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Review of the Differentiated Nature and Scope of Financial Regulation

Key Issues and Recommendations

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Review of the Differentiated Nature and Scope of Financial Regulation

Executive Summary

I. Introduction

This report analyses key issues arising from the differentiated nature of financial regulation in the international banking, insurance, and securities sectors. It also addresses gaps arising from the scope of financial regulation as it relates to different financial activities, with a particular focus on certain unregulated or lightly regulated entities or activities. The Joint Forum prepared this report at the request of the G-20 to help identify potential areas where systemic risks may not be fully captured in the current regulatory framework and to make recommendations on needed improvements to strengthen regulation of the financial system.

The Joint Forum presents its findings in five key issue areas:

- Key regulatory differences across the banking, insurance, and securities sectors;
- Supervision and regulation of financial groups;
- Mortgage origination;
- Hedge funds;
- Credit risk transfer products (focusing on credit default swaps and financial guarantee insurance).

The Joint Forum focused on these areas because they help shed light on some of the major sources of systemic risk that emerged from the current financial crisis. Unless action is taken, these issues may continue to pose systemic risk to the financial system and the global economy.

The Joint Forum analysed problems that sometimes extend beyond or cut across the scope of existing regulation of the banking, insurance, and securities sectors. The Joint Forum's goal was to analyse the key issue areas, identify gaps, and produce recommendations to address these gaps and bolster regulatory frameworks over the long term. The recommendations are supplemented with policy options when consensus could not be reached.

This report is part of a global effort to reform and strengthen financial regulation by the G-20 Leaders and co-ordinated by the Financial Stability Board (FSB). The Joint Forum's parent committees - the Basel Committee on Banking Supervision (BCBS), the International Organization of Securities Commissions (IOSCO), and the International Association of Insurance Supervisors (IAIS) - have initiated and conducted several other projects aimed at strengthening financial regulation and notably at redefining its scope. Given the Joint Forum's cross-sectoral perspective, this report has taken into account all of the analyses and recommendations from these initiatives,¹ as well as other authoritative research.

¹ Annex 9 lists the initiatives and reports that the Joint Forum considered in producing this report.

Additionally, the Joint Forum notes that global policy initiatives aimed at reducing the impact of future crises are resulting in increased prudential requirements on regulated entities. Paradoxically, these concerted efforts could result in an undesired effect, that is, providing incentives to operate outside the traditional boundaries of supervision and regulation for the three sectors.

II. Mandate

At their 15 November 2008 meeting, the G-20 Leaders called for a review of the differentiated nature and scope of regulation in the banking, securities, and insurance sectors. This report responds to the following declaration:

“The appropriate bodies should review the differentiated nature of regulation in the banking, securities, and insurance sectors and provide a report outlining the issue and making recommendations on needed improvements. A review of the scope of financial regulation, with a special emphasis on institutions, instruments, and markets that are currently unregulated, along with ensuring that all systemically-important institutions are appropriately regulated, should also be undertaken.”

In its 25 March 2009 report on *Enhancing Sound Regulation and Strengthening Transparency*, the G-20 stated the following:

“The Joint Forum, a Working Group of the BCBS, IOSCO and the IAIS, is undertaking a project that addresses the differentiated nature and scope of financial regulation. The main objective of this project is to identify areas where systemic risks may not be fully captured in the current regulatory framework. Special emphasis will be placed on institutions, instruments, and markets that are currently unregulated or lightly regulated. As appropriate, the Joint Forum will leverage off current work from other international bodies in its assessment.”

III. Focus and guiding principles of this study

In light of the breadth and short time frame of this mandate, the Joint Forum took a focused approach for identifying and analysing key issue areas and gaps. Drawing primarily on previous Joint Forum analyses, the Joint Forum first analysed the differentiated nature of financial regulation by comparing key differences in existing international regulation across the banking, insurance, and securities sectors.

The Joint Forum also focused on areas that correspond to immediate and well known gaps in supervision and regulation, have a strong cross-sectoral dimension, have been addressed by Joint Forum analyses of similar issue areas, and would benefit from a mix of different regulatory perspectives. While the areas the Joint Forum focused on obviously do not represent all of the existing gaps and differences in financial supervision and regulation, they either contributed to the crisis in varying degrees or pose significant systemic risk.

A. Focus of this study

This report focuses on five key issue areas for the following reasons.

1. Key regulatory differences across the banking, insurance, and securities sectors

International financial regulation is sector specific as evidenced by the independent development of core principles or standards in each financial sector. A sector-specific approach to supervision comes with the potential for increasing regulatory gaps, which causes supervisory challenges and presents opportunities for regulatory arbitrage. Differences exist in the nature of financial regulation among the banking, insurance, and securities sectors. These differences are warranted in some cases due to specific attributes of each financial sector, but, in others, these differences may contribute to gaps in the regulation of the financial system as a whole. One way to understand the differences and identify the gaps is to compare the core principles for financial supervision across each sector. The core principles reflect characteristics of the respective sector and the nature of the supervised financial institutions. They represent the key components and features of the supervisory and regulatory framework of each financial sector. These principles, issued independently by the BCBS, IAIS, and IOSCO, correspond to the minimum requirements for sound supervision. This analysis provides insights into the differentiated nature of regulation across sectors from an international perspective² but not into the unregulated sector.

2. Supervision and regulation of financial groups

Financial groups, through networks of legal entities and structures, offer a wide range of financial services and are often active across multiple jurisdictions and with multiple interdependencies. The financial crisis has shown the significant roles these financial groups play in the stability of global and local economies. Because of their economic reach and the mix of regulated and unregulated entities (such as special purpose entities and unregulated holding companies), financial groups blur the boundaries among the sectors and present challenges for the application of sector-specific financial regulation and also for their review and assessment by supervisors.

3. Mortgage origination

The focus of the role of mortgage products in the financial crisis has been on the securitisation of mortgage loans or the sale of securitisations. This has been addressed in several international fora, including the Joint Forum and its parent committees. Receiving far less attention, however, is the fundamental building block of sound securitisation: the quality of underwriting of the component mortgages. The G-20 noted³ that the credit quality of loans granted with the intention of transferring them to other entities through the securitization process was not adequately assessed. Therefore, this report focuses on standards for the origination of mortgage loans that contribute to sound securitisations and global market stability.

² This analysis does not specifically focus on differences in regulation across countries. In that respect, it should be noted that the exact definition of each sector may vary from one country to another one.

³ *Enhancing Sound Regulation and Strengthening Transparency*, G-20 Working Group 1 (March 2009).

4. Hedge funds

Hedge funds, especially the largest of them, could have a systemic impact on financial stability. Failure in particular of a large, highly leveraged hedge fund might not only impact its investors, but also financial institutions and markets. Yet hedge funds are perceived as largely unregulated because they, like individual investors, typically do not have legal or regulatory investment restrictions, although their operators are regulated in many countries. While the possible contribution of hedge funds to the financial crisis is still a subject of debate, the Joint Forum agreed that the lack of a consistent prudential regime for monitoring and assessing hedge funds is a critical gap in the regulatory framework.

5. Credit risk transfer products

Credit default swaps and financial guarantee insurance products⁴ transfer risks within but also outside the regulated sectors. There is broad agreement that these products should be subject to sound counterparty credit risk management and that more transparency is needed. This report focuses on areas not already specifically addressed by other fora and on areas where additional input on previous recommendations would be beneficial. This report also consolidates and emphasises recommendations that have been made in other fora.

B. Guiding principles of this study

The broad mandate led to analysis of a diverse and large range of issues. Consequently, some recommendations and policy options are aimed at supervisors while others target more generally policymakers⁵.

In developing these recommendations and policy options, the Joint Forum applied certain guiding principles that reflect general views about the nature of financial regulation and, to a great extent, echo general recommendations made by the G-20. Articulating these principles helps ensure that these recommendations are designed for the long term.

- Similar activities, products, and markets should be subject to similar minimum supervision and regulation.
- Consistency in regulation across sectors is necessary; however, legitimate differences can exist across the three sectors.
- Supervision and regulation should consider the risks posed, particularly any systemic risk, which may arise not only in large financial institutions but also through interactions and interconnectedness among institutions of all sizes.⁶
- Consistent implementation of international standards is critical to avoid competitive issues and regulatory arbitrage.

⁴ The report addresses issues specific to financial guarantee insurers as sellers of financial guarantee insurance.

⁵ For the purposes of this report, the term “supervisors” means all supervisory and/or regulatory authorities, while “policymakers” has a broader scope and may include legislative authorities.

⁶ Such an approach of systemic risk is in line with the analyses done by the International Monetary Fund, the Bank for International Settlements, and the Financial Stability Board and presented in their *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments* (November 2009)

Because of the dynamic, changing nature of the global financial system, the scope of financial regulation must be continuously monitored and reviewed.

IV. Key issues and gaps

The following summarises the findings and observations in the five areas reviewed.

A. Key regulatory differences across the banking, insurance, and securities sectors

To undertake the review of the differentiated nature of existing regulation in the banking, securities, and insurance sectors, the Joint Forum focused on updating a review of the respective core principles of supervision in the banking, insurance, and securities sectors conducted in 2001⁷. The core principles reflect the main characteristics of the respective sector and the nature of the financial institutions supervised under each framework. The purpose of such comparison was to identify common principles and understanding differences when they arise.

Despite different formats, content and language used, the core principles review revealed substantial *commonalities* across sectors. Indeed, differences among each sector's core principles have been decreasing slightly over time, reflecting the converging nature of the business in the three sectors.

Furthermore, some of the existing *differences* among the core principles are warranted as they reflect - at least in part - intrinsic characteristics of the banking, insurance, and securities sectors. Examples of these intrinsic differences include the following ones:

- There are many unique aspects in securities regulation reflecting the broader scope of securities supervisors. The IOSCO core principles therefore encompass not only the regulation and supervision of securities firms, but also that of markets, exchanges, collective investment schemes, and disclosure by issuers. This broader scope of the IOSCO core principles reflects unique and intrinsic aspects of securities regulation and supervision. Core principles in the banking and insurance sectors describe only the framework needed to supervise financial institutions, not markets.
- Differences in the nature of the businesses being conducted by firms within each sector also explain and justify some fundamental differences in the nature of their regulation. An example of this differentiated nature of businesses of firms across sectors is the key role assigned to technical provisions by insurance regulation, but not by banking and securities regulation. Insurance companies offer protection against uncertain future events. As a consequence, much regulatory and supervisory effort in the insurance sector is directed towards the valuation of technical provisions as they are estimations of the cost of future liabilities.

⁷ *Core Principles, Cross-sectoral Comparison*, Joint Forum (November 2001).

However, as already noted by the Joint Forum in 2001⁸, key differences remain among the regulatory frameworks of the banking, securities, and insurance sectors that have no objective justification. Furthermore, the relevance of some of these differences has been emphasised by the financial crisis, as noted by the G-20 in its report on *Enhancing Sound Regulation and Strengthening Transparency*.

As a general and overarching matter, the Joint Forum believes that there is room for greater consistency among each sector's core principles, as well as the standards and rules applied to similar activities conducted in different sectors. Such improvements would reduce opportunities for regulatory arbitrage and contribute to greater efficiency and stability in the global financial system. Also, the financial crisis evidenced the lack of a coordinated approach to assess the implications of systemic risks and of the necessary policy options to address them. The core principles for each sector should appropriately reflect the extent to which systemic risk and financial stability play a role in the development of supervisory policies and approaches.

More specifically, despite exposures to common risk factors and growing interactions and risk transfer across the three sectors, there are areas treated differently for the purposes of prudential regulation of financial firms under each sector's supervisory system:

- This is notably the case with regard to the supervision and regulation of financial groups. The emphasis placed on supervision on a group-wide basis varies dramatically and the principle is applied in very different ways in the three sectors. While the Basel framework has always placed much focus on consolidated supervision, the IAIS only started requiring group-wide supervision (in addition to supervision of individual entities) in 2003. IOSCO's core principles do not require securities firms to be supervised on a group-wide basis⁹.
- Differences exist regarding a global uniform capital framework within each sector. A uniform framework exists only in the banking sector, whereas different frameworks still coexist within securities and the insurance sectors at the international level.
- Prudential regulations across sectors also remain largely different from both a conceptual and a technical point of view. Although these largely reflect significant differences in underlying business activities, some of these differences create supervisory challenges as well as opportunities for regulatory arbitrage.
- The extent to which regulation of the different sectors deal with business conduct and consumer or investor protection also vary.

⁸ See the review of the core principles mentioned above as well as another report focusing on prudential regulation: *Risk Management Practices and Regulatory Capital, cross-sectoral comparison*, Joint Forum (November 2001)

⁹ The IOSCO Principles do, however, address the importance of cooperation with respect to financial conglomerates (section 9.5) and cite the Joint Forum's February 1999 principles. The conglomerates section also cites the December 1999 Joint Forum reports that set forth principles on risk concentration and intra-group transactions and exposures. Moreover, principle 23 of the IOSCO Principles requires market intermediaries to comply with standards for internal organization and operational conduct that aim to protect the interests of clients and ensure proper management of risk. We also note that most, if not all, systemically important securities firms are affiliates of banking institutions, and are thus already subject to consolidated supervision. Finally, IOSCO has, since 1990, written extensively on capital standards and potential harmonization of those standards, and has also published principles on the supervision of financial conglomerates.

The Joint Forum believes that addressing these inconsistencies in supervisory frameworks across the banking, securities, and insurance sectors is necessary in order to ensure a sounder financial system in the future.

In addition to considering the legal or regulatory framework for evaluating differences in prudential regulation across sectors, it is also important to consider how supervisors implement these regulations. Differences at the implementation level are important as they may impede fair and effective supervision and assessment of the financial sector in general. Although how supervisors implement regulations was beyond the scope of this work, the Joint Forum wishes to emphasise that partial or inconsistent implementation of even near-identical prudential regulation can result in significant differences in practice.

B. Supervision and regulation of financial groups

Financial groups play a significant economic role but can threaten financial stability at local and global levels. Governments, supervisors, and central banks have struggled to evaluate the risks of financial groups and have incurred significant costs in mitigating the potential impact of financial groups on financial stability.¹⁰

Financial groups offer services in banking, securities, insurance, or a combination of these services. This mix blurs the traditional supervisory and regulatory boundaries among the sectors. Moreover, these groups rely on a network of legal entities and structures (some of them unregulated) to derive synergies and cost savings and to take advantage of differences in taxation, supervision, and regulation.

This report focuses on differences in the treatment of:

- **Unregulated entities when calculating group capital adequacy.** The differences in how a financial group is defined, in how entities are included for calculations, and in the methods for calculating group capital adequacy create problems for supervisors in assessing the risks of a financial group, the capital adequacy of the group, and implications for regulated entities within the group. These differences create gaps when unregulated entities are used to lower capital requirements of individual regulated entities, to reduce group capital adequacy requirements, and to blur the distinction among sectors. This can encourage the creation of group structures that are complex, opaque, and interdependent.
- **Intra-group transactions and exposures (ITEs), including those involving unregulated entities.** ITEs allow a financial group to coordinate its businesses across its legal structure. ITEs can create contagion and unintended risks across the group and/or individual legal entities within the group, as shown by the failure of Lehman Brothers. The differences in approaches to supervision and regulation of ITEs can make it difficult for supervisors to assess the risks to the sustainability of the business models of the group and its legal entities.
- **Unregulated entities, particularly unregulated parent companies of regulated entities.** Differences can create loopholes for financial groups to establish *unregulated* parent holding companies that end up controlling *regulated* entities from a completely separate jurisdiction. The unregulated parent holding company's

¹⁰ Examples of institutions for which governments and central banks have provided support are Dexia (Belgium); Fortis and ING (Netherlands); UBS (Switzerland); Lloyds and RBS (U.K.); and AIG, Goldman Sachs, Citigroup (US).

jurisdiction may not have related regulated entities or not have legal authority to exercise power or oversight over unregulated entities. This hinders supervision. The unregulated parent holding company is under no obligation to provide information to unrelated third parties, such as foreign supervisors, and is not required to produce the information in a meaningful way. Existing protocols for obtaining and sharing critical information do not address unregulated entities that are higher in the organisational hierarchy of ownership.

These differences help create situations in which regulatory requirements and oversight do not fully capture all the activities of financial groups or the impact and cost that these activities may impose on the financial system. Thus, there is a need to consider regulatory reforms to address, where appropriate, these differences. Meanwhile, supervisors need to monitor the risks that these differences can create and ensure that they are managed by regulated entities.

C. Mortgage origination

Until 2007, this decade was characterised by relatively strong economic growth, low interest rates in many jurisdictions, an abundance of liquidity, and increased lending to consumers. In a number of countries, housing and mortgage markets expanded dramatically, and there was rapid expansion in the variety and number of mortgage products and in related securitisation. Lack of discipline by market participants in several jurisdictions was notable during this boom period. When housing price bubbles were suspected, it was not clear at what point a system-wide response would be needed, especially given the positive macroeconomic effect of increasing home values and homeownership. This evaluation was further complicated by rising home values masking a number of poor underwriting practices, particularly those designed to lower initial monthly payments.

In several countries that experienced a surge in mortgage lending and housing growth, most notably the United States and the United Kingdom,¹¹ lenders developed new, riskier products that made use of relaxed product terms, liberal underwriting, and increased lending to high-risk populations. These developments eventually resulted in significant losses for consumers and financial institutions alike. However, many other countries with sophisticated mortgage markets have not experienced a significant degree of distress and some countries did not experience such growth, for example, Germany and Canada.

This report focuses on two fundamental areas of concern:

- **Poor mortgage underwriting practices.** Problems arising from poorly underwritten residential mortgages in certain countries contributed significantly to the global financial crisis; indeed, the securitisation and other structured financing of these mortgage loans - which were purchased by a number of international financial firms - spread the problems of their poor underwriting to the banking, securities, and insurance sectors globally. In contrast, prudent practices and sound and comprehensive policies may have prevented market participants in those countries that have not experienced a significant degree of distress from engaging in the less disciplined underwriting behaviour that was endemic in other, more troubled mortgage markets.

¹¹ There are significant differences in market trends, product offerings, and supervision among these countries.

- **Mortgage originators subject to differing supervision, regulation, and enforcement regimes for similar activities/products.** Like most aspects of the mortgage industry, the prevalence, role, and supervision of nonbank credit intermediaries varies greatly across the various mortgage markets. Mortgage originators range from the smallest individual mortgage brokers to large international lenders. They include lenders that provide warehousing lines to fund loans on an interim basis, those that structure securitisations and market securities, and central banks and government-sponsored enterprises that essentially make markets in mortgage loans. In some cases, the government closely controls the mortgage market through explicit guarantees for the full balance of the loan, while in others involvement is limited. The number of participants, the variety of roles they play, and the differences among countries are substantial, particularly given the patchwork approach to the regulatory framework in many countries. Such differences created regulatory gaps that helped erode prudent mortgage underwriting practices.

D. Hedge funds

Debates continue over whether and to what extent hedge funds may have contributed to - or mitigated - the expansion of the financial crisis. Some argue that hedge funds increased stress on liquidity in the financial markets in fall 2008, while others argue that hedge funds generally reduce the likelihood and prevalence of asset bubbles given the strategies hedge funds use. There is, however, general consensus that hedge funds, given their role in the economy, may have a systemic impact.

The analysis for this report focuses on four areas of concern.

- **Internal organisation, risk management, and measurement.** Failures in risk management by hedge fund managers can cause problems for markets and are a matter of cross-border and cross-sectoral concern. Yet there is no common or cross-border understanding of or requirements for how funds are organised or how fund risks are managed and measured.
- **Reporting requirements and international supervisory cooperation.** The risks posed by hedge funds cannot be easily measured by supervisors or investors because funds are not required to fully disclose their activities. The limited disclosure rules that funds do face vary by jurisdiction and information collected is not shared by supervisors for hedge funds operating across borders.
- **Minimum initial and ongoing capital requirements for systemically relevant fund operators.** Adequate financial reserves are needed to help fund operators withstand the operational risks they incur, ensure their orderly dissolution, and minimize potential harm to the financial system. Not all supervisors require such fund operators to meet even minimum capital requirements.
- **Procyclicality and leverage-related risks posed by the pool of assets.** The use of leverage allows funds to magnify potential returns but also the exposures, and, consequently, the risks for not only fund investors, but also the financial system itself. Supervisors do not constrain the use of leverage by funds.

E. Credit risk transfer products

One of the factors contributing to the crisis was the inadequate management of risks associated with various types of products designed to transfer credit risk. This resulted in severe losses for some institutions. These products transfer risks within and outside the regulated sectors.

This report focuses on two credit risk transfer products that were evidenced to contribute to major gaps in market practices or effective regulation: credit default swaps and financial guarantee insurance.

Credit default swaps (CDS) and **financial guarantee (FG) insurance** are products that provide protection against identified credit exposures. Because the provider of that protection may have to make payments based on the performance of the underlying credit, these products create new sources of credit exposure. Buyers of credit protection, therefore, need to maintain and enforce sound counterparty credit risk management practices with respect to credit protection providers.

While CDS and FG insurance products have quite different legal structures, they perform similar economic functions. The analysis identified the following issues as common to both the CDS and FG insurance markets. Each contributed to the recent crisis or poses cross-sectoral systemic risk.

- **Inadequate risk governance:** Sellers of credit protection did not, and often could not (given their existing risk management infrastructure) adequately measure the potential losses on their credit risk transfer activities. This was generally true in the CDS market and to a lesser extent in the regulated FG insurance market (where there is at least some financial reporting required by statute). Buyers of protection did not properly assess sellers' ability to perform under the contracts, and they permitted imprudent concentrations of credit exposures to uncollateralised counterparties.
- **Inadequate risk management practices:** Poor management of large counterparty credit risk exposures with CDS and FG insurance transactions contributed to financial instability and eroded market confidence. CDS dealers ramped up their portfolios beyond the capacity of their operational infrastructures.
- **Insufficient use of collateral:** The absence of collateral posting requirements for highly rated protection sellers (eg AAA-rated monoline firms) allowed those firms to amass portfolios of over-the-counter derivatives, and FG insurance contracts - and thus create for their counterparties excessive credit exposures - far larger and with more risk than would have been the case had they been subject to normal market standards that required collateral posting.
- **Lack of transparency:** The lack of transparency in the CDS and to a lesser extent in the FG insurance markets made it difficult for supervisors and other market participants to understand the extent to which credit risk was concentrated at individual firms and across the financial system. Market participants could not gauge the level of credit risk assumed by both buyers and sellers of credit protection.
- **Vulnerable market infrastructure:** The concentration of credit risk transfer products in a small number of market participants created a situation in which the failure of one systemically important firm raised the probability of the failure of others.

Separately, this report addresses key issues and gaps specific to CDS products. They are largely unregulated although their use is subject to supervision and regulation when protection buyers and sellers are regulated institutions. To the extent that unregulated entities, such as special purpose entities, are major participants in CDS markets, this may be perceived as a gap in existing supervision and regulation. For example, even if regulated firms are subject to capital requirements for risks arising from their CDS exposures, systemically important unregulated firms are not subject to comparable requirements, and this may pose a systemic risk. There also are concerns about potential weaknesses in the

market infrastructure for CDS products because they are typically traded over-the-counter. Operational risks can be exacerbated by weaknesses in market infrastructure.

Finally, there are key issues and gaps specific to FG insurance products. The number of FG insurers worldwide is small, but they operate across international boundaries and the regulation of these insurers varies considerably across jurisdictions. In recent years, FG insurers increased their risk appetites and expanded into asset-backed securities, including collateralised debt obligations, as well as subprime mortgage-backed securities. Insurers also established minimally capitalised special purpose entities, which sold CDS products that were not legally permitted within the main FG insurance business. Accounting practices, capital and liquidity, the role of credit rating agencies, use of special purpose entities, and knock-on effects pose cross-sectoral and/or systemic impact as the economic validity of the business model and design of these products remains in question.

V. Recommendations and options for effective and consistent financial regulation across sectors

The Joint Forum provides 17 recommendations arranged in the same order as the five key issues and gaps addressed in this Executive Summary. The recommendations seek to enhance the nature and expand the scope of financial regulation to achieve particular goals. Most of the recommendations are broad in nature. As a result, some follow-up work will be needed to further elaborate upon the recommendations and to successfully and fully implement them, taking into account ongoing work or initiatives by the parent committees.

In cases where the Joint Forum could not reach consensus on recommendations, policy options are provided to give policymakers choices for strengthening financial regulation or broadening its scope.

A. Reducing key regulatory differences across the banking, securities, and insurance sectors

Financial supervision and regulation is sector-specific, as evidenced by the independent development of core principles and standards for the banking, securities, and insurance sectors. Such principles do not specifically take into account systemic risk or financial system stability in a consistent manner. In addition, differences exist with respect to the relative importance attached to prudential or market conduct regulation by supervisors across the three sectors. Even though the boundaries of activities among the three sectors have become increasingly blurred over time, this sector-specific approach comes at the risk of more differentiated financial supervision among sectors.

The Joint Forum recommends a more coordinated approach among the three sectors.

Recommendation n° 1: The BCBS, IOSCO, and IAIS should review and revise their core principles to ensure that the principles appropriately take into account systemic risk and the overall stability of the financial system. Work should also be carried out to update and make more consistent principles related to market conduct, consumer protection, and prudential requirements.

In the March 2009 report on *Enhancing Sound Regulation and Strengthening Transparency*, the G-20 recommended that, as a supplement to their core mandate, the mandates of all international financial bodies and standard setters (the IASB, BCBS, IOSCO, and IAIS) should take account of financial system stability.

The Joint Forum agrees that maintaining overall financial system stability and reducing systemic risk is a cross-sectoral principle of financial supervision and regulation that should be further developed in each sector's core principles.

The Joint Forum agrees with the G-20 recommendation and encourages BCBS, IOSCO, and IAIS to review and revise, as necessary, their respective core principles to take into account financial system stability. The extent to which concerns over systemic risk and financial stability play a role in the development of supervisory policies and approaches should be made clearer for each sector, possibly to include an overarching principle addressing overall financial system stability.

Generally, the Joint Forum believes that increasing the consistency of the sectors' core principles will contribute to reducing regulatory gaps. Work should also be carried out to strengthen consistency in core principles related to market conduct, consumer protection, and prudential requirements. For example, ensuring that there are adequate principles regarding market conduct and customer protection would be for the benefit of customers and would enhance confidence. This assurance would also help reduce the possibilities for regulatory arbitrage regarding product manufacturing and distribution across sectors.

Recommendation n° 2: International prudential frameworks for minimum capital adequacy should be in place within each sector to reduce regulatory arbitrage across countries and to facilitate the supervision of cross-border groups.

A uniform minimum global capital standard does not exist for the securities and insurance sectors. The BCBS's core principles alone incorporate the requirement for a uniform risk-based capital standard to reduce competitive inequalities across countries and to safeguard financial stability. IOSCO and IAIS expect supervisors to promulgate capital requirements, but they do not have a single global capital standard for their respective sectors.

It is the Joint Forum's view that the lack of a uniform global standard for capital adequacy within each sector can contribute to regulatory arbitrage, competitive inequalities across jurisdictions, and, in some cases, financial system instability. Striving for a single global standard, however, should not result in the lessening of existing prudential standards.

Recommendation n° 3: In addition to making core principles more consistent across sectors, the BCBS, IOSCO, and IAIS should work together to develop common cross-sectoral standards where appropriate so that similar rules and standards are applied to similar activities, thereby reducing opportunities for regulatory arbitrage and contributing to a more stable financial system.

The G-20 noted that, in order to avoid regulatory arbitrage, there is a need for greater consistency in the regulation of similar instruments and of institutions performing similar activities, both within and across borders. The Joint Forum agrees with this need for greater consistency.

Comparable high-quality cross-sectoral standards should be developed with the goal of reducing opportunities for regulatory arbitrage by ensuring, to the extent possible, that similar activities are subject to similar rules and standards.

Recommendations for mortgage origination and credit risk transfer products, as outlined in Chapters 3 and 5 of this report, provide examples of possible cross-sectoral standards. Further work is needed to identify additional instances where

similar standards should be applied to similar activities, regardless of the sector in which the activities are conducted.

B. Strengthening supervision and regulation of financial groups

The Joint Forum believes that all financial groups, particularly those that are active across borders, should be subject to supervision and regulation that captures the full spectrum of their activities and risks. A variety of regulatory frameworks and approaches have contributed to financial groups being subject to supervision and regulation that did not fully capture the significance or potential costs of their risks.

Frameworks for supervision and regulation of financial groups should be clear and applied consistently, and should cover all financial activities and risks within groups, irrespective of where they may arise or whether those activities are conducted through regulated or unregulated entities within each group. These frameworks should clearly set out the powers and responsibilities of supervisors and supplement the supervision and regulation applicable to individual regulated entities or activities within the group.

As noted in the previous section, common cross-sectoral standards should be developed whenever justified. These standards would supplement the recommendations that aim at strengthening supervision and regulation of financial groups. These standards should also be applied with particular intensity when a group or any single entity within a group is identified as systemically important.

Any differences in the supervision and regulation of financial groups should be justified. Identifying and addressing these differences will improve the ability of supervisors to monitor and, as appropriate, mitigate the potential risks and threats financial groups can create.

Recommendation n° 4: Policymakers should ensure that all financial groups (particularly those providing cross-border services) are subject to supervision and regulation that captures the full spectrum of their activities and risks.

The cost of the failure or near-failure of financial groups, together with lessons learned from the financial crisis, has reaffirmed the importance of the supervision and regulation of financial groups. As the financial crisis has shown, risks assumed by unregulated companies within a group may significantly affect the whole group, including in particular its regulated entities. To be effective, the supervision of financial groups should seek to ensure full capture and treatment of all risks and entities of the groups. This implies that financial groups should be subject primarily to group-wide supervision.

Given the diversity across sectors for the supervisory and regulatory frameworks of financial groups, group-wide supervision should be fully implemented and practiced by each sector while also recognising the critical importance of supervision and regulation of the individual entities within the group.

The IAIS underscored the importance of appropriate supervision of financial groups by assigning a task force in 2009 to consider the merits of designing a common framework for the supervision of insurance groups. In this context, substantial progress toward strengthening the supervision and regulation of financial groups, including unregulated risk, is expected to be achieved.

Recommendation n° 5: The 1999 Joint Forum principles on the *Supervision of Financial Conglomerates* should be reviewed and updated.

The Joint Forum defines a financial conglomerate as any group of companies under common control whose exclusive or predominant activities consists of providing significant services in at least two different financial sectors (banking, securities, and insurance). In 1999, the Joint Forum issued a comprehensive set of principles covering capital adequacy, sound and prudent management, supervisory information sharing, intra-group transactions and exposures, and risk concentration.

The recommended review should focus on the supervisory powers over unregulated parent holding companies, the oversight and access to information of unregulated entities within a group, the calculation of capital adequacy on a group basis with regard to unregulated entities and activities (such as special purpose entities), the oversight of intra-group transactions and exposures involving regulated entities, the coordination among supervisors of different sectors, and the governance and risk management systems and practices of groups.

The principles should be updated to:

- ensure that the principles properly address developments in sectoral frameworks (eg Basel II) and in the markets since 1999;
- facilitate more effective monitoring of activities and risks within a financial group, particularly when these activities span borders and the boundaries across the regulated and unregulated areas of the financial system;
- provide a basis for increased intensity of supervision and regulation of financial groups, particularly when a group or any of its institutions are identified as systemically important;
- improve international collaboration, coordination, and cooperation among supervisors across sectors;
- clarify the responsibility and power of supervisors with respect to the risks in their jurisdictions stemming from an entity being part of a financial group;
- ensure that financial groups' structures are transparent, consistent with their business plans, and do not hinder sound risk management; and
- provide, to the extent possible, credible and effective options for action during a crisis or to avoid a crisis.

Recommendation n° 6: The BCBS, IOSCO, and IAIS should work together to enhance the consistency of supervisory colleges across sectors and ensure that cross-sectoral issues are effectively reviewed within supervisory colleges, where needed and not already in place.

Independent of the development of common standards and principles across sectors, actions are needed to improve coordination and cooperation with regard to the supervision, and potential cross-border resolution, of financial groups. Actions are also needed for accessing and sharing information, notably for unregulated entities. The FSB, BCBS, IOSCO, and IAIS have identified supervisory colleges as a major tool to improve this supervisory coordination and cooperation. The Joint Forum recognises that work is being done on a sectoral basis but believes that there is merit in developing colleges of a cross-sectoral nature or in making supervisory colleges consider effectively cross-sectoral issues.

C. Promoting consistent and effective underwriting standards for mortgage origination

Because each country's mortgage industry is shaped by distinct real estate markets, cultural influences, and socioeconomic policies, it would be challenging to construct a single regulatory approach to mortgage underwriting standards. To help prevent recurrences of the market disruption and financial instability recently experienced, however, supervisors should address issues in their respective mortgage markets to achieve more consistent and more effective regulation of mortgage activities.

Sound underwriting standards¹² are integral to ensuring viable, robust mortgage markets at the local and global levels and may improve financial stability notably when mortgages are securitised. Systemic risk will be reduced if mortgages are properly underwritten, ensuring that borrowers have the capacity and economic incentive to honour their commitments to retire the debt in a reasonable period of time. Indeed, by focusing on prudent underwriting, supervisors can help institutions and markets avoid the broad-based issues and disruptions experienced in recent years and potentially help restore securitisation/structured finance markets.¹³ Therefore, the Joint Forum recommends that supervisors take the following actions:

Recommendation n° 7: Supervisors should ensure that mortgage originators adopt minimum underwriting standards that focus on an accurate assessment of each borrower's capacity to repay the obligation in a reasonable period of time. The minimum standards adopted should be published and maintained in a manner accessible to all interested parties.

Measuring a borrower's ability and willingness to repay:

Standards should incorporate requirements consistent with the following basic principles, with guidelines and limits adjusted to reflect the idiosyncrasies of the supervisors' respective markets and regulatory framework.

Effective verification of income and financial information. Capacity measurements, such as debt-to-income ratios, are only as good as the accuracy and reasonableness of the inputs. That is, the efficacy of debt-to-income ratios and other capacity measures is dependent on stringent guidelines for verifying a borrower's income and employment, debt, and other financial qualifications for repaying a mortgage. When lenders allow borrowers to claim unsubstantiated financial information, or do not require such information, they undermine underwriting policies and introduce additional credit risk as well as expose themselves to fraud. Supervisors should therefore generally require lenders to verify information submitted for mortgage qualification. There also should be penalties for borrowers and other originators who misrepresent such information.

¹² When this report refers to standards, the word is used interchangeably to mean practices, as in some jurisdictions they are not meant to be compulsory to each and every mortgage underwritten in each jurisdiction. The goal is to ensure that the majority of mortgages underwritten per institution and for the system as a whole follow sound underwriting practices.

¹³ As outlined in one of the recommendations regarding securitisation contained in the IOSCO report on unregulated markets and products, lenders that pursue an "originate to distribute" model could be required to retain a portion of the credit risk. This ongoing ownership interest may act as a deterrent to lax underwriting. However, such measures may also create a number of issues and undue complexity when employed with respect to structured finance.

Reasonable debt service coverage. One of the most fundamental components of prudent underwriting for any product that relies on income to service the debt is an accurate assessment of the adequacy of a consumer's income, taking into account all debt commitments¹⁴. These assessments and calculations should accurately capture all debt payments, and any exclusions should be well controlled. The assessment also should ensure sufficient discretionary income to meet recurring obligations and living expenses. Supervisors should adopt appropriate standards to ensure reasonable debt-to-income coverage for mortgages. As a secondary capacity test, supervisors should consider appropriate standards regarding income-to-loan amount (eg loan amount should generally not exceed a particular multiple of annual earnings).

Realistic qualifying mortgage payments. At least in the United States, there was a proliferation of mortgage products with lower monthly payments for an initial period that were to be offset by higher monthly payments later (eg "teaser rate" mortgages, "2/28" adjustable rate mortgages, payment option mortgages). In some cases, the initial monthly payments were much lower than the payments scheduled for later. Many lenders determined whether a borrower qualified for a mortgage by calculating the debt-to-income ratio using only the reduced initial monthly payment, without taking into account the increase in that payment that would occur later. When house prices stopped appreciating, and then declined, borrowers could no longer refinance loans and very often could not afford the mortgage payment once it reset to a higher rate. To address this problem, underwriting standards should require that the analysis of a borrower's repayment capacity be based on a mortgage payment amount sufficient to repay the debt by the final maturity of the loan at the fully indexed rate, assuming a fully amortising repayment schedule.¹⁵ Any potential for negative amortisation should be included in the total loan amount used in the calculation.

Appropriate loan-to-value ratios. Supervisors should adopt appropriate standards for loan-to-value (LTV) ratios. Equity requirements should address loan underwriting in the form of both minimum down payments¹⁶ and caps on subsequent equity extraction through cash-out refinancing and other types of home equity borrowing. Meaningful initial down-payment requirements help validate borrower capacity as well as ensure necessary commitment to the obligation. Equity extraction limitations contribute to housing market stability, deter irresponsible financial behaviour that puts homes at risk, and promote savings through equity build.¹⁷ They effectively limit

¹⁴ Well-used capacity measures include debt-to-income (DTI), which measures annual debt service requirements as a percentage of gross annual income, along with loan-to-income (LTI), also referred to as payment-to-income (PTI), which effectively shows the monthly payment amount for the loan at hand as a percentage of monthly income. LTI may be used in conjunction with DTI, but it is not an appropriate substitute for DTI.

¹⁵ The "fully indexed, fully amortising" concept is described in full in the 2006 US financial regulatory report titled "Interagency Guidance on Nontraditional Mortgage Product Risks." Basically, a fully indexed rate is the index rate prevailing at origination plus the margin that applies after the expiration of any introductory interest rate. The fully amortising payment schedule is based on the term of the loan, considering any borrower option to extend that period.

¹⁶ The minimum down payment required should be based on borrower-provided cash to the transaction. Because the intent is to ensure borrower commitment to the transaction, the measure excludes down payment assistance provided through gifts, loans, etc.

¹⁷ While it might be argued that supervisors are not responsible for protecting borrowers from themselves or promoting such savings, to ignore this important aspect would be irresponsible from a public policy standpoint.

the fallout associated with unfettered “monetization” of the equity gained during periods of rapid home price appreciation, especially since that appreciation may not prove sustainable. However, while LTV limits help control the lender’s loss exposure upon default, they should not be relied on exclusively because they are not a substitute for ensuring the paying capacity of the borrower.

Effective appraisal management. The LTV measure relies on sound real estate values. If lenders assign unsubstantiated values to mortgage collateral, the effectiveness of LTV thresholds or minimum down payments is significantly diminished. Therefore, supervisors should ensure the adoption of and adherence to sound appraisal/valuation management guidelines, including the necessary level of independence.

No reliance on house appreciation. Lenders should not consider future house price appreciation as a factor in determining the ability of a borrower to repay a mortgage.

Other factors important to an effective underwriting program:

The following are not substitutes for sound underwriting practices but should be taken into consideration when determining the soundness of an underwriting program.

Mortgage insurance. Mortgage insurance provides additional financing flexibility for lenders and consumers, and supervisors should consider how to use such coverage effectively in conjunction with LTV requirements to meet housing goals and needs in their respective markets. Supervisors should explore both public and private options (including creditworthiness and reserve requirements), and should take steps to require adequate mortgage insurance in instances of high LTV lending (eg greater than 80 percent LTV).

Recourse. Individual financial responsibility is critical to ensuring the smooth functioning of the mortgage market for all participants. Consequently, mortgage loans should be backed by full recourse to the borrower.

Recommendation n° 8: Policymakers should ensure that different types of mortgage providers, whether or not currently regulated, are subject to consistent mortgage underwriting standards, and consistent regulatory oversight and enforcement to implement such standards.

The goal is to ensure that similar products and activities are subject to consistent regulation, standards, and examination, regardless of where conducted.¹⁸ The role of mortgage participants should be clear, and they should be subject to appropriate and consistent levels of regulatory oversight and enforcement. Any framework

For many, home equity is by far the most significant asset going into retirement, so it is important to promote and preserve this asset.

¹⁸ While striving for a level of underwriting consistency and uniformity, supervisors should assess existing and new products and market needs on an ongoing basis. It is not unreasonable to expect that they may consider banning certain products or imposing limits and/or more stringent capital requirements on products that do not adhere to established standards. However, the benefits of explicit bans or limits need to be weighed against potential costs and unintended consequences. For example, product bans could control the level of riskier credit from a macroprudential standpoint but also could restrict access to credit for certain classes of borrowers, reduce innovation, and result in a de facto regulatory allocation of credit.

should include provisions for ongoing and effective communication among supervisors. The lines of supervision must be clearly drawn and effectively enforced for all market participants.

The Joint Forum recognises that this recommendation presents many challenges because it requires changes to some countries' legal and supervisory regimes. Nevertheless, the importance of the goal of consistent underwriting standards makes these changes worthwhile.

Recommendation n° 9: National policymakers should establish appropriate public disclosure of market-wide mortgage underwriting practices. In addition, the Financial Stability Board should consider establishing a process to review sound underwriting practices and the results should be disclosed.

While there are efforts under way in some parts of the world to harmonise mortgage lending practices across borders, this is a longer term challenge given the differences in mortgage markets. However, these individual markets can be evaluated to determine the overall adequacy of underwriting practices and mortgage market trends.

To address this recommendation and to have an international effect, the following should occur:

- Countries should have adequate public disclosure that includes dissemination of information concerning the health of their mortgage market, including underwriting practices and market trends, encompassing all mortgage market participants.
- The Financial Stability Board should consider establishing a process to periodically review countries against the sound mortgage underwriting practices noted in recommendation 7, and the results should be made publicly available. The goal is to evaluate the soundness of mortgage practices overall rather than to evaluate individual components. For example, a country with high LTV limits may mitigate the risk through more stringent debt-to-income or other capacity limits. The review process would consider the level of risk posed by the underwriting criteria as a whole rather than focus solely on the high LTV limits. The review may also consider underwriting in light of macroeconomic conditions, including evolution of housing prices, interest rate levels, total mortgage debt to gross domestic product, and reliance on various funding mechanisms.
- The Financial Stability Board should consider monitoring the health of the mortgage market (eg country volumes, funding needs, bond performance) to highlight emerging trends and to consider recommending adjustments or changes as warranted.

D. Broadening the scope of regulation to hedge fund activities

Hedge funds have been clearly identified as one of the most significant group of institutions in the “shadow” banking system, notably by the G-20. Measures have already been taken or are under discussion to supplement the traditional indirect approach to regulate hedge funds (ie where supervisors regulate other entities' interactions with hedge funds). These measures would increase direct regulation of hedge funds or their managers and may help to mitigate their risks.

In June 2009, IOSCO made a significant contribution at the international level regarding regulation of hedge funds with the publication of its report titled *Hedge Fund Oversight: Final Report*. The following Joint Forum recommendations and policy options fully take into account IOSCO's work to avoid duplication of efforts and to leverage analysis already conducted. The Joint Forum fully supports the six high-level principles on the regulation of hedge funds and/or hedge fund managers/advisers (or hedge fund operators) as set forth by IOSCO.

Prime brokers and banks that provide financing and other services to hedge funds are subject to both conduct of business and prudential regulations in all jurisdictions. This regulation includes standards on risk management of counterparty risk exposures. In fact, as mentioned, the prevailing indirect approach to addressing risks posed by hedge funds has, thus far, been through regulation of relevant counterparties.¹⁹ Therefore, although counterparties and investors can be a transmission mechanism for financial distress, the Joint Forum in this report focuses on existing gaps in the direct prudential regulation of hedge fund operators and relevant hedge funds.

Because most of the concerns relating to hedge fund activities are shared with other categories of market participants, such as similar types of less-regulated investment vehicles and/or their operators, the Joint Forum's recommendations and policy options have a functional tenor. They apply to all pools of capital and to managers/advisers who engage in activities posing risks substantially similar to hedge funds, regardless of how they are denominated or qualified domestically.

This approach is aimed at encompassing existing differences in the definition of hedge funds at the national level, or even the lack of definition, and at avoiding regulatory arbitrage.

Recommendation n° 10: Supervisors should introduce and/or strengthen (in view of the risk posed) appropriate and proportionate minimum risk management regulatory standards for hedge fund operators. If necessary, supervisors should be given the authority to do so.

The minimum risk management regulatory standards should be scaled to the size and complexity of the funds ; in particular, supervisors should strongly consider adopting the following standards:

Maintenance of an appropriate risk management policy. Hedge fund operators should be required to develop and maintain appropriate, proportionate, and documented risk management policies to identify, measure, monitor, and manage all risks stemming from the activity of each managed hedge fund, consistent with its intended risk profile. Appropriate reporting lines should be established to ensure frequent and timely reporting to senior management about the actual level of risks.

Establishment of an effective risk management function. Risk management policies and procedures should be implemented through the establishment of an effective risk management function within the hedge fund operator, appropriate to their respective risk profile. The risk management function should be hierarchically and functionally independent from the hedge fund management functions. Where the establishment of a separate risk management function would be

¹⁹ In 2000, the Financial Stability Forum (FSF) made recommendations for regulators on how to treat "Highly Leveraged Institutions" (ie hedge funds). -The FSF endorsed at that time an indirect approach to hedge fund regulation. See on this topic the analysis developed in the IOSCO's March 2009 report titled "Hedge Funds Oversight."

disproportionate to the nature, scale, or complexity of the hedge fund operator's activity, the hedge fund operator should establish appropriate safeguards against conflicts of interest and be able to demonstrate that the risk management process is consistently effective.

Management of liquidity risk and stress tests. The operator should be required, for each hedge fund it manages, to employ appropriate liquidity risk management systems. This is to ensure that the liquidity profile of the hedge fund's investments complies with its obligations and the redemption policy that has been disclosed to its investors, including possible gates and suspensions. The hedge fund operator should be required to conduct stress tests to assess and monitor the liquidity risk (and possibly other risks) under normal and exceptional circumstances for consistency with the funds' liquidity profile.

Conditions for delegation of activities relating to risk management. When a hedge fund operator delegates the performance of risk management to a third party, the hedge fund operator should remain fully responsible for the selection of the third party and for the proper performance of the risk management activity. The delegation should not prevent effective supervision by the relevant authorities of the adequacy of the risk management process.

Need for adequate and effective risk measurement methods and techniques. Hedge fund operators should be required to adopt adequate and effective arrangements and techniques for risk measurement to ensure that, for each hedge fund they manage, the risks of the positions and their contribution to the overall risk profile are accurately measured to ensure consistency with the fund's risk profile. These methods should include both quantitative measures and qualitative techniques aimed at measuring the effects of market risk, credit risk (including issuer risk and counterparty risk) and liquidity risk.

Recommendation n° 11: Supervisors should impose reporting requirements on hedge fund operators to identify current or potential sources of systemic risk and to enable cross-sectoral monitoring of systemically important hedge funds. If necessary, supervisors should be given the authority to do so.

Meaningful information should be reported to supervisors to enable them to monitor, evaluate, and exchange information on systemic risks on a cross-sectoral basis. To this end, the Joint Forum supports the IOSCO initiatives to develop appropriate reporting requirements.

Recommendation n° 12: In view of the operational risks posed and in order to allow for orderly winding down of a fund operator in the event of bankruptcy, supervisors should impose minimum initial and ongoing capital requirements on operators of systemically relevant hedge funds. If necessary, supervisors should be given the authority to do so.

There should be initial and ongoing capital requirements for relevant hedge fund operators as a condition for registration and ongoing supervision. Such requirements could be designed to absorb losses arising from operational failures and may allow for orderly winding down of a fund operator in the event of bankruptcy.

The level of minimum capital standards should be enough to allow an orderly liquidation of or transfer of funds managed by a failing hedge fund operator and take account of the obligations of the operator.

Operators should be subject to timely regular reporting to their supervisors in order to allow supervisors to monitor on an on-going basis the capital adequacy.

Options to be considered for systemically relevant pools of assets

In addition to the prior recommendations, other options set forth below may help mitigate any risks posed by hedge funds and comparable pools of assets. The Joint Forum has not reached a consensus on the following policy options but has nevertheless decided to include them in the interest of providing policymakers with regulatory actions that are supported by some but not all Joint Forum members.

The following options are aimed at addressing the macroprudential risks, particularly procyclicality and leverage-related risks, posed by a pool of assets itself (as opposed to its operator), where the size or other characteristics of the pool are deemed to make it systemically relevant. The identification of the criteria to assess the systemic importance of a pool of assets, such as a hedge fund, should take into account the work done by the International Monetary Fund, the Bank for International Settlements, and the Financial Stability Board.

Haircuts and margin requirements: To mitigate counterparty credit risk, supervisors could require hedge funds to provide collateral in excess of the value of the funds borrowed. This option would limit leverage only if generally imposed by all counterparties, since otherwise the collateral for one counterparty could be financed by borrowing from the other.

Imposing closed-end form/redemption gates: To limit excessive funding liquidity risks, supervisors could require hedge funds that significantly invest in illiquid assets (eg more than a certain percentage of their portfolio) be set up as closed-end funds or to adopt adequate gating structures in order to address liquidity mismatches.

Risk-independent leverage requirements: To avoid excessive risk-taking, supervisors could impose direct and simple caps on leverage, including from exposures arising from derivatives and/or financing.

Risk-based capital or leverage requirements: Supervisors could limit leverage, including from exposures arising from derivatives and/or financing, specified as a function of risk weighted assets, so that limits become more stringent when assets are riskier.

Risk management procedures for the timely delivery of financial instruments. Short selling is a legitimate trading technique. But hedge fund operators that engage in short selling should be required to ensure that each hedge fund they manage, irrespective of the hedge fund's domicile and legal nature, is organised and operated to comply with applicable regulatory requirements to avoid market disruption. To promote this goal, hedge fund operators engaging in short selling should be required to adopt procedures that ensure timely delivery of the short sold financial instruments (eg by adhering to a master agreement that governs borrowing/lending of securities).

Potential advantages of options: These options might be used as tools for imposing limits to the level of leverage and preventing excessive risk taking by hedge funds. This approach would promote a more level playing field between hedge funds and other more traditional regulated market participants that pose similar prudential risks, for example, operators of other types of collective investment undertakings and bank trading desks.

Potential disadvantages of options: Setting ex ante leverage or liquidity caps or leverage requirements could be an extremely difficult and complex task, considering the different strategies and activities of hedge funds. The risk is that setting arbitrary limits could cause market distortion and would almost certainly be gamed. Imposition of limits beyond those essential to mitigate excessive systemic risk would unduly limit investor choice. Outright regulation might also be expected to increase moral hazard or shift the activity to any jurisdiction that imposes less hedge fund regulation. In this context, international regulatory and supervisory convergence remains critical.

E. Strengthening regulatory oversight of credit risk transfer products

In light of the role that inadequate management of risks associated with credit risk transfer products played in the crisis, supervisors should consider various actions - on either a national or international basis - to address these risks. This report focuses on two prominent products for transferring credit risk: credit default swaps (CDS) and financial guarantee (FG) insurance.

While CDS and FG insurance share some similar characteristics (notably, they both transfer credit risk but give rise to counterparty credit risk, operational risk, and risks related to a lack of transparency, among others), there are significant differences between the two that merit unique consideration. As the guiding principles presented elsewhere in this report suggest, the supervisory and regulatory requirements applied to activities that appear to have similar economic substance (eg transfer of credit risk via CDS and FG insurance) should adequately reflect any similarities and differences. Consequently, some recommendations for addressing gaps in oversight apply to both CDS and FG insurance, while others are more narrowly focused on one or the other.

Many of the recommendations and options presented below have been discussed in other international fora or in jurisdictions. They are reiterated in this report because the Joint Forum seeks to provide a broad range of recommendations and options for addressing gaps in oversight. Moreover, the Joint Forum welcomes efforts that have been undertaken since the onset of the crisis and supports further international work to address these gaps in an appropriate manner. Some of the recommendations and options below reiterate, for example, the detailed recommendations in IOSCO's September 2009 report on *Unregulated Financial Markets and Products* in the areas of risk management, transparency, and market infrastructure.

In the context of promoting more stable and transparent markets, reducing systemic risk, and restoring confidence, several central counterparties (CCP) for trading over-the-counter derivatives - such as CDS - have been established and have begun operation; capital requirements for the use of such instruments have been increased for banking organisations; transparency has been enhanced; and steps have been taken to reduce operational and settlement risks.

Recommendation n° 13: Supervisors should encourage or require greater transparency for both CDS and FG insurance.

Supervisors should continue to support initiatives to store CDS trade data in repositories (eg the Depository Trust & Clearing Corporation's Trade Information Warehouse).

Supervisors should encourage or require firm-level public disclosures (to provide transparency for investors) and/or enhanced regulatory reporting (to provide transparency for supervisors). Such disclosures could include, for example, risk characteristics of instruments, risk exposures of market participants, valuation

methods and outcomes, and, off-balance sheet exposures including investments with unregulated entities and contractual triggers that may lead to the posting of collateral, claims payment, or contract dissolution.

Supervisors should promote, in the context of wider liquidity considerations, the appropriate and timely disclosure of CDS data relating to price, volume, and open interest by market participants, electronic trading platforms, exchanges, data providers, and data warehouses.

With this greater transparency, supervisors should, to the extent feasible, monitor concentrations that could pose systemic risks. Such disclosure should be calibrated to avoid detrimental impact on market liquidity.

Supervisors should develop tools to conduct enhanced surveillance of CDS markets to detect and deter market misconduct.

Recommendation n° 14: Supervisors should continue to work together closely to foster information-sharing and regulatory cooperation, across sectors and jurisdictions, regarding CDS market information and regulatory issues. Supervisors should cooperate and exchange information on the potential cross-sectoral and systemic risks raised by stress and scenario testing of FG insurers.

Recommendation n° 15: Supervisors should continue to review prudential requirements for CDS and FG insurance and take action where needed. This includes:

Setting appropriate regulatory capital requirements for CDS transactions.²⁰

Establishing minimum capital, solvency, reserving, and liquidity requirements for FG insurers (including requirements for the use and actuarial approval of internal models) with appropriate levels of surplus to policyholders factored into these requirements.

Monitoring the exposure and concentration of risk by FG insurers with reinsurers.

Requiring firms to undertake aggregated risk analysis and risk management, including counterparty risk arising from exposures via CDS or FG insurance, as well as the potential effect of special-purpose entities and other external vehicles that could affect a FG insurer, so the insurer is not compromised by the failure of such vehicles.

Applying robust counterparty risk management arrangements, including requirements for all important counterparties to post collateral to secure their obligations.

Ensuring that the corporate governance process of an FG insurer is commensurate with its risks.

Recommendation n° 16: Supervisors should continue to promote current international and domestic efforts²¹ to strengthen market infrastructure, such as supervised/regulated CCPs

²⁰ The BCBS in July 2009, for example, issued revisions to the Basel II capital framework.

²¹ Initiatives are under way in a number of jurisdictions to achieve the objectives noted here.

and/or exchanges. This should include encouraging greater standardisation of CDS contracts to facilitate more organised trading and CCP clearing, more clearing through central counterparties for clearing eligible contracts, and possibly an evolution to more exchange trading. There should also be enhanced dialogue among supervisors of CCPs regarding applicable standards and oversight mechanisms for CCPs.²²

Recommendation n° 17: Policymakers should clarify the position of FG insurance in insurance regulation, if this is not already the case, so it is clear that the provision of FG insurance is captured by regulation and is subject to supervision.

Options to be considered

Among the more specific options that supervisors are exploring or that may be explored in the future, are:

- Ring-fencing and protecting from the potential losses of other business lines the traditional business underwritten by FG insurers (eg wrapping municipal bonds) so it is separately reserved and capitalised.
- Prohibiting or limiting exposure by FG insurers to pools of asset-backed securities that are partly or wholly composed of other pools.
- Requiring FG insurers to set maximum limits for exposure to any one risk or group of risks, such as a particular counterparty or category of obligation, by reference either to the aggregate exposure or to capital levels;
- Limiting the notional value of aggregate exposures, either by counterparty or by risk factor, in relation to levels of capital or by other appropriate measure.

²² In this regard, for example, IOSCO and the Committee on Payment and Settlement Systems (CPSS) established a joint task force to review the application of the 2004 CPSS-IOSCO *Recommendations for Central Counterparties* to clearing arrangements for OTC derivatives. The recommendations, which were developed by the CPSS and the IOSCO Technical Committee, set forth standards for risk management of a central counterparty.

Chapter 1

Key differences in regulation across the banking, securities, and insurance sectors

I. Introduction

International financial regulation is sector-specific as evidenced by the independent development of core principles and standards for the banking, securities, and insurance sectors. Indeed, the BCBS, IOSCO, IAIS have each formulated core principles for financial supervision in their respective sectors.

To better understand the differentiated nature of existing regulation in the three sectors, the Joint Forum primarily focused on the key differences in the core principles in each sector and drew upon some of its previous works and analyses. This approach was chosen because the core principles reflect characteristics of the respective sectors and the nature of the supervised financial institutions, products, and markets. Each sector's core principles provide an overview of the key elements of the supervisory system in that sector and help explain the key objectives of supervision.

Despite exposures to common risk factors and growing interactions among the sectors, the Joint Forum's comparison of core principles found that significant differences exist in the nature of international financial regulation among the banking, securities, and insurance sectors. The Joint Forum found:

- Some of these differences are warranted as they reflect intrinsic characteristics of the three financial sectors, including the scope of their respective responsibilities. This type of difference is particularly evident in the IOSCO core principles, as they not only address the supervision of securities firms but also markets, collective investment schemes, and disclosure by issuers.
- Other differences in the principles governing the supervision of banking, securities, and insurance firms also are warranted, as they reflect intrinsic differences in the core businesses conducted by firms in each financial sector. For example, technical provisions play a role in the insurance prudential framework, but not for banking and securities.
- Some differences and gaps do not have any objective justification and should be addressed.

Differences in regulation across sectors tend to create supervisory challenges as well as opportunities for regulatory arbitrage. Moreover, as evidenced by the financial crisis, problems arising in any of the three sectors can have an impact on overall financial stability. Addressing these key differences in international regulation across sectors is necessary in order to ensure a more stable financial system in the long run. Greater consistency at a high minimum standard would thus contribute to the reduction of systemic risk and to the overall stability of the global financial system.

Since 2000, the International Monetary Fund and the World Bank have been assessing compliance with international regulatory and supervisory standards (eg core principles) as part of the Financial Sector Assessment Program. In 2009, the Financial Stability Board created the Standing Committee on Standards Implementation to conduct peer reviews of countries' compliance with international regulatory and supervisory standards. It is therefore important to keep the core principles updated to take into account contemporary developments.

II. Background and approach adopted by the Joint Forum

In 2001, the Joint Forum performed a comparative analysis of the core principles in the banking, securities, and insurance sectors and published *Core Principles, Cross-Sectoral Comparison*. The objective was to identify common principles and understand differences.²³ The Joint Forum used an issues-based approach for this cross-sectoral comparison because the structure and format of the core principles in each sector are quite different.

This review identified:

- Substantial commonalities across sectors despite the use of different formats, content and language.
- Intrinsic differences reflecting the different scope of supervisory responsibilities in the sectors or differences in the underlying businesses conducted by firms in each sector that justify nonhomogeneous regulation.
- Significant differences in regulation across sectors that do not reflect any specific intrinsic characteristic and do not have any objective justification.

Although each sector revised and reissued its core principles since the 2001 review,²⁴ differences remain. In light of the financial crisis, the Joint Forum reassessed the differences to determine whether they create regulatory gaps that amplify risk to the overall financial system. The Joint Forum reviewed its other 2001 report, *Risk Management Practices and Regulatory Capital, Cross-Sectoral Comparison*, which confirmed some of the prudential issues identified in its 2001 core principles comparison.

While the recommendations in this chapter focus on key differences, annex 3 summarises all changes in core principles since 2001. Annex 4 summarises key developments regarding differences in prudential frameworks across sectors.

III. Key issues and gaps

Commonalities in regulation across the sectors

The 2001 review of the core principles revealed substantial commonalities across sectors, despite the use of different formats, content, and language. Differences have decreased over time, reflecting the converging nature of the businesses conducted in the three sectors.

²³ *Core Principles - Cross-Sector Comparison*, Joint Forum, 2001.

²⁴ See the latest versions of the core principles through the following links:

- BCBS's Core Principles for Effective Banking Supervision at <http://www.bis.org/publ/bcbs129.htm>,
- IOSCO's Objectives and Principles of Securities Regulation at <https://www.iosco.org/library/pubdocs/pdf/IOSCOPD265.pdf>, and
- IAIS's Insurance Core Principles and Methodology at http://www.iaisweb.org/__temp/Insurance_core_principles_and_methodology.pdf.

The Joint Forum found these commonalities:

- **Preconditions:** All sectors see sound and sustainable macroeconomic policies and well-developed public infrastructure as preconditions to effective supervision.
- **The supervisory system:** All sectors consider customer protection and systemic stability as objectives of the supervisory system. All sectors also recognise the need for operational independence and adequate resources for supervisors, and have the ability to apply supervisory sanctions.
- **The supervised entity:** All sectors require supervisors to have a regime for licensing entities and vetting of key individuals and encourage sound corporate governance within licensed entities.
- **Ongoing supervision:** All sectors require an effective system for monitoring, on-site inspection, and cooperation with other supervisors.
- **Prudential standards:** All core principles describe criteria for capital adequacy, internal controls, large exposure limits, accounting policies and procedures, and risk management processes.
- **Markets and customers:** All core principles take some supervisory responsibility for the prevention of financial crime.

Intrinsic differences in regulation across financial sectors

The 2001 Joint Forum core principles comparison report noted that some of the existing differences are warranted because they reflect, in part, intrinsic characteristics of the three sectors or of the firms supervised within each sector. The 2001 report found:

- **Differences in the scope of responsibilities of supervisors in each sector,** There are many unique aspects in securities regulation reflecting the broader scope of securities supervisors. The IOSCO core principles encompass the regulation and supervision of securities firms and that of markets, exchanges, collective investment schemes, and disclosure by issuers. Principles that aim at preserving market integrity are only referred to in the IOSCO core principles. In contrast, banking and insurance supervisors generally oversee financial firms but not the markets themselves. The core principles in the banking and insurance sectors describe only the framework needed to supervise financial institutions.
- **Differences in the nature of the underlying business activities conducted by firms within the sectors.** This logically explains and justifies some fundamental differences in the nature of their regulation. One example is the key role assigned to technical provisions by insurance regulation but not by banking and securities regulation. Insurance companies offer protection against uncertain future events. As a consequence, much regulatory and supervisory effort in the insurance sector is directed toward the valuation of technical provisions as they are estimations of the cost of future liabilities. Misestimation of technical provisions can affect pricing decisions and the overall solvency of the insurance company.

Differences that can contribute to regulatory gaps

Because financial supervision and regulation is sector-specific, differences have traditionally existed with respect to the relative importance that supervisors place on prudential or market conduct regulation across the three sectors. As the Joint Forum found previously,²⁵ some of these differences are not readily explained by intrinsic differences among the sectors and have no other apparent objective justification. These differences pose challenges to effective supervision and create opportunities for regulatory arbitrage among the sectors, despite the increasingly converging nature of the activities conducted within these sectors.

In its 2001 cross-sector comparison, the Joint Forum identified key prudential differences that could not be readily characterized as intrinsic differences among the sectors. These differences related to preconditions, cooperation and information sharing, safeguarding of client assets, group-wide supervision, and prudential standards for capital adequacy.

For this report, the Joint Forum focused on two of these differences - group-wide supervision and prudential standards for capital adequacy - because these differences can lead to supervisory gaps that can amplify systemic risk. This report does not address all of the differences in core principles and prudential standards that exist between the sectors. The Joint Forum believes that more work is needed to identify and assess differences that can lead to inconsistent supervisory approaches or regulatory gaps. Strengthening core principles and prudential standards, with the aim of establishing consistently high standards of comparable quality across sectors, could reduce opportunities for regulatory arbitrage and contribute toward a more stable financial system.

It is also important to consider how supervisors implement key principles and supervisory frameworks. Differences at the implementation level may impede fair, consistent, and effective supervision and assessment of the financial sector in general. The implementation of a supervisory framework can be influenced by a variety of factors, including differences in the style or culture of supervision across sectors and jurisdictions. Although implementation was beyond the scope of this review, the Joint Forum emphasises that partial or inconsistent implementation of even near-identical prudential standards of regulation and supervision can result in significant differences in practice.

Strengthening the emphasis on financial system stability in the core principles

The formulation of each sector's core principles should start with the observation that financial supervision and regulation aims, in part, to maintain financial stability by reducing the systemic risk posed by financial institutions, markets and products. The Joint Forum reviewed the core principles to determine to what extent maintaining financial stability and reducing systemic risk were taken into account in each sector.²⁶

²⁵ See reports issued by the Joint Forum in November 2001: *Core Principles, Cross-Sectoral Comparison and Risk Management Practices and Regulatory Capital, Cross-Sectoral Comparison*. In a 2006 report, the Joint Forum found that many of the existing cross-sectoral differences are rooted in what some have been described as differences in the "culture" of supervision. See *Regulatory and market differences: issues and observations* (Joint Forum, 2006).

²⁶ As part of this review, the Joint Forum analysed the objectives of financial regulation from an economic standpoint. Annex 2 presents this analysis.

Although the core principles indicate that supervisors from each sector consider the reduction of systemic risk to be a key objective, differences exist with respect to how this objective is made explicit ²⁷

- The 2006 BCBS principles state that supervisors should “develop and maintain a thorough understanding of the banking system as a whole” and the “stability of the banking system.” Further, they state that “a high degree of compliance with the principles should foster overall financial system stability.”
- The 2008 IOSCO core principles state that “the three core objectives of securities regulation are (1) the protection of investors, (2) ensuring that markets are fair, efficient, and transparent, and (3) the reduction of systemic risk.” IOSCO further notes that there may be significant overlap in the policies that securities regulators adopt to achieve each of these objectives. For example, regulations that help to ensure fair, efficient, and transparent markets also help to reduce systemic risk.
- The 2003 IAIS core principles state that “the key objectives of supervision promote the maintenance of efficient, fair, safe, and stable insurance markets for the benefit and protection of policyholders.” This implies that the main goal of insurance supervision is to ensure that the interests of the insured are adequately safeguarded and the laws applicable to the operation of insurance business are observed. The principles recognise the financial convergence of the sectors, and state that “supervisors and regulators should understand and address financial and systemic stability concerns arising from the insurance sector as they emerge.” Further, the 2008 IAIS by-laws explicitly state that “the objectives of the Association are... to contribute to global financial stability.”

The relevance of financial stability was made apparent by the financial crisis, as noted by the G-20 in its report *Enhancing Sound Regulation and Strengthening Transparency*.

“As a supplement to sound micro-prudential and market integrity regulation, national financial regulatory frameworks should be reinforced with a macro-prudential overlay that promotes a system-wide approach to financial regulation and oversight and mitigates the build-up of excess risks across the system. In most jurisdictions, this will require improved coordination mechanisms between various financial authorities, mandates for all financial authorities to take account of financial system stability, and effective tools to address systemic risks.”

Each set of core principles draws a link between financial stability and systemic risk. The principles, however, do not expand on what is meant by systemic risk and they do not make clear to what extent systemic risk and financial stability play a role in the development of regulatory frameworks and supervisory policies in each sector.

The Joint Forum concurs with the G-20 recommendation and encourages the BCBS, IOSCO and IAIS to review and revise, as necessary, their core principles to ensure that they appropriately focus on a coordinated approach to reducing systemic risk and maintaining the overall stability of the financial system.

²⁷ All three sectors consider customer protection and systemic stability as objectives of the supervisory system. However, BCBS places greater emphasis on systemic stability and the IAIS on customer (ie, policyholder) protection. IOSCO emphasises equally its three objectives of investor protection, fair, transparent and efficient markets, and reduction of systemic risk.

Reducing key prudential differences across financial sectors

This report analyses two key differences identified in 2001 that can lead to regulatory gaps and contribute to systemic risk. They are:

- Differences in group-wide supervision, and
- Differences across and within sectors in applying capital standards.

These two prudential issues were explored in more detail in the 2001 Joint Forum report *Risk Management Practices and Regulatory Capital, Cross-sectoral Comparison*. Annex 4 of this report summarises the main differences identified in that report, as well as the key developments in those areas since 2001.

Differences in group-wide supervision

Effective group-wide supervision better enables supervisors to capture and assess risks within a financial group irrespective of the sector and entity, regulated or unregulated, in which those risks arise. In 2001, the Joint Forum noted that the principles of group-wide supervision varied dramatically in the three sectors and were applied in different ways. For example, only the BCBS core principles emphasised the importance of group-wide supervision. The 2001 report also noted that group-wide supervision was not generally required in the insurance sector and that the IOSCO core principles did not prescribe consolidated supervision.²⁸

It is important to recognise that, since this comparative analysis was performed, the IAIS in 2003 introduced, among other things, the requirement that the supervision of insurers be conducted on both an individual and a group-wide basis.

Several aspects regarding group-wide supervision indicate not only actual inconsistencies in application of and emphasis on the principle across the financial sectors. They also raise the issue of the supervisory challenges related to assessing risks and activities conducted outside the perimeter of regulation. For example, the existence of unregulated entities within financial group structures pose significant challenges to the effectiveness of supervision (such as with respect to the treatment of unregulated holding companies).

Since the 2001 report was issued, developments in the financial markets have highlighted the need for effective group-wide supervision irrespective of whether groups conduct

²⁸ The 2001 report noted that supervision of the banking group on a consolidated basis goes beyond accounting consolidation. It implies that there is a group-wide approach to supervision whereby all risks run by a banking group are taken into account, wherever they are booked. The report emphasised that both accounting consolidation and consolidated supervision are key aspects of the supervision of banking groups.

The report noted, however, that, according to the IAIS core principles, insurance supervisors should have the ability to impose reporting requirements on a consolidated basis. The 2001 report further explained that insurance supervisor take a group-wide approach by requiring that capital requirements be structured so as to prevent multiple gearing and that the need for taking this group-wide view was also recognised in the core principles dealing with cross-border establishments.

The report also explained that securities supervisors have diverse ways to obtain information about the activities of a broker-dealer and its affiliates. The IOSCO core principles expressly state that supervisors need to obtain information about unlicensed and off-balance sheet affiliates of supervised entities. The IOSCO core principles also state the importance of enhancing cooperation with authorities responsible for supervising other parts of the group and establishing measures to safeguard regulatory capital within the individual firms.

banking, securities, or insurance activities or are well-diversified financial conglomerates. Furthermore, lessons learned from the financial crisis have highlighted the key importance of supervisors having a full view of all risks of and entities within financial groups.

The complex challenges relating to group-wide supervision, including the supervisory gaps arising from the existence of unregulated entities or unregulated activities within financial groups, are explored and discussed in greater detail in Chapter 2 of this report, together with associated recommendations for needed improvements.

Differences - across and within sectors - in applying capital standards

The Joint Forum's 2001 core principles comparison noted that the core principles of all three sectors specify that supervisors should set capital requirements for supervised entities. However, differences in capital frameworks exist in two respects.

First, differences in capital requirements exist *within* sectors, resulting in different rules being applied across jurisdictions for entities undertaking similar activities. International capital standards are expected to reduce the competitive inequalities and pressures across countries and thereby the possibilities for regulatory arbitrage. The 2001 report noted that the BCBS has established an international capital standard (the Basel Accord). IOSCO and IAIS, by contrast, expect supervisors to promulgate capital requirements, but they do not have a single international capital framework for their respective sectors.²⁹ Only the BCBS core principles incorporate the requirement for a uniform risk-based capital standard to reduce competitive inequalities across countries and to safeguard financial stability. The IAIS has developed a set of high-level standards and guidance papers on solvency assessment.

Despite developments in prudential regulation since 2001 (eg, Basel II in banking, joint work by the BCBS and IOSCO on risks arising from trading book activities, the development of the Solvency II Directive for insurance in the European Union, the IAIS Cornerstone project), the observations made in 2001 by the Joint Forum with respect to differences in prudential frameworks *within* sectors generally remain the same: a uniform global framework exists only in the banking sector, whereas different frameworks still coexist in the securities and the insurance sectors at the international level.

Second, differences in capital requirements also exist *across* sectors, resulting in similar risks being subject to different capital treatments in each sector. The BCBS and IOSCO core principles expressly state that capital requirements should be risk-based³⁰. The IAIS core

²⁹ There are two main approaches for securities firms: the Net Capital approach, which is used in the US, Canada, Japan, and other non-EU jurisdictions, and the EU Capital Adequacy Directive, based on the Basel Accord Amendment for market risks. There are also two main approaches for insurance companies: the Risk-Based Capital framework, which is used in the US, Canada, Japan, Australia, and other countries, and the index based solvency regime, which is used throughout the EU and in a number of other jurisdictions.

³⁰ The IOSCO principles do not directly use the term "risk-based." They do state, however, state as follows: Capital adequacy standards foster confidence in the financial markets and should be designed to allow a firm to absorb some losses, particularly in the event of large adverse market moves, and to achieve an environment in which a securities firm could wind down its business over a relatively short period without loss to its customers or the customers of other firms and without disrupting the orderly functioning of the financial markets. Capital standards should be designed to provide supervisory authorities with time to intervene to accomplish the objective of orderly wind down... A firm should ensure that it maintains adequate financial resources to meet its business commitments and to withstand the risks to which its business is subject. Risk may result from the activities of unlicensed and off balance sheet affiliates and regulation should consider the need for information about the activities of these affiliates. Further, a capital adequacy test should address the risks faced by securities firms judged by reference to the nature and amount of the business undertaken by the firm.

principles state that insurance supervisors are expected to take into account the size and complexity of insurance companies, in addition to the risks undertaken, in setting capital requirements.

The Joint Forum recognises that more consistency in prudential frameworks for financial firms *across* sectors is desirable due to the increasing exposure of financial groups to similar risk factors and increasing transfer of risks across sectors.³¹ However, as a starting point to achieve more consistency across sectors where needed, such as capital frameworks, it would be necessary to first achieve more convergence of prudential frameworks *within* financial sectors.

IV. Recommendations to reduce key differences in regulation across the banking, securities, and insurance sectors

Financial supervision and regulation is sector-specific, as evidenced by the independent development of core principles and standards for the banking, securities, and insurance sectors. Such principles do not specifically take into account systemic risk or financial system stability in a consistent manner. In addition, differences exist with respect to the relative importance attached to prudential or market conduct regulation by supervisors across the three sectors. Even though the boundaries of activities among the three sectors have become increasingly blurred over time, this sector-specific approach comes at the risk of more differentiated financial supervision among sectors.

The Joint Forum recommends a more coordinated approach among the three sectors.

Recommendation n° 1: The BCBS, IOSCO, and IAIS should review and revise their core principles to ensure that the principles appropriately take into account systemic risk and the overall stability of the financial system. Work should also be carried out to update and make more consistent principles related to market conduct, consumer protection, and prudential requirements.

In the March 2009 report on *Enhancing Sound Regulation and Strengthening Transparency*, the G-20 recommended that, as a supplement to their core mandate, the mandates of all international financial bodies and standard setters (the IASB, BCBS, IOSCO, and IAIS) should take account of financial system stability.

The Joint Forum agrees that maintaining overall financial system stability and reducing systemic risk is a cross-sectoral principle of financial supervision and regulation that should be further developed in each sector's core principles.

The Joint Forum agrees with the G-20 recommendation and encourages BCBS, IOSCO, and IAIS to review and revise, as necessary, their respective core principles to take into account financial system stability. The extent to which concerns over systemic risk and financial stability play a role in the development of supervisory

³¹ For example, credit risk insured (and therefore assumed) by an insurance company to a bank is generally treated in a completely different way in the insurance company (generally through technical provisions based on actuarial calculations on past experience about the probability of default) than if it remains in the bank (through credit risk capital charges).

policies and approaches should be made clearer for each sector, possibly to include an overarching principle addressing overall financial system stability.

Generally, the Joint Forum believes that increasing the consistency of the sectors' core principles will contribute to reducing regulatory gaps and work should also be carried out to strengthen consistency in core principles related to market conduct, consumer protection, and prudential requirements. For example, ensuring that there are adequate principles regarding market conduct and customer protection would be for the benefit of customers and would enhance confidence. This assurance would also help reduce the possibilities for regulatory arbitrage regarding product manufacturing and distribution across sectors.

Recommendation n° 2: International prudential frameworks for minimum capital adequacy should be in place within each sector to reduce regulatory arbitrage across countries and to facilitate the supervision of cross-border groups.

A uniform minimum global capital standard does not exist for the securities and insurance sectors. The BCBS's core principles alone incorporate the requirement for a uniform risk-based capital standard to reduce competitive inequalities across countries and to safeguard financial stability. IOSCO and IAIS expect supervisors to promulgate capital requirements, but they do not have a single global capital standard for their respective sectors.

It is the Joint Forum's view that the lack of a uniform global standard for capital adequacy within each sector can contribute to regulatory arbitrage, competitive inequalities across jurisdictions, and, in some cases, financial system instability. Striving for a single global standard, however, should not result in the lessening of existing prudential standards.

Recommendation n° 3: In addition to making core principles more consistent across sectors, the BCBS, IOSCO, and IAIS should work together to develop common cross-sectoral standards where appropriate so that similar rules and standards are applied to similar activities, thereby reducing opportunities for regulatory arbitrage and contributing to a more stable financial system.

The G-20 noted that, in order to avoid regulatory arbitrage, there is a need for greater consistency in the regulation of similar instruments and of institutions performing similar activities, both within and across borders. The Joint Forum agrees with this need for greater consistency.

Comparable high-quality cross-sectoral standards should be developed with the goal of reducing opportunities for regulatory arbitrage by ensuring, to the extent possible, that similar activities are subject to similar rules and standards.

Recommendations for mortgage origination and credit risk transfer products, as outlined in Chapters 3 and 5 of this report, provide examples of possible cross-sectoral standards. Further work is needed to identify additional instances where similar standards should be applied to similar activities, regardless of the sector in which the activities are conducted.

Chapter 2

Supervision and Regulation of Financial Groups

I. Introduction

Financial groups offer services in banking, insurance, or securities, in various combinations. They often operate across multiple jurisdictions, have multiple interdependencies, and comprise both regulated and unregulated entities. They use an array of legal entities and structures to derive synergies and cost savings, and they take advantage of differences in taxation, supervision, and regulation. These overlaps and linkages blur the traditional supervisory and regulatory boundaries across the three sectors.

While international standards guide the supervision and regulation of financial groups, the combination of blurring distinctions between the sectors, the presence of unregulated entities, different supervisory approaches, and a scarcity of information, presents major challenges. Because of these issues, supervisors and central banks have struggled to evaluate risks posed by financial groups and significant costs have been incurred trying to mitigate the potential impact of their activities on global and national financial stability. Prime examples include the bailout of American International Group (AIG) and the demise of Lehman Brothers, both in the United States, along with the bailout of Fortis in the Netherlands and other financial groups benefiting from state support.

This chapter examines differences in the supervision and regulation of financial groups and the problems arising from those differences. The focus is on differences in the treatment of:

- Unregulated entities when calculating group capital adequacy.
- Intra-group transactions and exposures, including those involving unregulated entities.
- Unregulated entities, particularly unregulated parent companies of regulated entities.

These differences, irrespective of the frameworks used, resulted in supervisory and regulatory requirements that failed to fully capture the significance or potential costs of all the risks that financial groups face, especially with regard to unregulated entities. Accessing and sharing information about these unregulated entities is another important challenge.

Responses to the financial crisis and proposals for reform have emphasised supervisors' need to address such differences. Indeed, the financial crisis precipitated a flurry of policy initiatives aimed at reducing the risk and impact of future crises in the financial sectors. The G-20 Leaders, the Financial Stability Board, and the Joint Forum's parent committees have all been working to strengthen financial regulation and in particular prudential requirements for the regulated entities. Without commensurate attention to unregulated entities, these concerted efforts could result in an undesired effect, that is, providing incentives to operate outside the traditional boundaries of supervision and regulation for the three sectors. In this regard, it is noted that the IAIS is finalising a *Guidance paper on treatment of non-regulated entities in group-wide supervision*.

II. Background

A financial group is a collection of legal entities linked together by control or influence. Through the use of separate regulated and unregulated entities, financial groups can take

advantage of supervisory and regulatory differences. (For the purposes of this report, “unregulated” refers to unregulated or lightly regulated entities or subsectors within the financial system.)

An unregulated entity may be established for a variety of reasons, may engage in financial or nonfinancial activities or a combination of the two, may not be in the same jurisdiction as the related regulated entity, and may have no direct connection to the related regulated entity. Financial groups establish unregulated entities in foreign jurisdictions for a number of reasons. The most obvious reasons are tax neutrality, cost, and the development of business specialties within jurisdictions. For example, some jurisdictions specialise in the formation and administration of unregulated special purpose entities (SPE). The absence of regulation of SPEs invariably means that limited information is available in the jurisdiction of SPEs, as little is required to be provided or maintained.

Legal structures in some jurisdictions may hinder group-wide supervision. A company may have its own board of directors, and there may be no requirement for the board to provide company information to unrelated third parties, such as foreign supervisors. Importantly, the company may not even possess information desired by the supervisor, if, for example, the board of an unregulated entity is under no obligation to conduct stress testing to manage risk.

This chapter focuses on two types of unregulated entities:

SPEs

The unregulated financial system experienced rapid growth in the past two decades, especially between 2000 and 2008, as discussed in the Joint Forum’s *Report on Special Purpose Entities*, published in September 2009. Helping to fuel this growth was the use of unregulated SPEs, which allowed groups to raise funds from capital markets for lending and investing, rather than through the use of bank balance sheets.³² Just as SPEs grew rapidly, use of SPEs declined during the financial crisis, which focused attention on how little was known about SPEs, let alone how to manage their risks.

The report found that financial groups were motivated to use unregulated SPEs for a number of reasons: advantages related to risk management, funding and liquidity, off-balance sheet accounting, regulatory capital, and investor motivations. The report noted that there is no consistency in the treatment of SPEs despite their influence on the related regulated entity or group.

Non-operating holding companies

Another type of entity that is particularly relevant for this report is the unregulated parent holding company within a financial group. Jurisdictional differences in powers and requirements over an unregulated parent holding company, also known as a non-operating holding company, or NOHC, pose challenges.

While NOHCs are often at the top of the structure of a financial group, they can also be positioned elsewhere in the group, for example, at the head of a sub-group. Supervisory and regulatory requirements for NOHCs vary greatly and sometimes do not exist. When the parent company of a financial group is a regulated entity, it is subject to some form of supervision.

³² *Joint Forum Report on Special Purpose Entities*, September 2009 p. 11-18.

There are legitimate reasons for financial groups to use intra-group transactions and other arrangements (referred to here as intra-group transactions and exposures, or ITEs). ITEs can be used by financial groups to reconcile business lines with the legal structures. ITEs can create certain synergies and efficiencies among the various parts of the group, such as in the use of capital and other resources and in the management of risk exposures. ITEs also can pose risks and create “avenues of contagion,” especially among internationally active groups, groups involved in different kinds of financial services, and groups having both regulated and unregulated entities. The issue is particularly relevant for supervisors when ITEs are conducted between regulated and unregulated entities, including SPEs and NOHCs, within a financial group. Examples include intergroup lending and provision of guarantees or other forms of support.

III. Key issues and gaps

This section is organised in four subsections that address the key issues and gaps that challenge the supervision and regulation of financial groups. Addressing these issues should help improve supervision and regulation of financial groups and mitigate any risks they create.

A. Differences in the treatment of unregulated entities when calculating group capital adequacy

The assessment of capital adequacy of a financial group is intended to capture all of the risks in a group, including those of unregulated entities and to eliminate double gearing of capital and excessive leveraging. This assessment, combined with any performed at the individual entity level, should ensure that all of the risks in a group are covered by an adequate amount of capital.

How financial groups are defined differs among supervisors and standard setters. How group capital adequacy is calculated also varies, for example, the manner in which regulated and unregulated entities are regarded in this calculation. Annex 5 shows that international standards vary greatly in how they define key components of a group (eg participation or subsidiary).

In 1999, the Joint Forum published principles for financial conglomerates,³³ which proposed solutions to the problems associated with assessing capital adequacy. The Joint Forum defines a financial conglomerate as any group of companies under common control whose exclusive or predominant activities consist of providing significant services in at least two different financial sectors (banking, securities, or insurance). The principles on capital adequacy defined approaches in dealing with the differences in calculating capital adequacy among sectors and in ensuring that the risks posed by the sectors are accounted for at the highest level.

Generally, any approach to supervision and regulation has to balance two views of financial groups. One view is that a financial group is a single, diversified economic unit that pools risks. The other is that a financial group comprises a set of separate legal entities. Existing supervisory frameworks can be divided into two broad approaches:

³³ *Capital Adequacy Principles*, Joint Forum, 1999.

- A consolidated approach in which the view of the financial group is based on capital requirements applied to the consolidated assets and liabilities at the parent company level. The assumption is that these assets and liabilities are freely transferable around the group.
- A risk-based aggregation approach that aggregates the capital requirements that apply to individual regulated entities within the financial group and attributes specific treatment for unregulated entities.

In practice, supervisors implement these approaches differently. For example, U.S. banking supervisors explicitly require a bank holding company to serve as a source of strength, standing behind its U.S. depository institution subsidiaries in times of stress. Some European supervisors favour supervision of financial groups operating in their jurisdictions almost exclusively at the group-wide (or consolidated) level and impose few, if any, capital requirements on an individual entity basis.

Whichever approach to group supervision is used, supervisors remain responsible for the individual regulated entities operating in their jurisdiction. Supervisors should understand the effects and implications of regulated entities' membership in a financial group. Supervisors are responsible for providing input and verifying data on risks and capital derived from regulated entities' operations that contribute to the group.

One of the challenges regarding capital adequacy at the group level is the treatment of unregulated entities. The Joint Forum report on SPEs identified two issues:

- use of unregulated entities to lower individual capital requirements of regulated entities and to take advantage of the possible netting of intra-group risk positions on consolidation to reduce the group capital adequacy requirement;
- blurring of the distinction across sectors between capital charges for individual risks, particularly between credit risk and market risk for securitisation or credit risk transfer products.

Other Joint Forum analyses supported this observation, noting that some supervisors have had difficulties assessing the level of capital needed to account for risks posed by major unregulated affiliates in a financial group. The difficulties occurred despite the adoption of a framework for assessing group-wide capital adequacy consistent with the Joint Forum's capital adequacy principles.

The use of the accounting consolidation approach to calculating group capital adequacy has compounded these problems for supervisors. This approach treats the group as a single economic unit and:

- assumes that intra-group transactions are risk-free for the group even if transactions cross borders;
- allows some offsetting of risk between group members, particularly in the area of market risk; and
- is independent of the distribution and transferability of risks and resources between the legal entities that comprise the group.

Individual supervisors responsible for different sectors or legal entities within a financial group have challenged the assumption that a financial group functions as a single economic

unit. Studies conducted after the financial crisis, such as the BCBS's 2009 *Report and Recommendations of the Cross-Border Bank Resolution Group*,³⁴ found that this assumption does not take into account the likely actions of individual supervisors responsible for different parts of a group and the possibilities of separating different parts of the group for the purposes of resolution. The difficulty lies in understanding not only the calculation of group capital adequacy under the various supervisory frameworks, but also the interaction between group capital adequacy and the position of individual regulated entities in the group's hierarchy. Case in point: the collapse of Lehman Brothers and the support given to AIG.³⁵

The Joint Forum believes that a clear and consistently applied treatment for including and assessing unregulated entities ensures that risks are properly captured at both the group and entity levels and are not offset inappropriately against other risks of the group. This treatment would enable all supervisors to understand and assess the structure and risks of a group, and the implications for the businesses, regulated or unregulated, operating in various jurisdictions.

B. Differences in the treatment of ITEs, including unregulated entities

How well a financial group manages ITEs can affect the viability of the business model of the group and its individual legal entities. However, extensive use of ITEs (within a jurisdiction or cross-border) can obscure the supervisor's view of the group and its entities. Also, a company itself can experience difficulty evaluating whether a business model is sustainable.

Supervisors' ability to understand and monitor ITEs is critical in effectively supervising a financial group.

ITEs can become a source of supervisory concern when, among other things:

- ITEs are not conducted in a transparent manner and all relevant supervisors are thus not aware of their existence or do not have access to pertinent details;
- The economic substance of ITEs is obscured;
- ITEs result in capital or income being inappropriately transferred from a regulated entity to an unregulated entity or from one regulated entity to another regulated entity under a different regulatory regime;
- ITEs are not conducted at an arm's length basis, particularly if they result in terms that are disadvantageous to the regulated entity;
- ITEs adversely affect the solvency, liquidity, or profitability of regulated entities within a group;
- ITEs are used as a form of supervisory arbitrage, such as when ITEs have no valid business purpose but are pursued to avoid capital charges or regulatory restrictions;
- Risks that ITEs represent - including contagion - are not well understood by the group or by supervisors.

³⁴ *Report and Recommendations of the Cross-border Bank Resolution Group - consultative document*, BCBS, September 2009.

³⁵ See AIG case study in annex 8. Other case studies (Fortis and Dexia) can be found in the report of the Cross-Border Bank Resolution Group mentioned above.

Joint Forum analyses indicate that different sectoral rules may exacerbate some of these problems. To date, some jurisdictions have set minimum notification or other requirements, limits, or guidance on certain aspects of ITEs, either for individual entities in their jurisdictions or group-wide. Requirements tend to differ considerably across sectors and across jurisdictions. Sectoral differences may be explained in part by the different objectives of capital adequacy within each of the sectors. Reasons for other differences are less clear.

The December 1999 Joint Forum report *Intra-Group Transactions and Exposures Principles*³⁶ set forth five principles on ITEs in the context of supervision of financial conglomerates. These principles relate to risk management, monitoring, transparency, supervisory cooperation, and supervisory action. In light of the lessons learned from the financial crisis, these basic principles should be strengthened to ensure the adequate supervision of financial groups.

C. Differences in the treatment of unregulated parent companies of regulated entities

Jurisdictional differences in powers and in requirements over unregulated entities, particularly NOHCs, pose other supervisory challenges. Minimum standards and requirements vary for the supervision and regulation of holding companies in financial groups. A regulated parent holding company within a group is subject to some form of supervision; NOHCs often are not.

Assessing potential risks under these circumstances can be difficult as supervisors may not have meaningful information on risks or may not have the authority to take appropriate action. Few supervisors are empowered to require a NOHC to disclose information or to take action against it if an institution's strategy fails to account for risks posed to regulated entities within a financial group. Often these supervisors manage to gain some indirect supervisory authority over NOHCs mainly through indirect regulation of regulated entities.

The jurisdictional differences in supervisory powers and requirements over NOHCs, together with fiscal incentives, can encourage financial groups to establish a NOHC that controls the regulated entities in a different jurisdiction that has a less rigorous supervisory approach, has no regulated entities operating in that jurisdiction, or does not exercise any surveillance over NOHCs. This presents problems for supervisors of regulated entities and the group in accessing the necessary information to assess the group, its risks, and its strategies and in taking appropriate risk mitigation action. Any international framework for group-wide supervision should consider how to reduce the opportunity for regulatory arbitrage by reducing gaps in regulations and requirements that apply to NOHCs within a financial group.

There are considerable differences across jurisdictions and sectors regarding the intensity or stringency of NOHC regulation³⁷. Jurisdictions with robust supervisory frameworks are those in which parent holding companies must be financial institutions or must be subject to comparable regulatory requirements. Parent holding companies operating under lighter regulation may have greater flexibility to insulate financial activities from supervisory purview. In the banking sector, for example, NOHCs are treated as banks in some countries and consequently must meet all capital and risk management requirements applicable to banks.

³⁶ *Intra-Group Transactions and Exposures Principles*, Joint Forum, December 1999.

³⁷ Some jurisdictions are moving to adopt relatively consistent supervisory frameworks for NOHC regulation across industry sectors, but sectoral differences persist in other jurisdictions.

NOHCs that are treated as banks are included in the consolidated banking supervision process. In jurisdictions where parent holding companies, particularly NOHCs, are subject to more stringent regulation, supervisors generally have a range of tools for applying consolidated supervision. In some jurisdictions, supervisors have authority to require a financial group to restructure if the existing structure cannot be supervised effectively. Irrespective of this power, the Joint Forum believes that supervisors should devote more attention to the link between regulated and unregulated entities. On the other hand, there are countries where NOHCs are not consolidated for supervisory purposes.

Lack of transparency within complex ownership structures involving unregulated holding companies can impede supervisors from carrying out such functions as fit and proper testing or assessing corporate governance and compliance frameworks. Impediments such as these mean that a regulated entity may not be able to fully meet its regulatory requirements if governance and compliance functions are controlled at the NOHC level.

D. Challenges to obtaining meaningful information on unregulated entities

A contributing factor to the financial crisis is that supervisors lack relevant information about unregulated entities.

The BCBS, IOSCO, and IAIS core principles address the supervisory responsibility of obtaining information on a group-wide basis. In practical terms, regulated entities often have difficulty complying with such requests because the entities themselves may not have access to group-wide information. Supervisors may be able to obtain information about regulated entities within a group from supervisors in charge of other regulated entities, but gaps remain with regard to accessing information about unregulated entities. The difficulty that supervisors experience in obtaining and sharing information on unregulated entities generally increases when unregulated entities are located in foreign jurisdictions.

None of the sectors' core principles refers explicitly to unregulated entities.³⁸ For the most part, the core principles concentrate on chains of direct ownership rather than on a financial group as a whole. Therefore, adherence to the core principles alone does not help identify unregulated entities that pose risk to a financial group or to the stability of regulated entities within certain jurisdictions.

Additionally, while the core principles related to group-wide supervision may be effectively implemented by the home supervisor, host supervisors experience more difficulty obtaining meaningful information because they do not have jurisdiction over entities higher up in the organisational hierarchy, nor do they have a direct link to the unregulated entity in their jurisdiction. International expectations regarding the exchange of information should include information on any unregulated entities within the ownership chain above the regulated entity.

An important mechanism for addressing cross-jurisdictional issues and cooperation and information exchange among supervisors is the establishment of supervisory colleges, which comprise supervisors involved in the oversight of entities that are part of a financial group. Colleges now exist for each of the largest global financial institutions. A supervisory college can take various forms depending on the structure and organisation of the group and the jurisdictions involved in its supervision. These colleges can help to establish a working relationship among supervisors and facilitate the exchange of information.

³⁸ See annexes 6 and 7.

A key function of colleges is to identify the most important relationships within a financial group and assess the risks posed by different entities to each other. A particular problem arises when there are only unregulated entities in a particular jurisdiction. In this case, there is no supervisor who can participate in the college and take action at the level of the unregulated entity.

Traditionally, supervisory colleges have been established along sectoral lines (ie involving only one supervisory discipline). In October 2009, the IAIS issued *Guidance Paper on the Use of Supervisory Colleges in Group-Wide Supervision*,³⁹ and work on colleges is ongoing in the banking sector. The FSB is actively promoting consistency in supervisory college approaches and identifying best practices. Because financial groups are operating increasingly across sectors, developing colleges of a cross-sectoral nature or ensuring that supervisory colleges consider cross-sectoral issues would help draw a full picture of financial groups.

IV. Recommendations to strengthen supervision and regulation of financial groups

The Joint Forum believes that all financial groups, particularly those that are active across borders, should be subject to supervision and regulation that captures the full spectrum of their activities and risks. A variety of regulatory frameworks and approaches have contributed to financial groups being subject to supervision and regulation that did not fully capture the significance or potential costs of their risks.

Frameworks for supervision and regulation of financial groups should be clear and applied consistently, and should cover all financial activities and risks within groups, irrespective of where they may arise or whether those activities are conducted through regulated or unregulated entities within each group. These frameworks should clearly set out the powers and responsibilities of supervisors and supplement the supervision and regulation applicable to individual regulated entities or activities within the group.

As noted in the previous section, common cross-sectoral standards should be developed whenever justified. These standards would supplement the recommendations that aim at strengthening supervision and regulation of financial groups. These standards should also be applied with particular intensity when a group or any single entity within a group is identified as systemically important.

Any differences in the supervision and regulation of financial groups should be justified. Identifying and addressing these differences will improve the ability of supervisors to monitor and, as appropriate, mitigate the potential risks and threats financial groups can create.

Recommendation n° 4: Policymakers should ensure that all financial groups (particularly those providing cross-border services) are subject to supervision and regulation that captures the full spectrum of their activities and risks.

The cost of the failure or near-failure of financial groups, together with lessons learned from the financial crisis, has reaffirmed the importance of the supervision

³⁹ See http://www.iaisweb.org/_temp/Guidance_paper_No__3_8_on_the_use_of_supervisory_colleges_in_group-wide_supervision.pdf

and regulation of financial groups. As the financial crisis has shown, risks assumed by unregulated companies within a group may significantly affect the whole group, including in particular its regulated entities. To be effective, the supervision of financial groups should seek to ensure full capture and treatment of all risks and entities of the groups. This implies that financial groups should be subject primarily to group-wide supervision.

Given the diversity across sectors for the supervisory and regulatory frameworks of financial groups, group-wide supervision should be fully implemented and practiced by each sector while also recognising the critical importance of supervision and regulation of the individual entities within the group.

The IAIS underscored the importance of appropriate supervision of financial groups by assigning a task force in 2009 to consider the merits of designing a common framework for the supervision of insurance groups. In this context, substantial progress toward strengthening the supervision and regulation of financial groups, including unregulated risk, is expected to be achieved.

Recommendation n° 5: The 1999 Joint Forum principles on the *Supervision of Financial Conglomerates* should be reviewed and updated.

The Joint Forum defines a financial conglomerate as any group of companies under common control whose exclusive or predominant activities consists of providing significant services in at least two different financial sectors (banking, securities, and insurance). In 1999, the Joint Forum issued a comprehensive set of principles covering capital adequacy, sound and prudent management, supervisory information sharing, intra-group transactions and exposures, and risk concentration.

The recommended review should focus on the supervisory powers over unregulated parent holding companies, the oversight and access to information of unregulated entities within a group, the calculation of capital adequacy on a group basis with regard to unregulated entities and activities (such as special purpose entities), the oversight of intra-group transactions and exposures involving regulated entities, the coordination among supervisors of different sectors, and the governance and risk management systems and practices of groups.

The principles should be updated to:

- ensure that the principles properly address developments in sectoral frameworks (eg Basel II) and in the markets since 1999;
- facilitate more effective monitoring of activities and risks within a financial group, particularly when these activities span borders and the boundaries across the regulated and unregulated areas of the financial system;
- provide a basis for increased intensity of supervision and regulation of financial groups, particularly when a group or any of its institutions are identified as systemically important;
- improve international collaboration, coordination, and cooperation among supervisors across sectors;
- clarify the responsibility and power of supervisors with respect to the risks in their jurisdictions stemming from an entity being part of a financial group;

- ensure that financial groups' structures are transparent, consistent with their business plans, and do not hinder sound risk management; and
- provide, to the extent possible, credible and effective options for action during a crisis or to avoid a crisis.

Recommendation n° 6: The BCBS, IOSCO, and IAIS should work together to enhance the consistency of supervisory colleges across sectors and ensure that cross-sectoral issues are effectively reviewed within supervisory colleges, where needed and not already in place.

Independent of the development of common standards and principles across sectors, actions are needed to improve coordination and cooperation with regard to the supervision, and potential cross-border resolution, of financial groups. Actions are also needed for accessing and sharing information, notably for unregulated entities. The FSB, BCBS, IOSCO, and IAIS have identified supervisory colleges as a major tool to improve this supervisory coordination and cooperation. The Joint Forum recognises that work is being done on a sectoral basis but believes that there is merit in developing colleges of a cross-sectoral nature or in making supervisory colleges consider effectively cross-sectoral issues.

Chapter 3

Mortgage Origination

I. Introduction

The Joint Forum believes that sound, consistent and effective underwriting practices should apply to financial products, regardless of the originating institution. Problems arising from poorly underwritten residential mortgages contributed significantly to the financial crisis. Credit was extended to consumers who did not have the ability to repay under the loan terms, eg subprime mortgages in the United States. Although this was not a cross-sectoral problem that is typical of the issues taken up by the Joint Forum, the related securitisation of these mortgage loans did affect the banking, securities, and insurance sectors globally.⁴⁰ Additionally, given that the majority of problem mortgage loan products were originated by lightly regulated mortgage companies, this issue is related to the review of the perimeter of regulation, which is within the scope of this report.

Many of the issues emanating from the financial crisis, and more specifically relating to mortgage-related structured products, are being or have been addressed in other Joint Forum initiatives as well as initiatives of other international fora, including by the parent committees of the Joint Forum. For example, IOSCO has undertaken several initiatives relating to credit rating agencies,⁴¹ securitisation,⁴² and transparency of structured products.⁴³

The Joint Forum does not, therefore, focus on securitisation of mortgage loans or the sale of securitisations. Rather, the focus is on the origination of mortgage loans, with the goal of providing recommendations to promote safe and sound lending practices appropriate for each country, thereby contributing to enhanced residential mortgage quality and stability on a global basis.

II. Background

Until 2007, this decade was characterised by relatively strong economic growth, low interest rates in many jurisdictions, an abundance of liquidity, and increased lending to consumers. In a number of countries, housing and mortgage markets expanded dramatically. Additionally, there was rapid expansion in the variety and number of mortgage products and in related securitisation. Lack of discipline by market participants in several jurisdictions was notable during this boom period.

⁴⁰ The G-20 notes that “The credit quality of loans granted with the intention of transferring them to other entities through the securitization process was not adequately assessed.” G-20 Working Group 1 report *Enhancing Sound Regulation and Strengthening Transparency*.

⁴¹ Because credit ratings are relevant to the use of structured finance products, IOSCO established a new standing committee on credit rating agencies, which is expected to address a number of issues relating to the ratings process. In addition, IOSCO published *Role of Credit Rating Agencies in Structured Finance Markets* in May 2008. The Joint Forum, in light of the problems associated with the credit ratings given to financial products, published *Stocktaking on the use of credit ratings* in June 2009.

⁴² IOSCO published *Unregulated Financial Markets and Products – Final Report* in September 2009. The report focuses on two systemically important markets: securitisations and credit default swaps.

⁴³ IOSCO published *Transparency of Structured Finance Products*, a consultative report, in September 2009.

As a result, growth in mortgage loans, both relative to GDP and as a share of total credit outstanding, rose significantly. In addition, home prices increased substantially; and new, nontraditional mortgage products designed to lower initial monthly payments increased as a share of total mortgage loans. When housing price bubbles were suspected, it was not clear at what point a system-wide response would be needed, especially given the positive macroeconomic effect of increasing home values and homeownership. This evaluation was further complicated by rising home values masking a number of poor underwriting practices, particularly those designed to lower initial monthly payments.

In several countries that experienced a surge in mortgage lending and housing growth, most notably the United States and the United Kingdom,⁴⁴ lenders developed new, riskier products that made use of relaxed product terms, liberal underwriting, and increased lending to high-risk populations. These developments eventually resulted in significant losses for consumers and financial institutions alike. However, many other countries with sophisticated mortgage markets have not experienced a significant degree of distress and some countries did not experience such growth, for example, Germany and Canada. To better understand the differences, the Joint Forum reviewed several countries.

A. United Kingdom

In the United Kingdom, total mortgage debt to GDP jumped from 50 percent in 1997 to over 80 percent in 2007. Measures of leverage relative to income (loan-to-income and debt-to-income) rose. Mortgage credit was extended to borrowers with higher risk characteristics. Those borrowers previously would not have enjoyed access to such credit, and an ever increasing number of mortgages was sold on an “income non-verified” basis. For example, in 2006 and 2007, 45 percent of loans were advanced on an “income non-verified” basis.

Meanwhile, residential mortgage lending shifted away from house purchase. The buy-to-let⁴⁵ sector grew from small to significant proportions. In 2007, the buy-to-let segment accounted for 26 percent of mortgage lending.⁴⁶ That same year, mortgage equity withdrawal, such as through home equity loans or lines of credit, accounted for 39 percent of mortgage lending. The rapid extension of mortgage credit contributed to the expansion of the UK property market. This in turn further fueled the demand for mortgages and homeownership as property appreciated quickly in value. In a rising property market, lenders had reduced incentives to assess borrowers’ ability to repay their mortgage obligations. And mortgages with multiple high-risk features increased, such as loans with greater than 95 percent loan-to-value ratios, in combination with terms exceeding 25 years or in combination with greater than three times income multiples.

Another feature in the UK mortgage market in the run-up to the crisis was the rapid growth of a number of banks that, instead of funding themselves with deposits or other stable sources of funding, were increasingly reliant on the permanent availability of large-scale interbank funding and/or on their continuous ability to securitise and sell down credit assets, particularly in the mortgage market.

⁴⁴ There are significant differences in market trends, product offerings, and supervision among these countries.

⁴⁵ Buy-to-let refers to the purchase of residential property by an investor who intends to rent rather than occupy the property.

⁴⁶ *The Turner Review – A regulatory response to the global banking crisis*, UK FSA, March 2009 (www.fsa.gov.uk/pubs/other/turner_review.pdf).

B. United States

Concurrently, in the United States, multiple factors drove the change to less traditional mortgages and less rigorous but more expedient methods of closing loans. As home prices continued to appreciate, competition among lenders intensified, and investors clamoured for higher yields, lenders responded by offering nontraditional mortgage loan products⁴⁷ to address affordability and made such loans available to a much wider and often higher risk spectrum of borrowers. Until reined in by the regulatory community, lenders qualified borrowers based on the low initial payments without considering their capacity to perform on the higher payments necessary to amortise the debt. This significant weakness was further exacerbated by excessive “risk layering,” which combined two or more liberal underwriting characteristics. Other common un-mitigated risk factors included low/no documentation of income or assets, low/no down-payments, and high debt-to-income levels. In addition, these more liberal underwriting practices were also employed for investor loans, which typically warrant more conservative standards.

The bulk of non-prime business activity in the United States was conducted by state licensed mortgage originators, who were not subject to stringent supervisory oversight. The practice of securitisation, notwithstanding its well documented benefits, appears to have contributed to the weakening in underwriting practices as mortgage originators were able to pass on to investors much of the risk from these loans. Investors drove part of this in their quest for yield and reliance on steady house price appreciation, high credit ratings, and low historic losses on mortgage credit. During the boom period, underwriting practices were increasingly loosened in pursuit of market share and income, at the expense of prudent risk management and controls. The increased complexity of mortgage products sometimes interacted with weakened incentives for sound underwriting, to the detriment of the borrower.

C. Spain

The period from 2000 to 2007 was marked by the introduction of the euro, low interest rates, and high demand for housing (eg the monthly payment of a mortgage in late 90’s early 2000’s could be below or shortly over the monthly payment of a rent). Both home prices and construction volumes increased dramatically over this period. The mortgage market was characterised by increasing competition, and there was some relaxation of traditional underwriting practices. Some mortgage products that were new to the Spanish market were introduced in this period, such as greater-than-80 percent loan-to-value mortgages, along with a general use of additional guarantees and/or mortgage insurance. These products provided easier access to credit for first-time home buyers. Also becoming available were extended loan maturities, which reduced borrowers’ monthly payments,⁴⁸ but that would also be much more sensitive to future increases of interest rate.

However, lenders in Spain have recourse to all the borrower’s other assets and income if their mortgage loan goes to foreclosure. Lenders primarily target prime borrowers, while buy-to-let mortgages represent a small portion of lending volumes. Loans without proper verification of income and total debt of the borrower are extremely rare and only may be

⁴⁷ “Nontraditional” mortgage loans are primarily designed to provide borrowers with low initial monthly payments and include such products as “interest-only” mortgages, where a borrower pays no loan principal for the first few years of the loan and “payment option” adjustable-rate mortgages (ARMs), where a borrower has flexible payment options with the potential for negative amortisation.

⁴⁸ *Spanish Banks’ Exposure to the Housing Market*, Fitch Ratings, February 21, 2008.

granted for low loan-to-value loans, in very specific circumstances.⁴⁹ Additionally, a number of legal procedures prevent mortgages from being originated by a different type of originator other than a registered credit institution.

D. Canada

Mortgage underwriting practices in Canada are generally considered to be conservative relative to practices in other countries. Deposit-taking financial institutions hold the bulk of outstanding residential mortgage debt and securitisation plays a relatively small role.⁵⁰ Loans with greater than 80 percent loan-to-value must have insurance, while all mortgages that back the National Housing Act Mortgage-Backed Securities Program also must be insured.⁵¹ Mortgage insurance covers the full amount of a loan, and the borrower pays the entire insurance premium up front. If a mortgage loan goes to foreclosure, the lender has full recourse to all the borrower's other assets and income.

E. Germany

Germany offers another contrast to the recent experience of the United Kingdom and United States. Even during the early 1990s boom after German reunification, the country did not experience significant house price increases.⁵² There are several possible reasons, including high transaction costs, substantial prepayment penalties, and long-term financing structures that discourage the frequent buying and selling of properties. Additionally, noncredit institutions are not permitted to provide residential mortgage loans.

III. Key issues and gaps

This report focuses on two fundamental areas of concern.

- **Poor mortgage underwriting practices:** Problems arising from poorly underwritten residential mortgages in certain countries contributed significantly to the global financial crisis; indeed, the securitisation and other structured financing of these mortgage loans - which were purchased by a number of international financial firms - spread the problems of their poor underwriting to the banking, securities, and insurance sectors globally. In contrast, prudent practices and sound and comprehensive policies may have prevented market participants in those countries that have not experienced a significant degree of distress from engaging in the less disciplined underwriting behaviour that was endemic in other, more troubled mortgage markets.
- **Mortgage originators subject to differing supervision, regulation and enforcement regimes for similar activities/products:** Like most aspects of the

⁴⁹ Ibid.

⁵⁰ *Canadian Residential Mortgage Markets: Boring but Effective*, John Kiff, International Monetary Fund, June 2009.

⁵¹ Ibid. The government guaranteed Canada Mortgage and Housing Corporation accounts for 70 percent of all outstanding insurance.

⁵² *The German Housing Market*, Fitch Ratings, June 9, 2009.

mortgage industry, the prevalence, role, and supervision of nonbank credit intermediaries varies greatly among the various mortgage markets. Mortgage originators range from the smallest individual mortgage brokers to large international lenders. They include lenders that provide warehousing lines to fund loans on an interim basis, those that structure the securitisations and market the securities, and central banks and government-sponsored enterprises that essentially make markets in mortgage loans. In some cases, the government closely controls the market through explicit guarantees for the full balance of the loan, while in others involvement is limited. The number of participants, the variety of roles they play, and the differences among countries are substantial, particularly given the patchwork approach to the regulatory framework in many countries. Such differences created regulatory gaps that helped erode prudent mortgage underwriting practices.

IV. Recommendations to promote consistent and effective underwriting standards for mortgage origination

Because each country's mortgage industry is shaped by distinct real estate markets, cultural influences, and socioeconomic policies, it would be challenging to construct a single regulatory approach to mortgage underwriting standards. To help prevent recurrences of the market disruption and financial instability recently experienced, however, supervisors should address issues in their respective mortgage markets to achieve more consistent and more effective regulation of mortgage activities.

Sound underwriting standards⁵³ are integral to ensuring viable, robust mortgage markets at the local and global levels and may improve financial stability notably when mortgages are securitised. Systemic risk will be reduced if mortgages are properly underwritten, ensuring that borrowers have the capacity and economic incentive to honour their commitments to retire the debt in a reasonable period of time. Indeed, by focusing on prudent underwriting, supervisors can help institutions and markets avoid the broad-based issues and disruptions experienced in recent years and potentially help restore securitisation/structured finance markets.⁵⁴ Therefore, the Joint Forum recommends that supervisors take the following actions:

Recommendation n° 7: Supervisors should ensure that mortgage originators adopt minimum underwriting standards that focus on an accurate assessment of each borrower's capacity to repay the obligation in a reasonable period of time. The minimum standards adopted should be published and maintained in a manner accessible to all interested parties.

Measuring a borrower's ability and willingness to repay:

⁵³ When this report refers to standards, the word is used interchangeably to mean practices, as in some jurisdictions they are not meant to be compulsory to each and every mortgage underwritten in each jurisdiction. The goal is to ensure that the majority of mortgages underwritten per institution and for the system as a whole follow sound underwriting practices.

⁵⁴ As outlined in one of the recommendations regarding securitisation contained in the IOSCO report on unregulated markets and products, lenders that pursue an "originate to distribute" model could be required to retain a portion of the credit risk. This ongoing ownership interest may act as a deterrent to lax underwriting. However, such measures may also create a number of issues and undue complexity when employed with respect to structured finance.

Standards should incorporate requirements consistent with the following basic principles, with guidelines and limits adjusted to reflect the idiosyncrasies of the supervisors' respective markets and regulatory framework.

Effective verification of income and financial information. Capacity measurements, such as debt-to-income ratios, are only as good as the accuracy and reasonableness of the inputs. That is, the efficacy of debt-to-income ratios and other capacity measures is dependent on stringent guidelines for verifying a borrower's income and employment, debt, and other financial qualifications for repaying a mortgage. When lenders allow borrowers to claim unsubstantiated financial information, or do not require such information, they undermine underwriting policies and introduce additional credit risk as well as expose themselves to fraud. Supervisors should therefore generally require lenders to verify information submitted for mortgage qualification. There also should be penalties for borrowers and other originators who misrepresent such information.

Reasonable debt service coverage. One of the most fundamental components of prudent underwriting for any product that relies on income to service the debt is an accurate assessment of the adequacy of a consumer's income, taking into account all debt commitments⁵⁵. These assessments and calculations should accurately capture all debt payments, and any exclusions should be well controlled. The assessment also should ensure sufficient discretionary income to meet recurring obligations and living expenses. Supervisors should adopt appropriate standards to ensure reasonable debt-to-income coverage for mortgages. As a secondary capacity test, supervisors should consider appropriate standards regarding income-to-loan amount (eg loan amount should generally not exceed a particular multiple of annual earnings).

Realistic qualifying mortgage payments. At least in the United States, there was a proliferation of mortgage products with lower monthly payments for an initial period that were to be offset by higher monthly payments later (eg "teaser rate" mortgages, "2/28" adjustable rate mortgages, payment option mortgages). In some cases, the initial monthly payments were much lower than the payments scheduled for later. Many lenders determined whether a borrower qualified for a mortgage by calculating the debt-to-income ratio using only the reduced initial monthly payment, without taking into account the increase in that payment that would occur later. When house prices stopped appreciating, and then declined, borrowers could no longer refinance loans and very often could not afford the mortgage payment once it reset to a higher rate. To address this problem, underwriting standards should require that the analysis of a borrower's repayment capacity be based on a mortgage payment amount sufficient to repay the debt by the final maturity of the loan at the fully indexed rate, assuming a fully amortising repayment schedule.⁵⁶ Any potential for

⁵⁵ Well-used capacity measures include debt-to-income (DTI), which measures annual debt service requirements as a percentage of gross annual income, along with loan-to-income (LTI), also referred to as payment-to-income (PTI), which effectively shows the monthly payment amount for the loan at hand as a percentage of monthly income. LTI may be used in conjunction with DTI, but it is not an appropriate substitute for DTI.

⁵⁶ The "fully indexed, fully amortising" concept is described in full in the 2006 US financial regulatory report titled "Interagency Guidance on Nontraditional Mortgage Product Risks." Basically, a fully indexed rate is the index rate prevailing at origination plus the margin that applies after the expiration of any introductory interest rate. The fully amortising payment schedule is based on the term of the loan, considering any borrower option to extend that period.

negative amortisation should be included in the total loan amount used in the calculation.

Appropriate loan-to-value ratios. Supervisors should adopt appropriate standards for loan-to-value (LTV) ratios. Equity requirements should address loan underwriting in the form of both minimum down payments⁵⁷ and caps on subsequent equity extraction through cash-out refinancing and other types of home equity borrowing. Meaningful initial down-payment requirements help validate borrower capacity as well as ensure necessary commitment to the obligation. Equity extraction limitations contribute to housing market stability, deter irresponsible financial behaviour that puts homes at risk, and promote savings through equity build.⁵⁸ They effectively limit the fallout associated with unfettered “monetization” of the equity gained during periods of rapid home price appreciation, especially since that appreciation may not prove sustainable. However, while LTV limits help control the lender’s loss exposure upon default, they should not be relied on exclusively because they are not a substitute for ensuring the paying capacity of the borrower.

Effective appraisal management. The LTV measure relies on sound real estate values. If lenders assign unsubstantiated values to mortgage collateral, the effectiveness of LTV thresholds or minimum down payments is significantly diminished. Therefore, supervisors should ensure the adoption of and adherence to sound appraisal/valuation management guidelines, including the necessary level of independence.

No reliance on house appreciation. Lenders should not consider future house price appreciation as a factor in determining the ability of a borrower to repay a mortgage.

Other factors important to an effective underwriting program:

The following are not substitutes for sound underwriting practices but should be taken into consideration when determining the soundness of an underwriting program.

Mortgage insurance. Mortgage insurance provides additional financing flexibility for lenders and consumers, and supervisors should consider how to use such coverage effectively in conjunction with LTV requirements to meet housing goals and needs in their respective markets. Supervisors should explore both public and private options (including creditworthiness and reserve requirements), and should take steps to require adequate mortgage insurance in instances of high LTV lending (eg greater than 80 percent LTV).

Recourse. Individual financial responsibility is critical to ensuring the smooth functioning of the mortgage market for all participants. Consequently, mortgage loans should be backed by full recourse to the borrower.

⁵⁷ The minimum down payment required should be based on borrower-provided cash to the transaction. Because the intent is to ensure borrower commitment to the transaction, the measure excludes down payment assistance provided through gifts, loans, etc.

⁵⁸ While it might be argued that supervisors are not responsible for protecting borrowers from themselves or promoting such savings, to ignore this important aspect would be irresponsible from a public policy standpoint. For many, home equity is by far the most significant asset going into retirement, so it is important to promote and preserve this asset.

Recommendation n° 8: Policymakers should ensure that different types of mortgage providers, whether or not currently regulated, are subject to consistent mortgage underwriting standards, and consistent regulatory oversight and enforcement to implement such standards.

The goal is to ensure that similar products and activities are subject to consistent regulation, standards, and examination, regardless of where conducted.⁵⁹ The role of mortgage participants should be clear, and they should be subject to appropriate and consistent levels of regulatory oversight and enforcement. Any framework should include provisions for ongoing and effective communication among supervisors. The lines of supervision must be clearly drawn and effectively enforced for all market participants.

The Joint Forum recognizes that this recommendation presents many challenges because it requires changes to some countries' legal and supervisory regimes. Nevertheless, the importance of the goal of consistent underwriting standards makes these changes worthwhile.

Recommendation n° 9: National policymakers should establish appropriate public disclosure of market-wide mortgage underwriting practices. In addition, the Financial Stability Board should consider establishing a process to review sound underwriting practices and the results should be disclosed.

While there are efforts under way in some parts of the world to harmonise mortgage lending practices across borders, this is a longer term challenge given the differences in mortgage markets. However, these individual markets can be evaluated to determine the overall adequacy of underwriting practices and mortgage market trends.

To address this recommendation and to have an international effect, the following should occur:

- Countries should have adequate public disclosure that includes dissemination of information concerning the health of their mortgage market, including underwriting practices and market trends, encompassing all mortgage market participants.
- The Financial Stability Board should consider establishing a process to periodically review countries against the sound mortgage underwriting practices noted in recommendation 7, and the results should be made publicly available. The goal is to evaluate the soundness of mortgage practices overall rather than to evaluate individual components. For example, a country with high LTV limits may mitigate the risk through more stringent debt-to-income or other capacity limits. The review process would consider the level of risk posed by the underwriting criteria as a whole rather than focus solely on the high LTV limits. The review may also consider underwriting in light of macroeconomic conditions,

⁵⁹ While striving for a level of underwriting consistency and uniformity, supervisors should assess existing and new products and market needs on an ongoing basis. It is not unreasonable to expect that they may consider banning certain products or imposing limits and/or more stringent capital requirements on products that do not adhere to established standards. However, the benefits of explicit bans or limits need to be weighed against potential costs and unintended consequences. For example, product bans could control the level of riskier credit from a macroprudential standpoint but also could restrict access to credit for certain classes of borrowers, reduce innovation, and result in a de facto regulatory allocation of credit.

including evolution of housing prices, interest rate levels, total mortgage debt to gross domestic product, and reliance on various funding mechanisms.

- The Financial Stability Board should consider monitoring the health of the mortgage market (eg country volumes, funding needs, bond performance) to highlight emerging trends and to consider recommending adjustments or changes as warranted.

Chapter 4 Hedge Funds

I. Introduction

While regulators recognise that hedge funds did not cause the recent crisis, the crisis helped to focus attention on the systemic role hedge funds may play and the way in which regulators address the risks they may pose. The question is whether hedge funds, particularly the largest, most leveraged, may pose systemic risks to other markets and the global financial system in the event of a future crisis.

The question of how best to address these potential risks is complicated by the continuing debate over whether hedge funds helped or worsened the international liquidity crisis sparked by the collapse of housing markets. On the one hand, hedge funds benefit markets by providing liquidity and distributing risk. On the other, hedge funds are complex investments not easily understood by investors or regulators, and they operate across borders, largely free of regulatory restrictions. Because hedge funds are not required to fully and publicly disclose their activities and risks, the exact level of risk - systemic or not - that they may pose to markets and the global financial system cannot be easily measured by investors or mitigated by regulators.

Hedge funds were caught up - along with other investments and investors - in a crisis that revealed just how quickly risks can spread across markets. Hedge fund managers were forced to sell off portfolios to raise cash as market prices plummeted. These forced sales drove down the value of hedge fund holdings, undermining their credit worthiness, triggering a vicious circle of more calls on loans, forced asset sales, and further losses. Many hedge funds suffered losses; a few failed.

In hopes of mitigating or preventing future crises, the IOSCO helped focus attention on the risks hedge funds may pose and how regulators may address them. In June 2009, the IOSCO published *Hedge Funds Oversight: Final Report* and outlined six high-level principles to enable securities regulators to address the risks hedge funds pose in a collective, cooperative, and efficient way across international jurisdictions while supporting a globally consistent approach.⁶⁰

The Joint Forum supports the IOSCO's efforts and the six principles on the regulation of hedge funds and their managers. This report's analysis of hedge funds relies on the IOSCO's work. But to leverage the work and to avoid duplication of efforts, the Joint Forum focused on the macro systemic and microprudential risks that hedge funds pose.⁶¹

⁶⁰ See *Hedge Fund Oversight: Final Report*, IOSCO, June 2009.

⁶¹ This is consistent with the statement under par. 38 of the IOSCO's *Hedge Fund Oversight: Final Report*, recommending that further work is being undertaken with other standard setters to further develop principles for prudential regulation at a global level:

"The IOSCO Technical Committee recommends that further work should be undertaken with other standard setters and regulators to further develop this principle at a global level. The IOSCO Technical Committee also notes that there may be a need in some jurisdictions to review domestic arrangements for information-sharing, coordination of regulatory standards and approaches in this area."

The analysis for this report focuses on four areas of concern.

- **Internal organisation, risk management, and measurement.** Failures in risk management by hedge fund managers can cause problems for markets and are a matter of cross-border and cross-sectoral concern. Yet there is no common or cross-border understanding of or requirements for how funds are organised or how fund risks are managed and measured.
- **Reporting requirements and international supervisory cooperation.** The risks posed by hedge funds cannot be easily measured by supervisors or investors because funds are not required to fully disclose their activities. The limited disclosure rules that funds do face vary by jurisdiction and information collected is not shared by supervisors for hedge funds operating across borders.
- **Minimum initial and ongoing capital requirements for systemically relevant fund operators.** Adequate financial reserves are needed to help fund operators withstand the risks they incur, ensure their orderly dissolution, and minimize potential harm to the financial system. Not all supervisors require such fund operators to meet even minimum capital requirements.
- **Procyclicality and leverage-related risks posed by the pool of assets.** The use of leverage allows funds to magnify potential returns but also the exposures, and, consequently, the risks for not only fund investors, but also the financial system itself. Supervisors do not constrain the use of leverage by funds.

II. Background

The Joint Forum assessed the risks posed by hedge funds that may be subject to lesser levels of regulation than other collective investment funds. The Joint Forum believes that the lack of a regime for monitoring and assessing hedge funds creates a critical gap in the regulatory framework.

Because hedge funds are largely unregulated, they have been identified, most notably by the G-20, as one of the most significant groups in the “shadow” banking system. Supervisors are concerned that failures of hedge funds, particularly the largest ones, could have an adverse systemic impact on hedge fund investors and spill over to other financial institutions and markets.

The IOSCO’s June 2009 hedge fund report addresses these concerns and identifies six high-level principles for regulating hedge funds. The following italicised bullets are the high-level principles, quoted from the report:

- i. Hedge funds and/or hedge fund managers/advisers should be subject to mandatory registration.*
- ii. Hedge fund managers/advisers which are required to register should also be subject to appropriate ongoing regulatory requirements relating to:*
 - a. Organisational and operational standards;*
 - b. Conflicts of interest and other conduct of business rules;*
 - c. Disclosure to investors; and*
 - d. Prudential regulation.*
- iii. Prime Brokers and banks which provide funding to hedge funds should be subject to mandatory registration/regulation and supervision. They should have in*

place appropriate risk management systems and controls to monitor their counterparty credit risk exposures to hedge funds.

- iv. *Hedge fund managers/advisers and prime brokers should provide to the relevant regulator information for systemic risk purposes (including the identification, analysis and mitigation of systemic risks).*
- v. *Regulators should encourage and take account of the development, implementation and convergence of industry good practices, where appropriate.*
- vi. *Regulators should have the authority to co-operate and share information, where appropriate, with each other, in order to facilitate efficient and effective oversight of globally active managers/advisers and/or funds and to help identify systemic risks, market integrity and other risks arising from the activities or exposures of hedge funds with a view to mitigating such risks across borders.*

The IOSCO report distinguished hedge funds from other investments as “all those investment schemes displaying a combination of some of the following characteristics.” The following italicised bullets are quoted from the report:

- *borrowing and leverage restrictions, which are typically included in collective investment schemes related regulation, are not applied, and many (but not all) hedge funds use high levels of leverage;*
- *significant performance fees (often in the form of a percentage of profits) are paid to the manager in addition to an annual management fee;*
- *investors are typically permitted to redeem their interests periodically (eg quarterly, semi-annually or annually);*
- *often significant “own” funds are invested by the manager;*
- *derivatives are used, often for speculative purposes, and there is an ability to short sell securities;*
- *more diverse risks or complex underlying products are involved.*

As recognised in the IOSCO report,⁶² the global financial system is tightly interlinked. The crisis demonstrated that systemic risks crystallising in one country can have a serious impact on the stability of other financial systems. A strong argument exists for designing a framework to monitor and control these risks at a global level and to favour regulatory convergence across borders to prevent these risks from causing disruptions.

Addressing these risks is complicated by the divergent views of the role hedge funds played in the recent crisis. Some argue that hedge funds increased their exposures by leveraging up their portfolios and added stress on other market participants and the financial system and that this amplified the asset price bubble and reduced liquidity. They cite recent events (eg pressure on asset prices from forced unwinding) and previous crises (eg the Long-Term Capital Management hedge fund crisis of the late 1990s and the Asian currency crisis of 1997) as evidence that the failure of a fund can impact investors and the financial system.

Others argue that hedge funds reduced volatility by selling overvalued assets and buying undervalued assets. They contend that hedge funds played an essential role in maximising the impact of available investment capital and were victims of a crisis caused by poor risk

⁶² Page 16-17, IOSCO Final Report.

and credit management by regulated banks and other financial institutions. They argue that 1,500 hedge funds in the United States closed without counterparty disruption or other apparent systemic impact to the financial system.

The Joint Forum believes, however, that the following factors - acting alone or in combination - may transmit systemic risk from hedge funds to other markets through two main channels.

- **Credit risk:** Exposures to hedge funds are important sources of counterparty risk, especially if a hedge fund borrows from multiple brokers or is engaged in multiple trading relationships and individual counterparties do not have a full picture of the hedge fund's leverage or of its other risk exposures. This lack of transparency may constitute a major obstacle to risk mitigation.⁶³ Despite the focus on additional risk controls and information provided by funds to their prime broker counterparties following the LTCM crisis, it remains unclear whether information is as extensive as some counterparties would need.⁶⁴
- **Market risk:** A disorderly or too rapid unwinding of large positions may fuel market illiquidity, volatility, and a collapse of asset prices. Although this channel is not confined to hedge funds and capturing these effects is difficult, large individual hedge funds and clusters of funds with significant and concentrated exposures may have the potential to disrupt markets, particularly in the event of herding of positions in common trades.⁶⁵

These two channels contributed to a deflationary spiral during the financial crisis.⁶⁶ When prime brokers reduced financing and requested more collateral, hedge funds were forced to sell assets in declining markets. This forced selling led to downward pressure in asset prices, which led to more collateral calls from the prime brokers. The degree of leverage through borrowing, repurchase agreements, short sales, or derivative products amplified these risks in a procyclical way. Even moderate price changes can force market participants to liquidate positions to meet margin calls, causing a ripple effect across markets.

Hedge fund operators (eg the managers or the advisers ultimately responsible for the undertaking of investment decisions on behalf of the hedge fund) employ investors' money and face traditional principal-agent related problems; their payoff could theoretically cause them to undertake unreasonable risks. These compensation arrangements, however, are negotiated with fund investors. The incentive to limit the use of unduly risky strategies is principally the desire to stay in business but also the desire to attract and retain investors (those incurring the investment risks). In circumstance of a general decline of market prices, improvement of fund performance may be achieved only by making wide use of leverage, such as investing in derivatives or employing short selling techniques. These strategies may exacerbate negative market trends, thus further contributing to procyclical effects, although the closing of short positions is generally counter-cyclical.

⁶³ Lack of information on hedge funds activity is traditionally due to the fact that they engage in proprietary trading strategies, on which they are keen to keep strictest confidentiality.

⁶⁴ Page 13, IOSCO Final Report.

⁶⁵ Prudential risks may be determined by herding behaviours that occur when market participants, including hedge funds, mimic investment decisions and trades of other funds and market participants. Herding is associated with contagion and "crowded trades" leading funds to respond similarly to a shock.

⁶⁶ When prime brokers cut financing and requested more collateral, hedge funds were forced to sell assets in declining markets. This forced selling led to downward pressure in asset prices which lead to more collateral calls from the prime brokers in a sort of downward spiral.

Similar to other market participants, hedge funds face microprudential risks in performing their activities, such as market risks,⁶⁷ funding liquidity risks (including possible liquidity mismatches),⁶⁸ credit risks (including default and settlement risks and the disorderly insolvency of custodians), and operational risks (including reputation risk as well as legal and compliance-related risks).⁶⁹

The financial crisis highlighted failures by hedge fund operators (and many other market participants) with respect to risk management and due diligence, excessive and concentrated counterparty risk, and trend-following. Management of funding liquidity risks⁷⁰ proved to be particularly difficult, especially in situations combining increasing redemption requests and illiquid asset markets.

Transmission of shocks may go both ways. As highlighted by the near-collapse of Bear Stearns and the bankruptcy of Lehman Brothers, the failure of prime brokers may impair hedge funds, particularly when their collateral is tied up.

Prime brokers and banks that provide financing and other services to hedge funds are subject to both conduct of business and prudential regulations in all jurisdictions. This regulation includes standards on risk management of counterparty risk exposures. In fact, as mentioned, the prevailing indirect approach to addressing risks posed by hedge funds has, thus far, been through supervision and regulation of relevant regulated counterparties.⁷¹ Therefore, although counterparties and investors can be a transmission mechanism for financial distress, the Joint Forum in this report focuses on existing gaps in the direct prudential regulation of hedge fund operators and relevant hedge funds.

Trading desks of banks and securities firms, as well as of some investment schemes operators are subject to internal risk management functions, regulatory capital requirements, business continuity requirements and by public disclosure of the firm's activity. Such regulation has not been generally applied to hedge fund operators.

This report presents a number of recommendations and, where there was no consensus achieved within the group, policy options to tackle the risks posed by the operation of hedge funds and other similar pools of capital from a prudential standpoint.

⁶⁷ As recognised in the FSA Report of June 2005, *Hedge Funds: A discussion of risk and regulatory engagement*, the market impact of hedge funds is far greater than traditional asset management because of the characteristics of hedge funds, such as the high transaction volume/fund turnover; use of leverage; the concentration in less liquid markets, innovative/complex products and high profile corporate events/market movements (p. 28).

⁶⁸ Substantial requests for redemptions may make hedge funds become forced sellers. Investor related liquidity concerns might be exacerbated when there is a strong concentration in the source of investors. Therefore, hedge funds are vulnerable to "runs on the bank" phenomena.

⁶⁹ Operational risk can formally be defined as the risk of a loss from inadequate or failed internal processes, people and systems or from external events (eg failure in the order, execution or reconciliation of a transaction, fraud). It does include some elements of reputational risk as well as legal and compliance-related risks.

⁷⁰ Liquidity (maturity) mismatches between assets and liabilities and availability of cash

⁷¹ In 2000, the Financial Stability Forum (FSF) made recommendations for regulators on how to treat "Highly Leveraged Institutions" (eg hedge funds). The FSF endorsed at that time an indirect approach to hedge fund regulation. See on this topic the analysis developed in the IOSCO's March 2009 report titled *Hedge Funds Oversight*.

It is worth noting that since most of the concerns relating to the activities of hedge funds are shared with other categories of market participants using similar investment techniques, such as comparable types of less regulated investment fund operators and their investment schemes, the Joint Forum has developed sufficiently broad recommendations and policy options.

These recommendations and options should be applicable to all those operators and their pools of capital that engage in activities posing similar risks, regardless to how they are denominated or qualified domestically. This approach is aimed at encompassing existing differences in the definition or legal structure of hedge funds at the national level, so as to avoid regulatory arbitrage and contribute to a level playing field. This report nonetheless avoids a “one size fits all” approach; these recommendations are functional enough to be adapted to the characteristics of the business, to the different type of assets under management and the specific risks behind the investment policies or strategies employed.

In addition to general recommendations applicable to all hedge fund operators, the report highlights a number of tailored recommendations and policy options to be applied only to those funds/operators falling within a specific category (eg systematic use of leverage, systemic relevance of the fund or the fund operator).

III. Key issues and gaps

These key issues and gaps raise fundamental concerns.

A Internal organisation, risk management, and risk measurement

The effective management of microprudential risks by the hedge fund manager is a matter of cross-border and cross-sectoral concern. Failures in risk management practises may cause problems for financial markets.

Effective management of risks depends upon a common understanding of the duties applicable to the fund operators to address market, liquidity, counterparty and operational risks.

In this particular segment of the industry, in the case of pools of assets which are managed by an operator, the risks faced at the level of the fund operator have to be separated from the risks that arise from the management of funds.⁷²

In jurisdictions where such issues have already been addressed, there are rules requiring the fund operator to implement appropriate risk management practice and procedures which ensure that the:

- investments for each fund managed are in line with the investment strategy, the objective and the risk profile of the fund, as disclosed to investors;
- risks associated with each investment position of the fund and their effect on the portfolio are identified, measured and monitored at any time;

⁷² In the case of a self-managed investment company, the two aspects may coincide.

- investments comply with the liquidity profile of the fund and with the redemption policy as disclosed to investors;
- risks associated with counterparty risks in case of over-the-counter transactions are correctly evaluated or measured and mitigated;
- risks associated with positions in derivatives and with the level of leverage are correctly evaluated or measured and mitigated;
- risks associated with particular trading techniques such as short selling are correctly evaluated or measured and mitigated.

The Joint Forum believes that supervisors should consider establishing minimum requirements for the internal organisation, risk management, and risk measurement of fund operators. These recommendations could be considered core recommendations applicable to all fund operators regardless of whether they are systemically relevant.⁷³

B. Reporting to regulators and international supervisory cooperation

Currently, regulators have only limited information on which to assess the risks posed by hedge funds. Regulators need to be able to assess clearly and in a timely fashion the existence and scale of financial risks. The recent crisis revealed the need for data collection, and information sharing between supervisors. Regulators need this to get a clear picture of risk concentrations, leverage, liquidity and the size and volatility of positions. Weaknesses in this respect affect the ability to perform proper oversight of systemic risks and financial stability. A major obstacle to the effective monitoring of risks is the different jurisdictional regulatory reporting requirements and some lack of cross-border, macroprudential cooperation.

Macroprudential oversight requires not only the collection of relevant data on leverage, trading activity, risk concentration and performance, but also the existence of appropriate domestic and cross-border information-sharing. The assessment of potential macroprudential risks to financial stability posed by the operation of hedge funds supports more comprehensive monitoring and collaboration by supervisors.

The Joint Forum recognises the merit of developing a reporting mechanism that enables collection of cross-sectoral information on a regular basis on:

- principal markets and instruments in which systemically important funds trade; concentration of investments in private and illiquid assets;
- principal exposures, performance data and concentration of the risks;
- principal exposures and concentration of risks of key prime brokers and counterparties of systemically important funds;
- aggregate leverage in all forms, the main sources of leverage and the main collateral arrangements employed.

⁷³ The reason for this approach is that these requirements are sufficiently principles-based and flexible to be adapted to businesses with different scale and complexity. They are aimed at preventing or internalising externalities that would otherwise determine market failures and address micro-prudential risks. The Joint Forum additionally considered that activities or individual entities that may not be considered systemically relevant per se, may, at times, pose macro-prudential risks that need to be monitored and mitigated.

In this respect, the Joint Forum acknowledges the initiatives currently being undertaken by the IOSCO Task Force on Unregulated Financial Entities. In particular, the IOSCO Task Force is developing principles for hedge fund reporting. The IOSCO Task Force on unregulated financial entities is also considering the development of a common format for gathering the above information on a regular basis from hedge fund operators at national level. The aim is to gather data in a consistent way in order to enable data from different jurisdictions to be comparable across different operators and funds, allowing regulators to have a common view in relation to the systemic risks that hedge funds may pose.

The Joint Forum could define in more detail which pieces of information collected would be “relevant” for the purpose of gathering information related to systemic risk on a cross-sectoral basis. To avoid duplication, the Joint Forum recommends that this is considered further following the conclusion of the IOSCO Task Force on the reporting of hedge funds related information.

To foster the pooling of information on systemic risks and the monitoring of macroprudential risks at an international level, the Joint Forum could also devote some effort to discussing whether some mechanisms and arrangements should exist for sharing information internationally on a cross-sector basis.

In particular, regulators from all financial sectors could, subject to appropriate confidentiality safeguards and national law restrictions, share information on hedge funds, relevant operators and key counterparties on a timely and ongoing basis in order to support effective macroprudential oversight. These information-sharing mechanisms should assist supervisors’ ability to evaluate the implications of hedge fund operations in their jurisdiction.

C. Minimum initial and ongoing capital requirements for fund operators

The Joint Forum believes that systemically important fund operators should have adequate financial resources to meet their business commitments and withstand the operational risks they incur, depending on the type and complexity of the activities performed.

The IOSCO Final Report states that “Some members of the IOSCO Technical Committee believe that adequate capital requirements are important to ensure that hedge fund managers can face the risks incurred in their activities and have less of an impact on the wider financial system. These prudential requirements should be broadly consistent with those required of firms with similar business profiles. Therefore, hedge fund managers should be subject to prudential requirements that reflect the risks they take (and which are most likely to be akin to other asset manager requirements), e.g. operational risk, client money, etc.”

Accordingly, capital adequacy standards could be designed so fund operators can absorb losses arising from operational failures (including compliance, legal and reputation risks) and continue to run, without damaging investors and without disrupting the orderly functioning of financial markets. The holding of capital also may allow for an orderly winding down of a fund operator in the event of bankruptcy.

The advantages of imposing minimum capital requirements are that fund operators could better cover fraud, operational risks, and increase market confidence. There is general acknowledgement that capital is just one component of regulation, along with other components such as insurance, compliance, conflicts management, segregation and custody of assets.

On the other hand, raising capital requirements could directly impact on competition and entry to the marketplace. Therefore, there is a need to ensure that any capital requirement should not be set at unrealistically high levels and could be calibrated to the nature of the operator's business. Imposing capital requirements on a fund operator (which is a legally distinct entity from the hedge fund) may not cover systemic risk stemming from the fund itself.

Any capital requirements applied to a hedge fund operator should be developed acknowledging the similarities between hedge funds and other investment schemes. Any requirements should be comparable to those that may apply to other operators of investment schemes, except where justified by the particular systemic risks assumed by the fund operator to avoid the possibility of arbitrage opportunities between different types of investment schemes.

However, capital requirements may not be necessary for all fund operators in all circumstances. Such requirements may indeed restrict the formation of funds while providing only limited protection against fraud. Capital at the hedge fund operator may not be legally accessible to fund investors. If the requirement is on the fund itself, a capital reserve would prevent a fund from fully investing in its stated strategy. In addition, capital reserves should not be used to protect against poor investment decisions.

From a systemic risk perspective, regulators may want to consider only imposing capital adequacy requirements upon a financial entity whose combination of size, nature, leverage (including off-balance sheet exposures), and interconnectedness could pose a threat to financial stability if it failed. The capital requirements for such an entity should maximise financial stability at the lowest cost to long-term financial economic growth and should reflect the large negative externalities associated with the financial distress, rapid deleveraging, or disorderly failure of each entity. Therefore, capital requirements should be strict enough to be effective under stressful economic and financial conditions. Entities should be required to have enough high-quality capital during good economic times to keep them above prudential minimum capital requirements during difficult economic times.

In addition to the capital adequacy requirements described above, regulators may mitigate risk through other approaches focused on hedge funds or their operators. For example, there should be regulation of systemically important payment, clearing, and settlement systems. Regulators also could require that all standardized over-the-counter (OTC) derivatives are cleared through regulated central counterparties (CCP). To make this measure effective, regulators would need to require that CCPs impose robust margin requirements. In addition, it should be ensured that other necessary risk controls and customized OTC derivatives are not used solely as a means to avoid using a CCP. Furthermore, regulators could require hedge fund operators to hold fund assets with certain financial institutions and/or be subject to surprise annual audits by independent public accountants. Regulators also could require business continuity plans for operators, focusing on operational risk.

From an investor protection perspective, another option is to forego capital adequacy requirements and substantively regulate the conduct of hedge fund operators. Such regulation could impose fiduciary duties upon advisers or require them to adopt and implement written policies and procedures reasonably designed to prevent securities laws violations.

Therefore, regulators should consider, in view of the risks posed, risk-based capital requirements for all systemically relevant hedge fund operators.

From a macro perspective, this approach is consistent with the purpose of addressing systemic risks, while avoiding undue entry barriers. From a microprudential standpoint, the

operational risks posed by smaller hedge fund operators proved not to be an issue during the recent financial turmoil.

The work carried out by International Monetary Fund on systemic importance market and institutions could be used to identify criteria for a proper definition of systemically relevant fund operators.

D. Addressing procyclicality and leverage-related risks posed by the pool of assets

Leverage permits hedge funds to magnify their potential returns, but also their exposures and, consequently their risks. Following the crisis, the issue of whether regulators should limit the level of leverage to which a hedge fund can have access has been debated.

Leverage may be constrained through several regulatory tools. For instance, the European Commission Proposal for a Directive on Alternative Investment Fund Managers,⁷⁴ if adopted as it currently stands, would have the ability to impose leverage limits on alternative funds' operators where this is required to ensure stability and integrity of the financial system. The proposal also would grant emergency powers to national authorities to restrict the use of leverage by alternative funds' operators in exceptional circumstances.

However, in ongoing discussions at the European level, the Commission's first proposal (imposing leverage limits by the Commission) is one of the most controversial whereas the second (emergency powers on national regulators) seems more accepted. Some argue that sophisticated investors invest in a hedge fund to follow a certain strategy and the fund's strategy should be restricted only if leverage could cause systemic risk. In addition, setting leverage caps could be extremely difficult and complex. This is particularly true given the different strategies and activities of hedge funds and because the true extent of leverage cannot be easily figured out without analysing the embedded leverage in each underlying investment. In addition, setting an arbitrary cap could cause market distortion. Granting prudential supervisors the ability to cap leverage for a fund identified as posing systemic risk could be more easily recommended.

One way to overcome market distortions might be to impose a leverage limit in a flexible manner. From an economic perspective, an appropriate approach for avoiding procyclicality in financial markets could be to tighten such limits during market upturns while prohibiting excessive marketing activity (preventing bubbles) and relaxing limits during downturns. This would help prevent funds from having to sell assets and thus amplify downward pressures during market declines. For example, regulation could result in building risk buffers in the system procyclically and relying on these buffers anti-cyclically.

For the time being, these issues remain under discussion by the European Union Council and Parliament.

Another more thorough approach could be to limit leverage through rules applicable to all market participants, such as the amounts that may be loaned or borrowed against traded stock.

⁷⁴ Available online at http://ec.europa.eu/internal_market/investment/docs/alternative_investments/fund_managers_proposal_en.pdf

Another issue under consideration is whether regulation should focus directly on the hedge fund itself. One example is provided by the European Union with the Undertakings for Collective Investments in Transferable Securities Directive. This Directive provides for regulation on the portfolio composition of the pool of assets (i.e, type of assets that can be purchased, minimum degree of diversification, maximum level of leverage, etc.). This regulatory approach is usually justified on the basis of retail investor protection.

Other examples include requirements applicable to pension funds and insurance funds that may be subject to own funding requirements proportionate to the pool of assets' exposure to risks. These seek to reduce the risk that defined benefits would not be paid by fund providers (see Europe the Pension Funds Directive and the Solvency II Directive).⁷⁵

The approach of regulating only the operator is under discussion within the European Union, since it has been endorsed by the European Commission Proposal for the aforementioned Directive on Alternative Investment Fund Managers. In the European Commission's view, the regulatory approach focussing on fund operators would not imply that the investment fund itself is not effectively monitored. This is because rules on the fund operators, including self-managed investment companies, can be ultimately aimed at determining how the funds and the associated risks are managed.

Indeed, in the context of hedge funds, there may be reasons to focus on the fund operator rather than the pool of assets. From a prudential standpoint, the risks associated with the management of the fund depends on decisions undertaken by the fund operator (investment decisions, including trading and level of leverage, maintenance of a governance structure and internal control systems, relationships with investors, organisation of administrative functions, including valuation, selection of depository for the assets safekeeping). The investment strategies of hedge funds are more diverse and complex than retail products. Also, investors are predominantly professionals.

However, the recent crisis showed that hedge funds may pose systemic risks that may not be controlled solely by organisational and risk management tools. Therefore, other tools may be necessary, including:

- **Haircuts and margin requirements.** As market prices fluctuate, the mark-to-market of the position may deteriorate and trigger a margin call. To protect against counterparty risks, regulators could require that margins and collateral are set by application of risk-based haircuts, so that a sufficient buffer can be established to protect against a margin call.
- **Closed-end fund and redemption gates.** In order to limit excessive funding liquidity risks, regulators might require that hedge funds significantly investing in illiquid assets (eg more than a certain percentage of their portfolio) are to be set up as closed-end funds or should adopt adequate gating structure in order to address liquidity mismatches. During 2008, many hedge funds used gates and suspensions to effectively avoid liquidity mismatches.
- **Limits to borrowing and overall fund financial exposure.** Credit risk could be limited by imposing a requirement that hedge funds comply with an overall level of maximum indebtedness, although these limits should be no stricter than those applied to other market participants;

⁷⁵ For instance, a Dutch pension fund must have sufficient own funds to ensure, with a confidence level of 97.5 percent that the value of the fund's investments will not be less than the level of the technical provisions within a period of one year. Both investments and obligations are recognised on the basis of market value.

- **Limiting leverage.** To limit excessive leverage contributing to systemic risks, regulation may establish strategy-by-strategy limits - or ex ante caps - on leverage at the fund level (eg by setting limits on the maximum potential exposure to derivatives), subject to the same limits applicable to other market participants and similar strategies
- **Risk-based capital ratios.** Regulators could limit leverage, including exposures arising from derivatives and/or financing, etc., as a function of risk-weighted assets, so that limits become stricter when assets are riskier.

These options may help reduce systemic risks that, due to externalities, information asymmetries and lack of adequate private incentives, individual market participants would not limit satisfactorily. This approach also would favor the creation of a more level playing field between hedge funds and regulated market participants potentially posing similar prudential risks, including for instance bank trading desks.

On the other hand, it should be noted that these tools would not protect against poor investment decisions. They would restrict the formation of funds and limit the ability of each fund to follow their own stated trading strategy. In addition, they would result in operating restrictions that may unduly curtail the efficient activity of hedge funds and diminish their beneficial impact of market liquidity and price discovery. Therefore, restrictions should be justified by a level and type of leverage actually causing systemic risks.

Setting leverage limits, liquidity caps or capital reserve requirements could be difficult, considering the different strategies and activities of hedge funds. Arbitrary limits could cause market distortions. Furthermore, direct regulation on hedge fund leverage may increase moral hazard or shift the activity to a less regulated jurisdiction. To avoid this regulatory arbitrage, international convergence of regulation and supervisory practices are critical.

IV. Recommendations and policy options to broaden the scope of regulation to hedge fund activities

Hedge funds have been clearly identified as one of the most significant group of institutions in the “shadow” banking system, notably by the G-20. Measures have already been taken or are under discussion to supplement the traditional indirect approach to regulate hedge funds (ie where supervisors regulate other entities’ interactions with hedge funds). These measures would increase direct regulation of hedge funds or their managers and may help to mitigate their risks.

In June 2009, IOSCO made a significant contribution at the international level regarding regulation of hedge funds with the publication of its report titled *Hedge Fund Oversight: Final Report*. The following Joint Forum recommendations and policy options fully take into account IOSCO’s work to avoid duplication of efforts and to leverage analysis already conducted. The Joint Forum fully supports the six high-level principles on the regulation of hedge funds and/or hedge fund managers/advisers (or hedge fund operators) as set forth by IOSCO.

Prime brokers and banks that provide financing and other services to hedge funds are subject to both conduct of business and prudential regulations in all jurisdictions. This

regulation includes standards on risk management of counterparty risk exposures. In fact, as mentioned, the prevailing indirect approach to addressing risks posed by hedge funds has, thus far, been through regulation of relevant counterparties.⁷⁶ Therefore, although counterparties and investors can be a transmission mechanism for financial distress, the Joint Forum in this report focuses on existing gaps in the direct prudential regulation of hedge fund operators and relevant hedge funds.

Because most of the concerns relating to hedge fund activities are shared with other categories of market participants, such as similar types of less-regulated investment vehicles and/or their operators, the Joint Forum's recommendations and policy options have a functional tenor. They apply to all pools of capital and to managers/advisers who engage in activities posing risks substantially similar to hedge funds, regardless of how they are denominated or qualified domestically.

This approach is aimed at encompassing existing differences in the definition of hedge funds at the national level, or even the lack of definition, and at avoiding regulatory arbitrage.

Recommendation n° 10: Supervisors should introduce and/or strengthen (in view of the risk posed) appropriate and proportionate minimum risk management regulatory standards for hedge fund operators. If necessary, supervisors should be given the authority to do so.

The minimum risk management regulatory standards should be scaled to the size and complexity of the funds ; in particular, supervisors should strongly consider adopting the following standards:

Maintenance of an appropriate risk management policy. Hedge fund operators should be required to develop and maintain appropriate, proportionate, and documented risk management policies to identify, measure, monitor, and manage all risks stemming from the activity of each managed hedge fund, consistent with its intended risk profile. Appropriate reporting lines should be established to ensure frequent and timely reporting to senior management about the actual level of risks.

Establishment of an effective risk management function. Risk management policies and procedures should be implemented through the establishment of an effective risk management function within the hedge fund operator, appropriate to their respective risk profile. The risk management function should be hierarchically and functionally independent from the hedge fund management functions. Where the establishment of a separate risk management function would be disproportionate to the nature, scale, or complexity of the hedge fund operator's activity, the hedge fund operator should establish appropriate safeguards against conflicts of interest and be able to demonstrate that the risk management process is consistently effective.

Management of liquidity risk and stress tests. The operator should be required, for each hedge fund it manages, to employ appropriate liquidity risk management systems. This is to ensure that the liquidity profile of the hedge fund's investments complies with its obligations and the redemption policy that has been disclosed to its investors, including possible gates and suspensions. The hedge fund operator

⁷⁶ In 2000, the Financial Stability Forum (FSF) made recommendations for regulators on how to treat "Highly Leveraged Institutions" (ie hedge funds). -The FSF endorsed at that time an indirect approach to hedge fund regulation. See on this topic the analysis developed in the IOSCO's March 2009 report titled "Hedge Funds Oversight."

should be required to conduct stress tests to assess and monitor the liquidity risk (and possibly other risks) under normal and exceptional circumstances for consistency with the funds' liquidity profile.

Conditions for delegation of activities relating to risk management. When a hedge fund operator delegates the performance of risk management to a third party, the hedge fund operator should remain fully responsible for the selection of the third party and for the proper performance of the risk management activity. The delegation should not prevent effective supervision by the relevant authorities of the adequacy of the risk management process.

Need for adequate and effective risk measurement methods and techniques. Hedge fund operators should be required to adopt adequate and effective arrangements and techniques for risk measurement to ensure that, for each hedge fund they manage, the risks of the positions and their contribution to the overall risk profile are accurately measured to ensure consistency with the fund's risk profile. These methods should include both quantitative measures and qualitative techniques aimed at measuring the effects of market risk, credit risk (including issuer risk and counterparty risk) and liquidity risk.

Recommendation n° 11: Supervisors should impose reporting requirements on hedge fund operators to identify current or potential sources of systemic risk and to enable cross-sectoral monitoring of systemically important hedge funds. If necessary, supervisors should be given the authority to do so.

Meaningful information should be reported to supervisors to enable them to monitor, evaluate, and exchange information on systemic risks on a cross-sectoral basis. To this end, the Joint Forum supports the IOSCO initiatives to develop appropriate reporting requirements.

Recommendation n° 12: In view of the operational risks posed and in order to allow for orderly winding down of a fund operator in the event of bankruptcy, supervisors should impose minimum initial and ongoing capital requirements on operators of systemically relevant hedge funds. If necessary, supervisors should be given the authority to do so.

There should be initial and ongoing capital requirements for relevant hedge fund operators as a condition for registration and ongoing supervision. Such requirements could be designed to absorb losses arising from operational failures and may allow for orderly winding down of a fund operator in the event of bankruptcy.

The level of minimum capital standards should be enough to allow an orderly liquidation of or transfer of funds managed by a failing hedge fund operator and take account of the obligations of the operator.

Operators should be subject to timely regular reporting to their supervisors in order to allow supervisors to monitor on an on-going basis the capital adequacy.

Options to be considered for systemically relevant pools of assets

In addition to the prior recommendations, other options set forth below may help mitigate any risks posed by hedge funds and comparable pools of assets. The Joint Forum has not reached a consensus on the following policy options but has nevertheless decided to include them in the interest of providing policymakers with regulatory actions that are supported by some but not all Joint Forum members.

The following options are aimed at addressing the macroprudential risks, particularly procyclicality and leverage-related risks, posed by a pool of assets itself (as opposed to its operator), where the size or other characteristics of the pool are deemed to make it systemically relevant. The identification of the criteria to assess the systemic importance of a pool of assets, such as a hedge fund, should take into account the work done by the International Monetary Fund, the Bank for International Settlements, and the Financial Stability Board.

Haircuts and margin requirements: To mitigate counterparty credit risk, supervisors could require hedge funds to provide collateral in excess of the value of the funds borrowed. This option would limit leverage only if generally imposed by all counterparties, since otherwise the collateral for one counterparty could be financed by borrowing from the other.

Imposing closed-end form/redemption gates: To limit excessive funding liquidity risks, supervisors could require hedge funds that significantly invest in illiquid assets (eg more than a certain percentage of their portfolio) be set up as closed-end funds or to adopt adequate gating structures in order to address liquidity mismatches.

Risk-independent leverage requirements: To avoid excessive risk-taking, supervisors could impose direct and simple caps on leverage, including from exposures arising from derivatives and/or financing.

Risk-based capital or leverage requirements: Regulators could limit leverage, including from exposures arising from derivatives and/or financing, specified as a function of risk weighted assets, so that limits become more stringent when assets are riskier.

Risk management procedures for the timely delivery of financial instruments. Short selling is a legitimate trading technique. But hedge fund operators that engage in short selling should be required to ensure that each hedge fund they manage, irrespective of the hedge fund's domicile and legal nature, is organised and operated to comply with applicable regulatory requirements to avoid market disruption. To promote this goal, hedge fund operators engaging in short selling should be required to adopt procedures that ensure timely delivery of the short sold financial instruments (eg by adhering to a master agreement that governs borrowing/lending of securities).

Potential advantages of options: These options might be used as tools for imposing limits to the level of leverage and preventing excessive risk taking by hedge funds. This approach would promote a more level playing field between hedge funds and other more traditional regulated market participants that pose similar prudential risks, for example, operators of other types of collective investment undertakings and bank trading desks.

Potential disadvantages of options: Setting ex ante leverage or liquidity caps or leverage requirements could be an extremely difficult and complex task, considering the different strategies and activities of hedge funds. The risk is that setting arbitrary limits could cause market distortion and would almost certainly be gamed. Imposition of limits beyond those essential to mitigate excessive systemic risk would unduly limit investor choice. Outright regulation might also be expected to increase moral hazard or shift the activity to any jurisdiction that imposes less hedge fund regulation. In this context, international regulatory and supervisory convergence remains critical.

Chapter 5

Credit Risk Transfer Products

I. Introduction

One of the factors contributing to the financial crisis was the inadequate management of risks associated with various types of products designed to transfer credit risk. This shortcoming resulted in severe losses for some institutions. Such products can result in transferring risks not only within, but also outside the regulated sectors.

This report focuses on two credit risk transfer products that evidenced major regulatory gaps in regulation. The products are:

- Credit default swaps (CDS); and
- Financial guarantee (FG) insurance.

CDS and FG insurance are products that provide protection against identified credit exposures. Since the provider of that protection may have to make a payment on the protection contract, these products create a new source of credit exposure. Buyers of credit protection therefore need to maintain and enforce sound counterparty credit risk management practices.

While CDS and FG insurance products have quite different legal structures, they perform similar economic functions. The Joint Forum's analysis identified the following issues as common to both CDS and FG insurance products. Each contributed to the recent crisis or poses cross-sectoral systemic risk.

- **Inadequate risk governance:** Sellers of credit protection did not and often could not (given their existing risk management infrastructure) adequately measure the potential losses on their credit risk transfer activities. This was generally true in the CDS market and to a lesser extent in the regulated FG insurance market (where there is at least some financial reporting required by statute). Buyers of protection did not properly assess sellers' ability to perform under the contracts, and they permitted imprudent concentrations of credit exposures to uncollateralised counterparties.
- **Inadequate risk management practices:** Poor management of large counterparty credit risk exposures with CDS and FG insurance transactions contributed to financial instability and eroded market confidence. CDS dealers ramped up their portfolios beyond the capacity of their operational infrastructures.
- **Insufficient use of collateral:** The absence of collateral posting requirements for highly rated protection sellers (eg AAA-rated monoline firms) allowed those firms to amass portfolios of over-the-counter (OTC) derivatives, and FG insurance contracts - and thus create for their counterparties excessive credit exposures - far larger and with more risk than would have been the case had they been subject to normal market standards that required collateral posting.
- **Lack of transparency:** The lack of transparency in the CDS and to a lesser extent in the FG insurance markets made it difficult for supervisors and other market participants to understand the extent to which credit risk was concentrated at individual firms and across the financial system. Market participants could not gauge the level of credit risk assumed by both buyers and sellers of credit protection.

- **Vulnerable market infrastructure:** The concentration of credit risk transfer products in a small number of market participants created a situation in which the failure of one systemically important firm raised the probability of the failure of others.

II. Background

There is broad agreement that credit risk transfer exposures should be subject to sound counterparty credit risk management. This report focuses on areas not already specifically addressed by other international bodies and on areas where additional input on previous recommendations would be beneficial. In addition, this report attempts to consolidate and emphasise recommendations that have been made in other fora.

Credit risk transfer products contributing to the crisis included OTC derivative instruments as well as more complex instruments, such as collateralised debt obligations (CDO) holding asset-backed securities and arbitrage or hybrid asset-backed commercial paper conduits, the risks of which were highlighted in two earlier Joint Forum papers on credit risk transfer.⁷⁷ While investors suffered major losses on such products, this paper focuses on CDS and FG insurance products because they are the building blocks of the credit exposures that contributed to the crisis. For example, CDOs often used CDS products as the source of the credit risk in their structures. Some of the factors contributing to the risk management failures associated with CDOs, including overreliance on third-party credit ratings and inappropriate regulatory capital requirements, are already being addressed by the Joint Forum⁷⁸ and by financial sector supervisors and regulators.⁷⁹

Likewise, this report does not focus on other long-standing forms of credit risk transfer, such as loan guarantees, syndications or traditional securitisation activities. The Joint Forum believes issues associated with such activities have been addressed in other international fora and are relatively well-understood. For example, the Joint Forum's parent committees are addressing weaknesses identified with securitisation. This report builds on the IOSCO's recommendations on unregulated financial markets and products. The IOSCO made these recommendations in response to the G-20's concerns regarding the role that certain unregulated market segments and products, such as securitised products and the CDS market, played in the crisis and in the evolution of capital markets.⁸⁰ The BCBS recently enhanced the Basel II capital framework; changes included increased capital, risk management, and disclosure requirements for certain securitisation activities.⁸¹

Supervisors and market participants have taken steps in response to some of the gaps and risks identified in this report. Notably, supervisors have worked with market participants to promote greater use of central counterparties (CCP) for clearing standardised CDS contracts. The use of a CCP, which replaces bilateral counterparty relationships by acting as

⁷⁷ See *Credit Risk Transfer*, Joint Forum, March 2005 and *Credit Risk Transfer – Developments from 2005 to 2007*, Joint Forum, July 2008.

⁷⁸ See, for example, *Stocktaking on the use of credit ratings*, Joint Forum, July 2009.

⁷⁹ IOSCO, for example, has undertaken several initiatives regarding the regulation and oversight of credit rating agencies, including regarding their role in structured finance markets.

⁸⁰ *Unregulated Financial Markets and Products*, IOSCO, September 2009.

⁸¹ See *Enhancements to the Basel II Framework*, BCBS, July 2009.

a seller to every buyer and as a buyer to every seller, might constitute the first step in a possible evolution toward greater exchange trading, with attendant transparency benefits in addition to clearinghouse settlement. Instead of being exposed to each other, the protection buyer and seller are exposed to the CCP. The CCP, in turn, manages counterparty risk by imposing robust risk management and margining requirements on its members. While increased use of CCPs can mitigate some of the risks associated with complex webs of counterparty exposures, they may also result in concentration of risk in CCPs, which therefore require robust supervision.⁸² As this report was being published, several regulated CCPs had been established, or were in the process of being established, in the United States and Europe.

Transparency has been enhanced in the CDS market, particularly through the Depository Trust & Clearing Corporation's Trade Information Warehouse, which is a contract repository containing electronic records of a large and growing share of CDS trades. The repository greatly enhances data being collected by the Bank for International Settlements and various industry groups.

A number of steps have been taken to strengthen the CDS market infrastructure. For example, major dealer firms have worked with supervisors and regulators to reduce confirmation backlogs and to enhance electronic processing of transactions.⁸³ In April 2009, the International Swaps and Derivatives Association implemented changes to standard CDS documentation that incorporated auction settlement terms to cash settle CDS transactions as an alternative to requiring physical delivery of securities (the so-called "Big Bang Protocol"). Auction settlement mitigates the risk of large market movements based solely on the need for counterparties to access securities when the volume of outstanding CDS contracts exceeds the underlying value of debt.

III. Key issues and gaps common to both CDS and FG insurance

While CDS and FG insurance products can share a common purpose and economic substance and are similarly complex, they face differing regulatory oversight, market exposure, and reserve requirements.

CDS are largely unregulated financial instruments, although the use of such instruments is subject to supervision and regulation in cases when buyers and sellers of this protection are regulated institutions. CDS products written or traded OTC by regulated firms may be subject, to a varying extent across sectors and jurisdictions, to regulatory capital requirements, restrictions, and, in some cases, limits on use and disclosure/reporting requirements. In addition, to the extent that unregulated entities (eg special purpose entities or hedge funds) are major participants in CDS markets, their lack of regulation may constitute a significant regulatory gap. For example, even if regulated firms are subject to capital requirements for their exposure to risks arising from their CDS exposures, if unregulated firms that are systemically important are not subject to comparable requirements, this may pose a systemic risk.

⁸² In this regard, a group of international supervisors and regulators has established an OTC Derivatives Regulators' Forum (<http://www.newyorkfed.org/newsevents/news/markets/2009/ma090924.html>).

⁸³ Efforts related to the market infrastructure for OTC derivatives are summarised on the Federal Reserve Bank of New York's website (http://www.newyorkfed.org/newsevents/otc_derivative.html).

CDS are traded instruments, whereas FG insurance is a non-traded insurance product. Because buyers of protection using CDS do not need to have an insurable interest in the underlying reference entity (ie they do not need to own the security for which they are purchasing protection,) protection can be purchased for either hedging or trading purposes. Buyers also may purchase multiple contracts written against the same credit event, so the notional amount of CDS protection written against a reference entity may far exceed the outstanding amount of underlying debt, a situation that could have widespread implications for risk management.

FG insurance, in contrast, is not traded OTC or on any market, and FG insurers, which are largely regulated entities, are required to maintain capital reserves. As a result, generally they cannot write protection in amounts that exceed the underlying debt that they are insuring. The insurable interest requirement ensures that the actual amount of credit risk transferred in the market cannot exceed the notional amount of credit risk actually existent in the financial market. This inability to leverage limits the systemic impact of these FG contracts.

While established as regulated insurance entities, the business model required ring fencing this type of product from more general forms of insurance and did not include access to any type of guaranty mechanism. These products were viewed as risk transfer from one financially sophisticated party to another.

Finally, concentration risk is a systemic concern both in the CDS market and among FG insurers that gives rise to supervisory concerns.

A. Inadequate risk governance

Sellers of credit protection did not, and often could not (given their existing risk management infrastructure) adequately measure the potential losses on their credit risk transfer activities. This was generally true in the CDS market and to a lesser extent in the regulated FG insurance market, where a minimum statutory financial reporting exists. Buyers of protection did not properly assess the ability of sellers to perform under the contracts; they permitted imprudent concentrations of credit exposures to uncollateralised counterparties.

B. Inadequate risk management practices

The inadequate management of risks associated with CDS transactions have, in at least some instances, contributed to financial instability and harmed market confidence. While CDS per se have not been primary contributors to the crisis, poor risk management by some institutions that were important participants in CDS markets did exacerbate systemic risk.

In at least one high-profile case, a firm sold protection to other large financial firms on a massive scale (some observers have characterised this as writing deep out-of-the-money options on the state of the economy). But the firm, assuming that the aggregate risk arising from these transactions was de minimis, failed to hold sufficient capital or to ensure that it had ready access to sufficient liquid financial resources to meet possible credit downgrade-related margin calls. The firm's counterparties, in turn, did not impose sufficiently rigorous initial or variation margin requirements on the protection seller.

Indeed, subsequent credit downgrades of both the firm and the subprime-related securities on which it had written protection resulted in collateral calls that the firm could not meet. Concerns about knock-on effects throughout the financial system resulted in large-scale, and unprecedented, government support. In this instance, inadequate risk management by the

protection seller and its counterparties resulted in a buildup of systemic risk that went largely undetected by supervisors.

The concentration of CDS contracts in a small number of market participants (eg significant CDS dealers or sellers of protection) could be problematic for their counterparties if they were unable to perform. This has raised the specter that some firms, while not necessarily viewed as too big to fail purely on the basis of size, may nevertheless be considered too interconnected to fail because of the impact that their failure could pose - with the CDS market as one of a variety of transmission mechanisms - to the broader financial system.

The crisis exposed a lack of effective risk management by a number of FG insurers. Their expansion from underwriting of municipal issuers to higher-risk lines of business, such as the underwriting of asset-backed issues, together with expanded geographical reach⁸⁴ was not accompanied by an appropriate increase in risk governance and risk management awareness or an updating of risk management controls to monitor exposures and to assess capital requirements. More sophisticated analysis of the different financial and other sectors, together with an understanding of the combined effect of deteriorating market conditions and increased risk correlation within the global financial markets, may have identified potential problems at an earlier stage and gone some way toward mitigating the severity of losses. The Financial Accounting Standards Board (FASB) in its statement number 163 now requires additional disclosure of risk management activities by FG insurers. Those activities include ones adopted by FG insurers to evaluate credit deterioration in insured obligations.

Some firms built up overall levels of risk that should have been subject to limits even if the probability of having to pay out was considered very low. While the perceived risk of selling protection against highly rated exposures was very small, it was not risk-free. A fundamental risk management tenet is that firms should limit the risks of such low-probability, high-impact, positions. Writing deep out-of-the-money options can pose catastrophic risk, so proper risk management and governance practices should have prevented the buildup of such large exposures. Further, adequate stress testing should have made potential problems apparent as the crisis began.

The failure to effectively manage counterparty credit risk in the CDS market can have a potentially systemic impact. In particular, if a large protection seller were unable to meet its obligations to counterparties (including payment in response to a credit event or posting of collateral in response to credit downgrades), this could have adverse consequences for market liquidity, which could create liquidity and solvency problems for market participants well beyond the parties to the CDS contract. Correlation between the creditworthiness of a protection seller and the reference entity could increase the risk that the protection seller's ability to meet its obligations might decline at the same time that a credit event is most likely.

Firms that are significant CDS market participants also may be exposed to potentially substantial operational risk. This can, among other things, take the form of legal documentation risk (ie are contractual terms clear and unambiguous, for example, with regard to the definition of a credit event?) and settlement risk (ie can firms deliver securities or cash as required by the swap contract following a credit event?). Market participants must have appropriate back-office personnel and infrastructures, including information technology and management reporting systems commensurate with the nature and level of market

⁸⁴ According to the Association of Financial Guaranty Insurers, the par value of outstanding international securities insured by AFGI members increased from \$91 billion in 2000 to \$295 billion, as of August 2009 (<http://www.afgi.org/products-intl.htm>).

activity. Operational risk at the firm level is closely related to broader market infrastructure issues.

Inadequate risk management within FG insurers raises fundamental issues. When the credit worthiness deteriorated market perceptions resulted in the “good” risks becoming tainted by the “bad.” Risk concentrations were not adequately monitored or properly understood. Hence, while downgrades from the credit rating agencies led to calls for collateral to be posted in the case of some FG insurers, the downgrades also led to increased claims at the same time FG insurers were experiencing mark-to-market losses.

Liquidity risk management processes also did not factor in the risks of the lack of availability of contingent capital, an increase in the cost of capital, or the potential for increased collateral requirements.

Uncertainties about counterparty credit risk within financial markets means that FG insurers have been unable to sufficiently identify risks, especially remote exposures. In addition, assessments undertaken by insurers on their exposure to any one counterparty, or to particular risk factors (eg exposure to real-estate markets arising from insurance of complex structured instruments) were inadequate. If all of the relevant information is not available for analysis, the correlation of risks underwritten by FG insurers cannot be assessed. Altogether, there has been a lack of adequate corporate governance and internal controls at FG insurers, including management oversight and understanding of the risks being underwritten.

C. Insufficient use of collateral

While most major firms active in the OTC derivatives market collateralise their exposures on a daily basis, market convention permitted firms with the highest credit ratings not to provide collateral to secure their derivatives obligations. They have infinite thresholds (ie there is no payable amount that would call for a collateral posting requirement to the dealer). Contractual requirements may call for these highly rated firms to post collateral once the firm’s rating falls to a specified credit level. The absence of collateral posting requirements often has led such firms, some of which were systemically important, to amass a portfolio of OTC derivatives far larger, and with more risk, than would have been the case if they were subject to normal market standards. The contingent liquidity risk that these firms assumed, in the event of a credit downgrade, was excessive. Contractual arrangements permitting infinite thresholds for systemically important market participants invites the systemic liquidity and credit problems that occurred during the crisis.

D. Lack of transparency

These concerns have been exacerbated by the opacity and complexity of CDS instruments and by a lack of transparency in the market (because CDS are OTC instruments) that made it difficult for either supervisory authorities or market participants to understand where, and to what extent, credit risk had been assumed or transferred. It was widely assumed that the CDS market had resulted in diversification of credit exposure across the financial system. While this was true to a large extent, some firms nevertheless built up concentrations that were not detected ex ante. This lack of transparency, in turn, has been heightened by the increased participation of unregulated entities (such as hedge funds) - which can be opaque to market participants and supervisors - in the CDS market as protection buyers and sellers.

Supervisors have expressed concerns that opacity in the CDS market may result in market misconduct (ie manipulation or insider trading⁸⁵), while a lack of transparency may have made it exceptionally difficult for market regulators to detect such misconduct. This is a particular concern because of the large impact that news about a company (especially regarding its creditworthiness) may have on CDS spreads of the underlying company. In addition, CDS spreads can have an effect on price movements in bond and equity markets, which supervisors and regulators have varying degrees of ability to oversee. Moreover, the lack of transparency in the CDS market with respect to prices, trading volumes, and aggregate open interest makes it difficult for market participants to assess conditions in the credit cash and equity markets. The potential impact of CDS spreads on related markets has grown as the volume of outstanding CDS has in many cases far outstripped the value of the underlying reference debt.

There was, to a lesser degree, a lack of transparency in relation to some exposures as the risks underwritten by FG insurers became further removed from the original underlying issuer risk. There may have been several tranches of securitisation between the debt security insured by FG insurers and the original mortgage or other debt. This complexity - which resulted in a lack of transparency - made it difficult for FG insurers to monitor risk exposures, especially correlation risks, accurately and to estimate losses. While the municipal risk exposures may have remained relatively less complex, and therefore easier to assess, other exposures, such as pooled corporate exposures and pooled consumer-related risks (eg mortgage securities), became increasingly difficult to assess.

A lack of transparency in the CDS market may have exacerbated problems during periods of significant stress. This lack of transparency can be attributed not only to potentially insufficient disclosures by individual institutions but also to the OTC nature of CDS contracts that prevents aggregation of data across firms. This poses several related risks. First, from a macroprudential perspective, it has been difficult for supervisors to understand the extent to which credit risk has either been transferred or concentrated across the financial system. Second, limited disclosure requirements make it difficult for market participants to identify firms with significant concentrations of CDS exposures, especially at major dealers and protection sellers. This can impact not only significant market participants, but also the market more broadly to the extent that market participants pull back in the face of uncertainty about risk concentrations. Finally, asymmetric information (when one party involved in a transaction has more information than the other) and/or market opacity may mask potential market integrity problems.

Market integrity issues can be caused by involvement in multi-tranched obligations in which the risks are inherently more difficult to evaluate, where the exposures are more difficult to quantify, and where market participants do not or cannot assess the risks arising from their exposure to FG insurers. There are typically a large number of counterparties in each transaction, each earning fees and premiums. This means that the process is subject to tension whereby one party has more information than another about a portfolio of risks. The seller at each stage may pass progressively less information to the buyer and therefore the knowledge of the original risk becomes diluted at each stage.

⁸⁵ The legal standards for defining and placing restrictions on manipulation, insider trading, and other forms of market conduct may vary across jurisdictions.

E. Vulnerable market infrastructure

The limited pool of FG insurers and FG reinsurers and CDS dealer firms means that risk is concentrated in a relatively small number of firms. Some FG insurers are moving toward run-off or seeking to commute their liabilities (ie disposing of their liabilities in a manner that provides certainty) to reduce the potential adverse impact on their capital. Unless new capital enters the market and doubts about the continued viability of the FG insurance business model can be addressed, the pool of FG insurers could be further reduced. While concentration risk is a systemic concern both in the CDS market and among financial guarantee insurers, the interconnectedness of CDS market participants (especially the major dealer firms) gives rise to unique supervisory concerns.

IV. Key issues and gaps specific either to CDS or FG insurance

In addition to the common issues and gaps discussed, there are important issues of concern that are specific to each of these credit risk transfer products.

A. Key issues and gaps specific to CDS

The use of CDS contributed positively and negatively to the financial crisis. On the one hand, firms used CDS products to more actively manage credit risk, and CDS spreads are increasingly used by market participants (and, in some instances, by supervisors as a supplemental indicator of market sentiment) as a tool for assessing a reference entity's creditworthiness. Despite supervisory and industry concerns about the CDS market infrastructure having been raised in previous Joint Forum reports on credit risk transfer and by a number of supervisory authorities, the market has been fairly resilient to date. This is evidenced by several large, high-profile credit events (eg the September 2008 bankruptcy of Lehman Brothers and the placement into conservatorship of the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation in the United States).

In addition to the gaps and issues discussed above in section III, a number of supervisors (domestically and through international fora such as the Joint Forum) raised concerns about potential weaknesses in the market infrastructure for CDS prior to the financial crisis, particularly since CDS are typically traded OTC. Steps taken by supervisors and market participants (eg credit event auctions) in response to these concerns likely contributed to the effective functioning of the market infrastructure throughout the crisis. Nevertheless, further strengthening of the market infrastructure to mitigate systemic risks remains a high priority.

Operational risks remain an issue at specific firms, and these operational risks can be exacerbated by weaknesses in market infrastructure. Moreover, effective management of settlement risk, especially where firms have large counterparty exposures, is essential at both the firm and market level. In addition, effective collateral management is an essential element of risk management. This can be complicated by the cross-border nature of many CDS transactions, which can pose additional settlement and, potentially, legal risks.

Steps taken to date to address issues and gaps related to market infrastructure and operational risk are discussed in the background section of this chapter.

B. Key issues and gaps specific to FG insurance

The number of financial guarantee insurers worldwide is small. There are fewer than 10 in the United States alone, but they operate across international boundaries. They have offices - with varying volumes of business - in Australia, Bermuda, France, Italy, Japan, Spain, and the United Kingdom. Consequently, this may give rise to systemic risks across borders. The regulation of these insurers varies considerably across jurisdictions. Some have specific legislation for financial guarantee insurance (eg segregating such provision of insurance into separate firms) and others regulate financial guarantee insurance in the same way as traditional general insurance business.

Historically, default rates on the underlying municipal bonds covered by FG insurance have been very low. In more recent years, FG insurers have expanded into the provision of insurance on asset-backed securities, such as CDOs. As the FG insurers expanded their business lines, they changed their risk appetites and insured more complex structured securities, such as subprime mortgage backed securities (including the most senior AAA-rated tranches and higher-risk mezzanine tranches) without a commensurate adjustment of their risk management frameworks. Following concerns about excessive defaults in the subprime markets, credit rating agencies required FG insurers to increase their capital levels or face downgrades (most of the FG insurance industry was, in fact, downgraded during the recent crisis). The downgrade of an FG insurer could have an impact on the value of the underlying bond or other asset that it has insured.

FG insurers have also established minimally capitalised SPEs, which sold CDS that were not legally permitted within the main FG insurance business. The FG insurers would then guarantee the obligations of these SPEs, notwithstanding that the credit events they were covering went beyond the scope of risks that they could have written within the regulated FG insurance business.

The FG insurance business model was developed in the United States. Historically, the AAA ratings of FG insurers provided credit enhancement to bond issuers by providing a guarantee of payment of principal and interest to the bondholder in the event of an issuer default. The business originated in the early 1970s to provide guarantees in respect of municipal bonds. The AAA rated guarantee, in the form of an insurance contract, enabled municipal issuers to reduce their total cost of debt. The rating agencies would confer the rating of the FG insurer on the debt issue and, therefore, the bonds could be sold at lower rates of interest than would otherwise be the case. Vitally, FG insurance and the benefit of the AAA rating it conferred was more cost effective to issuers than the expense that would have been incurred had the issuers attempted to obtain a AAA rating in their own right. In order to maintain their essential AAA rating from the credit rating agencies, the FG insurers maintained a “zero-loss” or “remote-loss” underwriting approach, writing primarily municipal and state government-issued securities.

The insurance guarantee covered only those with an insurable interest in the debt. It would only be triggered in the event of an actual default and not merely a downgrading of the issuer’s credit rating. The FG insurer must honour the original interest and principal repayment terms but is not obliged to repay the principal immediately on a default event. The FG insurance therefore does not have immediate cash flow issues when a claim arises.

Insurance legislation in the United States prevented general property and casualty insurers from writing this business and effectively ring fenced the FG insurance business into a few so called “monoline” insurers. FG insurers also operate from other jurisdictions, sometimes but by no means always, as monoline insurers.

Some, but not all, FG insurers are active in the FG insurance reinsurance market. The principles on FG insurers covered by this chapter apply equally to the FG insurance reinsurance market.

The problems outlined below have been widely attributed to “monolines,” which as noted above is a term that is commonly applied to FG insurers. However, the term “monoline” is misleading as entities known as monolines engage in a range of specialised lines of business in different parts of the world. In addition, some jurisdictions have segregated the FG insurance business as separate entities and others have not. Therefore, the effect on bond and other markets of any credit rating downgrades to FG insurers has been more pronounced in some jurisdictions than in others. A lack of consensus on the legislative treatment and differing regulatory treatment of FG insurance business across jurisdictions contributed to the lack of transparency in the markets.

The financial crisis generated problems for FG insurers in both the traditional markets involving bond insurance and in the business written by their SPEs. These problems were due to a number of factors, which are outlined below.

The FG insurance market is still under significant stress, as reflected in the downgrading, placement on negative outlook, or withdrawal of ratings of some FG insurers by the rating agencies.⁸⁶ Although the amounts paid out by FG insurers have been considerably less than was first estimated, and some have been able to raise additional capital, others have gone into run-off or retreated back to underwriting only municipal bond business. As the crisis has demonstrated, there are potential risks and issues which could have a cross-sectoral and/or systemic impact.

Accounting practices. Divergent and inadequate reserving practices resulted in inconsistencies in the recognition and measurement of claims liabilities. Reserving was also generally based on a cash, rather than on an accrual basis, meaning that claims were underestimated and that rating agencies relied in part on assessments of these reserves in assigning credit ratings to FG insurers. In recognition of the diversity that existed in accounting for FG insurance contracts by insurance enterprises, the FASB issued Statement of Financial Accounting Standards No. 163, which is effective for accounting periods beginning on or after 15 December 2008. The statement requires that claim liabilities be recognised prior to an event of default where there is evidence of credit deterioration in an insured financial obligation. The statement also clarifies the recognition and measurement of premium revenue, where inconsistencies also existed, by linking the recognition of revenue to the amount of insurance protection and the period in which it is provided. The expanded disclosures required by the FASB regarding FG insurance contracts should improve the quality and comparability of financial reporting by FG insurers.

Irrespective of accounting requirements, firms had an obligation to understand the risks that they were amassing, even if there were no current demands for collateral. Firms that took a mark-to-market perspective for risk management purposes, even if they reported on a cash basis, would have seen red flags about potential credit downgrades and calls on liquidity.

⁸⁶ The Committee of European Insurance and Occupational Pensions Supervisors provided an overview of the FG insurance industry in its 2009 Spring Financial Stability Report (<http://www.ceiops.eu/media/files/publications/reports/CEIOPS-Spring-Financial-Stability-Report-2009.pdf>). See also the OECD report, “Challenges Related to Financial Guarantee Insurance,” Sebastian Schich, June 2008.

Capital and liquidity. Some FG insurers held capital that was inadequate and not commensurate with their risk profiles. Historically low loss ratios led the FG insurers to act as though they were writing “zero loss” or “remote loss” insurance (ie as though claims would very rarely crystallise). There was a lack of appreciation of the need to maintain capital and liquidity at sufficient levels to survive the adverse events which developed. In practice, capital levels were largely driven by the requirements of the rating agencies in relation to maintaining AAA status rather than by a firm’s own analysis of its capital requirements. It was apparent that, once in difficulty, the FG insurance sector did not have sufficient financial flexibility to access additional liquidity or capital at reasonable cost. Historically, the levels of losses were such that the FG insurance sector had ample time in which to plan its capital management. In this instance, however, FG insurers were unable to respond to the rapid development of the crisis and many were left with capital shortfalls.

The market also needs to address the management of collateral; some FG insurers were not able to deal with the requirement for increased collateral to be posted when they were downgraded by the rating agencies. While an FG insurer may have sufficient liquidity to make required payments on defaulting guarantees as they become due, some FG insurance contracts allowed other counterparties the right to demand collateral following the downgrading of an FG insurer. In such circumstances, counterparties can require collateral to back up the insurance guarantee even on securities which have not defaulted. Much depends on the terms of the original guarantees that were issued, as some FG insurance contracts did not require any collateral to be posted.⁸⁷

Role of credit rating agencies. There appears to have been an overreliance on rating agencies to determine the rating of the securities being underwritten rather than FG insurers undertaking their own evaluation of the underlying risks. As part of the underwriting process, the sector apparently did not undertake sufficient in-depth analysis of the underlying risks (including, for example, deteriorating underwriting standards in mortgage markets) of the securities they were insuring. The simple monitoring of movements in credit ratings was not a substitute for the ongoing monitoring of the risk following the original underwriting decision. The rating agencies rated the FG insurers as well as the underlying exposures; therefore, the entire market was based essentially on the views of the rating agencies.

The downgrading of credit ratings had a fundamental effect on the FG insurance market. The impact of a downgrade in the rating of an FG insurer was to trigger contractual conditions requiring the posting of collateral or, in some circumstances, the unwinding of contracts.

The role of the credit rating agencies in the financial crisis has been well documented elsewhere.⁸⁸ Many of the now-problematic transactions, such as high-risk mortgage-backed securities, were rated AAA by the rating agencies at the time those securities were issued. Other counterparties may have difficulty in evaluating rating agency conclusions because each agency has its own criteria and methodology which are not always transparent to the market. Since the credit rating

⁸⁷ For example, to the extent that FG insurance industry provided protection by writing CDS contracts, many of these contracts did not allow for accelerated amortisation or require collateral postings in the event of downgrades of the FG insurance.

⁸⁸ See, for example, *The Role of Credit Rating Agencies in Structured Finance Markets*, IOSCO, May 2008.

is a key parameter in the business plans of the FG insurers, and in those of their counterparties, it is important that there is consistency and transparency in the rating process. Any downgrade in a rating not only affects the business outlook of the FG insurers but also feeds through to the rating of those securities for which insurance guarantees have been issued.

Use of special purpose entities. The establishment and use by FG insurers of unregulated SPEs, which had no capital or reserve requirements and which were reliant on support from the FG insurers, exacerbated the problems of the insurers. All of the issues described above were therefore magnified in these SPEs, but this became apparent only when the crisis was well underway. The wider risk issues posed by SPEs - to which the FG insurance sector is not immune - are described in the 2009 Joint Forum Report on Special Purpose Entities. All of the above factors resulted in FG insurers becoming highly leveraged when measured by total insured exposures relative to claims paying resources. An FG insurer's value is extremely sensitive to downgrades in the credit rating of its financial strength, so that any decline has a significant impact on its future business prospects. High operating leverage increases the potential for such rating downgrades, particularly when there are large, correlated risk exposures which will have a negative impact if the performance of those exposures deteriorates.

Knock-on effects. There are further risks which are related to market infrastructure, including poor segregation of the risks associated with different lines of business so that adverse impacts on capital and solvency from the higher-risk business have an impact on the traditional municipal bond insurance business. The higher-risk business has been characterised not just by higher premiums but also by greater default intensities and size of losses. The capital bases of the FG insurers may not be sufficiently strong to withstand the increasing demands of these higher-risk areas of structured finance.

V. Recommendations and policy options to strengthen regulatory oversight of credit risk transfer products

In light of the role that inadequate management of risks associated with credit risk transfer products played in the crisis, supervisors should consider various actions - on either a national or international basis - to address these risks. This report focuses on two prominent products for transferring credit risk: credit default swaps (CDS) and financial guarantee (FG) insurance.

While CDS and FG insurance share some similar characteristics (notably, they both transfer credit risk but give rise to counterparty credit risk, operational risk, and risks related to a lack of transparency, among others), there are significant differences between the two that merit unique consideration. As the guiding principles presented elsewhere in this report suggest, the supervisory and regulatory requirements applied to activities that appear to have similar economic substance (eg transfer of credit risk via CDS and FG insurance) should adequately reflect any similarities and differences. Consequently, some recommendations for addressing gaps in oversight apply to both CDS and FG insurance, while others are more narrowly focused on one or the other.

Many of the recommendations and options presented below have been discussed in other international fora or in jurisdictions. They are reiterated in this report because the Joint Forum seeks to provide a broad range of recommendations and options for addressing gaps in oversight. Moreover, the Joint Forum welcomes efforts that have been undertaken since

the onset of the crisis and supports further international work to address these gaps in an appropriate manner. Some of the recommendations and options below reiterate, for example, the detailed recommendations in IOSCO's September 2009 report on *Unregulated Financial Markets and Products* in the areas of risk management, transparency, and market infrastructure.

In the context of promoting more stable and transparent markets, reducing systemic risk, and restoring confidence, several central counterparties (CCP) for trading over-the-counter derivatives - such as CDS - have been established and have begun operation; capital requirements for the use of such instruments have been increased for banking organisations; transparency has been enhanced; and steps have been taken to reduce operational and settlement risks.

Recommendation n° 13: Supervisors should encourage or require greater transparency for both CDS and FG insurance.

Supervisors should continue to support initiatives to store CDS trade data in repositories (eg the Depository Trust & Clearing Corporation's Trade Information Warehouse).

Supervisors should encourage or require firm-level public disclosures (to provide transparency for investors) and/or enhanced regulatory reporting (to provide transparency for supervisors). Such disclosures could include, for example, risk characteristics of instruments, risk exposures of market participants, valuation methods and outcomes, and, off-balance sheet exposures including investments with unregulated entities and contractual triggers that may lead to the posting of collateral, claims payment, or contract dissolution.

Supervisors should promote, in the context of wider liquidity considerations, the appropriate and timely disclosure of CDS data relating to price, volume, and open interest by market participants, electronic trading platforms, exchanges, data providers, and data warehouses.

With this greater transparency, supervisors should, to the extent feasible, monitor concentrations that could pose systemic risks. Such disclosure should be calibrated to avoid detrimental impact on market liquidity.

Supervisors should develop tools to conduct enhanced surveillance of CDS markets to detect and deter market misconduct.

Recommendation n° 14: Supervisors should continue to work together closely to foster information-sharing and regulatory cooperation, across sectors and jurisdictions, regarding CDS market information and regulatory issues. Supervisors should cooperate and exchange information on the potential cross-sectoral and systemic risks raised by stress and scenario testing of FG insurers.

Recommendation n° 15: Supervisors should continue to review prudential requirements for CDS and FG insurance and take action where needed. This includes:

Setting appropriate regulatory capital requirements for CDS transactions.⁸⁹

⁸⁹ The BCBS in July 2009, for example, issued revisions to the Basel II capital framework.

Establishing minimum capital, solvency, reserving, and liquidity requirements for FG insurers (including requirements for the use and actuarial approval of internal models) with appropriate levels of surplus to policyholders factored into these requirements.

Monitoring the exposure and concentration of risk by FG insurers with reinsurers.

Requiring firms to undertake aggregated risk analysis and risk management, including counterparty risk arising from exposures via CDS or FG insurance, as well as the potential effect of special-purpose entities and other external vehicles that could affect a FG insurer, so the insurer is not compromised by the failure of such vehicles.

Applying robust counterparty risk management arrangements, including requirements for all important counterparties to post collateral to secure their obligations.

Ensuring that the corporate governance process of an FG insurer is commensurate with its risks.

Recommendation n° 16: Supervisors should continue to promote current international and domestic efforts⁹⁰ to strengthen market infrastructure, such as supervised/regulated CCPs and/or exchanges. This should include encouraging greater standardisation of CDS contracts to facilitate more organised trading and CCP clearing, more clearing through central counterparties for clearing eligible contracts, and possibly an evolution to more exchange trading. There should also be enhanced dialogue among supervisors of CCPs regarding applicable standards and oversight mechanisms for CCPs.⁹¹

Recommendation n° 17: Policymakers should clarify the position of FG insurance in insurance regulation, if this is not already the case, so it is clear that the provision of FG insurance is captured by regulation and is subject to supervision.

Options to be considered

Among the more specific options that supervisors are exploring or that may be explored in the future, are:

- Ring-fencing and protecting from the potential losses of other business lines the traditional business underwritten by FG insurers (eg wrapping municipal bonds) so it is separately reserved and capitalised.
- Prohibiting or limiting exposure by FG insurers to pools of asset-backed securities that are partly or wholly composed of other pools.

⁹⁰ Initiatives are under way in a number of jurisdictions to achieve the objectives noted here.

⁹¹ In this regard, for example, IOSCO and the Committee on Payment and Settlement Systems (CPSS) established a joint task force to review the application of the 2004 CPSS-IOSCO *Recommendations for Central Counterparties* to clearing arrangements for OTC derivatives. The recommendations, which were developed by the CPSS and the IOSCO Technical Committee, set forth standards for risk management of a central counterparty.

- Requiring FG insurers to set maximum limits for exposure to any one risk or group of risks, such as a particular counterparty or category of obligation, by reference either to the aggregate exposure or to capital levels;
- Limiting the notional value of aggregate exposures, either by counterparty or by risk factor, in relation to levels of capital or by other appropriate measure.

Annex 1

Acronyms

AIG	American International Group
BCBS	Basel Committee on Banking Supervision
CCP	Central counterparties
CDO	Collateralised debt obligation
CDS	Credit default swap
DTI	Debt to income
EU	European Union
FASB	Financial Accounting Standards Board
FG	Financial guarantee
FSB	Financial Stability Board
GDP	Gross domestic product
JFRAC	Joint Forum Working Group on Risk Assessment and Capital
IAIS	International Association of Insurance Supervisors
IASB	International Accounting Standards Board
IMF	International Monetary Fund
IOSCO	International Organization of Securities Commissions
ITE	Intra-group transaction and exposure
LTI	Loan to income
LTV	Loan to value
MBS	Mortgage-backed securities
NOHC	Non-operating holding company
OTC	Over-the-counter
SPE	Special purpose entity

Annex 2

Fundamental analysis of the objectives of financial regulation

In order to better understand and analyse the nature of financial regulation in each sector, the Joint Forum has performed a comparative analysis of the key objectives of financial regulation from an economic standpoint. This analysis focuses on market failures that should be addressed through regulation. Indeed, these elements could be seen as key drivers of the nature of the financial regulation in each sector.

A. The role of financial intermediation for the real economy

The aim of financial intermediation is to promote the efficient allocation of savings and investments in the real economy. To this end, financial intermediaries bring together economic agents with a surplus of funds and those with a deficit of funds. By supplying these services to the real economy, financial intermediaries lower the cost of capital for corporates and individuals and allow for the pricing and distribution of risk.

One classical example of a financial intermediary is a bank. Traditionally, this type of institution provides for its funding by taking deposits or by borrowing on money and capital markets, while it uses these funds to supply loans to other parties or invest in (financial) assets. While doing so banks generally engage in maturity transformation, in the sense that they have short-term liabilities while lending long-term. As a result, a bank might be forced to repay its creditors on a shorter notice than that it can demand repayment of the loans made to its debtors. The typical risks faced by banks are therefore credit risks from their lending activities, and funding liquidity risk related to the mismatch between short-term liabilities and relatively illiquid assets on their balance sheets.

Insurance companies are another type of financial intermediary, particularly a risk intermediary, and offer their policy holders protection against uncertain future events. Insurance offers protection against uncertain future events. Although this task is of considerable importance to the economy, usually the traditional insurance sector is unlikely to be a source of financial instability. Insurance provides a safety net when underlying adverse events occur. Insurance firms themselves are directly affected by economic events such as interest rate movements, which can impact asset valuation, and inflation, which can result in policyholders cashing out policies. Moreover, economic distress leading to deteriorating social or economic conditions, or obligations to pay damages as a result of judicial rulings, can result in new liabilities and potentially catastrophic losses. Insurers intermediate risks directly. They manage these risks through diversification and the law of large numbers. For example, diversification of policy liabilities can be achieved through reinsurance. Aside from these direct business risks, the most significant risks to insurers are generated on the liability side of the balance sheet. These risks are referred to as technical risks and relate to the actuarial or statistical calculations used in estimating liabilities. If these calculations are incorrect (for example, if one or more of the assumptions on which they are based prove to be inaccurate), the consequences for the insurer can be significant. In particular, premiums charged could be inadequate to cover the risk and costs, insurers may pursue lines of business that are not profitable, and liabilities may be under- or over-stated, masking the true financial state of a company. On the asset side of the balance sheet, insurers incur credit,

market and interest rate risk from their investments, as well as risks arising from asset-liability mismatches.

A third type of financial intermediary are market intermediaries, which are referred to in IOSCO principles as generally including those who are in the business of managing individual portfolios, executing orders, dealing in or distributing securities and providing information relevant to the trading of securities. Thus, they can be investment banks, or managing companies of (collective) investment schemes or funds. Examples of funds are hedge funds, money market funds, some special purpose vehicles, or real estate funds. The securities sector is particularly sensitive to market risk and liquidity risk. For example, a loss of confidence on the part of investors can lead to massive and rapid withdrawal of short-term funds, producing a collapse in asset prices.

In addition to intermediating between agents in the real economy, financial intermediaries often engage in transactions with each other. Transactions may take the form of a bilateral contract between the parties, which will be settled over-the-counter and which may give rise to the posting of collateral. Although financial instruments such as stocks, futures and options may be traded over-the-counter, they are typically traded on organised trading venues such as regulated markets and cleared via central clearing. In this case, a third party is involved, the role of which is to manage and reduce counterparty risk. When instruments are traded on an exchange and centrally cleared there is no direct connection between counterparties anymore. While providers of exchange or central clearing facilities as well as clearing and settlement systems are generally not financial intermediaries themselves, they form an important part of the infrastructure of financial markets and are generally subject to regulation or supervision.

While financial flows increasingly cross the boundaries among the three financial sectors, these boundaries themselves have become more blurred over time as well. This happens either because intermediaries from different sectors merge to form financial conglomerates, or because intermediaries from one sector engage in activities traditionally belonging to another. By now, for instance, banks can offer insurance-like products by selling financial derivatives such as credit default swaps (which may be used for speculative purposes), while insurance firms can offer investment schemes such as variable annuities, and sometimes earn more on their own investments than on their risk pooling activities. In addition, many securities firms act in a bank-like manner by financing illiquid assets with short-term debt, which can lead to a highly leveraged balance sheet. This ability to take the same type of risks on balance as a typical bank, without being regulated as such, has by now caused entities such as hedge funds or special purpose vehicles to be considered members of a “shadow” banking system. This classification underlines the fact that while they are different from one another on a legal definition, the different types of intermediaries can engage in similar economic activities.

B. Market failures impeding stable and efficient financial intermediation

Economic theory has traditionally identified three types of market failures that can justify the regulation of private institutions. These market failures are i) negative externalities, ii) information asymmetries, and iii) competitive distortions. While also in the financial sector the reduction of competitive distortions is generally implemented by the anti-trust authorities, the

need to address negative externalities and information asymmetries can be considered the economic rationale for the existence of financial supervision⁹²

(i) Negative externalities

When deciding upon their preferred risk profile, financial intermediaries may not fully take into account the negative effects their failure might have on other intermediaries or on the economy as a whole. This more narrow focus follows naturally from the fact that when the intermediary becomes insolvent, its owners only lose their claim on the future profits of the intermediary. What happens thereafter to the stability and profitability of the other intermediaries and agents in the economy is not taken into account by them. The social cost of an intermediaries' insolvency thus exceeds the private costs for the owners of the intermediary itself. There are four reasons why this is the case.

- First, via **informational contagion** the insolvency of an intermediary can cause counterparties of other intermediaries and their clients to lose confidence in these institutions' assets as well. When these intermediaries rely to a significant extent on for instance short-term funding, this loss of confidence can lead other institutions and clients to cease financial transactions with them and to a withdrawal of funds with liquidity shortages as the potential outcome. In case the freeing of funds requires assets to be sold below book value, the liquidity problems can even have insolvency as a result.
- Second, illiquidity or (near-) insolvency of an intermediary can force it to engage in a **fire sale** of assets so as to adjust the size of its balance sheet to the remaining amount of debt and equity available. When the book value of the assets sold is to be calculated on the basis of mark-to-market accounting, the depressing effect that such fire sales can have on market prices will lead to write downs also for other intermediaries holding such financial assets. Especially when assets are sold in illiquid markets, the price declines and thus the write downs for other intermediaries can be substantial.
- Third, financial intermediaries are relatively **closely interrelated**, for instance because they belong to the same financial group via mutual exposures in the inter bank market, or through derivative trading, re-insurance, prime brokerage services et cetera. The insolvency of an intermediary can thus cause it to default on many of its obligations to other financial intermediaries, which can cause these to suffer large losses as well. Especially during the immediate aftermath of the failure there can be much uncertainty about the size of these exposures, which can again negatively affect the liquidity of other intermediaries via the confidence channel described above.
- Fourth, illiquidity or (near-) insolvency of an intermediary can force it to **restrict the supply of financial services** to the real economy, for instance by raising margins or by quantity rationing. When this happens on a large scale and the supply of credit and insurance is seriously reduced, economic activity will be depressed so that personal and corporate defaults in the real economy increase and prices of (financial) assets decline. In turn, these effects will adversely affect the health of other financial intermediaries as well.

⁹² See also Brunnermeier, Crockett, Goodhart, Persaud and Shin (2009), *The fundamental principles of financial regulation*, Geneva Reports on the World Economy 11.

The above shows why the illiquidity or insolvency of a financial intermediary can have such a destabilising impact also on parties that are not its direct customers or financiers. These effects thus remain in place also when (some of) these intermediaries' direct financiers are protected, for instance by explicit guarantees for bank deposits or insurance policies. Likewise, any indirect supervision of the intermediary by these (professional) financiers will not sufficiently reduce these negative effects either, since these financiers will naturally focus only on those risks relevant for themselves, but not on the destabilising effects on any other parties that the insolvency of an intermediary can bring about.

As such, it could be argued that one objective of financial supervision is the need to internalise these externalities, ie to make sure that when intermediaries decide upon their preferred risk profile, they take the social welfare costs associated with their own instability into account as well. Below, adopting a more common terminology, this objective will be referred to as the reduction of systemic risk caused by the intermediary^{93,94}

(ii) Information asymmetries

Efficient financial intermediation requires the dissemination of relevant information to be timely and widespread, and to be reflected in the price formation process. Higher market efficiency improves the ability of market participants to evaluate the risks and rewards associated with transactions they engage in. This statement of course applies to transactions taking place in all sectors of the economy, but is especially relevant to financial transactions due to the relatively high complexity and information intensity of the contracts involved. When information asymmetries exist between market parties, ie when one party involved in a transaction has more information than the other, this not only affects market efficiency in general, but can also lead to adverse selection and moral hazard behaviour by the party with the informational advantage.

Adverse selection problems occur directly before a transaction has been agreed upon, and happen when one party is not able to properly verify the characteristics of the other. A classic example of this problem is the fact that health insurance is more likely to be bought by people who are more likely to get sick. A recent example of adverse selection is the sale of securitised mortgages to investors after the crisis had unfolded. Since buyers were unable to verify the characteristics of the underlying mortgages, while sellers were unable to credibly signal the quality of their product, the prices investors were willing to pay for these mortgages declined across the board. After all, the only way to avoid buying a mortgage of too low a quality at too high a price was to offer the price that would be appropriate for the mortgage with the lowest quality. The information asymmetry between sellers and buyers of securitised mortgages thus lead buyers to lose market confidence, with a classical 'lemons market' being the result.

⁹³ Technically speaking, reducing systemic risk is a somewhat broader objective than internalising negative externalities, since the former can for example also imply that activities causing negative externalities are simply prohibited, rather than that their costs in terms of financial stability are internalised at their originator in the form of capital or liquidity requirements.

⁹⁴ However it is noted that open economy societies with modern legal systems intentionally provide incentives to entrepreneurs and investors to undertake certain economic activities while putting at risk only the capital invested. Limited liability of companies is a central principle of most modern economic and legal systems. The promotion of innovation and competition among market participants is another key objective of regulation and one often also dependent on a working system of limited corporate liability.

Moral hazard problems take place after the transaction has agreed upon, and happen when one party cannot accurately verify the actions of the other. A classic example is that those people having bought insurance are likely to start taking more risks. A recent example of moral hazard is the making of mortgage loans to individual households during the run-up to the crisis. Since these mortgages and the risks associated with them were securitised directly after they were made, mortgage originators had an incentive to make loans to households in riskier market segments, while monitoring them less accurately. In addition, the non-recourse character of several mortgages induced moral hazard behaviour from the part of the household, since in case of any price declines or payment problems they could unwind their contract by returning the house to the mortgage originator. These households could thus accept more risky mortgages because part of these risks was transferred to the issuers, while the issuer could offer more risky mortgages because part of these risks were transferred to investors in the securitisation process.

In summary, when any information asymmetries exist in (financial) markets, agents having the informational advantage will not always be able or willing to credibly provide other market participants with their information. Therefore, the second economic justification for financial supervision is the need to reduce any information asymmetries between financial market participants, in so far as these hamper the fairness and efficiency of financial markets. Implementing this objective will in turn also reduce systemic risks, since more symmetry of information fosters investor confidence, and thus reduces the probability that informational contagion will occur.

C. Evaluation of standard setters' key objectives in light of the market failures identified

The Basel Committee on Banking Supervision (BCBS), the International Association of Insurance Supervisors (IAIS), and the International Organisation of Securities Commissions (IOSCO) each have formulated core principles for financial supervision. These core principles describe, among other things, the key objectives of their supervision on the three financial sectors. In line with the discussion above, from an economic perspective the formulation of these key objectives should start with the observation that financial supervision aims to redress two types of market failure: systemic risks posed by financial intermediaries (which are to be internalised primarily via prudential supervision), and information asymmetries hampering the functioning of financial markets (which are to be reduced primarily via market conduct supervision). Below, it is analysed to what extent redressing these market failures is included as a key objective in the core principles.

The key objective of bank supervision, as described in the 2001 BCBS core principles, is “to maintain stability and confidence in the financial system, thereby reducing the risk of loss to depositors and other creditors” (p. 8). In the revised version in 2006, the objective is somehow broadened as it is indicated that a “high degree of compliance with the Principles should foster overall financial system stability.”

According to the 2003 IAIS core principles, the main goal of insurance supervision is “the maintenance of efficient, fair, safe, and stable insurance markets for the benefit and protection of policyholders” (p. 9). In practice, this implies that the main goal of insurance supervision is to ensure that the interests of the insured are adequately safeguarded and the laws applicable to the operation of insurance business are observed.

According to the 2008 IOSCO core principles, “the three core objectives of securities regulation are (1) the protection of investors, (2) ensuring that markets are fair, efficient, and

transparent, and (3) the reduction of systemic risk” (p. 5). As noted by the IOSCO, there may be significant overlap in the policies that securities regulators adopt to achieve each of these objectives. For example, regulations that help to ensure fair, efficient, and transparent markets also help to reduce systemic risk.

(i) Reduction of systemic risk

Although their core principles reflect that all standard setters consider reduction of systemic risks to be a key objective, substantial differences exist with respect to how this objective is made explicit. This issue was already raised by the Joint Forum in 2001⁹⁵: “traditionally, the broad objective of supervisors and regulators of the three sectors has been to protect customers, whether these were depositors, investors or policyholders. Over time, as firms have become larger and more entwined with other market participants, supervisors have in some cases also been concerned to limit the potential implications of the sudden failure of a financial institution on the financial system and the economy.” However, “the extent to which concerns over ‘systemic risk’ currently do or should play a role in the development of supervisory policies in each sector is not completely clear. Supervisors in some jurisdictions place more emphasis on these concerns than others, even within the same sector, so it is hard to make generalisations across the sectors” (p. 32).

The above citation underlines that the objective of customer or stakeholder protection is not equivalent to the objective to reduce systemic risks. On the one hand, protecting customers may help to reduce systemic risk by for instance preserving market liquidity, while on the other this might increase systemic risks by undermining market discipline. To have financial supervisors put more emphasis on the objective of systemic risk reduction, the G-20 recommends in its 2009 report on Sound Regulation and Strengthening Transparency that “as a supplement to their core mandate, the mandates of all national financial regulators, central banks, and oversight authorities, and of all international financial bodies and standard setters (IASB, BCBS, IAIS and IOSCO) should take account of financial *system* stability.”

The BCBS states most clearly in its core principles that it aims to maintain overall stability of the financial system. Traditionally, especially distress in the banking sector and instability in the macroeconomic environment have been perceived as reciprocally linked. Therefore, concerns about the importance of banks to the overall economy, including their use as a tool in the implementation of monetary policy, are reflected in the historic tendency of many governments to support their banking sectors during times of crisis. Because of the strong linkage between the banking sector and the macro economy, banking supervisors - many of which are (or were) also central bankers - have placed a great deal of emphasis on maintaining systemic stability.

The IAIS focuses more specifically on promoting a stable insurance market for the benefit and protection of policyholders, while putting somewhat less emphasis on the objective of reducing systemic risks in general.⁹⁶ Although promoting a stable insurance market will contribute to overall systemic stability as well, the core principles put less emphasis on reducing systemic risks than for instance the principles underlying banking supervision. This difference can to some extent be rationalised by noticing that insurers generally are not very dependent on short term debt financing, and therefore are less sensitive to instability caused

⁹⁵ The citations referring to Joint Forum (2001) concern the report on the cross-sectoral comparison of standard setters’ core principles.

⁹⁶ The 2008 IAIS By-Laws however explicitly state in Article 2 (1) (c) that “The objectives of the Association are ... to contribute to global financial stability.”

by confidence effects and liquidity shortages. The systemic risk posed by insolvency of an insurer is therefore not usually at the same level of severity or speed as that associated with the failure of a typical bank⁹⁷.

The IOSCO explicitly aims to reduce systemic risk as well, to the extent that the financial or operational failure of a provider of investment services (or of a market infrastructure such as an exchange, a clearing house, or a clearing and settlement system) does not significantly impair the proper functioning of the broader markets and the economy. In this respect the IOSCO core principles thus predominantly consider risks involving the market intermediary, and IOSCO principles include principles relating to capital adequacy aiming at the following:

- allowing a firm to absorb some losses, particularly in the event of large adverse market moves, and to achieve an environment in which a securities firm could wind down its business over a relatively short period without loss to its customers or the customers of other firms and without disrupting the orderly functioning of the financial markets ;
- requiring firms to maintain adequate financial resources to meet their business commitments and to withstand the risks to which their business is subject. Risk may result from the activities of unlicensed and off balance sheet affiliates and regulation should consider the need for information about the activities of these affiliates.

It also needs to be mentioned that the IOSCO offers an important contribution to reducing systemic risks by reducing information asymmetries and enhancing investor confidence. This objective will be discussed in more detail below.

(ii) Reduction of information asymmetries

There also exist differences between the standard setters with respect to the inclusion of reduction of information asymmetries as a key objective in the core principles. In general reducing information asymmetries fosters market confidence and contributes to financial stability. Such transparency strengthens perceptions of regulatory predictability and contributes to supervisory accountability, which in turn facilitate normal market functions and improve the credibility of the enforcement process. However, when problems emerge in a particular financial intermediary a supervisory dilemma arises. This was noted already by the Joint Forum in 2001: “Supervisors in all three sectors must take into account the balance of advantage in making public any supervisory action that has been taken to prevent or remedy problems in supervised firms”. Hence, especially in times of financial instability the objectives to reduce both systemic risks and information asymmetries might be difficult to reconcile.

Bearing the above in mind, the core principles of the BCBS do not explicitly mention the reduction of information asymmetries or customer protection as a key objective. This was already noticed by the Joint Forum in 2001: “This leads banking supervisors in many jurisdictions to avoid or postpone public disclosure of banks’ problems because of the importance of maintaining confidence in the banking system. Public confidence is essential to ensure stable funding. Loss of confidence in the banking sector can create financial instability by resulting in a run on banks by depositors, with a subsequent systemic drain on liquidity” (p. 9). Nonetheless, the BCBS core principles stipulate the need for intermediaries to

⁹⁷ Refer to the views of the IAIS on *Systemic Risk and Insurance* for further elaboration http://iaisweb.org/__temp/Note_on_systemic_risk_and_the_insurance_sector.pdf

adequately disclose relevant information on their financial position to market participants in general.⁹⁸

The IAIS core principles reflect the need to reduce information asymmetries by referring to the objective of promoting customer protection. This objective is filled in by the requirement that intermediaries treat policyholders and investors fairly, while they adequately provide them with relevant information. Nonetheless, in practice the trade-off between this objective and the need to maintain the stability of the intermediary exists here as well, as was mentioned by the Joint Forum in 2001: “Insurance supervisors are concerned that disclosure to the public of regulatory actions being taken could cause policyholders or others to take actions that could worsen the situation the supervisor was trying to remedy. Furthermore, the public awareness of difficulties of individual companies might affect public confidence in the insurance sector as a whole.” To address this issue, however, “in at least some jurisdictions, a distinction is made between supervisory actions related to prudential issues, which tend not to be made public, and those related to conduct of business issues, where disclosure is more common” (p. 11).

The IOSCO most explicitly refers to the objective of reducing information asymmetries, by stating that markets should be fair to the extent that they do not unduly favour some market participants over others, that they should be efficient in the sense that relevant information⁹⁹ is necessary for investors to make informed investment decisions on an ongoing basis and should be is timely disseminated, and that they should be transparent in the sense that information about trading itself is publicly available on a real-time basis. Securities supervisors generally also disclose enforcement actions, reflecting that in the securities sector, supervisory transparency and accountability are linked to the maintenance of confidence in the markets, which is vital for the maintenance of orderly markets. Besides, with regard to the secondary market, the core principles state that “systems for clearing and settlement of securities transactions should be subject to regulatory oversight, and designed to ensure that they are fair, effective and efficient and that they reduce systemic risk.”

D. Observations on the objectives of financial regulation

Traditionally, differences exist with respect to the relative importance attached to prudential and market conduct regulation by supervisors across the three financial sectors. This is a reflection of the sectoral approach to financial supervision, with separate principles for banks, insurance companies, and securities firms. Indeed, this approach comes at the risk of more differentiated financial supervision between sectors, even though the boundaries between financial sectors have become increasingly blurred over time. In contrast, in times of financial instability the boundaries between prudential and market conduct supervision tend to become more explicit, since during such times a trade-off can arise between the reduction of systemic risks and the reduction of information asymmetries. Nonetheless, under a sectoral approach to financial supervision, standard setters’ need to keep in mind both these key objectives of financial supervision in formulating their core principles.

In summary, the above analysis shows that:

⁹⁸ This is also included in the third pillar of Basel II, which deals with disclosure to market participants.

⁹⁹ Information that is material to investors’ decisions includes information related to the public offering of securities - including comparable and reliable financial information, which requires sound accounting and auditing standards - as well as the trading of securities.

- The BCBS core principles already put quite a large emphasis on the objective to reduce systemic risks, but do not explicitly state as a key objective the adequate disclosure of information to market participants and the public and the fair treatment of customers (although Pillar 3 of the Basel capital adequacy framework shows that supervisory practice might be somewhat ahead of supervisory principles in this case).
- For IOSCO, the key objective of investor protection is mainly met by the reduction of information asymmetries, including the indirect contribution thereof to financial stability, while the objective of reducing systemic risks directly receives substantially less attention.
- The IAIS core principles reflect both objectives, although they have a relatively strong focus on risks for direct policy holders rather than on risks for the financial system in general.

Annex 3

Differences in the core principles

Issues noted in the 2001 JF Core Principles Report	Changes in Principles and Objectives since 2001 (BCBS Core Principles 2006; Insurance Core Principles 2003; IOSCO Objectives and Principles of Securities Regulation 2008)	Other Developments (after the release of the respective principles)
<p>Preconditions:</p> <p>Banking: Banking supervision as a part of wider arrangements to promote stability in financial markets. This requires eg:</p> <ul style="list-style-type: none"> - A well developed public infrastructure - Effective market discipline - Procedures for efficient problem resolution - An appropriate level of systemic protection. <p>(Section II)</p>	<p>Banking: The updated CPs do not include any preconditions.</p>	<p>Banking: ./.</p>
<p>Insurance: Supervision relies upon eg:</p> <ul style="list-style-type: none"> - A well-developed public infrastructure - Effective market discipline - Sound and sustainable macroeconomic policies. <p>(Section 1)</p>	<p>Insurance (Conditions for effective insurance supervision, ICP 1): Reflected in new ICP 1. The previous 4 areas now combined into 3:</p> <ul style="list-style-type: none"> - a policy, institutional and legal framework for financial sector supervision - a well developed and effective financial market infrastructure - efficient financial markets 	<p>Insurance: ./.</p>
<p>Securities: Existence of an appropriate and effective legal, tax and accounting framework.</p> <p>Securities law and regulation cannot exist in isolation from the other laws and the accounting requirements of a jurisdiction. (Regulatory Environment)</p>	<p>Securities: Unchanged.</p> <p>! The 2008 IOSCO Objectives and Principles of Securities Regulation are absolute identical with the former version; differences can only be found in the footnotes that refer to other/ new additional sources !</p>	<p>Securities: ./.</p>

Group-Wide Supervision:		
<p>Banking: (Global) Supervision of banking groups on a consolidated basis as an essential element of supervision.</p> <p>Non-financial activities of a bank or group may pose risks to the bank. (CPs 18, 20, 23)</p>	<p>Banking (Consolidated Supervision, CP 24): Group-wide approach (whereby all risks run by a banking group are taken into account, wherever they are booked) that may go beyond accounting consolidation.</p> <p>Home supervisor has power to require the closing of foreign offices or to impose limitations on their activities, if it cannot gain access to the information required for a consolidated supervision.</p> <p>CP 25 states criteria for the functioning of a cross-border according to cooperation and information exchange.</p> <p>Licensing criteria in respect to a sufficient consolidated supervision (ICP 3 EC 5).</p> <p>Adequate distribution of capital within different entities of a banking group (CP 6 AC 4).</p>	<p>Banking: The Joint Forum: <i>Cross-sectoral review of group-wide identification and management of risk concentration</i> (April 2008)</p>
<p>Insurance: “Idea” of a group-wide supervision, but no specific regulations. (ICPs 12, 15)</p>	<p>Insurance (Group-Wide Supervision, ICP 17): New ICP which calls for supervisory authorities to supervise insurers on a solo and a group-wide basis. Essential criteria to demonstrate observance includes:</p> <ul style="list-style-type: none"> - clear definition of groups considered to be insurance groups/financial conglomerates and scope of supervision - Authority ensures effective and efficient group-wide supervision and cooperate to avoid unnecessary duplication - Well-defined responsibilities of supervisory authorities in charge of different parts of the group. These shall leave no supervisory gaps. - Supplement solo supervision in areas such as group structure and management, capital adequacy, reinsurance, risk concentrations, intra-group transactions and exposures, internal control and risk management - Home/host supervisory cooperation - Reporting systems to meet supervisory information demands - Supervisory action when organisational structure 	<p>Insurance: The Joint Forum: <i>Cross-sectoral review of group-wide identification and management of risk concentration</i> (April 2008)</p> <p>IAIS: <i>Principles on group-wide supervision</i> (Oct. 2008) to establish an internationally acceptable framework. Focus on:</p> <ul style="list-style-type: none"> - Capital adequacy on group-wide basis - Fitness and propriety of board and senior management members - Adequate risk management and internal controls - Sufficient supervisory skills and authority - Cooperation and exchange of information between supervisors. <p>See also IAIS: <i>Guidance paper on the role and responsibilities of a group-wide supervisor</i> (Oct. 2008) and <i>Guidance paper on the use of supervisory colleges in group-wide supervision</i> (Oct 2009.) Furthermore, the IAIS currently develops an overarching Group-wide Supervision Framework</p>

	hinders effective supervision	(GSF).
<p>Securities: Need for cooperative efforts to improve the effectiveness of supervisory methods and approaches; this is particularly important when a group is active in several jurisdictions.</p> <p>Risks may result from the activities of unlicensed and off balance sheet affiliates and regulation should consider the need for information about the activities of these affiliates. (CPs 11-13)</p>	<p>Securities: Unchanged.</p>	<p>Securities: The Joint Forum: <i>Cross-sectoral review of group-wide identification and management of risk concentration</i> (April 2008)</p> <p>IOSCO: Creation of the Task Force on Supervisory Cooperation (June 2009.)</p>
Cooperation and Information Sharing:		
<p>Banking: Arrangements for sharing information and cooperation between other supervisors and other authorities with responsibilities for the soundness of the financial system, both on a national and international level. (CPs 1, 3, 24, 25)</p>	<p>Banking (Consolidated Supervision, CP 24; Home-Host Relationships, CP 25): Basically unchanged, but amendments in CP 25 (Home-host-relationships).</p>	<p>Banking: BCBS initiative to strengthen global regulation of the banking sector, eg with the use of a more regulatory focus on macroprudential supervision.</p>
<p>Insurance: Need for adequate and effective communication in order to share relevant information with each other; esp. consultations according to cross-border establishments. (ICPs 2, 4, 15, 16)</p>	<p>Insurance (Supervisory Cooperation and Information Sharing, ICP 5): Combined previous Principle 16 Coordination and Cooperation and Principle 17 Confidentiality and streamlined language.</p>	<p>Insurance: Developed an IAIS Multilateral Memorandum of Understanding which became operational in June 2009.</p>
<p>Securities: Regulator should have authority to share information with domestic and foreign counterparts; they should establish information sharing mechanisms.</p> <p>Regulatory system should allow for assistance to be provided to foreign regulators.</p> <p>Possible exchange of information with other regulators, eg in the banking and insurance sectors at both the domestic and international levels. (CPs 9-13)</p>	<p>Securities: Unchanged.</p>	<p>Securities: IOSCO: The Multilateral Memorandum of Understanding concerning Consultation and Cooperation and the Exchange of Information was approved in May 2002. All IOSCO ordinary members have to implement the MOU by 1-1-2010. IOSCO is currently carrying out the assessments. Fifty-two members have now become signatories to the IOSCO MOU and twenty have joined the IOSCO MOU Appendix B list (June 2009).</p>

Safeguarding of client assets		
<p>Banking: Not specifically addressed, supervision aims to maintain stability and confidence in financial system, thereby reducing risks for depositors/other creditors.</p> <p>Deposit protection. (Intro, CP Appendix II)</p>	<p>Banking: No obvious changes, only indirect protection of clients due to enlarged disclosure regulations (Accounting and Disclosure, ICP 22).</p>	<p>Banking: Joint Forum: <i>Customer suitability in the retail sale of financial products and services</i> (April 2008)</p> <p>BCBS/ IADI: “Core principles for effective deposit insurance systems” (June 2009)</p>
<p>Insurance: Customer protection as a part of insurance supervision. (Background, ICP 11)</p>	<p>Insurance (Consumer Protection, ICP 25):</p> <ul style="list-style-type: none"> - Previous Principle 11 Market Conduct split into 3 ICPs – ICP 24 Intermediaries; ICP 25 Consumer Protection; ICP 26 Information, disclosure & transparency towards the market. - ICP 24 reads: “The supervisory authority sets requirements, directly or through the supervision of insurers, for the conduct of intermediaries.” - ICP 25 states that the supervisor sets minimum requirements for insurers and intermediaries in dealing with consumers. This includes the provision of timely, complete and relevant information to consumers. - ICP 26 states that the supervisor requires insurers to disclose relevant information on a timely basis to give stakeholders a clear view of the business activities, financial position and to facilitate the understanding of risks. 	<p>Insurance: IAIS: <i>Standard on disclosures concerning investment risks and performance for insurers and reinsurers</i> (Oct. 2008)</p> <p>Joint Forum: <i>Customer suitability in the retail sale of financial products and services</i> (April 2008)</p>
<p>Securities: Regulatory system should provide for rules governing the legal form and structure of collective investment schemes and the segregation and protection of client assets. (CP 18)</p> <p>Requirement of disclosure to enable the evaluation of the suitability of a collective investment scheme for a particular investor and the value of the investor’s interest in the scheme.(CP 19)</p> <p>As investor protection is a fundamental objective of securities regulation, all Principles generally are aimed at achieving this objective. (CPs 15, 18, 18, 19; Objective of securities regulation)</p>	<p>Securities: Unchanged.</p>	<p>Securities: Joint Forum: <i>Customer suitability in the retail sale of financial products and services</i> (April 2008)</p>

Application of uniform prudential standards		
Banking:	Banking:	Banking:
<p>Risk Management Banks have a comprehensive risk management process in place, incl. appropriate board and senior management oversight. (CP 13)</p> <p>Evaluation of a bank's policies, practices and procedures related to the granting of loans and making of investments. (CP 7) Adequate loan loss provisions/ reserves. (CP 8)</p> <p>Requirements set for connected lendings. (CP 10)</p> <p>Adequate measuring, monitoring and controlling of market risks. (CP 12) Only small "sub-item" on liquidity risk. (CP 5)</p> <p>Only small "sub-item" on operational risk. (CP 5)</p> <p>Only small "sub-item" on interest rate risk.</p>	<p>Risk Management Process (CP 7):</p> <ul style="list-style-type: none"> - Board members and senior management have to satisfy enlarged requirements - Banks need policies/ processes to ensure that new products and major risk activities are approved eg by the Board - Clear segregations of functions that deal with risks within banks; larger/ more complex banks need especially dedicated units - Conduction of stress-tests - Policies/ processes to consider other risks not addressed in these CPs (eg reputational risks). <p>Credit Risk (CP 8):</p> <ul style="list-style-type: none"> - Refined criteria for taking credit risk, incl. eg a continued analysis of a borrower's situation, a classification system consistent with the bank's activities - Policies/ processes to assess the actual/ future counterparties credit risk exposures. <p>Exposures to Related Parties (CP 11):</p> <ul style="list-style-type: none"> - Write-offs of exposures to related parties according to standard policies/ processes - Establishment of policies/ processes for considering valuation adjustments for positions that otherwise cannot be prudently valued. <p>Market Risk (CP 13):</p> <ul style="list-style-type: none"> - Market risk models have to be independently tested <p>Liquidity Risk (CP 14):</p> <ul style="list-style-type: none"> - Banks must have a comprehensive liquidity management strategy and policies/ processes for managing liquidity risk that takes into account how other risks may impact this strategy - Redefined regulations for currency risks. <p>Operational Risk (CP 15):</p> <ul style="list-style-type: none"> - Banks need to have comprehensive operational risk management policies/ processes that are reviewed by supervisors - Need for detailed management, assessment and monitoring of outsourced activities. <p>Interest Rate Risk in the Banking Book (CP 16):</p>	<p>Joint Forum: <i>The Management of Liquidity Risk in Financial Groups</i> (May 2006)</p> <p>BCBS: <i>Principles for Sound Liquidity Risk Management and Supervision</i> (September 2008)</p> <p>BCBS: <i>Supervisory guidance for assessing banks' financial instrument fair value practices</i> (April 2009)</p> <p>BCBS WP No. 16 on the interaction of credit and market risk (May 2009)</p> <p>BCBS: <i>Principles for sound stress testing practices and supervision</i> (May 2009)</p> <p>BCBS: <i>Enhancements to the Basel II framework</i> (July 2009)</p> <p>BCBS: <i>Revisions to the Basel II market risk framework</i> (July 2009)</p>

(CP 5)	<ul style="list-style-type: none"> - Comprehensive and appropriate interest rate risk measurement systems; any models/ assumptions are validated on a regular basis - regular appropriate stress tests to measure the vulnerability to loss under adverse interest rate movements. 	
Internal Controls Banks need to have internal controls that are adequate for the nature and scale of their business. (CP 14)	Internal Control and Audit (CP 17): <ul style="list-style-type: none"> - No significant changes. 	
Risk Concentration Banks have management information systems that enable the management to identify risk concentration within the portfolio. Supervisors must set limits to restrict certain exposures; They can also establish criteria for reviewing major acquisitions or investments. (CPs 5, 9)	Large Exposure Limits (CP 10): <ul style="list-style-type: none"> - No significant changes; but banks must additionally have an active governance that eg establishes thresholds for acceptable concentrations. 	The Joint Forum: <i>Cross-sectoral review of group-wide identification and management of risk concentration</i> (April 2008) BCBS: <i>Enhancements to the Basel II framework</i> (July 2009)
Capital Requirements Setting of prudent and appropriate minimum capital adequacy requirements that reflect the banks risks. Definition of capital components. Capital requirements for internationally active banks not to be less than those established in the Basel Capital Accord. (CP 6)	Capital Adequacy (CP 6): Possible use of internal assessments of risks as inputs to the calculation of regulatory capital. Banks have to adopt a forward-looking approach in anticipation of possible events or market changes that could have negative effects on capital. Adequate distribution of capital within different entities of a banking group. Supervision can intervene early to prevent capital from falling below the minimum (CP 23).	BCBS: <i>Enhancements to the Basel II framework</i> (July 2009) BCBS: <i>Revisions to the Basel II market risk framework</i> (July 2009) BCBS initiative to strengthen global regulation of the banking sector, eg: <ul style="list-style-type: none"> - More and higher quality capital to back risky exposures - Countercyclical buffers and provisions - Introduction of a non-risk based measure to supplement Basel II and help contain leverage in the banking system
Accounting Policies/ Practices Consistent accounting policies/ practices to enable a true and fair view of the bank's financial situation. Supervision provides mandatory accounting standards to be used in preparing supervisory reports. (CPs 5, 6, 9, 21)	Accounting and disclosure (CP 22): <ul style="list-style-type: none"> - Banks must have a formal disclosure policy that should provide a basis for effective market discipline - Principal need for more detailed quantitative and qualitative information. 	(BCBS initiative to strengthen global regulation of the banking sector, eg by a greater transparency about the risks in banks' portfolios) BCBS: <i>Supervisory guidance for assessing banks' financial instrument fair value practices</i> (April 2009)
Insurance:	Insurance:	Insurance:
Risk Management	Risk Assessment and Management (ICP 18):	IAIS: <i>Guidance paper on investment risk management</i>

<p>Insurers must have a comprehensive risk management, eg the setting of standards for underwriting risks, valuation of policy liabilities; Supervisors have authority to act if eg underlying risks are not understood by the board/ senior management. (CPs 4-6, 14)</p> <p>Establishment of standards regarding the companies' assets, that apply at least to an amount of assets equal to the total of the technical provisions and that address eg diversification by type, limits. Main risks: market risk, credit risk, liquidity risk, operational risk, legal risk and safe keeping of assets. (ICPs 5-6)</p> <p>Establishment of standards regarding the liabilities of licensed companies, considering eg:</p> <ul style="list-style-type: none"> - What is to be included as a liability - Provision for policy liabilities or technical provisions. <p>Financial reports should refer to technical provisions/ liabilities.</p> <p>Special provisions for re-insurance (ICPs 7, 10, 12).</p> <p>Possibility to set requirements for the use of financial instruments that may not form part of the financial report; possible restrictions in the use of derivatives/ other off-balance sheet items. (ICP 9)</p>	<ul style="list-style-type: none"> - New ICP 18 Risk assessment and management and ICP 19 Insurance Activity with the latter focusing more on underwriting risk. ICP 18 lays down that the insurer needs to recognise the range of risks that they face and to assess and manage them effectively. <p>Investments (ICP 21):</p> <ul style="list-style-type: none"> - Previous Principle 6 Assets re-expressed from the perspective of investments. <p>Liabilities (ICP 20):</p> <ul style="list-style-type: none"> - No significant changes. <p>Derivatives and similar commitments (ICP 22):</p> <ul style="list-style-type: none"> - No significant changes. 	<p>(October 2004) – currently under review</p> <p>IAIS: <i>Standard on asset-liability management</i> (Oct. 2006) – currently under review</p> <p>IAIS: <i>Standard on disclosures concerning investment risks and performance for insurers and reinsurers</i> (Oct. 2008); broad disclosure requirements according to:</p> <ul style="list-style-type: none"> - investment objectives, policies and management - risk exposure - asset class segregation, description and profiling - performance measurement. <p>IAIS: <i>Standard and guidance paper on enterprise risk management for capital adequacy and solvency purposes</i> (Oct. 2008)</p> <p>Joint Forum: <i>The Management of Liquidity Risk in Financial Groups</i> (May 2006)</p>
<p>Internal Controls Establishment of adequate internal controls appropriate to the nature and scale of business. (CPs 5, 9)</p>	<p>Internal Control, ICP 10:</p> <ul style="list-style-type: none"> - No significant changes. 	<p>./.</p>
<p>Risk Concentration Insurers should have in place a strategic policy that addresses eg: the determination of the strategic asset allocation, that is, the long-term asset mix over the main investment categories, the establishment of limits for the allocation of assets by geographical area, markets, sectors, or counterparties and currency; use</p>	<p>Investments, ICP 21:</p> <ul style="list-style-type: none"> - No significant changes. 	<p>IAIS: <i>Standard on asset-liability management</i> (Oct. 2006)</p> <p>The Joint Forum: <i>Cross-sectoral review of group-wide identification and management of risk concentration</i> (April 2008)</p>

reinsurance as an instrument of risk containment. (ICPs 6, 10)		
Capital Requirements Requirements should be clearly defined and should address the minimum levels of capital or the levels of deposits that should be maintained, always according to the size, complexity and business risks of the insurer. (ICP 8)	Capital Adequacy and Solvency, ICP 23: <ul style="list-style-type: none"> - Requirement to comply with the prescribed solvency regime which includes capital adequacy requirements and requires suitable forms of capital that enable the insurer to absorb significant unforeseen losses - Inflation of capital, eg through intra-group transactions is addressed in the capital adequacy and solvency calculation - Establishment of solvency control levels; where the solvency position reaches or falls below one or more control levels, the supervisory authority intervenes and requires corrective action by the insurer or imposes restrictions on the insurer - Supervisory assessment of the structure of its solvency regime against structures of a peer group of jurisdictions; works towards achieving consistency. 	IAIS: <i>Standard and Guidance Paper on the Use of Internal Models for Regulatory Capital Purposes</i> (Oct. 2008) <ul style="list-style-type: none"> - Only applicable where internal models are accepted by supervisory authority to determine regulatory capital IAIS: <i>Standard on the Structure of Regulatory Capital Requirements and Guidance Paper on the Structure of Regulatory Capital Requirements</i> (both Oct. 2008) and “Standard on the Structure of Regulatory Capital Resources” and “Guidance Paper on the Structure of Regulatory Capital Resources” (both Oct 2009), eg: <ul style="list-style-type: none"> - The supervisor should set out appropriate target criteria for the calculation of regulatory capital requirements, which should underlie the calibration of a standardised approach. - Allowance of the use of approved more tailored approaches such as internal models - Supervisory interventions to avoid the exacerbation of procyclicality effects - Consideration of external factors (eg credit rating agencies).
Accounting Policies/ Practices Accounting standards should be comprehensive, documented, transparent and consistent with international standards. The supervisory authority sets out the principles/ norms regarding accounting techniques to be used for the purposes of reports provided to it for supervisory purposes. Valuation rules should be consistent, realistic, and prudent. (ICP 12)	Reporting to supervisors and off-site monitoring, ICP 12. In this ICP it is laid down that the supervisor sets the requirements for the submission of regular and systematic financial and statistical information, actuarial reports and others. It also requires that the supervisor sets out the principles and norms regarding accounting and consolidation techniques to be used.	./.
Securities: Risk Management Effective risk management that ensures that capital and other prudential requirements are sufficient to address the risks; efficient and accurate clearing and settlement processes; consideration of unlicensed and off-balance-sheet activities. (CP 22) Periodic evaluation of risk management processes;	Securities: Unchanged.	Securities: Joint Forum: <i>The Management of Liquidity Risk in Financial Groups</i> (May 2006)

<p>knowledge of the firm's business, control procedures and policies on the assumption of risk.</p> <p>Regulations according to proprietary trading, secondary markets, the transparency of trading and collective investment schemes (CPs 21ff.).</p>		
<p>Internal Controls Provision of rules governing collective investment schemes and the segregation and protection of client assets. (CP 18)</p> <p>Market intermediaries should comply with certain standards for internal organisation and operational conduct. (CP 23)</p>	Unchanged.	
<p>Risk Concentration Monitoring (and information sharing) of open positions that are sufficiently large to pose a risk to the market or to a clearing firm ("large exposures"). (CPs 25-30)</p>	Unchanged.	<p>The Joint Forum: <i>Risk-Concentration Principles</i> (Dec. 1999)</p> <p>The Joint Forum: <i>Cross-sectoral review of group-wide identification and management of risk concentration</i> (April 2008)</p>
<p>Capital Requirements Initial and ongoing capital and other prudential requirements for market intermediaries. (CP 22)</p> <p>Capital adequacy tests to address the risks of securities firms regarding the nature and amount of their business. (CP 22)</p>	Unchanged.	
<p>Accounting Policies/ Practices Accounting and auditing standards of high and internationally accepted quality. (CPs 16, 21-24)</p>	Unchanged.	IOSCO Technical Committee: <i>Statement on Providing Investors with Appropriate and Complete Information on Accounting Frameworks Used to Prepare Financial Statements</i> (Feb. 2008)

Annex 4

Differences in prudential frameworks across financial sectors

ANALYSIS OF THE DIFFERENTIATED NATURE OF REGULATION ACROSS SECTORS	
Main source: <i>2001 Joint Forum Report Risk Management Practices and Regulatory Capital – Cross-sectoral Comparison</i>	
Differences in prudential frameworks noted in this report and developments since then	
Issues noted in the 2001 JF report	Developments since publication of the JF report
Specific capital regulation or solvency regime frameworks are quite distinct (reasons behind):	
<ul style="list-style-type: none"> • For banks, the dominant approach is based on the Basel Accord. 	<ul style="list-style-type: none"> • Adoption of Basel II aspects of which are currently being reviewed
<ul style="list-style-type: none"> • There are two main approaches for securities firms: <ul style="list-style-type: none"> ◦ The Net Capital approach, which is used in the United States, Canada, Japan, and other non EU jurisdictions. ◦ The EU Capital Adequacy Directive, based on the Basel Accord Amendment for market risks. 	<ul style="list-style-type: none"> • Joint work between IOSCO and the BCBS on trading book issues
<ul style="list-style-type: none"> • There are also two primary frameworks for insurance companies: <ul style="list-style-type: none"> ◦ The Risk Based Capital (RBC) framework, used in the United States, Canada, Japan, Australia and other countries, and ◦ The index based solvency regime that is used throughout the EU but also in a number of other jurisdictions. 	<ul style="list-style-type: none"> • IAIS adopted standards and guidance papers on structure of regulatory capital requirements and resources, ERM for capital adequacy and solvency purpose, use of internal models for regulatory capital purposes. Finalising standards and guidance papers on valuation for solvency purposes; investments. These papers are applicable at solo level. • In the EU, recent adoption of Solvency II which, among other things, incorporates an asset side risk-based capital framework.
The different requirements of accounting conventions , such as the requirement that assets be marked to market (that is common for securities firms) as compared to the historical cost approach typically applied for banks and the variety of different approaches applied by insurance firms make it very difficult to undertake clear comparisons.	<ul style="list-style-type: none"> • IFRS to be applied to a larger number of financial institutions
Differences in the definition of eligible capital (The definition of capital is different across and within sectors)	<ul style="list-style-type: none"> • BCBS currently working on the definition of capital • IAIS adopted a new standard and guidance paper on structure of regulatory capital resources in October 2009.
Differences in the charges applied to individual risks	
Differences in the aggregation methodologies of these charges	<ul style="list-style-type: none"> • Work by the JF on trends in risk integration and aggregation (2003)
Differences in the scope of application of the framework (to individual firms, groups of firms or consolidated groups).	<ul style="list-style-type: none"> • Insurance Core Principle 17 on group-wide supervision provides the overarching requirement for insurers to be supervised on a solo and group-wide basis. IAIS adopted principles paper on group-wide supervision and guidance on the role of a group-wide supervisor. • Currently developing a Group-wide Supervision

	<p>Framework (GSF) that will provide an overarching agenda for the IAIS work in the area of group-wide supervision compatible with the IAIS Framework for insurance supervision for solo entities (including group-wide solvency standards).</p>
<p>Differences in the relative roles of capital and provisions across the sectors.</p>	<ul style="list-style-type: none"> • Further elaboration in IAIS guidance paper on structure of regulatory capital requirements and (the soon to be finalised) guidance paper on structure of regulatory capital resources.

Annex 5

Differences in definitions relevant to identifying the scope of a financial group

Term	Legislative text	Art	Definition
Subsidiary	IOSCO	133	<p>Where the parent holds 100% of the share capital and voting rights in a subsidiary, then capital in that subsidiary not required there for regulatory purposes will in normal circumstances be available to the parent (and, hence, to other parts of the group), subject to any other requirements (eg legal, tax or foreign exchange control restrictions). Provided that excess capital, in addition to that required by the regulator of the subsidiary, is of a type which is acceptable to the regulator of the parent and there are no current or foreseeable restrictions on its transfer, it is not imprudent to allow such an excess to be regarded as available for the bearing of risks by the parent institution or by other entities in the group.</p> <p>134. The position is, however, less clear-cut when external holdings exist in a dependant company.</p> <p>Partly-owned undertakings can be categorised in a number of ways, for example:</p> <ul style="list-style-type: none"> - Subsidiary undertakings over which control is established, either by the group owning more than 50% of the shares or the voting rights, or through a contractual or other arrangement; <p>138. There are, however, some differences of view with regard to the treatment of subsidiary undertakings which are not wholly owned, but over which a group has effective control (either through the ownership of more than 50% of the shares or voting rights, or through a contractual or other arrangement).</p>
Subsidiary	IFRS IAS 27, 28, 31	IAS 28.2 ; 13	<p>A subsidiary is an entity, including an unincorporated entity such as a partnership, that is controlled by another entity (known as the parent).</p> <p>(See parent and control) A subsidiary is an entity, including an unincorporated entity such as a partnership, that is controlled by another entity (known as the parent).</p> <p>13 Control is presumed to exist when the parent owns, directly or indirectly through subsidiaries, more than half of the voting power of an entity unless, in exceptional circumstances, it can be clearly demonstrated that such ownership does not constitute control. Control also exists when the parent owns half or less of the voting power of an entity when there is:</p> <ul style="list-style-type: none"> (a) power over more than half of the voting rights by virtue of an agreement with other investors; (b) power to govern the financial and operating policies of the entity under a statute or an agreement; (c) power to appoint or remove the majority of the members of the board of directors or equivalent governing body and control of the entity is by that board or body; or (d) power to cast the majority of votes at meetings of the board of directors or equivalent governing body and control of the entity is by that board or body.

Subsidiary	IAIS		Subsidiary: A legal entity that is controlled by another entity.
Participation	IOSCO		“Associated undertakings”, denoting for these purposes undertakings over which the group does not have control but does have significant influence (in the sense of a group shareholding or share of the voting rights of between 20% and 50%);
Participation	IFRS IAS 27, 28, 31	IAS 28.2 , 28.7	Significant influence is the power to participate in the financial and operating policy decisions of the investee but is not control or joint control over those policies. Significant influence 6 If an investor holds, directly or indirectly (eg through subsidiaries), 20 per cent or more of the voting power of the investee, it is presumed that the investor has significant influence, unless it can be clearly demonstrated that this is not the case. Conversely, if the investor holds, directly or indirectly (eg through subsidiaries), less than 20 per cent of the voting power of the investee, it is presumed that the investor does not have significant influence, unless such influence can be clearly demonstrated. A substantial or majority ownership by another investor does not necessarily preclude an investor from having significant influence. 7 The existence of significant influence by an investor is usually evidenced in one or more of the following ways: (a) representation on the board of directors or equivalent governing body of the investee; (b) participation in policy-making processes, including participation in decisions about dividends or other distributions; (c) material transactions between the investor and the investee; (d) interchange of managerial personnel; or (e) provision of essential technical information. IAS31.3 Significant influence is the power to participate in the financial and operating policy decisions of an economic activity but is not control or joint control over those policies.
Participation	IAIS		Qualifying participation: a participation held directly, or indirectly through one or several subsidiaries, by a natural person, of at least X % in the company, or – also in the case of a lower percentage – a participation enabling the shareholder to substantially influence the company’s management. X is defined in accordance with domestic law (10% or 20% are common threshold values). [Source: IAIS Insurance Core Principles Methodology, June 2000]
Others	IFRS IAS 27, 28, 31	IAS 28	An associate is an entity, including an unincorporated entity such as a partnership, over which the investor has significant influence and that is neither a subsidiary nor an interest in a joint venture. The term minority interest was replaced by the term non-controlling interest, with a new definition. Non-controlling interest is the equity in a subsidiary not attributable, directly or indirectly, to a parent.
Group	IAIS		Insurance group refers, in this paper, to a group structure which contains two or more insurers. The structure of international insurance groups may derive from an ultimate holding company which is not an insurer. Such a holding company can be an industrial or commercial company, another financial institution (for example a bank) or a company the majority of whose assets consist of shares in insurance companies (and/or other regulated financial institutions). <i>Principles Applicable to the Supervision of International Insurers and Insurance Groups and Their Cross-Border Business Operations (R/NR?)</i> Financial conglomerate: Any group of companies under common control whose exclusive or predominant activities consist of providing significant services in at least two different financial sectors (banking, securities, insurance).
Group	Basel II	21	Banking groups are groups that engage predominantly in banking activities and, in some countries, a banking group may be registered as a bank.

Control	IFRS IAS 27, 28, 31	IAS 27.13	<p>Control is presumed to exist when the parent owns, directly or indirectly through subsidiaries, more than half of the voting power of an entity unless, in exceptional circumstances, it can be clearly demonstrated that such ownership does not constitute control. Control also exists when the parent owns half or less of the voting power of an entity when there is:</p> <p>(a) power over more than half of the voting rights by virtue of an agreement with other investors;</p> <p>(b) power to govern the financial and operating policies of the entity under a statute or an agreement;</p> <p>(c) power to appoint or remove the majority of the members of the board of directors or equivalent governing body and control of the entity is by that board or body; or (d) power to cast the majority of votes at meetings of the board of directors or equivalent governing body and control of the entity is by that board or body.</p> <p>14 An entity may own share warrants, share call options, debt or equity instruments that are convertible into ordinary shares, or other similar instruments that have the potential, if exercised or converted, to give the entity voting power or reduce another party's voting power over the financial and operating policies of another entity (potential voting rights). The existence and effect of potential voting rights that are currently exercisable or convertible, including potential voting rights held by another entity, are considered when assessing whether an entity has the power to govern the financial and operating policies of another entity. Potential voting rights are not currently exercisable or convertible when, for example, they cannot be exercised or converted until a future date or until the occurrence of a future event.</p> <p>15 In assessing whether potential voting rights contribute to control, the entity examines all facts and circumstances (including the terms of exercise of the potential voting rights and any other contractual arrangements whether considered individually or in combination) that affect potential voting rights, except the intention of management and the financial ability to exercise or convert such rights.</p> <p>16 A subsidiary is not excluded from consolidation simply because the investor is a venture capital organisation, mutual fund, unit trust or similar entity.</p> <p>17 A subsidiary is not excluded from consolidation because its business activities are dissimilar from those of the other entities within the group. Relevant information is provided by consolidating such subsidiaries and disclosing additional information in the consolidated financial statements about the different business activities of subsidiaries. For example, the disclosures required by IFRS 8 Operating Segments help to explain the significance of different business activities within the group. * If on acquisition a subsidiary meets the criteria to be classified as held for sale in accordance with IFRS 5 Non-current Assets Held for Sale and Discontinued Operations, it shall be accounted for in accordance with that IFRS.</p>
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Annex 6

Core principles related to group-wide supervision

Core principles established by the BCBS and IAIS set minimum standards for group-wide supervision, although there are variations between these standards.

Principles on group/consolidated supervision

The BCBS core principle on consolidated supervision specifies that where corporate ownership of banking companies (eg unregulated or lightly regulated holding companies) is permitted, the supervisor should have the power to:

- review the activities of parent companies and to determine the safety and soundness of the bank
- establish and enforce fit and proper standards for owners and senior management of the (less regulated) parent.

The IOSCO core principles refer to group supervision in the context of supervisory cooperation.

The IAIS core principle on group-wide supervision specifies that where an insurer is part of a conglomerate, the assessment of the risk exposures of the insurer would take into account the operations of other group companies, including applicable holding companies. It also notes that at a group level there should be adequate supervisory oversight of:

- the group structure and inter-relationships, including ownership and management structure,
- capital adequacy, reinsurance and risk concentrations, and intragroup transactions;
- internal control mechanisms and risk management processes, including reporting lines and fit and proper testing of senior management.

The IAIS has also published the following papers:

- Guidance paper on the role and responsibilities of a group-wide supervisor – October 2008,
- Guidance paper on the use of supervisory colleges in group-wide supervision – October 2009, and
- Principles on group-wide supervision – October 2008

These principles include:

1. The assessment of capital adequacy on a group-wide basis
2. The assessment of the fitness and propriety of the board, senior management and significant shareholders on a group-wide basis
3. The assessment of risk management and internal controls on a group-wide basis
4. Supervisors should have appropriate skills and authority to supervise on a group-wide basis

5. Cooperation and exchange of information among supervisors of the group to allow efficient and effective supervision

The IAIS is also developing further papers including:

- a Group-wide Supervision Framework (GSF)
- a guidance paper on the treatment of unregulated entities in group-wide supervision, and
- a guidance paper on establishing criteria for supervisory recognition in group-wide supervision.

Unregulated entities

The BCBS core principles require banking supervisors to have a means of collecting, reviewing and analysing prudential reports and statistical returns from banks on an individual entity and consolidated basis. This should include information on off-balance sheet activities.

The core principles also state that an essential element of banking supervision is the ability of supervisors to supervise the banking group on a consolidated basis. The supervisor should have the ability to review nonbanking activities and should take into account that non-financial activities of a bank or group may pose risks to the bank. Banking supervisors are also required to practice global consolidated supervision over their internationally active banking organisations and to apply prudential norms to all aspects of the business including foreign branches, joint ventures and subsidiaries.

The IOSCO core principles note that risk may result from the activities of unlicensed and off-balance sheet affiliates and that regulators should consider the need for information about the activities of these affiliates.

The IAIS core principles require supervisors to require insurers to submit information about their financial condition and performance on both an individual and a group-wide basis. They should also request and obtain financial information on any subsidiary of the supervised entity and require insurers to report any off-balance sheet exposures.

Insurance supervisors should also require that the structures of the financial groups containing potential controlling owners of insurers be sufficiently transparent so that supervision of the insurance group will not be hindered.

The core principles of the BCBS, IOSCO and the IAIS expect exchange of cross-border information between supervisors within the same sector.

Information sharing

The BCBS core principles state that arrangements for sharing information between supervisors and protecting the confidentiality of such information should be in place. This requires a system of interagency cooperation and sharing of information among the various official agencies, both domestic and foreign, responsible for the safety and soundness of the financial system.

Other BCBS core principles provide that a key component of consolidated supervision is establishing contact and information exchange with the various other supervisors involved, primarily host country supervisory authorities, but also refer to the sharing of information with home country supervisors.

In the banking sector in particular, the supervisory approach has been for home and host supervisors to share information but the swiftness of the financial system crisis exposed this approach as being somewhat two dimensional. The international standards also provide little emphasis on the exchange of information between supervisors in different sectors.

IOSCO requires the sharing of both public and non-public information with domestic and foreign counterparts, the establishment of information sharing mechanisms and the provision of assistance to foreign regulators. Specifically in relation to financial conglomerates, the IOSCO core principles refer to the exchange of information with other regulators in the banking and insurance sectors.

The IAIS core principles require supervisors to cooperate and share information with other relevant supervisors subject to confidentiality requirements. Information to be exchanged includes but is not limited to specific information gathered from the entity, relevant financial data and objective information on individuals. Consultation should take place between insurance supervisors before action is taken and there are obligations on both home and host supervisors to provide information to each other if such action would have an effect in the other's jurisdiction.

A comparatively recent development in cooperation and information exchange between supervisors is the establishment of Multilateral Memoranda of Understanding (MMoU), namely those established by IOSCO and the IAIS.

In broad terms, the IOSCO MMoU is based around potential enforcement action by securities supervisors and the information expected to be exchanged under it by signatories relates to transactions, and market abuse, insider dealing and other fraudulent activity in relation to those transactions. In order to become a signatory to the MMoU a supervisor must be able to obtain information from a person who is not regulated (for example, an unregulated entity or a member of the public).

The IAIS MMoU is concerned with facilitating cooperation and the exchange of information for insurance supervision generally. Information disclosed under the MMoU must have a valid purpose and relate to licensing, fit and proper criteria, ongoing supervision, enforcement, winding up or other supervisory concerns. The MMoU is, therefore, not specifically directed at transactions.

Ownership structure

The BCBS core principles require banking supervisors to have the authority to review and reject any proposals to transfer significant ownership or controlling interests in existing banks to other parties. The original ownership structure should be assessed at the licensing stage and, when the proposed owner is a foreign bank, the consent of the home country supervisor should be obtained.

The IOSCO core principles state that regulation should provide for minimum entry standards for market intermediaries. Changes of control or material influence should be made known to the supervisor and the supervisor should be empowered to withdraw a licence where a change in control results in a failure to meet relevant requirements.

The IAIS core principles require that supervisors approve or reject proposals to acquire significant ownership or any other interest in an insurer that results in that person, directly or indirectly, alone or with an associate, exercising control over the insurer. The term "control" is described as a defined shareholding, voting rights or the power to appoint and remove directors.

Insurance supervisors are therefore required to approve any change in ownership which comes above the regulated entity in the ownership structure. However, a change of control within any other entity in the group will not necessarily need to be notified to the supervisor even though that entity may have an effect on the risk exposure of the whole group. There is therefore a requirement that the supervisor has the authority to refuse or revoke a licence if the group structure is not sufficiently transparent so that the supervision of the group is not hindered.

Insurance supervisors are also required to apply a fitness and propriety test to prospective controllers including an assessment of both their financial and non-financial resources. Typically, jurisdictions define controllers who are beneficial owners as having a minimum shareholding in a regulated entity and information on such owners is required by the supervisor in order to assess fitness and propriety prior to licensing an entity and prior to any change of controller after licensing. With regards to senior management, individuals are often required to complete a personal questionnaire, which includes details of employment history together with personal details, which allows the supervisor to carry out due diligence on such individuals.

Supervisors require appropriate statutory powers in order to ensure that the core principles described above can be applied in their jurisdiction.

Annex 7

Basis for powers over holding companies, fit and proper, powers to request information and supervisory cooperation

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
I. HOLDING COMPANY SUPERVISION					
24 EC8	<p>An essential element of banking supervision is that supervisors supervise the banking group on a consolidated basis, adequately monitoring and, as appropriate, applying prudential norms to all aspects of the business conducted by the group worldwide.</p> <p>The supervisor determines that oversight of a bank's foreign operations by management (of the parent bank or head office and, where relevant, the holding company) includes: (i) information reporting on its foreign operations that is adequate in scope and frequency to manage their overall risk profile and is periodically verified; (ii) assessing in an appropriate manner compliance with internal controls; and (iii) ensuring effective local oversight of foreign operations.</p> <p>The supervisor confirms that oversight of a bank's foreign</p>		Silent on holding company matters.	17 ECd	<p>The supervisory authority supervises its' insurers on a solo and a group-wide basis</p> <p>At a minimum, group-wide supervision of insurers which are part of insurance groups or financial conglomerates includes, as a supplement to solo supervision, at a group level, and intermediate level as appropriate, adequate policies on a supervisory oversight of:</p> <ul style="list-style-type: none"> • Group structure and interrelationships, including ownership and management structure • Capital adequacy • Reinsurance and risk concentration • Intra-group transactions and exposures, including intra-group guarantees and possible legal liabilities • Internal control mechanisms

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC10	<p>operations by management (of the parent bank or head office and, where relevant, the holding company) is particularly close when the foreign activities have a higher risk profile or when the operations are conducted in jurisdictions or under supervisory regimes differing fundamentally from those of the bank's home country.</p> <p>For those countries that allow corporate ownership of banking companies:</p>				and risk management processes, including reporting lines and fit and proper testing of senior management
AC1	<p>the supervisor has the power to review the activities of parent companies and of companies affiliated with the parent companies, and uses the power in practice to determine the safety and soundness of the bank; and</p> <p>the supervisor has the power to establish and enforce fit and proper standards for owners and senior management of parent companies.</p>				
II. FIT AND PROPER					
3	The licensing authority must have the power to set criteria and reject applications for establishments that do not meet the standards set. The licensing process, at a minimum, should consist of an assessment of	21-24 12.3	<p>The licensing and supervision of market intermediaries should set minimum standards for market participants</p> <p>The licensing process should require</p>	7	The significant owners, board members, senior management, auditors and actuaries of an insurer are fit and proper to fulfil their roles. This requires that they possess the appropriate integrity, competency, experience and

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
	<p>the ownership structure and governance of the bank and its wider group, including the fitness and propriety of Board members and senior management, its strategic and operating plan, internal controls and risk management, and its projected financial condition, including its capital base. Where the proposed owner or parent organisation is a foreign bank, the prior consent of its home country supervisor should be obtained.</p>		<p>a comprehensive assessment of the applicant and all those who are in a position to control or materially influence the applicant</p>		<p>qualifications.</p>
EC6	<p>The licensing authority identifies and determines the suitability of major shareholders, including the ultimate beneficial owners, and others that may exert significant influence. It also assesses the transparency of the ownership structure and the sources of initial capital.</p>	Foot Note 67	<p>Many jurisdictions set out detailed criteria relating to education, training, experience and the so called “fitness and properness” of an applicant to be met before a person may be licensed.</p>	ECd	<p>The insurer should be required to demonstrate to the supervisory authority the fitness and propriety of key functionaries by submitting documentation illustrating their knowledge, experience, skills and integrity upon request, or where there are changes in key functionaries. The knowledge and experience required depends on the position and responsibility of the functionary within the insurer.</p>
EC8	<p>The licensing authority, at authorisation, evaluates proposed directors and senior management as to expertise and integrity (fit and proper test), and any potential for conflicts of interest. The fit and proper criteria include: (i) skills and experience in relevant financial operations commensurate with the intended activities of the bank; and (ii) no record of criminal activities or adverse regulatory judgments that make a person unfit to uphold important positions in a bank.</p> <p>The Board, collectively, must have a sound knowledge of each of the types of activities the bank intends to</p>			8 ECe	<p>The supervisory authority must be satisfied that those seeking control meet the criteria applied during the licensing process. The requirements in ICP 7 – Suitability of persons – will apply to the prospective owners in control of insurers.</p> <p>The board of directors:</p> <ul style="list-style-type: none"> • has thorough knowledge, skills, experience and commitment to oversee the insurer effectively
				9 ECb	

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC13	pursue and the associated risks.				
III. POWER TO REQUIRE INFORMATION					
21 EC1	<p>Supervisors must have a means of collecting, reviewing and analysing prudential reports and statistical returns from banks on both a solo and a consolidated basis, and a means of independent verification of these reports, through either on-site examinations or use of external experts.</p> <p>The supervisor has the power to require banks to submit information, on both a solo and a consolidated basis, on their financial condition, performance, and risks, at regular intervals. These reports provide information on such matters as on- and off-balance sheet assets and liabilities, profit and loss, capital adequacy, liquidity, large exposures, asset concentrations (including by economic sector, geography and currency), asset quality, loan loss provisioning, related party transactions, interest rate risk and</p>	<p>CP21-24 12.3</p> <p>CP8</p> <p>8.2</p>	<p>The capital requirement should be maintained and should be the subject of periodic reporting to the regulator or competent SRO.</p> <p>To ensure that continued licensing remains appropriate, there should be a requirement for periodic updating of relevant information and a requirement for reporting material changes in circumstances affecting the conditions of licensing.</p> <p>The regulator should have comprehensive inspection, investigation and surveillance powers.</p> <p>The regulator should have the power to require the provision of information or to carry out inspections of business operations whenever it believes it necessary to ensure compliance with relevant standards. The suspicion of a breach of law should not be a necessary prerequisite to use</p>	<p>12</p> <p>ECc</p>	<p>The supervisory authority receives necessary information to conduct effective off-site monitoring and to evaluate the condition of each insurer as well as the insurance market.</p> <p>The supervisory authority:</p> <ul style="list-style-type: none"> – requires insurers to submit information about their financial condition and performance on both a solo and a group-wide basis. It may request and obtain financial information on any subsidiary of the supervised entity. – sets out the principles and norms regarding accounting and consolidation techniques to be used. The valuation of assets and liabilities should be consistent, realistic, and prudent (refer to ICP 21 EC b). – requires insurers to report any off-balance sheet exposures. – requires insurers to report on their outsourced functions. – requires that the appropriate level of an insurer's senior management is

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC6	<p>market risk.</p> <p>The supervisor has the power to request and receive any relevant information from banks, as well as any of their related companies, irrespective of their activities, where the supervisor believes that it is material to the financial situation of the bank or banking group, or to the assessment of the risks of the bank or banking group. This includes internal management information.</p>	12.7	<p>of inspection powers in respect of authorised or licensed persons.</p> <p>Powers of Inspection - The right to inspect the books, records and business operations of a market intermediary should be available to a regulator to ensure compliance with all relevant requirements, even in the absence of a suspected breach of conduct. There must be complementary requirements for the maintenance of comprehensive records.</p>	ACe	<p>responsible for the timing and accuracy of these returns.</p> <ul style="list-style-type: none"> – requires that inaccurate information be corrected and has the authority to impose sanctions for deliberate misreporting. – based on this information, maintains a framework for on-going monitoring of the financial condition and performance of the insurers. <p>The supervisory authority requires insurers to report promptly material changes that affect the evaluation of their condition.</p>
IV. SUPERVISORY COOPERATION AND INFORMATION SHARING					
25	<p>Cross-border consolidated supervision requires cooperation and information exchange between home supervisors and the various other supervisors involved, primarily host banking supervisors. Banking supervisors must require the local operations of foreign banks to be conducted to the same standards as those required of domestic institutions.</p>	11	<p>The regulator should have authority to share both public and non-public information with domestic and foreign counterparts.</p>	CP5	<p>The supervisory authority cooperates and shares information with other relevant supervisors subject to confidentiality requirements.</p>
EC1	<p>Information to be exchanged by home and host supervisors should be adequate for their respective roles and responsibilities.</p>	12	<p>Regulators should establish information sharing mechanisms that set out when and how they will share both public and non-public information with their domestic and foreign counterparts.</p>	ECa	<p>The existence of a formal agreement with another supervisor is not a prerequisite for information sharing.</p>
EC2	<p>For material cross-border operations of its banks, the supervisor identifies all other relevant supervisors and establishes informal or formal arrangements (such as memoranda of understanding) for appropriate</p>	13	<p>The regulatory system should allow for assistance to be provided to foreign regulators who need to make inquiries in the discharge of their functions and exercise of their powers.</p>	ECb	<p>The supervisory authority, at its discretion, can enter into agreements or understandings with any other financial sector supervisor (“another supervisor”) to share relevant supervisory information or to otherwise work together.</p>
		9.5	<p>It is also appropriate to consider the regulator’s capacity to exchange information with other regulators, for</p>	ECc	<p>When reasonably requested and with appropriate safeguards, the supervisory authority is able to exchange with another supervisor (refer to ICP 7 EC e) the following:</p>

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC3	<p>information sharing, on a confidential basis, on the financial condition and performance of such operations in the home or host country. Where formal cooperation arrangements are agreed, their existence should be communicated to the banks and banking groups affected.</p> <p>The home supervisor provides information to host supervisors, on a timely basis, concerning: • the overall framework of supervision in which the banking group operates; • the bank or banking group, to allow a proper perspective of the activities conducted within the host country's borders; • the specific operations in the host country; and • where possible and appropriate, significant problems arising in the head office or other parts of the banking group if these are likely to have a material effect on the safety and soundness of subsidiaries or branches in host countries. A minimum level of information on the bank or banking group will be needed in most circumstances, but the overall frequency and scope of this information will vary depending on the materiality of a bank's or banking group's activities to the financial sector of the host country. In this context, the host supervisor will inform the home supervisor when a local operation is material to the financial sector of the host country.</p> <p>The host supervisor provides information to home supervisors, on a timely basis, concerning: • material or</p>		<p>example in the banking and insurance sectors at both the domestic and international levels. Again, such exchanges of information must be consistent with the proper maintenance of confidentiality and the protection of personal data.</p>	<p>ECd</p> <p>ECe</p> <p>ECf</p> <p>ECg</p> <p>ECh</p>	<p>relevant supervisory information, including specific information requested and gathered from a supervised entity</p> <p>relevant financial data</p> <p>objective information on individuals holding positions of responsibility in such entities.</p> <p>Information sharing, whether carried out under formal or informal arrangements, allows for a two-way flow of information without requiring strict reciprocity in terms of the level, format and detailed characteristics of the information exchanged.</p> <p>The home supervisory authority provides relevant information to the host supervisor.</p> <p>The supervisory authority is required to take reasonable steps to ensure that any information released to another supervisor will be treated as confidential by the receiving supervisor and will be used only for supervisory purposes.</p> <p>The supervisory authority consults with another supervisor if it proposes to take action on the evidence of the information received from that supervisor.</p> <p>The home supervisory authority informs relevant host supervisors of any material changes in supervision that may have a significant bearing on the operations of foreign establishments operating in their jurisdictions.</p>

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC4	<p>persistent non-compliance with relevant supervisory requirements, such as capital ratios or operational limits, specifically applied to a bank's operations in the host country; • adverse or potentially adverse developments in the local operations of a bank or banking group regulated by the home supervisor; • adverse assessments of such qualitative aspects of a bank's operations as risk management and controls at the offices in the host country; and • any material remedial action it takes regarding the operations of a bank regulated by the home supervisor. A minimum level of information on the bank or banking group, including the overall supervisory framework in which they operate, will be needed in most circumstances, but the overall frequency and scope of this information will vary depending on the materiality of the cross-border operations to the bank or banking group and financial sector of the home country. In this context, the home supervisor will inform the host supervisor when the cross-border operation is material to the bank or banking group and financial sector of the home country.</p> <p>A host supervisor's national laws or regulations require that the cross-border operations of foreign banks are subject to prudential, inspection and regulatory reporting requirements similar to those for domestic banks.</p> <p>Before issuing a license, the host</p>			<p>ECi</p> <p>ECj</p> <p>CP6 ECc</p> <p>ECd</p>	<p>Where possible, the home supervisory authority informs the host supervisor in advance of taking any action that will affect the foreign establishment in the host supervisor's jurisdiction.</p> <p>Where possible, the host supervisory authority informs the home supervisor in advance of taking any action that will affect the parent company or headquarters in the home supervisor's jurisdiction.</p> <p>The supervisory authority requires that no domestic or foreign insurance establishment escape supervision.</p> <p>All insurance establishments of international insurance groups and international insurers are subject to effective supervision. The creation of a cross border establishment should be subject to consultation between the host and home supervisor.</p>

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC5	<p>supervisor establishes that no objection (or a statement of no objection) from the home supervisor has been received. For purposes of the licensing process, as well as ongoing supervision of cross-border banking operations in its country, the host supervisor assesses whether the home supervisor practises global consolidated supervision.</p>				
EC6	<p>Home country supervisors are given on-site access to local offices and subsidiaries of a banking group in order to facilitate their assessment of the group's safety and soundness and compliance with KYC requirements. Home supervisors should inform host supervisors of intended visits to local offices and subsidiaries of banking groups.</p>				
EC7	<p>The host supervisor supervises shell banks, where they still exist, and booking offices in a manner consistent with internationally agreed standards.</p> <p>A supervisor that takes consequential action on the basis of information received from another supervisor consults with that supervisor, to the extent possible, before taking such action.</p>				
EC8	<p>Where necessary, the home supervisor develops an agreed communication strategy with the relevant host supervisors. The scope and nature of the strategy should reflect the size and complexity of the</p>				

CORE PRINCIPLE	BCBS	CORE PRINCIPLE	IOSCO	CORE PRINCIPLE	IAIS
EC9	cross-border operations of the bank or banking group.				
AC1					

Annex 8

Case study: American International Group

In 2008, American International Group (AIG) was a global financial conglomerate with significant insurance operations and operates in more than 130 countries and has about 116,000 employees. For the year 2007, AIG reported earnings of USD 6.2b. Its balance sheet amounted to more than USD 1 trillion and the group was the world's largest insurance group. AIG in 2009 provides a very different picture. AIG's total assets now stand at USD 860b and its 2008 earnings are a record loss of USD 100b. In the fourth quarter of 2008 alone, AIG made a loss of USD 60b. Its stock fell from around USD 50 in the beginning of 2008 to around USD 1 in 2009.

AIG was an extremely complex operation which had many subsidiaries and was basically able to choose its supervisor. Its consolidated supervisor is, thus, the Office of Thrift Supervision (OTS). AIG's problems stemmed not from its insurance companies but are located at the holding level and its non-insurance subsidiaries.

The backbone of AIG's insurance business was used to shore up its unregulated financial products trading business which specialised in the trading of credit default swaps (CDSs). CDSs were, unlike insurance, not regulated and were traded over-the-counter.¹⁰⁰ AIG insured more than USD 500b of debt against default by the use of CDSs. They insured credit events on super-senior tranches of financial obligations (normally AAA or equivalent tranches). This includes asset backed securities (ABS). AIG Financial Products Corp. (AIGFP), based in London (United Kingdom), is a very small unit within AIG (about 400 employees). Counterparties include major banks, hedge funds, money managers, sovereign wealth funds and other institutional investors. At least some of them may have sought to buy protection from AIG in order to reduce their regulatory capital requirements. AIG did not expect the CDSs to be executed which probably was one of the motivations behind its massive use. Historical data did not indicate default levels high enough to seriously threaten AIG's business and the perceived risk seemed to be low and the unit contributed substantially to AIG's profits for some years. However, this strategy eventually appeared to be flawed and AIGFP amassed heavy losses in 2007 and 2008. A CDS portfolio of more than USD 60b on CDOs existed with RMBS as underlying including subprime mortgages. This caused write-downs but also made it necessary to post cash collateral as the CDOs reduced in value.

Another issue AIG had to face came from its securities lending programme. AIG's insurance undertakings essentially lent securities via this programme to other financial institutions outside the AIG group in exchange for cash collateral. This money was then used by AIG Investments for investments in RMBS and other debt obligations. News on the weakening state of AIG caused increasing numbers of lenders to return the securities and to regain their money from AIG. This caused further liquidity difficulties for AIG.

Both activities contributed to a strong need for additional liquidity at AIG in September 2008. Also, downgrades by credit rating agencies forced AIG to post further collateral and contributed to the worsening state of the group. Eventually, just after the breakdown of

Lehman Brothers, the Federal Reserve and the United States government decided to bail out AIG and to provide it with a lending facility given by the Federal Reserve Bank of New York (AIG was provided with much needed liquidity as well as with equity). This was to prevent further damages from the world economy as a whole and the world's insurance industry. In order to service this debt, AIG committed itself to an orderly wind-down of its financial products unit and to sell parts of its insurance businesses. A new "AIG" will concentrate on its core business, which is insurance. This will also help to reduce the complexity of its group structure.

Annex 9

Related initiatives and reports

Joint Forum

- *Supervision of Financial Conglomerates*, February 1999
- *Core Principles, Cross-sectoral Comparison*, November 2001.
- *Risk Management Practices and Regulatory Capital, cross-sectoral comparison*, November 2001
- *Credit Risk Transfer*, March 2005
- *Regulatory and market differences: issues and observations*, May 2006
- *Customer suitability in the retail sale of financial products and services*, April 2008
- *Credit Risk Transfer, developments from 2005 to 2007*, July 2008
- *Stocktaking on the use of credit ratings*, June 2009
- *Report on Special Purposes Entities*, September 2009

BCBS

- *Core Principles for Effective Banking Supervision*, October 2006
- *Enhancements to the Basel II framework*, July 2009
- *Report and Recommendations of the Cross-Border Bank Resolution Group*, September 2009

IAIS

- *Insurance Core Principles and Methodology*, October 2003
- *Guidance paper on the role and responsibilities of a group-wide supervisor*, October 2008
- *Principles on group-wide supervision*, October 2008
- *Guidance Paper on the Use of Supervisory Colleges in Group-Wide Supervision*, October 2009

IOSCO

- *Objectives and Principles of Securities Regulation*, February 2008
- *Role of Credit Rating Agencies in Structured Finance Markets*, May 2008
- *Report on the subprime crisis*, May 2008
- *Hedge Fund Oversight: Final Report*, June 2009
- *Unregulated Financial Markets and Products*, September 2009

G-20 Working Group 1

- *Enhancing Sound Regulation and Strengthening Transparency*, March 2009

IMF-BIS-FSB

- *Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations, report and background paper*, November 2009

Annex 10

List of members of the Joint Forum Working Group on the Differentiated Nature and Scope of Financial Regulation

Co-chairs	Marta Estavillo Klaas Knot	Bank of Spain Netherlands Bank/Ministry of Finance
Canada	Judy Cameron	OSFI
France	Fabrice Macé	Commission Bancaire
France	Françoise Buisson	Autorité des Marchés Financiers
Germany	Sina Weinhold-Koch Christian Schindler	BAFin
Guernsey	Richard Walker	Guernsey Financial Services Commission
Italy	Maria Alessandra Freni	Bank of Italy
Italy	Nicoletta Giusto Irene Tagliamonte	CONSOB
Japan	Tomoyuki Shimoda	Bank of Japan
Japan	Takafumi Saito	Financial Services Agency
Netherlands	Mark Mink	Netherlands Bank
Spain	José Manuel Portero	Comisión Nacional de Mercado de Valores
Switzerland	Gabe Shawn Varges	FINMA
United Kingdom	Nick Kitching	Financial Services Authority
United States	Kirk Odegard	Board of Governors of the Federal Reserve System
United States	Kristin Malcarney	Federal Reserve Bank of New York
United States	Teresa Rutledge Kirk Spurgin	Office of the Comptroller of the Currency
United States	George Lavdas	Securities and Exchange Commission
United States	Ray Spudeck	State of Florida Office of Insurance Regulation
FSB	Marina Moretti	Financial Stability Board
IAIS	Jeffery Yong	International Association of Insurance Supervisors
IMF	Michael Moore	International Monetary Fund
IOSCO	Greg Tanzer	International Organization of Securities Commissions
Secretariat	Sylvain Cuenot	