GROUP OF TEN

REPORT ON CONSOLIDATION IN THE FINANCIAL SECTOR

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Introduction and summary of findings and policy implications

1. Introduction

The ongoing consolidation of financial institutions is one of the most notable contemporary features of the financial landscape both within and across many industrial countries. In recognition of this fact, and its potential implications for public policy in a variety of areas, in September 1999 Finance Ministers and central bank Governors of the Group of Ten asked their Deputies to conduct a study of financial consolidation and its potential effects. This Report presents the results of that study.

To conduct the study, a Working Party was established under the auspices of finance ministry and central bank deputies of the Group of Ten.[1] From the beginning, it was recognised that the subject matter was substantial and that there was a need to utilise expertise from a wide range of sources. Thus, the Working Party was organised into six Task Forces, each of which was charged with addressing a key aspect of financial consolidation and its potential effects. These Task Forces addressed the patterns of financial consolidation observed in the 11 G10 nations plus Australia and Spain (the study nations), the causes of consolidation, and the potential effects of consolidation on financial risk, monetary policy, financial institution efficiency, competition and credit flows, and payment and settlement systems.

The Working Party sought to employ a broad definition of financial services, but also to limit the work's scope to manageable proportions. Thus, the definition of the financial services industry used here includes commercial banking, investment banking, insurance and, in some cases, asset management. Most other types of financial activity, such as exchanges and specialty finance, are excluded.

When attempting to understand and interpret this Report's findings and implications, it is critical to keep some general principles in mind. First, a core objective of the study is to identify the potential impacts of consolidation, not to judge whether consolidation in combination with other developments has led to a net change in, say, financial risk or the competitive environment. In practice, isolating such "partial" effects is extremely difficult. Consolidation is only one of several powerful forces causing change in the financial system, and each of these forces affects and is affected by the others. Nevertheless, a systematic attempt to focus on the possible effects of consolidation has, in the Working Party's judgement, significant value added.

Second, it is well known that international comparisons are inherently difficult for many reasons. The current study certainly suffers from this complexity, and the study is organised along national lines in a number of places for precisely this reason.[2] Still, financial consolidation

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[1] The Working Party was chaired by Roger W Ferguson, Jr, Vice-Chairman of the Board of Governors of the Federal Reserve System. The Working Party comprised finance ministry and central bank staff from Australia, Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Spain, Sweden, Switzerland, the United Kingdom and the United States, and representatives from the Bank for International Settlements, the European Central Bank, the European Commission, the International Monetary Fund and the Organisation for Economic Co-operation and Development.

[2] In some cases international comparisons have become easier over time. For example, creation of the euro has facilitated comparisons among the member states.

and its close cousin financial globalisation are phenomena that cut across national boundaries in many dimensions. Thus, international comparisons are imperative, and a second core objective of the study is to identify common (but not necessarily identical or equally important) patterns, causes, and implications across the study nations.

Although it was not the Working Party's intention to develop specific policy recommendations, an important objective was to identify key areas in which financial consolidation supports the need for new or continued, and in some cases accelerated, policy development. These areas are discussed in some detail in this chapter and in the separate chapters written by the individual Task Forces.

Lastly, as indicated above, the study adopted a broad definition of financial services. However, as a practical matter, the predominant portion of existing research and to a great extent the available data are focused on the banking industry in all the study nations. Thus, the study is more bank-centric than was originally intended. This emphasis may not be too distorting because, as discussed below, most merger and acquisition activity in the financial sector during the 1990s involved banking firms. Nevertheless, one of the conclusions of the study is that in some cases more research and data collection would be helpful for non-bank financial service firms and markets. The remainder of this chapter proceeds as follows. Section 2 presents a brief listing of the study's key findings and policy implications. Little effort is made here to explain the reasoning and evidence behind the findings and implications identified by the Working Party. Section 3 is a more extended discussion of findings and policy implications that also summarises the analysis behind the Working Party's conclusions.

2. Key findings and policy implications

The study's most important findings and their policy implications, organised by topic, may be listed briefly.

Findings

Patterns

(1) There was a high level of merger and acquisition (M&A) activity in the 1990s among financial firms in the 13 countries studied. In addition, the level of activity increased over time, with a noticeable acceleration in consolidation activity in the last three years of the decade. As a result, a significant number of large, and in some cases increasingly complex, financial institutions have been created.

(2) Most mergers and acquisitions involved firms competing in the same segment of the financial services industry and the same country, with domestic mergers involving firms in different segments the second most common type of transaction.

(3) Cross-border M&As were less frequent, especially those involving firms in different industry segments. However, cross-border activity was relatively strong at insurance companies and in joint ventures and strategic alliances outside the United States.

(4) Most M&A activity during the 1990s in the financial sector involved banking firms. Acquisitions of banking firms accounted for 60% of all financial mergers and 70% of the value of those mergers.

(5) The number of joint ventures and strategic alliances increased over the 1990s, with especially large increases in the last two years.

(6) The number of banking firms decreased in almost every country during the decade and the concentration of the banking industry, as measured by the percentage of a country's deposits controlled by the largest banks, tended to increase. If other banking activity, such as off-balance

sheet activities, were included in the size measure, the increase in banking concentration would be even greater.

(7) The structure of banking industries continues to differ greatly across countries, ranging from very unconcentrated in a few nations (the United States and Germany) to highly concentrated in about half of the nations in the study (Australia, Belgium, Canada, France, the Netherlands and Sweden).

(8) There are no consistent patterns across countries in changes in the number of insurance firms or concentration in the insurance industry during the 1990s. Also, patterns often differed for life and non-life insurance companies in the same country.

(9) Many specific activities of the securities industry, such as underwriting, are dominated by a small number of leading institutions. It is unclear, however, whether this pattern changed much over the 1990s.

(10) Over-the-counter (OTC) derivatives markets grew dramatically in the 1990s, with notional value quadrupling between 1992 and 1999. Concentration measures in worldwide derivatives markets were at modest levels at the end of the decade.

Causes

(1) According to the practitioners interviewed, the primary motives for financial consolidation are cost savings and revenue enhancements.

(2) The most important forces encouraging consolidation are improvements in information technology, financial deregulation, globalisation of financial and real markets, and increased shareholder pressure for financial performance. With respect to globalisation, the euro has accelerated the speed of financial market integration in Europe and encourages cross-border activity, partly through consolidation.

(3) Important factors discouraging consolidation are diverse domestic regulatory regimes and corporate and national cultural differences.

(4) Consolidation is likely to continue, but the likelihood of specific future scenarios is impossible to assess with confidence. Possible scenarios, none of which are mutually exclusive, include (a) continuation of the current trend towards globally active universal financial service providers; (b) the emergence of more functionally specialised financial firms within a given segment of the financial industry; and (c) continued consolidation, but a more radical form of specialisation through the gradual "deconstruction" of the supply chain via the outsourcing of certain activities (eg internet services) to both financial and non-financial third parties.

Financial risk

(1) The potential effects of financial consolidation on the risk of individual institutions are mixed, the net result is impossible to generalise, and thus a case by case assessment is required. The one area where consolidation seems most likely to reduce firm risk is the potential for (especially geographic) diversification gains. Even here, risk reduction is not assured, as the realisation of potential gains is always dependent upon the actual portfolio held. After consolidation some firms shift towards riskier asset portfolios, and other risks, such as operating risks and managerial complexities, may increase. More broadly, there is no guarantee that cost savings or efficiency gains will be realised.

(2) Systemic financial risk is most likely to be transmitted to the real economy through the wholesale activities of financial institutions and markets, including payment and settlement systems.

(3) In part because the net impact of consolidation on individual firm risk is unclear, the net impact of consolidation on systemic risk is also uncertain. However, it seems likely that if a large and complex banking organisation became impaired, then consolidation and any attendant

complexity may have, other things being equal, increased the probability that the "work-out" or "wind-down" of such an organisation would be difficult and could be disorderly. Because such firms are the ones most likely to be associated with systemic risk, this aspect of consolidation has most likely increased the probability that a work-out could have broad implications.

(4) Another critical element in evaluating the potential for consolidation to affect systemic risk is assessing the extent of interdependencies among large and complex financial organisations. A high degree of interdependency would suggest the potential for systemic risks.

(5) Evidence suggests that interdependencies between large and complex banking organisations have increased over the last decade in the United States and Japan, and are beginning to do so in Europe. Although a causal link has not been established, these increases are positively correlated with measures of consolidation. Areas of increased interdependency that are most associated with consolidation include interbank loans, market activities such as OTC derivatives, and payment and settlement systems.

(6) Partly as a result of consolidation, non-bank financial institutions, not just banks, have the potential to be sources of systemic risk.

(7) Consolidation also appears to be increasing the possibility that even a medium-sized foreign bank (or perhaps a non-bank financial institution) from a large nation would be a potential source of instability to a relatively small host country. The possibility of loss of domestic ownership of a small nation's major banks has, other things being equal, also increased.

(8) It appears that consolidation, and especially any resulting increase in firms' complexity, has had an ambiguous effect on the potential for market discipline to control the risk-taking of large and complex financial institutions. On the one hand, increased disclosures have probably improved firm transparency and encouraged market discipline. On the other hand, increased complexity has made assessment of a firm's financial condition more difficult, and firms' increased size has the potential to augment moral hazard problems.

(9) Consolidation may encourage the further development of capital markets, especially in Japan, with potential benefits for financial stability.

Monetary policy

(1) The potential effects of consolidation on the implementation of monetary policy depend on whether consolidation has an impact on the market for central bank balances or the market(s) used by the central bank to adjust the supply of such balances. Consolidation could reduce competition in these markets, increasing the cost of liquidity for some firms and impeding the arbitrage of interest rates between markets. In addition, consolidation could affect the performance of the markets if the resulting large financial firms behave differently from their smaller predecessors.

(2) Virtually all central banks in the study nations suggest that the impact of consolidation on these markets has so far been minimal, and consolidation is not expected to be a significant concern in the foreseeable future, although in some cases it may prompt minor changes in aspects of policy implementation.

(3) Financial consolidation may also alter the channels through which the monetary transmission mechanism links monetary policy actions to the rest of the economy. The "monetary channel" concerns the transmission of interest rates across financial markets by arbitrage along the yield curve and across financial products. The "bank lending channel" operates through the supply of bank loans to borrowers without direct access to financial markets. The "balance sheet channel" operates through the effect of monetary policy on the value of collateral, and thus on the availability of credit to those requiring collateral to obtain funds.

(4) According to central banks and the few empirical studies, there is little evidence that consolidation has significantly affected any of these channels.

(5) Central banks have not identified significant effects of consolidation on the volatility or liquidity of financial markets, nor do they think it has substantially complicated interpretation of movements in indicator variables such as monetary aggregates.

(6) Consolidation has encouraged the development of very large and complex financial firms, and this trend is expected to continue. In the event of financial difficulties at such firms, central banks would need to consider carefully the appropriate provision of emergency liquidity, as well as whether and for how long the stance of monetary policy should be adjusted in the light of the possible macroeconomic impact of such difficulties.

Efficiency, competition and credit flows

(1) Evidence suggests that only relatively small banks could generally become more efficient from an increase in size. However, changes in technology and market structure might affect scale and scope economies in the future. For deals consummated over the last decade, there is some evidence of efficiency improvement, especially on the revenue side. Mergers and acquisitions typically seem to transfer wealth from the shareholders of the bidder to those of the target.

(2) In the securities industry, research based on US data suggests that economies of scale exist, but mainly among smaller firms. Economies of scope do not appear to be generally important in the securities industry.

(3) As with commercial banks, smaller insurance companies could probably reduce their costs by taking advantage of potential economies of scale. However, the limited evidence available and the rapid changes anticipated in the future make it difficult to assess the potential efficiency gains from insurance consolidations.

(4) Research results and views of industry participants regarding the potential for efficiency gains from consolidation may differ because: (a) participants may not look at cost reductions or revenue enhancements relative to peer group trends; (b) participants may focus on absolute cost savings rather than on measures of efficiency; (c) research results are for the typical merger, while some consolidations do result in efficiency gains; and (d) past consolidations may have suffered from restrictive regulations that may not hold in the future.

(5) The effects of consolidation on competition depend on the demand and supply conditions in the relevant economic markets, including the size of any barriers to entry by new firms.

(6) For retail banking products, evidence on both the demand and supply side suggests that markets for a number of key products are geographically local. Research generally finds that higher concentration in banking markets may lead to less favourable conditions for consumers, especially in markets for small business loans, retail deposits and payment services. Results are, however, weaker for the 1990s than for the previous decade.

(7) Markets for wholesale banking products, investment banking services, money markets and foreign exchange trading, derivatives, and asset management are normally national or international in scope. However, evidence suggests that investment banks may be exerting some degree of market power.

(8) Geographic markets for most insurance activities appear to be national (statewide in the United States). In recent years, the insurance market has generally become more competitive, although the extent of competition seems to vary significantly across products and countries.

(9) It seems clear that barriers to entry have decreased with the deregulation and globalisation of financial markets.

(10) The continued evolution of electronic finance could expand greatly, or even eliminate, existing geographic limits of financial markets and lower entry barriers, thereby altering the potential effects of consolidation. However, the potential benefits of electronic finance should not be exaggerated. For example, electronic finance may also reduce competition because of an increase in customer switching costs.

(11) Statistical studies of the effect of consolidation of banks on small business lending are available for only a couple of countries (Italy and the United States). These studies suggest that banks reduce the percentage of their portfolio invested in small business loans after consolidation. What is relevant, however, is the effect of consolidation on the total availability of credit to small business and whether it is associated with more accurate pricing of risk. Studies using US data find that other banks and new entrants tend to offset the reduction in the supply of credit to small businesses by the consolidating banks. Similar results hold for Italy, where only a shift away from the worst borrowers is detected.

(12) New technologies, such as credit scoring models, may have somewhat encouraged small business lending, and thus offset to some degree the tendency of larger banks to lend to larger customers. However, the benefits to date seem quite limited. In addition, technology will not necessarily reduce the cost, and may increase the relative cost, of processing the information typically used in relationship lending, thus disadvantaging borrowers who do not, for example, qualify for a sufficiently high credit score.

Payment and settlement systems

(1) Consolidation has led to a greater concentration of payment and settlement flows among fewer parties within the financial sector. Interbank transactions may increasingly become in-house transactions.

(2) Because of the significant economies of scale in electronic payment technologies, the large institutions resulting from consolidation may be better able to invest in new, often costly technologies, and to decrease unit costs by capturing economies of scale.

(3) Emerging global firms that participate in multiple systems are pressuring the operators of payment and settlement systems to enhance their systems, sometimes through consolidation.

(4) A reduction in the number of institutions providing payment and settlement services below a certain level might result in higher prices and lower incentives for innovation. Consolidation among systems, however, may decrease, increase or have no effect on competition from the customer's point of view. The competitive effects of system consolidation largely depend on the combination of such factors as the governance structure of the surviving system, access criteria, market demand for downstream services, and economies of scale.

(5) The risk implications of the consolidation of payment and settlement systems are complex. On the one hand, consolidation may help to improve the effectiveness of institutions' credit and liquidity risk controls. On the other hand, consolidation may lead to a significant shift of risk from settlement systems to customer banks and third-party service providers. In addition, it may lead to a greater proportion of on-us large-value payments, which may raise questions about the certainty of final settlement and the systemic implications of the concentration of payments within a few banks. For example, if a major payment processor were to fail or were not able to process payment orders, systemic risks could arise. These developments have also led to some convergence of risk considerations between payment and settlement system overseers and traditional bank safety and soundness authorities.

(6) The emergence of multinational institutions and specialised service providers with involvement in several payment and settlement systems in different countries, as well as the increasing liquidity interdependence of different systems, further serves to accentuate the potential role of payment and settlement systems in the transmission of contagion effects.

(7) At the interbank systems infrastructure level, central banks have made major efforts over the past decades to reduce and contain systemic risk by operating and promoting real-time gross settlement systems, and by insisting on effective risk control measures in net settlement systems. To the extent that these efforts have increased the robustness of interbank systems' risk controls, they should help to dampen and contain any contagion effects being transmitted through the payment system.

Policy implications

The Working Party has identified a variety of areas that could benefit from continued policy development involving financial risk, monetary policy, competition and credit flows, and payment and settlement systems.

Financial risk

Existing policies and procedures appear adequate to contain individual firm and systemic risks both now and in the intermediate term. However, the current study is quite supportive of continued policy development on the following topics.

(1) Both crisis prevention and crisis management could be improved by additional communication and cooperation among central banks, finance ministries, and the range of other financial supervisors, both domestically and internationally.

(2) Important components of improved crisis prevention and management are effective and efficient policies and operating procedures for acting promptly to deter and resolve a potential crisis. A central element here, particularly in the light of consolidation's contribution to the creation of very large and complex financial organisations, is how to act in ways that minimise moral hazard.

(3) Crisis management and the moral hazard incentives associated with large and complex financial institutions could be eased considerably by augmented contingency planning for working out a troubled large and complex financial institution in an orderly way.

(4) The probabilities of both an individual firm experiencing severe financial difficulties and of a systemic crisis could be lowered by more effective risk-based supervision of financial institutions. A critical component of these efforts should be risk-based capital standards that are tied more closely to economic risk.

(5) Both crisis prevention and crisis management could be enhanced by clearer understanding of how best to deal with non-bank financial institutions, including the treatment of non-bank entities that are part of a financial conglomerate that includes a bank.

(6) Improved market discipline has the potential to decrease the probabilities of individual firm and systemic crises. A number of strategies for improving market discipline seem potentially promising, including augmented disclosures, improved risk management, stronger incentives for risk control by owners and managers, and improved accounting conventions.

(7) Assessment of the likelihood of a systemic crisis, and the understanding of its potential implications, could be improved by the collection and analysis of data that are better targeted on such concerns. The monitoring and evaluation of individual firm data, both traditional (or improved) accounting and market data, in combination with data on firms' interdependencies, financial markets, and domestic and international macroeconomic variables, might yield valuable insights into risks posed by interdependencies and possibly improve early warning systems.

Monetary policy

Although financial sector consolidation appears to have neither impeded the implementation of monetary policy nor altered significantly the transmission mechanism of monetary policy, three areas of policy interest should be highlighted.

(1) Central banks can be reasonably confident when setting monetary policy that frequent reviews of the data allow them to take account of most changes in the relationship between their target interest rates and developments in financial markets and the real economy, even if the reasons for the changes are unclear. However, identifying those reasons may help establish how persistent those changes are likely to be.

(2) It would be prudent for central banks to remain alert to the implications of any reduction in the competitiveness of the key financial markets involved in monetary policy implementation that might be caused by future consolidation.

(3) Similarly, central banks ought to bear in mind that financial consolidation may, over time, change the way in which the bank lending and the balance sheet channels of the monetary policy transmission mechanism work.

Competition and credit flows

(1) Policymakers should carefully examine claims of substantial efficiency gains by financial institutions proposing major consolidations, especially in cases where a merger could raise significant issues of market power.

(2) The impact of consolidation on competition can be assessed only by using empirically supported definitions of the relevant product and geographic markets. Such empirical support should be updated regularly.

(3) The impact of technological changes on competition could be more powerful for households than for small firms, because standardised techniques such as credit scoring models are more suited to households.

(4) To increase competition in an environment that is reducing significantly the number of providers of financial services, consideration could be given to reducing obstacles to the mobility of customers across financial service providers.

(5) To the extent that consolidation may harm small business lending, the problems faced by small firms might be alleviated if alternative sources of finance to traditional bank lending are developed.

(6) Cross-industry competition may benefit consumers by encouraging competition on existing and new products.

(7) Effective antitrust policy implementation needs data on market shares, prices and quantities in key financial services and products. Financial institutions already provide some of the relevant data. However, it would be helpful to enrich the available information, especially at the firm level.

Payment and settlement systems

(1) Because of consolidation, central bank oversight of interbank payment systems is becoming more closely linked with traditional bank safety and soundness supervision at the individual firm level. Increasing cooperation and communication between banking supervisors and payment system overseers may be necessary both domestically and cross-border.

(2) At the current time, it does not appear that consolidation has adversely affected competition in the provision of payment and securities settlement services. It may be advisable, however, for government authorities to continue to monitor competition in the payment system as short-term effects of consolidation may not be indicative of longer-term effects.

(3) In specific cases, public authorities may want to consider removing potential obstacles to consolidation if such action would enable the market to develop initiatives aimed at reducing risks and enhancing efficiency in the field of payment and securities settlement.

(4) With regard to risk management, central banks and bank supervisors should carefully monitor the impact of consolidation on the payment and settlement business, and should define safety standards when appropriate. In particular, central banks, in conjunction with bank supervisors, may need to consider various approaches, possibly including standards, that could be used to limit potential liquidity, credit, and operational risks stemming from concentrated payment flows through a few very large players participating in payment systems. With regard to major payment systems, the Core Principles for Systemically Important Payment Systems now provide a key set of evaluative standards for the relevant authorities.

3. Extended summary

Patterns

Firms can combine with each other in a number of ways. The most common approaches are mergers and acquisitions (M&As), which combine independent firms under common control, and joint ventures and strategic alliances, which enhance inter-firm cooperation without combining separate entities. Patterns in the number and total value of mergers, acquisitions, joint ventures and strategic alliances among financial institutions are examined during the 1990s in the 13 countries covered by this study. The structures of the banking, insurance and securities industries are then described to illustrate some of the effects of this consolidation, and other factors.

Patterns in transaction activity

Mergers and acquisitions are considered separately from joint ventures and strategic alliances. In some cases, trends in consolidation are similar across all of the study nations. In other cases, there are substantial differences in the experiences of individual countries.[3]

Broad patterns in merger and acquisition activity

(1) There was a high level of M&A activity in the 1990s among financial firms in the 13 countries studied. In addition, the level of activity increased over time, with a noticeable acceleration in consolidation activity in the last three years of the decade. The annual number of deals increased threefold during the 1990s and the total value of deals increased almost tenfold in the 13 reference countries considered as a whole. As a result, a significant number of large, and in some cases increasingly complex, financial institutions have been created.

(2) The average value of M&A transactions increased substantially during the last few years of the 1990s. This increase was widespread across the study nations.

(3) Most M&A activity during the 1990s in the financial sector involved banking firms. Acquisitions of banking firms accounted for 60% of all financial mergers and 70% of the value of those mergers in the study nations.

[3] M&A activity is examined separately using either the target or the acquiring firm as the classifying criterion. Results are most often quite similar using either criterion, and the findings summarised here are, unless noted otherwise, based on results using the target firm. In addition, although the data used are the best available, the classification of transactions within industries and countries can sometimes be problematic and information on the value of transactions is not known in many cases.

(4) Most mergers and acquisitions involved firms competing in the same segment of the financial services industry and the same country, with domestic mergers involving firms in different segments of the overall industry the second most common type of transaction.

(5) Cross-border M&As were less frequent, especially those involving firms in different industry segments.

(6) Most domestic mergers involved banking organisations, but cross-border deals were roughly evenly divided between banks and insurance firms.

(7) All types of M&As, whether within one country or cross-border and whether within one industry segment or across segments, increased in frequency and value during the 1990s.

(8) Overall, financial firms in the 13 countries studied were net acquirers. That is, in the aggregate, firms in these countries acquired financial firms in the rest of the world more often than firms in the rest of the world acquired firms in the study nations.

Merger and acquisition patterns in individual regions and countries

(9) Using a variety of measures, the United States accounted for about 55% of M&A activity during the 1990s, in part due to its historically large number of relatively small financial firms. However, it is also the case that many very large US banking firms expanded their geographic footprint by acquiring other very large banks, especially in the later part of the decade.

(10) The overall level of M&A activity as a percentage of GDP varied across countries, from relatively high levels in Belgium, Switzerland, the United Kingdom and the United States to relatively low levels in Canada, Germany and Japan.

(11) Trends in the number and size of M&As over time varied across countries. France, the Netherlands and Switzerland showed little growth in the number of deals over the 1990s, while Japan showed a very rapid increase in the number of transactions at the end of the decade. Regarding average value, the end of the decade showed Belgium and Switzerland with particularly large increases.

(12) Financial firms in Japan and the United States tended to focus more on domestic M&As, while other countries, notably Belgium, were more heavily involved in cross-border deals. In large part because of legal restrictions, deals across industry segments were relatively less prevalent in Japan and the United States than in other countries.

(13) In the United States, financial mergers were more heavily concentrated in banking, while Australia, Canada, the Netherlands and the United Kingdom had a greater proportion of M&As in the insurance, securities and other segments of the financial industry.

(14) In Europe, roughly two thirds of M&A activity, as measured by the value of the European firm acquired, occurred during the decade's last three years.

(15) In Europe, there were a number of relatively large cross-border acquisitions of insurance firms. Many domestic acquisitions of European insurance companies were by firms in other segments of the financial industry.

Joint ventures and strategic alliances

(16) The number of joint ventures and strategic alliances increased over the 1990s, with especially large increases in the last two years.

(17) US firms accounted for nearly half of all joint ventures and strategic alliances, and these were overwhelmingly domestic arrangements.

(18) In the other 12 countries overall, cross-border joint ventures and strategic alliances were more common than domestic deals, a strikingly different result than for M&As.

Patterns in the structure of the financial sector

International comparisons of industry structures are very difficult because of differences in definitions and measurement across countries. Nevertheless, some broad similarities and differences in industry structures can be distinguished.

(1) The importance of the banking and insurance industries, as measured by the ratio of industry assets to GDP, tended to increase during the 1990s in the study nations, especially in Europe.

(2) The number of banking firms in each country tended to decrease during the decade and the concentration of the banking industry, as measured by the percentage of a country's deposits controlled by the largest banks, tended to increase. If other banking activity, such as off-balance sheet activities, were included in the size measure, the increase in banking concentration would be even greater.

(3) The structure of banking industries continues to differ greatly across countries, ranging from very unconcentrated in a few nations (the United States and Germany) to highly concentrated in about half of the nations in the study (Australia, Belgium, Canada, France, the Netherlands and Sweden).

(4) The increase in the concentration of the banking industry during the 1990s was relatively great in Belgium, Canada, Italy and the United States and relatively small in Japan and the United Kingdom.

(5) There are no consistent patterns across countries in changes in the number of insurance firms or concentration in the insurance industry during the 1990s. Also, structural patterns often differed for life and non-life insurance companies in the same country.

(6) Many specific activities of the securities industry, such as underwriting, are dominated by a small number of leading institutions. It is unclear, however, whether this pattern changed much over the 1990s.

(7) Over-the-counter derivatives markets grew dramatically in the 1990s, with notional value quadrupling between 1992 and 1999. Concentration measures in worldwide derivatives markets were at modest levels at the end of the decade.

Fundamental causes

The fundamental causes of consolidation are examined using the extensive body of research literature and interviews conducted by Task Force members with 45 selected industry participants and experts from the study nations. Interviewees were asked for their opinions based on a common interview guide.[4]

The analysis distinguishes between motives for consolidation and the environmental factors that influence the form and pace of consolidation. In practice, motives and environmental factors are intertwined, but analysis is facilitated by treating each separately. Environmental factors are divided into two categories: those encouraging and those discouraging financial consolidation.

Motives for consolidation

Both motives and environmental factors vary over time, across countries, across industry segments, and even across lines of business within a segment. In the interviews, these various dimensions were explored and the contrast in the responses across categories was indeed substantial. Nevertheless, some common themes emerge.

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[4] Summaries of each country's interview responses are presented in an annex to Chapter II of the full report.

Cost savings

(1) Mergers and acquisitions can lead to reductions in costs for a variety of reasons. The existing research literature, which focuses on cost savings attributable to economies of scale, economies of scope, or more efficient allocation of resources, fails to find much evidence suggesting that cost savings constitute an important outcome of mergers and acquisitions.

(2) A large majority of interviewees pointed to economies of scale as a very important motivating factor for consolidations involving firms that operate within the same country and the same industry segment. They viewed economies of scope as a moderately important factor underlying cross-segment M&As. Reasons for the differences between research results and the views of practitioners are discussed in the section on Efficiency, Competition and Credit Flows, below.

Revenue enhancement

(3) Consolidation can lead to increased revenues through its effects on firm size, firm scope (through either product or geographic diversification), or market power. Research suggests that mergers may provide some opportunities for revenue enhancement either from efficiency gains or from increased market power.

(4) Interviewees indicated that revenue enhancement due to increased size was a moderately important factor motivating domestic within-segment mergers, while revenue enhancement due to increased product diversity was a moderately to very important factor underlying domestic cross-segment mergers. Revenue enhancement was also viewed as a fairly important motivator for cross-border consolidation.

Other motives

(5) Other potential motives for consolidation include risk reduction, change in organisational focus and managerial empire building. Interviewees viewed all of these factors as at most slightly important.

Environmental factors encouraging consolidation

Research and interviews have revealed a number of important factors encouraging consolidation among financial service providers.

Improvements in information technology

(1) New technological developments have encouraged consolidation because of their high fixed costs and the need to spread these costs across a large customer base. At the same time, dramatic improvements in the speed and quality of communications and information processing have made it possible for financial service providers to offer a broader array of products and services to larger numbers of clients over wider geographic areas than had been feasible in the past.

(2) Interviewees perceived technological advances to be a moderately to very important force encouraging consolidation in the financial services industry.

Deregulation

(3) Over the past 20 years, many governments have removed important legal and regulatory barriers to financial industry consolidation. The removal of these barriers has opened the way for increased M&As, both within and across national boundaries and both within and across financial industry segments.

(4) The majority of interviewees ranked deregulation as an important factor encouraging consolidation.

Globalisation

(5) Globalisation is, in many respects, a by-product of technological change and deregulation. Its influence as a factor encouraging consolidation has been strongest among firms engaged in the provision of wholesale financial services, highlighting the importance of the expansion of capital markets. As non-financial firms expand the geographic scope of their operations, they expect their financial service providers to be able to meet their changing needs, which may also encourage consolidation.

Shareholder pressures

(6) Increased competition has helped to squeeze profit margins, resulting in shareholder pressure to improve performance. Importantly, shareholders have gained power relative to other stakeholders in recent years. This development is expected to continue, as it is the result of a structural move towards the institutionalisation of savings.

(7) The interplay of all of these factors has put increased pressure on financial institutions to improve profitability. Consolidation has in many cases seemed an attractive way to accomplish this objective.

The euro

(8) Although the impact of the euro on financial sector consolidation in Europe is still difficult to assess, there are reasons to believe that the euro is stimulating consolidation in Europe. These reasons relate primarily to the euro-induced changes in financial markets in Europe, which provide new opportunities for realising economies of scale and revenue enhancement through consolidation.

(9) The euro has not significantly influenced consolidation in countries outside Europe.

Environmental factors discouraging consolidation

Two key factors continue to discourage financial consolidation: regulation and cultural differences.

Regulation

(1) Deregulation has played an important role in encouraging consolidation among financial service providers over the past two decades. However, remaining legal and regulatory restrictions (eg competition policies and policies limiting foreign ownership of financial institutions) and differences in regulations across countries (eg capital standards) continue to discourage some types of consolidations, especially those that involve cross-border activity.

(2) Interviewees frequently cited legal and regulatory constraints as an important impediment to mergers and acquisitions.

Cultural differences

(3) Cultural differences, which include different corporate cultures and corporate governance regimes, as well as differences in language or national customs, appear to be important impediments to consolidation, especially on the cross-border and cross-product levels.

(4) Regulation and cultural differences can have particularly strong deterrent effects on hostile takeovers of financial institutions. In addition, the existence of strong information asymmetries between potential acquirers and potential targets in appraising illiquid financial assets probably discourages hostile takeovers.

Future trends

On balance, financial consolidation is likely to continue. At least three reasonable and not mutually exclusive scenarios can be distinguished, and the future balance among these possibilities is impossible to project with any reasonable degree of confidence.

(1) Continuation of the current trend towards globally active universal financial service providers. Under this scenario, M&As both within segments of the financial industry and across segments would continue, as well as between financial and non-financial entities (where permitted by law).

(2) Continued consolidation resulting in functionally specialised financial firms. Under this scenario, firms would become more specialised as they grow in part through mergers of firms within a given segment of the financial industry, combined with the spinning-off of non-core lines of business.

(3) Continued consolidation along with a gradual "deconstruction" of the supply chain of financial services. In this scenario, in some ways a more extreme form of scenario (2), firms specialise in the production of particular components of financial services or in the distribution to end users of products obtained from specialised producers (eg internet services) either within or outside the traditional financial services industry.

As the costs of merging rise, particularly between large entities, looser forms of consolidation, such as strategic alliances or joint ventures, may become attractive alternatives within the context of any of these scenarios.

Financial risk

Financial consolidation can affect the risk both of individual financial institutions and of a systemic financial crisis. Thus, both types of risk are analysed below. Because different nations, or sometimes geographic groupings of nations, can have very distinct economic characteristics, risk is analysed separately for the United States, Europe and Japan.[5] The discussion focuses on the effects of consolidation on financial risk that are judged to be common across the regions, effects that are relatively concentrated in a particular region, and the implications of both for policy development.

Common effects in the United States, Europe and Japan

Although the evaluation of financial risk for each of the three geographic regions used a common analytical framework, authors were given wide latitude to pursue their topics from the perspectives most appropriate for their area. Interestingly, this approach identified a large number of common themes across the nations in the three regions regarding the potential effects of financial consolidation on financial risk. These include:

(1) The potential effects of financial consolidation on the risk of individual financial institutions are mixed, and the net result impossible to generalise. Indeed, the analysis strongly indicates that, when it comes to evaluating individual firm risk, a case by case assessment is required. The one area where consolidation seems most likely to reduce firm risk is the potential for diversification gains, although even here the possibilities are complex. For example, diversification gains seem likely to accrue from consolidation across regions of a given nation and from consolidation across national borders. Although such gains are most likely to arise due to asset diversification across geographies, some gains may also derive from geographic diversification on the liabilities side of the balance sheet. In addition, diversification gains may result from consolidation across financial products and services, although research suggests the

5 An annex to Chapter III considers the potential impacts of consolidation on managing systemic risk in Canada.

potential benefits may be fairly limited. On the other hand, after consolidation some firms shift towards riskier asset portfolios, and consolidation may increase operating risks and managerial complexities. For example, organisational diseconomies may occur as financial institutions become larger and more complex if senior management teams stray far from their areas of core competency. More broadly, there is no guarantee that cost savings or efficiency gains will be realised.

(2) Economic shocks that have the potential to become systemic financial risk events are most likely to be transmitted to the real sector through the wholesale activities of financial institutions and markets, including payment and settlement systems.[6] Largely because of deposit insurance, retail deposit runs and traditional flights to currency are highly unlikely, and in fact have not occurred in the regions studied since World War II. However, the costs of a systemic crisis are likely to be borne by a broad range of economic agents.

(3) In part because the net impact of consolidation on individual firm risk is unclear, the net impact of consolidation on systemic risk is also uncertain. However, it seems likely that if a large and complex banking organisation became impaired, then consolidation and any attendant complexity may have, other things being equal, increased the probability that the work-out or wind-down of such an organisation would be difficult and could be disorderly. Because such firms are the ones most likely to be associated with systemic risk, this aspect of consolidation has most likely increased the probability that a wind-down could have broad implications.

Important reasons for this effect include disparate supervisory and bankruptcy policies and procedures both within and across national borders, complex corporate structures and risk management practices that cut across different legal entities within the same organisation, and the increased importance of market-sensitive activities such as OTC derivatives and foreign exchange transactions. In addition, the larger firms that result, in part, from consolidation have a tendency either to participate in or to otherwise rely more heavily on “market” instruments. Because market prices can sometimes change quite rapidly, the potential speed of such a firm’s financial decline has risen. This increased speed, combined with the greater complexity of firms caused in substantial degree by consolidation, could make timely detection of the nature of a financial problem more difficult, and could complicate distinguishing a liquidity problem from a solvency problem at individual institutions.

The importance of this concern is illustrated by the fact that probably the most complex large banking organisation wound down in the United States was the Bank of New England Corp. Its USD 23.0 billion in total assets (USD 27.6 billion in 1999 dollars) in January 1991 when it was taken over by the government pale in comparison to the total assets of the largest contemporary US firms, which can be on the order of USD 700 billion.

(4) Evidence suggests that interdependencies between large and complex financial institutions have increased over the last decade in the United States and Japan, and are beginning to do so in Europe. Importantly, although a causal linkage has not been established, these increases are positively correlated with measures of consolidation. Increased interdependencies are consistent with the view that systemic risk may have increased, because they suggest that a common shock would tend to be transmitted to many firms. A variety of evidence is presented which attempts to measure changes in total, direct and indirect interdependencies between firms. The evidence suggests that the areas of increased interdependency that are most associated with consolidation include interbank loan exposures, market activities such as exposures in OTC derivatives, and (as discussed below) payment and settlement systems.

(5) Partly as a result of consolidation, banks are not the only potential sources of and transmission mechanisms for financial instability. The general blurring of differences among

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[6] Payment and settlement issues are considered separately in the relevant section below.

commercial banks, investment banks, insurance companies and other types of financial intermediaries and the substantial rise in the importance of market activities strongly suggest that some non-bank financial institutions and markets could also be sources and transmission mechanisms. In addition, the consolidation of an increasingly wide range of financial activities within large and complex organisations that include banking units points to an increased risk of contagion effects running from the non-bank to the commercial bank parts of the same organisation.

(6) Consolidation also appears to be increasing the possibility that even a medium-sized foreign bank (or perhaps a non-bank financial institution) from a large nation would be a potential source of instability to a relatively small host country. The possibility of loss of domestic ownership of a small nation's major banks has, other things being equal, also increased. In addition, partly through cross-border consolidation there has been an increase in the role within the international financial system of institutions with operations in a number of jurisdictions. These developments raise the issues of: (a) how much further national crisis prevention and management policies may need to converge; (b) the extent to which policies may need to be assessed in an international rather than a domestic context; and (c) potential complications in crisis resolution due to the absence of cost-sharing arrangements across countries.

(7) It appears that consolidation, and especially any resulting increased complexity of financial institutions, have to some extent increased both the demand by market participants for and the supply by institutions of information regarding a firm's financial condition. The resulting rise in disclosures has probably improved firm transparency and encouraged market discipline, thus lowering individual firm risk and perhaps increasing financial stability. However, the increased complexity of firms has also made them more opaque, their increased size has the potential to augment moral hazard, and thus the net effects on firm transparency and market discipline are unclear. Indeed, there appears to be considerable room for improvement in disclosures.

Important asymmetries of effects

In addition to important common themes, a number of key diversities were identified across countries and regions. These diversities sometimes derive substantially from consolidation, and in some cases complicate evaluation of consolidation effects. Moreover, it is important to understand that the differences are primarily a matter of degree, and generally do not reflect stark asymmetries of effects. For example, although European firms have to date played a relatively prominent role in cross-border consolidation, cross-border deals, and the issues resulting therefrom, are clearly relevant in all the study nations.

United States

(1) The relatively strong desire of the United States to limit the federal safety net to insured depository institutions, and its relative lack of experience with financial conglomerates, raise a number of difficult issues that derive in part from the resulting complex corporate structure of growing and consolidating large US financial institutions. Important issues that derive in some degree from consolidation include the extent of supervision that should be applied to the various legal entities within a single organisation, the division of labour among "functional" supervisors, how best to manage the wind-down of a large and complex organisation, and a relatively high level of concern with operational risks.

(2) Market activities tend to play a considerably greater role in the total activities of US financial institutions than they play in continental European and Japanese financial institutions. Although increased reliance on markets and market activities are likely to be, in a broad sense, risk-reducing, such activities can introduce new risk considerations that may become systemic in certain situations. For example, as discussed above, the speed of a firm's deterioration could be accelerated. Partly in response to such considerations, disclosure practices in the United

States appear to be considerably more extensive than are those in either Europe or Japan. Finally, the long period of macroeconomic stability in the United States has not provided a strong test of reforms begun in the early 1990s that were designed to limit the safety net and encourage market discipline.

Europe

(3) As in other G10 countries, systemic events are likely to remain primarily national concerns in Europe over the near future. However, the euro has accelerated the speed of financial market integration and is encouraging cross-border activity by financial institutions, partly through consolidation. Therefore, if cross-border interdependencies grow rapidly across European countries, the probability that a banking crisis in one country will affect the banking systems of other countries is likely to be higher in the future. The current framework of harmonised directives across EU countries and the arrangements in place for extensive bilateral and multilateral cooperation, such as the Banking Advisory Committee, the Banking Supervisory Committee and the Groupe de Contact, provide a comprehensive framework for the management of banking crises. Still, European national authorities should increase the harmonisation of their policies and the coordination of actions taken in the prevention and management of crises, along the lines suggested recently by the European Union Economic and Financial Committee in its Brouwer Report (2000).

(4) Because of the number of sovereign nations involved, the cross-national problems that usually arise in all nations when merging institutions try to integrate across national borders tend to be more immediate and relatively intense in Europe. Such difficulties can derive from, for example, differences in national law and custom. These complexities are in addition to the standard problems that often appear from efforts to combine different corporate cultures. In both cases, integration complexities can affect the risk profiles of the firms involved.

Japan

(5) To date, the rather limited consolidation among large financial institutions in Japan has been driven primarily by two imperatives: the need to manage and resolve the ongoing financial crisis, and the Big Bang deregulation reforms. Thus, key issues revolve around crisis management, crisis prevention and the desire to encourage market discipline. In addition, despite the relatively small amount of consolidation among large financial institutions so far, additional consolidation is anticipated.

(6) In Japan, the need to manage a financial crisis that involves, among others, some of the largest financial institutions in the nation has required considerable flexibility in administration of the safety net. For example, explicit government guarantees of financial institution liabilities have been much more extensive in Japan than in other G10 nations in recent years. Looking forward, and as consolidation proceeds, it is expected that competitive forces as well as market discipline will play much greater roles in maintaining the strength and stability of the financial system.

(7) Consolidation may encourage the development of capital markets in Japan, with potential benefits for improved financial stability. For example, as consolidating (and competitively pressed) financial institutions are forced to concentrate more on maximising return on equity, some former borrowers may need to seek funding from other sources, including the capital markets. In addition, in order to reduce risk, consolidating firms are likely to need to shrink their balance sheets through other devices, including the securitisation of assets and the sale of portions of their often extensive holdings of corporate stock. Both actions would further stimulate capital market development.

(8) With respect to the possible effects of consolidation on individual firm risk in Japan, two additional points are noteworthy. First, the potential for risk reduction through the geographic diversification of assets seems quite limited *within* Japan. However, the potential for risk reduction via the diversification of liabilities, including the acquisition of relatively stable

core deposits, appears to be much greater. Second, the ongoing expansion of the co-ownership of banking and commercial firms in Japan may lead to the creation of “platform risk”, whereby a bank is physically dependent on the platform (eg a supermarket) of the commercial business.

Policy implications

Existing policies and procedures appear adequate to contain individual firm and systemic risks both now and in the intermediate term. However, the analyses presented are quite supportive of the need for continued policy development in a number of areas. The Working Party is aware that a large number of policy initiatives are under way in a variety of forums. The intention here is to reinforce those that, from the point of view of the effects of consolidation on financial risk, appear to be the most important, and to suggest some new directions or areas needing expanded attention.

The areas worthy of further policy development cut across a number of interdependent dimensions. These include crisis prevention and crisis management, public and private actions, including the appropriate use of taxpayer versus private funds, supervisory and market discipline, and trading off public actions and moral hazard. In the judgement of the Working Party, the most important areas in need of ongoing policy development are:

(1) Both crisis prevention and crisis management could be improved by additional communication and cooperation among central banks, finance ministries and financial (both bank and non-bank) supervisors, both domestically and internationally. Such efforts are particularly important given the extent of current and expected cross-sector and cross-border consolidation in the financial services industry. Specific areas where improvements could yield significant net benefits are discussed below.

(2) Important components of improved crisis prevention and management are effective and efficient policies and operating procedures for acting promptly to deter and resolve a potential crisis. A central element here, particularly in the light of consolidation’s contribution to the creation of very large and complex financial organisations, is how to act in ways that minimise moral hazard. Policies implemented in recent years in a number of nations designed to encourage prompt intervention by supervisors in a troubled institution appear to have promise, but have yet to be tested in a major crisis. Although all nations studied are sensitive to the need to minimise moral hazard incentives, perspectives differ depending in part on a nation’s current situation and experience with crisis management.

(3) Crisis management could be eased considerably by augmented contingency planning for working out a troubled large and complex financial institution in an orderly way. The most effective approach will probably involve efforts by both the public and private sectors, and possibly both within and across borders. Areas where clear understanding is critical include: (a) the administration of bankruptcy laws and conventions; (b) the coordination of supervisory policies, especially early intervention, within and across borders; (c) the treatment of OTC derivatives, foreign exchange, and other “market” activities in distress situations; (d) the roles and responsibilities of management and boards of directors; and (e) administration of the lender of last resort function.

(4) The probabilities both of an individual firm experiencing severe financial difficulties and of a systemic crisis could be lowered by more effective risk-based supervision of financial institutions. In addition to the large number of initiatives under way, the results of this study highlight the importance of timely monitoring and surveillance. With regard to monitoring and surveillance, the increasing importance of cross-border operations and market activities suggests an augmented need to evaluate risk developments at not only the individual institution level, but also at the overall market level or, put differently, from a “systems” perspective (see point 9 below).

(5) A critical element of improved risk-based supervision is risk-based capital standards that are tied more closely to economic risk. Capital standards provide an anchor for virtually all

other supervisory and regulatory actions, and can support and improve both supervisory and market discipline. For example, early intervention policies triggered by more accurate capital standards could prove to be important in crisis prevention.

(6) If taxpayer funds are needed to manage and resolve a crisis, as seems likely given the increasing size and complexity of financial institutions, increasing cross-border consolidation may require the development of cost-sharing arrangements among governments, and additional policies and procedures to minimise moral hazard incentives.

(7) Both crisis prevention and crisis management could be enhanced by clearer understanding of how best to deal with non-bank financial institutions, including the treatment of non-bank entities that are part of a financial conglomerate that includes a bank. It should be acknowledged that the scale and level of financial market participation of a number of non-bank financial institutions in some countries are sufficient to make their impairment a potentially systemic event. How best to resolve the resulting and inevitable tension between protecting financial stability and inducing moral hazard is difficult to determine, but an issue that policymakers should address.

(8) Improved market discipline also has the potential to decrease the probabilities of individual firm and systemic crises, although markets can sometimes react quite rapidly, thereby forcing supervisors' actions and introducing complexities that might not otherwise occur. In any event, the size and complexity of consolidating financial institutions support, and may well require, the use of market discipline as a complement to supervisory discipline. Effective market discipline requires clear incentive structures both within institutions and among other market participants. A number of strategies for improving market discipline seem potentially promising for financial institutions in all of the nations studied, and include augmented disclosures, improved risk management, stronger incentives for risk control by owners and managers, and improved accounting conventions.

(9) Assessment of the likelihood of a systemic crisis, and the understanding of its potential implications, could be improved by the collection and analysis of data that are better targeted on such concerns. Although the precise links between financial institutions and markets that are most likely to augment systemic risks are uncertain, and indeed somewhat unique to a given crisis, the analysis suggests that consolidation has probably increased interdependencies among firms and raised the probability that markets will play an important role in a future crisis. Thus, the monitoring and evaluation of individual firm data, both traditional (or improved) accounting and market data, in combination with data on firms' interdependencies, financial markets, and domestic and international macroeconomic variables, might yield valuable insights into risks posed by interdependencies and possibly improve early warning systems. At a minimum, it would seem prudent to evaluate whether central banks, finance ministries and other financial supervisors are collecting and evaluating data at both the domestic and international levels that are appropriately targeted on future possibilities.

Monetary policy

The behaviour of financial firms and markets influences the environment in which monetary policy decisions are made, how they are put into practice, and how they are transmitted to output and prices. Thus, if consolidation causes changes in the behaviour of financial intermediaries or the operation of financial markets, it could have implications for the conduct of monetary policy. As with other topics evaluated in this study, it is difficult, particularly looking at data within a single country, to disentangle the effects, if any, of consolidation from those of globalisation, technical innovation, deregulation, and other factors affecting the behaviour of financial intermediaries.

Effects on the implementation of policy

Whether consolidation affects the implementation of monetary policy depends on whether it has impacts on the market for central bank balances, or the market(s) used by the central bank to adjust the supply of such balances. Consolidation may affect such markets in two ways.

(1) First, consolidation may reduce the degree of competition in the relevant markets. Reduced competition might cause liquidity to be more costly for those participants with less market power, and hence impede the arbitrage of interest rates between the market targeted by the central bank and other financial markets. Decreased competition might also lead to higher volatility in very short-term interest rates, if consolidation allowed firms to exercise their increased market power only from time to time, depending on market conditions.

(2) Second, consolidation could affect the performance of these markets because the resulting large financial firms behave differently from their smaller predecessors. For example, by internalising what had previously been interbank transactions, consolidation could reduce the liquidity of the market for central bank reserves, making it less efficient at reallocating balances across institutions and increasing market volatility.

(3) Virtually all central bank responses to a Task Force questionnaire suggest that the impact of consolidation on the operation of these markets has so far been minimal, and it is not expected to be a significant concern in the future. In practice, the structures of the market for central bank balances and the markets used for monetary policy operations differ widely across countries. In most countries, consolidation has reduced the number of participants in these markets. However, even in those countries with relatively few participants, the relevant markets appear to be partially contestable. That is, the market power of participants is constrained to some degree by the possibility that new firms could enter the market. In addition, the euro has encouraged development of European money and capital markets, thus making the number of participants in a particular nation's markets less relevant. Finally, the central bank's position as a monopoly supplier of central bank liquidity gives it countervailing power and allows it to adjust operational arrangements as it sees fit.

(4) Nevertheless, central banks reported that possible reactions to increased consolidation in the future might include more careful monitoring of operations, stricter assessment and management of counterparty risk, and efforts to encourage the participation of more counterparties (eg changing eligibility criteria).

Effects on the monetary transmission mechanism

Financial sector consolidation may also alter the monetary transmission mechanism that links central bank decisions and operations to the rest of the economy. This mechanism works via various channels.

The monetary channel

(1) The "monetary channel" concerns the transmission of interest rates across financial markets by arbitrage along the yield curve and across financial products (ie the "pass-through" of changes in the interest rate targeted by the central bank to other rates, including bank lending and deposit rates).

If consolidation leads to greater concentration among financial intermediaries, that could lead to higher and perhaps more variable margins between borrowing and lending rates. It could also influence the lags in the monetary transmission mechanism (eg reduce them if bigger firms can process more information more rapidly or increase them if bigger firms are more able to exploit customer inertia when official rates change).

(2) Many other factors also affect the pass-through in practice, such as the introduction of new technologies by financial intermediaries, the development of new financial instruments, the reduction in barriers to entry in some financial markets, and the greater integration of capital

markets across countries. Even if consolidation does affect the transmission mechanism, central banks would over time be able to adjust their policy settings appropriately in response to observed changes in pass-through without needing to identify the precise reasons for those changes – if necessary, by trial and error – particularly if the pace of consolidation is gradual compared with central banks' decision cycles.

(3) Empirical evidence about the effect of consolidation on pass-through is scarce and inconclusive. Some evidence suggests that consolidation may have led to margins being higher than they would otherwise have been. One cross-country study concluded that barriers to entry – but not market concentration as such – may slow down interest rate adjustments.

(4) The responses of central banks to the Task Force's survey generally indicated that consolidation by itself had not had an important influence on pass-through, although some noted that the speed of pass-through had increased for various reasons, possibly including consolidation. Some European central banks thought that consolidation would increase the degree and speed of pass-though to administered rates in the future. Several respondents noted that other factors – especially globalisation and increases in competition in more integrated markets – had probably more than offset the possible adverse effects of consolidation on the level of competition in financial markets.

Bank lending and balance sheet channels

Consolidation could also affect the transmission mechanism by influencing other possible channels of monetary policy.

(5) These channels include: the "bank lending" channel, which operates through the impact of policy changes on the supply of bank loans to borrowers without direct access to financial markets; and the "balance sheet" channel, which operates through the effect of monetary policy on the value of collateral, and so on the availability of credit to those requiring collateral to obtain funds.

(6) In principle, consolidation could influence both of these alternative channels. Indeed, there is some suggestive cross-country evidence that differences in the structure of countries' financial sectors can help to explain differences in the strength of the effects of monetary policy. However, some research has cast doubt on the empirical importance of these channels of policy, and direct effects of consolidation have been difficult to identify.

(7) There is some evidence that larger banks find it easier than smaller banks to fund loans in periods of tight monetary policy, so consolidation might reduce the importance of the bank lending channel, and hence the impact of any given change in the interest rate targeted by the central bank.

(8) Central bankers did not report such an effect, generally noting either that this channel was not particularly important in their country or that its importance was difficult to assess.

(9) Similarly, if consolidation influences the need for borrowers to post collateral, it could influence the balance sheet channel, although the sign of the theoretical relationship is not clear. The empirical evidence is also ambiguous, and so it is not surprising that central banks reported that changes in the importance of this channel have not been a major consideration.

Other possible effects

Financial sector consolidation could also affect the setting in which monetary policy is determined.

(1) For example, cross-border consolidation is likely to have increased the potential for shocks in one country to affect financial firms and markets in another.

(2) A reduction in the number of firms participating in financial markets could reduce market liquidity and depth and perhaps boost market volatility.

(3) Consolidation could also reduce the resilience of markets during times of stress, either because shocks were transmitted across firms and markets more rapidly or to a greater degree than had been the case, or because financial firms became less willing or able to act to cushion the impact of shocks on borrowers and markets.

(4) However, central banks did not report significant effects of consolidation on the volatility or liquidity of financial markets.

(5) Nor did they think that consolidation had made it significantly more difficult to interpret movements in indicator variables such as monetary aggregates.

(6) Consolidation has encouraged the development of very large and complex financial institutions, and this trend is expected to continue. Such institutions could pose increased challenges to central banks in their lender of last resort and monetary policy roles. In the event of financial difficulties at such firms, central banks would need to consider carefully the appropriate provision of emergency liquidity, as well as whether the stance of monetary policy should be adjusted in the light of the possible macroeconomic impact of the difficulties. However, central bankers did not believe that consolidation increased the likelihood that policy would be unduly influenced by firm-specific concerns.

Conclusions and policy implications

(1) So far, financial sector consolidation does not appear to have impeded the implementation of monetary policy or altered significantly the transmission mechanism of monetary policy.

(2) Central bankers reported that they had not noticed any effect of consolidation on the distributional impact of monetary policy (eg households vs firms or large firms vs small ones). This is consistent with the lack of evidence of significant changes in the monetary transmission mechanism.

(3) Research targeted on further refining theories of the monetary transmission mechanism could help to clarify what effects might appear in the future.

(4) Central banks can be reasonably confident when setting monetary policy that frequent reviews of the data allow them to take account of most changes in the relationship between their target interest rates and developments in the rest of the economy, even if the reasons for the changes are unclear. However, identifying those reasons may help establish how persistent those changes are likely to be.

(5) Nonetheless, it would be prudent for central banks to bear in mind the possible implications of any reductions in the competitiveness of the key financial markets involved in the implementation of policy, as well as the potential changes in the role of the bank lending and balance sheet channels of monetary policy transmission that might be brought about by future financial sector consolidation.

Efficiency, competition and credit flows

Foreign ministries, central banks and financial supervisors are frequently concerned about the potential impacts of financial consolidation on the efficiency of financial institutions, the degree of competition in the markets for financial services, and on credit flows to small and medium-sized enterprises.

Efficiency

Efficiency is a broad concept that can be applied to many dimensions of a firm's activity. A narrow definition takes size and technology as given, and focuses on measuring managerial efficiency (the optimisation of existing resources) by analysing how production factors are combined. A more comprehensive definition also considers economies of scale and scope, both

of which vary with technologies, regulations and consumers' tastes. Efficiency gains can be gauged with the help of the stock market performance of the merging institutions; consolidation creates value if the sum of the market valuations of the bidder and the target increases.

Commercial banks

When comparing cost and revenue structures, it should be remembered that in countries with a heavily bank-oriented financial system the banking industry may evolve differently than in countries where securities markets are prominent. In countries with well developed financial markets, banks provide many services in addition to loans and deposits; they have better opportunities to tailor their risk profile, both on- and off-balance sheet. Furthermore, differences in regulation mean that, while in some countries commercial and investment banks are (or have in the past been) separated, in others they can operate jointly as universal banks and even have cross-shareholdings with industrial companies. These differences hamper international comparisons. All these warnings notwithstanding, the banking industries in the countries studied share some structural features that emerge from a careful analysis.

(1) Evidence suggests that only relatively small banks could generally become more efficient from an increase in size. However, changes in technology and market structure might affect scale and scope economies in the future. In addition, the direct evidence on how M&As affect banks' performance is mixed. In general, more efficient banks acquire relatively inefficient banks, but there is little evidence of subsequent cost reduction. For deals consummated over the last decade, there is some evidence of improvement, especially on the revenue side. The gains, however, are probably not as large as those anticipated by practitioners.

(2) The main finding of studies that examine share prices around the time that a merger is announced is that, on average, total shareholder value is not affected by the announcement of the deal. On average, the bidder suffers a loss that offsets the gains of the target. Put differently, M&As seem typically to transfer wealth from the shareholders of the bidder to those of the target.

Other financial institutions

(3) For the securities industry, results based on US data indicate that economies of scale exist, but mainly among smaller firms; larger firms demonstrate scale diseconomies. Similarly, research suggests that smaller specialty firms tend to exhibit modest economies of scope while large multi-product firms exhibit modest diseconomies of scope. In general, however, economies of scope do not appear to be important in the securities industry. These results suggest that there is room for both diversified and specialty firms, as long as they are above minimum efficient scale.

(4) Economies of scale in the asset management industry are significant only up to a relatively small size threshold. The evidence is slightly more favourable for scope economies. Such findings are consistent with recent developments in the industry, in which asset management services are often distributed jointly with other financial products in order to reap the benefits from cross-selling.

(5) As is the case for commercial banks, smaller insurance companies could probably reduce their costs by taking advantage of potential economies of scale. However, the benefits are likely to disappear after a threshold that is well below the size of the largest firms. The existence of economies of scope with other financial institutions is unclear. The insurance industry is still very fragmented because of regulation and the specificity of some of its products. The dispersion of efficiency levels that results from these barriers to entry could probably be reduced if better managed firms acquired weaker ones, but the limited evidence available for the past and the rapid changes expected in the future make it difficult to assess the potential efficiency gains from M&As.

Views of practitioners versus results of research

Research on the ex post results of M&As seems to contradict most of the motivations given by practitioners for consolidation, which are largely related to issues of economies of scale and scope and to improvements in management quality. However, to a certain extent this puzzle might be only apparent because:

(6) practitioners may consider cost reductions or revenue increases per se to be a success, without also taking into account industry trends as a benchmark;

(7) practitioners may focus on absolute cost savings rather than on efficiency measures that compare costs to assets;

(8) while research finds no improvements on average, some institutions improve efficiency and some do not. Given the inside knowledge of their firm and the arm's-length knowledge of competitors, managers might be justified in believing that their institution might be among the ones that would benefit from a merger or acquisition; and

(9) deals done in the past might have suffered from stricter regulation (eg labour laws) that prevented firms involved in M&As from reaping all the benefits of the deal. Such regulations may not exist in the future.

Competition

The effects of consolidation on competition depend on the demand and supply conditions in the relevant economic markets, including the size of any barriers to entry by new firms.

Market definition

(1) On the demand side, markets for a number of key retail bank products appear to be primarily local. In empirical research, local markets are usually approximated by areas such as provinces, rural counties, cantons or metropolitan areas. In the United States, this assumption is supported by survey evidence indicating that both households and small businesses overwhelmingly procure banking services from suppliers located within a few miles of the customer; it is still rare to deal with institutions that can be reached only via the telephone or the internet. Despite the development of electronic banking and other advances, in Europe transport costs are still significant, and entry into foreign markets requires opening or acquiring a network of branches.

(2) There is also evidence on the supply side that some banking markets are local. The number of bank branches in most countries continues to increase despite a consolidation process that has reduced the number of independent banking organisations and statutory changes that have largely removed legal constraints on bank geographic expansion. This indicates that firms continue to feel the need for a local presence.

(3) Wholesale banking products generally have markets that are national or international in scope. In much of continental Europe, bond markets that tended to be national have expanded with the adoption of the euro; cross-border competition should also increase for services like correspondent banking. The geographic scope of markets is also national or international for investment banking services, money market trading, foreign exchange trading, derivatives trading and asset management.

(4) Geographic markets for most insurance activities appear to be national (statewide for the United States), although the barriers to entering geographic markets might be low relative to the barriers to entering different product lines.

Barriers to entry in financial markets

There are three main types of barriers to entry in financial markets: (a) regulatory barriers, including specific subsidies or public guarantees; (b) entry barriers due to differences in firms' costs, especially those that arise when entry requires significant sunk costs, such as the necessity

to set up a network of branches; and (c) relatively inelastic customer demand, which may exist if costs of switching among financial service providers are large.

(5) It seems clear that regulatory barriers to entry have decreased with the deregulation and globalisation of financial markets. Introduction of the euro has reduced barriers to entry into some European markets.

(6) The impact of technology, driven in part by consolidation, is uncertain. On the one hand, technology might increase some fixed costs, including advertising expenses, and it might contribute to locking consumers in with their existing suppliers by increasing switching costs for customers. On the other hand, technology might expand the geographic limits of markets, thus enhancing competition from firms located in other areas.

Consolidation and prices

(7) Research using both European and US data generally finds that higher concentration in banking markets may lead to less favourable conditions for consumers. Studies using US data indicate the existence of market power in some markets for small business loans, retail deposits and payment services, although results are weaker for the 1990s than for the previous decade.

Studies that examine directly the pricing strategies of merging institutions support the view that M&As may influence market prices. Studies in the United States, Italy and Switzerland find that in-market concentrations have the potential to cause a reduction in deposit interest rates or an increase in loan rates.

(8) On balance, evidence suggests that investment banks may be exerting some degree of market power. Moreover, the importance of reputation and of the placing power of underwriters may create a barrier to entry that is likely to survive even the technological developments foreseeable in the near future. Therefore, in-market consolidation among large firms could affect negatively their consumers.

The investment banking industry is highly internationalised, as the largest firms are chartered in many different countries. However, the market is highly concentrated: a small group of firms dominates each segment. For example, the market share of equity underwriting of the five largest firms is above 50% both in the United States and in Europe. Nonetheless, there is little research available on the degree of competition in the investment banking sector.

In Italy, a thorough examination by the antitrust authorities concluded that, even though the market for investment banking was dominated by a small number of firms, there was no evidence of abuses. In contrast, studies of US securities markets found evidence of anticompetitive pricing and procompetitive effects of entry.

(9) In the last few years, the insurance markets in the nations studied have generally become more competitive, although the extent of competition seems to vary significantly from product to product and from country to country. Research on US insurance markets finds higher prices in more concentrated markets.

The potential impact of technology on competition

(10) The continued evolution of the internet and other forms of electronic commerce could have major implications for the definition of geographic markets, thereby altering the potential effects of consolidation. Although electronic finance is not yet widespread, forecasts suggest rapid growth in the near future. If financial services can be purchased or supplied effectively by electronic means without the need for physical branch offices, geographic limits to market expansion may disappear, increasing competition from firms located in other areas. Developments in electronic technology could also reduce entry barriers by reducing search costs for consumers.

(11) The development of e-finance may also reduce, rather than increase, competition. Financial institutions are increasingly operating in multiple sectors, partly in an attempt to sell

bundles of products to customers. Due to technological progress, these bundles may become more and more customised for a large number of consumers. As a result, switching costs may rise, especially if suppliers provide enough products to justify "one-stop shopping" strategies. Finally, new ways of distributing financial services may be created which could only be exploited by vertical consolidation of financial institutions with non-financial partners such as telecom and media enterprises.

(12) The short- and medium-term benefits of e-finance, however, should not be exaggerated. Electronic banking does not reduce information costs for products where the bank has to rely on information about local markets. Furthermore, new entrants may be forced to back up their internet entry with significant advertising outlays before they can effectively compete. For some high-value, infrequently purchased products, customers may demand more than online contracts, however personalised. Generally speaking, consumers currently do not seem to view internet banking as a substitute for banking with an institution that has physical branches. Also, at the moment, the necessary legal framework is incomplete for internet commerce, in particular with regard to consumer protection and money laundering.

Credit flows

Small and medium-sized enterprises (SMEs) make a substantial contribution to the economies of the nations studied. For example, in 1996, on average, they accounted for 66% of total employment in Europe and more than 50% of the labour force in Canada and the United States. SMEs are also prominent in Japan. Currently, SMEs are highly dependent on banks, particularly in Europe.

In many countries, consolidation in the banking system has involved a large number of small banks. The reduction in the number of these institutions may affect the availability of credit to small firms. When consolidation occurs, the larger bank resulting from the merger is able to expand its lending capacity with respect to larger borrowers and it may restructure its portfolio, discontinuing credit relationships with smaller borrowers. To the extent that credit relationships between banks and small businesses are characterised by a greater degree of information asymmetries, small firms could face difficulties in finding credit from other sources.

Consolidation and credit rationing

(1) Statistical studies of the effect of consolidation of banks on small business lending are available for only a couple of countries (Italy and the United States). These studies suggest that banks reduce the percentage of their portfolio invested in small business loans after consolidation.

(2) However, the impact of M&As on small business lending depends crucially on the motivations of the deal and on the type of banks involved. Moreover, what is relevant is the effect on the total availability of credit to small borrowers and whether it is associated with more accurate pricing of risk. In the United States, studies that have examined the effect of M&As on small business lending by other banks in the same local markets found that other banks and new entrants tend to offset the reduction in the supply of credit to small firms by the consolidating banks. In Italy, consolidating banks tend to shift away from the worst borrowers.

Potential impact of technology on small business lending

(3) Credit scoring models, currently used mostly by large banks, will benefit mainly "transaction-type" loans, which, like credit card loans, do not need much information-intensive credit evaluation. Thus, some of the potentially negative effects of consolidation, such as a reduction in credit availability by banks involved in M&As, may be partially offset by such innovations. However, benefits to date seem quite limited. In addition, technology will not necessarily reduce the cost, and indeed may increase the relative cost, of processing the information typical of relationship lending, harming small borrowers who do not, for example, qualify for a sufficiently high credit score.

Policy implications

In the judgement of the Working Party, the most important policy implications of consolidation for efficiency, competition and credit flows are:

(1) Policymakers should carefully examine claims of substantial efficiency improvements by financial institutions proposing major consolidations, especially in cases in which a merger could raise significant issues of market power.

(2) The impact of consolidation on competition can only be assessed by using empirically supported definitions of the relevant product and geographic markets. Because financial markets are constantly changing, these definitions have to be scrutinised regularly, also taking into account the differential impact on different classes of consumers, such as households and small firms.

(3) The impact of technological changes could be more powerful for households than for small firms, because standardised techniques such as credit scoring models are more suited to the former. The analysis of relevant markets for antitrust purposes should take into account changes due to technological forces in the geographic and the product dimensions as well as changes in demand.

(4) In order to increase competition in an environment that is reducing significantly the number of providers of financial services, consideration could be given in some nations to removing obstacles to the mobility of customers across financial service providers. This could be done, for example, through greater transparency regarding products and prices, or by simplifying the process of changing providers. Better flows of information between customers and financial institutions could also decrease the asymmetric information problems between small firms and banks and limit the probability of credit rationing.

(5) To the extent that consolidation may harm small business lending, the problems faced by small firms in funding their projects might be alleviated if alternative sources of finance, in terms of both providers and products, are developed. This could be encouraged by, for example, fostering the development of equity markets or decreasing the costs of being listed on an exchange. Such measures, together with actions already taken, may foster the development of financial markets, particularly equity markets. Alternative sources of finance may become more available as costs of information generation and storage decrease, especially in Europe and Japan. Policies that encourage transparency and promote awareness of financial markets would probably be helpful in this respect.

(6) Cross-industry competition may benefit consumers by encouraging competition on existing and new products. Eliminating policies that limit cross-industry competition generally would have a beneficial effect.

(7) Effective antitrust policy implementation needs data on market shares, prices and volumes of activity in key financial services and products. The financial services industry already regularly provides some of the relevant data; however, it would be helpful to enrich the available information, especially at the firm level. The burden of these added reporting requirements should be minimised; authorities should explore ways to encourage financial institutions to contribute the needed data on an ongoing basis and authorities should focus on collecting data only in areas where consolidation is likely to have significant effects, such as small business lending and retail branch banking services. In general, it is important to consider what kind of information should be readily available so that the potential impacts of proposed M&As can be quickly assessed.

Payment and settlement systems

The ongoing consolidation of the financial industry is affecting the market infrastructures for payment and securities settlement, as well as banks' internal systems and procedures for payment and back office activities. At the global level, correspondent banking and the global

custody businesses are becoming more concentrated among a smaller number of large market players. At the domestic level, banks are increasingly outsourcing payment and settlement activities to "processing factories" – transaction banks and non-bank service providers. On the demand side, users of payment and settlement services are increasingly calling for more efficient payment and securities processing. Consequently, they are often the main driving force behind a greater harmonisation of interbank systems and consolidation of systems within and across borders.

Effects of consolidation

Consolidation affects the efficiency of payment and securities settlement processes, the degree of competition between banks and between market infrastructures, and the level of financial and operational risk. It also has implications for central banks' approach to oversight of the payment system. The complexity of the consolidation processes taking place within the financial industry, however, makes it impossible to categorise clearly the net effects as either positive or negative.

Efficiency

(1) Consolidation has led to a greater concentration of payment and settlement flows among fewer parties within the financial sector. Indeed, consolidation tends to lead to the emergence of very large financial institutions and non-bank service providers that specialise in providing a wide range of payment and settlement services to third parties. Interbank transactions may increasingly become in-house transactions, which do not involve external exchanges of payment messages and hence tend to be cheaper to process.

(2) Because of the significant economies of scale in electronic payments technologies, the large institutions resulting from consolidation may be better able to invest in new, often costly technologies, and to decrease unit costs by capturing economies of scale.

(3) Due to their specific business needs, the emerging global firms are pressuring the operators of payment and securities settlement systems to enhance their systems, reduce overall processing redundancies through consolidation of systems, and to increase efficiency and reduce costs to users. In this connection, operators of payment and securities settlement systems may face increasing demands for remote access capabilities and for a wider range of eligible collateral that can be used across a variety of systems. Remote access and broader collateral, however, involve complex policy and legal considerations that require further analysis.

Competition

(1) The overall effects of consolidation on competition in the provision of payment services are likely to vary according to the type of consolidation being considered (eg consolidation of financial institutions or of market infrastructures), the definition of the market (ie local, national or global), the market's degree of competitiveness, the extent of existing market concentration, and the legal and policy framework governing competition.

(2) On one level, a reduction in the number of institutions providing payment and securities settlement activities beyond a certain limit might result in increased prices for settlement services and lower incentives for innovation. To the extent that large players have sunk costs in a particular clearing technology, an established customer base with switching costs, and market power, they may actively discourage or slow the movement to more efficient technologies or processes for clearing. On the other hand, large institutions may be more capable and willing to invest in better risk management systems and form alliances with other clearers to clear payments and securities more efficiently. Whether any such efficiency gains are passed on to customers is open to debate.

(3) On another level, consolidation among payment and settlement systems may also affect competition, but the effects may vary depending on the model used. Three policy views

of system consolidation exist in the literature – a competing network model, a public utility model, and a model for promoting intra-network competition. The competitive effects of system consolidation under each of these models largely depend on such factors as the governance structure of the surviving system, access criteria, market demand for downstream services, and economies of scale. For example, under an intra-network competition model, shared automated teller machine (ATM) networks may reduce competition at the network level, but simultaneously enhance competition among banks by allowing small and large banks to offer ATM services on an equal basis at a similar number of locations. The ownership structure and the governance of a specific system are crucial points in this respect. To the extent that one or a few large participants dominate the network's decisions, access, efficiency and innovation may be affected, possibly to the detriment of other participants or would-be participants.

(4) Apart from these considerations, policymakers should be aware that competition is a dynamic process where effects observed over the short term might not be indicative of competition effects over the longer term.

Risk

The payment system risk implications of financial consolidation are complex.

(1) On the one hand, consolidation may help to improve the effectiveness of institutions' credit and liquidity risk controls. For example, increased concentration of payment flows may reduce liquidity tensions due to the greater degree of offset between payments received and payments sent by individual participants.

(2) On the other hand, consolidation (especially through specialisation and outsourcing) may lead to a significant shift of risk from settlement systems to customer banks and third-party service providers. Moreover, consolidation may lead to a greater proportion of on-us large-value payments, which may raise questions about the certainty of final settlement and the concentration of payments within a few banks.

(3) To the extent that institutional and system consolidations result in a greater concentration of payment flows, potential effects of an operational problem may increase. For example, if a major payment processor were to fail or were no longer able to process payment orders, serious repercussions might arise, not only for the liquidity situation of individual market participants that would not receive expected incoming funds, but also for the money, capital and foreign exchange markets in general.

(4) The emergence of multinational institutions and specialised service providers with involvement in several payment and securities settlement systems in different countries, as well as the increasing liquidity interdependence of different systems, further serve to accentuate the potential role of payment and settlement systems in the transmission of contagion effects.

(5) In order to properly manage these risks, banks need to have well developed risk control mechanisms in place to monitor service providers and the service relationship that is applicable to intraday and overnight credit, liquidity and operational exposures.

(6) At the interbank systems infrastructure level, central banks have made major efforts over the past decades to reduce and contain systemic risk by operating and promoting real-time gross settlement systems, and by insisting on the implementation of risk control measures in net settlement systems. To the extent that these efforts have increased the robustness of interbank systems' risk controls, interbank systems should help to dampen and contain any contagion effects being transmitted through the payment system.

Policy implications

The key policy implications identified by the Working Party are:

(1) Because of consolidation, central bank oversight of interbank payment systems is becoming more closely linked with traditional bank safety and soundness supervision at the

individual firm level. Increasing cooperation and communication between banking supervisors and payment system overseers may be necessary both domestically and cross-border.

(2) At the current time, it does not appear that consolidation has adversely affected competition in the provision of payment and securities settlement services. It may be advisable, however, for government authorities to continue to monitor competition in the payment system as short-term effects of consolidation may not be indicative of longer-term effects.

(3) In specific cases, public authorities may want to consider removing potential obstacles to consolidation if such action would enable the market to develop initiatives aimed at reducing risks and enhancing efficiency in the field of payment and securities settlement.

(4) With regard to risk management, central banks and bank supervisors should carefully monitor the impact of consolidation on the payment and settlement business, and should define safety standards when appropriate. In particular, central banks, in conjunction with bank supervisors, may need to consider various approaches, possibly including standards, that could be used to limit potential liquidity, credit and operational risks stemming from concentrated payment flows through a few very large players participating in payment systems. With regard to major payment systems, the Core Principles for Systemically Important Payment Systems now provide a key set of evaluative standards for the relevant authorities.

Chapter I

Patterns of consolidation

1. Introduction

This chapter provides a comprehensive overview of the patterns of consolidation in the financial services sector during the 1990s. The main focus is on three important groups of financial institutions: depository institutions (banks), insurance companies and securities firms. Thirteen countries – those in the G10 plus Spain and Australia – are included in the study. As a supplementary discussion, Annex I.1 describes securities exchanges in the United States, Japan and Europe and any associated consolidation.

Several methods of consolidation are discussed in the chapter, including mergers, acquisitions, joint ventures and strategic alliances. These transaction types are defined and quantitative data presented and discussed. In addition, data on the condition, performance, structure and concentration of each country's commercial banking and insurance industries are presented to highlight patterns, particularly those associated with consolidation. Concentration of certain financial activities on a global basis is also examined to assess the importance of the world's largest financial firms.

The chapter is organised as follows: Section 2 discusses several of the methods that are used by firms to consolidate. Section 3 presents extensive data and discussion of merger and acquisition activity. More limited data and discussion on joint ventures and strategic alliances are also provided. Section 4 focuses on the structure of the financial services industry and has three main parts. First, the banking and insurance industries of each country are discussed. Second, some basic international comparisons are made. Third, the global role of banking and securities leaders is examined. The chapter ends with a brief conclusion.

2. Methods of consolidation

In general terms, consolidation of the financial services sector involves the resources of the industry becoming more tightly controlled, either because the number of key firms is smaller or the rivalry between firms is reduced. Consolidation may result from combinations of existing firms, growth among leading firms, or industry exit of weaker institutions. This chapter focuses primarily on the first of these causes.

There are several alternatives for firms combining with each other. Each has its strengths and weaknesses and may be particularly appropriate in certain situations. Section 3 presents data on two classes of methods: (1) mergers and acquisitions and (2) joint ventures and strategic alliances.

The primary methods of consolidation employed by firms are mergers and acquisitions. With both of these methods, two formerly independent firms become commonly controlled. Throughout this chapter, the terms merger and acquisition are used interchangeably to refer to transactions involving the combination of two independent firms to form one or more commonly controlled entities. The distinction between a merger and an acquisition is somewhat vague. A merger is often defined as a transaction where one entity is combined with another so that at least one initial entity loses its distinct identity. Thus, full integration of the two firms takes place and control over a single entity can easily be exercised. An acquisition is often

classified as a transaction where one firm purchases a controlling stake of another firm without combining the assets of the firms involved. Relative to acquisitions, mergers provide a greater level of control, because there is only one corporate entity to manage. Acquisitions are most appropriate when there are operational, geographic or legal reasons to maintain separate corporate structures.

Mergers and acquisitions are also sometimes distinguished by defining mergers as transactions involving two firms that are of essentially equal size, while acquisitions are transactions where one party clearly obtains control of another. A partial, or non-controlling, acquisition is similar to an acquisition of a controlling interest, except that, as the name implies, the acquiring firm does not establish control. Such deals encourage cooperation between potential rivals, because they establish a common interest among the firms. Partial acquisitions may also serve as a first step for firms before engaging in more complete consolidations of control.

Joint ventures and strategic alliances enable firms to work together without either firm relinquishing control of its own operations and activities. Strategic alliances are partnerships between independent firms that involve the creation of tangible or intangible assets. The level of collaboration is often fairly low and focused on a well-defined set of activities, services or products. Strategic alliances may be most appropriate for the exchange of technical information and sophisticated knowledge or when there are legal, regulatory or cultural constraints making a more thorough collaboration difficult or illegal. Moreover, relative to mergers and acquisitions, strategic alliances generally involve lower formation and dissolution costs. Like partial acquisitions, strategic alliances may enhance cooperation among firms or serve as a first step towards a merger or acquisition.

A joint venture, which may be viewed as a type of strategic alliance, occurs when two or more independent firms form and jointly control a different entity, which is created to pursue a specific objective. This new entity typically draws on the strengths of each partner. Joint ventures facilitate consolidation, because they enable firms to develop strong ties. Joint ventures may also serve as a precursor to more comprehensive consolidation such as mergers.

3. Patterns in transaction activity

In this section, patterns in mergers and acquisitions and patterns in joint ventures and strategic alliances are examined over the 1990s for deals involving financial firms. The data were obtained from Securities Data Company (SDC), which attempts to collect information on all transactions involving large and medium-sized firms. With the mergers and acquisitions (M&A) data, the analysis only includes those deals in which both of the participating firms were from the financial sector. With joint ventures and strategic alliance data, only deals where the shared business arrangement is classified as financial in nature are included.

Constructing transactions data that are accurate, comprehensive and comparable across countries is inherently difficult, and although SDC appears to have done a good job, there are likely to be differences in the availability of data across countries that could influence reported figures. In addition, it is highly likely that at least some deals include firms with improperly classified industries or countries.[7]

In the M&A data, financial firms are classified as operating in one of three industries: banking, insurance or securities/other. Investment banks are classified as securities firms. The announcement date is used to determine when the transaction took place. Only deals that were completed or still pending as of May 2000 were included; all cancelled deals were excluded.

[7] As a result of improper classifications and other issues associated with obtaining accurate and consistent data, some of the figures reported in the tables in Annex A exhibit minor inconsistencies.

The number of M&A deals, total deal value and average deal value are reported in the tables in Data Annex A for a variety of groupings based on the country and industry of the participants in each year of the 1990s, as well as for the entire decade.[8]

Joint venture and strategic alliance data are not as comprehensive as M&A data. The annual and decade total number of deals in each country is reported, as is the breakdown between cross-border and within-border deals. Cross-border agreements are defined as those deals in which the firms sponsoring the joint venture or strategic alliance were not all located in the same country. Therefore, within-border transactions involve sponsoring firms that were all from a single country. The distinction between cross- and within-border agreements is based solely on the location of the firms sponsoring the venture. Therefore, the tables present no information regarding the country of the venture itself relative to the country of the sponsoring firms.

A more detailed description of the source of the transactions data, as well as the definitions, screens and classifications that are used, is provided in Data Annex A. The annex also presents transactions tables. Table A.1 presents global figures on M&A activity between 1990 and 1999. Tables A.2 to A.4 provide aggregate figures for the North American, Pacific Rim, and European countries included in the study, and Tables A.5 to A.17 provide separate data for each of those countries. The number of joint ventures and strategic alliances is reported in Table A.18. It is important to note that the data collected by SDC are not comprehensive or free of errors. However, most large deals are included and the data should provide an excellent foundation for analysing patterns in transactions.

Mergers and acquisitions

Mergers and acquisitions are methods of consolidation where a change in control takes place through a transfer of ownership. These two methods, which are not distinguished from each other in this chapter, strongly bind the participating firms and can have a substantial effect on economic structure. For purposes of the tables and discussion, M&A activity is defined as occurring when ownership by one financial firm of another goes from less than 50% to more than 50%. Such a change generally results in an unambiguous transfer of corporate control.

Broad global patterns

SDC reports that in the 1990s there were more than 7,300 deals in which a financial firm in one of the 13 countries included in this study was acquired by another financial firm (Table A.1). The value of these deals was roughly USD 1.6 trillion.[9] Over the same period, financial firms in these countries made roughly 7,600 acquisitions with a similar estimated value. The differences between the two sets of figures are attributable to cross-border deals involving a firm in a country not included in this study and a firm in a country that is included.[10]

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[8] Value is not always released by participating firms. Therefore, average value, which is total value divided by the number of deals with a reported value, does not always equal total value divided by the total number of deals.

[9] Deal value is a somewhat ambiguous term as SDC obtains its estimates from announcements available from public sources. In the case of share exchanges, the deal value is based on the market price of shares. In the case of a merger of equals, the transaction value is calculated as the value of shares that are exchanged. Values are also not based on a consistent date relative to the merger process, as the recorded transaction value may vary during the period between announcement and consummation of a deal as information becomes available or deal terms are changed during post-announcement negotiations. The value is reported in nominal terms, so changes over time are influenced at least somewhat by inflation.

[10] In some deals, a firm in one of the 13 countries purchased a firm located outside the group of 13, and in other deals, a firm from elsewhere made an acquisition in one of the 13. The former would only be included when deals are classified by acquirer. Likewise, the latter would only be included when classification is based on the target. Deals involving two firms from the 13 reference countries are included regardless of whether deals are classified by target or acquirer.

The level of M&A activity involving financial firms increased during the 1990s, with strong growth both in the number and in the average value of M&A transactions. In the last three years of the decade, there were nearly 900 transactions annually involving the acquisition of a financial company in one of the 13 reference countries. These deals were associated with an estimated total value of almost USD 400 billion per year. These levels represent a nearly threefold increase in the number of deals observed in 1990 and roughly a tenfold increase in total value per year. Similar patterns exist among deals in which the acquirer was a financial firm in one of the 13 countries under examination. The increase in activity between 1990 and 1999 may be somewhat exaggerated, because the SDC database excluded deals with a reported value below USD 1 million before 1992.

The rapid growth in total M&A transaction value was accompanied by an increase in the estimated size of the average transaction, which was roughly similar to the growth of the market value of financial sector stocks over the same period. In the last three years of the decade, there was a dramatic rise in the number of and value associated with large M&A deals. This pattern is demonstrated in Table I.1, which reports the annual number and aggregate value of mergers and acquisitions that involved a financial firm in one of the 13 countries as the target and that had a reported value of at least USD 1 billion.

Table I.1

Financial sector mergers and acquisitions with value greater than USD 1 billion

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Number	8	10	6	11	14	23	21	49	58	46
Value (USD bn)	26.5	22.1	12.4	39.7	23.7	113.0	59.0	233.0	431.0	291.0

Source: Thomson Financial, SDC Platinum.

Most of the M&A activity during the decade involved banking firms. About 60% of deals involved the acquisition of a banking organisation. Securities/other firms were targets in about a quarter of deals, and acquisitions of insurance firms only constituted about 15% of transactions. Interestingly, banking deals accounted for about 70% of the value of all deals, while securities/other acquisitions comprised only about 11%.[11]

Global patterns by same/different countries and industries

To further examine patterns for different types of M&A activity, deals are placed into one of four groups based on whether the transactions involved firms in the same or different countries and industries. The first group examined comprises domestic, same-industry deals. The data clearly indicate that most of the M&A consolidation activity in the financial services sector during the 1990s involved firms operating in the same industry and from the same country (Table A.1). Such transactions accounted for more than 70% of total activity measured in terms of both the number of deals and the value of deals. The prevalence of same-country, same-industry activity may reflect regulatory constraints in some countries prohibiting cross-border and cross-industry mergers.

Because domestic, same-industry deals are so prevalent, observed patterns of consolidation are generally not strongly influenced by whether deals are classified by the country and industry of

[11] When deals are classified by the industry of the acquirer, the results are similar.

the acquirer or of the target. Therefore, most of the discussion in this chapter regarding patterns of M&A activity focuses on deals classified by target. However, distinctions between results based on target and acquirer classifications are noted when they are important.

The average value of domestic, same-industry transactions was much greater in the latter half of the decade than in the first half. The average deal value was under USD 150 million for the period up to 1994 and jumped to USD 500 million between 1995 and 1999. Transaction value was especially large at the end of the decade, averaging about USD 800 million over the last two years.

The banking industry represented by far the largest share of domestic, same-industry M&A activity. Approximately 68% of all deals and 78% of the value of such deals involved a bank being acquired. A landmark year for domestic banking mergers was 1995, when the average value of transactions quadrupled compared to the previous two years. The average value of bank M&A transactions generally increased throughout the second half of the decade.

The second type of domestic deal involves firms that operated in the same country and different industries. Although these deals were the second most common type of transaction, they only accounted for about 15% of all deals, whether measured by number or value. There was a fairly steady increase in the overall number of deals throughout the decade. In terms of the value of transactions, 1998 was a year of very large deals. The aggregate deal value during that year was nearly USD 110 billion, about half of the 10-year total, and the average value exceeded USD 1.3 billion. These deals often resulted in the creation or substantial growth of large, complex banking organisations.

As with the case of domestic, same-industry transactions, mergers with banks as targets represented the most common type of deal as measured by value. However, securities firms were more important than observed in the case of domestic, same-industry transactions. Average values for domestic, cross-industry deals with targets from each industry were comparable to the average levels for similar domestic, same-industry deals, with the exception of the insurance industry, where same-industry deals were larger on average.

Cross-border, same-industry deals are examined next. When deals are classified by the country and industry of the acquirer, there are about 250 more deals than when deals are classified by target. This discrepancy indicates that, in the aggregate, firms located in the 13 reference countries were net acquirers of firms in their own industry. In other words, firms in the 13 countries acquired more same-industry firms in countries not in the study than were purchased by firms in those non-study countries.

During the 1990s, the total value of acquisitions of firms located in reference countries by foreign firms operating in the same industry amounted to about USD 140 billion, a figure that corresponds to nearly 10% of the total transactions in the financial sector over the period. Such activity grew throughout the decade. Nevertheless, the impact of various impediments to cross-border consolidation, including economic, operational and regulatory barriers, is evidenced by the large differences in the level of domestic and cross-border activities in all three industries.

A particularly striking contrast between domestic and cross-border consolidation involving same-industry firms was the relative importance of different industries. In particular, insurance firms were frequently involved in buying foreign rivals, as the acquisition of insurance companies accounted for about 40% of all deals and nearly half of total transaction value. In contrast, banking deals, which were very prevalent in domestic consolidation, accounted for only about one third of the number and value of all cross-border, same-industry activity. Insurance transactions were prevalent throughout the period under review, but were particularly important after 1997.

Finally, the least common type of deal was cross-industry, cross-border consolidation. There were only about 250 such M&A transactions with a target from a country included in the study and roughly 330 such deals with an acquirer from one of the 13 countries. The average transaction in this category typically involved a lower value than deals with firms that shared a

country, industry or both. Similarly to all other categories of consolidation, cross-border and cross-industry deals became both more frequent and larger during the second half of the 1990s, especially in the last three years of the decade. International, cross-border deals helped facilitate the creation and growth of large and complex financial institutions.

As with the international, same-industry transactions, financial firms in the 13 countries were acquirers more frequently and for more value outside their domestic country than they were targets of foreign firms. There were also important differences in the industry composition of deals in which the firms from the reference countries were the targets and those where they were the acquirers. When a firm from one of the 13 countries was acquired, it was commonly a bank (57% of total value) or, to a lesser extent, a securities/other firm (25%). In contrast, overseas acquisitions by firms in one of the 13 countries often involved a purchase by a securities/other firm (48%) or insurance company (33%).

Patterns in individual regions and countries

Even though some general patterns are evident on a global level, a number of differences in the patterns of M&A activity in various countries existed in the 1990s (Tables A.5 - A.17). The relative importance of M&A activity, as measured by total deal value over the decade divided by GDP over the period, differed substantially across countries. In Germany, Japan and Canada, this measure was less than 0.5%, whereas in Switzerland, Belgium, the United States and the United Kingdom, it exceeded 1% regardless of whether deals are classified by target or acquirer.

Countries also differed in the extent to which their firms engaged in international mergers. In the United States and Japan, almost all deals involved two firms from the home country. In contrast, when one of the firms was located in Belgium, half of all deals, accounting for about 40% of all value, involved an international transaction. Classifying by target or acquirer generally makes little difference in the relative importance of foreign and domestic deals, except in the case of the Netherlands. Dutch firms made some large overseas acquisitions that raised their cross-border figures when deals are classified by acquirer relative to when deals are classified by target.

Although there were differences across countries in the relative amount of activity within and across industries, those differences tended to be smaller than those observed within and across borders. In Japan, Spain and the United States, a large amount of M&A activity involved firms operating in the same industry.[12] Among the countries with firms that engaged in a lot of cross-industry activity was Belgium, which also had firms that engaged in a lot of cross-border deals.

The particular industries in which targets and acquirers operated varied by country. In the United States, targets and acquirers were frequently banks, a finding that is consistent with domestic banking deals being highly prevalent in the United States. In other countries, such as Australia, Canada, the Netherlands and the United Kingdom, banking deals were not nearly as common. In Japan, almost half of all deals involved firms in the securities/other industry, but these deals were very small and accounted for very little value. In contrast, the banking industry accounted for about half of all deals, yet virtually all of the value of deals.

Although countries generally exhibited similar patterns in M&A activity, there were substantial differences in patterns across time. Comparing the last three years of the decade (1997-99) to the first seven (1990-96) reveals that Canada and, to an even greater extent, Japan experienced very large increases in the average annual number of deals. In contrast, firms in France, Switzerland and the Netherlands were involved in fewer deals annually as both targets and acquirers.

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[12] The relatively modest amount of cross-industry activity in Japan and the United States in the 1990s may have been largely due to legal restrictions, whereas the relative lack of such activity in Spain may have been largely attributable to an already high level of cross-industry ownership.

Average deal value reveals a somewhat different and more consistent picture. Nearly all countries exhibited a higher average deal value at the end of the decade. In seven countries, the average value of a deal involving a home-country firm was at least three times as high during the last three years as during the first seven. Most notable is Switzerland, where the average value of purchased firms was almost 30 times more at the end of the decade. This difference is due largely to a small number of very large firms being acquired or engaging in mergers, primarily in 1997. When deals are classified by acquirer, acquisitions averaged twice as much in the last three years than in the first seven in 10 countries. Belgian firms made acquisitions that were nearly 15 times larger. The only countries that showed a decline in average deal value were Japan (by target and by acquirer) and the Netherlands (by target). Japan's decline was attributable to one huge deal in 1995 and the drop in the Netherlands was due to several large deals in the early part of the decade.

In the remainder of this section, patterns in M&A activity for the countries included in this study are examined more closely on a regional basis. Nations are placed into one of three geographic regions – North America, the Pacific Rim and Europe. In both North America and the Pacific Rim, there are only two countries, one of which is much larger than the other. Therefore, because a regional discussion would be very similar to a discussion of the larger country, the text focuses on each country separately. In Europe, the discussion is not organised on a country-by-country basis. Instead, area-wide patterns are described more thoroughly, and data from individual countries are introduced as supporting evidence. This approach seems more appropriate for Europe given that there are nine nations with strong economic ties, many of which are fairly comparable in size.

North America

United States

The global M&A picture was dominated by firms located in the United States. During the 1990s, deals involving US firms, classified either by the country of the target or by that of the acquirer, accounted for about 55% of all financial deals, measured by either number or total value of transactions (Table A.5). The intense consolidation activity in the United States was driven, at least in part, by changes in the regulatory framework, a variety of technological changes, and intense pressure for cost reductions and revenue enhancements in segments of the industry (see the Causes chapter for a more thorough discussion of the causes of consolidation).[13]

In particular, the data reflect the reaction of the US banking industry to the Riegle-Neal Interstate Banking and Branching Efficiency Act of 1994, which greatly relaxed interstate banking and branching restrictions. Although many of the deals in the United States were domestic bank-to-bank transactions throughout the decade, the average value of such deals rose considerably in the latter part of the 1990s. Very large banking companies were increasingly expanding the geographic footprint of their operations by buying other very large banks. In 1998, several extremely large deals took place including BankAmerica-NationsBank, Wells Fargo-Norwest, and Banc One-First Chicago NBD.

Domestic, cross-industry merger activity represented 11% of the total financial sector consolidation activity by number of transactions and 14% by value. This picture, however, is misleading, as most of the domestic, cross-industry transaction volume, in terms of value, took place in the 1997-98 period. During these years, there were some large deals, especially those involving banks. Indeed, the value of banking acquisitions rose to more than USD 80 billion in

[13] The relatively high level of measured activity for US firms may also reflect a potential bias in the coverage of the database as discussed in Annex A, whereby deals among US firms may be more highly represented than deals involving firms from other countries.

1998, accounting for almost two thirds of the total value of domestic, cross-industry deals in the entire decade. One of the most important and unique financial deals in this period was the 1998 merger between Citicorp, which was a bank holding company, and Travelers, which was an insurance and securities firm.[14] Cross-industry deals involving the acquisition of non-bank financial companies peaked around 1996-97. Earlier in the decade, restrictions on bank activities limited the level of domestic, cross-industry consolidation activity.

Acquisitions of US financial firms by foreign, same-industry firms increased in the late 1990s, as three quarters of the overall deal value associated with such acquisitions arose between 1997 and 1999. Likewise, US firms also increased the rate at which they purchased foreign firms that operated in their own industry. Of special note, firms headquartered in the United States made foreign acquisitions more frequently than their foreign counterparts made US acquisitions, but the size of the purchases made by US firms was smaller. During the decade, acquisitions of foreign firms by US firms had an estimated average value (roughly USD 300 million) which was less than half the value of acquisitions by foreign firms of US firms (roughly USD 800 million), suggesting that foreign firms may have been more focused on larger, more mature firms.

Cross-border, cross-industry deals were rare in the 1990s, but many of the deals of this type involved US firms in the securities/other industry, as either acquirer or target. US banks were also not uncommon targets of such deals.

Canada

In Canada, consolidation activity was fairly modest in the first half of the 1990s (Table A.6). During this period, M&A activity was characterised by a small number of transactions between small and medium-sized financial firms. However, in later years, a greater number of transactions took place, including some large deals, especially in the banking and insurance industries. Of particular note was a merger between two Canadian banking concerns (TD Bank Financial Group and CT Financial Services) announced in 1999.

Most other domestic, same-industry activity was not very significant. More than half of such deals involved firms in the securities/other industry, but these transactions tended to be very small, with an average deal value under CAD 50 million. The most frequent targets of domestic, cross-industry merger activity were banks. However, with domestic, cross-industry deals, securities/other firms were both the most active acquirers and the largest targets, and insurance firms were engaged in the largest deals as acquirers. Many of the cross-border deals involving Canadian firms, as either acquirer or target, were relatively modest in size.[15]

[14] The merger between Citicorp and Travelers to form Citigroup did not violate the provisions of the Glass-Steagall Act or the Bank Holding Company Act, which restricted the securities and insurance activities of bank holding companies, because the Board of Governors of the Federal Reserve had the authority to allow Citigroup to operate for as long as five years before requiring a divestiture of certain activities that might be considered impermissible. The issue of whether the deal violated existing laws and regulations became irrelevant with the passage of the Financial Services Modernization Act in 1999.

[15] There is one cross-border, same-industry transaction in the banking industry that may raise questions. The database shows this particular deal as the merger/takeover of Newcourt Credit Group Inc (classified by SDC as a Canadian "credit institution") by CIT Group Inc (a US "credit institution"). "Credit institutions" are classified as banks in the analysis conducted in this chapter. While this classification might not be highly relevant in this case, classifying credit institutions as banks is appropriate in the context of other countries included in the study.

Pacific Rim

Japan

Merger and acquisition activity in the Japanese financial sector was rather subdued for nearly the entire 1990s (Table A.7). Before 1999, there were few acquisitions of firms in either the banking or securities/other industries and even fewer acquisitions of Japanese insurance companies. The main deals that took place during this period of modest M&A activity were a series of transactions by Mitsubishi Bank, which purchased a majority interest in Nippon Trust in 1994 before merging with Bank of Tokyo in the following year. Also, Taiyo Kobe Bank and Mitsui Bank merged to become Sakura Bank, and Kyowa Bank and Saitama Bank merged to become Asahi Bank at the start of the decade. A number of deals in the middle and late 1990s took place as a result of financial distress among the acquired institutions.

The pattern of modest M&A activity that persisted throughout much of the decade changed dramatically in 1999. Nearly half of all Japanese deals that took place in the 1990s occurred in that final year. Moreover, except for the 1995 Nippon Trust-Mitsubishi Bank merger, the 1999 deals tended to be larger than those in previous years. Many of the 1999 deals were among the nation's top banks and were a product of government efforts to resolve those banks' bad loan situations and improve their longer-term profitability. Only a handful of significant cross-border acquisitions took place in the 1990s that involved Japanese financial companies as either acquirers or targets. However, several distressed Japanese banks and insurance companies were acquired during the decade, especially in the second half. The average value of cross-border deals involving Japanese acquirers was extremely low and was much smaller than the value of such deals with Japanese targets.

Australia

The number of deals between domestic, same-industry Australian firms increased slightly over the 1990s, but not steadily and not by much (Table A.8). However, most large deals of that type were generally concluded during the second half of the decade. Several more very large same-industry deals might have taken place, but mergers between the country's four largest banking organisations were ruled out by the government because of their likely effect in reducing competition. An important factor driving mergers involving insurance firms was the gradual conversion of mutual firms to stock firms. This "demutualisation" increased the opportunities for consolidation.

Domestic, cross-industry M&A activity, which was concentrated in the second half of the 1990s, involved a relatively large number of acquisitions by banks of firms in the securities/other industry. An important factor driving some cross-industry acquisitions, especially those by banks, was a desire to acquire asset management capacity in order to participate in the growth of the private pension provision market. The overall number of domestic, cross-industry transactions was not only half of same-industry activity, but the average value of cross-industry deals was lower as well.

There were only a handful of significant cross-border acquisitions of Australian financial companies during the 1990s, many of which involved firms in the same industry. One significant cross-border deal involved the takeover of an Australian insurance company in 1995. Australian firms were engaged in slightly fewer, but larger, international cross-industry deals as acquirers than as targets.

Europe

Roughly two thirds of European M&A activity in the 1990s, as measured by the total value of transactions involving the acquisition of a European financial firm, occurred during the last three years of the decade (Table A.4). Overall, firms in the European countries included in this study engaged in fewer, but generally larger transactions than North American institutions. The total value of all European deals, however, was only about half that of North American deals.

Merger activity, as measured by the value of firms acquired, was primarily concentrated in the banking industry, which accounted for about 65% of the total. Insurance was the second most active industry at roughly 25%. In both the banking and insurance industries, average European acquisition values were substantially higher than averages in North America. In contrast, values were lower in European deals involving firms in the securities/other industry.

The number of domestic, same-industry transactions showed a less pronounced upward trend in Europe than in North America during the decade. However, important differences exist in the patterns of domestic, same-industry consolidation activity among individual European countries. In Belgium, Italy, Spain, the Netherlands and the United Kingdom, most, and in some cases almost all, of such activity, measured by value, occurred in the last two years of the decade.

Other differences in the patterns of domestic, same-sector deals also existed, as Belgium, Spain and Switzerland exhibited a high concentration of transaction activity in the banking industry, primarily in terms of value. In several European countries, at least one large transaction took place that led to the creation of a dominant domestic institution (eg Bayerische HypoVereinsbank in Germany, UBS in Switzerland).

Among European countries, the United Kingdom was home to the largest amount of domestic, same-sector transaction activity, accounting for about 25% of the number and 30% of the total value of such deals in Europe. This finding is consistent with the casual observation that the increased integration of European financial and capital markets prompted many UK (as well as non-UK) financial institutions to seek a foothold in London or expand their existing operations in that financial centre.

As with the other global regions, domestic, cross-industry consolidation in Europe was less common than domestic, same-industry activity. Compared to North America, however, domestic, cross-industry consolidation exhibited a different pattern over time in terms of the number of firms being acquired. In Europe, the number of acquisitions remained fairly steady in the latter half of the decade, although registering a one-year slump in 1998.

While the overall number of domestic, cross-industry deals was roughly the same in the two regions, the average European deal was valued at about USD 300 million, which was about one third lower than in North America. Both regions experienced a surge in the average value of transactions in 1997 and 1998. This surge resulted in the average value of European, cross-industry targets during this two-year period being about four times the average for the remainder of the decade. Interestingly, the dip in the number of domestic, cross-industry transactions in 1998 coincided with the peak in the total value of deals, with the greatest share of that value involving purchases of banks.

A distinguishing feature in Europe was the relative importance of domestic, cross-industry acquisitions of insurance firms. Transactions in the insurance industry represented the second largest group in terms of total value and exhibited a high average deal value. The total value of such transactions accounted for at least half the value of all domestic, cross-industry activity in Germany, France, Spain and Switzerland. In all of these countries, however, the importance of insurance deals was the result of a few large transactions, as acquisitions of banks outnumbered those that involved the purchase of insurance companies.

Domestic, cross-industry patterns in Belgium, Switzerland and the Netherlands shared an important similarity. In all three countries, there were relatively few, albeit very large, acquisitions, which enabled conglomerates pairing banking concerns with insurance companies ("bancassurance") to emerge. In fact, in Belgium and the Netherlands, the aggregate value of domestic, cross-industry consolidation exceeded the value of domestic, same-industry transactions.

International mergers and acquisitions involving European firms accounted for a large share of all cross-border, same-industry activity. In fact, European firms were targets in 65% of such transactions. These deals correspond to transactions valued at roughly USD 65 billion. More

importantly, however, same-sector foreign acquisitions by European financial companies over the 1990s exceeded USD 120 billion. Overall, European firms were therefore large same-industry net acquirers, in that they were purchasers of foreign firms (in terms of number and value) more than they were targets.

Overall, insurance was the leading industry in cross-border, same-industry transactions in European countries. This pattern holds, although just barely in some cases, with both the number and average value of transactions, as well as when deals are classified either by the country of the target or by that of the acquirer. In six of the nine European reference countries, more than half of the value associated with the purchase of domestic firms by foreign financial institutions involved transactions with domestic insurance firms. Such deals were particularly important in Germany, Italy, the Netherlands and Switzerland.

A difference exists between the typical size of cross-border, same-industry transactions involving European banks when such firms were targets and when they were acquirers. The average deal value associated with the acquisition of a European bank by a foreign bank was about USD 200 million. This figure is less than half the average value associated with deals involving a European bank buying a foreign bank.

Finally, cross-border, cross-industry acquisitions of European financial firms represented more than 60% of the number and value of all international, cross-industry deals. European banks were particularly popular targets, as the total value of acquisitions of European banks by foreign non-banks was more than two times greater than the value of deals involving the other two financial industries combined. While most of the activity in terms of value took place after 1997, especially in Belgium, Germany, Italy and the United Kingdom, the acquisition of European banking interests by foreign non-banking firms showed an early peak in 1990-93, when a few large deals took place. Overall, European firms were net acquirers with respect to cross-border, cross-industry transactions.

Joint ventures and strategic alliances

In this section, joint ventures and strategic alliances are defined as agreements where two or more entities combine resources to form a new, mutually advantageous business arrangement to achieve predetermined objectives. In addition to participating in the venture, the original firms continue to operate as they had before their alliance. Joint ventures and strategic alliances are a weaker method of binding two firms together than mergers and acquisitions.

The data presented in Table A.18 reveal several of the same patterns as those observed with the M&A data. First, activity volume increased over the decade, especially in the last few years. Of the roughly 3000 deals recorded by SDC, about half took place in either 1998 or 1999. In contrast, about one quarter of all agreements occurred in the five-year period between 1990 and 1994. Second, the United States accounted for much of the activity. Nearly half of all the joint ventures and strategic alliances involved the creation of a US entity.

Third, within-border ventures, defined as deals involving "parent" firms from a single country, were 50% more prevalent than cross-border ones. However, within-border deals were not nearly as universally common as with M&A activity. In fact, with ventures involving the creation of a European or Pacific Rim entity, cross-border transactions were, in aggregate, more common than within-border deals. In Europe, there were about 50% more cross-border joint ventures and strategic alliances than within-border agreements, and in the Pacific Rim, cross-border deals were about 25% more common. Among all deals, cross-border joint ventures and strategic alliances were more common than cross-border mergers and acquisitions. This difference is consistent with the belief that ventures and alliances are highly useful in cases where mergers and acquisitions may be difficult, such as when firms from different countries are involved.

Summary of key patterns in transactions activity

Merger and acquisition activity generally increased during the 1990s, especially during the last three years of the decade when average deal value increased substantially. Over the entire period, several types of deals were prevalent. Transactions involving firms located in the same country and operating in the same industry were by far the most common type of deal. In addition, M&A activity frequently involved firms in the banking industry. Finally, firms in the thirteen countries included in this study were, in the aggregate, acquirers more often than they were targets and were involved in deals with greater total value as acquirers than as targets.

In addition to several important common trends, some key differences characterised the M&A activity of various countries during the decade. The value of such activity varied across nations and was relatively low in Germany, Japan and Canada (below 0.5% of GDP over the decade by target and acquirer) and relatively high in Belgium, Switzerland, the United States and the United Kingdom (greater than 1.0% of GDP). In the United States, a large share of activity, in terms of both number and value of deals, involved domestic, banking mergers. In other countries, most notably Belgium, deals tended to more heavily involve firms from different countries or different industries. Also, some countries, such as Canada, experienced a substantial increase in the number and average value of deals towards the end of the decade, whereas others, such as the Netherlands, did not experience an end-of-decade spike.

Joint venture and strategic alliance data reveal some of these same patterns. The number of agreements increased over the decade, especially in the last few years, and the United States accounted for a large portion of all such ventures. Although agreements involving firms from a single country were more prevalent among all ventures and alliances than cross-border agreements, the latter were actually more common outside the United States.

4. Patterns in the structure of the financial sector

In this section, key structural measures of the commercial banking and insurance industries are examined for each country with the primary focus being elements associated with consolidation. Some international comparisons are also made. In addition, features of banking and certain securities and over-the-counter derivatives activities are examined on a global basis. This section of the chapter illustrates some of the effects that the transaction activity discussed in the previous section has had on financial structure.

The primary data used in the chapter, which were collected from national authorities with the help of the OECD and other sources, are well suited to an analysis of particular industries in individual countries. However, extensive cross-country comparisons are difficult to make due to a lack of consistency. According to the OECD, "international comparisons in the field of income and expenditure accounts of banks are particularly difficult due to considerable differences in OECD countries as regards structural and regulatory features of national banking systems, accounting rules and practices, and reporting methods."[16] Comparisons of insurance data are similarly difficult. A detailed description of the data and how they were collected is provided in Data Annex B. The annex also presents Tables B.1 to B.13 with banking and insurance data for each country. Table B.14 presents some of the key measures from Tables B.1 to B.13 in a way that makes it easy to view all countries simultaneously.

Most of the data in the section relate to the banking and, to a lesser extent, insurance industries. Only a limited amount of securities data is presented. The discrepancy in the volume of data covering the different industries is driven largely by availability. Obtaining sufficient country-

[16] Organisation for Economic Co-operation and Development (1999a).

specific banking and insurance data was easier than collecting securities data. Nonetheless, available securities data are presented to illustrate key patterns.

Before discussing each country's financial sector, a brief historical background is provided. Around 1980, there were two basic models for the relationship between commercial banking and securities activities. One, which could be called the "Glass-Steagall" model, involved a legal separation of the two activities; Japan and the United States were good examples of this model. The second, which could be referred to as the "universal bank" model, permitted financial institutions to engage in both commercial banking and securities activities. A somewhat related issue is the degree to which insurance was separate from banking and securities activities.

Another key feature of a country's financial sector was the degree to which capital markets were active and developed. In 1980, capital markets were well developed in Canada, the United States and the United Kingdom. In contrast, capital markets were generally not well developed in the other countries in this study. Firms there relied primarily on banks for long-term funds. Although the characteristics of a country's financial sector in 1980 influenced the consolidation patterns observed in subsequent years, a country's starting point was not necessarily a predictor of subsequent consolidation activity.

Country-by-country analysis

North America

United States

The US financial services sector has traditionally consisted of three largely distinct types of firms – depository institutions (banking), securities firms and insurance firms. This segmentation is primarily attributable to various laws that have defined the scope of activities in which particular types of financial firms may engage. Throughout the late 1980s and 1990s, the severity of the separation was weakened, and the Financial Services Modernization Act, which was passed and signed into law in late 1999, removed most of the remaining barriers among banking, securities and insurance activities. This law did, however, seek largely to retain the long-standing barrier between financial services and non-financial commerce. The US securities industry is large and well developed, with many of the leading securities firms (investment banks) in the world being headquartered in the United States.

The number of firms in each financial segment in the United States is large in comparison with most other industrial countries, particularly in the case of depository institutions. The large number of depository institutions in the United States is due, in large part, to historical restrictions on interstate and intrastate banking and branching. Most restrictions on intrastate banking and branching and some restrictions on interstate banking and non-banking financial activities were eliminated by 1990. The Riegle-Neal Interstate Banking and Branching Efficiency Act eliminated remaining restrictions on interstate branching as of 1 June 1997, making nationwide banking possible and spawning numerous interstate mergers and acquisitions.

There are, and have been, three main types of depository institutions in the United States: (1) commercial banks, (2) thrift institutions (savings banks and savings and loan associations) and (3) credit unions.[17] Thrifts and credit unions tend to be small and provide basic banking services

[17] Deposits up to USD 100,000 held at any of these types of institutions are protected by federal deposit insurance. Savings and loan associations used to have a separate deposit insurance system (FSLIC) from commercial banks and savings banks (FDIC), but FSLIC was integrated into the FDIC in 1989 after the savings and loans crisis of the 1980s.

to households.[18] Commercial banks are the largest and most important group of depository institutions. They typically serve both households and businesses and engage in the widest variety of financial activities. Most commercial banks are owned by bank holding companies, which may not only control multiple commercial banking institutions, but may operate thrifts and financial, non-depository subsidiaries as well.

Changes in the structure of the banking industry clearly reflect the extensive consolidation that took place in the United States during the 1990s (Table B.1). Between 1990 and 1999, the total number of commercial banks and thrifts decreased by about one third from roughly 15,000 to 10,000. This dramatic decrease was accompanied by substantial growth, in both absolute and relative terms, by the largest institutions. The top 100 commercial banks increased their size, in terms of total assets and assets relative to GDP, and the very largest banks controlled an increasing share of the industry. Relative to GDP, the overall banking industry in the United States decreased during the period.

The life segment of the US insurance industry experienced more modest changes during the 1990s. Although the number of institutions steadily declined, concentration only changed by a small amount, with the direction of the change varying by the number of firms incorporated into the measure. The non-life segment experienced a different pattern of change than the life segment. The number of firms increased slightly, but concentration rose as well. As a share of GDP, both the life and non-life industries grew during the decade, but the non-life industry barely grew, whereas the life industry grew at a more rapid rate.

Canada

For several decades, the Canadian financial system has been based on five principal types of institutions: chartered banks, trust and loan companies, the cooperative credit movement, life insurance companies and securities dealers. These different types of firms traditionally operated separately. Banks entered the securities business following a legislative change in 1987 that allowed banks to invest in such firms.

In 1992, consolidation was further facilitated with the passage of legislation that permitted financial firms to provide most financial services unless expressly prohibited from doing so.[19] In 1992, in order to ensure that banking issues are periodically reviewed, the duration of the sunset clause incorporated in Canadian banking legislation was changed to five years from 10 years. As earlier, life insurance companies and all deposit-taking institutions were restricted in their holdings of equity in commercial enterprises. In 1999, legislation allowed foreign banks to establish commercially oriented branches in Canada. Legislation was introduced in 2000 to further ease ownership restrictions, allow more flexible holding company structures, facilitate joint ventures and strategic alliances, and ease entry requirements by allowing small, closely held financial institutions, including banks, to exist. However, the legislation was not passed before Parliament ended its activities prior to the November 2000 federal election.

The 2000 legislative initiative included guidelines (non-legislative) for the review of merger proposals of major banks. A formal and transparent merger review process was established for banks with equity in excess of CAD 5 billion. The guidelines were established after the Minister of Finance rejected two proposed mergers among leading Canadian banks on the basis that the deals would have resulted in an unacceptable level of concentration, a significant reduction in competition and reduced policy flexibility to address future prudential issues that might arise.

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18 Throughout the 1980s and 1990s, many thrift institutions faced less restrictive limitations on branching, interstate banking and non-bank activities than commercial banking organisations.

19 The new laws included the Bank Act, Trust and Loan Companies Act, Insurance Companies Act and Cooperative Credit Associations Act.

The number of commercial banks in Canada increased substantially in the 1980s before declining somewhat in the 1990s (Table B.2). The large rise in the earlier decade was driven by the initial entry of foreign banks, which was allowed starting in 1980. Despite increased entry by foreign banks, the leading Canadian domestic banks, of which there were five during the 1990s, tended to be very large and traditionally controlled most of the banking activity in Canada. The dominance of the largest banks increased substantially during the decade. Moreover, the overall banking industry grew during the 1990s, as assets-to-GDP nearly doubled.

The number of life insurance companies did not change much during the late 1990s. Moreover, although concentration for the five largest life firms increased during the latter part of the decade, concentration levels for the one, ten and fifteen largest firms remained virtually unchanged. The number of non-life insurance companies (largely property and casualty firms) also remained steady in the latter half of the 1990s. Several insurance firms recently converted from mutual to stock ownership.

Pacific Rim

Japan

For many years, the Japanese financial sector has been compartmentalised. Specifically, banking, securities and insurance activities have traditionally been segmented by regulatory measures with financial institutions competing within narrowly defined industries.[20] Banks can be classified into the following groups: (1) city banks, which conduct wholesale banking activities and maintain large branch networks, (2) long-term credit banks, which engage in long-term lending and issue long-term debentures, (3) trust banks, (4) regional banks and (5) second tier regional banks. In addition, there are groups of smaller, more specialised deposit-taking institutions that include (6) shinkin banks,[21] (7) credit cooperatives and (8) agricultural and fishery cooperatives and others. Often, groups (1), (2) and (3) are considered "major banks" and groups (1)-(5) are called "commercial banks." In addition, the government-operated postal savings system has had a significant market share.

Divisions began to change in the late 1990s in response to more intense global competition, the announcement of extensive legislation (Big Bang) in 1996, and other, more gradual deregulation of the financial sector. During the decade, Japan's economy experienced protracted problems that emanated from a large and rising volume of bad debts associated with the property and stock market collapses of the late 1980s. In the face of these problems, several Japanese financial institutions (eg banks, long-term credit banks and securities firms) failed, were acquired by another entity, or were taken over by the government. Much of the financial sector consolidation in terms of the decline in the number of institutions in Japan was driven by balance sheet deterioration in the midst of a broader economic decline.

Little consolidation took place in the Japanese banking industry. The number of firms did not change much between 1980 and 1999, although the number of smaller institutions not classified as banks declined sharply during that period (Table B.3).[22] There was a modest reduction in the

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[20] For more details of the Japanese financial market, see Ito (1992).

[21] Shinkin banks are smaller deposit-taking institutions that specialise in taking deposits and lending in the community.

[22] The number of banks increased from 150 in 1994 to 173 in 1995, because of a classification change whereby trust bank subsidiaries were classified as banks. The number of credit cooperatives declined from 475 in 1980 to 407 in 1990 and 322 in 1998.

number of banks at the end of the 1990s as a result of some bank failures.[23] Other indicators show that Japanese banks retrenched during the 1990s. Relative to GDP, total bank assets fell modestly and large bank assets declined substantially through much of the decade. Concentration measures also tended to decline modestly. The slow growth of the 1990s provides a stark contrast to the rapid growth of the 1980s, especially among large banks. In the late 1980s and early 1990s, large Japanese banks occupied high places in the world rankings in terms of asset size.[24] However, distress in the banking industry and a lack of consolidation resulted in only one bank remaining among the top 10 in 1998.

There is also little sign of consolidation in the Japanese insurance industry. The number of life insurance companies more than doubled, primarily due to deregulation and the entry of 13 firms in 1996. Moreover, concentration ratios remained fairly steady between 1980 and 1997, before dropping suddenly in 1998. Both the number of non-life insurance companies and industry concentration remained stable. The two segments of the insurance industry showed little growth in the level of premiums written throughout the 1990s.

Australia

The Australian financial system in 1980 was strongly segmented along institutional lines. While there were no formal restrictions separating banking, insurance and securities activities, competition was played out within, not across, these lines. The bulk of financial intermediation was conducted through the banking system, which included five private banks, nine government-owned banks (which included two trust banks), and two foreign banks which, for historical reasons, were permitted to operate as branches. In addition, other, smaller deposit-taking institutions (building societies and credit unions) operated as well. With the aforementioned two exceptions, the banking system was closed to foreign entry. Together, banks, merchant banks and finance companies met the bulk of corporate borrowing demand in Australia, and only limited use was made of direct borrowing through the issue of corporate securities. Life insurance and pension funds comprised the remaining significant segment of the financial sector. Although the majority of life insurance companies were foreign-owned, the industry was dominated by one large domestic firm (AMP Society).

The opening of the banking system to foreign competition, which initially occurred in 1984 for a limited number of firms, but was expanded to all foreign firms in 1992, had a large effect on the banking industry. Deregulation, which allowed banks to compete against finance companies in the wholesale market and building societies and credit unions in the retail market, also influenced the industry. Some domestic banks consolidated their merchant banking and finance company affiliates into one entity.

Regarding consolidation, government policy ruled out mergers among any of the four major banks and, until 1997, mergers between the four major banks and the top two or three life insurance institutions. Currently, the only significant restriction in place concerns not permitting mergers among the four major banks, the so-called “four pillars” policy.

Financial deregulation and the opening of the banking industry to foreign competition has resulted in an increase in the number of banks in Australia over the past 15 years (Table B.4). In this deregulated environment, nine large building societies converted to banks. During the 1990s all of the government-owned banks were privatised or sold. Notwithstanding the increase in bank numbers, the Australian banking industry has been consistently dominated by four major banks – the Commonwealth Bank, ANZ, Westpac and National Australia Bank.

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23 Seven housing loan companies (Jusen) failed in 1995. Several banks failed in the 1990s including Hyogo Bank, an exchange-listed regional bank, in 1995, Hokkaido Takushoku Bank, a city bank, in 1997, and Long-Term Credit Bank and Nippon Credit Bank in 1998.

24 Data on the largest banks in the world were obtained from various issues of *The Banker* (see Table B.15).

Concentration was initially high, but did not change much in the 1990s, although there was a drop in the middle of the decade, before a modest increase towards the latter part of the 1990s.

Consolidation had little impact on the structure of the insurance industry. Not only did the number of life and non-life insurance companies remain fairly steady throughout the 1990s, but concentration also declined. These patterns were observed during a period when both the life and non-life segments of the insurance industry grew substantially.

Europe

Common characteristics of European banking

There were several important and widely shared characteristics of the banking industry in Europe. First, European banks tended to operate in accordance with the universal banking principle. This principle encompasses two elements: banks may engage in a full range of securities activities in a direct way rather than through separately incorporated subsidiaries and banks may closely link themselves to non-bank firms, by either equity holdings or board participations. Firms in Germany, Sweden and Switzerland were the best examples of universal banks.

The second feature of the European banking industry was a fairly high level of government involvement. There was widespread public ownership of banks, especially in Germany, Italy, Spain and France, although, beginning in the late 1980s, important privatisation took place in certain countries. Moreover, regulations were frequently stringent regarding interest rates on deposit and loans. Also, credit and capital market controls existed in all European countries, except Germany, the Netherlands and, to a lesser extent, Switzerland.

Third, capital markets played a limited role around 1980. Equity markets were generally small and had low market capitalisations in all countries except the Netherlands and Switzerland. Markets for government bonds were more developed, especially in countries with large public debts like Belgium and Italy.

The final feature of European banking was the generally limited role of institutional investors, which were particularly unimportant in Italy and Spain, but somewhat more important in Sweden, the Netherlands and Switzerland. Restrictions on bank ownership of insurance companies were generally binding, especially in Belgium, France and the Netherlands. Regulations were even more constraining on insurance companies holding equity stakes in banks.[25]

Belgium

Belgian commercial banks, which have been the dominant entities in the financial sector, can be classified as universal banks to the extent that they conduct investment banking activities, especially in connection with public debt operations. Also, in the early 1990s, banks were allowed to perform activities in the equity markets through the acquisition or creation of specialised securities firms. Some large banks were permitted to become market-makers in the secondary market for public bonds. This activity was opened to foreign banks in 1998. Banks have not traditionally had significant holdings in non-financial corporations or insurance companies, as this role has been the limited preserve of several large holding companies.

Government ownership of the so-called public credit institutions is another feature of the banking system in Belgium. These institutions were established to grant long-term credit on favourable terms to specific sectors (eg cities, agriculture and small commercial businesses), but evolved during the 1990s to become much more similar to commercial banks. In fact, some

[25] Office for Official Publications of the European Communities (1997).

public credit institutions were privatised during the decade. The Belgian banking industry also consists of small private savings banks and highly specialised institutions including mortgage companies and finance companies.

The high level of public debt in Belgium partially explains the weakness in the issuance of bonds by private, non-financial corporations. However, equity markets became more fully developed after a 1982 fiscal package that was aimed at stimulating share issues and equity holdings by individuals. In general, limited capital markets increased corporate dependence on banks.

The dynamism of the insurance industry may have been impaired by very strict rules restricting the ownership of such companies and the start-up of insurance subsidiaries by banks. Nonetheless, composite insurance firms, which engage in a wide range of insurance activities, played a much larger role in the financial sector by the end of the 1990s.

Consolidation began influencing the banking industry around the middle of the 1990s. The total number of banks actually increased in the early part of the decade, before reversing course and decreasing (Table B.5). The drop was especially pronounced after 1996 as a result of mergers and acquisitions. Mergers were initially confined to small and medium-sized banks, but a few deals involved large banks towards the end of the decade. As a result of these large mergers, the number of large banks declined and concentration increased in the last few years of the decade.

Consolidation also appears to have influenced the insurance industry. Over the decade, the number of non-life insurance companies fell by almost half, and the number of life companies fell by roughly a quarter. Most of the drop in the number of non-life companies occurred in 1994. The drop in this year may reflect the exclusion from the data after 1993 of branches of foreign companies whose head offices were situated in the European Economic Area. Premium levels indicate that growth was fairly modest in the non-life segment, but robust in the life segment.

France

Until the early 1980s, banking activity in France was governed by a set of regulations adopted in the 1940s that favoured a high degree of specialisation within the financial sector. The main division was between commercial banks and investment banks, although this basic classification was supplemented by the presence of many specialised banks. Specialisations were typically based on such features as the average maturity of credits, industry served (eg agriculture), type of credit provided (eg export financing), and degree of control exercised by the monetary authorities. State-owned mutual and cooperative banks were particularly prominent among the specialised banks. In addition, two special institutions governed by special laws played an important role: the postal financial service and the "Caisse des dépots et consignations."

The role of the state in the French banking industry increased in the beginning of the 1980s, when prominent commercial banks were nationalised. However, this development was soon reversed during two periods of privatisation. The first period took place in the late 1980s and involved banks like Société Générale, Crédit Commercial de France and Banque Indosuez. The second period occurred in the 1990s. For instance, Banque Nationale de Paris was privatised in 1993 and Crédit Lyonnais was sold in 1999.

Banks could operate insurance companies, but faced very restrictive rules regarding starting up and acquiring equity stakes in such firms. In the life insurance industry, the largest firms were limited companies. Mutual companies played a much larger role in non-life insurance.

Although the financial sector was highly segmented, a progressive tendency towards universal banking was felt even before 1980. This evolution was decisively reinforced with the adoption of the Banking Act of 1984, which abolished the legal distinctions between commercial banks,

investment banks and other specialised institutions, thereby establishing a full-blown universal banking system.[26] This evolution towards universal banking was further reinforced by a greater involvement of banks in life insurance activities ("bancassurance") after the liberalisation brought about by the single European market.

Significant consolidation took place among French banks in the 1990s, as revealed by the large reduction in the total number of institutions (Table B.6). This decline was primarily driven by a decrease in the number of small banks, and because much of the consolidation activity involved small banks, concentration was largely unaffected. The French banking industry did not grow much over the decade, as assets-to-GDP remained fairly steady, although it was relatively high throughout.

The life insurance industry also experienced change. The number of firms declined modestly, the industry became more concentrated, and the size of the industry increased dramatically, almost tripling as a share of GDP. The structure of the non-life segment experienced greater change, as the number of firms fell by a third and concentration rose fairly sharply. Much of the increase in concentration followed the privatisation of public companies. The overall size of the industry grew only fairly modestly.

Germany

In Germany, banks have traditionally been free to operate as universal banks. However, the concept of universal banks has to be qualified in several respects: Banks have been able to carry out the full range of commercial banking and investment banking activities, but some restrictions required the separation of banking and insurance. Nonetheless, banks have collaborated with insurance companies primarily through strategic alliances and, to a lesser extent, cross-participations. Aside from the currently four big privately owned universal banks (Deutsche Bank, Bayerische Hypo- und Vereinsbank, Dresdner Bank and Commerzbank), specialised financial institutions, mortgage banks and small local cooperative banks have played an important role and led to a German banking market that has been multi-layered, with a large number of institutions. Publicly-owned banks (Landesbanken and Sparkassen (savings institutions)) were fairly important in Germany and their presence in the industry remained virtually unchanged during the 1990s, although there was a lot of consolidation among the savings banks. The postal giro agencies were merged into the Postbank, which is being privatised.

An important tax change was adopted in 2000 that will exempt German banks (and all other corporations) from corporate tax on capital gains associated with the sale of participating interests from 2002 onwards. This legislation is expected to encourage banks to dispose of some of their industrial interests.

Germany had a tradition of cross-shareholdings between banks and insurance companies. As a result, banks chose to collaborate with insurance companies rather than develop in-house bancassurance. These relationships were further encouraged by conservative marketing practices. Tied agents dominated the life and non-life insurance industries, although brokers played a significant role as well as in the life insurance sector.

Equity and corporate bond markets were both quite small and largely dependent on the banking industry. This dependence was increased by the issuance of medium-term notes by the banking industry. Deregulation proceeded at a slow pace in Germany due to the liberal starting point. Stock market regulations were relaxed in the 1980s, enabling banks to gain better access to securities activities.

[26] The 1984 Banking Act redefined the notion of credit institutions.

During the 1990s, the German banking industry experienced both substantial consolidation and growth. The number of banks declined by about a third from 4,700 to 3,200, primarily as a result of consolidation among savings and cooperative banks (Table B.7). As a result, consolidation appears to have had little effect on concentration among the largest banks. At the same time that the industry consolidated, total assets increased relative to GDP. In addition, the ratio of deposits to assets decreased during the decade, suggesting that much of the increase in banking assets may have been due to an increase in non-depository activities conducted by German universal banks.

The structure of the life insurance industry was not influenced much by consolidation in the 1990s: the number of firms declined modestly and concentration increased by a very small amount. Concentration among non-life firms showed similarly small increases, although the number of firms fell from about 400 to 330. Both industries grew relative to GDP.

Italy

Italian banks have traditionally faced regulations related to the funding needs of the government. Segmentation existed within the banking industry, with savings banks playing a particularly important role. Moreover, regulation explicitly differentiated between short- and long-term lending banks. In this framework, the so-called special credit institutions provided medium- and long-term financing to the corporate sector. Banks also traditionally faced geographic restrictions that limited their ability to establish branches. Most banking restrictions were removed during the 1980s, so banks faced increasingly less restrictive regulations on their ability to lend, branch and hold participations in non-financial companies.

State involvement in the banking industry was very important at the beginning of the 1980s. However, this involvement declined significantly from the mid-1990s, with the privatisation of several institutions.[27] Nonetheless, despite the privatisations, the state retained an indirect influence on many banks via its role in the so-called "fondazioni" (joint stock companies holding stakes in several banks).

The role of insurance companies was limited at the beginning of the 1980s despite a more liberal regulatory framework. The main channel of distribution constituted tied agents, especially in the non-life segment of the industry. Nearly all large insurance firms offer a wide range of life and non-life products.

Consolidation had a pronounced effect on the Italian banking industry in the 1990s. The number of banks steadily declined, falling by more than a third (Table B.8). At the same time, concentration increased substantially. For example, the largest 10 banks controlled almost two fifths of deposits in 1992 but that figure increased to three fifths by 1999. After growing fairly rapidly in the first few years of the decade, the banking industry actually shrank relative to GDP, possibly due to the effect of economic liberalisation and privatisation.

The limited data available for the Italian insurance industry do not suggest that there was sizeable consolidation. Between 1991 and 1997, the number of life insurance companies increased, while the number of non-life insurance firms declined by about the same amount. Also during this time, total life insurance premiums grew dramatically, whereas non-life insurance premiums grew at a more modest rate.

Netherlands

The Dutch financial landscape underwent a major change at the beginning of the 1990s. Large-scale mergers and closer cooperation among savings banks resulted in a more concentrated

[27] The most prominent privatised banks were Banca Commerciale Italiana, Credito Italiano and Istituto Mobiliare Italiano. The privatisation wave followed the adoption of the 1993 Banking Law ("Testo Unico" or unified text), which allowed banks to pursue market objectives as opposed to social functions.

banking industry. The process of liberalisation and deregulation, which started as early as the 1970s, made large advances as universal banks that provided an array of services in commercial banking, investment banking and insurance were permitted to emerge. Both the equity and bond markets were highly developed relative to other continental European countries.

In general, Dutch authorities did not impose substantial regulation. The sole significant rule was a strict institutional separation between the money market and the capital market, with each market having its own participants, structure and customs. Partly in response to the mature conditions at home, the largest institutions shifted their focus abroad and became substantial players in international markets. In contrast, penetration into the Netherlands by foreign institutions has remained limited. During the decade under observation, no major financial upheavals occurred. Moreover, the government sold its remaining holdings in commercially relevant institutions.

The insurance industry exhibited a historically close relationship to the banking industry, with bancassurance taking off quite early in the Netherlands as compared to other countries. However, brokers were by far the most prominent distribution channels for insurance companies. Another important feature of insurance was the prevalence of mutual companies in the non-life segment.

Consolidation had a large, but unique, effect on the banking industry. The total number of banks did not change much in the 1990s, in large part due to high levels of new entry (Table B.9). Concentration did, however, rise by a few percentage points. In addition, the largest banks grew substantially. Between 1990 and 1998, the aggregate assets of the three largest banks as a percentage of GDP more than doubled. Increased large bank presence may be due, to a large extent, to the merger of ABN and AMRO in 1991 and several significant foreign acquisitions by ING, a leading Dutch bank. The overall banking industry also grew quickly during the decade, but not as fast as the largest banks.

The number of life insurance companies increased over the 1991-97 period, primarily in 1997. In contrast, the number of non-life firms decreased dramatically. However, much of the drop (over 350 firms) took place between 1994 and 1995 and probably reflects changes in the data whereby reinsurance companies, exempted small local mutuals and branches of foreign insurers with a head office within the EU/EEA were no longer included after 1994.

Spain

The Spanish financial sector is characterised by universal banking, whereby banking groups include firms that engage in insurance, asset management and securities activities. Banks can also hold equity stakes in non-financial companies. This relationship between banks and non-financial companies in Spain has had a considerable historical tradition, dating back to the establishment of the so-called industrial banks in 1962. However, the traditional activities of industrial banks were gradually taken over by larger banks in the 1970s and 1980s, and the historical segmentation between industrial-merchant banks and commercial banks withered away. Strict geographical limits were also imposed on banks, which had to be distinguished as national, regional or local banks according to their size and the number of provinces in which they operated. Ties between insurance companies and banks were historically close in Spain (the main insurance companies were bank affiliates), but banks faced strict regulatory constraints, especially as regards the distribution of insurance products. Tied agents constituted the main distribution channel of insurance products.

Starting in the mid-1980s, regulations such as interest rate controls, branching restrictions, solvency and investment requirements, accounting rules and entry constraints were relaxed or harmonised, which increased the level of competition in the financial sector. Trading on the Spanish stock market was very thin, exhibited a low degree of transparency, and was dominated by a small number of institutions. Bond markets were equally underdeveloped. However, a drastic reform of the equity market began in 1988 to address some of the problems.

Consolidation had a relatively minor effect on the Spanish banking industry. There was a modest decline in the total number of banks in the 1990s and a small increase in the number of commercial banks (Table B.10). Concentration figures generally remained steady between 1992 and 1997. However, more recent figures, which are not reported, are likely to be higher as a result of the mergers between Banco Santander and Banco Central Hispanoamericano (to create BSCH) and between Banco Bilbao Vizcaya and Argentaria (to create BBVA). Banks exhibited modest growth relative to GDP in the early part of the 1990s, but no growth thereafter.

The number of life insurance companies declined by about 20% from 1990 to 1997. This consolidation was accompanied by a nearly fourfold increase in premiums collected. The number of non-life companies fell by a comparable amount on a percentage basis. However, that segment grew much less rapidly over the period.

Sweden

In Sweden, banking and insurance have traditionally remained separate. In the late 1970s, the banking industry included commercial banks, saving banks and cooperative banks, with commercial banks operating as universal banks. Each savings bank was self-owned, independent and required to confine its activities to a well-defined geographical area. In addition, specialised lenders such as mortgage institutions also operated in Sweden. At the time, a few large commercial banking groups and insurance groups dominated their industries.

In the early 1990s, banks and insurance companies were allowed to own shares in each other and be part of the same holding company. Cross-industry consolidation was further encouraged in the mid-1990s with legislation that opened the pension savings market to banks and other financial companies. In addition, savings banks and cooperative banks were permitted to change legal status and become limited liability companies in 1991-92. This change had a large effect on the structure of the banking industry. In the early 1990s, about 10 of the larger saving banks transformed into a new banking group with a parent holding company. Also, the 12 central cooperative banks were merged and subsequently transformed into a single commercial bank.

The banking industry in Sweden exhibited several patterns that were in contrast to most other countries examined in this study. First, as previously mentioned, the cooperative banks merged into one commercial bank in 1992, which accounts for the substantial decline in the number of banks in that year and is also likely to have contributed to the increased concentration in the early part of the decade (Table B.11). Also in 1992, the largest savings banks were transformed into one banking group. It should be noted that this transaction influenced the structure of the industry, but possibly not the reported figures, which are based on institution-level, not organisation-level, data.

Besides these two events, the Swedish banking industry went through a further consolidation involving all the major banking groups. The result was a further decrease in the number of large institutions from six to four. At the same time, between 1992 and 1998 the number of banks increased somewhat due to foreign entry and the establishment of several new, so-called niche banks that competed mainly in the household deposit market. During this time, the banking industry declined relative to GDP in the first part of the decade, before growing rapidly in the latter part.

The available data suggest that the insurance industry was largely unaffected by consolidation. Both the life and non-life segments saw their membership increase by roughly 25% during the 1990s. Between 1990 and 1998, both segments experienced healthy growth, as each roughly doubled in size relative to GDP.

Switzerland

The Swiss banking and, to a lesser degree, insurance industries are characterised by a two-tier structure. The first tier is internationally oriented and, at year-end 1999, consisted of two large banks, two large insurance companies and some smaller private banks and insurance groups that focus either on private banking or life insurance, including asset management. The large banks

are universal banks with substantial investment banking activities that place them among the global leaders in underwriting and brokerage operations.

Large banks and insurance companies were active in the consolidation process of the 1990s on a domestic and cross-border level, and large financial conglomerates emerged as a result. Besides the consolidation of insurance firms and banks, some institutions expanded into asset management abroad.

The second tier consists of a large, heterogeneous group of small, domestically focused banks and insurance companies. This group includes cantonal banks (state-owned), regional banks, Raiffeisen banks (credit cooperatives) and, in another category with a clear focus on a foreign client base, foreign banks. In the early 1990s, Switzerland experienced asset deflation in the real estate market followed by a prolonged period of stagnation, which led to a significant restructuring and consolidation in the banking industry. Many regional banks were acquired by larger domestic competitors, and global financial conglomerates emerged.

The importance of the banking industry in Switzerland is evidenced by the very high level of assets, relative to GDP, held by all banks throughout the decade (Table B.12). Moreover, asset levels grew throughout the period and, by 1997, assets were nearly five times larger than annual GDP. Four large banks accounted for most of this growth and, by 1997, they controlled assets three times larger than GDP. Increased concentration accompanied large bank growth. Concentration figures are only reported up to 1997 and therefore do not fully reflect the increase in concentration over the decade, because they omit the effects of the 1998 merger of two very large Swiss banks – Union Bank of Switzerland and Swiss Banking Corporation. During the 1990s, the number of banks in the industry, which started at just over 450, fell by about 100. However, this decrease was not attributable to fewer commercial banks, which maintained fairly stable numbers.

Consolidation had little impact on the insurance industry. The number of both life and non-life firms increased, albeit modestly, during the 1990s. The level of life insurance premiums more than doubled, suggesting that the segment enjoyed healthy growth, but the level of non-life premiums remained stable. The insurance sector was important in Switzerland, partly due to the significance of asset management activities and the development of private pension schemes.

United Kingdom

The UK financial sector was dominated by a relatively small number of large banks in 1980, along with a larger number of building societies, insurance firms, credit unions and friendly societies.[28] Strict regulations restricted the ability of institutions to compete across traditional lines of business, but regulatory reforms during the 1980s and 1990s removed many of those barriers. This deregulation allowed for the development of more universal banking. Restrictions on building societies' activities were further liberalised in 1997.

The 1986 Big Bang reforms of the London Stock Exchange achieved extensive deregulation, including elimination of practices that had restricted the entry of new participants into London’s markets. The wave of mergers and acquisitions that followed these changes resulted in many UK securities firms being acquired by domestic retail banks and foreign investors.

There was a dramatic expansion in the number of banks competing in the United Kingdom during the 1980s from about 350 in 1980 to roughly 500 in 1990 (Table B.13). This increase was primarily due to the growth of international banking and also partly due to building

[28] Friendly societies have a long history of making mutual provisions for members and their relatives against loss of income through sickness or unemployment and for retirement. The provision of life and accident insurance and small-scale savings products is the staple of most societies. According to the UK Treasury, there were approximately 270 societies with total funds of GBP 12 billion and at least 5 million estimated members as of March 1999.

societies becoming banks after converting from mutual to stock ownership. Subsequent consolidation in the 1990s, however, reduced the number of banks by almost 20%. Surprisingly, concentration ratios among the largest one and five banks in the UK banking industry fell in the 1990s, while concentration among the top 10 and 15 rose only very modestly. In all cases, concentration fell during the late 1990s. Relative to GDP, industry assets grew at a healthy rate throughout the decade, with much of this growth arising from the expansion of international banks operating from London.

The number of life insurance companies declined steadily throughout most of the 1990s. However, there were no significant changes in concentration ratios until the late 1990s. While the concentration ratios of the largest firm showed little change, those of the largest five, 10, and 15 firms increased substantially in 1998. This increase may be due to several mergers involving large insurance companies. The number of non-life insurance companies climbed slightly. Increases in the concentration ratios within the non-life industry were more consistent than those found in the life industry. This may reflect the higher level of merger activity of the largest non-life firms relative to the largest life insurance firms.

International comparisons

Although the data presented in Tables B.1 to B.13 are not well suited for international comparisons, certain large and important differences are clearly observable, especially in the banking industry. Table B.14 presents key banking and insurance data in a manner that enables figures for all countries to be examined simultaneously.

The banking industry in the United States was particularly unique, as a result of strict limitations on branching and interstate banking, as well as on bank activities. Throughout the decade, the United States had many more banks and lower concentration levels than other countries (with the possible exception of Germany). Although both numbers have moved towards most of the world, there was still a substantial difference at the end of the decade. Moreover, as measured as a share of GDP, the banking industry was relatively less important than elsewhere.

Other countries exhibited distinguishing characteristics as well. In about half of the countries included in this study, concentration levels were extremely high throughout the decade, as a small group of banks controlled a substantial share of deposits. These highly concentrated countries include North American (Canada), European (Belgium, France, Netherlands, Sweden and possibly Switzerland) and Pacific Rim (Australia) countries. Also, in several countries, both highly and not highly concentrated, concentration increased substantially over the decade. The largest banks in Belgium, Canada, Italy and the United States generally showed a pattern of controlling a rapidly increasing share of banking deposits. In contrast, the largest banks in Japan and the United Kingdom experienced no change or even a modest decline in their share of total bank deposits.

At the end of the decade, the banking industry was very important in four European countries: Belgium, Netherlands, Switzerland and the United Kingdom. In all four, banking assets were more than three times annual GDP during the late 1990s. In the United States, where the banking industry was relatively small, banking assets did not exceed 100% of GDP at any time in the 1990s. In Switzerland and the Netherlands, bank assets relative to GDP increased by well over 100 percentage points over the decade, contributing to the prominent position of the banking industry in those countries in the late 1990s.

International comparisons of insurance data are even more difficult to make than with bank data, in part because insurance data are reported for only about half of the countries in the study. Nonetheless, notable differences exist among the countries for which insurance data are

available.[29] At the end of the decade, concentration in the life insurance segment was high in Australia, Canada, France and Japan, and low in Germany and the United States. Also, the countries for which non-life data are available can be classified into two well-defined groups: Australia, Germany and the United States were less concentrated than France, Japan and the United Kingdom.

Concentration tended to decline in Japan and Australia, with the leading Australian firms tending to control a declining share of the non-life segment as well. Finally, as measured by assets-to-GDP, the insurance industry was relatively important in Sweden and Switzerland and relatively unimportant in the United Kingdom.

Global financial leaders

Analysing the banking and insurance industries of each country is very helpful for an examination of the effects of consolidation on those industries in each country. However, the analysis does not shed any light on the impact of consolidation on a global basis. In this section, such an analysis is conducted on the banking and securities industries.

Table I.2 indicates that the consolidated assets of the largest banks in the world increased relative to the GDP of the 13 countries included in this study during the last two decades of the century. The largest banks include banks from all over the world, not just the 13 reference countries, but many of the largest banks, especially the very largest ones, are located in one of the 13 reference countries. Because the GDP numbers in the denominator only reflect the 13 countries examined in this study, the figures account for only about half of total world output. Therefore, the figures reported in the table overstate the relative importance of the largest banks on a global basis.

Relative to GDP, the consolidated assets of the largest banks steadily increased. Assets of the top 50 banks in the world exceeded 70% of the combined GDP in 1998, while the same ratio was just above 35% in 1980. The top 20 banks' ratio increased from almost 20% in 1980 to nearly 40% in 1998. These dramatic changes clearly illustrate the growth of the leading banks in the world relative to the economies of the countries included in this study.

Table I.2

Assets of the world's largest banks to G13 GDP

(in percentages)

	1980	**1990**	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**
Top 20	19.5	31.6	35.2	34.2	36.0	36.5	37.5	36.8	38.1	39.8
Top 30	25.5	40.3	44.4	44.1	46.3	47.0	48.5	49.0	51.1	52.7
Top 40	30.8	47.0	51.5	51.5	54.1	55.1	56.8	56.8	61.4	63.2
Top 50	35.4	52.8	57.6	57.6	60.5	61.9	64.0	66.0	69.0	71.2

G13 refers to the 13 countries included in this study. Sources: Asset data: *The Banker*, various issues. GDP: IMF, *International Financial Statistics*, CD-ROM, March 2000.

[29] Life insurance companies in Canada are allowed to issue some types of annuities with deposit-like characteristics. In Canada, life insurance companies continue to be generally restricted by legislation from directly accepting deposits.

At the same time that the largest banks were becoming increasingly important, the identity of the very largest banks was changing over time. In particular, as Table B.15 shows, the distribution of the home countries of the 10 largest banks in the world (by assets) was not stable over the years. The number of banks from Japan grew in the 1980s, but fell during the 1990s. Large mergers in the late 1990s enabled several banks from the United States to enter the ranks of the largest institutions.

The largest institutions have also played an important role in the securities industry. Table I.3 reports the annual share of total worldwide debt and equity underwriting associated with the largest underwriter, as well as the share of those activities accounted for by the top five and 10. The data indicate that although there has not been an increase in the share of overall activity conducted by the leading firms, underwriting has been dominated by a fairly small group of players. It should be noted that much of the underwriting measured in the table reflects activity in the United States. Nonetheless, firms that are large in the United States also tend to be global players with a sizeable presence in many countries.

Table I.3

Concentration of worldwide debt and equity underwriting

(in percentages)

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Top 1	12.1	12.9	13.0	12.9	12.6	13.6	13.0	13.7	14.1	12.5
Top 5	43.9	47.1	48.2	46.3	44.3	44.8	44.3	50.0	49.7	46.7
Top 10	63.2	68.2	71.0	67.9	65.3	63.5	64.1	70.9	71.2	68.2

Source: *Investment Dealers' Digest*, various issues.

Table I.4 is similar to Table I.3 with the exception that only worldwide equity underwriting data are presented. The levels of concentration are roughly equivalent to those observed with both debt and equity underwriting. However, equity underwriting actually became somewhat less concentrated during the decade. Nonetheless, the 10 largest firms accounted for more than 60% of underwriting activity (measured in US dollars) in 1999.

Table I.4

Concentration of worldwide equity underwriting

(in percentages)

	1990	**1991**	**1992**	**1993**	**1994**	**1995**	**1996**	**1997**	**1998**	**1999**
Top 1	13.7	14.4	13.7	13.9	9.7	10.5	9.9	12.1	14.1	10.9
Top 5	50.7	48.8	50.7	42.3	33.3	35.8	38.7	37.3	43.9	43.0
Top 10	69.0	68.4	69.0	60.3	51.8	52.4	55.2	53.9	61.3	61.2

Source: Thomson Financial, SDC Platinum.

Table I.5 illustrates that in 1999 leading securities firms had a large presence in a variety of other securities activities. Typically about half of the leading firms were headquartered in the

United States. The names, levels of activity and market shares of the largest firms in the activities listed below, as well as several other securities activities, are presented in Table B.16.

Table I.5

Global concentration of various securities activities, 1999

(in percentages)

Securities activity	Top 1	Top 5	Top 10
International equities[1]	16.2	56.2	75.8
International European equities[1]	19.2	58.4	81.2
International US equities[1]	23.9	83.8	96.6
International IPOs[1]	15.9	59.1	76.1
US Market IPOs[2]	20.7	67.7	87.3
Syndicated loan arrangers - euromarkets[3]	8.0	29.8	47.8
Syndicated loan arrangers - US markets[3]	19.3	59.9	74.0
International bonds[1]	8.9	37.7	63.3
Public euro and global bonds[1]	10.0	40.5	67.1

Sources: [1] Capital Data-Bondware. [2] Thomson Financial Securities Data. Data exclude closed-end funds and rank ineligible issues. [3] Capital Data-Loanware.

On a global basis, over-the-counter (OTC) derivatives markets are not as highly concentrated as securities activities. Table I.6 reports various concentration measures for several types of OTC derivatives activities at several points in the late 1990s. Although there are not enough data to identify a trend, the table indicates that concentration increased between December 1998 and December 1999. Not truly global, the data nonetheless reflect the total derivatives volume in several large countries (France, Germany, Italy, Japan, Switzerland, the United Kingdom and the United States).

Table I.6

Concentration of various OTC derivatives activities

(in percent)

Instrument type	Date	Top 3	Top 5	Top 10
Foreign exchange	Dec 1998	23.5	34.3	55.5
	June 1999	26.3	38.3	57.4
	Dec 1999	29.4	42.0	60.7
Interest rate	Dec 1998	23.9	32.6	50.6
	June 1999	26.1	35.2	54.4
	Dec 1999	27.6	36.7	56.2
Total	Dec 1998	22.3	31.5	48.5
	June 1999	25.6	34.3	52.7
	Dec 1999	27.2	36.0	54.7

Source: National authorities.

Summary of key structural patterns in the financial sector

During the 1990s, several key patterns emerged in the financial sectors of the various countries included in this analysis that suggest that consolidation had a substantial impact. In particular, the banking industry was affected a great deal. First, the number of institutions decreased in nearly all countries, as mergers and acquisitions appear to have thinned the ranks. Between 1990 and 1999, about half of the countries in this study experienced a decline of greater than 20% in the total number of banks. During that period, only Belgium, Australia and Japan increased the number of banks, and Japan's increase was due to a definition change while Belgium's change was very small.

The second effect of consolidation on various banking industries was that large banks grew relatively more important, as indicated by growth in various measures of deposit concentration. Such measures increased in all countries except Japan and among the very largest banks in the United Kingdom. In Japan, decreasing concentration stemmed from a relatively modest level of consolidation activity and the financial distress experienced by the largest banks. Japanese concentration may increase in the future if planned mergers among its largest banks are completed. Finally, the banking industry grew relative to GDP in all countries except Japan, which experienced the aforementioned financial distress, and the United States, where banks faced increasing competition from other financial firms such as mutual fund companies and specialised lenders.

The sizeable increase in concentration in banking that is reported in the tables may actually understate the growing dominance of leading banks. Concentration measures are based on total deposits, and so the influence of off-balance sheet activities is not included. These activities, which increased in level throughout the 1990s, have been and continue to be dominated by large banks. Therefore, concentration measures that include them, along with traditional bank activities (ie lending and deposit-taking), would be likely to reflect a higher and faster growing level of concentration over the course of the decade. Table B.17 presents data on the notional size of global OTC derivatives markets between 1992 and 1999, and the quadrupling of total notional size over the period clearly illustrates the rapid growth that has taken place.

The data are less comprehensive and patterns related to consolidation less consistent in the insurance industry. In both the life and non-life segments, the number of firms showed no consistent patterns across countries: the number fell in some countries and increased in others. Interestingly, for a given country, the change in the life segment did not appear related to the change in the non-life segment. Although concentration data lean slightly towards greater concentration in both segments, the patterns are very weak and only reflect about half of the countries. As a result, there is little convincing evidence to suggest that the insurance industry became more concentrated in the 1990s. The industry does, however, appear to have grown. In all countries where data are available for 1990 and 1998, the insurance industry (both life and non-life) grew relative to GDP.

Although the aforementioned patterns are reflective of patterns observed in the banking and insurance industries of the 13 countries included in this study, important distinctions among countries existed. Individual countries exhibited clear differences in both the level and growth rate of concentration and industry size. However, one must be extremely cautious in making international comparisons, as the data are not well suited to such analysis.

Most of the analysis in this section involves independently looking at the financial sectors of individual countries. However, an examination of the largest banks and underwriters in the world reveals that the largest firms are important on a global basis. Relative to the GDP of the 13 countries included in this study, the assets held by the largest 20, 30, 40, and 50 banks in the world increased a great deal during the 1980s and 1990s. Notably, the composition of the home countries of the largest 10 banks in the world changed a great deal over time.

Regarding the securities industry, although there was little change in the concentration of leading worldwide underwriting activity, the largest firms accounted for a substantial share of activity. Concentration figures from the end of the decade also reveal that many specific

securities activities were largely controlled by a small group of leading institutions. OTC derivatives markets were less concentrated.

5. Conclusion

The 1990s saw dramatic change in the financial services industries of the 13 countries examined in this study. Much of this change was driven by consolidation in its various forms. Mergers, acquisitions, joint ventures and strategic alliances are the most common methods, with each involving a different level of control and integration and each being preferable in certain circumstances.

Consolidation activity was brisk during the decade and generally increased throughout. Most mergers and acquisitions, in terms of both the number and value of deals, involved firms in the same industry and from the same country. Moreover, banks accounted for a large share of the M&A activity that took place during the 1990s. The level of joint venture and strategic acquisition activity also increased throughout the decade, especially in the last two years. Deals of this type more often involved firms from the same countries than from different ones, but this result is driven by the United States, which accounted for a large share of all ventures, particularly within-border ventures.

M&A activity contributed to a decreased number of banks and increased concentration in the banking industries of most of the countries included in this study. The insurance industries were not as clearly influenced by consolidation. During the decade under review, the size of the banking and insurance industries in most countries tended to increase relative to GDP. Finally, at the end of the decade, worldwide securities activities were largely controlled by a small group of leading institutions, whereas over-the-counter derivatives markets exhibited more modest levels of concentration.

Collecting data that are consistent across nations and over time is a very difficult and complex task. Nonetheless, the information that is presented in this chapter can be effectively used to illustrate important patterns that emerged. Certain clear and important distinctions among countries can be observed in measures such as the level, growth and nature of consolidation activity and the level and growth of concentration and industry size. However, data must be analysed with caution, especially with respect to international comparisons.

Annex I.1
Securities exchanges and consolidation

United States[30]

The New York Stock Exchange (NYSE) is the largest stock exchange in the United States. Other smaller stock exchanges include the American Stock Exchange (AMEX), Chicago Stock Exchange, Philadelphia Stock Exchange, Pacific Stock Exchange, Boston Stock Exchange and Cincinnati Stock Exchange. These exchanges are linked by the Intermarket Trading System, which enables market participants at one of the exchanges to direct an order to any of the other exchanges.

Equities are also traded via the National Association of Securities Dealers Automated Quotation System (NASDAQ). Although not a formal exchange, NASDAQ links dealers via a network of computers. Traditionally, nearly all large corporations listed their shares on the NYSE. However, this pattern changed somewhat in recent years, because many firms listed on the NASDAQ operate in the fast-growing high-technology sector and decided to remain listed on NASDAQ as they grew. In fact, some of the largest firms in the world now trade over NASDAQ.

There are three large exchanges that specialise in the trading of futures contracts. They are the Chicago Board of Trade, Chicago Mercantile Exchange (CME) and New York Mercantile Exchange (NYMEX). Securities options are primarily traded on the Chicago Board Options Exchange, as well as on some other securities exchanges. There are also a number of smaller futures exchanges.

Consolidation among the leading exchanges in the United States has been fairly modest in recent years. In 1994, New York's two largest futures exchanges, NYMEX and the Commodity Exchange, combined. In 1998, NASDAQ merged with AMEX to create the NASDAQ-AMEX Market Group.

There are two primary developments currently taking place among the securities exchanges. First, smaller exchanges have been experiencing difficulties attracting members and face pressure to consolidate. Second, exchanges have moved towards restructuring their corporate forms by converting from mutual to stock ownership. Exchanges believe that being stock-owned will enable them to more easily consolidate and acquire capital for investment in technology.

Japan

The integration of Japanese regional stock exchanges accelerated in the 1990s. Traditionally, there were nine stock exchanges, but at the end of the decade, there were six. However, one major and one minor exchange dominate. About 90% of transactions are carried out on the Tokyo Stock Exchange (TSE), and a majority of the other transactions are carried out on the Osaka Securities Exchange (OSE). The concentration of the stock exchanges is mainly a result of cheaper and simpler communication tools.

The OSE created a new section with NASDAQ in 2000. Although listings were limited in the first few months, this new section will enable Japanese venture capital companies to offer their stocks and it will permit NASDAQ companies to be traded in Japan in the near future. It is also planned that shares of Japanese venture companies will be traded over NASDAQ.

[30] The discussion in this section is drawn heavily from Austin (1995).

Separate from the stock exchanges, there is JASDAQ, an over-the-counter trading system, managed by Japan Securities Dealers Association. The JASDAQ has operated since 1983, with a computerised system since 1991. At the end of 1999, the total capitalisation of TSE was JPY 456 trillion (roughly USD 4 trillion), while the total capitalisation of JASDAQ was JPY 27 trillion.

Although affiliation and cooperative agreements between Japanese and foreign exchanges have been made, an outright merger has not been pursued. Therefore, the venture between NASDAQ and OSE was an exception, rather than a trendsetter, at least until now.

Futures exchanges exhibit more competition than the equity exchanges. The Nikkei 225 futures have been traded on the OSE, Singapore's SIMEX and Chicago's CME. The SIMEX trading volumes of Nikkei 225 increased in the early 1990s after transactions costs in Osaka were increased. No consolidation is planned among the exchanges that trade futures.

Europe

The integration of organised securities exchanges in Europe gained momentum in recent years due to growing competition between traditional European exchanges and competition both from foreign exchanges and from private, electronic exchanges like Instinet (the so-called proprietary networks). The advent of the euro has played an important catalytic role in this process by eliminating substantial currency risk and thereby encouraging investors to trade assets by sectors rather than by countries and to be more concerned about liquidity. In this more competitive environment, agreements and alliances may be critical for achieving full economies of scale and transforming technological progress into a competitive edge.[31]

As regards stock exchanges and derivatives markets, the first wave of consolidation, which took place in the second half of the 1990s, exhibited a clear regional or domestic flavour. For instance, in 1998 the OM Stockholm Stock Exchange[32] and the Copenhagen Stock Exchange signed an agreement to set up a common Nordic market, NOREX, which is based on cross-membership and provided for sharing the SAX-2000 trading system and the same trading rules. In 2000 a letter of intent was signed with an additional five exchanges (Norway, Iceland, Estonia, Latvia and Lithuania). The Deutsche Börse was formed in 1993 by the merger of eight regional stock exchanges in Germany. This new exchange promoted the merger between the German and the Swiss derivatives markets in 1996 to form Eurex, the leading European derivatives market. The Dutch and Belgian primary markets merged with their derivatives markets and clearing systems, giving way to AEX in 1997 and BEX in 1999, respectively.

The most recent mergers have a more pan-European flavour. The merger between Paris Bourse, the AEX and BEX to form Euronext was completed in September 2000. Euronext is incorporated as a Dutch limited company and offers trading in equities, bonds and derivatives. The structure of Euronext is designed to preserve various subsidiaries and maintain strong links with local investors through a decentralised structure. Trading in blue-chip equities is offered in Paris, trading in derivatives in Amsterdam, and trading in small or medium-sized companies in Brussels. Trading is based on the French NSC system, already sold worldwide to about 20 exchanges.

Despite persistent efforts over the last two years, a pan-European stock exchange has remained an elusive goal. In May 2000, the London Stock Exchange and Deutsche Börse announced their plan to merge operations in what was to be a significant step towards the pan-European goal. The two exchanges proposed the adoption of a common trading platform and the concentration

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[31] See Abraham and Pirard (1999).

[32] The OM Stockholm Stock Exchange was itself constituted in 1998 by the merger of the Swedish Stock Exchange with the derivatives exchange OM.

of different market segments in one or the other physical location. However, the plan collapsed in September 2000 under the weight of scepticism regarding dual currency listings, the absence of consolidation of the post-trade settlement systems, and the cost to smaller brokers of adopting a new platform. As a consequence, both exchanges are likely to pursue independent routes to consolidation.

Continental European government bond markets were more closely integrated after the advent of the euro. A common trading platform was created for the most liquid government bonds of seven major euro area issuers (Belgium, Germany, Spain, France, Italy, the Netherlands and Austria). This screen-based system is called Euro-MTS and is based on the Italian system MTS-PCT. This system was recently enhanced so as to enable its participants to trade repurchase agreements (repos) on different ranges of maturity. Other initiatives have been undertaken such as Reuters' development of a trading platform for repurchase agreements. No significant integration has occurred regarding the infrastructure of corporate bond markets.

References

Abraham, Jean-Paul and Anne-Françoise Pirard (1999): "Competition and co-operation among European Exchanges – The impact of financial globalisation with special reference to smaller-sized exchanges", working paper prepared for the 1999 Annual Meeting of the European Association of University teachers in Banking and Finance, Lisbon, September.

Austin, Stephanie (1995): "Chapter 12: Securities Markets", in "Securities Processing", edited by William L Imhoff, 1995, pp 126-36.

Bank of Japan: Bank of Japan Economic Statistics Quarterly, various years.

Best, A M (1991-99): Best's Aggregates and Averages, Life-Health, various years.

Best, A M (1991-99): Best's Aggregates and Averages, Property-Casualty, various years.

Conti, Vittorio and Rony Hamaui (1993): "Financial Markets' liberalisation and the role of banks", Cambridge University Press.

Dale, Richard (1994): "International Banking Deregulation – The Great Banking Experiment", Blackwell Finance.

European Central Bank (1999): "Possible Effects of EMU on the EU Banking Systems in the Medium to Long Term", February.

European Central Bank (2000): "Mergers and Acquisitions Involving the EU Banking Industry – Facts and Implications", forthcoming.

Genetay, Nadege and Philip Molyneux (1998): "Bancassurance", MacMillan Press.

Ibca: Ibca CreditDisk, various reports.

International Monetary Fund (2000): Financial Statistics, CD-ROM, March.

Investment Dealers' Digest (1991-2000), various issues.

Ito, T (1992): "The Japanese Economy", Chapter 5, MIT Press.

Lewis, Alfred and Gioia Pescetto (1996): "EU and US Banking in the 1990s", Academic Press Limited.

Organisation for Economic Co-operation and Development (1990-97, 1999): Insurance Statistics Yearbook.

Organisation for Economic Co-operation and Development (1998): Institutional Investors Statistical Yearbook.

Organisation for Economic Co-operation and Development (1999): Bank Profitability.

Office for Official Publications of the European Communities (1997): "The Single Market Review, Subseries II: Impact on Services, Credit Institutions and Banking".

Office for Official Publications of the European Communities (1998): "The Single Market Review, Subseries II: Impact on Services, Volume 1: Insurance".

Office for Official Publications of the European Communities (1998): "The Single Market Review, Subseries II: Impact on Services, Volume 3: Credit Institutions and Banking".

The Banker, various issues.

White, William R (1998): "The Coming Transformation of Continental European Banking", Bank for International Settlements, *Working Paper* number 54, June.

Williamson, John and Molly Mahar (1998): "A Survey of Financial Liberalization", Essays in International Finance 211, November.