

of economic isolationism that followed it helped escalate the tensions that eventually launched World War II, with its unprecedented destruction, madness, and misery. The response of the current crisis has already been a bit different: certainly, currency and trade spats and other forms of chauvinism have flared, as have political cracks in the European Union exacerbated by sovereign debt crises and runaway budget deficits. There are concerns that nationalism is on the rise and that it will spawn selfish beggar-your-neighbor actions. How effective our response to this crisis will be is being determined now, at a national level such as in the United States and the United Kingdom; at a regional level such as in Europe; and at a global level through gatherings such as the G-20. It is not clear whether we are heading in the right or wrong direction.

There is at least one parallel between the Great Depression and the current crisis, however: if one of the results of the Great Depression of 1929 was the Glass-Steagall Act (1933), which separated commercial banking from investment banking until 1999 when it was repealed by the Gramm-Leach-Bliley Act (1999), then so are the Volcker Rules a result of the 2008 crisis, which try to do the same by repealing Gramm-Leach-Bliley. The ball is clearly in the court of the regulators, who need to find solutions to the problem of risk management in banks while also deciding how to handle interconnected systemically important financial institutions so that large man-made financial disasters do not recur. The regulators also need to accurately predict future problems arising from innovation in financial services, avoid unintended consequences of their reforms, and prevent the choking off of capital—from both onerous capital requirements and a counterparty mistrust—thereby preserving economic growth. It will be a tough balancing act, and as the crisis has demonstrated, regulatory reform needs to be carefully thought through lest the next crisis be bigger than the current one. With some measures already in place—capital requirements, bank taxes, bail-ins, living wills, and salary and bonus caps—conversations have become speculative: opponents of new measures are calculating the impact they will have on GDP, while proponents are arguing that the long-term good of mitigating or softening future crises outweighs their short-term impact. Clearly, this is where King's assessment of business activity after the crisis being

“5% to 10% below what it would have been had there not been a crisis” fits in.

BANKS, REST, AND MOTION

Since the start of the financial crisis, regulators have weighed in on the key lessons of the crisis in their public statements and speeches. Donald Kohn, vice chairman of the Federal Reserve Board, discussed “The Federal Reserve’s Policy Actions during the Financial Crisis and Lessons for the Future,”⁶ while Federal Reserve Board Governor Daniel Tarullo expounded on “Lessons from the Crisis Stress Tests”⁷ and gave his thoughts “Toward an Effective Resolution Regime for Large Financial Institutions.”⁸ Andrew Haldane, executive director of Financial Stability at the Bank of England, asked “The Contribution of the Financial Sector: Miracle or Mirage?”⁹ and Adair Turner, chairman of the U.K.’s Financial Services Authority (FSA), spoke in January 2009—at just the time when bankers lived day-to-day with the uncertainty and fear about whether their banks or counterparties would stand or fall—on “The Financial Crisis and the Future of Financial Regulation.”¹⁰ More recently he asked “What Do Banks Do, What Should They Do, and What Public Policies Are Needed to Ensure Best Results for the Real Economy?”¹¹ Ironically, these are questions that will soon be better answered by the Bank of England than by the FSA, as the latter will be phased out as a financial regulator when the United Kingdom implements a new future of financial regulation—a future different from the one that FSA head Turner might have imagined in his speeches. Meanwhile, Jaime Caruana, general manager of BIS, aimed to tie it all together by his discussions “Re-establishing the Resilience of the Financial Sector: Aspects of Risk Management and Supervisions”¹² and “The Challenge of Taking Macroprudential Decisions: Who Will Press Which Button(s)?”¹³

Various organizations have weighed in on the solutions to the crisis and have outlined proposals that need to be put in place to prevent a repeat of the crisis. IMF policymakers have focused their attention on five key goals for financial sector reforms; namely, (1) ensuring a level playing field in regulation (and avoiding regulatory arbitrage where financial institutions and other entities could move business to more

challenges that lie ahead for banks as well as offer some observations from the generals who are fighting in the trenches to resolve on-the-ground, operational issues. The commentators in this volume include regulators, both local and regional, who oversee the safe conduct of their banks; commercial bankers, who balance the raising of capital with its safe deployment in order to protect stakeholders and reward shareholders; and risk managers, who are involved in the day-to-day management of the financial risks that every bank must undertake as part of its *raison d'être*.

The book is divided into three parts: "The Regulators," "The Practitioners," and "The Risk Managers." When considering the balance of the roles that these parties play in designing a new financial services system, some questions need to be asked: Who is the master and who is the learner? In a lose-lose situation, who holds the upper hand? In a war for talent, how do the regulators stand next to the practitioners? And, most important, do our best thinkers in either of these camps have what it takes to succeed?

Among the regulators are those who have a squad of large state-owned banks under their purview as well as those from Organisation for Economic Co-operation and Development (OECD) countries who have medium-sized, troubled banks in their oversight. Liu Mingkang runs the China Banking Regulatory Commission, a newly established authority that oversees the world's largest, most profitable, fastest-growing, and systemically important banks. Eric Rosengren is a long-term manager in the Federal Reserve Bank of Boston, and now its president, from where he regulates banks in six U.S. states; he also meets his regional peers in the Federal Reserve System as a voting member of the Federal Open Market Committee, which oversees the U.S.'s open market operations. Jane Diplock is the chairman of the New Zealand Securities Commission and has a view of the securities industry in her country, but she is also the chairperson of the Executive Committee of the International Organization of Securities Commissions (IOSCO) and thus has a view of global regulatory trends in the securities industry as well as in other industries where IOSCO has a partnership arrangement with respective regulatory associations, such as BIS. José María Roldán (senior director at both the Bank of Spain and the Committee for European Banking Regulators) and Jesús

Saurina (senior director at the Bank of Spain) offer insights gained from supervising the banks of Europe.

We hear from key survivors of the financial crisis, including Richard Kovacevich, the former chairman and CEO of Wells Fargo, who helped his bank dodge the mortgage real estate bullet that crippled so many industry peers, and Mike Smith, currently CEO of ANZ in Australia, who had a seat at the top of one of those peers in his previous role at HSBC. Smith explains how he applied lessons learned from one bank at another, and what the system needs to do to improve, while Kovacevich explains how the system ultimately fails everybody. Shan Weijian, chairman and CEO of Pacific Alliance Group, offers a view of what to do with a bank that *has* failed, offering insights gained from a career in private equity and a stellar reputation for turning failed banks into leaders.

Banks at Risk also contains the insights of risk managers of various sorts. Rob Close, the former CEO of CLS Bank, talks about the creation of a global framework and infrastructure for mitigating risk. Tham Ming Soong, the chief risk officer of UOB Bank in Singapore, gives an on-the-ground view of instilling risk management culture in an institution that is modernizing in a rapidly growing region as well as of issues in regulatory reform for banks in Asia. Tsuyoshi Oyama, Partner, Financial and Industries Group, Deloitte Touche Tohmatsu, and the former deputy director-general in the Financial Systems and Bank Examination Department of the Bank of Japan, gives his views on global regulatory reform and key global accords such as the Basel Accords. Oyama provides a strong global and a regional view on key reform issues.

With their unique, personal stories, it is clear that each of the commentators has been marked by scars of his or her own in the day-to-day battle to survive in the challenging and highly competitive world of financial services and financial services regulation and supervision. The insights the commentators provide shed some light on the thinking going into changing the world of financial services by those that deal with it every day of their careers. While *Banks at Risk* provides a look into the business of only 10 individuals and their institutions, it nevertheless serves as a chronicle of the industry's awareness of its problems and the level of its willingness to change.

externalize the cost of high-risk activities. The constraint ability of capital requirement for inhibiting banks from undertaking excessive risk activities would actually be seriously weakened. I argue that a capital charge should not be applied on the identified SIBs, but instead on identified risks; I will go into detail about this later.

Second, an indicator-based approach is good in principle but is difficult to apply in practice. As the MPG pointed out, due to the fact that indicators to measure interconnectedness and substitutability are difficult to quantify, in the end, the estimation of the interconnectedness and substitutability of the SIBs has to a large degree overlapped with the estimation of size. In light of this, an indicator-based approach, although it seems more accurate, in effect may prove to be more arbitrary, with a high possibility of killing large but prudent banks and causing unfair competition. Perhaps we need to recognize that one important problem in today's regulation is that regulators increasingly off-load their responsibilities for deep analysis and evaluation of the risks of banks, which is what they are paid to do, on to a series of indicators and models. To a great degree, the problem revealed by the crisis is not the lack of new tools and instruments but the regulators' negligence of their assigned responsibilities, the so-called regulatory capture. If the philosophy of regulatory capture is still guiding our direction of reform, we are in danger. We should be aware that in most cases, risks are not quantifiable, and moreover, the interactions among various risks are not linear, but exponential—beyond the capture of indicators and models. The challenge of better quantifying risks has long existed in today's science, not to mention its application in finance. The imperative of struggling out of a crisis situation does not change very much the likelihood that we can find satisfactory solutions all of a sudden. A more practical and effective solution is instead to emphasize regulators' deep knowledge about banks and conduct a more expertise-based assessment of their risks. This certainly is not to say that indicators or models are unimportant. What we need is to place regulators' analysis and judgment about risks into the principal place. Under this precondition, indicators and models can play an important role in assisting judgment. If we overlook the primacy of personal analysis above indicators, we risk putting the cart before the horse.

Third, capital surcharge is surely a very important tool, and higher quality capital does provide a buffer to allow supervisors more time to seek a better resolution of a troubled institution, but capital is not the answer in and of itself. It is difficult for capital to prevent risks in a

preemptive manner because regulators cannot charge higher capital on banks before the latter take excessive risks. To charge higher capital after banks have already taken excessive risks will result in becoming trapped in the dilemma I described above. Moreover, although it is feasible in theory for capital to increase a bank's cost of taking excessive risks, studies have shown that in the real world banks can always find ways to circumvent the rules and transfer the increased costs to depositors and investors—by charging higher fees, changing asset portfolios, or otherwise moving the risky activities to the loosely regulated shadow banking system. Therefore, the tools necessary to solve the TBTF problem are much broader than just capital. Capital can be effective only when applied in combination with other risk-prevention measures to enhance the resilience of the financial system. The function of capital should not be interpreted as a levy or a tax on externality posed by SIBs; rather, it should be used to increase the ability of banks to absorb loss.

SOME THOUGHTS ON THE SOLUTION TO THE TBTF BANK PROBLEM

Some of the current proposals on bank reform further complicate the issue of TBTF banks, and it seems that we are still not firm in our stance on some fundamental issues surrounding the TBTF problem. Perhaps we need to think about the issue of TBTF banks from another perspective, and then it will be revealed that at the core of the problem is the excessive risk-taking of some large banks. As Adair Turner has pointed out,¹⁰ there is a rule of diminishing marginal returns. Once we exceed the optimal point, marginal returns decrease and diseconomy follows. If we agree on this, it should come as no surprise that the efficiency of a banking system cannot be pursued indefinitely: while the benefit of financial efficiency will surely continue to increase, the potential cost of bank failure also increases in this process. The reason some large banks continue expanding and pursuing financial efficiency indefinitely is simply that there are opportunities for them to externalize the increased costs arising from conducting excessively risky activities. In effect, the higher the risks and external costs, the greater the likelihood that governments will be forced to bail them out, and once again the problem of TBTF banks grows. A link exists between high-risk activities and the likelihood of government bailout.

Implications of the Financial Crisis for Risk Management and Macroprudential Supervision

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The horrified residents of Boston saw many lives lost and more than 700 buildings destroyed in the devastating Great Fire of 1872. Sadly, this was the city's *second* such fire. Cities like Boston finally put an end to the era of recurring great fires by addressing prevention (through various codes and their enforcement) and putting in place infrastructure that could help mitigate the damage (like professional firefighting and adequate water pressure and supply).

Today, somewhat similarly, we need to make progress in our ability to prevent and mitigate *financial* firestorms.³ As the overarching focus of *Banks at Risk* is new post-crisis approaches to risk management, in this chapter we explore some elements of financial fire prevention and the mitigation of damage should such a fire break out.⁴

We begin with some observations on the recent financial crisis and on pre-crisis risk management. Such observations can help with the development of a well-informed approach to risk management going forward.⁵ Next we explore *macroprudential supervision*—its promise, its challenges, and some related issues. Then we discuss capital and its potential to reduce the likelihood of future problems. Finally, we explore ways to reduce the likelihood of failures and the

severity of their effects using things like resolution authority, *living wills*, and compensation-related incentives.

OBSERVATIONS ON THE FINANCIAL CRISIS

Capital

The first observation on the crisis is perhaps the most important: In retrospect it is clear that financial institutions did not hold adequate capital for the economic shocks that emerged. Many of the largest American and European banks needed to be recapitalized, frequently with support from their governments.

While many of the problems began with large institutions that were actively engaged in securitization and investment banking, in time the financial problems spilled over to the real economy. As real estate problems became worse, an increasing number of small community banks began to fail. Particularly in regions of the United States that experienced a significant boom-bust cycle in real estate markets, bank failures became common.

Risk Management

A second important observation is that these widespread bank failures occurred despite significant investments in risk management over the previous decade. Substantial investments in risk management were made by the largest financial institutions, whose risk models served as the backbone for the Basel II international capital accord. Banks and regulators had focused their attention on improving risk management by exploiting improvements in technology and data collection to build sophisticated models to monitor and manage risk. Using recently collected data, many banks and regulators became convinced that improved risk management meant traditional banking could now be conducted with relatively thin capital cushions.

However, because of the limited time period captured in the data, such models significantly underestimated the risks in bank portfolios. In particular, the models were estimated over a period that some economists have termed the *Great Moderation*—the period beginning in the mid-1980s during which there was a substantial decline in macroeconomic volatility (in other words, a decline in the variability of output, inflation, and other aspects of the economy).⁶

Bank examiners spend significant time analyzing the adequacy of a bank's reserves in light of the quality of its assets. Reserve levels are calculated based on accounting standards that focus on incurred losses at the bank rather than on expected or unexpected losses. The incurred-loss model can sometimes be at odds with a more risk-based view that is more forward looking. By focusing on reserves in the manner defined by accounting rules, examiners are looking at history—that is, ensuring banks do not understate the losses that have already occurred—rather than focusing on whether banks have adequately provided for future losses.

It is important to explore how we can reduce the macroeconomic consequences of procyclical regulatory and accounting policies. Such policies can magnify economic fluctuations in either direction, so their financial stability implications should be carefully considered.¹⁴

Currently, U.S. Generally Accepted Accounting Principles (GAAP) provide that a loan-loss reserve should reflect probable and estimable losses that have already been incurred in the loan portfolio but have not yet been discovered (the *incurred-loss model*). The goal from an accounting standpoint is to inject transparency into reserve setting and inhibit financial manipulation. However, as financial conditions deteriorate, loan-loss reserves lag the increases in non-performing loans and expected losses. Solutions to this predicament would do well to achieve earlier loss recognition, more rapidly addressed problems, and a curtailment of high-risk lending earlier in the cycle.

To an economist's way of thinking, expected future losses should also be considered part of a more comprehensive view of loan losses. For example, if we anticipate unemployment will rise rapidly, our calculation of expected losses looking through the cycle may be very different than the losses that are probable and estimable given current economic conditions.

Spain's regulators use a different approach to reserving for loan losses, known as dynamic provisioning, whereby *stress losses* are estimated and loan-loss reserves are built up during good times for use during difficult times.¹⁵ Losses draw down the reserve rather than capital, so capital is much less sensitive to economic conditions. Thus, there is less pressure to reduce lending during periods of financial difficulty (which is *procyclical*, meaning it only adds to the momentum of the business cycle). Of course, any changes to accounting rules to address procyclicality must take pains to avoid inviting *earnings management* and should respect the needs of investors and other users of financial statements.

Capital Retention

While building up capital during good times can provide a significant buffer, if large losses do occur it is important that banks move quickly to retain capital. Many banks did not retain capital initially but commenced doing so after the crisis began, often with significant prodding from regulators. Macroprudential supervision should place greater emphasis on retaining capital as problems emerge. During a financial crisis it is important that individual institutions as well as the banking system more generally take measures to retain capital.¹⁶ This not only reduces the likelihood of insolvency of individual institutions, it also reduces the likelihood of institutions shrinking their balance sheet by reducing lending to prop up capital-to-assets ratios.

During the crisis, substantial dividends were paid in the initial phases to institutions that ended up needing significant government support. Dividends and stock buybacks could have been limited much earlier, as problems began to emerge. Many banks reduced or eliminated bonuses for senior management. By reducing both bonuses and dividend payments, banks were able to recapitalize relatively quickly; however, by waiting until the crisis became severe, much more government capital was needed. In the future, finding ways to retain capital earlier may significantly reduce the damage created by undercapitalized banks.

Convertible Debt

One reason that capital retention is so important is that it can be difficult or extremely expensive for banks to raise new capital in the middle of a financial crisis. An alternative for capital raising is to require that systemically important banks issue mandatory convertible debt, which converts to equity when certain triggers are hit. This allows debt to be converted when a firm or the banking system is under severe stress. Because there has been a reluctance to make debt holders suffer losses when financial institutions are troubled, this alternative provides an automatic mechanism to convert debt to equity when an institution is experiencing financial problems.

Because this debt converts to equity, it is likely to be much more expensive than debt that does not have this feature. One way to make such securities attractive is to establish that debt instruments could be used to meet capital requirements only if they have automatic triggers to convert to common equity under certain circumstances.¹⁷

potentially financially attractive to executives that benefit from short-term profits; as these executives may not be with the firm when the consequences of those risky actions are fully realized, the underlying compensation practices can be counterproductive to the firm overall. During the recent crisis, executive bonuses, given the powerful economic incentives they carried, seemed to have a big impact on behavior.

One can envision circumstances under which executive bonuses should be forfeited; for example, if the organization breaches certain capital buffers. This example may help align top executives' thinking with that of macroprudential regulators and risk managers. Many firms have been proactive in restructuring compensation schemes to better align management compensation with the long-term health of the financial institution.

CONCLUDING OBSERVATIONS

We began this chapter with the metaphor of the great fires of past centuries. Cities finally put an end to the era of recurring, devastating great fires by addressing prevention measures and putting in place infrastructure that could help lessen the damage from fires that did occur. We need to make progress in our abilities to prevent and mitigate *financial* firestorms. In this chapter we explored some elements of financial fire prevention and steps that would mitigate damage should such a fire again break out.

The financial crisis with its severe economic impact on individuals and organizations underlines the need for urgency and diligence in addressing the need for financial fire protection. Risk management is likely to be dramatically changed by the crisis and the Great Recession that began in December 2007. Risk managers and regulators need to be more skeptical of statistical models and be more aware of how fragile the assumptions underlying the models can be during economic downturns.

Over-reliance on statistical models allowed financial firms to justify high dividends, stock buybacks, and compensation practices that did not fully reflect the risks being taken by them. This problem was compounded by the failure to foresee the liquidity shock that could emerge during a period of turmoil, much less its impact on the value of assets on balance sheets. Perhaps most important, parties assigned too low a probability of house prices falling across the United States, despite an understanding of the impact that such an occurrence would

have. Even those who realized that a significant decline in house prices nationally would cause subprime securitization deals to suffer enormous losses assigned a very low or nonexistent probability to the drop in house prices that actually occurred, because house prices nationally had not declined significantly in the post-war period.²⁵

Given the magnitude of the collateral damage created by the financial crisis, it is heartening that some early steps have been taken to avoid problems in the future. In the United States the new financial regulatory framework provides ways to reduce the likelihood of another crisis and reduce the costs of a crisis if it should nonetheless occur. Of course, the full impact of this legislation will not be known until regulations are in place and have been tested by financial stress. But the reforms are a good starting point for improving risk management of individual institutions and—for the first time—providing some tools for implementing more comprehensive macroprudential supervision.

ENDNOTES

1. Blueprint for a Modernized Financial Regulatory Structure, <http://www.ustreas.gov/press/releases/reports/Blueprint.pdf>.
2. Reforms of Banking Regulations Seen as Urgent—Approaches in Many Countries Fall Short in the Face of Today's Market Strains, the Pace of Financial Innovation and Globalization [press release, Group of Thirty, <http://www.group30.org/100608release.pdf>].
3. Eric Rosengren, "Opening Remarks: Prevention, Containment, and Policy Change – Lessons from History" (speech delivered at the Federal Reserve Bank of Boston's 54th Economic Conference, Chatham, Massachusetts, October 21, 2009), <http://www.bos.frb.org/news/speeches/rosengren/2009/102109.htm>.
4. This chapter is based on remarks by Eric Rosengren's speech "Observations on Macroprudential Supervision" at the Federal Reserve Bank of Atlanta's 2010 Financial Markets Conference (Atlanta, Georgia, May 12, 2010) and other speeches delivered by Eric Rosengren in 2008, 2009, and 2010. The authors are grateful to many colleagues for their insights and feedback, and especially to Peggy Gilligan for quantitative analysis underlying the speeches. The views expressed are the authors', not necessarily those of our colleagues or the Federal Reserve System.
5. For further reading, we recommend "Causes of the Recent Financial and Economic Crisis," the written testimony of Federal Reserve Chairman Ben Bernanke before the Financial Crisis Inquiry Commission,

Securities regulators also have to think about the inter-relationship between bank and securities regulators and the importance of cooperation, which should culminate in new considerations of better regulatory models and approaches aimed at crisis prevention. In terms of solutions to the crisis, this means weighing the pros and cons of a bank-based financial system against a market-based financial system. The issue of *too big to fail*, which is a concept in banking that was tested with the Lehman Brothers collapse, is also distinctly applicable to the securities world in terms of the unwinding of failed institutions and their liabilities and other obligations; here, exchanges often play an important role.

Issues have cropped up on the agenda of those assessing the impact of the crisis on emerging markets and the formulation of potential mitigation strategies for the worst impacts of financial crises. Emerging markets have shown their unique vulnerabilities as a result of the crisis and new partnerships are constantly forming between developed and developing markets for strengthening these systems, but altogether this has proven to be less of a concern than examining the flaws in the large developed markets in the United States and Europe.

REAL GLOBAL OVERSIGHT

The crisis has required that securities regulators re-examine corporate governance and risk management, especially in jurisdictions that have been hit by issues that arose out of a neglect of meaningful oversight and major market deceptions such as the Ponzi scheme of Bernard Madoff. Corporate governance and risk management topics that concern securities commissions as a result of the global financial crisis include executive compensation and its effect on risk management, board responsibility at traded institutions and their obligations to all stakeholders, and investor protection. Many of these themes are encapsulated in the treatment by regulators of the credit ratings agencies, in the forming of assessments of the agencies' role in the financial crisis—whether they lived up to their duty of judging and grading risk accurately—and in the forming of a better understanding of what the agencies' rights and responsibilities in this re-assessment process are. The issues thrown up by the crisis show the need to design a new set of shared values and rules for all participants of the financial services industry.

The International Organization of Securities Commissions (IOSCO) is a global regulatory body comprising securities and futures market regulators that includes as members the main financial regulator from each member country. The organization aims to help members cooperate to promote the standards of regulation needed to maintain just, efficient, and sound markets. It also helps exchange information on experiences and best practices to promote better development of domestic markets, enabling greater levels of global standardization and coordination. IOSCO promotes enforcement against securities market offenses, and also takes a surveillance role.

Besides corraling the views and experiences of securities regulators all over the world, IOSCO works with other organizations as a member or an observer. Principally it forms one part of the regulatory troika—the other two parts are the Basel Committee on Banking Supervision and the International Association of Insurance Supervisors—that makes up the Joint Forum on Financial Conglomerates. Between the three is a joint view on all financial services—banking, securities, and insurance—mirroring the regulatory architecture of certain jurisdictions, such as the European Union and China, where three distinct supervisory bodies work together. IOSCO is also involved with the Organisation for Economic Co-operation and Development (OECD), the Financial Stability Board, the Financial Action Task Force on money laundering, the International Accounting Standards Board, the Public Interest Oversight Board, the International Monetary Fund, the World Bank, and the European Commission.

Since 1998, IOSCO has adopted a set of objectives and principles in securities regulation that aims to strengthen auditor independence and oversight, strengthen corporate financial disclosure and transparency, reduce conflicts of interest for financial analysts—core principles about what makes up good securities regulation—and also provide a memorandum of understanding on enforcement cooperation. Importantly, it also sets up a code of conduct for credit rating agencies, a code that has been severely strained in the crisis.

Jane Diplock is the chairperson of the Executive Committee of IOSCO, having been first elected to the role in 2004 and re-elected for a third term in 2008. She is also the chairman of the Securities Commission of New Zealand, a role that she has held since 2001; in 2006, she was re-appointed to a second term to the New Zealand securities regulatory body, which will expire on September 3, 2011.

investors can lead to failures of the vehicles. This report recommends that supervisors ensure market participants assess all SPE economic risks and business purposes throughout the life of a transaction. Assessment should be ongoing, and management should understand the risks. If at any point financial firm support is evident or likely, SPE activities should be aggregated with the institution's activities for supervisory assessment and risk-management purposes. SPE supervisors should support more standardization of definitions, documentation, and disclosure requirements, and report any divergent material to investors. They should also oversee and monitor SPE activity and assess its implications for regulated firms.

IOSCO intends continuing to monitor developments in off-balance-sheet financings, including unconsolidated SPEs.

3. Elements of International Regulatory Standards on Funds of Hedge Funds Related Issues Based on Best Market Practices, September 2009¹³

This report was prompted by retail investors' increasing involvement in hedge funds through funds of hedge funds, and it aims to give investors better information in this largely unregulated area. The report recommends that managers determine whether fund-of-hedge-fund liquidity is consistent with that of the underlying hedge funds. Managers should also consider whether conflicts of interest might arise between any underlying hedge fund and other parties. They should monitor and analyze several aspects of due diligence: the appropriateness of the legal regime and service providers and the transparency, valuation, and reporting arrangements of a specific hedge fund. Organizational structure, resources, and procedures must be adequate to taking action on any anomalies that due diligence identifies. Managers should also regularly assess whether selection procedures for eligible underlying hedge funds have been properly followed and explain any deviations. If any aspect of due diligence is outsourced, a fund-of-hedge-funds' manager should ensure conflicts of interest are addressed. Managers should also see that outsourcing is consistent with the IOSCO *Principles on Outsourcing of Financial Services for Market Intermediaries*.¹⁴

4. Exploration of Non-professional Ownership Structures for Audit Firms, September 2009¹⁵

Securities regulators and investors rely on audited financial statements, therefore availability of quality audit services is critical. The European Union, Japan, and the United States all restrict audit firm ownership, and securities regulators have long been concerned that the loss of just one of the big four firms—Deloitte Touche Tohmatsu, Ernst & Young, KPMG, and PricewaterhouseCoopers—could disrupt the entire market for independent audit of large companies, which represents a significant risk to market efficiency. In this report, IOSCO explores the barriers preventing more firms from competing in the market. At the same time it is of course keen to preserve auditor objectivity, independence, professionalism, and competence, and thus, audit quality. The report suggests that modifying rules for audit firm ownership would give public companies a greater choice of audit firm services without compromising the quality of those services.

5. Principles for Periodic Disclosure by Listed Entities (Periodic Disclosure Principles), July 2009¹⁶

This report amounts to a guide for companies with securities listed or admitted to trading on a regulated market in which retail investors participate. Periodic reporting is the lynchpin of both investor protection and transparent operation of financial markets. Information in periodic reports should be relevant and include independently audited financial statements covering the entire previous financial year. Reports must be regular, clear, concise, and understandable, and should identify who was responsible for producing them. Financial reporting should be regularly reviewed internally to ensure assets are safeguarded from unauthorized or improper use and transactions are properly recorded.

6. IOSCO Good Practices in Relation to Investment Managers' Due Diligence When Investing in Structured Finance Instruments (Investment Manager Due Diligence Practices), July 2009¹⁷

The due diligence practices this report recommends are designed to help industry and regulators understand and monitor investments

Introduction

REGIONAL REGULATORY SENSIBILITIES: THE EUROPEAN VIEW

While the global financial crisis may have had its true roots in the real estate bubble of the United States and was magnified by the yield-chasing activities that went on at the various investment banks and other parties in the system, Europe had its own unique calamities around the same time. Some European banks (ING Group, in particular the ING Direct division) were caught up with investments in the same sophisticated risk products as the large U.S. banks, but there were also banks that were laid low by disastrous mortgage portfolios and impossible-to-refinance short-term liabilities (Northern Rock and Halifax Bank of Scotland in the United Kingdom) as well as banks that either had acquired very large financial institutions at the top of the market or had bought businesses that were overladen with toxic debts of their own (RBS and Lloyds TSB of the United Kingdom and Fortis of Belgium).

Since the start of the crisis, European institutions have tried to show their thought leadership in developing solutions to the crisis. Gordon Brown's U.K. government was the first to propose a decisive and significant bailout for struggling lenders, and the government later enacted a serious revamp of its financial architecture by transferring oversight of U.K. banks away from the Financial Services Authority to the Bank of England, ending a nine-year experiment in regulatory infrastructure reform. The Bank for International Settlements is also headquartered in Europe and is seen as the key coordinating body for financial services reform, although one body that sits within it, the Financial Stability Forum (and later the Financial Stability Board), headed by Mario Draghi, the president of Italy's central bank, is also a strong forum for discussion of global financial services reform and has a significant voice of its own. The European Union (EU), with its common currency and the resulting need for fiscal and monetary policy coordination among 27 member states, has sophisticated economic needs and is in many regards setting standards for multilateral cooperation within its own unique political and economic union.

Arguably the world's largest and most complex bureaucracy, as it unifies the policies of a large number of sovereign states under some forms of shared civic infrastructure and legislation-producing regional political bodies, the EU has a broad range of economic study groups and other bodies to oversee improvements in the financial services industry. Many of these are mandated by the European Commission to harmonize the financial services market; they include the Markets in Financial Instruments Directive, the Payment Services Directive, the Trans-European Automated Real-time Gross Settlement Express Transfer System (TARGET2), and TARGET2-Securities.

The Committee of European Banking Supervisors (CEBS), an independent group set up in 2004 by the EU to provide advice on both policy and regulatory issues in banking supervision, is a body that plays a key role in the formulation of EU thinking on financial services reform—a role that has only strengthened since the onset of the global financial crisis. CEBS advises on the preparation of draft measures on lending activities, sees that there is consistent implementation of EU directives within the European Community member states to improve coordination, and ensures that there is supervisory cooperation and a robust exchange of information. Similar committees exist for securities, insurance, and pensions.

THE TROUBLE WITH EUROPEAN BANKS

Since 2009, CEBS has provided banking sector analysis and assessed risk in that sector. In 2010 it conducted public hearings on its guidelines around lessons learned from the financial crisis; the management of operational risk in market-related activities; the operational functioning of supervisory colleges to prepare for and handle emergency situations; concentration risk; liquidity cost-benefit allocation; transparency issues; and capital adequacy of cross-border groups.

In July 2010, CEBS conducted stress tests of banks in 27 European member states and publicly announced the results, seeking to allay fears that these banks were exposed to sovereign risks. This was in some ways a European variation of the tests that U.S. banks had been put through 13 months earlier. The U.S. tests were seen as a successful exercise and were credited for helping restore some confidence in the institutions that were tested (although they were criticized by bankers who felt the results should not have been made public or that the

with internal estimates of key parameters, which have proven harder to value and much less transparent than originally thought. In addition to all of this, and to make things even worse, Keynesian-style stimulus policies have also shown their limits as they have increased public deficits significantly and are rapidly posing new threats to economic growth. In short, we are (almost) naked in terms of our tools for understanding the depth of the crisis.

The fact that the crisis has hit hard some of the supposedly best-managed banks in the world, together with the fact that in many different countries, with different supervisory arrangements, some large banks have done well while others badly, points to a key variable that explains the crisis of some banks and the survival of others: risk management. The crisis has proven how badly managed some banks were, while others have shown their strength in terms of risk assessment, risk monitoring, and risk mitigation. The crisis has also shown how important it is to have a good prudential framework as well as to apply it through effective supervisory actions.

Most of the lessons we have learned from the crisis are old lessons that show the limited ability of human beings to avoid past mistakes, as well as the cyclical nature of both the economy and the financial markets. Some of the lessons are new and show the need for some humility and skepticism when we assess financial products, institutions, and markets.

OLD LESSONS DRAWN FROM THE CRISIS

The first old lesson of this crisis is the key importance of lending standards for banking stability. At the core of the crisis has been the significant deterioration in lending standards in the United States mortgage market, as well as in other credit markets, with leveraged buyout funding and commercial real estate lending being two other clear-cut examples not restricted to the case in the United States. The relaxation of lending standards is always based on the excess of optimism of lenders and borrowers about repayment capacities or, at least, about their ability to refinance the loans at a later stage based on a rising value of the collateral. This is a mistake that happens in all lending booms.³ Overoptimism leads to an upward biased estimation of the net present value of investment projects so that banks grant more loans than they should if they were applying a more conservative discounting factor that took into account the cyclical nature of the economy.

Of course, most experienced bankers know this and try to behave accordingly. However, competitive pressure is high as less risk-averse bankers (and their shareholders) are more prone to bet on a continuous expansion and are ready to lure customers from the more conservative banks. The pressure can increase further if some of the lenders are softly regulated or almost unregulated. Specialized mortgage lenders in the United States are a case in point here. At the end of a credit cycle, most of the banks engage in a process of significant credit growth at lower and lower prices, with shrinking risk premiums being applied, and declining lending standards fuel even more the lending cycle, increasing the probability of a sharper and deeper crisis. An environment of low interest rates for a long period of time may enhance the risk appetite of bankers as they are lured into a search for high yield activities, and thus incline their balance sheets toward riskier credit market segments. There is plenty of evidence that this old lesson about lending standards, learned by bank managers and supervisors crisis after crisis, was forgotten during the run-up to the crisis years.

The risk management process is the key to avoiding the worst of the recession or the housing collapse. The most conservative bankers—the ones that are stricter in the screening and monitoring of borrowers—are the ones that are able to survive the banking crisis, and moreover they are the ones that will take over the market share of more imprudent banks.⁴ In fact, in Spain, the deep recession the economy is experiencing shows clearly how different credit risk management and lending standards have been during the current lending cycle: at the end of 2009 there were banks with less than 2 percent non-performing loan ratios while others had them in the double digit range.

The second old lesson is the role of collateral in lending. Collateral is not a substitute for the repayment of a loan and should not be considered as such. It is at most a mitigant of that lack of payment. Therefore, a loan granted on the basis of the collateral that is pledged and not on the repayment capability of the borrower is a weak loan that may turn sour.

The U.S. subprime market seems a perfect example of what was not a proper bank lending policy regarding collateral. This approach to collateral encompasses the (blind) faith in the reappraisal of the value of the collateral as the house price boom was deemed permanent, with continuous increases in house prices. The Japanese banking crisis of

retail banking focus through its use of a large branch network to raise capital from retail deposits. This concept of fund raising—along with its good risk management—stood it in good stead when the global financial crisis hit and stable sources of funding were worth their weight in gold. In the years since 1998, which saw major banking mergers such as the formation of Citigroup from Citibank and Travellers, the Norwest-Wells Fargo merger has been considered one of the better combinations, largely due to the instilment of a strong corporate culture laced with good risk management and a strong network of main street branches.

A NEW JUGGERNAUT

The new entity took the Wells Fargo name, and began a trek to build a serious coast-to-coast financial institution. This ambition was finally fulfilled in 2008 when Wells Fargo completed a long-anticipated acquisition of Wachovia Corporation—an east coast institution that had overstepped itself with the expensive acquisition of subprime lending unit Golden West—with which the west coast-based Wells Fargo had very little overlap. By 2010 Wells Fargo was still the U.S. bank with the broadest distribution (a presence in 40 states) as well as the second largest bank by deposits, the third largest by market capitalization, and the fourth largest by assets. It competes with Bank of America and JPMorgan Chase in U.S. markets, banks which have also remained relatively strong throughout the global financial crisis despite the former's near-disastrous acquisition of Merrill Lynch. But throughout the years leading to the crisis, it was Wells Fargo's branch-level view of the United States that gave its management insight into subprime mortgage mania and its questionable practices—which clashed with Kovacevich's folksy basic banking sensibilities—allowing it to remain relatively safe from that danger.

Since its humble beginnings, Wells Fargo has not only expanded across most U.S. states, but also entered 80 different business lines, with an eye that diversification can provide a bank with an opportunity to naturally distribute risk and avoid the type of concentration that had hobbled institutions like the smaller Norwest Bank, or even mortgage lending-based institutions such as Washington Mutual. All the while it has developed a business culture that knows the fine points of banking and risk management.

This culture has led to a confidence in Wells Fargo's methods that has at times clashed with the goals and opinions of others, especially when crisis management measures were applied to the financial system as a whole. Kovacevich himself has become known as one of the more controversial and outspoken thinkers in financial services as a result, and he has referred to the U.S. administration's plan for stress testing banks as "asinine," while pushing for the Federal Deposit Insurance Corporation program to be privatized and for the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac) to be allowed to move into bankruptcy.

Kovacevich turned his role as CEO over to bank president and COO John Stumpf in July 2007, announcing his retirement as chairman in September 2009 in what is regarded as one of the most orderly succession plans in financial services (compared, for example, to the change in senior management at HSBC in September 2010, which seemed poorly managed, misinformed, or just badly orchestrated). Stumpf had been with the bank two years longer than Kovacevich and groomed over the long term for the top role. The succession program seems to have paid off, and Stumpf's success leading Wells Fargo made him the highest-paid U.S. bank CEO in 2009.

In terms of the heads of the largest world banks, Kovacevich has long been seen as an old-school banker. With his iron-clad faith in the value of risk management, as well as a clear love for the art of gathering deposits through a broad base of retail branches such as would exist in developing markets, Kovacevich clearly has no love for sophisticated practices, and only recently has become interested in investment banking as a business division. The most successful banker of his generation seems to have picked up his skills in a bygone era.

But if Kovacevich seems like a holdout of a simpler era that relished the type of risk management practices that regulators refer to when they talk about "going back to basics" or that held as its main tenets "boring banking" with "plain vanilla" products, he is still very much a man of his times. Being consigned as boring may seem like a harsh fate but it is a better alternative than belonging to the type of leveraged "casino banking" that can threaten to bring down entire financial systems. Nevertheless, boring banking as applied by Kovacevich is anything but, as the Wells Fargo tale is also one of rapid expansion—both geographic and along business lines—and success in a land of opportunity where there is no need to fail.

of the bank regulators came out publicly to say that it had become necessary to rein in Fannie Mae and Freddie Mac—to reduce their roles and limit their portfolios. But Rubin and Summers had their heads handed to them by Congressional Democrats, who said “stay out of this.” The financial subprime and mortgage bubble could not have reached the level it did, even with AAA ratings, if Fannie Mae and Freddie Mac hadn’t been guaranteeing so many subprime mortgages. Fannie Mae and Freddie Mac are going to cost the government and taxpayers \$400 to \$500 billion, or even more—far more than all other taxpayer bailouts of U.S. institutions in the financial crisis combined. Given this fact, the key question is why wasn’t a full reform of Fannie Mae and Freddie Mac the first thing to be addressed in the financial reform package recently passed? Is Congress afraid to open up this can of worms? Congress has ignored the reform of Freddie Mac and Fannie Mae in the past and continues to do so—to this day, Congress hasn’t stepped up and admitted its mistake, but has instead laid blame on others. But it’s quite simple: Congress failed us.

The Securities and Exchange Commission (SEC) failed us. How could the SEC let the ratings agencies do what they did? How could the SEC allow investment banks to have leverage ratios of 30 to 40 times shareholder equity? The SEC didn’t even require investment banks to have adequate liquidity plans—the investment banks didn’t fail because of inadequate capital levels, they failed because of illiquidity. Some investment banks had \$800 billion of wholesale funding at 30-day and 60-day durations—a big no-no according to Liquidity Management 101—but the SEC didn’t require liquidity plans of the financial firms they were supervising. Consequently, many of those firms failed, but the SEC has not come clean on its culpability in the matter.

State regulators failed us. Seventy percent of all subprime originations were by brokers who were regulated and licensed by the states. State attorney generals have got more gall than anyone I’ve ever seen in the way they have been saying that federal regulators failed—it’s the state regulators who failed. They were the regulators who licensed the brokers, many of whom intentionally committed fraud, in my opinion. They put down income levels that they knew were wrong, they put down that mortgages were for owner-occupied houses although many of them were not, and they put down employment histories that were untrue. This was not the accidental recording of incorrect information—this was full and premeditated fraud.

Finally, I am convinced that the federal bank regulators failed us, about which I ask this rhetorical question: What regulatory authority did the New York Federal Reserve—most of the problems in this financial crisis culminated in New York and under its jurisdiction—lack to rein in the risk of financial institutions like Citigroup? The regulators were not powerless; they were the financial authorities. And yet now we are crafting new regulations, pretending that the previous regulations were toothless. What good are regulations if regulators don’t use them?

What we have to understand for the future is that all five of the safety valves we have historically relied upon—rating agencies, Congress, SEC, state regulators, and federal regulators—failed us. We’ve had one or the other safety valves fail us from time to time but never before have all of them failed at the same time. And that’s why this bubble got as big as it did.

PASSING THE BUCK

I’m not trying to defend the management of about a dozen financial institutions—most of which were in investment banking—for their malfeasance, unethical behavior, and complete lack of sensible risk management. The management of these institutions is certainly the main culprit of the current crisis, but we must admit that those who managed the checks and balances process also failed us.

The fact that we had institutional checks and balances that weren’t activated is an important key to the size of the problem. Ineffective regulation is far worse than no regulation at all because investors develop a false sense of security if they operate with the assumption that someone is watching what is going on. This has been most painfully evident among unsophisticated investors, the ones who are the most vulnerable, who have placed in regulators a confidence that isn’t deserved and have been tricked into a false sense of security. If you have independent and objective ratings agencies, the SEC, federal regulators, state regulators, and Congress supposedly watching the financial services industry on your behalf, you should naturally feel that you’re relatively safe. When they all failed, it was small investors who were the main victims. The only parties that are being castigated right now are the managers of banks, even though only about a dozen of these banks actually sinned and many were not even commercial banks at the time. Eight thousand commercial banks that had nothing

the time in the commercial banking space there wasn't a huge amount of understanding about HSBC's stance on the coming storm. And while HSBC was unfortunate to own Household Finance, which later became known as HSBC Finance, it was that vehicle that made clear the depth of the problem.

The quality of the loans that subprime lenders were making, and the subsequent process of bundling them and lending them onward, was actually quite shocking to traditional bankers. Then there was the problem of the trading book as well, because this stuff was being traded between the banks and the investment banks in a very sizeable way. We couldn't understand why anybody would want to have a trading book of subquality assets—it just didn't make any sense. It was growing the balance sheet for the sake of growing the balance sheet and that was another clear warning right there.

All in all, we managed through the situation well at ANZ. We remained profitable, maintained our AA rating, and didn't require any government support.

MANAGING CRISES

The crises that I've seen have varied in their magnitude, and I've been able to learn different things from all of them. The worst one I've lived through was the Argentine debt crisis of 2000 and 2001. While the meltdown of Argentina was not as dramatic as the global financial crisis in terms of scale—although it did have a major impact on emerging markets—in terms of its impact on an individual country it was quite extraordinary. To have survived the Argentine debt crisis is the banking equivalent of living through the Battle of Stalingrad—it doesn't get any worse. With the Argentine crisis, the key lessons were as always the importance of liquidity, the importance of having contingency plans all the time, always being one step ahead, trying to think through where markets would go, and always keeping in mind that the completely unexpected can occur.

When managing a major crisis, we tend to be driven by the norms that we've grown accustomed to and we don't believe that things will get dramatically worse. It becomes important to remove yourself from the situation and look at it with a wide-angle lens and be prepared for the possibility that it *can* actually get even worse. That was the lesson I learned early on in Argentina, because at the time I didn't

believe it was possible that bond prices could drop so much. The situation became violent and very unpleasant, and you had your own personal safety and that of your staff and customers to worry about. In that crisis, I saw the destitution of the whole middle class of Argentina and it was quite frightening.

Some of this is playing out in Europe now, where there's been an ostrich mentality. The Greek bond crisis is an issue that has really been on the table for some time. The European Union has allowed matters to get to a point where it has no other choice but to do something; it could have acted in a more systematic and considered way when it became apparent that Greece wasn't keeping to its fiscal policy commitments.

GOVERNMENT INVOLVEMENT

In such a crisis of confidence as we have recently seen, a national government can step in and introduce sweeping measures. In terms of the banking crisis, in the United States the government came up with the idea of conducting stress tests to return confidence to the market and then publishing the results of those stress tests. That was a brave move and the U.S. regulators handled it well, because it could have worked against them. It basically brought back market confidence.

Now the market is not quite as confident about Europe because there are still structural questions there that are not resolved. Is it possible for southern Europe to comply with demands for austerity? What are the social implications and barriers to change? The situation around market confidence is a huge problem. When the Americans did their stress tests it was early in the crisis. They needed to put a line under the problem and they felt that a stress test exercise was just one way of doing that: creating a situation where it became well known which banks would succeed and which would fail. This was a better scenario than the complete lack of trust and the lack of confidence that had been in the whole market.

More recently, stress tests in Europe addressed the health of European banks. And while this process and the results of the stress testing weren't really what people had expected, most banks appear to be in a much better position than had been envisioned. But the issue that these stress tests raised was the quality of the stress, particularly around a number of institutions that didn't mark to market their bond holdings, especially in sovereign debt.

government or policymakers. Or worse, the lack of internal control led to lending to customers who had conspired with corrupt bank officers to disguise their true financial conditions. Banks too were engaged in businesses that they didn't quite understand or know how to manage.

Many of the Korean banks were brought down by *investment trust* businesses that offered customers investment products such as mutual funds or bond products. To attract customers, many banks guaranteed the yield of these trust products for their customers. Customers welcomed such investment products as they were perceived as having no downside but much upside. With rather lax regulation prior to the financial crisis, the liabilities arising from the guarantees were kept off balance sheet; that is, not counted as the potential liabilities of the banks and therefore no capital was set aside against these liabilities. Why? Because banks never thought these products would generate a loss and they didn't believe they would ever have to make good on their guarantees. When the financial crisis hit, these investment trust products suffered heavy losses, which naturally had to be borne by the guaranteeing banks.

Similarly, many insurance companies in Asia and elsewhere suffered from the *negative spread* problem for many years: they offered insurance products that guaranteed a certain rate of return to customers, but the companies could only generate a rate of return on their own investments far below the guaranteed level when market conditions changed. Such negative spread drove some insurance companies into insolvency.

Banks can get into trouble even without providing guarantees for third party products they sell to customers when the selling bank doesn't understand the products they sell or whether the risks associated with these products are suitable for their customers. For example, many Asian banks suffered heavy losses for having sold complex structured *mini-bonds* linked to Lehman Brothers when the bankruptcy of Lehman Brothers rendered these worthless. In theory, the risks for these bonds were supposed to be borne by the investors who bought these bonds, not by the banks that sold them simply as selling agents. But regulators found that some of the banks didn't understand these mini-bonds; although they had marked them as high risk internally, they had nonetheless sold them to customers who expressly wanted to make low risk investments. As a result, the banks that sold them were ordered to pay for a large part of the losses suffered by the retail customers.

RESTRUCTURING BANKS: MANAGEMENT

In our experience, management holds the key to the success or failure of a company or a bank. A good management team can turn around a bad company; a bad management team can run a good company into the ground. We've seen this situation occur repeatedly. To restructure a failed bank, the first thing shareholders need to do is to replace the management team with the best and most experienced talent. Before Newbridge Capital took over Korea First Bank, the government fired the bank's two preceding presidents and put them in jail. We installed a new management team, and the board held it accountable for the performance of the bank. We aligned the interests of management with those of shareholders by providing management with incentive compensation, including stock options. Fixing management is the first thing one needs to do to fix a troubled bank.

It seems in many places in the world, there is a great deal of reluctance to hold management responsible and accountable for the performance of the company it manages, even though that management is highly compensated. In many cases, the compensation system incentivizes management to take excessive risks. A good system should reward good performance but should also penalize poor performance. A system of rewards without proportional punishment amplifies the risks of financial institutions and makes matters worse in a crisis. The rebuilding of a failed or troubled institution cannot meaningfully begin until and unless the management is replaced by a more competent one, which must be held accountable.

The advantage of a market economy compared with a state-controlled system is not so much that privately owned companies are always better run than state-owned ones. Privately run companies fail all the time, just as many state-run firms are inefficient. The key difference is that in a market economy, the penalty for a poorly run company is severe: bad companies go bankrupt and cease to exist. Existing or surviving companies by and large have a good reason to exist—they are better performers. A functioning market system makes sure that those companies that have survived are the better ones, whereas in a state-controlled economic system, inefficient and poorly performing companies may continue to exist.

The market has a way of fixing inefficiencies by eventually forcing poor performers out of the game. It is a rather ruthless system and bankruptcies can cause a lot of pain for shareholders and employees.