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Regulatory and market differences: issues and observations

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Regulatory and market differences: issues and observations

1. Background

1. At an industry roundtable hosted by the Joint Forum in November 2003, participants discussed a number of Joint Forum papers on the subject of risk management and regulatory approaches in the banking, securities and insurance sectors.¹ The roundtable discussion touched on the extent to which market practices were converging across the three sectors and whether differences in the regulatory approaches to risk across those sectors reflect actual differences in the underlying risk and risk management practices. The view was expressed that better information was needed in order to inform the international debate on this topic. Such information would be valuable in enhancing the understanding of how regulatory frameworks respond to market evolution and facilitating the spread of sound risk management practices.

2. The issue of regulatory differences is particularly relevant in the context of financial conglomerates.² For such firms,³ significant differences in regulatory approaches across sectors may raise practical challenges to both the management and supervision of risk on a group-wide basis. Key among those challenges are the management of risk concentrations and intra-group risk transfers.

3. Following the roundtable discussion, the Joint Forum created the Working Group on Regulatory and Market Differences (the Working Group) whose mandate was to identify and explain regulatory differences in the context of convergence in market practices. Where such differences were found to exist, the Working Group was to consider whether and how they might affect the supervision of financial conglomerates and the merits of addressing them further.

4. The Joint Forum agreed that the review should concentrate on those aspects of the regulatory response to risk and risk management where:

- convergence in market practice is, or is purported by the industry to be, taking place and,

¹ The following Joint Forum papers were discussed at the November 2003 industry roundtable: *Trends in risk integration and aggregation* (August 2003), *Operational risk transfer across financial sectors* (August 2003), and *Risk management practices and regulatory capital – cross-sectoral comparison* (November 2001).

² This paper uses the Joint Forum's definition of financial conglomerate, which is "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)". In contrast, the definitions applied in the European Union and in the United States are somewhat narrower. The EU Financial Conglomerates Directive defines a financial conglomerate as having at least one insurance or reinsurance undertaking in combination with at least one firm from one or both of the banking and securities sectors. In the United States, a financial conglomerate is any combination of a bank with at least one firm from one or both of the insurance or securities sectors.

³ Depending on the context, 'firm' in this paper may refer to a financial institution whose activities are generally restricted to a single sector (ie banking, securities or insurance), a financial conglomerate, or both. More specific language is used where such precision is needed.

- any differences might pose practical challenges for both financial conglomerates and their supervisors with regard to the assessment and management of risk concentrations and intra-group risk transfers.

5. The Working Group set out to identify these areas first by drawing heavily on work already undertaken by the Joint Forum. To that end, the Joint Forum papers discussed at the November 2003 sector roundtable proved useful, as did others.⁴ The Working Group also took account of the IMF paper entitled *Financial Sector Regulation: Issues and Gaps*.

2. Introduction

6. As a follow-up to the Joint Forum's 2001 paper on core principles, which was a comparison of the broad supervisory frameworks established in each of the three sectors, the objective of this initiative was to compare how those principles are applied – ie to compare the practices actually employed – by supervisory agencies in fulfilling their obligations in each of the sectors and in multiple regions. The Joint Forum acknowledges that there may be very good reasons for sectoral differences in regulatory approaches to the same risk. For example, the long-term nature of liabilities in a life insurance company relative to those of a bank may warrant differences in the focus of insurance and banking supervisors when they conduct reviews of firms' asset-liability management (ALM). Consequently, the Working Group did not approach this assignment in the belief that cross-sectoral convergence in regulatory approaches is desirable in every instance.

7. Although the case of financial conglomerates is of particular interest, the Working Group did not confine the scope of its work to financial conglomerates as the potential implications of cross-sectoral convergence, or lack thereof, in market practice and regulatory approaches are relevant more broadly. Indeed, cross-sectoral convergence in market practice is observed outside of conglomerate structures and firms of all types are confronted with differences in regulatory approaches across sectors. In some cases, firms may have an incentive to use these differences to their advantage. Ideally, however, the sector and firm in which a particular risk position ultimately resides should be determined on the basis of sound strategic and risk management decisions and not by differences in regulatory treatment.⁵ Furthermore, firms have legitimate concerns about the potential for competition-distorting effects arising from cross-sectoral differences in regulatory responses to risk where such responses are not even-handed.

8. The Working Group chose not to focus exclusively on existing market practices and regulatory approaches but to consider, as well, the impact of some of the more significant initiatives currently under consideration or being implemented. For example, Basel II, the recent joint initiative of IOSCO and the Basel Committee on trading book issues, the IAIS's solvency project, Solvency II and the implementation of the Financial Conglomerates Directive in the EU, and the Gramm-Leach-Bliley Act and Sarbanes Oxley Act in the US represent only a few of the developments that will shape regulatory approaches at the

⁴ The following Joint Forum papers were also reviewed: *Credit risk transfer* (March 2005); *Core principles – cross-sectoral comparison* (November 2001).

⁵ The decision to transfer risks across sectors solely to benefit from preferential regulatory treatment could affect the stability of the financial system if such risks are 'under-regulated' in the sector to which they are transferred. Although risks can also be transferred to unregulated firms, this issue was considered to be outside the scope of the Working Group's mandate.

sectoral and financial conglomerate levels well into the future. Accordingly, the Working Group determined that any meaningful assessment of the state of convergence in regulatory approaches must take stock of these and other related developments.

9. As the earlier Joint Forum papers on cross-sectoral comparisons attest, there is clearly some cross-sectoral convergence in the risks firms face and the practices they employ to manage those risks. The Working Group started this particular cross-sectoral comparison by analysing convergence along roughly the same dimensions used in the Joint Forum's 2001 cross-sectoral comparison of risk management practices – ie credit risk, market risk/interest rate risk, operational risk and risk concentration.⁶

10. For each risk type, the Working Group aimed to identify: the main features of, and key similarities and differences in, the typical risk management practices employed by firms in each sector; the main features of, and key similarities and differences in, the regulatory approaches to these risk areas across (i) sectors and (ii) countries/regions within a given sector, and; the forces driving these similarities and differences. Although much of the analysis was based on members' knowledge and experience, some members conducted informal interviews of firms, including some financial conglomerates, to gather additional insights in certain areas.

11. The Working Group found that cross-sectoral convergence in market practice and in regulatory approaches is occurring naturally, to some extent, and can be expected to continue as a result of the (sometimes inter-related) trends and developments highlighted in this report. Accordingly, a report of this nature can never truly be final, nor should it be considered all-encompassing. Rather, it is intended to reflect the current state of convergence in market practice and regulatory approaches across sectors and the Joint Forum's observations on some of the key issues in this area.

12. The report begins with a discussion of some of the key trends and developments with respect to convergence in market practice and regulatory approaches. It then outlines a number of areas in which the Working Group found evidence of significant convergence in market practice on the one hand, or differences in regulatory approach, on the other. Where differences were identified, the report explores whether the differences are the result of fundamental differences in the underlying business models – but this was not always a straightforward task.

13. During the course of this work, it became clear that the starting point for discussions among supervisors from different sectors is changing from one that focuses on differences in approach to one that focuses on similarities. This exercise has also served to reaffirm an observation that was made in the Joint Forum's 2001 comparison of core principles – that there seems to be merit in addressing cross-sectoral issues at an early stage in the policy development process to avoid introducing or exacerbating inappropriate differences in regulatory approaches at the technical level.

⁶ The Working Group also considered whether it would be beneficial to investigate cross-sectoral differences in capital requirements for individual asset classes. The 2001 Joint Forum paper on risk management practices concluded that such an effort would not produce a worthwhile result because a straightforward comparison of the specific charges would fail to take into account some of the crucial differences in the frameworks. These findings remain valid. Furthermore, some of the more fundamental changes in regulatory frameworks currently being considered or implemented should bring these frameworks more in line with the actual risks to which firms are exposed. As a result, the Working Group decided not to devote resources to this aspect of regulatory differences.

3. Trends and developments with respect to convergence

14. In the course of analysing the main features of market practice and regulatory approaches, the Working Group noted several key trends and developments and made a number of observations regarding the forces driving convergence. They are highlighted in this section of the report.

(i) Financial conglomerate structures

15. In the 1990s, a trend toward conglomerate structures was observed in the financial services industry in some regions. In some cases, such as in the United States, this trend was prompted by statutory changes that removed many of the barriers that had prevented combinations of banking, securities and insurance businesses. The creation of conglomerates was at least one factor in the evolution of centralised risk management functions and stimulated the development of enterprise risk management. These in turn may have helped to promote the development of common risk management practices and group-wide economic capital models incorporating common risk measures throughout the member firms of a conglomerate, irrespective of the sector in which those firms operate.

16. More recently, it would seem that the trend toward conglomerate structures has slowed and, in some instances, reversed. It has also been observed that few conglomerates are true conglomerates in the sense of their activities being equally split between two or more sectors. Rather, most existing conglomerate structures have a 'predominant leg', meaning that they are either bank-, securities- or insurance-dominated⁷, and this dominance often is apparent in a conglomerate's corporate culture, governance and risk management practices. Nonetheless, complex financial institutions (ie those with activities in more than one financial sector, whether or not the sectors are equally represented in the group) are doubtless a permanent fixture in the financial landscape.

(ii) Technical and theoretical advances in risk measurement

17. Significant advances have been made in recent years in the theoretical underpinnings and practical application of methods for quantifying risk. These advances are reflected in the dissemination of techniques such as Value at Risk (VaR) modelling, scenario analysis and stress testing beyond the market risk domain and have contributed to growing similarities in the management of credit and market risks, in particular. They have also supported a general increase in the tradability of risk positions and growth in the availability and use of risk transfer products.

18. Based on the current state of risk modelling in financial conglomerates, it would appear that the trend toward the modelling of risk to support the development of economic capital models is an important driver of convergence in risk management practice. Economic

⁷ This view is supported by the paper *The Performance of Financial Groups in the Recent Difficult Environment* (2004), in which the OECD analyses the performance of financial groups in the period from March 2000 to March 2003 and concludes that financial conglomerates proved quite resilient in the face of various shocks in financial markets. The paper argues, however, that this resilience was not primarily due to significant diversification benefits arising from financial conglomerates' involvement in more than one sector. On the contrary, the report indicates that the relative importance of revenues from a conglomerate's "core business" actually increased from 2000 to 2002, and that revenues from "non-core businesses" provided only limited relief during a period when revenues were under pressure. Looking ahead, the OECD predicts that a period of growth will provide a better environment for financial conglomerates to realise diversification benefits.

capital⁸ and similar measures, which start by defining and measuring individual risks, are used to assess business unit and firm-wide performance on a risk-adjusted basis by comparing returns to the risk incurred (as indicated by the amount of economic capital set aside) in earning those returns.

19. One example of how advances in risk measurement techniques have influenced the development of risk management practices across sectors – at least within financial conglomerates – can be seen in the results of a recent survey of large Dutch financial conglomerates. All survey respondents have implemented economic capital models. These models have a variety of applications, including capital allocation, performance measurement and external reporting. Although the relative importance of a given application and the details of a model's implementation differ by conglomerate, it is often the case that the manner in which a model is used for risk management purposes within a given conglomerate is broadly consistent across all firms making up the conglomerate, irrespective of the nature of the firms' business (ie banking, securities, or insurance).

20. The implementation of market risk VaR models is a further illustration of this point. Market risk VaR models, which have a relatively long history of use by banking and securities firms, are based on a short time horizon due to the relatively short holding period of trading positions. As a result, banks and securities firms tend to scale up the short-term VaR numbers in order to estimate an annual VaR. In the insurance sector, however, where legacy models are less of an issue, market risk models tend to compute annual VaR numbers directly.

21. Risk measurement models are evolving rapidly. From its origins in academia, risk modelling was adopted by the industry as a means of improving internal risk management practices and has now gained prominence in leading financial firms. The development and implementation of new regulatory capital frameworks – eg, Basel II in the banking sector and Solvency II and the Swiss Solvency Test in the insurance sector – reflect some growth in supervisors' acceptance of elements of firms' internal risk models; as such, the new frameworks are an important influence in the continuing evolution of risk modelling. At the same time, however, supervisors recognise that models are only one tool in a firm's risk management process and that they have their limitations. Given the different timetables for implementing these new frameworks and faced with limited resources, firms have chosen to focus first on improving models for quantifying credit and operational risks in banking activities. A similar acceleration of model development might be expected in the insurance sector as new solvency frameworks for insurance companies become more concrete.

(iii) Centralised risk management

22. Recent improvements in the ability to measure risk and the evolution of more structured ways to define and identify the drivers of risk have contributed to the development of more centralised risk management functions in larger financial institutions.⁹ This is

⁸ Economic capital can be defined as the amount of capital that a firm determines it requires as a buffer against unexpected losses (on- and off-balance sheet) at a specified level of confidence over a specified period of time.

⁹ Centralised risk management and enterprise risk management are different concepts. Many firms, including complex financial institutions, have centralised the responsibility for risk management in a single group or legal entity. For example, a single group may be responsible for developing policies for the management of operational risk, monitoring operational risk exposures, and reporting on operational risk wherever it occurs within the firm. However, actually aggregating operational risk information sector by sector, region by region, and legal entity by legal entity across that same firm (ie true enterprise risk management) may not be taking

perhaps most readily apparent in the growing prevalence of the position of chief risk officer, particularly in financial conglomerates. The tendency toward centralised risk management functions has served to highlight the difficulties in aggregating risk exposures across the full range of a firm's activities and has prompted the development of more consistent ways of viewing risks across sectors within a given conglomerate. The bringing together in some firms of credit and market risk professionals to manage the risks in complex traded products is evidence of the trend toward centralised risk management functions and of recent efforts to introduce a firm-wide view of risks.

23. The tendency toward centralised risk management functions is also reflected in advanced ALM management techniques that disaggregate positions into their component risks which are then managed by specialised departments. In some cases, these departments collect and manage all ALM positions across a firm's operations, making it possible to quickly adjust or hedge the firm's net position when necessary. This practice is typically employed by banks for purposes of separating credit and interest rate risks. To date, it is not found as widely in securities or insurance firms or in group-wide practices within financial conglomerates.

(iv) Internal valuation of assets and liabilities and accounting standards

24. Risk and value are closely related concepts. Risk can be defined as the probability of loss (ie a decline in value) due to adverse movements in a set of specific risk factors. Value in an uncertain environment generally means expected, or mean, value; as such, it is not an exact measure but a best estimate. Realistically, it is unlikely that a single method for determining value that is considered acceptable in all circumstances will be identified in the near future in light of the numerous going-concern concepts of value that exist today. These include:

- *Accounting value*, dominant in financial reporting and an important element in regulatory reporting. Although recent developments point toward the use of fair values, accounting value today is in many cases based on historical cost, which can lead to some divergence between reported and actual values. For some assets, such as portfolios of traded securities, accounting value also encompasses market value concepts. At the same time, it sometimes ignores market values where such values exist (eg bonds held in a bank's non-trading portfolio) or where reasonable alternatives are available (eg provisions). Currently, there is a tendency in the field of accountancy towards market valuation and convergence across sectors and countries.
- *Market value*, generally understood to be the price obtained for a good that is sold at arms' length by a willing seller to a willing buyer. Market value is often referred to as the 'observable' value of a good and is typically used in the context of market risk. All other valuation concepts essentially represent practical solutions for non-ideal markets and products.
- *Marking-to-model*, a valuation technique that typically arises in the context of market risk. Generally, marking-to-model is used to derive a proxy for market value in situations where market values are not observable.

place. Enterprise risk management is a relatively new concept and is still largely under development in financial conglomerates.

- *Embedded value*, an insurance concept that is used in business or product valuations where there are no traditional markets. In some cases, reinsurance contracts can serve as a proxy for market value.
- *Fair value*, a more recent valuation concept that carries with it the notion of subjectivity, although its aim is to calculate value as 'fairly' as possible. Fair value incorporates market value concepts but extends them to situations where products are not sold in traditional markets and where markets are not sufficiently liquid or transparent. Insurance products and monopolised markets are some examples of where, for that reason, fair values are used.

25. The emergence of risk management practices that are generally oriented more towards marking-to-market of risk positions is related to the development of economic capital models and has been accommodated by the recent growth in tradable products and risk transfer products.¹⁰

26. The increased attention being paid to fair value illustrates a degree of convergence in market practice across sectors and risk types. Many financial conglomerates have adopted fair values in their economic capital initiatives in part because they enable values to be aggregated where aggregation might otherwise generate less meaningful results. Risk management in financial conglomerates comprising some combination of banking and insurance activities is an example of situations where the industry sees benefits from the use of fair value that might outweigh any corresponding loss of soundness or accuracy.

27. Most supervisors actively encourage the development of economic capital methodologies that better link risk-taking with internal assessments of capital adequacy. At the same time, however, supervisors recognise that challenges remain in implementing fair value in the case of products for which clear indications of market value are unavailable (eg traditional loan facilities) or for which fair values may not be relevant. For example, supervisors have difficulty with the notion that capital would increase when the fair value of the outstanding debentures of a troubled firm declines. At the extreme, such a firm would never become technically insolvent. More generally, supervisors are concerned about the impact of fair values on regulatory capital levels in light of the subjectivity inherent in the fair value approach.

Explanatory Box

Embedded value and convergence towards fair value

Embedded value, the main valuation concept used by actuaries, is traditionally calculated using fixed or effective interest rates and deterministic scenarios. Whereas the fair – or market – value of a firm is calculated as the difference between the value of its assets and liabilities, embedded value is the sum of the firm's discounted net cash flows. In theory, these approaches should yield identical results when applied to the same firm or product, but in practice this is typically not the case.

More recently, actuarial practices have begun to incorporate market risk techniques. North American insurers were the first to start using full term structures of interest and stochastic (Monte Carlo) scenarios. The increased attention to fair valuation techniques in Solvency II proposals and aspects of IFRS accounting, among other things, might stimulate further convergence between fair value and embedded value. The creation of financial conglomerates

¹⁰ The Joint Forum report *Credit risk transfer* (March 2005) provides an extensive analysis of this subject.

involving combinations of banks and insurance companies and economic capital projects in the resulting combined firms (aimed at aggregating risk and value across risk types) also have accelerated developments in this direction.

(v) The use of firms' internal modelling for regulatory purposes

28. The development and implementation of Basel II have stimulated the debate among supervisors from all three sectors about the appropriateness of using internally developed capital calculations for regulatory purposes and about the broader application of risk-based supervisory approaches like the so-called 'three-pillar approach'.¹¹ Notable examples of Basel II's impact outside the banking sector include the recent Joint Working Group of IOSCO and the Basel Committee on trading book issues and double-default, the ongoing solvency project of the IAIS, and Solvency II in the EU.

29. Before supervisors might reasonably be expected to use a firm's economic capital or other internal models for regulatory purposes the firm should be able to demonstrate that its internal models are sufficiently robust and that they are adequately embedded in the firm's broader risk management framework. For example, the firm should be incorporating model outcomes in internal processes such as pricing and calculating performance-based compensation. Ultimately, the responsibility for models lies with the firm's senior management, which must be able to demonstrate a clear understanding of the firm's internal models and their application in the day-to-day process of managing the firm.

30. Other relevant issues for supervisors to consider include the behaviour of a firm's internal models in times of stress and the potential effects of recognising internal models on competitive equity, given that internal models will, by definition, vary from firm to firm.

31. Notwithstanding these and other related concerns, incorporating elements of economic capital and other internal models in the regulatory framework provides a positive stimulant to improve risk awareness, measurement and management within firms and may, in appropriate circumstances, introduce opportunities for convergence in regulatory approaches.

Explanatory Box

Solvency initiatives in the insurance sector – Solvency II in the European Union

The member agencies of the IAIS are currently working on a solvency project whose overall objective is to develop a common international framework for assessing the solvency of insurers. At a regional level, similar work is under way in Europe where the Solvency II project is scheduled for implementation in 2010. This new framework represents a shift of focus and recognition of international developments in other financial services sectors, accounting standards, and risk management practices. Although the framework remains a work in

¹¹ The "three-pillar approach" refers to the basic structure of Basel II. Pillar 1 prescribes the minimum amount of capital a bank must hold in relation to its overall risk. Pillar 2, the supervisory review pillar, requires banks to implement processes for assessing the adequacy of their capital and supervisors to review those processes. Pillar 3 outlines standards for disclosure and is designed to promote market discipline. The three-pillar approach is a comprehensive, risk-sensitive framework that provides for flexibility based on the size, complexity and sophistication of a firm and offers incentives for firms to improve their management of risk.

progress, its key elements are:

- Risk-based approach: recognition of risk classifications and capital requirements based on relative risk;
- Overall solvency: in addition to quantitative capital (and provisioning) requirements, introduces qualitative requirements for senior management, risk management, model validation and internal control;
- Introduction of internal modelling in collaboration with the actuarial profession and with reference to the experience of the banking sector;
- 3-pillar approach similar to Basel II, including a supervisory review process and general compatibility with the approach and regulations in the banking sector;
- Reporting, to the extent possible, in accordance with IAS and IFRS standards for fair value accounting;
- Harmonisation of technical provisioning;
- Consistency with developments in the IAIS (core principles), International Actuarial Association (IAA) and the International Accounting Standards Board (IASB);
- Inclusion of risk transfer techniques.

There is also a discussion in the European Union of the adoption of a total balance sheet approach to solvency calculations.

The European insurance and reinsurance industries (Comité Européen des Assurances) and the national insurance industry associations established a Solvency II Steering Group to coordinate and deliver sector input. Of particular interest is a study comparing solvency assessment models within the largest European and non-European markets. These include the National Association of Insurance Commissioners' (NAIC) Risk-Based Capital Forecasting model, Standard and Poor's European Insurance Group capital model, and models from Singapore, Australia and Canada. The study observes "some key areas of convergence" in:

- Total balance sheet approach;
- A trend towards 'economic' or market value based measurement of the balance sheet, versus reliance on existing accounting measures;
- A VaR approach to determining capital requirements;
- Inclusion of a wide range of risks within Pillar I;
- Calibration of capital requirements to a specific confidence level over one year, generally above 99.5%.

Although the study does not address technical provisions in detail, it observes that:

"...most of the static models currently require the technical provisions based on local accounting rules or IFRS to be used as the appropriate liability values. This ignores any prudence included in the valuation and, at a European level, may lead to inconsistencies across markets. The scenario and principles based models all define a 'realistic valuation' of liabilities and use this in order to calculate the required capital. Using the same definition of 'realistic value' across different geographies would lead to objective and comparable technical provisions (as expressed by the IAIS), however currently different regimes define 'realistic' values inconsistently."

This discussion of differences in liability valuation explains why Solvency II has put much effort and focus on harmonising technical provisions.

(vi) Greater cooperation among sectoral supervisory authorities

32. In the 1990s, the increasing integration of financial services sectors and other market developments drew attention to the need for greater cooperation among sectoral supervisory authorities. In some jurisdictions, these developments contributed to significant changes in the way supervisory agencies are organised. For example, once separate sector-specific agencies were combined in a number of European jurisdictions to create integrated prudential supervisory authorities (currently, there are integrated supervisory authorities in 12 of 25 EU member states). Other jurisdictions, such as the United States and the balance of EU member states, have opted to continue with an established system of functional regulation comprising separate sectoral supervisory agencies.

33. Advocates of the integrated supervisory model believe that such structures facilitate the sharing of knowledge across traditional sectoral boundaries and that integrated supervisory authorities may be confronted more readily with situations where regulatory approaches diverge across sectors. However, cross-sectoral knowledge sharing and other aspects of supervisory cooperation are equally achievable in jurisdictions with a system of functional regulation. In these jurisdictions, supervisory oversight responsibilities typically are coordinated among the various functional supervisors through a combination of formal and informal mechanisms for sharing information and discussing emerging issues.

34. Irrespective of their organisational structure, there has been a general recognition among supervisory authorities of the need for greater cooperation and interaction, particularly when it comes to addressing cross-sectoral issues. The resulting supervisory responses have helped to advance the thinking on cross-sectoral differences. Experience has shown, however, that close attention and effort are required to overcome cultural differences in regulatory approaches – even within an integrated supervisory authority.

4. Areas analysed with respect to cross-sectoral convergence

35. The Working Group invested considerable effort in identifying the key elements of current and evolving market practices in the three sectors and noting where those practices have converged (or are converging) across one or more sectors. This section provides an overview of the specific areas in which the Working Group found evidence of significant convergence in market practice or differences in regulatory approach. The following questions are addressed in each of these areas:

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

This part of the discussion introduces the subject area. It describes the current state of convergence in market practice and/or the key features of the relevant regulatory approaches and aims to identify cross-sectoral differences. In some cases, regional differences within sectors are identified, although this was not the principal focus of the analysis.

(b) *Do the identified differences in regulatory approach originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

The identified differences in regulatory approach are assessed in an effort to deepen the Joint Forum's understanding of them and determine the extent to which they are grounded in fundamental differences in the nature of the business activities, risks, and risk management practices across the sectors. In some areas, it is reasonably clear that cross-sectoral

differences in regulatory approach are driven by fundamental differences in the underlying business models. In others, the observations may be more anecdotal in nature but are nonetheless an indication of areas where further work might be beneficial.

36. Particularly in those areas in which the basis for the identified differences is unclear, further work might prove fruitful in terms of clarifying the nature and extent of convergence in market practice and regulatory approaches. Such work could include promoting cross-sectoral information sharing on the details of regulatory approaches in the particular subject area or gathering additional information to determine whether there is room for identifying best practices. The Joint Forum is not proposing, however, that work should commence in all of these areas in the short term. On the contrary, its members are sensitive to current concerns about regulatory overload and do not wish to unduly distract firms' attention from a number of key regulatory initiatives currently under way. Whether any of this work is initiated by the Joint Forum, its parent committees, or others, it should only be done after taking careful account of these issues.

37. In that light, the Joint Forum considered a number of potential new initiatives that might follow on from this report. Of those that are likely to require industry involvement, the Joint Forum narrowed the list of those it might undertake to one – a cross-sectoral review of firms' management of risk concentrations. It is anticipated that this new workstream will commence in the spring of 2006.

38. Before turning to the individual areas, it is worthwhile to note that many of the existing cross-sectoral differences in regulatory approach are rooted in what some have described as differences in the 'culture' of supervision. These cultural factors sometimes are more difficult to identify and describe than the supervisory rules or practices in a particular sector or region, but they could help to explain some of the other regulatory differences identified in this report. While the case for maintaining regulatory differences of any kind should be rigorously examined, there is no automatic presumption that differences attributable to cultural factors cannot be justified.

39. Conceptually, differences in supervisory culture can be grouped in two broad categories, as follows:

Scope of supervision: Differences in the scope of supervision across sectors and across jurisdictions are bound to influence the way in which supervision is carried out in practice. Some of these differences may be the result of differences in the resources available to supervisory authorities or from differences in supervisors' mandates, which typically are specified in legislation. Some key differences in the scope of supervision include:

- Whether the focus of supervision is on prudential considerations, conduct of business considerations, or some combination of the two;
- Whether supervision is conducted strictly along sectoral lines or whether it covers two or more sectors; and,
- Whether supervision covers all parts of a financial group or whether – and to what extent – supervision of the different parts of the group is coordinated.

Style of supervision: There is considerable variation in the way in which supervisors choose to carry out their responsibilities within the confines of their mandates and the legal systems in which they operate. These variations likely relate to the significant differences, across sectors and jurisdictions, in the nature of supervisory agencies and the origins of their supervisory functions. Examples include:

- The extent to which the overall approach is principles- or rules-based;
- The extent to which a risk-based approach is adopted, and its implications;
- The extent of reliance on in-depth on-site inspections and on third parties (eg internal and external auditors, actuaries);
- The balance between reactive and proactive supervision;
- The nature of the relationship between supervisor and supervised (eg the frequency of contact, the circumstances in which that contact occurs, and the level at which it occurs); and,
- The expectations of the supervisory relationship on both sides, which may have much to do with how the supervisor is primarily perceived (eg policeman/enforcer, sounding board, and source of information on market developments and best practice).

40. Today's supervisory systems typically have evolved over a period of years by sector and by region, independent of one another and in the context of local legal systems. As a result, consistencies in approach within a sector or region often do not extend beyond that sector or region. Aligning approaches under such circumstances is not a short-term prospect.

41. Although the Working Group did not set out to identify cultural differences, in light of their overarching nature and pervasive influence any analysis of regulatory differences would be incomplete without acknowledging their existence.

(i) The purpose of capital

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

42. In a general sense, capital serves as a buffer for unexpected losses while reserves (or provisions) serve as a buffer for expected losses. This basic concept is broadly applicable in all three sectors. Nevertheless, the relative role of capital and reserves differs significantly across the sectors as a result of differences in the underlying business models. This issue was addressed at some length in the Joint Forum's 2001 paper on risk management practices and regulatory capital.¹²

43. A comparison of the purpose of capital across the three sectors is complicated by differences in terminology. In the insurance sector, for example, firms do not refer to payouts as losses but call them claims instead. Expected claims are core business in the insurance sector, which may be a fundamental difference vis-à-vis the other two sectors. These expected claims are covered by technical provisions, a form of reserve that is unique to the insurance sector. Technical provisions represent coverage for the *expected*, but by definition uncertain, amount of claims that the insurer is contractually obliged to pay out to policyholders. They also generally include a risk margin ('market value margin'). In the absence of secondary markets for insurance products, the risk margin is often determined by prescribing specific confidence levels for the amount of technical provisions.¹³ Capital

¹² See pages 29 to 32 of the Joint Forum paper *Risk management practices and regulatory capital – cross-sectoral comparison* (November 2001).

¹³ Although not directly intended, this method for determining risk margins could be seen to introduce an element of unexpected losses in technical provisions.

provides an additional buffer when actual claims exceed the level anticipated by the technical provisions – these unexpected claims are comparable to unexpected losses. Capital also provides a cushion for other unexpected losses, such as those arising from operational, strategic and other risks.

44. Firms in the securities sector mark their inventory positions to market daily; banks do the same for their trading book positions and, under new international accounting standards, are going to use fair values for certain positions in their non-trading books. There is no need for additional steps, such as discounting these positions from their historical cost, to account for changes in market price (ie in essence, expected losses have already been accounted for). Consequently, firms generally do not maintain reserves against expected losses arising from market risks. Capital provides a buffer against any remaining, unexpected losses from market risks and is generally available as a buffer against unexpected losses from operational, strategic and other risks.

45. In the banking sector, where anticipated credit losses can be significant, loan loss reserves are an important cushion against expected losses. Capital provides a cushion for unexpected credit losses. However, because unexpected credit losses can be more significant than expected credit losses, and because capital also provides a buffer against unexpected losses from operational, strategic and other risks, a bank's capital tends to be larger than its loan loss reserves.

46. In summary, although the significance of capital relative to other buffers against losses differs across the three sectors, the purpose of capital in the three sectors is broadly consistent. Firms in each sector account on the balance sheet for all costs or losses that can be reasonably estimated, whether by technical provisions, marking positions to market, or loan loss provisions and other accepted forms of accounting reserves. Capital serves as a cushion for unanticipated losses that exceed these expected losses.

47. Differences in accounting and valuation rules across sectors and jurisdictions further complicate the cross-sectoral comparison of regulatory capital because of the impact these differences have on the amount and treatment (eg mark-to-market vs historical cost) of similar types of losses, which in turn affects the amount of capital a firm must hold.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

48. As indicated above, there are no appreciable differences in the purpose of capital across the three sectors. There are differences in the measurement of losses across the sectors, however, but these are due to differences in accounting practices, some of which may become less pronounced under new international accounting standards.

(ii) *Calculation of solvency requirements and acceptable forms of capital*

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

49. Regulatory approaches are currently undergoing significant change on a number of fronts (eg Basel II and the development of an international solvency framework for insurers and Solvency II in Europe). Supervisors in all three sectors and all jurisdictions are engaged in various initiatives which will further align capital requirements with measures of risk that are calibrated using economic capital models. In some instances, these initiatives may lead to further convergence across and within sectors, the recent IOSCO/BCBS trading book review being a notable example.

50. As noted previously in this report, the Joint Forum's 2001 comparison of risk management practices and regulatory capital extensively analysed the regulatory frameworks for the calculation of solvency in the three sectors. While it could be argued on the basis of that analysis that solvency calculations are relatively harmonised within the banking sector, there are regional differences in the securities and insurance sectors. The 2001 report also noted major differences across sectors.

51. The 2001 paper considers these cross-sectoral differences in the context of differences in the underlying businesses in the three sectors. The paper observes that it would be misleading to focus solely on the calculation of solvency requirements for similar risks, as there are significant differences in the amounts of capital that firms hold relative to their minimum capital requirement. Furthermore, there are three key external influences on the amount of capital that firms hold. First, there is the amount a firm must hold to comply with minimum solvency requirements. Second, supervisors expect a firm to hold capital above the minimum. Third, there's the amount the market requires a firm to hold in order to achieve a certain rating or conduct business with certain counterparties.

52. In some regions, frameworks also exist for determining the minimum capital requirements applicable to financial conglomerates. In the European Union and in Switzerland, for example, financial conglomerates are subject to group-wide solvency requirements that consider the solvency requirements of individual regulated entities within the group but provide for adjustments to address concerns about double-gearing (ie the use of the same capital by multiple entities within a group). Neither the EU nor Swiss approach considers cross-sectoral diversification benefits.

53. In the United States, financial conglomerates are subject to the requirements of the framework applied by the relevant supervisory authority. The Office of Thrift Supervision (OTS), for example, does not impose formula-driven minimum capital requirements on thrift holding companies. Rather, capital adequacy is determined on a case-by-case basis based on the level of risk inherent in the holding company's activities. In assessing the quantity and quality of a thrift holding company's capital, the OTS considers the parent's use of debt to fund subsidiary operations, access to capital markets, concentrations, intra-group transactions, internal controls, and off-balance sheet exposures. For those OTS-regulated financial conglomerates operating in the European Union, the OTS also reviews the conglomerate's capital calculations prepared according to EU requirements. Financial conglomerates supervised by the Federal Reserve must be considered well-capitalised.¹⁴ For bank holding companies, this means that all subsidiary depository institutions must meet or exceed the minimum capital requirements (tier 1 and total risk-based capital ratios and a tier 1 leverage requirement) imposed by the primary banking supervisor. For foreign banking organisations seeking to qualify for financial holding company status, the capital requirements are slightly different as most foreign banks operating in the United States do so in the form of branches as opposed to subsidiary banks.

54. The issue of acceptable forms of capital is closely related to the topic of solvency requirements. Once again, it could be argued that at a high level, the principles for determining acceptable forms of capital are broadly consistent across the three sectors. In all three sectors, capital is expected to demonstrate a minimum level of permanence and be

¹⁴ Under the Gramm-Leach-Bliley Act, bank holding companies and foreign banking organisations that meet certain criteria can qualify as financial holding companies and engage in a broad range of financial activities, including securities underwriting, insurance sales and underwriting, and merchant banking, which would otherwise be prohibited.

able to absorb losses. Paid-in capital and retained earnings are seen as core capital in all three sectors.

55. Differences within and across sectors exist, however, in the more detailed requirements for eligible capital instruments. For example, the extent to which subordinated debt is accepted and the conditions of its acceptance vary. At the international level, only the banking sector has an international standard that prescribes, among other things, limits on the amount of lower-quality forms of capital in a firm's capital structure. Even though there is currently no equivalent global standard in the insurance or securities sectors, regional and domestic standards are in place and a sector-wide agreement on suitable forms of capital is currently under development in the insurance sector. In the case of financial conglomerates, supplementary capital requirements under the European Union's framework can only be met with 'cross-sectoral' capital (ie capital instruments that would be eligible under the relevant rules in all three sectors).

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

56. The 2001 Joint Forum paper indicates that differences in some important elements of the methods for calculating solvency are the result of differences in the nature of business across the three sectors (eg the emphasis for US securities firms is on maintaining liquidity whereas solvency calculations for the insurance sector reflect a longer-term focus). On the other hand, there are differences that originate from conceptual choices, one example being the allowance for diversification effects for US insurers. As noted above, however, various initiatives are under way in a number of jurisdictions and all sectors that will more closely align capital requirements with actual economic risks. This process could lead to further convergence across the three sectors.

57. On the subject of acceptable forms of capital, it could be argued that there should be no differences in acceptable forms of capital as the fundamental purpose of capital appears to be the same across sectors and jurisdictions. Notwithstanding the fundamental differences in the nature of the business across the sectors, a given capital instrument offers the same protection irrespective of the sector in which the issuer operates. Where the same capital element exists across sectors, and these elements are intended to offset similar risks, there would seem to be no fundamental reason for treating that capital element differently. From a practical perspective, however, some of the differences in the definition of acceptable forms of capital are driven by differences in local tax and accounting treatments and practices for the winding-up of a firm.

58. The calculation of solvency and the treatment of capital instruments are separate but related concepts. While it may be appropriate to attribute some differences in the regulatory approach to solvency calculation to differences in the underlying business models across sectors, this is less clearly the case with respect to the treatment of capital instruments. Solvency requirements are generally stated in terms of the relationship between capital, as that term is defined by the relevant supervisory authority, and some measure of on- and off-balance sheet assets and/or liabilities. At the level of an individual firm, the starting point for the capital component in this relationship is the total amount of *acceptable forms of capital* (eg common shares, preferred shares, and subordinated debentures) the firm has issued. Typically, supervisory authorities at a national, regional or international level will prescribe criteria for determining whether a particular capital instrument is acceptable. Some forms of capital may be subject to limits. After taking these limits into account, further adjustments (eg deductions in respect of assets whose value and/or liquidity are uncertain, such as goodwill or real estate) are often necessary to arrive at the amount of capital used in the calculation of a firm's solvency for supervisory purposes.

(iii) Risk modelling and the use of firms' internal models in supervision

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

59. The concept of risk modelling¹⁵ has gained widespread acceptance and attention in the scientific field and among leading firms in the three sectors. Internal modelling of risk allows for the development of conceptually consistent models for the same risk type across sectors, at least within financial conglomerates. However, whether for historical reasons or as a result of implementation difficulties, materiality considerations, or lack of data, cross-sectoral differences in implementation can occur, even across entities within a financial conglomerate.

60. The fact that internal models are often based on similar techniques and have sometimes been developed from common commercial sources (ie some of the well-known model or database vendors) could be a driver for further convergence in market practice. On the other hand, it could also give rise to systemic risk. If all firms base their business decisions on the same models, which respond the same way to the same set of circumstances, market movements could be amplified. Furthermore, any technical or theoretical flaws in the model could cause major problems. At the firm level, management should not base business decisions on the output of a purchased vendor model without a clear understanding of how the model operates and, where necessary, tailoring the model to suit the firm's unique risk profile.

61. Some observers would suggest that internal risk modelling allows for better risk aggregation and quantification of diversification effects across entities. An internal risk model could also be a tool for more efficiently allocating capital across business lines and legal entities. Firms continue to face challenges, however, in aggregating risk across sectors and risk types. Common definitions or metrics for aggregating risk across risk types are the exception and not the rule. Limitations in information technology represent a further significant constraint on the ability to aggregate risk; although these limitations have generally been declining over time.¹⁶

62. The modelling of risk is undergoing rapid change, spurred by technical advances and the practical experience of firms that have implemented models. Another important influence in this process has been the development of new regulatory frameworks that allow for greater regulatory recognition of internal modelling in capital adequacy requirements. Given the different timetables for implementing these new frameworks and faced with limited resources, however, firms have chosen to focus first on improving models for quantifying credit and operational risks in banking activities. A similar acceleration of model development might be expected in the insurance sector as the development of new solvency frameworks for insurance companies becomes more concrete.

63. Model development by firms and acceptance by supervisors is an iterative process in which there is positive interaction between industry and supervisors, stimulating further

¹⁵ In this context, the reference to risk modelling is very broad. It is intended to cover all kinds of risk modelling techniques (ie not only economic capital or VaR modelling) for all kinds of risks. In addition to internal modelling in firms, it also includes modelling incorporated in supervisory frameworks.

¹⁶ Limitations in information technology are also relevant to the discussion of operational risk and risk concentrations elsewhere in the report.

model development and supervisory acceptance of risk modelling over time.¹⁷ Supervisors in the three sectors closely follow the developments in internal risk modelling within their respective sectors. Based on their experience and discussions with the industry and the scientific field, they assess the value of these developments to the ongoing improvement of their respective capital frameworks. Beginning with the introduction of market risk models for banks and securities firms, internal risk models have gradually become more widely accepted. For example, Basel II, Solvency II, and changes to the net capital rules in the US securities sector all incorporate the recognition of aspects of firms' internal models. The risk-based capital rules for US life insurers have also recently been revised to reflect, to a limited extent, some reliance on internal models for specific products and risks. Model development and refinement by firms and the subsequent growing acceptance of these models in regulatory approaches is an iterative process – as supervisors become more comfortable with modelling practices and begin to accept elements of them in their frameworks over time, firms may have incentives to develop them further.

64. The acceptance of internal risk models, or elements of them, for regulatory purposes could enable and promote further convergence in regulatory approaches generally, as such models must meet defined qualitative and, to a lesser extent, quantitative standards. The degree of flexibility that is granted to a supervised firm determines the extent to which it can develop a tailor-made solution.

65. The standards for regulatory approval go beyond validating the technical aspects of individual risk models. Validation takes place in a wider context that considers a model's implementation within the institution's broader risk management framework. Internal models whose outputs are accepted for regulatory purposes should be an important element in internal decision making processes such as pricing, capital allocation and risk management – the 'use test'. Consequently, model validation incorporates an assessment of management's oversight of the development and use of models and public disclosure of their main features and results, among other things. The process of model validation strengthens risk management practice within the industry, irrespective of the sector.

66. The wider recognition of internal risk modelling for regulatory purposes, however, presents a kind of paradox. At a high level, the principle-based nature of this kind of regulatory framework may facilitate cross-sectoral convergence in those frameworks. In practice, however, regulatory acceptance of internal models and the actual validation of those models could lead to differences in outcomes at the firm level – even within a given sector – and may blur the comparison of firms within and across sectors. In this environment, it is important to recognise the growing importance of even closer cooperation among regulatory authorities, primarily within sectors. Where internal models applied at the top-most level of a financial conglomerate are accepted for regulatory purposes, however, their validation would entail close cooperation among supervisors from different sectors. Such cooperation may be necessary to understand the interplay of models used by member firms of the conglomerate where those models feed into the model used at the conglomerate level. It would also be useful to confirm that all models in the chain are subjected to similar validation standards.

67. The Basel Committee's Accord Implementation Group recently established a working group consisting of both banking supervisors and representatives from the US

¹⁷ This is relevant in all three sectors but is of particular interest cross-sectorally because the bigger, more sophisticated firms who often take the lead in developing and using internal models tend to be active in multiple sectors.

securities sector to promote greater consistency in supervisory standards for approving market risk models and to share experience on the way banks and securities firms manage and measure risk in trading book positions, including, for example, the extent to which liquidity and concentration risks are captured. The working group recently started a dialogue with the industry, focusing in particular on how to capture event and default risk in VaR measures for specific risk.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

68. The extent to which internal models are accepted for regulatory purposes differs by sector and risk type. In part, these differences reflect the relative state of development of modelling approaches. For example, securities firms and banks are allowed to use internal market risk models to calculate regulatory capital requirements for specified positions – these were the first models to be accepted for regulatory purposes. In contrast, the Basel II proposals for credit risk permit banks to use internal credit risk models to derive key model parameters,¹⁸ but these parameters are only inputs for supervisory formulas prescribed in Basel II.

69. Initially, each sector focused on the risk type that is most relevant to firms in that sector; attention to other risk types came later. For example, attention in the banking sector was focused initially on credit and market risks, with operational risk becoming a factor more recently. In the insurance sector, insurance risk was the principal focus initially, followed by credit, market and operational risks. This may help to explain differences in the pace of development of business models for a particular risk and the corresponding regulatory approaches, within and across sectors.

70. The cross-sectoral differences that do arise are partly a result of allowing sufficient and appropriate flexibility for such things as differences in time horizons; seen in this light, they are a reflection of fundamental differences in the underlying business models. On the other hand, there is no apparent reason for the differences that exist in some elements of this subject area. These would include internal and regulatory model validation processes and regulatory expectations around the internal controls and governance structure for model development, confidence levels, and firms' use of stress testing and scenarios.

(iv) Valuation of assets and liabilities

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

71. The trend towards market valuation or fair value in some risk management activities and accounting practices across sectors and within conglomerates is related to the development of economic capital models, which in turn has been driven by the growth of tradable products and risk transfer products.

72. The increased attention being paid to fair value is illustrative of some convergence in market practice across sectors and risk types. Many financial conglomerates have adopted fair values in their economic capital initiatives as they enable values to be aggregated where aggregation might otherwise generate less meaningful results. Risk management in financial conglomerates that comprise some combination of banking and insurance activities is an

¹⁸ Probability of default (PD), loss given default (LGD), and exposure at default (EAD).

example of situations where the industry sees benefits from the use of fair values that might outweigh any associated loss of soundness or accuracy.

73. Most supervisors actively encourage the development of economic capital methodologies that better link risk-taking with internal assessments of capital adequacy. At the same time, however, supervisors in the banking and insurance sectors are sensitive to the challenges that remain in implementing fair value in instances where the fair value approach could have a potentially misleading impact on regulatory capital levels. Examples include long-dated assets purchased with the intent to hold or for which independent pricing information is not readily available (eg traditional loan facilities and some forms of insurance contracts) and instruments where there is a difference between the underlying term and the actual holding period (eg repo-style transactions). In light of these concerns, for purposes of calculating regulatory capital the BCBS recently developed prudential filters applicable to banks' use of the fair value option that are designed to adjust for the unwanted effects of fair value accounting.

74. There is also some apprehension in the industry regarding the broad application of fair value accounting. This reaction may stem from concerns that fair value accounting is sometimes inconsistent with management's investment objectives (eg applying fair value to a long-dated bond that management intends to hold to maturity) and may introduce unwanted volatility in the balance sheet.

75. Aside from the broad trend in all sectors toward the use of fair values, currently there are significant differences across sectors with respect to valuation approaches. At a high level, irrespective of the many nuances in the discussion of valuation approaches a general picture emerges. Due to the short-term investment horizon of firms in the securities sector, marking-to-market is the predominant valuation approach for both assets and liabilities. This is also true for the trading books of banks. On the other hand, banks (for their non-trading portfolios) and insurance companies currently rely more heavily, although not exclusively, on historical cost approaches to valuation because of the longer-term nature of their assets and liabilities. Insurance companies in some regions are moving towards a marking-to-market of their assets and, where there are no secondary markets for insurance products, marking-to-model of their insurance portfolios. For example, until such time as IFRS standards become available, the insurance approach to valuing technical provisions in some regions requires firms to include a risk margin to ensure that risks are covered at a prescribed level of confidence.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

76. The valuation approaches followed for financial statement reporting purposes are driven by developments in accounting practices. Firms and their supervisors may be able to influence these developments, but any regional or cross-sectoral differences that exist ultimately are the result of decisions made by accounting standard setters at international or national levels. Some of these differences reflect fundamental differences in the underlying business models across sectors (eg the short-term nature of trading book investments versus management's longer-term intentions for bonds held outside the trading book in banks), but regional differences within a sector are more difficult to explain.

77. In light of the cross-sectoral trend toward the use of fair value approaches for financial statement reporting purposes, it is interesting to consider the extent to which supervisors in one or another sector are prepared to accept fair values for prudential purposes and whether any differences in their positions are the result of fundamental differences in the underlying business models. For example, it may be appropriate for some supervisors to accept fair values in respect of certain liabilities while bank supervisors, for

instance, continue to expect banks to use notional values in respect of deposit and debenture liabilities. But cross-sectoral differences in the degree to which fair value approaches are accepted by supervisors may warrant further study, particularly in the case of products with similar characteristics, such as the intended holding period and the availability of independent pricing information.

78. Existing differences in valuation methods are grounded in differences in the underlying business models and accounting regimes. However, they also may create unintended arbitrage incentives between different parts of a conglomerate. The trend to fair values could bring about more cross-sectoral consistency in valuation, however, fair values are not always the appropriate solution from a prudential point of view.

(v) Interest rate risk in an ALM framework

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

79. In the case of interest rate risk in a trading environment (the typical time horizon being days rather than months), there is a relatively high degree of convergence in regulatory frameworks. Interest rate risk in banks' trading books is subject to consistent treatment across jurisdictions, pursuant to the 1996 Market Risk Amendment to the Capital Accord. In the EU, the implementation of the 1996 Market Risk Amendment affects both banks and securities firms. Securities firms generally mark their positions to market. To the extent that US securities firms are part of a consolidated supervised entity, they may use comparable VaR methods (based on a 99% confidence level and 10-day holding period) to determine regulatory capital.

80. From the perspective of market practice outside of the trading environment, the management of interest rate risk is a component of longer term ALM risk (long term being months or years, rather than days) across the sectors. Although the methods for quantifying interest rate risk vary from discounting cash flows to duration-based approximations or gap analyses, it is addressed explicitly by firms in all three sectors. While there is a vast amount of scientific literature on interest rate models, specific challenges remain in modelling conditional cash flows (options).

81. The regulatory frameworks for managing interest rate risk in an ALM framework ('mismatch risk') are different within and across the sectors. With respect to interest rate risk in the banking book, the Basel Committee recently published updated principles for the management and supervision of interest rate risk.¹⁹ While the more limited approach to interest rate risk in the banking book may not be problematic in a practical sense, codification could form a basis for further convergence in regulatory frameworks in this area. Within the insurance sector there is a major difference with respect to the treatment of interest rate risk between the current Solvency I rules in the European Union and the Risk Based Capital (RBC) approach in the United States. The RBC approach applicable to life insurers addresses interest rate risk in terms of the impact of a change in the interest rate on the asset and liability cash flows, whereas interest rate risk is not addressed separately in Solvency I. In the case of life insurance, it is part of the general fixed capital charge for investment risk, which is based on the technical provisions. In non-life insurance, interest

¹⁹ See *Principles for the management and supervision of interest rate risk* (July 2004), Basel Committee on Banking Supervision.

rate risk is generally not taken into account. Under Solvency II developments, interest rate risk will be viewed in an asset and liability context.

82. In recent years, firms and supervisors have both shown increased interest in the field of ALM. There are variations across and within sectors but it seems that the larger, more sophisticated firms, especially in the insurance sector, have made important improvements in measuring their interest rate risk and overall ALM-management.

(b) Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?

83. Differences in the treatment of interest rate risk flow partly from fundamental differences in sectoral business models. Whereas banks generally borrow money short and lend it long, life insurers typically have long-term obligations to their policyholders. It could be the case that they are not always able to find assets that match the duration of the obligations.

84. These differences only represent differences in expected outcome; they do not preclude a common approach to the risk. Life insurers can, for example, adjust their balance sheet structure, swapping long-term fixed rate obligations for a shorter term variable rate. As explained above, this observation would not apply to securities firms or the trading book of banks as both industry practice and regulatory approach seem to show a relatively high degree of convergence.

(vi) Treatment of operational risk

(a) What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?

85. In a practical sense financial institutions have always had to manage operational risk as part of their everyday business routines, but the management of operational risk as a discipline unto itself – not unlike that of credit or market risk – is a relatively new concept. Since the late 1990s operational risk has attracted considerable attention from both firms and supervisors in all sectors, starting with the securities sector but with the banking and insurance sectors following closely behind. More recently, some very high-profile cases of operational failures in financial firms have made them increasingly aware of the potentially significant losses that can result from operational risk. As a result, frameworks for the management and measurement of operational risk have developed very quickly. The development work has been spurred on by regulatory initiatives such as Basel II and the Sarbanes-Oxley Act of 2002, which sets forth financial reporting control expectations for publicly traded companies and financial institutions in the United States, and operational risk events ranging from September 11 to the numerous financial reporting scandals that resulted from internal control failures, among other things (eg Enron, WorldCom, Parmalat, Ahold).

86. Sound corporate governance is a cornerstone in effective operational risk management. Generally, supervisors in all sectors and regions require written operational risk management policies. However, differences exist in the implementation of supervisory requirements. In some jurisdictions, operational risk must be specifically addressed in corporate governance policies; in others this is not a formal requirement. The same observation is relevant concerning the requirement to have a compliance officer. Self-assessments are required either by law or by regulatory policy but differ in whether operational risk is specifically assessed. Supervisors in all sectors and most jurisdictions (and legislation in many jurisdictions) require an audit committee of the board and prescribe

other requirements regarding the board's independence, size and involvement in the management of operational risk.

87. Supervisors explicitly require firms in all sectors and jurisdictions to establish effective internal controls and systems. There tends to be a particular emphasis on the importance of effective controls around financial reporting in light of the potentially material reputational risk and other impacts from operational failures in this area. Annual external audits are generally required in all sectors. Depending on the size of the firm, most have some kind of internal audit program even where it isn't required by law.

88. All supervisors in all sectors conduct or otherwise require on-site reviews for purposes of assessing the adequacy of a firm's operational risk management process. The frequency of on-site reviews varies from yearly to once every few years depending on the requirements of the relevant regulatory framework and a firm's risk profile and overall condition. In the case of some supervisors, on-site reviews follow a prudential focus, whereas in others they are more rules-oriented. Generally, uniform procedures exist for on-site reviews, whether they are conducted by staff of the relevant supervisory authority or by third parties (such as external auditors), but on-site reviews typically are tailored to the specific activities and risk complexity of the firm. The scope of risks reviewed is broadly consistent across all sectors and jurisdictions, but not all risks are reviewed at each on-site exam. Supervisors generally perform off-site monitoring between on-site reviews, with the frequency varying from quarterly to annually.

89. Firms generally are not able to quantify operational risk to the same extent as other risk types, such as market and credit risk. Considerable progress has been made in recent years, however, particularly in the banking sector in which an explicit capital requirement for operational risk will be introduced with Basel II. The UK FSA has required UK insurance firms to quantify operational risk from January 2005. Apart from Basel II and the UK requirement for insurance companies, no supervisor currently requires that a specific amount of capital be allocated for operational risk. Current accounting standards provide limited room for firms in any sector or jurisdictions to establish reserves for operational risk.

90. Operational risk mitigation in the form of insurance and reinsurance is required by some supervisors (eg fidelity bond insurance is required by US and Canadian bank and securities supervisors). Basel II provides for the limited recognition of qualifying insurance contracts as an offset for operational risk capital requirements of certain banks. Outsourcing is another potential form of operational risk mitigant, although it often introduces other risks that require management attention.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

91. The concept of operational risk management as a discipline may be relatively new and still under development, but there nonetheless appear to be some broad similarities cross-sectorally and regionally in supervisory expectations of the board and internal control frameworks and in the attention being paid to operational risk measurement. Additional work in this area would be necessary to determine whether any material differences exist in the regulatory approach to operational risk management and, if so, whether they are based on fundamental differences in the underlying business models across sectors.

(vii) The aggregation of risk and treatment of risk concentrations

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

92. Banks, securities firms, insurers and conglomerates have made broad improvements over the past few years in their ability to quantify and manage risk concentrations by sector and by risk type.

93. Challenges remain, however, in aggregating risk across sectors and risk types. In general, it appears that firms continue to find it difficult to aggregate risk across sectors. From a financial conglomerate's perspective aggregation is an important focus (eg in calculating diversification benefits). The challenges that firms face in aggregation are not limited to risk concentrations, but also include intra-group exposures and individual risk types like operational risk.

94. Common definitions or metrics for risk concentrations across risk types such as credit, market and operational risks are not currently in use. On a related note, there is no common definition of risk concentration itself – ie when is risk actually concentrated? The scope of the risk concentrations area has widened in recent years. It includes not only large exposures to one obligor, product, region or industry, but also multiple exposures of different member firms of the same conglomerate to one counterparty. The Enron case is a typical example of events that have changed the thinking about risk concentrations and has prompted discussions among an array of interested parties. Although the focus is often on the asset side of the balance sheet, risk concentrations are equally relevant to the liability side of the balance sheet and to off-balance sheet exposures, as well. Aggregation also raises issues related to correlation, or the statistical relationship between different risk concentrations – the data needed to estimate correlations is often limited or not available, and correlations are generally susceptible to change under stress scenarios.

95. Some firms interviewed by the Working Group nevertheless noted that while they had historically monitored risk concentrations on a de-centralised basis, they had recently made strides in moving toward a more centralised, enterprise-wide monitoring of risks. This progress has been made possible in part by advances in information technology, which have enabled firms to more readily capture and assess risk concentrations.

96. Despite the improvements noted above, weaknesses persist. For example, various privacy and data protection laws that exist in many jurisdictions make it difficult for firms to capture and aggregate consumer data on a global basis.

97. Firms typically set limits on risk concentrations by obligor, product and industry, although differences exist between the sectors. In the case of financial conglomerates, some firms have developed triggers for reporting to senior management, with firms relying on managers' market expertise to determine their vulnerability to risk concentrations. Correlation assumptions are an important consideration in the setting of concentration limits, especially at the top-most level of a conglomerate.

98. Recently, there has been an increase in the use of secondary markets to manage risk concentrations. Specifically, the use of credit derivatives is widespread among firms, although the reason for engaging in derivative contracts may vary across sectors. Banks tend to be net protection buyers. Insurers also operate as protection sellers, but their use of credit derivatives remains limited. Insurers and conglomerates use reinsurance as a means to manage concentrations of insurance risk. Asset-backed securities (ABS), and mortgage-backed securities (MBS) in particular, appear to be important alternatives for both banks and insurers.

99. Regulatory reporting requirements contribute to supervisors' understanding of firms' risk concentrations. In general, there are requirements for firms to report financial information on a quarterly or annual basis. In the absence of common definitions, however, these reporting requirements are not fully consistent.

100. The Joint Forum's 1999 paper *Risk Concentration Principles* includes some observations that still appear to be valid today, despite the progress made in quantification and the development of alternative forms of risk mitigation. Concurrent with the increasing attention paid by supervisors to risk concentrations in financial conglomerates since the report was published, the management of conglomerates have been focusing more of their attention on concentrations that cross sectoral boundaries. Regulatory tools and methodologies, however, aim at measuring concentrations by risk factor and tend to vary by sector. Insurance supervisors use a variety of approaches based on technical provisions aimed at limiting insurance concentration risk. For example, they promote the use of reinsurance policies, prescribe regulatory limits and sometimes require additional technical provisions. On the asset side, investment limits and restrictions on the admissibility of assets are incorporated in the calculation of minimum capital requirements for insurers. Bank supervisors have developed large exposure guidance and quantitative limits on exposures to single counterparties or groups of related counterparties that are based on a bank's capital. In the securities sector, supervisors have introduced strict liquidity and credit requirements to manage risk concentrations, and some jurisdictions have introduced large exposure limits that are identical to those in the banking sector.

101. The 2003 Joint Forum paper *Trends in risk integration and aggregation* found that there is an interaction between the development of economic capital methods and the recognition of diversification benefits in regulatory capital calculations. In setting capital requirements, supervisors have taken a cautious approach and do not fully recognise the degree of diversification benefits predicted by economic capital models, particularly across risk types.

102. There has been an increasing use by supervisors of firms' internal measurements of risk concentrations, especially in the banking sector. For the insurance sector, internal measurement of insurance risk concentration is to some extent part of the regular calculation of technical provisions and reinsurance provisions. There is a growing awareness among insurance supervisors, however, that reinsurance can result in credit risk concentration.

103. The move toward risk-based supervision is gaining momentum, accompanied by a growing appreciation of the importance of risk concentrations. In general, it appears that supervisors of conglomerates, in particular, appreciate the importance of closely reviewing, at the conglomerate level, risk concentrations that might originate across different subsidiaries or business lines within the conglomerate.

(b) Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?

104. There is little evidence that cross-sectoral differences in regulatory approach would originate from fundamental differences in the underlying business models, but there is also little information on the existence of such differences. Currently there is no common cross-sectoral framework of definitions or metrics for dealing with risk concentrations, nor is there a common approach for aggregating risk concentrations across risk types. Privacy and data protection laws that prevent firms from capturing and aggregating global consumer data are relevant to this discussion, but this is not an issue that supervisors can address directly.

105. Regulatory approaches in the insurance sector are based on technical provisions and aimed at limiting risk. In the banking sector the focus is on maintaining a certain level of

capital relative to the exposure to a single counterparty or group of related counterparties. In the securities sector, the focus is on maintaining liquidity. These differences may be fundamental, but transcend the topic of risk concentrations.

106. Firms across all three sectors continue to work on improved techniques for identifying and addressing risk concentrations. For their part, supervisors have demonstrated interest in using firms' models in the course of their supervisory assessments. Since there is little evidence to suggest that cross-sectoral differences are of a fundamental nature, all sectors, and financial conglomerates in particular, might benefit from further work aimed at gathering current information about the management and supervision of risk concentrations.

(viii) Risk mitigation

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

107. For the purpose of this report, risk mitigation (or risk mitigants) includes those products and techniques that directly result in a reduction of the net quantity of a particular risk. Examples include the use of collateral, reinsurance and co-insurance, inflation-linked bonds, securitisations, and derivative instruments.²⁰ The use of both traditional and new risk mitigation products and techniques has increased in all sectors over the past several years, but the importance of secondary markets as a source of risk mitigation has grown in comparison to more traditional techniques. Although the use of risk mitigation products and techniques varies across sectors, collateral is an example of a technique that is widely used across sectors.

108. Risk mitigants serve an important function in reducing risks and allowing for the efficient reallocation of capital. At the same time, however, risk mitigants may also create or increase a firm's exposure to other risks. Examples include reinsurance contracts, which may introduce credit risk, collateral, which may introduce liquidity risk, and complex derivatives, which may introduce operational risk.

109. The recent growth of risk transfer across sectoral boundaries leads to increased inter-linkages among the sectors. Credit derivatives are an example. Because of the nature of their core business, banks tend to operate as net protection buyers. Insurers, on the other hand, tend to be protection sellers, whereas securities firms take positions from a trading perspective. Intra-group risk mitigation, a special form of cross-sectoral risk mitigation, is discussed below.

110. Relative to firms' internal recognition of the benefits of risk mitigation, the regulatory approaches of all three sectors are somewhat conservative in the extent to which capital rules recognise the reduction of risk. Supervisors need to be satisfied regarding the nature and extent of the risk that is actually mitigated. They tend to broadly encourage cost-effective risk mitigation techniques firms deem appropriate, but only recognise them in their capital rules where the end result is the equivalent of the protection provided by capital. As a result, supervisors have focused their attention on developing strict criteria governing the extent to which collateral is recognised for regulatory capital purposes.

²⁰ Other risk management structures and activities, such as sound corporate governance and diversification strategies, also have the effect of reducing the level of risk, but they do so indirectly. The discussion of risk mitigation in this report is not intended to cover these indirect forms of risk mitigation.

111. The regulatory treatment of risk mitigation and eligibility of specific products and techniques varies significantly across sectors. Not only is this true with respect to common risk mitigants like collateral, it is especially the case with more sector-specific risk mitigants. For example, there seems to be a difference in supervisors' attitudes toward the use of reinsurance in the insurance sector, on the one hand, and securitisations in the banking sector, on the other. In the insurance sector, supervisors regard reinsurance as an effective tool for transferring insurance risks to another party. In the banking sector, however, supervisors tend to be more sceptical of the risk mitigating effects of securitisations and require them to meet stringent criteria before their benefits can be recognised in regulatory capital calculations.

112. Intra-group risk mitigation is an important topic in the context of financial conglomerates. When two member firms within a conglomerate engage in a risk mitigation transaction, the firm that is selling the protection would have to engage in a further transaction with an outside party before there could be a reduction of the net quantity of risk at the conglomerate level. Where a conglomerate's capital adequacy is not assessed on a consolidated basis, these transactions could blur its true solvency position. Depending on how solvency is assessed at the conglomerate level, cross-sectoral differences in the treatment of risk mitigation could also give rise to arbitrage opportunities, with member firms that receive the most favourable regulatory treatment being the most active sellers of protection to other firms within the conglomerate.

113. As supervisors move generally in the direction of risk-based supervision, with more reliance on the firms' internal models, one might reasonably anticipate broader supervisory recognition of risk mitigation when firms are able to demonstrate that the techniques employed truly provide protection that is equivalent to the capital relief they generate.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

114. Products and techniques used to mitigate risk should only be recognised in the regulatory approach of any of the sectors when they truly mitigate risk. In some instances, cross-sectoral differences in regulatory approach to risk mitigation could be a function of differences in the historical focus of supervisors across sectors (eg market risk in the securities sector, credit risk in the banking sector, and insurance risk in the insurance sector) which might then be reflected in different levels of experience and comfort with a particular risk mitigation technique. If further study were to conclude that similar products or techniques truly mitigate risk in more than one sector, such work could potentially lead to a reduction in the nature and extent of any cross-sectoral differences that currently exist.

(ix) *Use of external ratings*

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

115. External ratings can be viewed from multiple perspectives. Firms use external ratings in their internal risk management practices, and some supervisory approaches recognise external ratings explicitly. Many firms also establish targets for their own external rating as a management tool.

116. External ratings are used by firms in all three sectors as a rough assessment of the credit quality of their counterparties. In the securities sector and in the trading portfolios of banks, external ratings play an important role in providing a firm with a third-party's credit assessment of its trading exposures and in enhancing liquidity in markets. In commercial

banking, where relationships tend to be long-term and banks typically conduct extensive independent due diligence, external ratings play a less important role in the management of credit risk (this is especially true in the case of larger banks). The internal ratings-based approach is an important innovation in the Basel II framework. Although it entails the use of a bank's own internal rating system to determine regulatory capital levels, external ratings have a role in the development and calibration of those internal systems. In the insurance sector, external ratings are a factor in the investment decisions of firms seeking yield above that offered by government bonds. Regionally, the use of external ratings has been more widespread in the United States than in continental Europe for a variety of reasons, including differences in the financing techniques used by borrowers and in the type and size of lenders. There are indications, however, that the use of external ratings is expanding in Europe.

117. In the context of the current regulatory frameworks, external ratings play only a modest role in the banking and securities sector. For both banks and securities firms that are subject to Basel requirements, external ratings are used to identify 'qualifying items' under the standardised approach for market risk. Looking forward, however, banks implementing the Basel II Standardised Approach will be permitted to use external ratings in the calculation of minimum capital requirements. The opportunity to rely on external ratings could lead to growth in the penetration of ratings in the European Union. In the insurance sector external ratings are currently used in the regulatory approaches in some regions. In the United States, for example, eligible investments that are rated by a recognised rating agency do not have to be reported to the NAIC for a credit designation. A role for external ratings is also being considered in the European Union under Solvency II for the assessment of capital adequacy for credit risk in the investment portfolio of insurers.

118. Many firms manage their capital to target a specific external rating. Economic capital models can also be designed to target a specific external rating by setting the confidence level at a level consistent with the firm's desired rating. Of course, liquidity, asset quality and other considerations factor into a firm's external rating, but capital levels are the most tangible feature that banks can manage to rating agency criteria.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

119. Although external ratings play a role in some current and foreseen regulatory frameworks in all three sectors, the importance of external ratings in the regulatory context differs across sectors and across regions. The role of external ratings is perhaps most significant in banking, which is not surprising as the granting of credit is the core business activity in this sector.

(x) *Regulatory reporting requirements*

(a) *What is the current state of affairs in market practice convergence and/or regulatory differences and similarities?*

120. Generally speaking, firms in all sectors must file financial reports with supervisors. This is also true in the case of financial conglomerates. Financial accounting is the starting point for regulatory reporting, but supervisors across sectors typically require additional reporting that may include, for example, supplemental information about individual balance sheet or income statement items. This is sometimes referred to as 'applying prudential filters', another example of which arises in the case of the fair value approach. As noted previously, supervisors recognise that challenges remain in implementing fair value in the case of products for which clear indications of market value are unavailable (eg traditional

loan facilities and insurance contracts). Supervisors might apply prudential filters to such products to adjust for the possible unwanted effects of fair value accounting on regulatory capital levels.

121. Differences in regulatory reporting requirements are a frequent source of comment by supervised firms. There are clearly some differences in reporting requirements for firms in different sectors resulting from differences in the nature of their business. For example, there may be more of a focus on liquidity reporting in the banking and securities sectors than in the insurance sector. Differences also exist within sectors based on a firm's size, international scope, complexity of operations and business mix (eg general, life, property and casualty insurance). Another area where there may be differences both within and across sectors is the extent to which supervisors use standardised regulatory reporting as opposed to firms' internal management reports in the course of their supervisory process. The former provides for easier peer comparisons, whereas the latter tends to provide better insight into a firm's unique risk profile.

122. A regulatory reporting framework that is consistent with the broader regulatory framework of which it is part may nonetheless be inconsistent with other regulatory frameworks within or across sectors because of other (ie non-reporting) differences in those frameworks. Accordingly, complete consistency in regulatory reporting within or across sectors could be problematic for individual regulatory frameworks and would not necessarily be an improvement. It is also important to note that existing differences stem in part from differences in the unique experiences of each sector over time. In theory, more consistent reporting frameworks might be achievable if supervisors in all sectors were to start today to redesign *de novo* frameworks. In reality, however, eliminating cross-sectoral differences within a particular jurisdiction is a challenging task; any effort to reduce them across sectors and jurisdictions is a longer-term prospect.

123. Although many supervisors have acknowledged the existence and potential burden of differences in regulatory reporting requirements, addressing them typically has not been a high priority. Some degree of convergence in regulatory reporting has been occurring and might be expected to continue, however, as a result of major regulatory developments like Basel II and Solvency II. The integration of supervisory authorities and ongoing supervisory interaction with large financial conglomerates, combined with the use of firms' internal management reporting for supervisory purposes, also might contribute to further reductions in regulatory reporting differences across sectors.

(b) *Do the identified differences originate from fundamental differences in the underlying business models across the three sectors? If so, to what extent?*

- 124. Differences in regulatory reporting requirements exist both within and across sectors, but determining whether the cross-sectoral differences are the result of fundamental differences in the underlying business models is difficult. It seems plausible though that at least some of them arise from such fundamental differences, which prompt supervisors to emphasise different issues in their regulatory reporting requirements. For example, a securities supervisor might place more emphasis on liquidity risk in its reporting requirements than insurance supervisors do.

5. Summary and concluding remarks

125. As noted previously, the Working Group followed a two-step process in fulfilling its mandate. First, it engaged in a fact-finding exercise to gain insight into the nature and extent of cross-sectoral convergence in the practical approaches to managing and supervising risk

along roughly the same dimensions used in the Joint Forum's 2001 comparison – ie credit risk, market risk/interest rate risk, operational risk and risk concentration. With that analysis in hand, the Working Group identified some key areas for further investigation and considered the extent to which the identified differences in regulatory approach in those areas might be based on fundamental differences in the underlying business model.

126. The Working Group found that cross-sectoral convergence in market practice and in regulatory approaches is occurring naturally, to some extent, and can be expected to continue as a result of various trends and developments, some of which are identified in this report. In the course of its work, it also became clear to the Working Group that the starting point for discussions among supervisors is changing from one that focuses on differences in approach to one that focuses on similarities. In addition, this exercise reaffirmed an observation that was made in the Joint Forum's 2001 comparison of core principles, which is that there seems to be merit in addressing cross-sectoral issues at an early stage in the policy development process to avoid introducing or exacerbating inappropriate differences in regulatory approaches at the technical level

127. The Working Group noted that many of the existing cross-sectoral differences in regulatory approach are rooted in what some have described as differences in the 'culture' of supervision. These cultural factors sometimes are more difficult to identify and describe than the supervisory rules or practices in a particular sector or region, but they could help to explain some of the regulatory differences identified in this report. While the case for maintaining regulatory differences of any kind should be rigorously examined, there is no automatic presumption that differences attributable to cultural factors cannot be justified.

128. The results of the Working Group's review of the regulatory and market differences in some specific subject areas may be summarised as follows:

- There are no appreciable differences in the purpose of capital across the three sectors.
- Various initiatives under way in a number of jurisdictions and all sectors will more closely align capital requirements with measures of risk that are calibrated using economic capital models. This process could lead to further convergence across the three sectors. On the subject of acceptable forms of capital, it could be argued that there should be no differences in acceptable forms of capital as the fundamental purpose of capital appears to be the same across sectors and jurisdictions. From a practical perspective, however, some of the differences in the definition of acceptable forms of capital are driven by differences in local tax and accounting treatments and practices for the winding-up of a firm.
- The extent to which internal models are accepted for regulatory purposes differs by sector and risk type. In part, these differences reflect the relative state of development of modelling approaches. Cross-sectoral differences also arise as a result of allowing sufficient and appropriate flexibility for such things as differences in time horizons; seen in this light, they are a reflection of fundamental differences in the underlying business models. On the other hand, there are aspects of this issue for which there is no apparent reason for cross-sectoral differences in regulatory approaches. These would include internal and regulatory model validation processes and regulatory expectations around the internal controls and governance structure for model development, confidence levels, and firms' use of stress testing and scenarios.
- The valuation approaches followed for financial statement reporting purposes are driven by developments in accounting practices. Firms and their supervisors may be able to influence these developments, but any existing regional or cross-sectoral differences are ultimately the result of decisions made by accounting standard

setters at international or national levels. In light of the cross-sectoral trend toward the use of fair value approaches for financial statement reporting purposes, further study may be warranted of the extent to which supervisors in one or another sector are prepared to accept fair values for prudential purposes and whether any differences in their positions are the result of fundamental differences in the underlying business models. The trend to fair values could bring about more cross-sectoral consistency in valuation, however, fair values are not always the appropriate solution from a prudential point of view.

- Differences in the treatment of interest rate risk flow partly from fundamental differences in sectoral business models. But these differences only represent differences in expected outcome; they do not preclude a common approach to the risk. In the case of securities firms or the trading book of banks, industry practice and regulatory approach seem to show a relatively high degree of convergence.
- Additional work would be necessary to determine whether any material differences exist in the regulatory approach to operational risk management and, if so, whether they are based on fundamental differences in the underlying business models across sectors.
- Currently there is no common cross-sectoral framework of definitions or metrics for dealing with risk concentrations, nor is there a common approach for aggregating risk concentrations across risk types. Firms in all three sectors continue to work on improved techniques for identifying and managing risk concentrations, and supervisors are showing interest in using firms' models in the course of their supervisory assessments. Since there is little evidence to suggest that cross-sectoral differences are of a fundamental nature, all sectors, and financial conglomerates in particular, might benefit from further work aimed at gathering current information about the management and supervision of risk concentrations.
- Some cross-sectoral differences in regulatory approach to risk mitigation could be a function of differences in the historical focus of supervisors across sectors (eg market risk in the securities sector, credit risk in the banking sector, and insurance risk in the insurance sector) which might then be reflected in different levels of experience and comfort with a particular risk mitigation technique. If further study were to conclude that similar products or techniques truly mitigate risk in more than one sector, such work could potentially lead to a reduction in the nature and extent of any cross-sectoral differences that currently exist.
- Although external ratings play a role in some current and foreseen regulatory frameworks in all three sectors, the importance of external ratings in the regulatory context differs across sectors and across regions. The role of external ratings is perhaps most significant in banking, which is not surprising as the granting of credit is the core business activity in this sector.
- Differences in regulatory reporting requirements exist both within and across sectors, but determining whether the cross-sectoral differences are the result of fundamental differences in the underlying business models is difficult. It seems plausible though that at least some of them arise from such fundamental differences, which prompt supervisors to emphasise different issues in their regulatory reporting requirements.

129. This report does not comprise a complete and final analysis of each of these areas. It does, however, represent a starting point for the discussion and prioritisation of areas where further work might help to clarify the nature and extent of convergence in market practice and regulatory approaches. This may be most relevant for those areas in which the basis for the identified differences is unclear. The Joint Forum is not proposing, however, that work should commence in all of these areas in the short term. On the contrary, its members

are sensitive to current concerns about regulatory overload and do not wish to unduly distract firms' attention from a number of key regulatory initiatives currently under way. Whether any of this work is initiated by the Joint Forum, its parent committees, or others, it should only be done after taking careful account of these issues.

130. In that light, the Joint Forum considered a number of potential new initiatives that might follow on from this report. Of those that are likely to require industry involvement, the Joint Forum narrowed the list of those it might undertake to one – a cross-sectoral review of firms' management of risk concentrations. It is anticipated that this new workstream will commence in the spring of 2006.

Annex

Members of the Working Group on Regulatory and Market Differences²¹

Chairman:	Dirk Witteveen, De Nederlandsche Bank	
Belgium	Mr Luc Van Cauter	Commission bancaire, financière et des assurances
Canada	Ms Pat Chaukos	Ontario Securities Commission
France	Ms Anne Lécuyer	Commission Bancaire
	Mr Guillaume Autier	Ministère de l'Economie, des Finances et de l'Industrie
	Mr Noel Guibert	Commission de contrôle des assurances
Germany	Mr Uwe Neumann	Bundesanstalt für Finanzdienstleistungsaufsicht
Japan	Mr Tomonori Yuyama	Financial Services Agency
Netherlands	Mr Erik Kersten	De Nederlandsche Bank
	Mr Marc Pröpper	De Nederlandsche Bank
Switzerland	Ms Helga Portmann	Bundesamt für Privatversicherungen
United Kingdom	Mr Richard Diggory	Financial Services Authority
	Mr Piers Haben	Financial Services Authority
United States	Mr Lance Auer	Federal Reserve Bank of New York
	Ms Kathleen O'Brien	Office of Thrift Supervision
	Mr Kevin McCarty	Florida Insurance State Department
	Mr Mike Yuenger	Office of the Comptroller of the Currency
	Ms Bonnie Gauch	Securities and Exchange Commission
EU Commission	Mr Peter Smith	
Secretariat	Mr Jeff Miller	Joint Forum Secretariat

²¹ The composition of the working group evolved over time. This list reflects the membership at the conclusion of the work.