate the *accuracy* of the data on each tape.

only 1.8 of the 19 sample tapes. Some of the borrower qualification fields, such as borrower income verification (0 of 19 tapes), co-borrower income verification (0), co-borrower employment verification (0), borrower asset verification (3), co-borrower asset verification (0), and underwriter discretion used (0), relate to the quality of the underwriting process, such that their unavailability undermined the effort to verify the accuracy of the *other* data fields. Based on these findings, we therefore recommend increased disclosures regarding borrower qualification and, specifically, the quality of the underwriting process.

Figure 31: Average Percent of Loan Tapes Containing the Data Points in a Particular Category



Having evaluated the availability of data on the loan tapes, we attempted to assess the significance to investors of the data that was *not* available. We surveyed 19 analysts from money managers, hedge funds, insurers, GSEs, Wall Street banks, and mortgage insurers who specialize in RMBS. Our survey asked the respondents to rate each of the 165 data fields as either "essential" or "nonessential." We received 6 responses.

The survey produced one strong result: numerous data fields considered essential by investors were simply not available to them. 21 data fields considered essential by *all* 6 respondents were not contained in *any* of the 19 sample loan tapes. At the same time, 41 data fields considered essential by all 6 respondents were contained on 5 or fewer of the 19 sample tapes. In addition, 40 data fields considered essential by 5 of the 6 respondents were also not contained in any of the loan tapes. At the same time, 77 data fields considered essential by 5 of the 6 respondents were contained on 5 or fewer of the 19 sample tapes. The table below compares the expressed desire for loan-level data fields with their availability on our sample tapes.

Table 14: # of Loan Tapes Out of 19 that Contained a Particular Data Field Considered Essential by the Survey Respondents							
Number of Survey Respondents that Considered a Particular Data Field Essential		0	1 or less	2 or less	3 or less	4 or less	5 or less
	6 of 6	21	26	31	34	38	41
	5 of 6	40	50	58	66	73	77

Below we list those fields considered essential by all respondents but not contained in any of the loan tapes. Again, the category of information least represented concerned borrower qualification; 6 of the 21 data fields desired by investors but not available on any loan tape fell in that category.

Table 15: Essential Data Not on Loan Tapes	
Category	*Data Point*
Loan Type	HELOC Indicator
Mortgage Lien Info	Origination Date of Most Senior Lien
	Loan Type of Most Senior Lien
	Hybrid Period of Most Senior Lien
	Negative Amortization Limit of Most Senior Lien
Negative Amortization Features	NegAm Recast Period
	NegAm Initial Minimum Payment
	NegAm Initial Minimum Payment Term
	Current Minimum Payment
Borrower Qualification	Most Recent FICO Date
	Most Recent Co-Borrower FICO
	All Borrower Wage Income
	Borrower Income Verification
	Fully Indexed Rate
	Mortgage Payment Used to Qualify
Subject Property	Most Recent Property Valuation Type
	Most Recent Property Valuation Date
	Most Recent AVM Model Name
	Most Recent AVM Confidence Score
Mortgage Insurance	Pool Insurance Stop Loss Percent
	FHA Section

As a more general matter, in conducting our analysis we experienced the difficulties resulting from a lack of standardization. Banks used different and sometimes unintuitive codes for each data field and provided them in different order, making comparisons difficult. Therefore, we fully support the efforts by ASF and others to develop a standard disclosure package.

3. Availability of Loan-Level Data for RMBS Transactions—Ongoing Basis

In the secondary market, analysis of RMBS credit risk requires not just data regarding the underlying mortgages available at issuance, but also ongoing information regarding individual loan performance. As discussed above, Moody's only recently

began requesting this information, and only limited loan-level data is made available on trustee websites and a few proprietary databases.

Ongoing *pool-level* performance information, on the other hand, has been available to investors through remittance reports for years. Remittance reports are posted online and sent out to investors on a monthly basis by either the trustee or the servicer, depending on the terms of the pooling and servicing agreement governing a particular MBS issuance. In addition to information on distributions paid to investors, the remittance reports present largely aggregate performance data on the underlying mortgage pool, including collections, changes in credit enhancement, and updated collateral balance. The reports also provide investors with the most recent mortgage status statistics, such as the percentage of the pool in delinquency (broken down into categories of days delinquent), foreclosure, or bankruptcy, and the percentage of the pool that is real estate owned (as the result of a failed foreclosure sale). Additionally, the remittance reports sometimes provide a list of loans that have been added to delinquent-specific categories, such as real estate owned (REO) or foreclosure/bankruptcy. However, as mentioned above, the reports contain only limited current loan-level data, such as remaining balance and current note rate. They rarely, if ever, contain updated FICO scores, debt-to-income (DTI) ratios, or loan-to-value (LTV).

There are a handful of trustees, including Deutsche Bank, Bank of New York Mellon, and Wilmington Trust, that have historically dominated the RMBS market. Deutsche Bank served as trustee in connection with 5 of the 19 sample RMBS issues we analyzed. To assess the availability of ongoing loan-level data, we analyzed the data available on Deutsche Bank's website with respect to these five transactions. Identical information was available for all five issues. On average, the trustee website possessed more information than the loan tapes—71 data fields per issue rather than 58.[338] However, the trustee website also contained ongoing loan performance information, updated on a monthly basis, that was not available on the loan tapes. Specifically, 17 of the 71 data fields related to the continuing performance of the underlying loans. Again, however, data relating to borrower qualification and the quality of the underwriting process was deficient. In fact, the Deutsche Bank website contained no information relating to the borrower's credit quality, income, or assets.

A variety of vendors, including Bloomberg, Intex, and Loan Performance, aggregate the limited loan-level data available in the remittance reports and provided by servicers, and the latter two supplement that data with proprietary analytics. The amount of data contained in these databases is staggering. Loan Performance, for example, has been estimated to contain approximately 25 million rows of data (each

[338] We note that the data available today on the Deutsche Bank website is not necessarily identical to what was available in 2006 when the sample loan tapes were issued.

representing a separate loan), for thousands of RMBS transactions. In total, Loan Performance contains upwards of 1 billion rows of data. The database is so massive that special third-party applications have been specifically developed to allow users to navigate the data.

4. Availability of Loan-Level Data for CDO Transactions

The failure to adequately assess credit risk in the securitized debt markets was not limited to RMBS. CDOs presented even more analytical complexity and the market for CDOs suffered an equally dramatic collapse as investors lost all confidence in their ability to price the risk associated with these instruments.

In theory, cash CDOs holding RMBS as collateral should present a difficult—but still not impossible—risk analysis. We have interviewed several CDO analysts regarding the possibility of drilling down to loan-level data for CDOs, and have received conflicting assessments.

According to one major institutional investor, CDOs were essentially "unanalyzable" for two principal reasons. First, most CDOs were not fully invested at issuance; the manager had discretion to add additional collateral. Second, since CDOs often used a variety of different securities as collateral—sometimes including other CDOs (so-called "CDOs squared"), it was practically impossible to trace back from these securities to the underlying collateral. Add to this the limited time and massive amount of data, and we were told that even the best RMBS modeler could not model a CDO. As a consequence, CDOs were essentially sold as a money manager product where the investor purchased the manager's expertise. In addition, there was an even greater reliance on credit ratings than was the case with RMBS.

Other institutional investors have told us that while CDOs were difficult to analyze in practice, risk modeling was not impossible. An investor could get the full list of collateral and cash flow (or "waterfall") rules from the issuer and, assuming loan-level data was available for the underlying mortgages, could drill down and model the data. While the initial offering documents may not have identified all collateral—as much as 30-50% of collateral may not have been purchased during the "ramping" period between the offering and effective dates—investors could request such information from issuers upon its availability. In practice, however, this was extraordinarily difficult, and few investors actually went to the trouble (especially prior to 2007). Holders of AAA-rated senior tranches were significantly less motivated to perform their own risk analysis than holders of equity tranches.

5. Amending Regulation AB

As noted above, Regulation AB permits—but does not compel—issuers of mortgage-backed securities to provide loan-level data.[339] The regulation should be amended to require such disclosure. The SEC itself has noted that technology is beginning to make loan-level data management readily available.[340] The Commission needs to begin implementing these changes immediately. Such a disclosure requirement will not, however, be workable absent the development of a standardized loan-level disclosure package and careful consideration of the privacy concerns of individual borrowers. Nor will it be useful if issuers can easily opt out of ongoing disclosures under Regulation AB pursuant to Section 15(d) of the Exchange Act.

a. Loan-Level Data

At the time of issuance, much of the information available to investors of mortgage-backed securities is generic—describing such loan terms as loan-to-value ratios, loan type, duration, liens, amortization, and prepayment penalties.[341] While this data is important, it is not vital to the determination of credit quality. Understanding the borrower's ability to repay is more important than the features of the underlying loan or even, arguably, the value of the collateral. Our study shows that most of the information presently available to the typical RMBS investor is inadequate to make a reasonable determination of credit quality. As a consequence, the Committee recommends that within the proposed standardized disclosure package granular, loan-level data be provided sufficient to allow investors to complete their own credit analysis.

A related point is that, as currently written, Regulation AB requires only that "material characteristics" of the asset pool be described.[342] It also provides a list of what may be considered material, but does not go so far as to require specific data. "Standardized credit scores of obligors and other information regarding obligor credit quality"[343] are simply one of the characteristics listed as possibly material. This is insufficient. Experience has shown that when providing data on asset pools, issuers have not reached consensus on what is "material." The Committee encourages the SEC to initiate a study immediately to refine the standardized list of RMBS pool data required at inception and on an ongoing basis. The current recommendations listed in Regulation AB may well serve as a baseline for the new standards. In particular, two major categories that need particular attention are credit quality and underwriting processes.

[339] Asset-Backed Securities, 70 Fed. Reg. 1506, 129.
[340] *Id.* at 131.
[341] 17 C.F.R. § 229.1111.
[342] C.F.R. § 229.1111(b).
[343] *Id.*

To complete a detailed credit analysis, a creditor needs data reflecting verification of the borrower's income, employment, assets, and credit scores.[344] Such data should be passed through the originator to the investor. A study by the SEC may also reveal other valuable pertinent data. All items should be readily quantifiable for the purposes of conveying the data to end investors via loan tape.

In addition to borrower qualifications, disclosure should be required regarding the quality of the underwriting itself. While more difficult to quantify, if an investor is to make an informed decision, it is vital they understand how the underlying information was obtained and verified.[345] For this reason, we believe that basic data should be provided in the disclosure package addressing the quality of the underwriting process. Simple responses to such inquiries as whether the borrower's federal income tax statements have been received or whether the borrower's employment was verified can be incorporated into the granular loan-level data provided at the time of issuance.

The ongoing disclosure requirements of Regulation AB deal principally with pool-level performance and updated delinquency reports.[346] Our research demonstrates that issuers have begun providing detailed information online that shows remittance reports and such performance data as collections, delinquencies, foreclosures, and bankruptcies. Modern technology makes it viable for issuers to update investors on an ongoing basis regarding such information as updated FICO scores and LTVs based on current property valuation. The SEC may also consider whether securitizers should have the obligation to conduct some kind of ongoing due diligence with respect to the accuracy of this data.

b. Suspension of Reporting Under Section 15(d)

Before the promulgation of Regulation AB, asset-backed securities issuers, including RMBS issuers, were exempted by the SEC from filing quarterly reports. Regulation AB created a new Form 10-D, for monthly distribution reports and also codified the SEC's positions on the necessity for annual reports of ABS. But issuers may enjoy suspension of these requirements, in the fiscal year after the year of issuance, pursuant to Section 15(d) of the Exchange Act,[347] which applies when the securities

[344] U.S. Dep't of Housing and Urban Development, *Mortgage Credit Analysis Worksheet Purchase Money Mortgages*, *available at* http://www.hud.gov/offices/adm/hudclips/forms/files/92900pur.pdf (The U.S. Department of Housing and Urban Development has created a Mortgage Credit Analysis Worksheet for Purchase Money Mortgages. This simple worksheet was intended as a basic template of enabling a lender to evaluate the type of loan data purchase money mortgage on an individual basis.).
[345] Letter from the Association for Investment Management and Research (AIMR) to Brian J. Lane, Director, Division of Corporation Finance, *Recommendations for a Disclosure Regime for Asset-Backed Securities* (Sept. 30, 1996), *available at* http://www.sec.gov/rules/proposed/s72104/s72104-1.pdf.
[346] Asset-Backed Securities, 70 Fed. Reg. 1506, 44.
[347] 15 U.S.C. § 78o(d).

issued in connection with a particular registration statement are held on record by fewer than 300 people.[348] Because RMBS are likely to be registered under brokers' names, many such issuances qualify for suspension of reporting under Section 15(d) despite the fact that far more individuals beneficially own, or are otherwise exposed to the risk of, such securities.[349]

When proposing Regulation AB, the SEC solicited public comment on whether it should consider changing the practice but eventually decided that they "are not at this time revisiting the statutory framework of Section 15(d) regarding the suspension of reporting obligations" because that would raise "broad issues regarding the treatment of other non-ABS issuers that do not have public common equity."[350] Because the enhanced disclosures we describe above will be useful only to the extent they are actually made, we encourage the SEC to consider whether the reporting exemption of Section 15(d) was meant to apply to the typical RMBS issuance otherwise covered by Regulation AB. If so, it should seek a statutory change to remedy this problem.

6. Due Diligence

Underwriter due diligence has always been an additional safeguard protecting investors in the securities offering process. The quality of disclosure is only as good as the veracity of the information presented. It makes little sense to require granular, loan-level disclosures upon the initial issuance of RMBS or CDOs if underwriters will ultimately fail to verify the accuracy of the data before the securities are purchased by investors. At present, underwriters of RMBS and CDO offerings do not normally have access to loan-by-loan files across-the-board. Where an underwriter enjoys access to such information because it also happens to have originated the underlying mortgages solves the informational problem but raises the question whether the underwriter is able to conduct its due diligence with thoroughgoing objectivity. There are also serious questions of how the validity of updated information should be assured. A key question here is on whom such obligation should be placed. The Committee makes no recommendations on due diligence but intends to study this question in the future. We

[348] *See id*. (stating that periodic filing obligations "shall … be automatically suspended as to any fiscal year, other than the fiscal year within which such registration statement became effective, if, at the beginning of such fiscal year, the securities of each class to which the registration statement relates are held of record by less than three hundred persons"). Section 15(d) also authorizes the SEC to determine how to interpret the "held of record" requirement as it deems necessary or appropriate in the public interest.

[349] Even a rudimentary search on SEC filings reveals that, during the period of 2004-2007, for all but a few RMBS securities issued in a given year, issuers would file a 15-15D termination report at the beginning of the next year and would provide Section 15(d) as their legal basis for terminating their reporting. The number of record holders provided in the 15-15D report ranges from two to more than 70 according to a survey of about 100 randomly selected securities. Of course, this number in no way reflects the number of ultimate beneficial owners of the securities.

[350] Asset-Back Securities, 70 Fed. Reg. 1506, 1563.

also encourage the SEC to examine this issue. Our call for improvements in the due diligence process should in no way be taken to imply that we believe existing standards of due diligence have not been satisfied in past offerings.

Specific Recommendations

35. Amend Regulation AB to Increase Loan-Level Disclosures. The Committee encourages policymakers to recognize the clear need and investor appetite for increased loan-level disclosures. More specifically, we recommend that Regulation AB be amended to require issuers of mortgage-backed securities to provide loan-level data. The SEC should set forth in its regulation the particular fields of loan-level data that must be disclosed. This should be largely based on investor demand and inputs.

36. Study Ways of Improving the Standardized Disclosure Package. We further recommend that the SEC immediately initiate a study to refine the standardized list of RMBS pool data required at inception and on an ongoing basis.

37. Revisit the Applicability of Section 15(d). We encourage the SEC to consider whether the less-than-300-holder exemption from the periodic reporting requirements of Section 15(d) was meant to apply to the typical RMBS issuance otherwise covered by Regulation AB and, if so, to seek statutory changes that would exempt RMBS issuance from its provisions.

C. Credit Rating Agencies*

1. Overview

Credit rating agencies (CRAs) bear substantial responsibility for the current crisis. CRAs serve as gatekeepers to the global credit markets and consequently occupy a unique place in the financial system. Through their issuance and ongoing monitoring of large numbers of credit ratings on debt and other fixed income securities issued by corporations, sovereigns, local governments, and securitization vehicles, CRAs exercise extensive influence over access to the capital markets and the pricing and terms on which borrowers receive credit. The ratings provided by CRAs on structured finance securities facilitated the issuance of over $6.5 trillion into the global credit markets between 2005 and 2007.[351] Failure by CRAs to assess accurately the risk associated with fixed income securities tied to U.S. residential mortgages led to catastrophic losses for investors and others who relied on their ratings. While originators, banks, regulators

* The primary author of this section is Paul S. Giordano, Senior Advisor to the Committee and a Director of Primus Guaranty, Ltd.

[351] Securities Industry and Financial Markets Ass'n, *Mortgage-Related Issuance*, *available at* http://www.sifma.org/research/pdf/Mortgage_Related_Issuance.pdf (regularly updated table).

and investors misjudged the risks associated with structured credit products, the breakdown in the global credit markets could not have occurred if the CRAs had performed properly.

Events since mid-2007 have demonstrated that the major CRAs grossly underestimated the risk of loss associated with several types of structured finance products that lay at the heart of the crisis. CRAs rated large amounts of RMBS supported by U.S. sub-prime mortgage loans and CDOs comprising RMBS, other CDOs, and various other asset-backed securities (ABS). A large portion of the capital structures in RMBS and CDO transactions were rated triple-A by CRAs. Ratings were determined using complex quantitative models that CRAs designed to measure under various scenarios the cash flows of the mortgage loans and other assets supporting payments of principal and interest on RMBS and CDO securities. However, those models did not capture the sudden and dramatic increase in delinquencies and foreclosures in the U.S. housing market, particularly from mortgages to weaker borrowers or with low documentation originated between the second half of 2005 and the middle of 2007. Liquidity and market values for RMBS, CDOs and other types of structured credit securities—even those rated triple-A by CRAs—plummeted in anticipation of performance far worse than originally contemplated. Factors such as low interest rates, lax lending standards, and new mortgage products overly sensitive to continued home price appreciation all contributed to a run-up in housing prices followed by the alarming underperformance of residential mortgage collateral over the past 36 months.[352] Since the third quarter of 2007, CRAs have downgraded substantial percentages of their ratings for RMBS and CDO securities, including those in the highest investment grade categories of triple-A and double-A. As global economic and credit conditions continue to deteriorate, pressure is mounting on other structured credit products such as commercial mortgage-backed securities, and eventually could have a serious impact on the creditworthiness of corporate and governmental borrowers as well.

The overall inaccuracy of structured credit ratings has led to an unprecedented investigation into what went wrong at CRAs. The result has been a number of specific criticisms of CRAs, the most important of which are:

* the procedures, methodologies, models and key assumptions employed by CRAs in rating structured finance securities were not sufficiently transparent and led to inaccurate ratings that did not adequately capture the risk of loss;

[352] *See* S&P/Case-Shiller Home Price Indices, *available at* http://www2.standardandpoors.com/spf/pdf/index/CSHomePrice_Release_022445.pdf (U.S. home prices peaked in the 1st or 2nd quarter of 2006).

* CRAs failed to ascertain whether the data and other information on which they were relying to determine structured finance ratings were sufficiently accurate and reliable;

* CRAs were slow to review and adjust structured finance ratings to reflect credit deterioration;

* the integrity of credit ratings in general can be called into question due to the existence of conflicts of interest, including CRAs' reliance on issuers[353] to pay their fees, widespread ratings shopping, and CRA rating staff providing recommendations on how to achieve desired ratings in connection with structured finance transactions;

* the use of ratings symbols for structured finance products identical to those used for traditional corporate fixed-income securities led to confusion over what the structured finance ratings meant in terms of the risk of loss as well as implied liquidity and market value characteristics;

* the incorporation of credit ratings in various regulatory regimes and other factors may have led investors to place undue reliance on such ratings; and

* CRAs are not subject to adequate regulation and oversight.

In addition to their failure to rate certain structured finance obligations accurately, CRAs also have been challenged over their approaches to rating U.S. state and local government obligations. Critics, including some members of Congress and state officials, claim that U.S. public finance obligors are generally under-rated compared to corporate issuers based on relative loss experience, resulting in higher borrowing costs to governmental issuers and their taxpayers.

These and other shortcomings on the part of CRAs give rise to a number of important policy issues that legislative and regulatory bodies are currently in the process of addressing.

2. Current Regulatory Framework and Proposals for Change

Regulation initiatives directed toward CRAs have come mainly from the International Organization of Securities Commissions (IOSCO), the United States, and the European Union.

[353] In the context of structured finance transactions, the term "issuer" should be broadly understood to include not only the actual obligor but also the sponsors, underwriters, and other affiliates of the issuer.

In 2003, IOSCO published a high-level set of principles that regulators, CRAs and other market participants could follow to protect the integrity of the rating process and to help ensure that investors are provided with timely, high-quality ratings (the Principles).[354] IOSCO developed a Code of Conduct Fundamentals for CRAs in 2004 to implement the Principles and serve as a model upon which CRAs could base their own codes of conduct (the Code of Conduct).[355] The Code of Conduct reflected a principles-based approach that, among other things, aimed at safeguarding the quality and integrity of the rating process, maintaining CRA independence, avoiding conflicts of interest, and promoting transparency and timeliness in ratings disclosure. IOSCO expected CRAs to adhere to the Code of Conduct and all major CRAs have done so. However, compliance is voluntary and subject to a principle of "comply-or-explain" pursuant to which CRAs may explain how their deviations from the Code of Conduct nonetheless achieve the objectives of the Code of Conduct and the Principles.

IOSCO amended the Code of Conduct in May 2008 to take a firmer approach following its review of the role that CRAs played in the structured finance markets.[356] Some of the more noteworthy amendments provide that a CRA should do the following:

* establish a formal function to review periodically ratings methodologies and models, including significant changes;
* adopt reasonable measures so that the information used in the rating process is of sufficient quality to support a credible rating;
* review compensation policies and prohibit analysts from making proposals or recommendations regarding the design of structured finance products that a CRA rates;
* disclose whether any one issuer or other client makes up more than 10% of annual CRA revenue;
* publish verifiable, quantifiable historical information about the performance of rating opinions;
* provide sufficient information about loss and cash-flow analysis to enable investors to understand the basis for structured finance product ratings; and

[354] IOSCO, *IOSCO Statement of Principles Regarding the Activities of Credit Rating Agencies* (Sept. 25, 2003), *available at* http://www.iosco.org.
[355] IOSCO, *Code of Conduct Fundamentals for Credit Rating Agencies* (Dec. 2004), *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD180.pdf.
[356] IOSCO, *The Role of the Credit Rating Agencies in Structured Finance Markets* (May 2008), *available at* http://www.iosco.org.

* differentiate ratings of structured finance products from other ratings, preferably through a different rating symbology.

IOSCO also wished to discourage ratings shopping by having CRAs urge issuers and originators of structured finance products to disclose publicly all relevant information about such products so investors and non-retained CRAs can conduct their own analyses and publish unsolicited ratings.

The first complete regulatory framework applicable to CRAs was adopted by the United States with the passage of the Credit Rating Agency Reform Act of 2006 (the Reform Act).[357] A major catalyst for the Reform Act was criticism of the failure by CRAs to anticipate the collapses of Enron and WorldCom. At its core, the Reform Act creates a framework for the voluntary registration of CRAs with the SEC as nationally recognized statistical rating organizations (NRSROs) and SEC oversight of the NRSROs' compliance with their own procedures and methodologies for issuing and maintaining credit ratings.

Registration will be granted to CRAs if the Reform Act's information and other requirements are met and the CRA has adequate financial and managerial resources to produce consistent credit ratings with integrity and to comply with the procedures and methodologies for issuing credit ratings disclosed to the SEC pursuant to the statute. The Reform Act sets forth rules governing NRSRO conflicts of interest and prohibits acts or practices that the SEC determines to be unfair, coercive, or abusive. NRSROs are required to implement written policies reasonably designed to address and manage conflicts of interest and to appoint an internal compliance officer responsible for overseeing compliance with the U.S. securities laws and the Reform Act. The SEC may censure, place limitations upon, suspend, or revoke an NRSRO's registration if the SEC finds after a hearing that such action is necessary for the protection of investors, in the public interest, and that the NRSRO has committed certain enumerated crimes or has failed to provide required certifications or maintain adequate financial and managerial resources to consistently produce credit ratings with integrity.

In February 2009, the SEC published new final regulations[358] under the Reform Act in order to address issues arising from CRAs' massive downgrades of structured credit products. Adoption of the final regulations represents the first step toward implementing a broader package of SEC proposals to strengthen oversight of NRSROs and reduce reliance on NRSRO ratings.[359] The new regulations supplement existing

[357] P.L. No. 109-291; *see* Securities Exchange Act of 1934 §§ 15E, 17(a), 15 U.S.C. § 78o-7, 78q-1.
[358] Re-Proposed Rules for Nationally Recognized Statistical Rating, Exchange Act Release No. 34-59342 (Feb. 2, 2009).
[359] *See* Proposed Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-57967 (June 16, 2008) (proposing new rules applicable to NRSROs, many of which were adopted in Feb. 2009 substantially as proposed or as modified in response to comments).

SEC regulations and impose new or expanded disclosure, recordkeeping, conflicts of interest, and annual reporting requirements on NRSROs.

NRSROs will be subject to enhanced public disclosure of ratings performance measurement statistics to facilitate evaluation of ratings accuracy by market participants. In connection with ABS, RMBS or asset pool transactions, NRSROs must disclose whether and, if so, how (a) information about verification performed on the underlying or referenced assets is relied on in determining credit ratings, and (b) assessments of the quality of asset originators play a part in the determination of credit ratings. NRSROs also must disclose more information about their surveillance processes, including the frequency with which credit ratings are reviewed and the interaction between models and criteria used in surveillance and those employed in issuing initial credit ratings.

Broader recordkeeping, disclosure, and annual reporting requirements also feature prominently in the new SEC rules. NRSROs must make and retain a record for each outstanding credit rating showing all rating actions by date as part of their internal records available to the SEC. NRSROs also must provide the SEC with an unaudited report of the number of credit rating actions by class during the fiscal year. After finding that issuer-paid credit ratings account for 98% of all NRSRO ratings, the SEC will require each NRSRO to make publicly available by credit rating class, on a six-month delayed basis, a random sample of 10% of its issuer-paid credit ratings and their histories where the NRSRO has issued 500 or more credit ratings in that class. The purpose of this requirement is to facilitate the ability of market participants and others to monitor and assess NRSRO performance with respect to issuer-paid credit ratings. Although not required to make them public, NRSROs must also keep internal records documenting why final credit ratings for an asset pool of ABS or RMBS materially deviate from the credit ratings implied by a quantitative model, where the model was a substantial component of the rating process. Written third-party complaints about credit analyst performance also must be retained as part of NRSRO internal records.[360]

The SEC also expanded the list of prohibited conflicts of interest. NRSROs cannot issue or maintain credit ratings where its staff made recommendations to the issuer about the corporate or legal structure, assets, liabilities, or activities of the issuer. This rule is not intended to prohibit customary and necessary feedback during the rating process—only recommendations are prohibited. The new regulations also prohibit issuing or maintaining ratings where the fee paid to the NRSRO was negotiated, discussed or arranged by staff responsible for determining or approving credit ratings or the processes and methodologies for determining ratings, including qualitative and quantitative models. Gifts and entertainment from an issuer to ratings

[360] Amendments to Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-59342 (Feb. 2, 2009).

staff are also prohibited, apart from items in the context of normal business activities with a value of $25 or less.

Important parts of the SEC's proposed rulemaking applicable to NRSROs remain open. One such rule would add issuing or maintaining issuer-paid credit ratings for structured finance transactions to the list of conflicts of interest that NRSROs must disclose and manage.[361] To remedy this conflict, NRSROs hired by issuers to rate structured finance products would need to disclose to other NRSROs (and only other NRSROs) the deals for which they are in the process of determining a rating and comply with certain other requirements. Another proposal on which the SEC has yet to comment or take action on is to require NRSROs to use ratings symbols for structured finance products that differentiate them from credit ratings for other types of securities, unless they publish a report describing how the rating procedures and methodologies for such products differ from those for other types of obligations.[362] Finally, the SEC has outstanding for public comment several proposals to remove references to NRSRO ratings from regulations under the federal securities laws, including the net capital rules applicable to broker-dealers and rules governing the operation of money market funds.[363]

In addition to the recent amendments to the IOSCO's Code of Conduct and new SEC regulations adopted under the Reform Act, the G-20 leaders and a number of prominent organizations have put forward suggestions for reforming CRA practices and increasing the degree of regulation to which they are subject. The G-20 called for governmental regulation of all CRAs whose ratings are used for regulatory purposes. Specifically, the G-20 endorsed CRA registration, mandatory compliance with the Code of Conduct, effective resolution of conflicts of interest and the improvement of the transparency and quality of the ratings process.[364] Other organizations that have urged CRA reform include the Financial Stability Forum,[365] the President's Working Group on

[361] Re-proposed Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-59343 (Feb. 2, 2009).
[362] Proposed Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-57967 (June 16, 2008).
[363] References to Ratings of Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-58070 (July 1, 2008) (proposing elimination of references to NRSRO ratings under certain provisions of the Securities Exchange Act of 1934 and regulations thereunder); Security Ratings, Exchange Act Release No. 33-8940 (July 1, 2008) (proposing elimination of references to NRSRO ratings in certain rules and forms under the Securities Act of 1933); and References to Ratings of Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. IC-28327 (July 1, 2008) (proposing elimination of references to NRSRO ratings in certain rules under the Investment Company Act of 1940).
[364] G-20 Working Group 1, *Enhancing Sound Regulation and Strengthening Transparency, Final Report* (Mar. 25, 2009), *available at* http://www.g20.org/Documents/g20_wg1_010409.pdf.
[365] Fin. Stability Forum, *Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience* (Apr. 7, 2008), *available at* http://www.financialstabilityboard.org/publications/r_0804.pdf.

Financial Markets,[366] the Group of Thirty,[367] the Committee of European Securities Regulators (CESR)[368], and the Securities Industry and Financial Markets Association.[369] Although varying in degree and specificity, these organizations generally call for greater disclosure about credit ratings and the bases for them, eliminating conflicts of interest and improving corporate governance.

One of the most important recent developments is the regulation creating a comprehensive supervisory framework applicable to CRAs (CRA Regulation) put forward by the European Commission in November 2008 and approved by the E.U. Parliament and Council in April 2009.[370] Consistent with the G-20 recommendations, the CRA Regulation moves away from the European Commission's previous approach predicated on CRA self-regulation in accordance with the Code of Conduct and imposes legally binding standards.[371] E.U. financial institutions, such as banks and insurers, will be permitted to use for regulatory purposes only credit ratings issued by CRAs established in the European Union and registered under the CRA Regulation.

In general, the CRA Regulation lays down conditions for the issuance of credit ratings and rules on the organization and conduct of CRAs to ensure their independence and avoidance of conflicts of interest.[372] The CRA Regulation will establish a comprehensive framework in which CRAs will be registered by the competent authorities of their home Member States following a consultative process with the CESR and a college of competent authorities to be established under the CRA Regulation. Among other things, registered CRAs will have to comply with detailed

[366] President's Working Group on Fin. Mkts, *Policy Statement on Financial Market Developments* (Mar. 2008), *available at* http://www.treas.gov/press/releases/reports/pwgpolicystatemktturmoil_03122008.pdf.
[367] Group of Thirty, *Financial Reform, A Framework for Financial Stability* (Jan. 2009), *available at* http://www.group30.org/pubs/recommendations.pdf.
[368] *See* Comm. of Eur. Securities Regulators, *The Role of Credit Rating Agencies in Structured Finance,* Second report to the European Commission on the compliance of credit rating agencies with the IOSCO Code (May 2008), *available at* http://www.cesr-eu.org/data/document/CESR_08_277.pdf.
[369] Securities Industry and Financial Markets Association, *Recommendations of the Securities Industry and Financial Markets Association Credit Rating Agency Task Force* (July 2008) (SIFMA Report), *available at* http://www.sifma.org/capital_markets/docs/SIFMA-CRA-Recommendations.pdf.
[370] Eur. Comm'n, *Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies* (Nov. 12, 2008), *available at* http://ec.europa.eu/internal_market/securities/docs/agencies/proposal_en.pdf; Press Release, Eur. Comm'n, "Approval of New Regulation Will Raise Standards for the Issuance of Credit Ratings Used in the Community" (Apr. 23, 2009), *available at* http://europa.eu/rapid/pressReleasesAction.do?reference=IP/09/629&format=HTML&aged=0&language=EN&guiLanguage=en.
[371] *See* Eur. Comm'n, *Communication from the Commission on Credit Rating Agencies* 2 (Mar. 11, 2006), *available at* http://eur-lex.europa.eu/LexUriServ.do?uri=OJ:C:2006:059:0002:0006:EN:PDF.
[372] Eur. Comm'n, *Proposal for a Regulation of the European Parliament and of the Council on Credit Rating Agencies* Art. 1 (Nov. 12, 2008), *available at* http://ec.europa.eu/internal_market/securities/docs/agencies/proposal_en.pdf.

rules addressing corporate governance, conflicts of interest, rating methodologies, disclosure and presentation of credit ratings. Member States will prescribe penalties for violating the CRA Regulation. Enforcement of the CRA Regulation is vested in the competent authority of a CRA's home Member State in consultation with the college of competent authorities and the CESR, but in some circumstances the competent authorities of other Member States are permitted to take generally more limited types of enforcement action against CRAs.

By design, the CRA Regulation sets forth rules that overlap with, but also go far beyond the Code of Conduct and the U.S. regulatory framework under the Reform Act.[373] Some of the most distinctive provisions of the CRA Regulation are as follows:

* requiring that CRA administrative or supervisory boards contain at least two independent members, at least one of whom (and one other member of the board) must be an expert in securitization and structured finance, to serve non-extendable five-year terms and take responsibility for monitoring the development of credit rating policy, the effectiveness of the internal quality control system, the effectiveness of conflict of interest safeguards, and processes relating to compliance and governance;[374]

* prohibiting CRAs from providing advisory services;

* an absolute prohibition on gifts or favors from anyone with whom a CRA does business;

* mandatory rotation of rating analysts and persons approving credit ratings after periods of time ranging between four to seven years;

* stating that credit ratings be presented in accordance with specific requirements contained in the CRA Regulation;

* a prohibition on issuing or maintaining a credit rating where the lack of reliable data or the complexity of the structure of a new type of financial instrument or the quality of the information available is not satisfactory or raises serious questions as to whether the CRA can provide a credible rating;

* in the case of structured finance instruments, a mandatory statement as to what level of assessment the CRA has performed concerning the due

[373] Press Release, Eur. Comm'n, "Commission Adopts Proposal to Regulate Credit Rating Agencies" (Nov. 12, 2008) ("Internal Market and Services Commissioner Charlie McCreevy said: . . . Our proposal goes further than the rules which apply in other jurisdictions").
[374] Note that the original proposal called for three independent directors, while the press release announcing approval only stated that two would be required.

diligence processes on the underlying financial instruments or other assets;

* disclosing historical default data every six months;
* annual disclosure of a CRA's largest 20 clients by revenue and a list of clients whose contribution to that CRA's growth rate exceeds certain quantitative thresholds; and
* requiring that structured finance credit rating categories be clearly differentiated using an additional symbol that distinguishes them from credit rating categories used for any other types of entities, financial instruments, or financial obligations.

The CRA Regulation addresses differences between itself and other regulatory regimes by allowing CRAs registered under the CRA Regulation to endorse credit ratings issued in countries outside the European Union. In general, credit ratings issued in other nations can be used for E.U. regulatory purposes provided that they comply with requirements which are at least as stringent as those provided for in the CRA Regulation—including many of its rules governing independence, conflicts of interest, mandatory rotation of ratings personnel, and disclosure. Other prerequisites to using credit ratings issued by CRAs outside the European Union are that there must be an objective reason for the credit rating to be issued in another country, the issuing CRA must be supervised by that country and that country's regulatory regime must prevent interference with the content of credit ratings and methodologies. The CRA that endorsed a credit rating issued in another country is deemed responsible for it under the CRA Regulation. Alternatively, the European Commission can determine that another country's legal and supervisory framework applicable to CRAs is equivalent to the requirements of the CRA Regulation—enabling E.U. financial institutions to use ratings issued by CRAs based in other countries for regulatory purposes.

3. Key Principles

a. Globally Consistent Standards

As a first principle, we recommend that policymakers and regulators develop and apply standards of conduct and regulatory frameworks for CRAs that are consistent on a worldwide basis. Such an approach reflects the reality that CRAs, like the markets and investors that they serve, operate globally and affect capital markets worldwide. While there appears to be general consensus on the broad parameters of CRA regulation—registration of CRAs with regulatory bodies, disclosure of key rating processes and methodologies, and rules governing conflicts of interest—important differences remain, particularly between the United States and Europe. Having globally consistent standards of conduct and regulatory frameworks will also facilitate

CRA compliance, reduce costs, and minimize complications from the extraterritorial application of laws to the largest CRAs, which are headquartered in the United States.

The starting point for any jurisdiction wishing to regulate the conduct of CRAs should be the Code of Conduct developed by the world's leading securities regulators. The G-20 recently affirmed this principle. Most, if not all, of the major CRAs have indicated that they accept the Code of Conduct and have implemented its provisions in their own internal codes of conduct. But efforts by regulators to move beyond self-regulation and voluntary adherence to the Code of Conduct are not only understandable in light of how CRAs contributed to the crisis, but are also necessary to restore confidence in CRAs as institutions and in the integrity of credit ratings themselves.

One of the greatest challenges today is reconciling the far-reaching requirements of the CRA Regulation with those of the IOSCO Code of Conduct and the U.S. regulatory framework. In its review of the draft CRA Regulation, the CESR called for the need to take account of the international dimension of credit rating activity as well as the measures already adopted in other jurisdictions with the intention to avoid inconsistencies and an unlevel playing field.[375] The CRA Regulation approved in April 2009 recognizes the international nature of credit ratings, but its equivalency requirement for allowing the use of ratings issued by CRAs located outside the European Union may be very difficult to satisfy in practice. For example, the United States has taken a less intrusive approach to governmental intervention in internal CRA affairs—such as mandatory rating analyst rotation and creating independent directors with special monitoring responsibilities, both of which are prescribed by the CRA Regulation. Other requirements, such as the CRA Regulation's prohibition against rating complex new structured financial instruments where information is unsatisfactory, or raises serious questions about rating credibility, may constitute legally impermissible prior restraints on expression or publication in countries like the United States that treat ratings to some degree as protected opinion or speech. Given the importance of ratings to the ability of borrowers to access credit on affordable terms, jurisdictions with standards exceeding international norms could see a decline in the number of ratings on securities issued or traded in their markets. Financial institutions located in such jurisdictions could find their range of permissible investment choices and risk diversification strategies unduly limited if there are regulatory penalties associated with foreign-issued CRA ratings. Disparate standards also could create unnecessary complications concerning the location of financing activity and the staff within financial institutions needed to service the fixed income markets. Looking at the overall effectiveness of another's country's CRA regulatory framework, rather than to

[375] Comm. of European Securities Regulators, *CESR's response to the consultation document of the Commission services on a draft proposal for a Directive/Regulation on Credit Rating Agencies*, Ref. CESR/08-671, *available at* http://www.cesr-eu.org/popup2.php?id=5222.

strict equivalency of individual rules, would offer greater flexibility and international coordination in regulating CRAs. The global nature of CRA operations and the use of credit ratings by investors worldwide require that leadership in regulating CRAs be shared internationally among key regulators.

b. Ensuring Unitary Systems of Enforcement

We believe that responsibility for enforcing regulatory laws and rules applicable to CRAs should be vested exclusively at the highest governmental level within a jurisdiction. This approach would promote consistent enforcement of the regulatory standards within a jurisdiction and accord with the broad nature and impact of the activities of CRAs.

The potential for multiple layers of enforcement exists in both the United States and Europe. Despite the Reform Act's framework for exclusive federal regulation of NRSROs,[376] the New York and Connecticut attorneys general have sought to impose far-reaching reforms on the three largest CRAs using actual or threatened litigation under state law.[377] New York has focused on improving certain practices in connection with rating RMBS transactions while Connecticut is attempting to force CRAs to rate state and local government obligations on the same scale applicable to corporate bonds, which would result in substantial upgrades for most U.S. public finance issuers. In Europe, a CRA's home Member State would have primary enforcement responsibility subject to prior consultation with the college of competent authorities and the CESR, but other Member States can also enforce the CRA Regulation in certain circumstances. Moreover, all Member States are required to lay down penalties for infringement of the CRA Regulation. With 50 States and 27 Member States, multiple layers of enforcement, however well intentioned, give rise to an unworkable patchwork of legal risks, complexities and compliance costs for CRAs in the United States and the European Union that could threaten their viability.

c. Avoiding Governmental Interference

For capital markets to function most efficiently, CRAs should be free to develop their rating processes and methodologies as they see fit and to express their opinions—

[376] The Reform Act provides that no laws of any state or local government requiring the registration, licensing, or qualification as a CRA or a NRSRO shall apply to an NRSRO or its employees. The Reform Act carves out of this prohibition, however, that it does not prohibit a state securities commission or agency performing like functions from investigating and bringing an enforcement action with respect to fraud or deceit against any NRSRO or its employees.

[377] In June 2008 to avoid potential legal action, the three largest CRAs entered into an agreement with the Attorney General of New York to change certain of their processes in relation to rating RMBS transactions. That was followed in July 2008 by the Attorney General of Connecticut initiating civil litigation against the three largest CRAs alleging that they had given municipalities artificially low ratings as compared to corporate borrowers in violation of the state's unfair trade practices statute.

both in form and substance—as they determine. Regulations naturally tend to address past problems instead of anticipating future ones. Rather than prescribing how CRAs must determine or express their rating opinions to address the deficiencies that came to light in the current crisis, regulatory frameworks should encourage competition and diversity in the philosophies, processes, methodologies, qualitative factors, quantitative models and ratings symbols used by CRAs. This will enable CRAs to keep their ratings attuned to the evolving needs of investors and other market participants. Although there can be no guarantee of future success, a flexible, market-driven approach is the best defense against future rating error.

Existing and proposed regulatory frameworks recognize to varying degrees that CRAs should make rating determinations free from governmental prescriptions. The Reform Act expressly states that neither the SEC nor any state or local government may regulate the substance of credit ratings or the procedures and methodologies by which any NRSRO determines credit ratings. In part, this provision reflects the significant free speech protection that U.S. courts have conferred on CRA ratings under the First Amendment of the U.S. Constitution.[378] Regulators in Europe would be prohibited by the CRA Regulation from interfering with the content of credit ratings in carrying out their duties under the regulation, although the CRA Regulation would prescribe how ratings are to be presented and even prohibit the issuance or maintenance of ratings in cases of where informational concerns or complexity raise serious questions as to the ability of a CRA to provide a credible rating.

Notwithstanding constitutional and statutory protections, ratings processes and methodologies used by CRAs continue to face serious challenges. For example, in an effort to put state and local debt securities on the same ratings scale as corporate obligations, the proposed Municipal Bond Fairness Act[379] introduced by House Financial Services Committee Chairman Barney Frank in June 2008 would require NRSROs to establish and maintain written policies and procedures designed to assess the risk that investors may not receive payment in accordance with the terms on which securities were issued. Other credit factors only could be taken into account if they are documented, disclosed, and have a demonstrated impact on the risk of non-repayment

[378] Although not yet considered by the Supreme Court of the United States, a number of intermediate courts have granted absolute or qualified First Amendment protection to credit ratings on the grounds that CRAs are members of the financial press or that their ratings are opinions on matters of public interest. *See, e.g.,* Connecticut Resources Recovery Authority v. Lay, 2005 U.S. Dist. LEXIS 4494 (S.D. Tex. Feb. 16, 2005); Jefferson County School District v. Moody's Investors Services, 175 F. 3d 848 (10th Cir. 1999); County of Orange v. McGraw-Hill Cos., 245 B.R. 151 (C.D. Cal. 1999). First Amendment protection, however, has not been extended in other cases where CRAs have been paid by issuers to rate private transactions or have taken an active role in the structuring process. *See, e.g.,* In re Fitch, Inc., 330 F. 3d 104 (2d Cir. 2003); Commercial Financial Services v. Arthur Andersen, 94 P. 3d 106 (Okla. Civ. App. 2004).

[379] H.R. 6308, 110th Cong. (2d Sess. 2008). (To date, this legislation has not been introduced in the 111th Congress that began in 2009)

in accordance with the terms of issuance. For general obligation bonds, only the risk of non-payment in accordance with the terms of issuance could be taken into account by NRSROs, whereas NRSROs could take into account other credit factors unique to municipal securities not backed by the full faith and credit of an issuer (e.g., municipal revenue bonds). The Municipal Bond Fairness Act would mandate an NRSRO to define clearly any rating symbol it uses and apply rating symbols in a consistent manner for all securities to which it applies. Thus, this legislation would purport to mandate how ratings are determined and how they are to be expressed for U.S. public finance obligations.

We believe that CRAs, rather than legislators or regulators, should decide not only rating processes and methodologies, but also whether to use different ratings symbols or add modifiers to ratings of structured financial instruments. The G-20 recently stated that regulators should differentiate ratings for complex products. Some commentators have proposed placing structured finance instruments on an entirely new and different lettering scale instead of using the traditional ratings that range from AAA for the highest quality securities to D for securities in default. Others, including IOSCO, the SEC, and the European Commission, have endorsed differentiating structured finance ratings from those on corporate and governmental obligors by adding a modifier such as "sf" so that, for example, a structured finance security formerly designated AAA would be redesignated AAA.sf. or something similar. Indeed, the CRA Regulation requires that structured finance ratings be clearly differentiated using an additional symbol. Despite the momentum behind such an approach, there are a number of practical concerns with implementing such proposals, including investor confusion over what such changes mean, the cumbersome process of amending private and statutory investment guidelines to reflect new ratings, and impairing the perception of other structured finance securities such as those backed by auto loans, credit cards and student loans.[380]

Perhaps most importantly, placing structured finance securities on a totally new scale (e.g., numerical rankings from 1 to 21) or adding modifiers such as "sf" are not what investors and other market participants appear to want. In a recent survey[381] of over 200 institutions representing in excess of $9 trillion under management, Moody's found that 73% of all respondents did not wish to change the existing rating scale or add modifiers for structured finance securities. Only 11% of respondents wanted a totally new scale, while 16% favored a modified scale. The results were approximately

[380] *See* Securities Industry and Financial Markets Association, *Recommendations of the Securities Industry and Financial Markets Association Credit Rating Agency Task Force* (July 2008) (SIFMA Report), *available at* http://www.sifma.org/capital_markets/docs/SIFMA-CRA-Recommendations.pdf.
[381] Moody's Investors Service, *Moody's Global Credit Policy – Introducing Assumption Volatility Scores and Loss Sensitivities for Structured Finance Securities* (2008), *available at* http://www.moodys.com/cust/content/content.ashx?source=StaticContent/Free%20Pages/Credit%20Policy%20Research/documents/current/2007100000499445.pdf.

the same when the responses were weighted by assets under management. While adding modifiers to structured finance ratings or placing such ratings on a different scale may have merit, we believe that such changes should be effected by the CRAs following consultation with market participants rather than imposed by regulators.

d. Carefully Reviewing References to Credit Ratings in Regulatory Frameworks

We caution that summary removal of all references to, or reliance upon, credit ratings in regulatory statutes and rules is unwarranted and potentially counterproductive. Credit ratings are intended primarily for market rather than regulatory users. Nevertheless, the historical independence of CRAs, the analytic rigor with which credit ratings have been determined, and, until recently, the acceptable track record for accuracy, has afforded regulators with an objective, clear, and readily available means for differentiating among credit-related risks in various regulatory regimes. Laws and regulations pertaining to banks, insurance companies, broker-dealers, and pension funds, to name a few, utilize CRA credit ratings for various purposes. Claims that embedding references to credit ratings in various laws and regulations directly contributed to the excessive reliance some investors placed on them have not been substantiated. If references to credit ratings are eliminated, they would need to be replaced by new standards as to credit quality, liquidity, or volatility. New standards could be far more subjective, difficult to apply in practice, and result in inconsistent outcomes for both regulators and regulated institutions.

We therefore recommend that lawmakers and regulators carefully review the appropriateness of references to credit ratings in various regulatory frameworks to determine whether using or relying upon such ratings is appropriate as compared to other alternatives. For instance, the SEC has proposed removing virtually all references to NRSRO ratings from the net capital rules applicable to broker-dealers and the rules governing eligible assets for money market funds. The rationale for doing so comprises several elements, including the ability of those institutions to make the required determinations and the importance placed by those rules on near-term liquidity and market value, which are reflected indirectly in the investment grade credit ratings on which such rules have relied. Under the proposed approach, ratings would become non-determinative factors that decision-makers under these two regulatory regimes could take into account in making the requisite determinations, but they can no longer rely solely on ratings. In other contexts, objective rules and definitive reliance on credit ratings may represent the most effective approach. Recently, as noted in Chapter 2, the Fed has made extensive use of NRSRO ratings in the Term Asset-Backed Securities Loan Facility, the Commercial Paper Funding Facility and the Money Market Investor Funding Facility to prescribe the credit quality of assets eligible for participation in

these emergency lending programs.[382] Incorporating readily available credit ratings into the architecture of these programs facilitates not only quick, clear implementation but also ongoing administration by the Fed.

In the absence of persuasive evidence that using credit ratings in regulations promotes an unhealthy over-reliance on them by market participants, legislators and regulators should consider incorporating references to credit ratings into regulatory frameworks on a case-by-case basis. In some cases where objective standards are required or timing considerations may be paramount, credit ratings provide a useful, if imperfect, tool that can be adapted for regulatory purposes. In others, credit ratings can be used as important, but not determinative, factors used by regulated institutions to make required determinations as to credit, liquidity, or market risk. Regulators also possess many other tools to guard against excessive reliance on credit ratings, such as requiring financial institutions to maintain capable investment staff or to retain qualified outside advisors or asset managers. A careful, well-considered approach is likely to yield the best results over the long term.

e. Increasing the Amount and Quality of Disclosure Pertaining to Structured Finance Transactions

We endorse the promulgation of regulations that would require greater disclosure of additional factual and other information on which credit ratings—particularly those of structured finance securities—are based in order to enhance the ability of investors and other market participants to assess and monitor ratings accuracy. In particular, CRAs should be required to make extensive disclosure of the criteria, methodologies, models, processes, key assumptions, and scenario analyses that they employ in rating all types of securities.

Although not perfect, the best way to guard against future rating error is to facilitate broad market monitoring of structured finance securities and their ratings. The great extent to which CRAs must rely on data and quantitative models, which are highly sensitive to assumptions and qualitative judgments about inputs, makes the process for determining the appropriate credit rating for a structured finance security very different from rating corporate or governmental issuers. Moreover, information about structured finance securities, many of which are distributed in private placements, generally is far more difficult to access than in the case of corporations or governments, about which information is often publicly available through periodic financial reports and other sources. Regulatory initiatives designed to increase the market's visibility into the factual bases for structured finance ratings would help to overcome these complexities and allow investors and other users of ratings to place

[382] For descriptions of these programs, see Fed. Res. Bank of N.Y., Term Asset-Backed Securities Loan Facility, *available at* http://www.newyorkfed.org/markets/talf.html (descriptions of these programs).

appropriate reliance on them. We endorse this approach in greater detail in Section B of this chapter.

Regimes designed merely to facilitate and increase the number of unsolicited structured finance ratings by CRAs that have not been retained to rate a transaction, like the one recently proposed by the SEC,[383] are flawed for a number of reasons. First, experience shows that CRAs often employ very similar approaches and models to rating structured finance transactions. Indeed, the present crisis itself demonstrates this tendency as no CRA accurately reflected in its credit ratings the extent of losses associated with recent vintage RMBS and CDOs. Utilizing diverse views on credit risk from a broad range of investors would constitute a more effective check on ratings accuracy than relying solely upon unsolicited ratings from other CRAs. Second, it is unrealistic to place great reliance on unsolicited structured finance ratings given the complexity and absence of direct economic incentives associated with producing them. Third, even non-retained CRAs have a potential conflict of interest when publishing unsolicited ratings as their opinions could be affected by a desire to be retained by the issuer, sponsor, or underwriter in the future. Thus, while unsolicited ratings of structured finance transactions can add to the mix of information in the market, they are not an adequate substitute for the collective judgment of the market as a whole.

We think a better approach is for additional disclosures to be made by CRAs, issuers, sponsors, and underwriters of rated structured finance securities directed at the types of factual information that will allow investors to reach their own conclusions regarding the risk that they pose. To varying degrees, as evidenced most recently by enhanced CRA disclosure requirements of the CRA Regulation, policymakers have endorsed this approach, but more can be done. Issuers, sponsors, and underwriters of structured finance securities should be required to make available shortly after completion of a public or private offering factual information about the key parties, terms of the securities, legal structure, underlying asset pool, scenario-modeled cash flows, and sensitivities to timing and other risks.[384] CRAs would disclose the quantitative and qualitative bases for their ratings of structured finance securities, including the asset pool data used to produce the ratings, model parameters, key assumptions, and model outputs under various scenarios.

[383] *See* Re-proposed Rules for Nationally Recognized Statistical Rating Organizations, Exchange Act Release No. 34-59343 (Feb. 2, 2009) (The SEC has proposed that NRSROs hired by arrangers to rate structured finance products be required to disclose to other NRSROs (and only other NRSROs) by means of a password protected internet website the deals for which they are currently in the process of determining ratings. Arrangers would agree to provide the relevant information to non-retained NRSROs, which would issue ratings on at least 10% of the deals for which they access information. The goal is to increase the number of ratings outstanding, broaden the range of views on credit available to investors and reduce the influence of arrangers on the ratings process.).

[384] For further details on what such information could contain, see the definition of ABS informational and computational material contained in Item 1101 of SEC Regulation AB. 17 C.F.R. § 229.1101.

Specific Recommendations

38. Develop Globally Consistent Standards. We recommend that policymakers and regulators develop and apply standards of conduct and regulatory frameworks for CRAs that are consistent on a worldwide basis. Such an approach reflects that CRAs, like the markets and investors they serve, operate globally and affect capital markets worldwide. While there appears to be general consensus on the broad parameters of CRA regulation—registration of CRAs with regulatory bodies, disclosure of key rating processes and methodologies, and rules governing conflicts of interest—important differences remain, particularly between the United States and the European Union. Having globally consistent standards of conduct and regulatory frameworks also will facilitate CRA compliance, reduce costs, and minimize complications from the extraterritorial application of laws to the largest CRAs, which are headquartered in the United States. If globally consistent standards and regulatory frameworks cannot be achieved, regulators should develop workable rules for recognizing and giving effect to credit ratings issued outside their jurisdictions in order to avoid undue fragmentation of the capital markets, a reduction in the range of investment choices, and restrictions on diversification.

39. Vest Enforcement of CRA Regulation at the Highest Governmental Level. We believe responsibility for enforcing regulatory laws and rules applicable to CRAs should be vested exclusively at the highest governmental level within a jurisdiction. With 50 states and 27 Member States in the United States and European Union, respectively, the potential for multiple layers of enforcement, however well-intentioned, gives rise to an unworkable patchwork of legal risks, complexities and compliance costs for CRAs that could threaten their viability. Placing enforcement powers with the highest level of government would promote consistent enforcement of the regulatory standards within a jurisdiction and accord with the broad nature and impact of the activities of CRAs.

40. Avoid Governmental Interference in the Rating Determination Process. We encourage governments not to interfere with how CRAs determine or express their rating opinions. For capital markets to function most efficiently, CRAs should be free to develop their rating processes and methodologies as they see fit and to express their opinions—both in form and substance—as they determine.

41. Review References to Ratings in Regulatory Frameworks. We recommend that lawmakers and regulators carefully review the appropriateness of references to credit ratings in various regulatory frameworks to determine whether relying on such ratings is appropriate as compared to other alternatives. We caution that summary removal of all references to, or reliance upon, credit ratings in regulatory statutes and rules, is unwarranted and potentially counterproductive. New standards could be far more subjective, difficult to apply in practice, and result in inconsistent outcomes for both regulators and regulated institutions. In the absence of persuasive evidence that using credit ratings in regulations promotes an unhealthy over-reliance on them by market

participants, legislators and regulators should consider incorporating references to credit ratings into regulatory frameworks on a case-by-case basis.

42. Increase Disclosure as to How Ratings Are Determined. We endorse the promulgation of regulations that would require greater disclosure of additional factual and other information on which credit ratings—particularly those of structured finance securities—are based in order to enhance the ability of investors and other market participants to assess and monitor ratings accuracy. In particular, CRAs should be required to make extensive disclosure of the criteria, methodologies, models, processes, key assumptions, and scenario analyses that they employ in rating all types of securities. Allowing for diverse views on credit risk from a broad range of investors will enable a more effective check on ratings accuracy than relying solely upon unsolicited ratings from other CRAs.

CHAPTER 4: Enhancing Accounting Standards

The global financial crisis has reignited a debate over accounting standards, due in large part to the massive write-downs taken by banks and other financial institutions. In this chapter, we examine two accounting issues, the use of "fair value" and the requirements for consolidating off-balance sheet exposures.

A. Overview

The Committee considers the current valuation methodology underlying fair value accounting, incorporating both credit and market value inputs, to have certain shortcomings. Valuing assets and liabilities in inactive or distressed markets on this basis fails to distinguish temporary market fluctuations from permanent credit impairments, obscuring fundamental value from investors. To supplement the fair value accounting standard, the Committee proposes that FASB require reporting firms to disclose two additional balance sheet presentations for Level 2 and Level 3 assets. One presentation would reflect strict market value based on observable market inputs only. The other presentation would reflect credit value based on fundamental estimates of long-term credit performance established independently of market inputs. Investors can then decide for themselves the degree to which they want to rely on either methodology to best depict a firm's financial position. This dual-pronged presentation would supplement, not substitute for, the current fair value accounting presentation.

Additionally, we believe that U.S. GAAP and regulatory accounting standards need not be identical. The Fed (to whom we entrust all capital regulation in Chapter 6) should instead be free to choose another method (credit value, or market value, or some combination of both) it decides is appropriate, subject to some external check to ensure its discretion is not used to provide the "regulatory forbearance" characteristic of the thrift crisis of the 1980s. As regards consolidation, we agree with FASB Interpretation No. 46R (FIN 46R), which focuses on the characteristic of control.

B. Fair Value

1. Current Definition of Fair Value Accounting

Fair value is currently defined in Financial Accounting Statement No. 157 (FAS 157), *Fair Value Measurements*, as "the price that would be received to sell an asset or paid to transfer a liability in an orderly transaction between market participants at the

measurement date."[385] Fair value is determined in the principal market, which is the market that has the greatest volume of activity for the asset or liability in question.

Under FAS 157, fair value may be determined using the market approach, the income approach, or the cost approach. Market approaches, such as multiple valuation, use market prices and other data generated in market transactions as inputs. Income approaches use valuation techniques that discount future cash or earnings flows. The cost approach is often based on current replacement cost.

Valuation techniques should be applied consistently, and a company should be able to use several of them if necessary. Inputs to these techniques belong to one of three classification levels, with inputs prioritized according to their perceived reliability. FAS 157 specifies a three-tier hierarchy:

> *Level 1*—"quoted prices (unadjusted) in active markets for identical assets or liabilities that the reporting entity has the ability to access at the measurement date."[386]
>
> *Level 2*—"inputs other than quoted prices included within Level 1 that are observable for the asset or liability, either directly or indirectly."[387] Examples include quoted prices for similar assets, quoted prices for identical assets in inactive markets, interest rates, yield curves, and credit risks.
>
> *Level 3*—unobservable inputs, which are "inputs that reflect the reporting entity's own assumptions about the assumptions market participants would use in pricing the asset or liability developed based on the best information available in the circumstances."[388]

Observable market inputs classed in Level 1 or Level 2 are most preferred under the fair value approach. A 2008 sample of 50 issuers that included the 30 largest financial institutions showed that 76% of the assets measured at fair value were valued using Level 2 inputs.[389] As the SEC noted in this study, however, "in some cases using unobservable inputs (Level 3) might be more appropriate than using observable inputs (Level 2); for example, when significant adjustments are required to available

[385] Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 157 6 (2008), *available at* http://www.fasb.org/pdf/aop_FAS157.pdf.
[386] *Id*. at 11.
[387] *Id*.
[388] *Id*. at 12.
[389] SEC, Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-to-Market Accounting 60 (Dec. 30, 2008), *available at* http://www.sec.gov/news/studies/2008/marktomarket123008.pdf.

observable inputs it may be appropriate to utilize an estimate based primarily on unobservable inputs."[390]

2. Current Fair Value Accounting for Investments

FAS 157 stipulates a *generalized* framework for determining fair value—used to value specific classes of assets and liabilities designated by FASB statements. Such asset and liability designations include FAS 133, *Accounting for Derivative Instruments and Hedging Activities*, requiring all derivative instruments to be measured at fair value, and FAS 115, *Accounting for Certain Investments in Debt and Equity Securities* (FAS115), which governs accounting for investments in which the investor does not exercise a controlling interest in or significant influence on the investee.

FAS 115 outlines different accounting treatments depending on management's classification of the investment security as trading, available-for-sale (AFS), or held-to-maturity (HTM). Trading securities are measured at fair value with holding gains and losses recognized currently in income. AFS securities are measured at fair value with gains and losses recognized in other comprehensive income on the balance sheet. HTM securities are measured at amortized cost and adjusted for impairments. At present, to ensure conservatism in financial reporting, impairments to AFS and HTM securities that are classed as "other than temporary" (OTTI) are immediately recognized in income.[391] As discussed below, FASB has recently issued guidance to change the accounting for OTTI for interim and annual periods after June 15, 2009.

It is important to note that fair value accounting standards are being developed internationally as well. In October 2008, the International Accounting Standards Board amended International Accounting Standards No. 39 and International Financial Reporting Standards No. 7 to facilitate the reclassification of certain assets out of fair value through a profit and loss category.[392] This amendment was described as a step toward convergence with U.S. GAAP, which allows transfers from trading to AFS in "rare" instances pursuant to paragraph 15 of FAS 115; IASB has determined that the global financial crisis is a "rare" circumstance. In Q4 2008, the SEC gave guidance to U.S. practitioners, noting that reclassifications would be appropriate, under certain circumstances, in the current crisis. It is unclear under what circumstances the SEC has actually agreed to reclassifications.

[390] SEC Office of the Chief Accountant and FASB Staff, Clarifications on Fair Value Accounting (Sept. 30, 2008), *available at* http://www.sec.gov/news/press/2008/2008-234.htm).
[391] Financial Accounting Standards Board, Statement of Financial Accounting Standards No. 115 16, *available at* http://www.fasb.org/pdf/aop_FAS115.pdf.
[392] International Accounting Standards Board, Reclassification of Financial Assets (Oct. 2008), *available at* http://www.iasb.org/NR/rdonlyres/BE8B72FB-B7B8-49D9-95A3-CE2BDCFB915F/0/AmdmentsIAS39andIFRS7.pdf.

C. Historical Cost v. Mark-to-Market Accounting

Historical cost accounting is a pillar of traditional accounting. Under this method, an asset is recorded at its purchase price. Throughout its life, the asset is reported without adjustments made for inflation or temporary changes in valuation. It may, however, be written down if it becomes impaired or systematically depreciated. A gain can only be reported when the asset is sold or otherwise disposed of. As a result, historical costing can produce irrelevant valuations on the balance sheet that are difficult to compare between firms. On the other hand, it provides an easily verifiable and extremely reliable approach readily understandable to investors.

In recent years, there has been a shift away from historical costing toward FVA in response to a perceived need for more relevant financial information. According to FVA advocates, financial markets have matured to a point nearing perfect competition, making security prices a more relevant measure of value. In addition, the proliferation of information technology has made market prices more accessible and, proponents argue, more reliable. Thus, FVA is seen to promote greater objectivity and transparency because it is based on unbiased market information that is current and relevant to users of financial statements. As a result, advocates contend that the FVA method does not contribute to economic downturns; instead it informs investors of risks in a timely manner.

Some accountants oppose FVA on the basis of conservatism. These critics believe that "when in doubt, financial statements should understate assets, overvalue liabilities, accelerate the recognition of losses, and delay the recognition of gains." Satisfying this principle requires that unrealized gains remain unrecognized until they are locked-in with some certainty.[393] Using FVA in cases where gains may be wiped out in the future leads to volatility in earnings and on the balance sheet. Historical cost advocates warn that companies faltering in their primary operations may look to unrealized investment income to prop up their overall bottom line. In short, FVA may give management more discretion in presenting financial results than historical costing does.

Another argument these critics raise against FVA relates to the potential instability it may promote in the financial sector. Generally, banks and other financial institutions hold substantial debt and equity securities as assets, are highly leveraged, and are subject to strict capital requirements.[394] Normal fluctuations of security prices are amplified on financial institution balance sheets by the effect of leverage. Increasing price and income instability can contribute to market inefficiency by fostering irrational investor activity.[395] This source of market instability can be a cause for serious

[393] Jamie Pratt, *Financial Accounting in an Economic Context* 139 (4th ed.1994).
[394] Clyde P. Stickney & Roman L. Weil, *Financial Accounting: An Introduction to Concepts, Methods, and Uses* 523–524 (12th ed. 2006).
[395] *Id*.

regulatory concern during economic downturns. Under these conditions, if banks are forced to continually write-down their assets, they risk facing capital insufficiency and perhaps bankruptcy.

Professors Plantin, Sapra, and Shin in their article "Fair Value Accounting and Financial Stability," further argue that FVA promotes a negative feedback effect in illiquid markets. According to the authors, a downward spiral can occur in inactive markets when firms begin to sell their assets to preempt suspected short-term drops in price that would force write-downs. These sell-offs exacerbate the decline in market prices, adding to the incentive to sell any remaining securities. This phenomenon can be severe enough to result in asset sales below intrinsic value. "In this way, the mark-to-market regime generates endogenous volatility of prices that impede the resource allocation roles of prices."[396] This has been a central concern in the present crisis.

D. Proposed Modifications to Accounting for Investments in Inactive and/or Distressed Markets

Increased criticism of FVA in the context of the current environment has been accompanied by a number of proposals to improve the approach.

1. Accounting Methods Proposals

Among the proposed alternatives to FVA, Jean-François Lepetit and others, in an article entitled, "How to Arrive at Fair Value during a Crisis,"[397] suggest authorizing government regulators to determine when a drastic market reversal has occurred and to adjust accounting practices accordingly. Under this plan, during a period of market disruption an "upgraded fair value" approach based on fundamentals would be substituted for market price inputs to fair value. A one-time gain representing the difference between this "fundamental" value and market value would be recognized to correct excessive write-downs recorded under FVA. When the regulator decides that the market has normalized, mark-to-market accounting using quoted prices would be reinstated.[398]

Others suggest a similar rethinking of FVA. Mike Leyand, in his article entitled "Fool's Value," suggests limiting FVA to use in active markets. He proposes a reversion

[396] Guillaume Plantin, Haresh Sapra & Hyun Song Shin, *Fair Value Accounting and Financial Stability* 5-6 (July 2008) *available at* http://faculty.chicagogsb.edu/haresh.sapra/docs_OP/Fair%20Value%20Accounting%20and%20Financial%20Stability.pdf.
[397] Jean-François Lepetit et al., *How to Arrive at Fair Value During a Crisis*, Fin. Times, July 28, 2008, *available at* http://www.ft.com/cms/s/0/37363970-5cc1-11dd-8d38-000077b07658.html.
[398] *Id*.

to historical cost accounting for "potentially illiquid, rarely traded assets."[399] Unlike Lepetit, he supports a complete scrapping of FVA in certain cases, instead of merely a switch to mark-to-model valuation on a temporary basis.

American Insurance Group (AIG) has proposed a method for recording excessive writedowns as comprehensive income instead of current earnings. "Under AIG's proposal . . . companies and their auditors would estimate the maximum losses they were likely to incur over time and only recognize these in their profits. All other unrealized losses [in excess] would be recorded on the balance sheet but would not affect profits."[400]

Others suggest a hybrid system that would combine features of historical cost and FVA. Business academics, such as Plantin, propose the use of a "tempered" valuation in which an asset's worth is determined using rolling averages. This approach would entail using average discount rates and average quoted market prices. The rolling average method "would allow market prices to fully exert themselves over the medium term, but prevent the short-run dynamics that lead to distorted decisions."[401] Current data would factor in valuation, but the feedback effect would be minimized.

2. Proposals for Increased Disclosure in Financial Statements

To strengthen the effects of these foregoing proposals, many authorities have further argued for a move to more transparent and standardized fair value disclosures. Stephen G. Ryan of the Stern School of Business at New York University, in his article, "Accounting in and for the Subprime Crisis," suggests additional disclosure of the assumptions and estimates underlying the valuation of subprime assets.[402] The Institute of International Finance Committee on Market Best Practices (IIF), while concurring in the call for more disclosure, prioritizes improving the uniformity and transparency of disclosure over simply increasing it. The IIF is presently studying a host of proposed amendments to disclosure rules intended to increase the quality and consistency of information provided for structured products. In this connection, it is

[399] Mike Leyland, *Fair Value: Fool's Value, Accountancy Age* (Sept. 20, 2007), *available at* http://www.accountancyage.com/accountancyage/comment/2199136/fair-value-fool-value.
[400] Francesco Guerrera & Jennifer Hughes, *AIG Urges 'Fair Value' Rethink*, Fin. Times Mar. 13, 2008, *available at* http://us.ft.com/ftgateway/superpage.ft?news_id=fto031320081815543732.
[401] Guillaume Plantin et al., *Fair Value Accounting and Financial Stability* 11 (July 2008), *available at* http://faculty.chicagogsb.edu/haresh.sapra/docs_OP/Fair%20Value%20Accounting%20and%20Financial%20Stability.pdf.
[402] Stephen G. Ryan, *Accounting in and for the Subprime Crisis* 4-5, 32, 47 (Mar. 2008), *available at* http://papers.ssrn.com/sol3/papers.cfm?abstract_id=1115323.

studying a proposal to standardize market definitions and structures. The IIF also hopes to clarify and standardize the roles of agents.[403]

Responding to this widespread demand, in December 2008 the FASB issued a proposed Staff Position (FSP) that would amend certain disclosure requirements in FAS 107. The FSP applies to AFS and HTM debt securities and would "increase the comparability of information about certain financial assets that have related economic characteristics, but have different reporting measurement attributes."[404] In particular, the FSP would require entities to disclose asset valuation and pro forma income under the different measurement methods.[405] The proposal promotes convergence with international standards and was developed jointly with the IASB. We endorse this approach and urge further exploration of disclosures that would allow investors to assess how the different levels of fair value accounting impact income and equity.

E. The Impact of Fair Value Accounting on Bank Losses During the Crisis

On December 30, 2008, the SEC issued a report on fair value accounting that attempted to assess the overall impact of FVA on bank failures, finding it to be insignificant. The study examined all 22 bank failures that occurred in the first 11 months of 2008 (including IndyMac and Washington Mutual (WaMu)) and determined that:

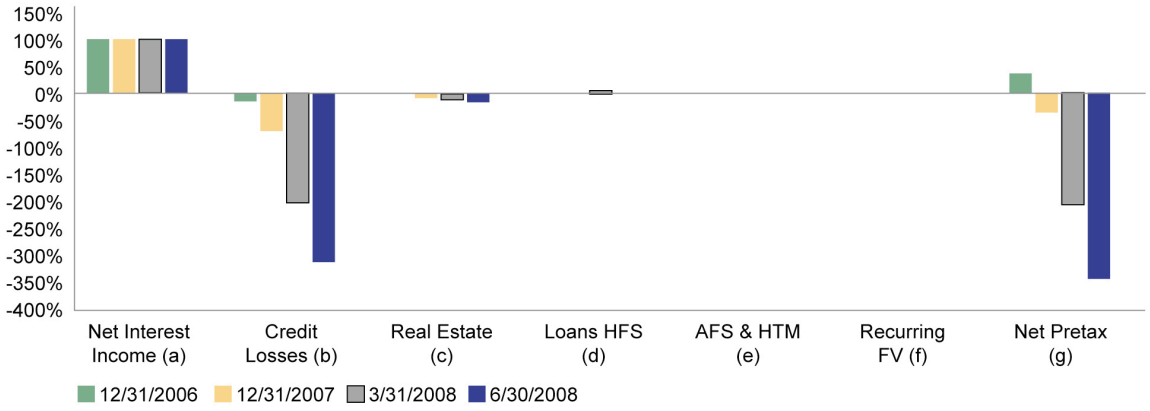
> [. . .] fair value accounting was not a primary underlying cause of the 2008 bank failures studied. For most of the failed banks studied, fair value accounting was applied in limited circumstances, and fair value losses recognized did not have a significant impact on the bank's capital. For the failed banks that did recognize sizable fair value losses, it does not appear that the reporting of these losses was the reason the bank failed.[406]

The study showed that credit loss provisions required by non-performing loans, not fair value write-downs, were overwhelmingly responsible for the failures. For instance, "WaMu had less then [sic] 5% of its assets accounted for on a recurring basis at fair value with changes in fair value through income."[407] Like the majority of failed

[403] The Institute of Int'l Finance, *Interim Report of the IIF Committee on Market Best Practices* (Apr. 2008), *available at* http://www.iif.com/download.php?id=SDzcEc8juCI=.
[404] Financial Accounting Standards Board, *Notice for Recipients of This Proposed FASB Staff Position,* FSP FAS 107-a (Dec. 24, 2008), *available at* http://www.fasb.org/fasb_staff_positions/prop_fsp_fas107-a.pdf.
[405] *Id*. at 10, 14.
[406] SEC, *Report and Recommendations Pursuant to Section 133 of the Emergency Economic Stabilization Act of 2008: Study on Mark-to-Market Accounting* 97 (Dec. 30, 2008), *available at* http://www.sec.gov/news/studies/2008/marktomarket123008.pdf.
[407] *Id*. at 109.

banks, its credit losses dwarfed its fair value losses in the first two quarters of 2008. The graph below aggregates data from all failed banks with less than $1 billion in total assets; the pattern is similar for larger banks like WaMu.

Figure 32: Income Categories as a Percent of Net Interest Income



Source: SEC Mark-to-Market Study, p. 118

Of course, the real question is not whether fair value played a major role in bank failures, the largest of which were WaMu and IndyMac, but what impact these policies have had on non-bank failures (including Lehman Brothers), as well as the ongoing operations of larger systemically-important financial institutions including AIG, Citigroup, and Goldman Sachs that did not fail but have received public funds. The SEC study sheds some light on this question but not enough. It found that the percentage of assets of large financial institution issuers measured by fair value was 45%, but only 25% of these assets were measured at fair value through the income statement.[408] For all 50 financial institutions sampled by the SEC (big and small), only 9% of the assets marked to fair value were Level 3 instruments where significant market information was not available.[409] Of course, the major issue for securitized assets that had to be marked-to-market was not that there were no market prices but rather whether these prices in "frozen" markets were reliable. The concern was mainly with Level 2, not Level 3 assets.

In assessing the impact on the income statement, the SEC found that, overall, fair value adjustments in the first three quarters of 2008 led to an *increase* in equity of 3-4% when the gains and losses of items reported at fair value were netted together for all issuers in the sample.[410] The SEC also found that in Q1 2008, no issuers in the sample had a percentage impact of fair value measurements greater than 15% of equity. The

[408] *Id*. at 4.
[409] *Id*. at 60.
[410] *Id*. at 88.

percentage impact on equity ranged from a decrease of 10% to an increase of 15%.[411] The SEC study does not provide information for the most systemically important institutions—those that have received significant public funds. It is still unknown what percentage of their losses on mortgages or mortgage related securities (losses triggering the current crisis) were accounted for by losses triggered by use of fair value. It may be that such a study would confirm the SEC's assessment of minimal impact. For example, there may well have been substantial losses on bank investments in investment securities other than mortgage-related securities, such as government bonds, that still had a relatively liquid market.

F. FASB's Guidance to FAS 157-e

In March 2009, FASB, in response to intense congressional pressure, issued a proposal to revise FSP FAS 157-e, *Determining Whether a Market is Not Active and a Transaction is Not Distressed.* The proposed guidance laid out a two-step process for determining whether an asset's market is inactive and whether a transaction is distressed. The results of the two tests dictated whether a quoted market price should be used to determine the fair value of an asset. Importantly, if the quoted price represented a distressed transaction, the firm had to use a Level 3 valuation method—such as discounted cash flow analysis—to determine fair value for the asset instead of the market price. However, a market price had to be used to calculate the appropriate discount rate, and the proposal required using hypothetical prices in an orderly market, not actual transaction data. While not relying on current prices to determine a discount rate—which may not be reliable and in the current crisis may significantly understate actual values (this is why one is in Level 3 in the first place), the approach relied on hypothetical prices in an orderly market that did not actually exist.

FASB's proposed guidance met with significant opposition from several parties, including the American Institute of Certified Public Accountants (AICPA), and the recently formed Investors Working Group (IWG). The AICPA's Accounting Standards Executive Committee commented that "the practical effects of the FSP could result in ignoring transaction prices in situations in which those prices might be the best representation of an exit price for purposes of measuring fair value."[412] The IWG severely criticized FASB's decision, stating, "to the extent that these new FASB proposals reduce the free flow of transparent and reliable financial information, they

[411] *Id.*
[412] Letter from the American Institute of Certified Public Accountants to Russel Golden, Technical Director, Financial Accounting Standards Board (Apr. 1, 2009), *available at* http://www.aicpa.org/download/news/2009/Fair-Value-FSPs.pdf.

undermine investor interests and weaken their ability to make sound investment decisions."[413]

FASB's proposals were, however, received positively by the market, with a number of sectors of the stock market rising sharply on news of the announcement.[414] Nevertheless, commentators were strongly divided about the effectiveness of the measures in promoting transparency and good governance[415] and where such changes are likely to sit within the wider framework of international accounting standards.

The IASB reviewed the proposed guidance for the purpose of determining whether a similar modification should be introduced into IFRS. On April 2, the trustees of the International Accounting Standards Committee Foundation (IASC) issued a statement of support for the IASB's review of accounting standards. However, the statement criticized FASB's response embodied in 157-e.[416] The trustees "urged the IASB to avoid piecemeal approaches that would undermine the ability to address broader issues related to accounting for financial instruments raised by the crisis," favoring "comprehensive" standards to the FASB's response.[417] At its April 1-2, 2009, meeting the IASB rejected a fast track agenda proposal to address the recent changes made by the FASB and decided to address these matters in an orderly fashion over the next six months. Further divergence between IASB and FASB treatment of this subject could give rise to considerable uncertainty for firms required to report under both U.S. GAAP and IFRS, as well as for other relevant market participants—namely investors.

Responding to the various reactions, on April 2, 2009 FASB voted on a revised FSP, FAS 157-4, reversing substantially the modifications contemplated under its proposed 157-e. FAS 157-4 expressly reaffirms a mark-to-market-based approach to fair value, stipulating that "a reporting entity's intention to hold the asset or liability is not

[413] Letter from the American Institute of Certified Public Accountants to Russel Golden, Technical Director, Financial Accounting Standards Board (Apr. 1, 2009), *available at* http://www.aicpa.org/download/news/2009/Fair-Value-FSPs.pdf, *quoted in* Floyd Norris, *Banks Get New Leeway in Valuing Their Assets*, N.Y. Times, Apr. 3, 2009, at B1.
[414] *See* Ian Katz, *FASB Eases Fair-Value Rules Amid Law-Makers Pressure,* Bloomberg, Apr. 2, 2009, *available at* http://www.bloomberg.com/apps/news?pid=20601087&sid=agfrKseJ94jc (on the news of FASB's vote, Citigroup's stock rose 2.2% to $2.74 in New York Stock Exchange composite trading. Bank of America Corp. added 2.7% to $7.24. The KBW Bank Index earlier rose 6.1%).
[415] Theo Francis, *New FASB Rules: Back to Square One?*, BusinessWeek, Apr. 2, 2009, *available at* http://www.businessweek.com/bwdaily/dnflash/content/apr2009/db2009041_492116.htm.
[416] The International FAS 157-e, http://ftalphaville.ft.com/blog/2009/04/03/54451/the-international-fas-157-e/ (Apr. 3, 2009, 08:38 EST).
[417] Press Release, International Accounting Standards Board, "Trustees express support for fundamental and urgent review of financial instruments accounting and conclude inaugural meeting with Monitoring Board" (Apr. 2, 2009), *available at* http://www.iasb.org/NR/rdonlyres/87748D19-F2A2-48B1-88BB-C43FDFEBDA68/0/TrusteessupportMonitoringBoardFINAL.pdf.

relevant in estimating fair value."[418] Instead, "fair value is a market-based measurement, not an entity-specific measurement." In a press release, FASB reiterated that fair value is an exit price in an orderly transaction under current market conditions.[419] FAS 157-4 replaces the hypothetical price inputs prescribed under FAS 157-e with renewed emphasis on using market transactions as inputs to fair value estimation, subject to revisions for inactive or distressed market conditions. It specifies a range of factors for determining if these conditions exist and requires that all adjustments made to valuation methodologies be disclosed and quantified for investors.

FAS 157-4 does not eliminate from fair value accounting the merger of credit and market value inputs in a single presentation. Instead, it requires the reporting entity to consider the weight of both kinds of inputs in valuing assets and liabilities in inactive or distressed markets. Replacing hypothetical price inputs to fair value with actual prices (which given Level 3 treatment are largely unreliable) does not solve the problem. Neither hypothetical orderly prices (as proposed) or actual prices that are unreliable (as adopted) is a solution to the problem. It appears to the Committee that the guidance will not result in significant changes in the approach to measure fair value under FAS 157.

G. An Alternative Proposal: Supplemental Disclosure Through Dual Presentation

The Committee believes that FASB should supplement the fair value standard outlined in FAS 157-4 by requiring preparers to disclose two additional balance sheet presentations that would enable investors to distinguish the influence of market and credit value inputs more explicitly.

This dual presentation reframes the fair-value debate in order to resolve the accounting controversy implicated by the combined use of market and credit value inputs. We believe that it is very difficult to present a single "fair" value for an asset, particularly in inactive markets and distressed circumstances. Traditionally, when discussing or presenting "fair" value, regulators and practitioners have instead used credit value, market value, or both. Credit value is an asset's intrinsic worth, as determined by the cash flow characteristics of the asset and its contractual provisions. Market value is the price at which an asset is trading in an observable exchange market. The concept of "fair value" embodied in FAS 157-4 conflates market value and credit value in a manner we believe is difficult for the investing public to comprehend.

[418] Financial Accounting Standards Board, *Determining Fair Value When the Volume and Level of Activity for the Asset or Liability Have Significantly Decreased and Identifying Transactions That Are Not Orderly*, FSP FAS 157-4 (Apr. 9, 2009), *available at* http://www.fasb.org/pdf/fsp_fas157-4.pdf.
[419] News Release, Financial Accounting Standards Board, "FASB Issues Final Staff Positions to Improve Guidance and Disclosures on Fair Value Measurements and Impairments" (Apr. 9, 2009), *available at* http://www.fasb.org/news/nr040909.shtml.

The dual presentation approach requires reporting institutions to disclose market value and credit value separately and independently of each other. The first presentation would reflect strict market value based on observable market inputs only, unadjusted for inactivity or distress. The second presentation would reflect credit value based on a fundamental appraisal of expected long-term performance established independently of market inputs. Investors can then use this information in reaching their own conclusions about a firm's financial position. This dual-pronged presentation would supplement, not substitute for, fair value accounting.[420]

To support this dual presentation, firms should be required to disclose in technical detail how each value was determined. In the case of credit value, firms must disclose their modeling techniques, methodologies for estimating expected cash flows and recoveries, and any other working assumptions that materially influence their valuation. They must also disclose the risk factors associated with their estimates. The credit value estimate established under this standard would be presented independent of market inputs. Estimates of market value, by contrast, must be narrowly limited to observable market inputs only, regardless of whether the relevant market is inactive or distressed within the meaning of 157-4. Firms would have considerably less discretion to adjust their estimates of market value under this standard than currently contemplated by FASB.

This framework is responsive to the principle that disclosure should be more, not less, transparent and consistent in periods of financial crisis. With these two presentations, investors would receive the benefit of more transparent and detailed disclosure. They would gain the added advantage of greater consistency in reporting among different firms because the scope for discretion in modeling and valuing assets and liabilities under these two supplemental approaches would be more constrained across the universe of reporting entities. Some may argue that this approach discloses too much information at the risk of confusing investors, but with proper explanatory supplements this risk can be minimized. Some firms might also object to sharing their valuation methodologies with the investing public on the grounds that they would be divulging proprietary information. However, our impression is that the models currently in use are not a source of competitive advantage and are more likely to be (and perhaps ought to be) standardized to allow for greater comparability across reporting firms.

[420] Press Release, International Accounting Standards Board, "IASB Provides Update on Applying Fair Value in Inactive Markets" (Oct. 14, 2008), *available at* http://www.iasb.org/NR/rdonlyres/2F9525FD-4671-439D-B08E-27C18C81C238/0/PR_FairValue102008.pdf (It should be noted that last year, an Expert Advisory Panel to IASB reaffirmed that forced liquidations or distress sales "should not be considered in a fair value measurement," and agreed to recommend that firms follow "existing guidance within International Financial Reporting Standards (IFRSs) that using the entity's own assumptions about future cash flows and appropriately risk-adjusted discount rates is acceptable when relevant observable inputs are not available.").

In proposing this dual-approach supplement to "fair" value accounting, we note that the use of two methodologies to derive and display a company's accounts is not without precedent or supporting rationale. Notably, the SEC has set the stage by permitting the presentation of certain data compiled using methodologies other than U.S. GAAP alongside U.S. GAAP based data. Developed in reaction to the Enron scandal, and pursuant to the Sarbanes-Oxley Act, the SEC's Regulation G allows U.S. firms to present non-GAAP data in addition to information required to be disclosed using U.S. GAAP.[421] This move arguably encourages the disclosure of more information in relation to a company's accounts, particularly where a firm may have generated data that may not be easily or indeed accurately presented under U.S. GAAP. The move toward allowing a duality in the presentation of accounting data largely reflected the gradual incorporation of a more "principles based" approach into U.S. accounting methodology following the passage of the Sarbanes-Oxley Act, designed to provide for greater transparency in the face of firms' increasingly complex financial dealings.[422] In March 2008 the Division of Corporation Finance of the SEC sent a letter to the chief financial officers of a number of large financial institutions requesting that they consider supplemental disclosures related to the valuation of these types of assets. Moreover, in August 2008 the SEC Advisory Committee on Financial Reporting recommended that the FASB establish a useful means of reconciling cash flow and income statement figures by major classes of measurement attributes, suggesting the potential for two earnings per share figures.[423] Taking this into account, our proposal is unlikely to present a radical departure in either form or substance. In particular, separate presentations of data relating to market value and credit risk aim to extract key indicators governing asset value more clearly. This should give investors enhanced clarity and choice in the determination of overall investment risk and thereby reduce information asymmetries and enhance investor protection.

More recently, FASB has applied the logic of a dual presentation to the reporting standards governing impairments associated with equity and debt securities, requiring firms to distinguish losses related to permanent credit impairment from temporary losses due to periodic fluctuations in market prices. In April 2009, FASB issued FSP FAS 115-2 and FAS 124-2, *Recognition and Presentation of Other-Than-Temporary-Impairments (OTTIs)*. These pronouncements altered the existing guidance for recording other-than-temporary-impairments, which previously conflated credit- and market-

[421] *See* Conditions for Use of Non-GAAP Financial Measures, Exchange Act Release No. 34-47226 (Jan. 22, 2003).
[422] *See* News Release, Financial Accounting Standards Board, "FASB Issues Proposal for a Principles-Based Approach to U.S. Accounting Standard Setting" (Oct. 21, 2002), *available at* http://www.fasb.org/news/nr102102.shtml.
[423] Final Report of the Advisory Committee on Improvements to Financial Reporting to the United States Securities Commission 27-34 (Aug. 1, 2008), *available at* http://www.sec.gov/about/offices/oca/acifr-finalreport.pdf.

related losses on the income statement.[424] Under both the old and new standards, an equity or debt security is deemed impaired whenever its fair value was determined to be less than its amortized cost. An other-than-temporary impairment is any impairment to a security that will not be held long enough for its fair value to recover to its amortized cost level. Prior to this release, however, the holder of an impaired held-to-maturity or available-for-sale security was required to reflect an impairment loss *entirely* in its earnings account if the impairment was other-than-temporary, without identifying its source as a credit or market loss.

Without disturbing this general fair value framework, the new guidance explicitly distinguishes the portion of an impairment attributable to an underlying credit loss, defined as "the difference between the present value of the cash flows expected to be collected and the amortized cost basis,"[425] from any residual amount associated with market fluctuations. When a holder identifies an impairment, only the credit portion is recognized immediately in earnings, while the remainder is recorded in other comprehensive income. By separating credit from non-credit loss reporting in earnings, this proposal provides clear disclosure of fair value to investors but limits the penalty to a security holder's earnings to only the portion of the loss associated with forecasted reduced cash collections. The remaining portion is disclosed without affecting a holder's bottom line. The result of this approach is to differentiate fundamental credit losses from market losses without displacing the fair value framework.

Given our stance on financial reporting for asset valuation, we propose an adjustment to regulatory accounting as well. Currently, FDICIA stipulates that accounting for bank capital should be at least as stringent as U.S. GAAP. [426] It is our opinion that the Fed and the banking regulators should not be limited to following U.S. GAAP and should instead be free to choose another method (credit value, market value, or some combination of both) it deems appropriate. The rationale behind this approach is that regulators have a different objective than investors in their use of financial information and therefore different measurements of these assets may be appropriate. Financial reporting is focused on providing information to investors that they can use to make investment decisions whereas regulators are focused on whether the bank has enough capital and is solvent. To reduce the risk of regulatory forbearance inherent in

[424] Financial Accounting Standards Board, *Recognition and Presentation of Other-Than-Temporary Impairments, FSP FAS 115-2 and FAS 124-2* (Apr. 2, 2009), *available at* http://www.fasb.org/pdf/fsp_fas115-2andfas124-2.pdf.
[425] *Id*. at 3.
[426] *See* 12 U.S.C. § 1831n(a)(2)(b) (2006) ("If the appropriate Federal banking agency or [the FDIC] determines that the application of any generally accepted accounting principle to any insured depository institution is inconsistent with the objectives described in [this section] . . . the agency or the [FDIC] may . . . prescribe an accounting principle which is applicable to such institutions which is no less stringent than generally accepted accounting principles.").

this proposal—a risk that led to the adoption of the FDICIA stringency test—an independent body should be established to check on the regulators' (the Fed under our proposal on regulatory restructuring) choice of accounting methodology for purposes of judging capital adequacy.

H. Consolidation of SPEs and VIEs and Revisions to FIN46R

Another accounting issue we have examined involves the relevant rules on consolidation. Prior to and during the current crisis, financial institutions used two different securitization vehicles to remove securitized debt from their balance sheets. First, pursuant to FAS 140, *Accounting for Transfers and Servicing of Financial Assets and Extinguishments of Liabilities,* they established Qualified Special Purpose Entities (QSPEs) to which they transferred their own assets. To qualify, the QSPE had to meet four conditions: (1) it had to be demonstrably distinct from the transferor; (2) the entity had significantly limited activities specified entirely in advance in legal documents, which could only be changed with approval of a majority of beneficial holders; (3) it generally could only hold passive financial assets; and (4) it could only dispose of non-cash assets in automatic response to certain conditions.[427] Second, if the institution did not transfer its assets or did not meet FAS 140's qualifications, it might avoid consolidation under FIN 46R, *Consolidation of Variable Interest Entities.* Per the statement, a firm that is the "primary beneficiary" of a variable interest entity (VIE) must consolidate the VIE's assets and liabilities on its balance sheet. FIN 46R currently defines a "primary beneficiary" as "the party that absorbs a majority of the [VIE's] expected losses, receives a majority of its expected residual returns, or both."[428] "Variable interests" are defined as "ownership, contractual, or other pecuniary interests in an entity that change with changes in the fair value of the entity's net assets exclusive of variable interests."[429]

In response to the role played by these securitization vehicles in the financial crisis, FASB announced its intention in April 2008 to entirely eliminate the use of QSPEs as a method of avoiding consolidation and to focus on revision to FIN 46R. The FASB made these proposals a formality on September 15, 2008, by issuing several Exposure Drafts (ED) containing amendments to current regulations.[430] In particular, the proposed ED on FIN 46R would provide a new method for determining the primary beneficiary by requiring an enterprise initially to perform a qualitative analysis to determine if the enterprise's variable interest gives it a "controlling" financial interest—

[427] Ajay Adhikari & Luis Betancourt, *Accounting for Securitizations: A Comparison of SFAS 140 and IASB 39*, 19-1 J. of Int'l Fin. Man. & Acc. 73-105 (2008).
[428] Financial Accounting Standards Board, *FASB Interpretation No. 46, FIN 46R* (Dec. 2003), *available at* http://www.fasb.org/fin46r.pdf.
[429] *Id*. at 2.
[430] Financial Accounting Standards Board, *Proposed Statement of Financial Accounting Standards, Amendments to FASB Interpretation No. 46R* (Sept. 15, 2008), *available at* http://www.fasb.org/draft/ed_amend_fin46r.pdf.

this would depend, in part, on whether the enterprise has an implicit financial responsibility to ensure that a variable interest entity operates as designed. This, in turn, would be determined by whether the enterprise with a variable interest had the power to direct significant matters of the VIE and the right to receive significant benefits or the obligation to absorb significant losses, with significance being determined by the impact on the variable interest entity. If the qualitative analysis is inconclusive, an enterprise shall then conduct their own analysis to determine whether its variable interest requires the enterprise to absorb a majority of the entity's expected losses, receive a majority of the entity's expected residual returns, or both. It was proposed that the new FIN 46R be effective for fiscal years beginning after November 15, 2009.[431]

The immediate impact of these changes to FIN 46R will be to balloon the balance sheets, particularly of large financial institutions that have utilized securitization structures, such as large credit card issuers. Consolidation will cause a noticeable deterioration in the FDIC Tier I leverage ratio of several banks. The impact on banks with significant conduit, structured investment vehicle (SIV) and QSPE exposures is illustrated in the following table. Nevertheless, we agree with FIN 46R insofar as it ensures that *control* is the chief trigger of the consolidation requirement.

Table 16: Tier I Leverage Ratios as of December 31, 2008

Pro Forma Ratios Do Not Include Impacts of Mark-to-market or Management Action

Institution Name	*Average Adjusted Assets ($BN)*	*Total Assets of VIEs and QSPEs ($BN)*	*Leverage Ratio (%)*	*Pro-forma leverage ratio with consolidation of VIEs and QSPEs (%)*
JPMorgan Chase	1,967	733	6.92%	5.04%
Citigroup	1,955	1,110	6.08%	3.87%
Bank of America	1,872	1,699	6.44%	3.38%
Wells Fargo[432]	595	1,789	14.52%	3.62%
State Street	180	26	7.83%	6.85%

Source: Tier I capital and Leverage Ratios from SNL. VIE and QSPE information from 10-Qs.
Note: Leverage ratio defined as (Tier I Capital / Average Adjusted Assets). Pro forma leverage ratios do not include management actions and impact of recognizing unrealized loss associated with decline in FV of VIE and/or QSPE assets. Pro forma ratio calculation assumes Tier I capital remains constant, and average adjusted assets increase by total assets of off-balance sheet VIEs and QSPEs. Total assets in QSPEs are not disclosed by all institutions.

Many in the investment community also felt that insufficient disclosures about these off-balance sheet structures had exacerbated the crisis. In response to investor demand, on December 11, 2008, FASB issued FSP FAS 140-4 and FIN 46R-8 to improve

[431] *Id.*

[432] Due to the Wachovia acquisition closing on Dec. 31, 2008, the quarterly average adjusted assets amount does not reflect the average assets of Wachovia for the full period, resulting in a leverage ratio that is significantly higher than expected on an ongoing basis. Using quarter end assets of $1,309 trillion instead, the leverage ratio would be 6.6%, reducing to 2.79% in the case of consolidation of all VIEs and QSPEs.

transparency involving transfers of financial assets and the use of VIEs.[433] Specifically, per the FSP, firms using QSPEs are now required to provide additional information related to:

* the nature, purpose, size, and activities of an SPE utilized in a transfer of financial assets, including how the SPE is financed;

* a transferor's continuing involvement with financial assets transferred in a securitization or asset-backed financing arrangement accounted for as a sale;

* assets and liabilities recognized in a transferor's financial statements that relate to transfers of financial assets accounted for as secured borrowings.[434]

Moreover, a firm that holds an investment in or is a sponsor of VIEs must disclose additional information as well, including, among other items, the purpose and activities of the VIEs, financing arrangements, contingencies requiring financial support of the VIEs, and the determination of the firm's maximum exposure to loss due to the VIEs. The FSP is effective for interim and annual reporting periods beginning after December 15, 2008.[435]

Specific Recommendations

43. Study How FVA Can Be Improved. The Committee believes "fair value" accounting is a problematic standard in inactive or distressed markets because it conflates the concepts of market value and credit model value and may confuse investors. We do not believe the problem has been solved by FASB's latest guidance. We recommend continuing to study how "fair value" accounting can be improved. We further recommend that this be done on a joint basis by FASB and IASB, so the two major accounting standard setters are consistent in their approach.

44. Supplement FVA with Dual Presentation of Market and Credit Values. To supplement fair value reporting, the Committee proposes that FASB require an additional dual presentation of the balance sheet for Level 2 and Level 3 assets using credit value and market value independently of each other. Accompanying this dual presentation, firms should also disclose their underlying valuation methodologies. In the case of credit value, this includes sharing modeling techniques, estimates,

[433] Financial Accounting Standards Board, *Disclosures by Public Entities (Enterprises) about Transfers of Financial Assets and Interests in Variable Interest Entities, FSP FAS 140-4 and FIN 46(R)-8* (Dec. 11, 2008), *available at* http://www.fasb.org/pdf/fsp_fas140-4andfin46r-8.pdf.
[434] *Id.* at 4.
[435] *Id.* at 4-6.

assumptions, and risk factors. In the case of market value, the disclosures should reveal what market prices were actually relied on.

45. Allow The Fed to Use a Non-GAAP Methodology. As for regulatory accounting, the Committee believes the Fed should not be limited to following U.S. GAAP and should instead be free to choose another method (credit value, market value, or some combination of both) it deems appropriate. To reduce the risk of regulatory forbearance inherent in this proposal—a risk that led to the adoption of the FDICIA stringency test—an independent body (whose identity has not been determined by the Committee) should be established to check on the regulators' choice of accounting methodology for purposes of judging capital adequacy.

46. Implement FIN46R. As for consolidation, we agree with the FIN 46R approach because it focuses on the issue of control.

CHAPTER 5: Regulation of Bank Activities

Banks and similar depository institutions lie at the heart of the global financial crisis. In addition to rethinking capital requirements and reforming the securitization process, the regulatory debate over banks raises key questions relating to bank activities. This chapter addresses two such questions. The first is whether we should return to the Glass-Steagall (GS) regime that prohibited the combination of banking, insurance, and securities activities within a single firm. The second question is whether the government should use its newfound leverage over weakened banks to direct their lending activities. We answer in the negative on both counts.

A. Return of Glass-Steagall?

The Gramm-Leach-Bliley Act (GLB) was signed into law by President Clinton on November 12, 1999. This law repealed the Glass-Steagall Act of 1933, which prohibited the combination of banking, insurance, and securities activities in banks.

In signing the legislation, President Clinton stated:

> Over the past 7 years, we've tried to modernize the economy, and today what we're doing is modernizing the financial services industry, tearing down these antiquated walls, and granting banks significant new authority.
>
> This will, first of all, save consumers billions of dollars a year through enhanced competition . . . .[436]

Some voices are calling for a return of GS. We think this is the wrong approach. The better policy response is to make sure the risks of whatever activities banks engage in are adequately capitalized and supervised for risk—not to prohibit particular activities. The financial system has not been plunged into crisis by banks offering life insurance or underwriting equities, or even taking proprietary trading positions. The heart of the crisis has been risky mortgage lending, a core bank activity. While banks prior to GS could not directly hold mortgage-related securities, they nevertheless managed to do so through so-called Section 20 affiliates, as detailed below.

[436] Remarks on Signing the Gramm-Leach-Bliley Act, 1999 Pub. Papers 2081 (Nov. 12, 1999).

1. The Benefits of GLB

During senatorial debates, several benefits were identified in favor of GLB: (1) allowing for increased competition within the financial services industry; (2) enabling U.S. financial institutions to better compete with foreign firms which were universal banks; and (3) recognizing that GS had grown obsolete due to the ability of banks to largely circumvent its restrictions. All of these benefits remain valid today.

a. Market Competition

One of the main arguments in favor of GLB was that it would increase competition among financial institutions. Of particular concern was the high concentration of underwriters.[437] The inability of banks to enter both the insurance and securities fields, and the similar limitations placed on securities firms and insurance companies, acted as barriers to market entry.[438] Therefore, in order to increase competition amongst underwriters, it seemed wise to repeal GS.

The Senate believed that the increased competition that resulted from enacting GLB would decrease the cost of capital for mortgagors, local governments, and corporations:[439]

> Families will find it easier to purchase homes, cars, and other goods and services that must be financed. Business firms will be aided in their efforts to expand production and enhance the efficiency of their operations. State and local governments will find it cheaper to provide services to their citizens.[440]

b. U.S. Competitiveness

Another major goal of GLB was to increase the competitiveness of U.S. financial institutions. Senator Proxmire noted, "[GS] restrictions inhibit a U.S.-based firm from offering the entire range of financial services to both domestic and foreign customers in the United States."[441] Therefore, many U.S. and foreign financial institutions were choosing to locate offshore, where they could provide such products to foreign clients.[442] Furthermore, although U.S. banks had expertise as underwriters through offshore activity, they could not achieve the economies of scale attainable through

[437] 134 Cong. Rec. S3,382 (1988).
[438] *See id.*
[439] *See id.* at S3,380.
[440] *Id.* at S3,385.
[441] *Id.* at S3,382.
[442] *Id.* at S3,385 & S3,382.

underwriting domestically.[443] Any limitation on U.S. bank activities that did not extend to foreign banks would be damaging to their future profitability.

The liberalization of activities restrictions brought the U.S. in line with other countries. A 1997 study indicated that of the then 15 E.U. countries, plus Canada, Japan, Switzerland and the United States, only Japan and the United States limited the financial activities of banking organizations,[444] and Japan abolished its version of Glass-Steagall in 1994.[445] Indeed, other countries still provide more unlimited choice to banking organizations about whether to engage in financial activities in the holding company or bank.

c. GS Had Been Largely Circumvented

One way for banks to get around GS rules was to go abroad. Although they could not underwrite most forms of securities domestically, "in 1985 . . . 11 American banks underwrote about $16 billion of Eurobonds, which is substantial in comparison with the $105 billion of corporate bonds underwritten in the United States."[446] Senator Proxmire concluded, "Permitting banks to establish securities affiliates in the United States would bring some of this business back home and contribute to the safety and soundness of our financial system."[447]

While U.S. national banks needed to go abroad to attain relief from GS, thrifts were able to both underwrite securities and affiliate with securities organizations. For example, in 1988, Sears owned both Sears Savings Bank—one of the largest thrifts in the country—and Dean Witter Reynolds—a large securities firm.[448]

By the 1980s, national banks could engage in several types of domestic securities activities without violating GS. First, they could serve as broker-dealers for institutional clients.[449] Second, they were able to sell commercial paper in private placements.[450] Third, the Fed gave U.S. banks permission to underwrite various types of debt, including municipal revenue bonds, mortgage backed securities, commercial paper, and

[443] *Id.* at S3,382.
[444] J. Barth, D. Nolle, and T. Rice, *Commercial Banking Structure, Regulation and Performance: An International Comparison*, Office of the Comptroller of the Currency Economics, Working Paper No. 97-6 (Feb. 1997), *available at* http://www.occ.treas.gov/wp97-6.htm.
[445] Roy C. Smith & Ingo Walter, *Global Banking* 174 (2003) (noting that "[t]he Japanese equivalent of Glass-Steagall, Article 65 of the Japan Financial Law, was repealed in 1994").
[446] 134 Cong. Rec. S3,382 (1988).
[447] *Id.*
[448] *See id.* The GLB debates of the 1990s focused on whether Congress should bar thrifts from holding securities and from combining with industrial corporations.
[449] 134 Cong. Rec. S3,382 (1988).
[450] *Id.*

"consumer-receivable-related securities."[451] Senator Proxmire argued that these exceptions to GS "illustrate the absence of complete separation between banking and securities activities."[452]

Banking organizations were also able to circumvent Glass-Steagall through use of a so-called Section 20 subsidiary (named for Section 20 of the Glass-Steagall Act), which permitted a bank holding company (BHC) to engage in otherwise prohibited securities activities to the extent it was not "engaged principally," defined by the Fed as more than 25% of gross revenue. A BHC could increase its otherwise prohibited securities activities by combining them with permissible ones, e.g., underwriting government securities.[453]

This history indicates it is very difficult to contain circumvention of securities activities.

d. GS Limited Diversification of Bank Risk

Many believed that GLB would lead to more stability and safety for banks. First, by increasing their securities and insurance practices, banks would be able to diversify their holdings.[454] Second, GLB was supposed to provide "a clear [regulatory] roadmap" for financial institutions.[455] Such clarity was in direct contrast with the "ad hoc expansion and administration of our banking sector."[456] In other words, the many exceptions to and ways around GS discussed in the previous section apparently left financial institutions wondering what was legal. GLB was supposed to reduce such confusion.

2. Risk Protection Under GLB

GLB was careful to make sure that only strong banking organizations could engage in the newly authorized securities and insurance activities.

Under Section 4(k) of the BHCA, GLB permits a BHC, all of whose subsidiary banks are "well-capitalized" and "well-managed," to become a financial service holding company (FHC) through which it can engage in a full range of financial activities, including insurance, securities, and merchant banking (investment in companies, including purely commercial companies, for resale).

[451] *Id.*
[452] *Id.*
[453] *See* Review of Restrictions on Director, Officer and Employee Interlocks, Cross-Marketing Activities, and the Purchase and Sale of Financial Assets Between a Section 20 Subsidiary and an Affiliated Bank or Thrift, 61 Fed. Reg. 57679, 57683 (Nov. 7, 1996); *see also* 75 Fed. Res. Bull. 192 (1989).
[454] 145 Cong. Rec. S4,735 (1988).
[455] *Id.*
[456] *Id.*

GLB also expands the power of well-capitalized and well-managed national banks to engage in financial activities through bank subsidiaries. These are the same financial activities permitted for FHCs with three exclusions: (1) certain underwriting of insurance and annuities; (2) real estate investment or development; and (3) merchant banking (this can be permitted after 2004 if the Fed and Treasury so agree). The total investment of a national bank in all financial subsidiaries is limited to the lesser of 45% of the bank's total assets or $50 billion (which is adjusted periodically by an index).

It is up to the regulators to make sure these well-capitalized and well-managed requirements are complied with.

3. Going Back in Time is Not a Practical Option

As of March 27, 2009, there were 610 BHCs which elected to be and qualified as FHCs, 54 of which were foreign BHCs.[457] In addition, over the last year, there have been further major combinations of banking and securities operations when major securities firms were acquired by banks (Bear Stearns by JP Morgan Chase, Merrill Lynch by Bank of America) or themselves converted to bank holding companies as FHCs (Goldman Sachs, Morgan Stanley). It would be disruptive, risky and impractical for the banking sector to undo these combinations.

Specific Recommendation

47. Refrain from Reimposing Glass-Steagall. Because the Gramm-Leach-Bliley Act has led to increased competition within the financial services industry and with foreign firms, and because the separation of banking from insurance and securities is impractical, the Committee recommends that policymakers leave the Gramm-Leach-Bliley Act largely intact.

B. Directed Lending

Government policies designed to influence or otherwise control the flow of credit have been implemented in a number of countries with a view toward achieving greater discipline in managing market volatility and to further state-approved social objectives.[458] Directed lending brings regulators into the market as decision-makers. They determine all or some of the conditions under which banks lend funds by, for example, choosing borrowers, determining interest rates, and setting repayment terms.

[457] *See* Fed. Res. Bd., Financial Holding Companies (updated regularly), *available at* http://www.federalreserve.gov/generalinfo/fhc/.
[458] Charles Calomiris & Charles Himmelberg, *Government Credit Policy and Industrial Performance*, World Bank Pol'y Research, Working Paper No. 1434 (1995).

State-directed lending can take place in cases where the state is in a position to mandate decision-making through a controlling stake or complete ownership of the bank, as is common to some developing countries and in the more developed, but highly centralized economy in China.[459] Additionally, legislation, government subsidies, and guarantees may require private banks to lend in conformity with state objectives.[460] Lending may also be controlled indirectly by reserve requirements.

While directed lending provides certain useful tools to policymakers—particularly when dealing with short-term crises—its longer-term use can prove problematic for the economy as a whole. This section provides an overview of the potential issues that may arise in the context of directed lending, taking into account the experiences of other countries that have employed various forms of directed lending in the design of their longer-term economic policy. In broad terms, the economic literature sets out the following reasons why extreme caution should be exercised in this area: (i) distorted allocation of resources and competition; (ii) potential agency risks and information asymmetries; and (iii) problematic exit strategies. Each of these issues is discussed in greater detail below.

The current financial crisis has seen a serious diminution in the flow of credit through the economy, resulting from the weakening of bank balance sheets and loss of market confidence in the financial institutions that helped generate the credit boom of the past decade.[461] Pursuant to the Troubled Assets Relief Program (TARP), Congress has authorized capital infusions into struggling institutions, with the Treasury becoming an investor in preferred shares and warrants in the stockholding of recipient companies.[462] In addition, the Fed has made available a number of liquidity facilities[463] in an attempt to encourage banks to borrow at lower than market rates to meet their liquidity needs and eventually revive their balance sheets. While neither TARP nor the Fed currently mandates that recipient firms use the funds to free up credit for main street consumers and businesses, the Treasury has come under scrutiny for not requiring banks to increase their lending activity.[464] Indeed, recent studies indicate that

[459] *See generally The Future of State-owned Financial Institutions* (Gerard Caprio, Jonathan Fiechter, and Michael Pomerleano eds., Brookings Institutions Press 2005).
[460] *See* James Hanson, "India and Indonesia," *in* Financial Liberalization: How Far, How Fast (Gerard Caprio, Patrick Honohan, Joseph Stiglitz eds., Cambridge Univ. Press 2001).
[461] *See, e.g.*, Cong. Oversight Panel, *Special Report on Regulatory Reform* (Jan. 2009).
[462] Matthew Ericson et al., *Tracking the $700 Billion Bail-Out*, N.Y. Times, Mar. 12, 2009, *available at* http://projects.nytimes.com/creditcrisis/recipients/table. *See also* U.S. Dep't of the Treasury, *Emergency Economic Stabilization Act: Capital Purchase Program Contract Terms* (Mar. 6, 2009), *available at* http://www.treasury.gov/initiatives/eesa/agreements/index.shtml.
[463] Fed. Res. Bd., *Credit and Liquidity Programs and the Balance Sheet* (Feb. 23, 2009), *available at* http://www.federalreserve.gov/monetarypolicy/bst_lendingdepository.htm.
[464] Cong. Oversight Panel, *Accountability for the Troubled Asset Relief Program* 3, 10, 11 (Jan. 9, 2009). For example, the Treasury has now begun demanding monthly reports from recipient banks that have been

banks and financial firms have been unenthusiastic about using TARP and Fed funds to lend to main street, preferring instead to shore up balance sheets and avoid the mistakes made during the credit boom.[465] It may therefore be the case that the government, as an investor and a provider of key liquidity facilities, takes a more robust stance going forward regarding the use of taxpayer funds to ensure that there is greater and more focused lending across the economy.

Directed lending has historically been used by governments seeking to push funding toward the development of particular sectors of the economy. The rationale governing this policy is that private firms are generally not willing to extend credit to areas of investment other than those that might serve private ends, so that socially valuable projects are left to fall by the wayside. In this regard, directed lending may also be seen as a means of developing certain strategically important areas of industry or society.[466] Gerard Caprio and Patrick Honohan point out that directed lending may also occur when governments take ownership positions in banks following financial crises.[467]

In the context of the current financial crisis, directed lending is seen by some as a near-term boost to a stagnating economy, releasing credit to certain borrowers or industries that may otherwise present too high a risk (or perhaps offer too low a return on the investment) for banks hurt by the crisis. However, notwithstanding this possible benefit, the macro-economic impact of this policy across a number of countries, both developing and developed, provides an instructive study of the undesirable effects of directed lending practices.

1. Resource Allocation and Competition

Gerard Caprio, James Hanson, and Patrick Honohan argue that state-directed economies tend to misallocate resources. The direct results of non-market mechanisms controlling the direction of resources are credit flows to inefficient public enterprises and to favored borrowers. First, subsidized or otherwise guaranteed borrowings create stronger incentives for the operation of capital intensive techniques that could, in a liberalized context, have been more efficiently constituted under market-driven pressures. Secondly, directed lending may be more vulnerable to political interference

most assisted under TARP to monitor how funds are being used to revive consumer and business lending.

[465] Rebecca Christie, *Treasury Demands Banks with TARP Funds Report Lending*, Bloomberg, Jan. 20, 2009, *available at* http://www.bloomberg.com/apps/news?pid=20601087&sid=aUwUf2tsVmwQ&refer=home.

[466] For example, directed lending has been used in India to provide banking services to the rural poor, with the establishment of bank branch networks across the country. Wendy Dobson, *Financial Reforms in China and India: A Comparative Analysis*, *prepared for* IFPRI/CES/SUFE International Conference on The Dragon and Elephant: China and India's Economic Reforms, held in Shanghai, July 1-2, 2006, Oct. 2005, at 4.

[467] For a brief review of the rationales for directed lending, see *id*.

when determining who should receive credit and on what terms, such that allocations may undermine both profit and social gain as well as permit corrupt conduct.[468] Thirdly, compounding these inefficiencies, directed lending can produce a moral hazard among financial intermediaries not only to push funding to unprofitable ends but also to fail to collect repayments and enforce the terms of loans—potentially creating structural vulnerabilities to systemic risk and thereby undermining an important regulatory objective. Accordingly, under such conditions, the state may be prompted to divert its own supervisory resources from monitoring the conduct and behavior of financial firms to analyzing details of loans and working to ensure that these are properly serviced and repaid.[469]

China's past practices exemplified such problems. With banks nationalized under Mao Zedong, Chinese banks developed directed lending policies that diverted credit to favored projects irrespective of their profitability or utility.[470] Nicholas Lardy notes that nonperforming loans of major financial institutions at the end of 2003 stood at 2,440 billion RMB (the Chinese currency), equivalent to about 18% of the loans of these institutions and 21% of gross domestic product. At least 90% of these may be regarded as government contingent liabilities.[471] Similar issues arose in Indonesia, where a considerable number of directed loans taken out by large public entities, conglomerates, and small agricultural farmers were never repaid. The government and depositors eventually paid the price for this poor credit allocation through a significant drop in deposit rates.[472]

In view of the above, directed lending tends to limit competition between banks, by encouraging the formation of cartelized policies on lending.[473] Where the state directs the terms on which lending should take place, banks are less motivated to innovate and develop new customer bases in the expectation of profit. This affects not only the novelty of products they offer but also the caliber of staff they retain.[474]

[468] *See* Kenneth Dam, *Credit Markets, Creditors' Rights and Economic Development* 3-5, Univ. of Chicago Law & Economics, Olin Working Paper No. 281 (Feb. 2006), *available at* http://ssrn.com/abstract=885198.
[469] Financial Liberalization: How Far, How Fast 6-7 (Gerard Caprio, Patrick Honohan, Joseph Stiglitz eds., Cambridge Univ. Press, 2001).
[470] Brian Bremner et al., *Betting on China's Banks*, BusinessWeek, Oct. 31, 2005, *available at* http://www.businessweek.com/magazine/content/05_44/b3957013.htm.
[471] *See* Gerard Caprio et al., *The Future of State-owned Financial Institutions* (Sept. 2004), *available at* http://www.brookings.edu/papers/2004/09globaleconomics_caprio.aspx.
[472] James Hanson, "India and Indonesia," *in* Financial Liberalization: How Far, How Fast 239 (Gerard Caprio, Patrick Honohan, and Joseph Stiglitz eds., Cambridge Univ. Press, 2001).
[473] *See generally* Isabelle Cassiers, *La Generale de Banque de 1935 a Nos Jours: une Mise en Perspective Macroeconomique*, *in* La Generale de Banque 1822-1997, at 173-209 (Erik Buyst et al. eds., Editions Racine, 1997); Isabelle Cassiers et al., "Economic Growth in Postwar Belgium," *in Economic Growth in Europe Since 1945* (N. Crafts and G. Toniolo eds., Cambridge Univ. Press 1996).
[474] In the case of Belgium, for example, liberalization led to increased growth, but not corresponding profitability. Charles Wyplosz suggests that a reason for this may be the increased labor costs arising from engaging a more expert workforce to create and manage more complex financial products. *See*

Furthermore, directed lending reduces the extent to which banks engage in determining the risk-profiles of borrowers or industries meriting investment.[475] Arguably, such policies may put strictly domestic banks at a competitive disadvantage, particularly compared to foreign or international banks not subject to constraining directives that have innovated and invested in profitable ventures in the interim, when government direction and support is lifted.

2. Information Asymmetries and Agency Risk

The presence of information asymmetries in a given market is generally a sound rationale for introducing some degree of regulation. Experts generally agree that the flow of information in the credit market is imperfect. Various sectors of the economy are privy to different pools of information, such that the rational allocation of credit is often skewed.

The impact of these information asymmetries is felt extensively in the operation of directed lending. In particular, a potential problem exists because of the agency structure created between the government as principal and the bank as agent. Here, the government is more than likely to be in possession of imperfect information. Regulators may make decisions on the basis of short-term information, particularly where directed lending is used to fulfill certain social or economic goals—for example, by pushing credit to borrowers that may have limited track records or where the value of information may itself be limited given the presence of state subsidies and guarantees. In any event, as a consequence of shallower competition, moral hazard and the absence of a profit motive for the extension of credit, private incentives to invest in better information collection may be more limited.[476] Accordingly, distortions already present in the market as a result of information discrepancies may be further magnified in this context.

Some may argue that the normative value of greater state control over the extension of credit depends on the belief that the government is more sophisticated than

Charles Wyplosz, "Restraints and Liberalization in Postwar Europe," *in* Financial Liberalization: How Far, How Fast 154 (Gerard Caprio, Patrick Honohan, and Joseph Stiglitz eds., Cambridge Univ. Press, 2001).

[475] The French experience from the 1950s to the 1980s provides further evidence that priority subsidized credit resulted in reduced completion and bad loans. This did not pose a problem in the risk management of banks that could count on a state guarantee for priority loans, but was seen as having contributed to bad management practices and weak institutions that could become vulnerable to the potential effects of high interest rates. *See* Charles Wyplosz, "Restraints and Liberalization in Postwar Europe," *in* Financial Liberalization: How Far, How Fast 133 (Gerard Caprio, Patrick Honohan, and Joseph Stiglitz eds., Cambridge Univ. Press, 2001).

[476] Financial Liberalization: How Far, How Fast 34 (Gerard Caprio, Patrick Honohan, and Joseph Stiglitz eds., Cambridge Univ. Press, 2001). *See also* Dimitri Vittas & Yoon Je Cho, *Credit Policies: Lessons from East Asia* 3, World Bank Policy Research, Working Paper No. 1458 (May 1995).

most private sector firms. While regulators may appear to have access to information on a large number of economic constituencies, in reality it may be that they are less experienced in the business of determining the best lending policies. In addition, the directed lending model places reliance on the state's ability, as principal, to direct financial intermediaries in the performance of broader social and economic goals. In this regard, there may be a discrepancy between the expectations of the state and the ability of credit institutions to deliver in areas where they may have limited experience and facility.

3. Exit Strategy

Commentators have highlighted the difficulties experienced by economies transitioning from the directed lending model to one without such restrictions. First, institutions entering into a more liberalized environment may be unprepared. By way of example, banks that made loans on the basis of poor information and risk management practices may find their balance sheets compromised from the start. Higher interest rate costs, reduced or eliminated state guarantees and subsidies, and economic measures that diminish the value of collateralized assets may saddle firms with worthless portfolios that prove difficult to shift. Similarly, managers used to working within the moral hazard created by state-guarantees and subsidies, and regulators formulating lending policy, could find themselves unprepared for a market in which credit risk must be newly assessed and investment opportunities freshly and critically analyzed.[477]

Finally, one might assert that transition from a directed to a more liberal model of lending and economic control may inevitably lead to some form of crisis. Changes in interest and deposit rates, elimination of capital controls, calibrations of reserves and deficits—as well as establishment of the institutional stepping stones required for a gradual movement to greater liberalization—present difficult challenges for regulators. As the experiences in Japan, Spain, and the Scandinavian countries have highlighted, some intermediary failure, with the potential for systemic consequences, may result once firms enter a more competitive and uncertain environment. In response, commentators have pointed to the importance of a competitive financial market, strong institutions, the rule of law, and effective regulation in mitigating any potential fall-out from a transition. Consequently, we believe that to provide for an orderly and untroubled move into greater liberalization in the future, any move toward directed lending may require the careful formulation of an exit strategy at the outset.

[477] Patrick Honohan, *Banking System Failures in Developing and Transition Countries: Diagnosis and Predictions*, 29(1) Econ. Notes 83, 2000.

Specific Recommendation

48. Avoid Directed Lending. We believe regulators should not direct the lending policies of financial institutions.

CHAPTER 6: Reorganizing the U.S. Regulatory Structure*

The previous chapters of this Report leave no doubt that substantive reforms to U.S. financial regulation are sorely needed. But such substantive reforms will be of little use if the regulatory structure remains fragmented and ineffective. While other nations have moved toward integrated financial regulatory structures, the United States continues to retain an outmoded, overlapping sectoral model. This becomes more evident everyday. As this Report goes to press, the Treasury has announced plans for various reforms with respect to OTC derivatives that involve somewhat duplicative responsibilities for the CFTC and the SEC, as well as undefined roles for the Fed and the Treasury itself.[478] The Committee believes this incoherent structure has not served the interests of the overall economy or the American public, as evidenced by the present crisis. In this chapter, we offer some alternatives for reorganizing the U.S. regulatory structure in a manner that makes it is more integrated and effective. These recommendations, in large part, were previously set forth in our statement entitled "Recommendations for Reorganizing the U.S. Regulatory Structure" on January 14, 2009.

A. Aspects of Regulatory Structure Upon Which We Reached Consensus

1. Two or Three Regulatory Bodies

The United States should have only two or, at most, three independent federal regulatory bodies overseeing the U.S. financial system—the Fed, a newly-created independent U.S. Financial Services Authority (USFSA), and possibly an independent investor/consumer protection agency. This means that various existing regulatory agencies, such as the Office of the Comptroller of the Currency (OCC), the Office of Thrift Supervision (OTS), the Federal Deposit Insurance Corporation (FDIC), the Securities & Exchange Commission (SEC) and the Commodities Futures Trading Commission (CFTC) would all be merged and consolidated into these two or three bodies.

* Roel C. Campos joined the Committee after the release of our January 14, 2009 statement on reorganizing the U.S. financial regulatory structure, which serves as the basis for this chapter. As a consequence, the views expressed in this chapter do not reflect those of Mr. Campos.

[478] Press Release, U.S. Dep't of the Treasury, "Regulatory Reform Over-The-Counter (OTC) Derivatives" (May 13, 2009), *available at* http://www.ustreas.gov/press/releases/tg129.htm; *see also* Letter from Timothy F. Geithner, Secretary of the Treasury to Harry Reid, Senate Majority Leader (May 13, 2009).

The United States occupies a distinct place in the world, and any decision regarding U.S. regulatory structure must be uniquely tailored to the needs of the United States. However, it bears noting that the vast majority of other leading financial center countries have moved toward more consolidated financial oversight. As shown in the recent paper by Professor Howell Jackson of Harvard Law School, "A Pragmatic Approach to the Phased Consolidation of Financial Regulation in the United States," the overwhelming trend is toward a more consolidated regulatory structure, whether of the three regulator model employed in Australia and the Netherlands (where, in addition to the central bank, one regulator is responsible for prudential regulation, while a second regulator focuses on business conduct in the financial sector) or the more consolidated model employed in Japan and the United Kingdom (where there is a single regulator in addition to the central bank). A rapidly dwindling share of the world's financial markets are supervised under the fragmented, sectoral model still employed by the United States.

Below are the relative responsibilities we believe appropriate for the regulatory bodies in a system of consolidated oversight.

a. Responsibilities of the Fed

The Fed would retain its exclusive control of monetary policy and its lender-of-last-resort function as part of its key role in ensuring financial stability. In addition, because of its institutional expertise, its significant role in the Basel process and the demonstrated relation of capital requirements to financial stability, the Fed would set capital requirements for all financial institutions. Other types of regulation that directly bear on systemic risk, like margin requirements, should also be entrusted to the Fed. Fed control of capital requirements for all institutions would ensure consistency across financial institutions, enable rapid reform, and avoid the adverse competitive consequences of different agencies setting different capital standards for essentially the same activity. As a consequence, we do not favor current proposals to vest systemic risk regulation in an interagency council comprising several existing regulatory agencies. We believe this important role should be retained by the Fed—and the Fed alone. One regulator needs the authority and accountability to regulate matters pertaining to systemic risk.

b. Responsibilities of the USFSA

The USFSA would regulate all other aspects of the financial system, including market structure, permissible activities and safety and soundness for all financial institutions (and possibly consumer/investor protection with respect to financial products if this responsibility were lodged with the USFSA). Again, there is a need for consistency, rapid reform, and avoidance of adverse competitive consequences in all financial institution regulation. This can only be ensured if regulation is undertaken by one agency. Moreover, that agency must be independent, like the Fed, such that its regulations are subject only to judicial—not executive—review and the appointment of

its governing body and membership, again like the Fed, should be insulated from the electoral cycle. The possible divisions of responsibility between the Fed and the USFSA with respect to supervision for safety and soundness are discussed below.

c. Responsibilities of an Independent Investor/Consumer Protection Agency or Division of the USFSA

It is unclear whether this activity is best organized in a separate agency or as a division of the USFSA. We do note, however, that the relevant prudential supervisor should give its input to the investor/consumer protection body regarding the safety and soundness impact of its regulatory actions; any conflict between the supervisory and investor/consumer protection body should be resolved by the Treasury. Moreover, if investor/consumer protection is undertaken in a division of the USFSA, the head of the agency should be Senate-confirmed to ensure strong congressional oversight and rigorous enforcement by the division.

2. Role of the Treasury

The Treasury would coordinate the work of the regulatory bodies. The difficulties experienced by the U.K.'s Tripartite Committee (U.K. FSA, Bank of England, and HM Treasury) in connection with the failure and bailout of Northern Rock, highlight the importance of communication and coordination between regulators. The Treasury must ensure that there are written procedures, perhaps in the form of memoranda of understanding, setting forth the exact responsibilities of the regulatory bodies.

The Treasury should also be responsible for the expenditure of public funds used to provide support to the financial sector, as in the TARP. Specifically, Section 101 of the Emergency Economic Stabilization Act of 2008 (EESA) authorized the Treasury Secretary "to purchase, and to make and fund commitments to purchase troubled assets," creating an Office of Financial Stability within the Treasury to administer the program.

In addition, any existing Fed loans to the private sector that are uncollateralized or insufficiently collateralized, should be transferred in an orderly fashion to the balance sheet of the federal government (through asset purchases by the Treasury from the Fed). Any losses of the Fed are ultimately losses for U.S. taxpayers and should be directly and transparently accounted for as part of the federal budget. For the same reason, going forward, only the Treasury should engage in insufficiently collateralized lending. As argued by Professor Kenneth Kuttner of Williams College in his report entitled, "The Federal Reserve as Lender of Last Resort during the Panic of 2008,"[479] the

Fed's assumption of credit risk by lending against insufficient collateral may compromise its independence by: (1) making the Fed more dependent on the Treasury for support in carrying out its core functions, including the conduct of monetary policy (*see* the supplemental finance facility under which the Treasury supplied additional Treasury bills to the Fed); (2) jeopardizing the ability of the Fed to finance its own operations and thus the need to look for budgetary support from the government; (3) tarnishing its image and financial credibility in the event that the Fed ends up with minimal or negative capital; and (4) making it more subject to political pressures (allowing the Fed to reduce its line of credit to AIG) and absorb the first $20 billion in losses associated with the Fed's new Term Asset-Backed

3. Phased Transition over Time

Professor Jackson argues, and we agree, that the U.S. should draw on the experiences of leading jurisdictions in devising a step-by-step consolidation process. Key steps are: (1) immediate enhancement of the President's Working Group on Financial Markets to play a coordinating role within the present federal regulatory structure; (2) prompt enactment of legislation creating an independent USFSA (and possibly an independent consumer/investor protection agency); and (3) a second round of legislation authorizing the merger into the USFSA (and possibly the independent consumer/investor protection enforcement agency) of all other federal supervisory agencies. While the merger of the SEC and CFTC contemplated in the medium term by the Treasury's Blueprint could be a transitional step, it should not be an end in itself; full consolidation within the USFSA (or independent consumer/investor protection enforcement agency) should be the ultimate outcome. In addition, a plan should be immediately formulated for the orderly shift of risky assets from the Fed to the Treasury. The completion of this entire process could well take several years.

B. Aspects of Regulatory Structure Upon Which We Did Not Reach Consensus

1. Supervision of Financial Institutions

As a background matter, we believe there are tremendous advantages to consolidated prudential supervision. Such an approach, as implemented in leading jurisdictions around the world, offers significant advantages over the current model of overlapping or fragmented supervision. While regulatory failures of the past decade can be traced to many causes, the fragmented U.S. system of prudential supervision narrowed the field of vision of every regulatory body and dissipated supervisory resources through contests over jurisdictional boundaries. Such a system also impairs our ability to coordinate supervision internationally. Some have criticized the SEC with respect to its supervision of investment banks, such as Bear Stearns and Lehman Brothers, and broker-dealers, such as Madoff. We believe supervision should be undertaken by agencies with sufficient resources and expertise (i.e., either the newly created USFSA or the Fed).

Consolidated prudential supervision can: (1) ensure the implementation of consistent regulatory requirements across different sectors, drawing from best practices and past experiences in all sectors; (2) enhance the capacity to attract and retain high quality staff and to reassign those staff promptly as needed across different sectors of the industry; (3) diminish the risk of regulatory capture; and (4) enhance accountability.

Below we present three options for supervising financial institutions, as well as the advantages and disadvantages of each.

a. Fed Supervision of Financial Institutions Determined to be "Systemically Important" and USFSA Supervision of All Other Institutions

Advantages: By virtue of its existing supervision of bank holding companies and state-chartered banks that are members of the Fed, combined with the knowledge obtained from its open market operations, lender-of-last-resort function, and oversight and operation of payments and settlement systems, the Fed possesses a deep understanding of the issues confronting financial institutions. Further, the quality of examination is arguably higher today at the Fed (due to culture and salary levels) than in other regulatory agencies, and arguably would remain higher than in a new USFSA. Finally, since the Fed may be called upon to lend to financial institutions, either as a matter of course through the discount window, or in a crisis, the Fed needs detailed knowledge of financial institution operations and risks. And to avoid moral hazard, the Fed needs the power of corrective action through supervision, to control the risks to financial institutions and ultimately to itself. The Fed would focus on only those institutions determined to be "systemically important." This would arguably optimize its institutional competence and permit it to focus on institutions that it may have to lend to on a significant scale. At the same time, the USFSA would supervise those institutions determined not to be "systemically important." Either the Treasury alone, the Fed alone, or the Fed and Treasury jointly could determine which institutions are "systemically important."[480]

Disadvantages: It would be difficult to determine ex ante and over time which institutions are "systemically important." Further, designating any institution as "systemically important" may create a moral hazard because the market will interpret any such institution as "too big to fail"; the consequence could be stratification of the industry, with significant cost-of-capital implications. Conversely, being regarded as non-systemically important might remit an institution to second-class status. While it is relatively clear who these institutions are even absent formal designation, this approach

[480] We do not believe that supervision of holding companies should be split from supervision of financial institution subsidiaries. The same agency that supervises the holding company should also supervise the subsidiaries. The determination of "systemically important" should be made on the basis of the fully consolidated holding company.

would codify the distinction and remove all ambiguity. Finally, Fed supervisory jurisdiction over systemically important institutions risks distracting the Fed from its core mission of conducting monetary policy and potentially exposes it to political pressures, though it may already be exposed to such pressures with respect to its current supervision of state member banks and bank holding companies.

b. Fed Supervision of All Financial Institutions[481]

Advantages: Fed supervision of all financial institutions has many of the same benefits of Fed supervision of systemically important institutions—chiefly, the Fed's unique institutional competence.

Disadvantages: An expansion of its supervisory jurisdiction—particularly with respect to relatively small institutions—risks distracting the Fed from its core mission of conducting monetary policy and dealing with systemic risk; it also risks excessive concentration of power in one agency. Further, risk to the Fed from its lending operations is likely to be significant only in the case of "systemically important" institutions. In addition, a new USFSA could achieve the same quality of examination as is provided by the Fed today for most institutions. Finally, such a broad supervisory role risks subjecting the Fed to political pressures, as discussed above.

c. USFSA Supervision of All Financial Institutions

Advantages: The Fed would be free to focus on its core mission of conducting monetary policy, while the USFSA could enjoy supervisory economies of scale and achieve consistency. This would not mean that the USFSA would supervise all institutions in the same way. As with the U.K. FSA, supervision of a financial institution would depend on its level of risk and the nature of the activities. The Fed could arguably rely on the supervision of (and get needed information from) this new agency—if it achieved the same quality in its supervision as the Fed presently provides. Putting regulation through rule-making and supervision in one agency makes sense—because these two regulatory techniques complement each other.

Disadvantages: The USFSA might not give the "systemically important" institutions the same attention or priority as would the Fed. Moreover, such an arrangement might deprive the Fed of direct and real-time information necessary to make lender-of-last-resort decisions, since its information would have to come from the USFSA.

[481] One variant of this option would be the Fed's use of a two-tiered supervisory system for systemically important and other institutions. Such an arrangement, however, presents the moral hazard of effectively designating an institution as too big to fail.

2. Location of Consumer/Investor Protection

We believe a vigorous consumer/investor protection body could exist either as a division within the USFSA or as a self-standing agency. If part of the USFSA, Senate confirmation of the division/agency head would help ensure strong Congressional oversight and rigorous enforcement. We were unable to reach consensus on which of these two alternatives would be preferable.

a. Locating the Consumer/Investor Protection Division Within the USFSA

Advantages: It would be difficult to separate issues of investor/consumer protection from other regulatory objectives—such as safety and soundness, market structure, and conduct. Putting these matters in one agency avoids such line drawing problems. Full integration would also facilitate tradeoffs between competing policy interests pursued by the USFSA. Moreover, the division could benefit from the institutional expertise of an agency with a necessarily broader focus. While a separate agency could be charged with making such trade-offs, it is much less likely that it would do so in practice.

Disadvantages: Trade-offs may be undesirable if they would undermine strong consumer/investor protection.

b. Creating a Separate Consumer/Investor Protection Agency

Advantages: Ensures a single-mission focus on consumer/investor protection.

Disadvantages: Such an agency would not effectively weigh competing policy interests. In addition, it would be difficult to coordinate the inevitable conflicts between prudential regulation and consumer/investor protection.

Specific Recommendations

49. Retain Two or Three Regulatory Bodies. We believe the United States should have only two, or at most, three independent regulatory bodies overseeing the financial system: the Fed, a newly-created independent USFSA and possibly another new independent investor/consumer protection agency.

50. Increase the Role of the Fed. The Committee believes one regulator needs the authority and accountability to regulate matters pertaining to systemic risk, and that the one regulator should be the Fed. The Fed would retain its exclusive control over monetary policy and its lender of last resort function, as part of its key role in ensuring financial stability. In addition, because of its institutional expertise, its significant role in the Basel process and the demonstrated relation of capital requirements to financial stability, the Fed would set capital requirements for all financial institutions. It would also be responsible for other regulation directly related to systemic risk, like margin

requirements. We oppose fragmentation of the "systemic risk regulator" into a council of regulators.

51. Establish the USFSA. The USFSA would regulate all aspects of the financial system, including market structure and activities and safety and soundness for all financial institutions (and possibly consumer/investor protection with respect to financial products if this responsibility were lodged with the USFSA). It would be comprised of all or part of the various existing regulatory agencies, such as the Office of the Comptroller of the Currency (OCC), the Office of Thrift Supervision (OTS), the Federal Deposit Insurance Corporation (FDIC), the Securities and Exchange Commission (SEC), and the Commodities Futures Trading Commission (CFTC). The possible divisions of responsibility between the Fed and USFSA with respect to supervision for safety and soundness are discussed below.

52. Enhance the Role of the Treasury Department. The Treasury Department would coordinate the work of the Fed and USFSA. The Treasury would also be responsible for the expenditure of public funds used to provide support to the financial sector, as in the TARP. In addition, to preserve the independence and credibility of the Fed, existing Fed lending against no or inadequate collateral would be transferred to the Treasury, and future lending of this type would be done only by the Treasury Department. All such lending would be on the federal budget.

53. Study Supervisory Options. There are three options with respect to the supervision of financial institutions: (1) the Fed supervises all financial institutions determined to be "systemically important" and the USFSA supervises all other institutions; (2) the Fed supervises all financial institutions; or (3) the USFSA supervises all financial institutions. While we agree there are significant advantages to consolidated supervision, we do not endorse any of the three options. Instead, we present the advantages and disadvantages of each.

54. Protect Consumers and Investors. A vigorous consumer and investor protection body with respect to financial products should exist, either as a division within the USFSA or as a self-standing third independent agency. If part of the USFSA, Senate confirmation of the division/agency head would help ensure strong Congressional oversight and rigorous enforcement. The Committee has not reached consensus on which of these two alternatives would be preferable.

CHAPTER 7: Facilitating International Regulatory Cooperation*

A. Overview

Any vision of financial reform must grapple with the globalization of both finance and its regulation. Most of the issues addressed in this Report, including the insolvency process, securitization, CDSs, the extension of regulation to hedge funds and private equity, the re-evaluation of capital requirements, and the debate over appropriate accounting, have global dimensions.

The current financial crisis has made this abundantly clear. In 2008 alone, the insolvency of Lehman Brothers occupied both U.S. and U.K. courts, the decline in value of securitized assets tied to the fortunes of the American housing market threatened the European economy because of the many ready buyers for those assets among European financial institutions, and AIG wrote most of the credit protection that felled its U.S. operations out of its London office. In the last decade, private pools of capital have increasingly moved offshore for regulatory and other reasons, capital adequacy has been handled by the multinational Basel Committee on Banking Supervision, and accounting standards have come increasingly from the International Financial Reporting Standards process (IFRS), which is administered by the mostly private, but public-minded IASB, based in London. The international dimensions of the financial crisis, and the events leading up to it, are so important that it is difficult to characterize the crisis as anything but global.

The markets underlying this regulatory overlay are also global. U.S. gross trading activity in foreign securities alone is $7.5 trillion, up from $53 billion three decades ago.[482] Approximately two-thirds of U.S. investors own securities of non-U.S. companies—a 30% increase from just five years ago.[483] And foreign trading activity in U.S. securities now amounts to over $33 trillion.[484]

The resulting impact of this globalization on the regulators who oversee U.S. markets has been enormous, as the SEC has exemplified. Instead of exclusively

* The primary author of this chapter is David Zaring, Assistant Professor of Legal Studies at the Wharton School of Business.

[482] Christopher Cox, Chairman, SEC, Address to the American Institute of Certified Public Accountants' International Issues Conference: International Business—An SEC Perspective (Jan. 10, 2008), *available* at http://www.sec.gov/news/speech/2008/spch011008cc.htm.

[483] *Id.*

[484] *Id.*

spending their time in the United States, in 2007, the SEC Commissioners gave speeches in Sydney (twice), Madrid (twice), Mumbai, London (thrice), Dublin, Berlin, Frankfurt, Paris (twice), Munich, Luxemburg, Cape Town, Vancouver, Brisbane, and Tokyo (thrice).[485] Former SEC Chair Christopher Cox reported during his chairmanship that international work "comprises over half of my time and responsibilities."[486] In his view, "it is no longer possible for the SEC to do its work in the United States without a truly global strategy . . . what goes on in other markets and jurisdictions is now intimately bound up with what happens here."[487] Former Commissioner Roel Campos agrees, noting that "if one can clearly see the benefits of international standards and convergence, then we are a long way down the road to making it happen."[488] But he likewise acknowledges that "it will take time; it will take the efforts of many people; and it will take international will and cooperation."[489]

How can U.S. regulators coordinate their efforts with their foreign counterparts to respond to the globalization of finance and to deal with the transnational spillovers that have become the part and parcel of financial crises?

In our view, an effective system of international financial oversight would perform three distinct tasks. First, it would provide the capacity to harmonize basic global rules, so that minimum levels of oversight and transparency are available in all the major markets, the inclination to regulatory arbitrage is minimized, and the capacity of emerging market regulators is developed. Second, it would serve as an early warning system that could coordinate quick responses to brewing crises with systemic implications. And third, it would provide some sort of capacity to resolve international differences in regulatory approach—particularly when those differences lead to jurisdictional and other disputes, as they have in the context of multinational insolvency proceedings and antitrust enforcement.

B. Harmonization

Although it would be theoretically possible—albeit time-consuming and arduous—to harmonize financial regulation across borders through a formal

[485] The analysis was concluded by visiting the agency's website, which admirably keeps track of every speech by SEC Commissioners. *See* http://www.sec.gov/news/speech/speecharchive/2007speech.shtml.
[486] Christopher Cox, Chairman, SEC, Address to the American Institute of Certified Public Accountants' International Issues Conference: International Business—An SEC Perspective (Jan. 10, 2008), *available at* http://www.sec.gov/news/speech/2008/spch011008cc.htm.
[487] Christopher Cox, Chairman, SEC, Remarks to "The SEC Speaks 2008" Program of the Practicing Law Institute (Feb. 8, 2008), *available at* http://www.knowledgemosaic.com/Gateway/Rules/SP.spch020808cc.020808.htm.
[488] Roel C. Campos, Commissioner, SEC, Remarks Before The IOSCO Annual Conference (Apr. 12, 2007), *available at* http://www.sec.gov/news/speech/2007/spch041207rcc.htm.
[489] *Id.*

international treaty, global financial regulation has always turned to so-called "regulatory networks" to deal with the increasing globalization of finance. However, during the current financial crisis, these industry-specific networks have failed to perform effectively.

Accordingly, the Obama Administration and G-20 have suggested entrusting international regulatory oversight to a "network of networks," the Financial Stability Forum, which will be renamed the Financial Stability Board and given enhanced powers. We endorse the suggestion, though we note that the G-20 itself can play an important role in harmonization and, indeed, has shown itself to be much more adept at responding to the crisis than have the networks that report to it. Although harmonization could also be achieved through a "Bretton Woods 3" process, as French President Nicolas Sarkozy has suggested, we think a treaty-like financial cognate to the World Trade Organization would be impractical.

The networks that have provided much of the prior impetus toward international regulatory harmonization include the Basel Committee on Banking Supervision and International Organization of Securities Commissions (IOSCO). The Basel Committee has produced its capital adequacy accords, while IOSCO has created a multilateral Memorandum of Understanding on enforcement to which most of the world's securities regulators are signatories.[490] While this Report has been critical of the Basel Accord, we do not think the cure is a return to national regulation.

The networks have, after all, embraced somewhat open international governance. Although they have never been paragons of administrative process, as they have evolved, they have often adopted the trappings of traditional domestic administrative law. Like domestic regulators, financial network activity has evolved into something that increasingly offers notice, comment, and an opportunity to respond.

A notable example of this change lies in the contrast between the first Basel Accord on capital adequacy, which was concluded in secret by the Basel Committee in 1988 and released in a twelve page document, and Basel II, which was put through most of a decade's worth of comment by hundreds of interested individuals and institutions and resulted in a correspondingly long and detailed regulatory product.[491] IOSCO has similarly opened its deliberations to this sort of ventilation by interested and affected parties.

[490] *See, e.g.,* David Zaring, *Choice of Policymaking Form in International Law*, 45 Colum. J. Trans. L. 563 (2008).
[491] David Zaring, *Informal Procedure, Hard and Soft, in International Administration*, 5 Chi. J. Int'l L. 547, 572-80 (2005).

While these bodies have an important function, it is possible that networks like Basel and IOSCO are simply too siloed off from one another, and too limited by the vagaries of industry definition, to be truly effective harmonizers (and, ideally, overseers to some degree).

Perhaps for this reason, the Obama Administration and the G-20 have endorsed greater use of the Financial Stability Forum (FSF) as the best place to put future harmonization hopes. To this end, the G-20 has renamed and promised to reform the Financial Stability Forum; time will tell if a network—even a network of networks—is capable of playing that role effectively.

The FSF was originally designed "to ensure that national and international authorities and relevant international supervisory bodies and expert groupings can more effectively foster and coordinate their respective responsibilities to promote international financial stability, improve the functioning of the markets, and reduce systemic risk."[492] It has met biannually and currently consists of 26 national regulatory agencies, including the principal members of the networks of banking supervisors and securities regulators (the Basel Committee and IOSCO), and it appears that the number of participants will grow.[493] The FSF has in the past been run by the General Manager of the Bank for International Settlements, who "was appointed Chairman of the FSF in a personal capacity," and for that reason, it has seemed like a rather quiet effort by Basel to broaden its supervisory ambit to include systemically significant multinational institutions that engage in banking but that also provide other financial services; this role also seems likely to change as the FSF turns into the Financial Stability Board (FSB), with a larger membership and a strengthened role for the IMF.[494]

The establishment of a newly strengthened FSB is a good idea, so long as it is flexible and expert enough to harmonize baseline rules for the regulation of international finance while still taking a broad view of all of the markets in which modern financial conglomerates participate.

C. Early Warning and Crisis Response

We think that the G-20 itself may also play an important role in both pushing harmonization and in responding to financial crises as they arise. Its critical role is based in part on its ability to respond to the most recent crisis, while networks like the FSF and the Basel Committee have remained relatively silent. However, the G-20 is not

[492] *See* G8 Information Centre, *Communiqué of G-7 Finance Ministers and Central Bank Governors* (Feb. 20, 1999), *available at* www.g7.utoronto.ca/finance/fm022099.htm.
[493] Fin. Stability Forum, *Overview*, *available at* http://www.financialstabilityboard.org/about/overview.htm.
[494] Fin. Stability Forum, *History*, *available at* http://www.financialstabilityboard.org/about/history.htm. The so-called "Joint Forum on Financial Conglomerates" has also served this purpose.

an operational body; we encourage it to pursue—as it has suggested it might—the empowerment of the IMF as a delegate agency that can do the work on the ground necessary to identify financial crises before they spread.

Over the course of the current crisis, the G-20—a purely political, and not at all legal or technocratic institution—has come to be the basis of the initial policymaking response to the crisis we have seen at a global level. In fact, the increasing importance of the G-20 is something of a rebuke to the capacity of other international legal institutions, and suggests that for early warning and crisis response, networks—and perhaps even a network of networks—are too disaggregated and narrow to play an important role. Perhaps for this reason, in addition to endorsing the expansion of network based governance through the new FSB, the G-20 has also indicated that it may delegate much of the task of early warning for financial crises to the IMF; we endorse this delegation to this established institution, though we note that it will continue to need adequate resources if it is to perform this task well.

Roles for the IMF and FSB are important because it is not clear that the G-level process can retain its focus on financial regulation. The G-20, after all, began without a particular financial mandate. The original participants in the G-level process included the six largest economies in the non-communist world: the United States, Japan, Germany, France, the United Kingdom, and Italy.[495] Founded in 1975, when French President Giscard d'Estaing invited leaders of these countries to a so-called "Rambouillet Summit," the initial goal of the G-level meetings was to create an environment in which leaders could meet, but at which national security would not be discussed.[496] Canada joined as the 7th member in 1976, at the group's Puerto Rico meeting.[497]

G-level summits followed regularly, but much of the work for these summits appeared to be done by the finance ministries and banking supervisors below the G-7 level; the heads of state spent more time, at least as Peter Hajnal and John J. Kirton report, on getting to know one another, and on creating relations designed to withstand international crises.[498] Although the ensuing production of the summits has always included macroeconomic and financial regulatory initiatives, it has also veered into development work and non-economic issues like nuclear power and proliferation.

[495] G8 Information Centre, *What is the G8?* (2005), *available at* http://www.g8.utoronto.ca/what_is_g8.html.
[496] G8 Information Centre, *Declaration of Rambouillet* (Nov. 17, 1975), *available at* http://link.library.utoronto.ca/g8/finding_aid/summit_detail.cfm?summit_id=219&category_no=1#Declarations%20and%20Statements.
[497] G8, *Background to the G8* (2003), *available at* http://www.g8.fr/evian/english/navigation/the_g8/background_to_the_g8.html.
[498] Peter I. Hajnal and John J. Kirton, *The Evolving Role and Agenda of the G7/G8: a North American Perspective, 7* NIRA Rev. 5 (2000), *available at* www.g7.utoronto.ca/scholar/hajnal_nira.pdf.

The focus on economics has come back over the last decade. The summit in 1997 founded the FSF, which was designed to coordinate the work of the Basel Committee and its correlates in insurance and securities regulation, and included the IMF and the World Bank as members. As financial shocks to the global economy began to come from non-western locales, the members of the G-8 saw an expansion of the membership to include countries that could represent the interests of the developing world as essential.[499]

We endorse the renewed focus of the G-20 on financial matters, and we note that it appears to be the international vehicle most capable, at least in this crisis, of responding to financial shocks. The new FSB may prove to be effective, but to encourage harmonization further, and to be able to monitor shocks and perform crisis response, the G-level process will probably also have to play a role.

We also endorse the G-20's intimation that it will use the IMF to identify early warning crises, and on the renewed funding of the IMF to respond to some of these crises. For global meltdowns, we suspect that only the G-20 itself will have the political will and resources to respond. But for early warnings, the IMF's country and global level financial stability reports are more likely to be effective than are the efforts of the disaggregated and low-budget financial regulatory networks.

The IMF, after all, already compiles detailed country-level reports, and, because of its large and expert staff, has the institutional capacity to do more along these lines than the G-20 alone can order—or remember to do. We note that a new reliance on the IMF to perform early warning work will have to be paired with the resources to make those early warnings at least somewhat reliable.

D. Dispute Resolution

As financial activity has globalized, government oversight has often come into conflict; this has been exemplified by the messy unwinding process for failed financial institutions that cross borders. Britain and Iceland have engaged in a war of words over who should take responsibility for failed Icelandic banks doing business in the United Kingdom, and the parallel bankruptcy proceedings for the resolution of Lehman Brothers has proven to be a messy division of responsibility between the United States and United Kingdom.

More fundamentally, problems arise when countries pursue different approaches to regulation. Even if the minimum harmonization approach we suggest were successful, issues would still arise when countries pursued different regulations to the same activity. This has been a particular problem in the crisis between the United States

[499] *Good Bye G7, Hello G-20*, Economist, Nov. 22, 2008, Vol. 389, Issue 8607, *available at* http://www.economist.com/finance/displaystory.cfm?story_id=12652239.

and Europe, which have disagreed on such important matters as regulation of CRAs, retention requirements for origination of securitized debt, and regulation of hedge funds. We believe the various regional "Regulatory Dialogues" and, in particular that of the U.S. and Europe need to be strengthened to deal with these problems.

Specific Recommendations

55. Support Global Regulatory Forums. The Committee endorses the establishment of a newly strengthened Financial Stability Board, provided it is flexible and expert enough to harmonize baseline rules for the regulation of international finance while still taking a broad view of all the markets in which modern financial conglomerates participate.

56. Enable the IMF to Play an Early Warning Role. The G-20 has indicated that it may delegate much of the task of early warning for financial crises to the IMF; we endorse this though we note that it will continue to require adequate resources if it is to perform this task well.

57. Strengthen Regulatory Dialogues. We believe the various regional "Regulatory Dialogues" and, in particular, that of the United States and Europe, need to be strengthened to resolve transnational regulatory disputes.

CONCLUSION

The global financial crisis has revealed dramatic weaknesses in the financial regulatory system. Some traditional areas of regulation, like capital requirements, have failed. Gaps in regulatory coverage have been revealed, and the entire regulatory structure has proven dysfunctional. So it is clear change is needed. Statutory frameworks must be revised and new regulatory approaches must be fashioned. The major objective should be to reduce systemic risk in the future through measures whose benefits exceed their costs. This Report has attempted to assist policymakers in achieving that objective by offering 57 specific recommendations, which taken together, embody a practical plan for effective reform.

APPENDIX 1: Comparison with Other Reports*

The Committee's recommendations are broadly similar to reforms proposed in other reports.

CHAPTER 1: The Crisis and a Regulatory Approach		
1	Regulate on Principle	* Group of 30, *Financial Reform: A Framework for Financial Stability* (Jan. 15, 2009), *available at* http://www.group30.org/pubs/recommendations.pdf [hereinafter Group of 30, *Financial Reform* (Jan. 2009)]. * G-20 Working Group I, *Enhancing Sound Regulation and Strengthening Transparency* (Mar. 25, 2009), *available at* http://www.g20.org/Documents/g20_wg1_010409.pdf [hereinafter G-20, *Enhancing Sound Regulation* (Mar. 2009)].
2	Analyze the Costs and Benefits of Proposed Regulations	* Cong. Oversight Panel, Special Report on Regulatory Reform—Modernizing the American Financial Regulatory System: Recommendations for Improving Oversight, Protecting Consumers, and Ensuring Stability (Jan. 2009), *available at* http://cop.senate.gov/documents/cop-012909-report-regulatoryreform.pdf [hereinafter Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009)]. * The Counterparty Risk Mgmt. Policy Group III, *Containing Systemic Risk: The Road to Reform* (Aug. 6, 2008), *available at* http://www.crmpolicygroup.org/docs/CRMPG-III.pdf [hereinafter CRMPG III, *Containing Systemic Risk* (Aug. 2008)].
CHAPTER 2: Reducing Systemic Risk		
3	Do Not Prohibit CDS Contracts	* North Am. Securities Administrators Ass'n, Proceedings of the NASAA Financial Services Regulatory Reform Roundtable (Dec. 11, 2008), *available at* http://www.nasaa.org/content/Files/Proceedings_NASAA_Regulatory_Reform_Roundtable.pdf [hereinafter NASAA, *Regulatory Reform Roundtable* (Dec. 2008)].
4	Mandate Centralized Clearing	* NASAA, Regulatory Reform Roundtable (Dec. 2008). * The de Larosière Group, *The High-level Group on Financial Supervision in the EU* (Feb. 25, 2009), *available at* http://ec.europa.eu/commission_barroso/president/pdf/statement_20090225_en.pdf [hereinafter The de Larosière Group, *EU Financial Supervision* (Feb. 2009)]. * Int'l Ctr. for Monetary and Banking Studies, *The Fundamental Principles of Financial Regulation* (Jan. 2009), *available at* http://www.voxeu.org/reports/Geneva11.pdf [hereinafter ICMBS, *Fundamental Principles* (Jan. 2009)]. * U.K. Fin. Services Authority, *The Turner Review: A Regulatory Response to the Global Banking Crisis* (Mar. 2009), *available at* http://www.fsa.gov.uk/pubs/other/turner_review.pdf [hereinafter U.K. FSA, *Turner Review* (Mar. 2009)]. * Group of 30, *Financial Reform* (Jan. 2009). * President's Working Group On Fin. Mkts., *Progress Update on March Policy Statement on Financial Market Developments* (Oct. 2008), *available at* http://ustreas.gov/press/releases/reports/q4progress%20update.pdf [hereinafter PWG, *Progress Update* (Oct. 2008)]. * G-20, *Enhancing Sound Regulation* (Mar. 2009). * CRMPG III, *Containing Systemic Risk* (Aug. 2008). * Fin. Stability Forum, Report of the Financial Stability Forum on Enhancing Market and Institutional Resilience (Oct. 10, 2008), *available at* http://www.financialstabilityboard.org/press/pr_081009f.pdf [hereinafter FSF, *Enhancing Market and Institutional Resilience* (Oct. 2008)].

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5	Increase Capital Requirements for Non-Centrally Cleared CDSs	* Group of 30, *Financial Reform* (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009).
6	Improve Netting Capabilities	* U.K. FSA, *Turner Review* (Mar. 2009).
7	Establish 1-2 International Clearing Facilities	* Group of 30, *Financial Reform* (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009).
8	Adopt a CDS Reporting System	* Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009). * CRMPG III, *Containing Systemic Risk* (Aug. 2008).
9	Require a Class of Exchange-Listed CDSs	* Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009).
10	Adopt Standards for Institutional Coverage	* N/A
11	Leave "Steady State" Risk-based Capital Calibration Unchanged Pending Further Study	* G-20, *Enhancing Sound Regulation* (Mar. 2009). * CRMPG III, *Containing Systemic Risk* (Aug. 2008).
12	Adopt Counter-Cyclical Capital Ratios	* The de Larosière Group, *EU Financial Supervision* (Feb. 2009). * Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009). * ICMBS, *Fundamental Principles* (Jan. 2009). * U.K. FSA, *Turner Review* (Mar. 2009). * Group of 30, *Financial Reform* (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009). * FSF, *Enhancing Market and Institutional Resilience* (Oct. 2008).
13	Hold Large Institutions to Higher Solvency Standards	* Council on Foreign Relations, Ctr. for Geoeconomic Studies, *Reforming Capital Requirements for Financial Institutions* (Apr. 2009), *available at* http://www.cfr.org/content/publications/attachments/Squam_Lake_Working_Paper2.pdf [hereinafter CFR, *Reforming Capital Requirements* (Apr. 2009)]. * Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009).
14	Focus Basel II Changes on Strengthening Pillars II and III	* G-20, Enhancing Sound Regulation (Mar. 2009). * CRMPG III, *Containing Systemic Risk* (Aug. 2008). * Inst. of Int'l Fin., *Final Report of the IIF Committee on Market Best Practices: Principles of Conduct and Best Practice Recommendations-Financial Services Industry Response to the Market Turmoil of 2007-2008* (July 17, 2008), *available at* http://www.ieco.clarin.com/2008/07/17/iff.pdf [hereinafter IIF, *Market Best Practices* (July 2008)].
15	Maintain and Strengthen the Leverage Ratio	* Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009). * U.K. FSA, *Turner Review* (Mar. 2009). * Group of 30, *Financial Reform* (Jan. 2009).
16	Consider the Critical Role of Hedge Funds	* NASAA, *Regulatory Reform Roundtable* (Dec. 2008). * The de Larosière Group, *EU Financial Supervision* (Feb. 2009).
17	Adopt Confidential Reporting	* G-20, *Enhancing Sound Regulation* (Mar. 2009).
18	Provide the Fed with Temporary Regulatory Authority	* N/A
19	Facilitate Information Sharing Among National and Supranational Regulators	* G-20, *Enhancing Sound Regulation* (Mar. 2009). * U.S. Gov't Accountability Office, *Hedge Funds: Regulators and Market Participants Are Taking Steps to Strengthen Market Discipline, but Continued Attention is Needed* (Jan. 24, 2008), available at http://www.gao.gov/new.items/d08200.pdf [hereinafter GAO, *Hedge Funds* (Jan. 2008)].

20	Introduce Structural Reforms to the Industry	* ICMBS, *Fundamental Principles* (Jan. 2009). * U.K. FSA, *Turner Review* (Mar. 2009).
21	Limit Regulation to Information Collection	* CRMPG III, *Containing Systemic Risk* (Aug. 2008).
22	Relax Acquisition Standards under the BHCA and SLHCA	* N/A
23	Introduce Mechanisms for Crisis and Risk Management	* Investment Company Institute, *Report of the Money Market Working Group* (Mar. 17, 2009), *available at* http://www.ici.org/pdf/ppr_09_mmwg.pdf [hereinafter ICI, *Money Market Report* (Mar. 2009)].
24	Study How to Compensate for Potentially Ongoing Taxpayer Support	* N/A
25	Establish a Single Insolvency Regime Applicable to All Financial Companies	* N/A
26	Provide Adequate Regulatory Flexibility	* N/A
27	Apply the Least Cost Test	* N/A
28	Authorize Enhanced Resolution Powers for Systemic Risk	* N/A
29	Consider Financing Methods that Protect the Taxpayer	* N/A
30	Consolidate or Coordinate Cross-Border Insolvency Proceedings	* N/A
CHAPTER 3: Reforming the Securitization Process		
31	Prohibit or Restrict High-Risk Mortgage Products and Lending Practices from Entering the Securitization Market	* NASAA, *Regulatory Reform Roundtable* (Dec. 2008).
32	Strengthen Representations, Warranties, and Repurchase Obligations	* N/A
33	Explore Minimum Risk Retention to Improve Incentive Alignment	* Group of 30, *Financial Reform* (Jan. 2009). * The de Larosière Group, *EU Financial Supervision* (Feb. 2009).
34	Enhance Disclosure of Retained Economic Interests	* N/A
35	Amend Regulation AB to Increase Loan-Level Disclosures	* N/A

36	Study Ways of Improving the Standardized Disclosure Package	* PWG, *Progress Update* (Oct. 2008). * President's Working Group on Fin. Mkts., *Policy Statement on Financial Market Developments* (Mar. 13, 2008), *available at* http://www.ustreas.gov/press/releases/hp871.htm [hereinafter PWG, *Policy Statement* (Mar. 2008)]. * CRMPG III, *Containing Systemic Risk* (Aug. 2008).
37	Revisit the Applicability of Section 15(d)	* N/A
38	Develop Globally Consistent Standards	* U.K. FSA, *Turner Review* (Mar. 2009). * Group of 30, *Financial Reform* (Jan. 2009). * Securities Industry and Fin. Mkts. Ass'n, *Recommendations of the Securities Industry and Financial Markets Association Credit Rating Agency Task Force* (July 2008), *available at* http://www.sifma.org/capital_markets/docs/SIFMA-CRA-Recommendations.pdf [hereinafter SIFMA, *CRA Recommendations* (July 2008)]. * G-20, *Enhancing Sound Regulation* (Mar. 2009).
39	Vest Enforcement of CRA Regulation at the Highest Governmental Level	* N/A
40	Avoid Governmental Interference in the Rating Determination Process	* ICMBS, *Fundamental Principles* (Jan. 2009).
41	Review References to Ratings in Regulatory Frameworks	* ICMBS, *Fundamental Principles* (Jan. 2009). * PWG, *Progress Update* (Oct. 2008). * PWG, *Policy Statement* (Mar. 2008). * FSF, *Enhancing Market and Institutional Resilience* (Oct. 2008).
42	Increase Disclosure as to How Ratings Are Determined	* Int'l Org. of Securities Commissions Technical Comm., *The Role of Credit Rating Agencies in Structured Finance Markets* (May 2008), *available at* http://www.iosco.org/library/pubdocs/pdf/IOSCOPD270.pdf [hereinafter IOSCO, *Credit Rating Agencies* (May 2008)]. * Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009). * ICMBS, *Fundamental Principles* (Jan. 2009). * PWG, *Progress Update* (Oct. 2008). * SIFMA, *CRA Recommendations* (July 2008). * PWG, *Policy Statement* (Mar. 2008). * G-20, *Enhancing Sound Regulation* (Mar. 2009). * FSF, *Enhancing Market and Institutional Resilience* (Oct. 2008). * IIF, *Market Best Practices* (July 2008).
CHAPTER 4: Enhancing Accounting Standards		
43	Study How FVA Can Be Improved	* Group of 30, *Financial Reform* (Jan. 2009). * PWG, *Progress Update* (Oct. 2008). * G-20, *Enhancing Sound Regulation* (Mar. 2009).
44	Supplement FVA with Dual Presentation of Market and Credit Values	* Group of 30, *Financial Reform* (Jan. 2009).
45	Allow the Fed to Use a Non-GAAP Methodology	* N/A
46	Implement FIN46R	* N/A
CHAPTER 5: Regulation of Bank Activities		
47	Refrain from Reimposing Glass-Steagall	* N/A

48	Avoid Directed Lending	* N/A
CHAPTER 6: Reorganizing the U.S. Regulatory Structure		
49	Retain Two or Three Regulatory Bodies	* U.S. Dep't of the Treasury, *Blueprint for a Modernized Financial Regulatory Structure* (Mar. 2008), *available at* http://www.treas.gov/press/releases/reports/Blueprint.pdf [hereinafter U.S. Treasury, *Financial Regulatory Structure Blueprint* (Mar. 2008)]. * IIF, *Market Best Practices* (July 2008).
50	Increase the Role of the Fed	* U.S. Treasury, *Financial Regulatory Structure Blueprint* (Mar. 2008). * Group of 30, *The Structure of Financial Supervision: Approaches and Challenges in a Global Marketplace* (2008), *available at* http://www.group30.org/pubs/pub_1428.htm [hereinafter Group of 30, *Financial Supervision* (2008)]. * ICMBS, *Fundamental Principles* (Jan. 2009). * Group of 30, *Financial Reform* (Jan. 2009).
51	Establish the USFSA	* N/A
52	Enhance the Role of the Treasury Department	* N/A
53	Study Supervisory Options	* N/A
54	Protect Consumers and Investors	* Lawrence A. Cunningham, Council of Inst. Investors, *Some Investor Perspectives on Financial Regulation Proposals* (Sept. 2008), *available at* http://www.cii.org/UserFiles/file/Sept2008MarketRegulation.pdf [hereinafter Council of Inst. Investors, *Investor Perspectives* (Sept. 2008)]. * NASAA, *Regulatory Reform Roundtable* (Dec. 2008).
CHAPTER 7: Facilitating International Regulatory Cooperation		
55	Support Global Regulatory Forums	* Group of 30, *Financial Supervision* (2008). * The de Larosière Group, *EU Financial Supervision* (Feb. 2009). * Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009). * ICMBS, Fundamental Principles (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009). * FSF, *Enhancing Market and Institutional Resilience* (Oct. 2008).
56	Enable the IMF to Play an Early Warning Role	* ICMBS, *Fundamental Principles* (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009). * The de Larosière Group, *EU Financial Supervision* (Feb. 2009).
57	Strengthen Regulatory Dialogues	* Cong. Oversight Panel, *Regulatory Reform* (Jan. 2009). * G-20, *Enhancing Sound Regulation* (Mar. 2009). * FSF, *Enhancing Market and Institutional Resilience* (Oct. 2008). * The de Larosière Group, *EU Financial Supervision* (Feb. 2009).

APPENDIX 2: Common Abbreviations

ABCP	Asset-backed commercial paper
ABS	Asset-backed securities
AFS	Available-for-sale
AICPA	American Institute of Certified Public Accountants
AIG	American Insurance Group
ARM	Adjustable rate mortgage
ASF	American Securitization Forum
BHC	Bank holding company
BHCA	Bank Holding Company Act
BoE	Bank of England
CDO	Collateralized debt obligation
CDS	Credit default swap
CESR	Committee of European Securities Regulators
CFTC	Commodity Futures Commission
CME	Chicago Mercantile Exchange
Code	U.S. Bankruptcy Code
CRA	Credit rating agency
DTCC	Depository Trust and Clearing Corporation
E.C.	European Commission
E.U.	European Union
EBITDA	Earnings before interest, taxes, depreciation and amortization
EESA	Emergency Economic Stabilization Act of 2008
FAS	Financial Accounting Statement
FASB	Financial Accounting Standards Board
FDI Act	Federal Deposit Insurance Act
FDIC	Federal Deposit Insurance Corporation
FDICIA	Federal Deposit Insurance Corporation Improvement Act
Fed	Federal Reserve
Fed Board	Board of Governors of the Federal Reserve
FHC	Financial service holding company
FHFA	Federal Housing Finance Agency
FIN 46R	FASB Interpretation No. 46R
FINRA	Financial Industry Regulatory Authority
FSP	FASB proposed Staff Position
FVA	Fair value accounting
GAAP	Generally-accepted accounting principles
GDP	Gross domestic product
GLB	Gramm-Leach-Bliley Act of 1999
GP	General partner
GS	Glass-Steagall Act of 1933
GSE	Government sponsored enterprise
HERA	Housing and Economic Recovery Act of 2008
HMT	U.K. Treasury
HTM	Held-to-maturity
IASB	International Accounting Standards Board
ICE	Intercontinental Exchange
IFRS	International Financial Reporting Standards
IIF	Institute of International Finance Committee on Market Best Practices

IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
IPO	Initial public offering
ISDA	International Swaps Dealers Association
IWG	Investors Working Group
LP	Limited partner
LTCM	Long-Term Capital Management
MMMF	Money Market Mutual Fund
NASD	National Association of Securities Dealers
NAV	Net asset value
NRSRO	Nationally Recognized Statistical Rating Organizations
NYSE	New York Stock Exchange
OCC	Office of the Comptroller of the Currency
QFC	Qualified financial contract
OTC	Over-the-counter
OTD	Originate-to-distribute
OTS	Office of Thrift Supervision
P&A	Purchase and assumption
PCA	Prompt corrective action
PE	Private equity
Project RESTART	Project on Residential Securitization Transparency and Reporting
QSPE	Qualified Special Purpose Entity
RMBS	Residential mortgage-backed securities
SEC	Securities and Exchange Commission
SIPA	Securities Investor Protection Act
SLHCA	Savings and Loan Holding Company Act
TARP	Troubled Asset Relief Program
TCE	Tangible common equity
TRACE	Trade Reporting and Compliance Engine
Treasury or Department	Department of the Treasury
U.K. FSA	Financial Services Authority
USFSA	U.S. Financial Services Authority
VAR	Value at risk
VIE	Variable interest entity
WEO	World Economic Outlook

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