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THE FUTURE OF THE FINANCIAL SYSTEM

Economic Group
Reserve Bank of Australia

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THE FUTURE OF THE FINANCIAL SYSTEM

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Reserve Bank of Australia

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Introduction

Malcolm Edey

During the past two decades financial systems world-wide have developed rapidly in terms of size, industry structure, and the range of products and services produced. In Australia the size of the financial system, measured by total assets, has approximately doubled relative to nominal GDP in the past twenty years, while in a number of other countries the growth has been even more dramatic. More importantly, there have been major changes in the range and mix of financial-sector activities and in competitive conditions for the participants. Examples include the spectacular growth in financial-market trading, including the newly developing derivatives markets, considerable product innovation in retail and commercial banking, and the development of new payment and transaction technologies. At the same time, the competitive environment is being reshaped by the increasing scope for new providers of financial services to enter traditional markets, or for existing providers to cross traditional boundaries.

These developments have stimulated considerable debate about the future of the financial system. Among the issues raised have been the likely roles of the established financial institutions, the extent to which traditional dividing lines within the financial sector will remain meaningful, and possible implications of further structural change for regulatory and supervisory policies. The papers commissioned for this volume are aimed at exploring those issues. They are divided into three parts: the papers in Part I present the recent trends, place them in historical and international perspective, and analyse some of the main driving forces; those in Part II consider possible future developments and their implications for finance-industry participants; and Part III focuses on issues for financial regulatory policy.

Historical Perspectives

The process of financial change can be viewed as being driven by a combination of demand and supply factors. On the demand side, rising real incomes and long-term demographic trends are likely to have contributed both to the overall growth in financial activity and to broad shifts in its composition. In particular there is a strong tendency internationally for the relative size of financial sectors to increase as real incomes rise; that is, as societies become wealthier, an increasing proportion of wealth tends to be held in financial form. Rising financial wealth in turn has generally been associated with a shift in its composition, with a greater proportion held in financial investment products as opposed to more traditional deposit instruments. This trend is likely to have been stimulated in part by the increasing focus on retirement savings as populations age.

Another important influence on the demand for financial services has come from major shifts in the financing requirements of governments. Particularly important were the increases in government deficits in the 1970s and 1980s, which created major additional demands for services associated with marketing, trading and investing in

government securities. In many countries, including Australia, this occurred at a time of high and variable inflation which meant that existing methods of selling government debt under administered interest rates became increasingly ineffective. The result was a general move to market-based methods of issuing government securities which complemented and stimulated the growth of financial markets more generally.

Notwithstanding the importance of these influences it is arguable that supply-side factors – that is, factors related to the cost structure and competitive environment within the financial sector – have been at least as important in shaping longer-term developments.

Financial regulatory policies played an important part in the process. Before the main steps in deregulation were taken in Australia in the late 1970s and early 1980s, key parts of the financial sector were subject to interest-rate and balance-sheet controls that limited their ability to compete for business, and banks in particular were losing market share to less regulated intermediaries over an extended period. This shrinkage of the regulated sector was one of the factors that eventually encouraged the move to deregulation. The trend in market shares shifted markedly in the post-deregulation period. There was a substantial recovery in banks' market share, although this has occurred in the context of a more competitive environment open to new entry from both domestic and foreign institutions. There has also been a major financial cycle as the sector overexpanded in its initial response to deregulation and has subsequently gone through a painful readjustment. The overall story, familiar to observers of the Australian financial sector, has numerous parallels in other countries.

The similarity of international experiences also points to the importance of more fundamental common forces driving the financial innovations to which regulatory policies were responding. In particular, the development of the industry has been powerfully shaped by rapid technological improvements and associated financial product innovations over the past two to three decades. Finance is an information-intensive industry involved with collecting, storing and interpreting detailed information about clients and markets, and processing and recording large volumes of transactions. It is not surprising that developments in information technology have transformed the cost structure of the industry, reducing production costs for many services and making available a wide array of new products and delivery systems: financial derivatives, ATMs, EFTPOS, securitised mortgages, telephone banking, to name just a few. Technological improvements have undoubtedly also contributed to reduced entry costs, particularly for new competitors offering specialist product lines. This in turn has increased the contestability of markets for a number of products, as has been illustrated recently by the growing competition from new players in the home mortgage market.

Prospects

There is a widespread perception that the process of change in the financial sector is set to continue as some of the main forces for change remain in place. In many respects the United States' financial system is in the vanguard of these developments. For example, the process of securitisation – the replacement of traditional bank intermediation by funding through securities markets – has gone much further there than it has in Australia, and may be indicative of the direction of further change for the Australian

system. There is now an active debate in the United States about the 'decline of traditional banking', reflecting the fact that traditional forms of intermediation are giving way to newer methods of meeting underlying financial demands. The emphasis in this debate is specifically on 'traditional' banking rather than on banks *per se*, since banks have continued to compete successfully for some of the newer lines of business, such as securitised lending and other fee-based activities. Nonetheless, in terms of total assets, banks have experienced a long-term decline as a proportion of the United States financial system.

In Australia there is little evidence, at an aggregate level, of the sort of decline in traditional banking that has been seen in the United States. Indeed in the post-deregulation period banks have significantly recovered market share on a total assets basis. Profits, after being hit by major increases in loan write-offs in the late 1980s and early 1990s, have recovered to high levels. Nonetheless the early stages of a process of increased competitive pressure on banks' core business activities can be clearly observed, with possible longer-term implications for their profitability and role in the financial system.

Central to this process has been the unbundling of the banks' traditional product mix. In simplified terms, traditional banking can be viewed as the provision of deposit, loan and transaction services. In this structure these core services were produced and priced jointly, and banks' competitive position was supported by extensive branch networks and access to low-cost deposits. Competition from outside the group of full-service providers was limited. The pricing structure that evolved for this product mix generally involved very low fees for transaction services, with revenues for the banks being earned mainly from the net interest margin.

A significant challenge to this market structure has come from the emergence of much stronger competition on a product-by-product basis, stimulated by specialist suppliers of individual product lines. Leading examples have been cash management trusts, on the deposit side, and mortgage originators on the lending side; another example has been the recent move by a number of life offices to increase their home mortgage lending. The common thread is that these institutions have been able to offer deposit or loan products on a stand-alone basis at highly competitive rates, placing considerable pressure on the banks to price their key products on a similar basis. The process has been facilitated by the growth of securities markets, which provide a funding vehicle for specialist lenders and an investment vehicle for institutions like cash management trusts. In other words, they allow the basic functions of deposit-taking and lending to be offered separately from traditional full-service banking.

On the deposit side the resultant competition has contributed to a trend increase in banks' relative deposit costs, a trend that has been reinforced by declining inflation which compressed the margin between market and 'low-cost' interest rates. More recently, competition to cut mortgage lending margins has been intense. The net effect of these forces on bank margins is in turn creating pressure on the banks to cut costs and to reduce their cross-subsidisation of transaction services. Banks have also sought to offset these competitive pressures in other ways, for example by expanding in other areas of business such as their involvement in funds management.

Many of these developments are still at a relatively early stage and are likely to have important ongoing consequences for the finance industry as they are worked out more

fully. The full impact of the new competitive pressures on bank profits is yet to be seen. More generally the combination of lower entry barriers and the ability to unbundle basic product lines suggests that financial businesses will have to re-examine their pricing structures and re-assess areas of comparative advantage. Cross-subsidisation is likely to come under further pressure as new competitors continue to focus on the more profitable lines of business that are the traditional revenue sources for cross-subsidies. This in turn suggests an increasing tendency for financial enterprises to examine and price each line of business on a stand-alone basis, with fewer fixed points of comparative advantage available to the established institutions.

None of this necessarily means a diminishing role for banks but it does imply an increased potential for the nature of banking business to change, and for a relative shift away from the traditional style of on-balance sheet intermediation. On the other hand, banks may well find enhanced opportunities to compete in newer markets where entry barriers are low. Their expanded activities in funds management, investment banking and in financial markets are examples of areas where this has already occurred. It can also be argued that banks are likely to retain a strong comparative advantage in at least some of their traditional core activities such as small business lending and retail deposit accounts.

Regulatory Policy

In considering the regulatory policy implications of all these trends, it is useful to keep in mind two main objectives of regulatory policy: investor protection and systemic stability. The two objectives give rise to very different types of regulation (using the term 'regulation' here in a broad sense to include financial supervision). The investor protection objective is generally related to regulations with a *product* focus, aimed at setting standards of business conduct with respect to particular markets or activities; examples include prospectus requirements or insider trading laws. In contrast, the systemic stability objective gives rise to regulations with an *institutional* or *prudential* focus, such as capital standards and the supervisory regime for banks. This follows from the nature of systemic risk, which is essentially the risk that insolvency of an individual institution will threaten the stability of the financial system as a whole. Since only institutions can be insolvent, the systemic stability objective implies a regulatory focus on institutions rather than products. Unless institutional groupings exactly correspond with product differences, the combination of the two objectives implies a distinct role for both types of regulation.

From a macroeconomic perspective it is the systemic stability objective of regulatory policy that is particularly important. The financial system trends already outlined are relevant to this aspect of regulatory policy in two ways.

First, any blurring of distinctions among the main groups of financial institutions is bound to raise difficult questions as to where the boundaries for prudential regulation are to be drawn. It is usually regarded as desirable to avoid extending the institutional coverage of prudential regulation too widely. A major reason for this comes under the generic heading of 'moral hazard' – the problem that bringing institutions under a prudential regime might encourage assumptions that they have implicit government

backing. On the other hand, once a set of boundaries is in place, financial institutions often innovate around them, particularly where artificial legal distinctions are made between institutions performing similar functions. These considerations suggest a need for balance between the aim of avoiding too wide an ambit for prudential policies, and that of finding a reasonably natural set of institutional boundaries that will not be quickly overtaken by financial innovation.

The extent of actual or prospective blurring of institutional boundaries is a matter of some debate. In simplified terms (and ignoring some specialised fields such as insurance) we can define two main types of legal entity engaged in financial business. The first group, financial intermediaries, comprises those institutions whose main business involves borrowing, lending and transaction services at agreed nominal values, principally the banks, merchant banks, building societies, credit unions and finance companies. The other main group, the funds managers, have as their core business the investment of members' funds on a 'best-endeavours' basis. Within the intermediaries group, the special status of banks is widely argued to have become less meaningful as business becomes increasingly mobile across the institutional groups; the point is underscored by the historical shifting back and forth of market shares between banks and non-bank intermediaries as regulatory policies changed. A more robust distinction has traditionally been made between intermediaries and funds managers. This distinction is relevant to the issue of systemic risk because funds managers are not subject to insolvency risk in the same way as intermediaries. An important area of current debate is the extent to which this distinction will remain robust in the face of increasing cross-market penetration between the two groups of institutions.

A second major implication for regulatory policy concerns the changing nature of systemic risk. Traditionally the main sources of systemic risk have been viewed as related to payments-system risk, depositor runs, or more general problems of balance-sheet insolvency. Aside from liquidity support facilities from the central bank, standard policy approaches to these risks have tended to focus on promoting balance-sheet soundness, through specific balance-sheet requirements such as capital adequacy rules as well as general supervisory oversight.

Increasingly, however, systemic risk is seen as coming not only from traditional balance-sheet items but also from banks' involvement in securities and derivatives markets. Since bank exposures to these markets can be difficult to measure and can change virtually continuously, these activities are not amenable to being monitored and controlled by the regulatory authorities using rule-based systems and standard balance-sheet analysis. Rather, they point to an important shift in the nature of prudential policies – towards much greater reliance on the analysis of markets and evaluation of risk-management systems, rather than the older more mechanical approaches.

The Evolving Structure of the Australian Financial System

Malcolm Edey and Brian Gray

1. Introduction

Like other industrial countries, Australia has experienced major changes to its financial system in recent decades. The net effect has been a transformation in the Australian financial system from a relatively closed, oligopolistic structure in the 1950s and 1960s, based predominantly on traditional bank intermediation, to a more open and competitive system offering a much wider variety of services from an array of different providers. This process of financial system evolution, while driven largely by market forces, has been assisted by prevailing regulatory and supervisory arrangements.

A process comparable to that seen in Australia has been observed and widely discussed in the United States under the generic heading 'the decline in traditional banking'.[1] There, the phrase has been used to describe a long-term trend involving financial disintermediation and a resulting fall in the relative size of the banking sector compared to other forms of financing. It has been associated, in particular, with an increasing trend towards financing through securities markets. The debate in Australia has been somewhat different, though it shares some common elements with the overseas experience. Here, the focus has been not on a decline in banks *per se* since, by most quantitative standards, Australian banks currently dominate the financial system as much as at any time in the past few decades. Rather, against a background of change, the focus is on how the competitive forces already at work might affect the future structure of the system, including the nature of the core business of banking and the boundaries between banks and other providers of financial services.

Among the range of influences on financial-sector development, three main forces can be highlighted. The first has been the role of financial regulatory policy which, to an important degree, shaped the broad trends in banks' market shares in recent decades – the extended period of decline up until the early 1980s and subsequent recovery in the post-deregulation period. Second, technological developments have been important in reducing the cost of many information-intensive financial activities and in making available a wide range of new products and delivery systems. A third influence arises from the interaction of these first two factors with the historical cost and pricing structure of traditional intermediation, and in particular with the traditional cross-subsidisation of payments services by banks. The persistence of elements of this pricing structure has created opportunities for growth of specialist low-cost financial service providers which have become an increasingly important source of competitive pressure on banks. An analysis of how these forces have shaped the evolution of the system underlies much of the discussion that follows.

1. See Edwards (1993) and Ettin (1995). An alternative view is given by Boyd and Gertler (1994).

In Section 2 of the paper we give a general overview of the main trends in the financial sector and try to relate those trends to the changing demands of the users of financial services: the government, household and business sectors. Section 3 deals in more detail with banks and financial intermediaries while Section 4 looks at the life insurance and superannuation sector, with an overall assessment drawn together in Section 5. There is an attempt in that final section to raise some questions about the boundaries between the traditionally defined institutions which form the basis of existing supervisory and regulatory arrangements.

2. Overview of the Main Trends

2.1 The Starting Point: The Financial System in the 1950s and 1960s

While the 1950s might seem a remote starting point for analysis, the period provides a good stylised model of what might be called the 'traditional' financial system, and many of the important trends to be analysed can be traced back to that time. In the discussion that follows we make use of a basic distinction between the *financial intermediaries* sector, comprising those institutions whose core functions involve borrowing and lending,[2] and the *managed-funds* sector, comprising mainly life insurance and superannuation funds along with other investment vehicles like unit trusts. It will be argued that this represents a reasonably natural distinction and that competition within each of the two sectors has generally been more important than competition across sectors. Emerging areas of competition and functional overlap between the two areas are discussed in Section 4.

Table 1 illustrates long-run trends in the structure of the financial intermediaries sector. It can be seen that, until the 1950s, financial intermediation was largely synonymous with banking. In 1953, banks accounted for 88 per cent of the total assets of this sector while the next largest group, pastoral financiers, had only 4 per cent. A summary balance sheet for banks at around the same period (Table 2) shows the main elements of what might be regarded as the traditional bank product mix. Deposits were raised mainly from low-cost sources, with non-interest-bearing cheque accounts and low-interest savings bank deposits together funding around 85 per cent of the balance sheet. Fixed deposits represented most of the remainder. On the asset side, almost half the balance sheet was invested in government securities or held in SRDs, and around 40 per cent accounted for by loans. With interest rate controls in place, bank loans were rationed and available only to the most creditworthy of borrowers. Banks faced little competitive pressure from other institutions, which had not yet begun their rapid development, and the system was not open to foreign bank entry or to offshore transactions. Banking business was essentially a low-risk proposition conducted at regulated prices.

2. The main groups are banks, merchant banks, finance companies, building societies, credit unions and pastoral financiers.

Table 1: Assets of Financial Intermediaries
Per cent of total

	1929	1936	1953	1970	1980	1985	1990	1995
Banks	94	95	88	70	58	59	69	77
Building societies	2	2	3	5	12	10	5	2
Credit unions	—	—	—	1	1	2	2	2
Money market corporations	—	—	—	3	6	11	11	9
Pastoral financiers	4	3	4	3	1	2	0	0
Finance companies	—	1	3	15	18	13	9	6
Other	—	—	1	3	4	3	4	3

Sources: Martin Committee (1991) and Reserve Bank of Australia *Bulletin*.

Table 2: Balance Sheet of the Banking Sector
$ million, June 1956

	Trading banks	Savings banks	Total	Per cent of total assets
Liabilities				
Non-interest-bearing deposits	2,336	—	2,336	43.0
Savings bank deposits	—	2,289	2,289	42.1
Fixed deposits	514	—	514	9.5
Other (excludes capital)	142	—	142	2.6
Assets				
SRDs	521	n.a.	521	9.6
Government securities	415	1,704	2,119	39.0
Loans	1,945	364	2,309	42.5
Other	366	119	485	8.9

Source: Reserve Bank of Australia Occasional Paper No. 8.

The other main part of the system was the managed-funds sector, which in terms of assets was around one-third the size of the banks. This comprised principally life offices and superannuation funds, which offered very different services from banks in the form of long-term, highly tax-favoured saving plans. There was some overlap with banking functions in the provision of mortgage lending by life offices, which helped to satisfy the demand for mortgages unmet by banks. This area of lending activity was quite substantial in the 1950s and 1960s but subsequently declined, for reasons discussed in Section 4.[3]

From this sketch we can summarise the three elements of what might be called the traditional bank business mix; namely, lending, deposit-taking and the provision of

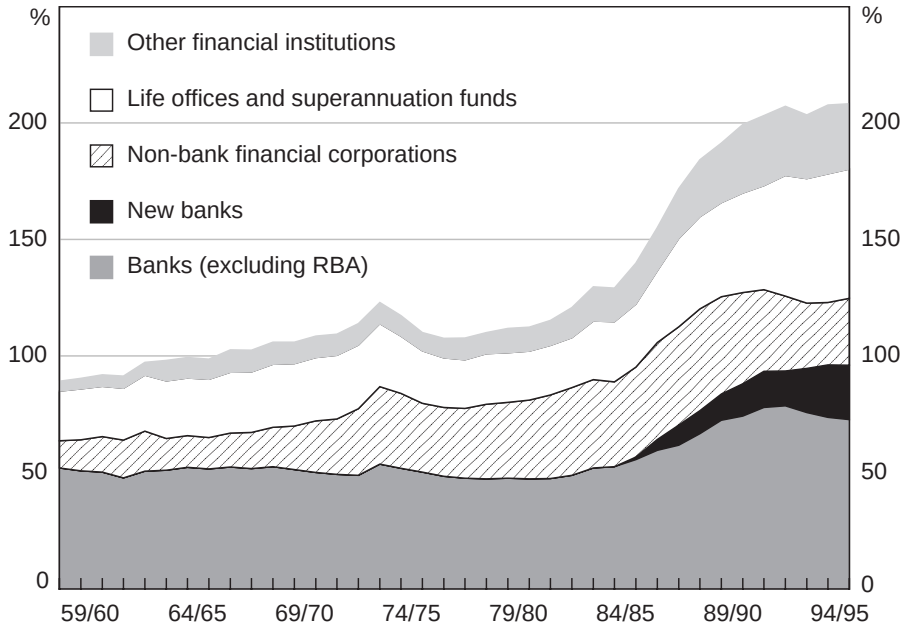
3. More recently, life offices have again become active in the mortgage market.

transactions services.[4] An important question that recurs through this paper is the extent to which these three services need to be provided in a single institution. In this respect a central part of the developing story concerns the emergence of new financial products and new institutions that can compete separately for profitable lines of business, without taking on the whole of the banking product mix. This sort of competition was not possible in the 1950s and 1960s when securities markets were undeveloped and separation of deposit and lending functions, as is now exemplified by cash management trusts and mortgage managers, was not possible.

2.2 Development of Financial Institutions

Overall growth of the financial system and its institutional subsectors is illustrated in Figure 1. System assets more than doubled as a ratio to GDP between the 1960s and 1990s, with much of that growth occurring in the immediate post-deregulation period in the second half of the 1980s. This has been followed by a period of slower growth but the long-term trend still appears to be upward, consistent with patterns in other countries and with theoretical notions of 'financial deepening' as an economy grows. That is, the demand for financial services, broadly defined, tends to increase faster than the increase in income.

Figure 1: Total Assets of Financial Institutions
Per cent of GDP



Source: Reserve Bank of Australia *Bulletin*.

4. A fourth element, the passive holding of government securities, is best thought of as something separate and only incidentally important in the early postwar period, rather than being part of the core business of banking; it was a product of regulation and of the high levels of government debt incurred during the war.

Banks went through an extended period of declining market share during the 1960s and 1970s, when corresponding gains were made by non-bank financial intermediaries, particularly building societies, finance companies, merchant banks and, later, unit trusts (trends that will be elaborated further below). This trend reflected the competitive disadvantage that financial regulations placed on banks. In particular, interest rate controls tended to keep the entire structure of bank rates below market-clearing levels, with a consequent rationing of bank funds and the emergence of a ready market for funding at higher rates. To some extent, the banks became involved in this market by creating new non-bank subsidiaries to conduct this business 'outside' the bank itself and, therefore, outside regulatory constraints. But there was also a substantial growth of non-bank financial institutions (NBFIs) not affiliated to the domestic banking sector. In a number of cases, these institutions were owned by foreign banks that sought a financial presence in Australia but were precluded from establishing a formal banking operation by the effective moratorium on new foreign banking authorities before 1985. In other cases, non-bank institutions were joint ventures between domestic and foreign banks.

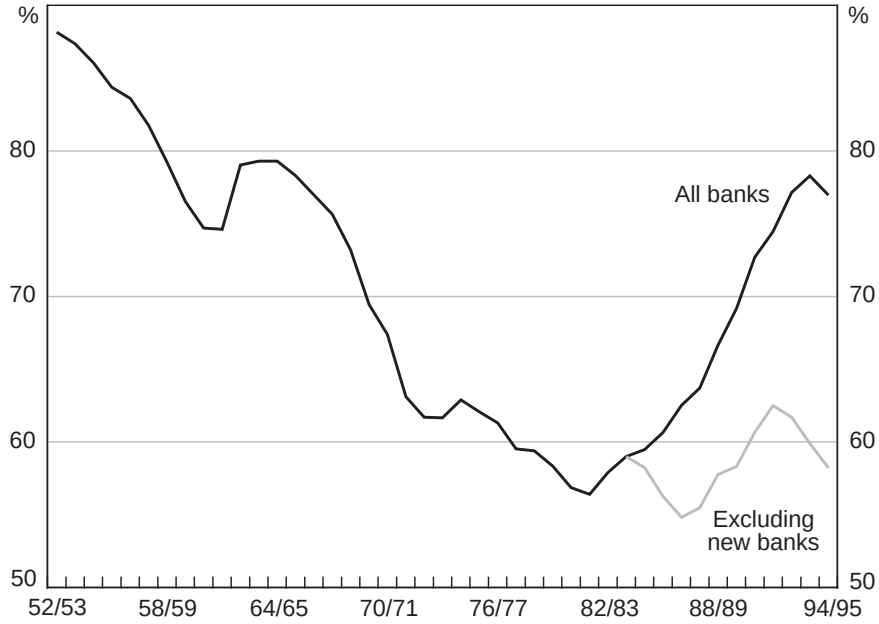
A strong reverse trend in these market shares has been observed in the post-deregulation period as the banks' ability to compete with NBFIs improved. In addition, banks reabsorbed non-bank affiliates onto their balance sheets and there were a number of prominent non-bank institutions, particularly building societies, which found it advantageous to convert to banks in the late 1980s and early 1990s. A one-off easing of restrictions on foreign bank entry in the mid 1980s, and the more open entry policy adopted in the early 1990s, saw the foreign bank presence increase, in part at the expense of the merchant bank sector.

A critical factor shaping the recent history of the financial system, and widely analysed elsewhere, was the credit boom which followed financial deregulation. This phenomenon, and its interaction with macroeconomic developments in the 1980s, contributed to growth of the financial sector in a number of ways. Most importantly, it gave the system the capacity to satisfy long-standing, repressed demands for finance. This had the predictable (in a qualitative sense) effect of allowing a one-off expansion of the financial sector relative to its historical trend. Related to this, the expansion in the availability of finance contributed to an asset price boom which further fed back into credit growth. Rising asset prices and expectations of continued asset price inflation fed the demand for credit and also provided increased collateral to support debt-financed asset acquisition. Finally, rising real asset prices and the high real interest rates that followed deregulation meant that the managed-funds sector generated exceptionally high rates of return in the 1980s. Since these funds tended to be locked in (particularly in superannuation funds) and automatically reinvested, the high rates of return contributed substantially to growth in these institutions' assets. The net result was a near doubling of the size of the financial sector relative to GDP in little more than a decade.

The shifting market share of banks *vis-à-vis* other financial intermediaries is illustrated more starkly in Figure 2, which shows banks' assets as a share of the total financial intermediation sector. This declined steeply to a low point of 57 per cent in 1982 before recovering equally dramatically to almost 80 per cent by 1994, comparable to banks' market share in the 1960s. The pattern of decline and recovery is exaggerated somewhat by the growth and subsequent reabsorption of NBFI subsidiaries by banks, but the

qualitative picture remains valid; on a consolidated basis, banks' asset share fell to a trough of 61 per cent in 1981, still a substantial reduction in the market share of consolidated banking groups from the levels of the 1960s and 1970s. On the other hand, the recovery in banks' aggregate market share during the subsequent period was substantially boosted by the entry of new banks, particularly through the conversion of existing non-bank intermediaries. When new and pre-existing banks are shown separately, it is apparent that banks already existing in the mid 1980s largely did not recover the market share lost in earlier decades. This may be one indicator of the increasingly competitive environment faced by banks, a theme that will be discussed in greater detail below.

Figure 2: Banks' Share of Intermediaries' Assets



Sources: Occasional Paper No. 8 and Reserve Bank of Australia *Bulletin*.

2.3 The Non-Financial Sectors

Before turning to a more detailed analysis of competitive forces within the intermediation sector it will be useful to look at trends in the financial demands of the other parts of the economy which are the financial sector's clients. This is done in the next three subsections covering the government, corporate and household sectors.

2.3.1 Government

Developments in government finance have exerted a powerful influence on the financial sector throughout the postwar period. The federal government entered the

postwar period with a substantial volume of debt, amounting in 1950 to more than 100 per cent of GDP. This ratio was steadily reduced until the late 1970s and underwent a further major reduction in the second half of the 1980s, reaching a trough of 15 per cent of GDP in 1990/91. This trend has meant that holdings of government debt have necessarily represented a diminishing proportion of the balance sheets of financial institutions, and particularly of banks, which had held a large part of the outstanding supply in the 1950s. The reduction in government security holdings in turn allowed banks to expand their lending to the household and corporate sectors, thereby gradually changing the structure of banks' balance sheets. Between the early 1950s and the early 1990s, public sector securities and SRDs fell from over 50 per cent to under 10 per cent of banks' total assets.

The combination of higher deficits and higher inflation in the 1970s had important consequences for the financial system in general and for the marketing of government securities in particular. High and variable inflation meant that the demand for government securities became more unpredictable at the same time as the flow of deficits to be financed increased. This in turn generated difficulties of monetary control that led to pressure for the introduction of market-based mechanisms to ensure that government financing requirements could be met. Important responses to these pressures were the introduction of treasury note tenders in 1979 and bond tenders in 1982, replacing the previous systems of administered interest rates on these instruments. The move to market-determined rates on these securities in turn stimulated a whole range of other financial developments as well as intensifying the pressure to deregulate deposit and lending rates of banks, a process described in detail by Grenville (1991).

2.3.2 Corporate sector

By international standards, leverage within the Australian corporate sector has traditionally been relatively low, and this remains the case despite a substantial increase in corporate borrowing in the late 1980s. Average debt-equity ratios of Australian companies appear broadly similar to those in the United States and Canada but significantly below those in the United Kingdom, other European countries and Japan (Table 3).[5] As is elaborated by Prowse in this volume, differences in leverage and other aspects of the corporate funding mix reflect a wide range of differences in the structural characteristics of the respective economies. One important dimension of this is the distinction often drawn between 'Anglo-Saxon' and 'universal-banking' financial systems, which differ in the extent to which their institutional characteristics favour intermediated rather than direct financing of business activities. Prowse argues that there is some tendency for these divergent systems to become more similar, a result of ongoing financial innovation and internationalisation of financial systems.

5. Some caution is needed in comparing balance sheet ratios across countries because of differences in accounting practices.

Table 3: Debt-Equity Ratios of Non-Financial Enterprises

	1981-1985	1986-1990	1991-1993
United States	0.5	0.8	1.0
Japan	4.8	4.2	4.0
Germany	3.6	2.7	2.8
France	2.7	2.2	1.4
Italy	3.6	3.0	3.1
United Kingdom	1.1	1.1	—
Canada	0.9	0.9	1.0
Australia	0.5	0.6	0.6

Sources: OECD Non-financial Enterprises Financial Statements (for all countries except Germany and Australia); OECD Financial Statistics (for Germany); and Reserve Bank of Australia.

The Australian historical experience seems broadly consistent with the pattern of increasing corporate debt observed in other low-leverage systems, particularly in the United States and Canada. Starting from a low base in the 1950s and 1960s, the average debt-equity ratio in Australia has been on a sustained upward trend, accelerating sharply in the second half of the 1980s before the subsequent period of debt reduction observed more recently (Figure 3). The spike in leverage in the late 1980s is in fact understated by the data in Figure 3, based on a continuous sample of companies, since many of the companies whose leverage increased most dramatically at that time did not survive the period and are therefore excluded from the continuous sample.[6] Notwithstanding the substantial debt reductions that took place in the early 1990s, the volume of corporate debt outstanding remains considerably higher relative to GDP than was the case in the early 1980s, and the most recent data suggest that corporate borrowing has again begun to increase.

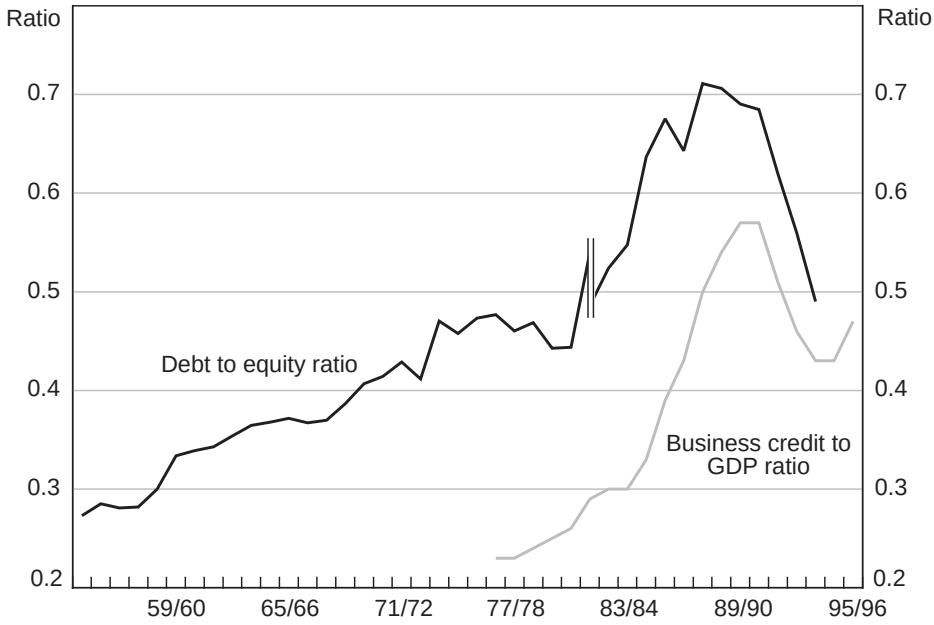
An important characteristic of the debt component of Australian corporate financing is the limited use made of direct borrowing through the issue of corporate securities. Corporate borrowing demands in Australia have traditionally been met mainly by financial intermediaries – that is, by banks, merchant banks and finance companies, with the largest part of the market being accounted for by banks. Currently only around 10 per cent of the aggregate corporate balance sheet is financed by debt securities.[7] In this respect the pattern of corporate financing in Australia differs from those in the larger English-speaking countries, particularly the United States and the United Kingdom, where debt security issuance has historically represented a sizeable proportion of overall corporate sector funding.[8] A possible explanation is the smaller size of the Australian economy and the relatively small number of Australian companies that would be considered large on an international scale. Direct security issuance is clearly likely to be

6. See Mills, Morling and Tease (1993).

7. This figure excludes bank bill finance.

8. Data presented by Tease and Wilkinson (1993) suggest that, in flow terms, security issuance provided funding of comparable magnitude to bank loans for the corporate sectors of both countries in the 1980s.

Figure 3: Corporate Debt Indicators



Sources: Reserve Bank of Australia *Bulletin*, Reserve Bank of Australia Company Supplement and Australian Stock Exchange Financial and Profitability Study (1995).

more viable the larger the company (other things equal), since large companies are more likely to have well-established reputations as well as being able to spread the cost of information over a larger volume of capital to be raised.

The fact that direct forms of financing have not been favoured to date, however, provides little guide to the future. There is a strong belief within banking circles that a number of underlying factors are generating conditions which could lead to an expansion in the corporate debt market. One factor is the increased sophistication of institutional investors and increased demand from that source for good quality debt. In Australia, the expected expansion in the funds-management and superannuation sector could be an important catalyst in this regard. The potential for growth could be further enhanced if attempts to rein in the growth of government debt are successful in the years ahead, as there could then be an increase in demand for alternative securities.

These observations concerning direct and indirect funding have an important bearing on the larger question of the long-term role of banks. An important part of the core business of banks, and of financial intermediaries more generally, has been the funding of businesses through non-marketable loans. Intermediaries earn income in this line of business through the application of expertise in credit assessment and from their store of detailed knowledge about individual borrowers. The question arises as to whether this line of business, or some segment of this business, will continue to represent a growth market for financial intermediaries, as it has over much of the historical period reviewed above.

One view, put for example by Bisignano (1991), is that technological improvement is continually reducing the information costs associated with direct financing, even for relatively small companies. Goodhart (1988) takes a somewhat contrary view arguing that banks (or financial intermediaries more broadly defined) seem likely to retain at least that part of lending linked to the small to medium business sector, where the practical difficulties of assessing creditworthiness are much greater, technological improvements notwithstanding, than for larger companies. It could, of course, be argued that the issue is more involved than suggested by either of the above authors. Corporate demands for finance tend to be diverse, with required borrowings linked variously to long-term capital investments at one extreme or to the need for shorter-term standby and liquidity facilities on a day-to-day basis. While direct forms of financing could be an efficient means of obtaining longer-term funds, a role could still exist for intermediated forms of financing in satisfying shorter-term requirements, even where the largest borrowers are concerned. It could also be argued that, even if there is a significant shift towards direct forms of financing, banks would be well placed to provide the associated services of origination, underwriting and distribution.

2.3.3 Households

The data in Figure 4 illustrate the household sector's position as a net holder of financial assets and show that both sides of the aggregate household balance sheet have undergone a trend expansion over several decades. Notwithstanding this trend, and the fluctuations in some of the balance-sheet components, an immediately striking feature of the asset side of the balance sheet is the relative stability of household deposit holdings. These currently stand at just under 40 per cent of GDP and have shown only minor fluctuations around a very gradually rising trend since the early 1960s. There seems to be reasonably close substitutability among deposits of competing intermediaries, suggested by the fact that the trend in total deposits is much more stable than either the bank or non-bank components of that aggregate. This could be argued to be consistent with a fairly stable level of desired deposit holdings relative to income, driven essentially by transaction and short-term saving requirements, with the institutional split between banks and non-banks being influenced by the relative attractiveness of their interest rates.[9] This behaviour can be contrasted with the much greater variation in household assets held with life insurance and superannuation funds, which did not appear to give rise to any offsetting fluctuations in deposit holdings. In other words, household behaviour seems to make a clear distinction between deposits with intermediaries and balances with funds managers.[10]

On the other side of the balance sheet the most important item is lending for housing, which accounts for around three-quarters of personal sector borrowing. Growth in overall borrowing by the household sector shows no sign of abating and, as in other areas of financial intermediation, banks have gained a strong recovery in market share since the mid 1980s, although very recent developments are putting that share under pressure.

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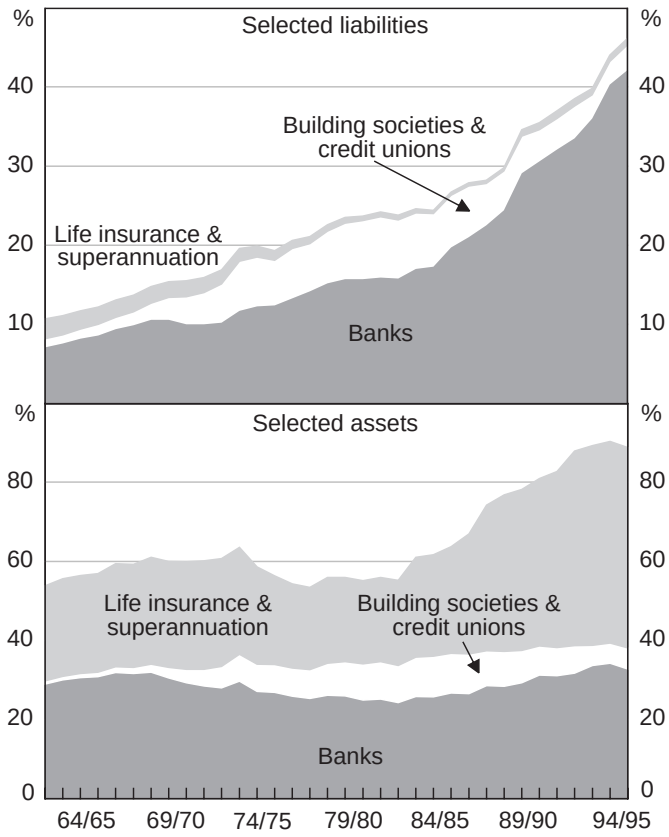
9. This view is consistent with more detailed evidence presented by Dilnot (1990).

10. A separate question concerns the substitutability between superannuation and other non-deposit stores of household saving, which is not addressed here. See Morling and Subbaraman (1995).

Figure 4: Household Sector
Per cent of GDP



Source: Reserve Bank of Australia Occasional Paper No. 8.

3. Financial Intermediation and Securities Markets

Within the intermediaries sector, two main trends have been important in shaping the competitive environment. The first, already outlined in Section 2, was the development of financial regulatory policy and its interaction with performance of the different groups of intermediaries. In broad outline, banks lost market share up to the mid 1980s but regained it rapidly once deregulation allowed them to compete for business on more equal terms. As is evident referring back to Table 1, banks now dominate the intermediation sector to an extent not seen since the 1950s and 1960s, accounting for almost 80 per cent of the total assets of this group of institutions. But it is worth underlining the ease with which business could move back and forth between banks and non-bank intermediaries as competitive advantages shifted.

The second trend, to be elaborated further below, has been the unbundling of the banks' traditional product mix. This refers to the increasing capacity for new entrants to

bid separately for components of banks' traditional business without offering a comprehensive range of banking services. This trend has potentially far-reaching consequences for the financial sector since it suggests that, even in an environment where banks are not hampered by regulatory constraints, there may be increasing competitive pressure on the most profitable parts of banks' traditional business base.

3.1 The Bank Product Mix

As was argued earlier, the traditional mix of products provided by banks can be viewed in broad terms as comprising three elements – deposit-taking, lending and providing transactions services. This of course has never been the complete picture and in recent years bank activities have expanded well beyond the traditional product range, as evidenced by the growing proportion of banks' income arising from fee-related activities as opposed to net interest earnings. Nonetheless, net interest income continues to provide the bulk of the aggregate profits of Australian banks, indicative of the fact that traditional intermediation services remain a central part of their overall business.[11]

An important issue to be addressed in relation to the basic economics of the banks' product mix concerns the extent to which the joint products within the mix are inherently separable. In other words, to what extent can the markets for these services be competed for separately rather than delivered jointly by 'full-service' institutions? Historical trends suggest that there has always been at least some scope for specialist institutions to compete with banks on a partial range of services. Important examples in the 1960s and 1970s were the building societies and finance companies, which could be thought of as offering limited ranges of deposit and lending services independent from the more comprehensive services, including transaction facilities, available from banks. These institutions grew rapidly in those decades (Figure 5), although the growth was much more a result of their ability to operate outside of key regulatory controls than to the specialist characteristics of their product lines.

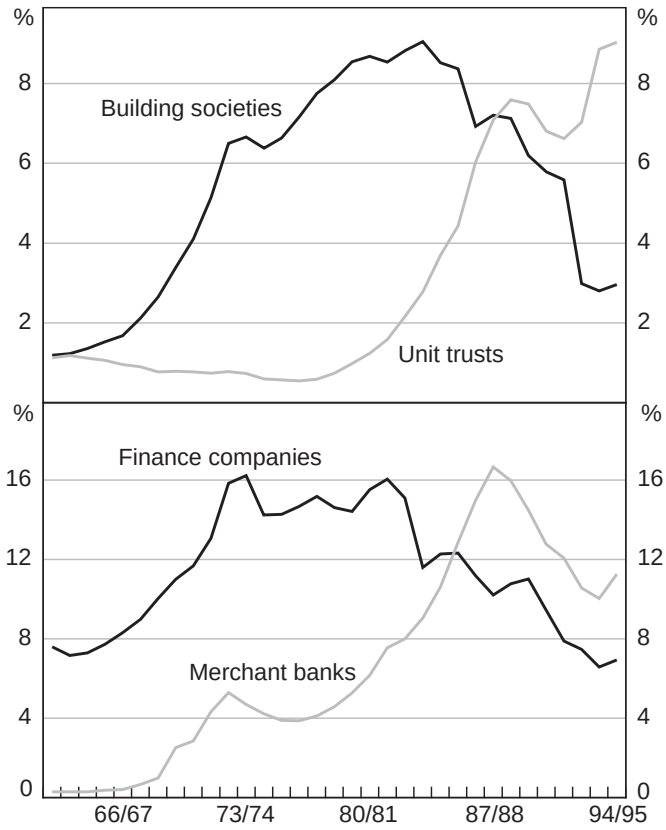
A much more important spur to competition for specialist lines of business came with the growth in size and liquidity of securities markets in the late 1970s and early 1980s. This allowed specialist institutions either to finance their lending activities by raising funds in liquid securities markets, or to operate effectively as retail deposit-takers while investing their funds in securities rather than loans. In other words, the development of securities markets helped to make possible the provision of deposit and lending services by separate institutions.

Three examples can be cited as illustrative of the process.

First, on the deposit side, was the growth of cash management trusts, the first of which was established in 1981. Although these are, strictly speaking, funds-management rather than deposit-taking institutions, they offer a service that from the point of view of the customer is akin to a short-term retail deposit offering close to wholesale rates of interest. Cash management trusts remain relatively small in aggregate (currently with around $7 billion in total assets, or around 3 per cent of aggregate household deposits) but have

11. Currently around 60 per cent of banks' income is accounted for by net interest. This figure understates the importance of intermediation business since it excludes bill acceptance fees, which are really a form of intermediation income.

Figure 5: NBFI Assets
Per cent of GDP



Source: Reserve Bank of Australia *Bulletin*.

had an important impact on competition for the marginal depositor, and hence on the pricing of banks' own deposit services. In this way they have contributed to the competitive pressures that have seen a steady erosion of banks' low-cost deposit base.

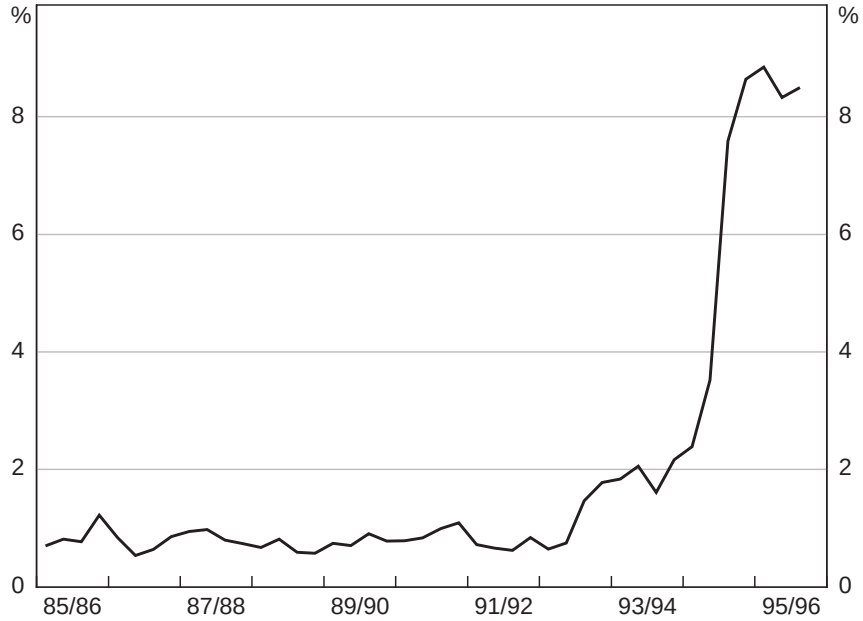
A second example, on the lending side, was the growth of merchant banking. This occurred in two distinct phases – one in the late 1960s and early 1970s, and the other in the 1980s (see Figure 5). Asset price inflation and an expanding demand for credit played a role in both episodes, with these institutions being active lenders at the more speculative end of the risk spectrum. Regulatory constraints on banks also clearly played a big role in the earlier episode but it is significant that merchant banking activity continued to expand rapidly in the mid 1980s after those constraints on banks were removed. The merchant banking sector engages in a wide range of financial activities but an essential characteristic of much of their activity is to provide loans to businesses, funded by borrowing in domestic financial markets or from non-residents. In this way, they perform

the lending and credit assessment functions associated with traditional banking without engaging in retail deposit-taking. Merchant bank assets expanded to a peak of around 13 per cent of the financial intermediaries sector in 1988 but then contracted sharply for several years. They nonetheless remain a significant presence as the largest of the non-bank intermediary categories, currently accounting for just under 10 per cent of total intermediaries' assets.

The third and more recent example of specialist competition is the growth of mortgage managers. These have been in existence since at least the 1970s but it is only in the past few years that they have grown dramatically and emerged as a significant, though still small, competitor to banks in the housing loan market. They currently account for about 8 per cent of new housing loans, compared with a market share of less than 1 per cent only a few years ago (Figure 6). Mortgage managers arrange housing loans largely funded by the issue of mortgage-backed securities that are in turn mainly held by institutional investors. The growth of this market provides a good illustration of the potential for separation of lending from deposit-taking functions in the financial intermediation sector, and also illustrates the role that funds managers can play as providers of funds to specialist institutions.

The market opportunity for mortgage managers arose from a number of factors, discussed in more detail below, that contributed to a widening of the gap between

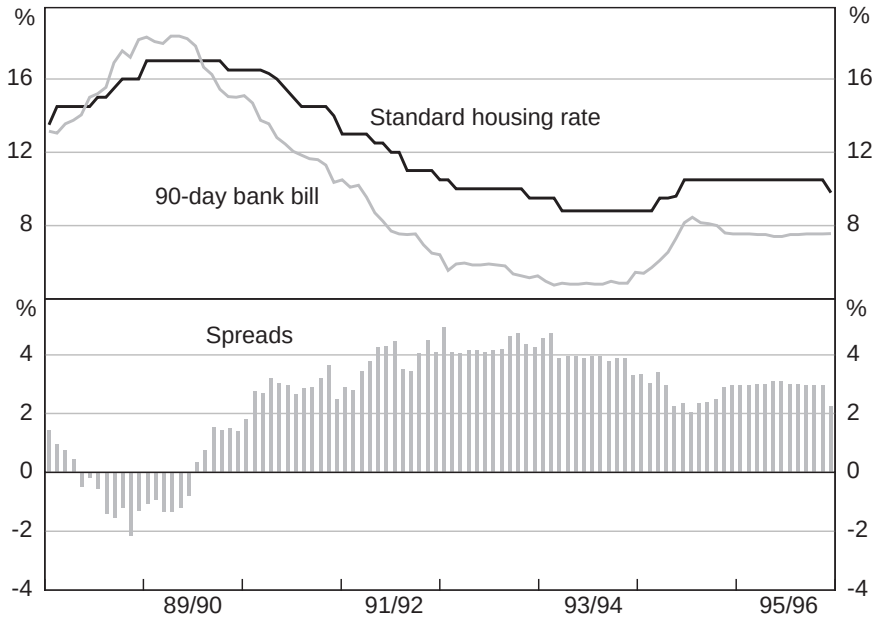
Figure 6: Mortgage Managers' Housing Lending
Per cent of total approvals



Sources: Australian Bureau of Statistics Cat. Nos 5609.0 and 5643.0 and Department of Industry, Science and Tourism.

standard housing loan rates and money-market interest rates; this was particularly evident in 1992 and 1993 when the gap was around 4 percentage points, though it has since narrowed considerably (Figure 7). By comparison, rough estimates suggest that mortgage managers can deliver a residential mortgage product at the bank bill rate plus around 150 to 200 basis points. The widening of the banks' interest differential in this area could be argued to have been partly a cyclical phenomenon; banks typically smooth out the path of mortgage interest rates relative to money-market rates and this means that the difference between the two is likely to be largest at the bottom of the interest rate cycle. But there is also an important structural dimension to this issue (discussed in detail below). Increasing competition for deposits, and a desire to preserve average profit margins, have meant that the overall structure of bank interest rates on both the deposit and lending sides have moved up relative to money-market interest rates. This created the opportunity for specialist lenders, funding themselves at money-market related rates, to undercut the banks and put pressure on banks to lower margins.

Figure 7: Variable Housing Loan and Funding Rates



Source: Reserve Bank of Australia *Bulletin*.

It should be noted that the process of disentangling traditional banking products by specialist institutions or entities is still in its infancy in Australia. In the United States, where disintermediation has been a feature of the financial system for a decade or more, almost two-thirds of residential mortgages and half of the outstanding credit card receivables are now funded through the wholesale markets via securitisation programs. Other entities, such as state and local authorities, are increasingly looking beyond the banking system to fund their activities via the issue of securities backed by their

receivables (water, electricity, gas etc). These practices have the potential to erode further the traditional market for bank funding in the United States and there is no reason to believe, in principle, that a similar process could not take hold in Australia. The issue, essentially, is the efficiencies which can be derived out of the intermediary structure as opposed to the efficiencies of separately producing each of the services implicit in the intermediation process.

3.2 Competition and Margins

An important influence on these competitive developments has been the traditional pricing structure of the banks' joint product mix. This has typically involved very low fees for transactions services, with bank revenue essentially coming from the net interest margin, a system often described as one involving 'implicit' interest payments to deposit holders in the form of free or low-cost transactions services. This pricing structure was sustainable as long as there were reasonably strong natural barriers to the separate production of banks' core services, which was essentially the case up to the 1970s. As noted above, the absence of well-developed securities markets meant that lending and deposit services could not be separately provided, and there was little scope to provide transactions services independently of deposit-taking facilities. The key subsequent development is that, to an increasing degree, separate production of these services is now possible and, as illustrated earlier, the new 'production technology' for basic deposit and lending services is increasingly one which does not require extensive branch networks. To the extent that this is the case (and the trend is still at an early stage) it means that the economic function of branch infrastructure should be viewed as being related primarily to transactions rather than intermediation services. This in turn suggests that, under the prevailing price structure, the provision of transactions services by banks is essentially loss-making and has to be cross-subsidised from net interest earnings.

The pricing structure described above is clearly not one the banks would ideally want. There is a strong economic logic to pricing transaction services more in line with costs, and indeed a wide range of transactions fees have been introduced by banks in recent years. These appear however to remain well short of full cost recovery.[12] The low-price regime on transactions services is essentially inherited from history and banks have faced strong public resistance to changing it. Nonetheless, the situation seems unlikely to be sustainable indefinitely, and changes are occurring. Banks will be unable to compete with specialist institutions while they are required to cross-subsidise payments services which their competitors do not offer.

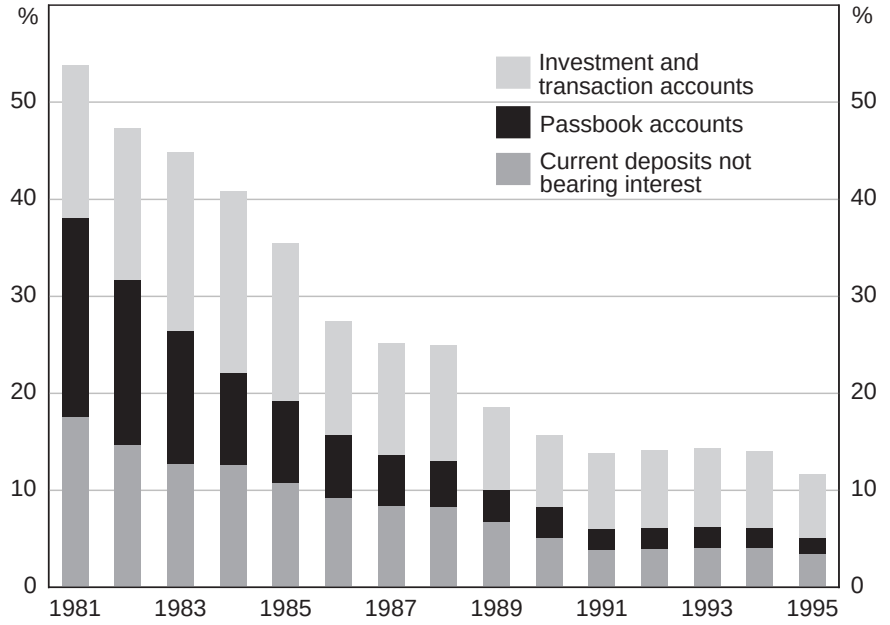
The need to cross-subsidise transactions services and maintain an expensive infrastructure network have important implications for banks' competitive position, particularly when viewed in conjunction with another development, the decline in banks' low-cost deposit base (Figure 8). Low-cost deposits – defined here as non-interest-bearing accounts, statement savings accounts and passbook accounts – currently represent about 12 per cent of the major banks' total liabilities. This is down from over 50 per cent in

12. The Prices Surveillance Authority (1995) concludes that bank transaction services are priced significantly below cost on the basis of allocations of infrastructure costs in line with standard accounting principles. See also Burrows and Davis (1995) for a discussion of the economics of cost allocation for joint products.

1980 and from even higher levels in the 1960s and 1970s. The trend can be attributed to a number of longer-term factors including the effect of periods of high inflation in sensitising depositors to differences in rates of return, as well as competition from non-bank competitors. This shift in the composition of deposits has been an important source of upward pressure on banks' average cost of funds relative to money-market interest rates.

Another factor influencing this relative cost of funds in the past few years has been the decline in inflation and the consequent fall in average nominal interest rates. Since the 'low' interest rates referred to above had little or no scope to fall further, the general fall in market interest rates has necessarily compressed the margin between low-cost and market rates. In other words, the cost advantage derived from a given volume of low-cost deposits has declined at the same time as their share of total deposits has fallen. In a low-inflation environment, there is no reason to expect a significant reversal of this trend.

Figure 8: Low-Cost Deposits of Banks
Per cent of total liabilities



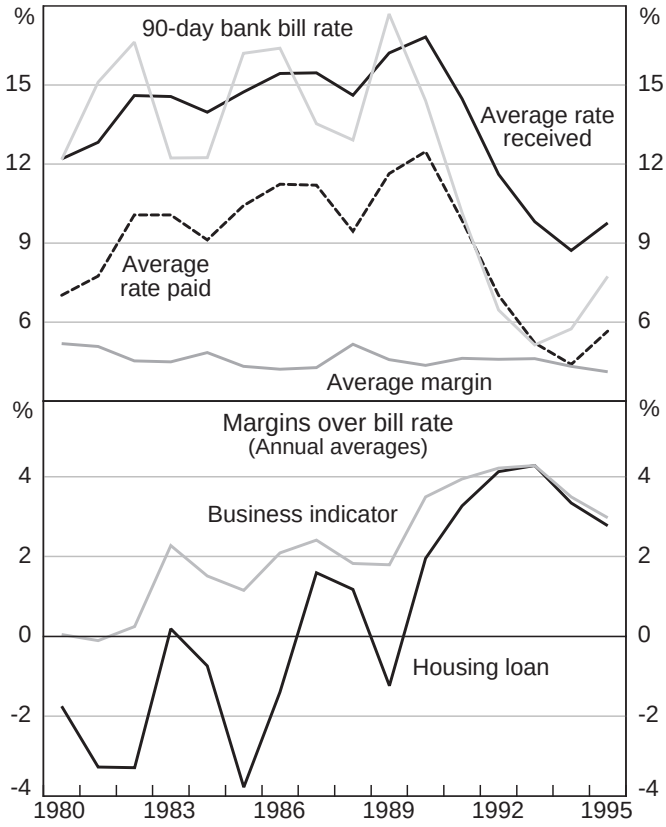
Source: Reserve Bank of Australia *Bulletin*.

Against this background it is useful to look at what has happened to margins between deposit and lending rates. The Campbell Committee expected that deregulation would lead to reduced margins by increasing overall competition and removing constraints that had channelled competition into non-price areas such as the extension of branch networks (Valentine 1991). There has been considerable debate as to whether these and other expected benefits of financial deregulation have been realised, and some borrower

groups such as small businesses have expressed concerns recently about high margins.[13] These concerns partly reflected the fact that key lending rates fell less than one-for-one with cash rates during the extended period of cash-rate reductions in the early 1990s, which was in turn related to banks' tendency to smooth their main lending rates over the course of a cycle. There was also concern that heavy loan-losses incurred by banks made them reluctant to cut gross margins.

The data presented in Figure 9 summarise a number of aspects of these issues. They suggest that average margins have been fairly stable although showing some tendency to fall since the early 1980s. Two features of the data seem particularly striking. The first is the way that average deposit rates and average lending rates have moved together over the course of a number of interest rate cycles. These averages seem much more closely related to each other than to developments in general securities-market interest rates such as the 90-day bill rate. Secondly, abstracting from cyclical movements, both deposit and

Figure 9: Margins



Source: Reserve Bank of Australia *Bulletin*.

13. For a discussion of these issues in an Australian context, see Fraser (1994) and the papers in Macfarlane (ed.) (1991). See also Edey and Hviding (1995) for a discussion of other OECD countries' experiences.

lending rates have moved upward relative to the bill rate over a period of time. This is true both for the averages depicted in the upper panel of Figure 9 and for the main indicator lending rates. Similar behaviour has been observed in a number of other OECD countries that deregulated their financial systems.[14]

In the light of the preceding discussion this behaviour can be interpreted as consistent with a form of joint-product pricing that aims to preserve average margins. With competition having been stronger on the deposit than on the lending side, average deposit costs have moved upward, and the cost of cross-subsidising transactions services has effectively been shifted from depositors to borrowers. It is this pricing structure that is now under pressure from specialist lenders.

The banks have been responding to these pressures on a number of fronts. In the housing loan market, banks have substantially narrowed the gap between their standard mortgage rates and the bill rate in the past two years, first by raising mortgage rates less quickly than the bill rate during 1994, and more recently by interest rate reductions that were a direct response to the competitive pressures outlined above. They also introduced reduced-rate loans like 'honeymoon' loans and 'no-frills' loans. More generally, the retail banks seem to be adopting marketing strategies that emphasise the full-service nature of their products, aiming thereby to differentiate themselves from more specialist institutions. In this regard the ability to smooth interest rates gives standard bank loans a potentially attractive characteristic compared with the new securitised loans.

Banks have also sought to reduce costs through measures to increase operating efficiency, particularly through reductions in branch and staff numbers. Increased account fees can also be thought of primarily as a cost-containment measure, since these fees are still pitched well below cost and appear to be designed mainly to discourage excessive use of transactions facilities. Particularly important has been the structuring of fees to encourage a shift to electronic payment methods. There has been considerable expansion of the ATM network and the number of EFTPOS terminals in recent years (Figure 10), and these and other card-based payment systems now account for more than half the volume of remote payment transactions.[15] A byproduct of this technology, however, and of banks' relatively low transaction charges, has been a greatly increased capacity for bank customers to make low-value transactions. To an important degree the result has been to stimulate demand for additional transactions services rather than significantly displacing demand for over-the-counter transactions at bank branches.[16] Thus, the general logic for higher transactions charges remains powerful.

Against the background of these developments, banks have also set their eyes increasingly on the burgeoning superannuation and funds-management sector as a potential long-term offset to these pressures. Aggregate funds under management currently total over $300 billion and, on latest estimates, banks already control around 25 per cent of that total. Growth of banks' activities in this area has been rapid over the past five years (Table 4). The question of how banks (narrowly defined) can effectively insulate themselves (and their depositors) from the activities of their funds-management

14. See Edey and Hviding (1995).

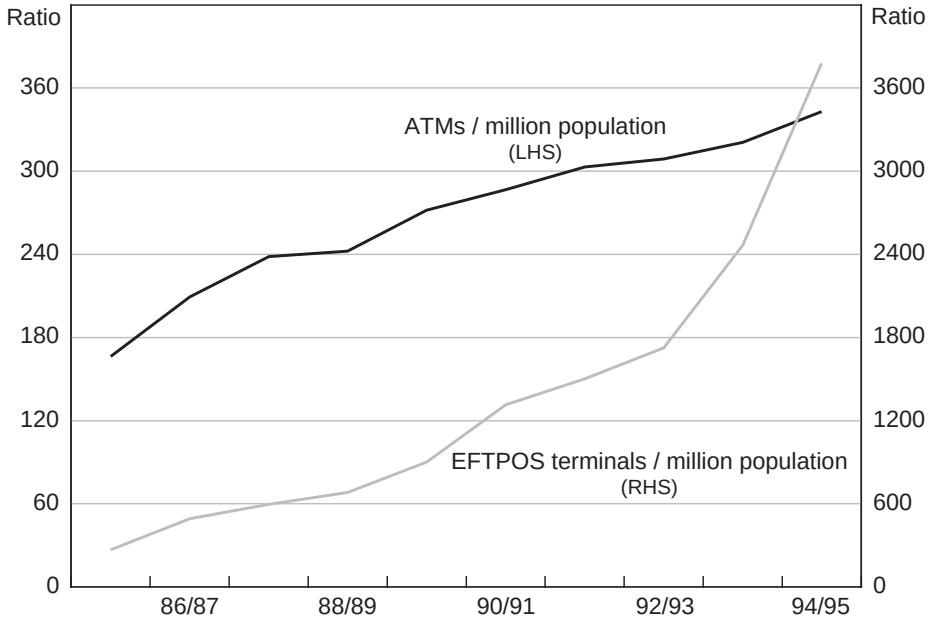
15. See Mackrell (1996).

16. Prices Surveillance Authority (1995), p. 179.

subsidiaries will be one of the ongoing issues facing supervisors and regulators. Another is the extent to which banks should be permitted to offer, or conceivably could offer, superannuation products of some form through their own balance sheets.

It should be emphasised that the competitive pressures, and potential responses analysed in this section are still emerging. Bank profits, on the whole, remain high if judged by recent results and the real pressures would appear to lie ahead.

Figure 10: Electronic Payment Methods



Source: Australian Payments System Council Annual Reports.

Table 4: Assets of Funds Managers[(a)]

Control by ultimate manager, per cent, as at June[(b)]

	1990	1991	1992	1993	1994	1995
Life office groups	45	45	44	42	39	39[(c)]
Banking groups	21	23	23	25	26	25
Other	34	32	33	33	35	36

Notes: (a) Excludes general insurers.
(b) Some estimation involved.
(c) Includes State Bank of NSW funds-management operations.

Source: Reserve Bank of Australia.

3.3 Impact of Foreign Banks

Only two foreign institutions operated continuously as authorised banks in Australia in the postwar period prior to 1985.[17] The absence of a wider foreign banking presence reflected the moratorium on foreign bank entry, discussed earlier, that had effectively applied in Australia since the war. Despite these restrictions, foreign banks did participate in the Australian financial sector via three main channels – through correspondent banking arrangements with Australian banks, through lending to Australian borrowers facilitated by the presence of representative offices and, most importantly, through the activities of foreign-owned or partially owned merchant banks. The merchant banking sector accounted for about 5 per cent of the assets held by intermediaries by the late 1970s and much of that related directly to the activities of foreign-owned institutions.

The emergence of a 'foreign bank presence' in Australia in the absence of 'authorised foreign banks' represents what, with hindsight, appears to have been a novel approach to the definition of banks and non-banks within the *Banking Act 1959*. Section 11 of the Act, for example, draws a distinction between those 'persons' wishing to 'carry out banking business' and those wishing to 'carry out the general business of banking'. The latter required a formal banking authority while the former could be exempted from that requirement. Nowhere, however, were the activities which constituted the 'general business of banking', as distinct from the 'business of banking', specified. Those institutions successfully seeking an exemption under section 11 became part of the non-bank sector. Large numbers of foreign banks entered the Australian market by this mechanism.[18]

A more formal opening of access to the domestic banking system was an important focus of the Campbell Committee. In outlining the case for foreign bank entry, the Campbell Committee argued that foreign banks would add to the competitiveness of the system. The Committee also warned that the contribution foreign banks could make to improved competition should not be exaggerated, given that they were already present in the market. There was a strong sense however that, as banks, such institutions could provide a more comprehensive array of banking services (especially in the retail area), could structure themselves in more efficient ways, and could generally be more competitive than as non-bank entities.

The relaxation of foreign bank entry announced in 1984 saw a limited number of pre-existing non-bank institutions convert to bank status in response to an invitation from the government. There was, in addition, an injection of a number of genuinely new banking entrants and an expansion in the number of foreign banks operating as merchant banks.[19] One feature of the entry requirement was that foreign banks assumed a

17. The Bank of New Zealand and Banque Nationale de Paris. The Bank of China also operated up to 1972, re-opening in 1985.

18. The *Financial Corporations Act 1974* provided that all institutions satisfying the definition of 'money market corporations' (merchant banks) automatically gained a section 11 exemption under the *Banking Act*.

19. The decision to allow an increase in the number of merchant banks operating in the market was against the background of the decision that only a limited number of new banking authorities would be issued. In all, 16 applicants for banking authorities were accepted of a much larger number that applied.

subsidiary rather than a branch structure. This was based on a view that to engage in the full range of banking activities in the Australian market, which encompassed both wholesale and retail activities, it was desirable from a prudential perspective to require capital to be held locally. In addition, it was felt that capital should also be set at a relatively high absolute level to encourage applicants with sufficient financial standing.[20]

The experience of foreign banks from the mid 1980s to the end of the decade, and their impact on the Australian banking system, proved to be mixed. At one level, the introduction of new banks, and the perception of the competition they would bring to the market, brought a new competitive focus to the entire banking system. There were some concrete examples of that process relatively early on. Some of the innovations in retail banking in the mid 1980s, for example, such as the payment of interest on current accounts and improvements to credit card facilities, flowed from the foreign banking sector and were quickly taken up by Australian banks. On the wholesale side, foreign banks continued their 'merchant banking' activities and in that sphere were innovative in product development and in financial and derivative markets. In terms of overall assets, however, the picture was less noteworthy. As a group, foreign banks quickly established around a 10 per cent share of total banking system assets, as assets were shifted from the non-bank to the banking sector, and that proportion was broadly maintained over the remainder of the decade. With only very minor exceptions, foreign banks were not able to make an impact on the dominant position of the Australian banks in the retail and commercial market, where large customer franchises had been established through extensive branch networks.

A second round of foreign bank entry began in 1992 when a generally more open-ended policy was adopted. In contrast to the position taken in the mid 1980s, foreign banks were encouraged to apply for authorisation at any time and in any number and, provided they met the entry requirements, they were permitted to adopt either subsidiary or branch structures. Where a branch structure was chosen, the bank was not permitted to participate in retail finance activities on the grounds that full local supervision and the depositor protection arrangements of the *Banking Act* could not realistically be applied.[21] A number of foreign banks strongly challenged this view but the policy was maintained and remains in force.

The number of foreign entrants increased significantly from 1992 (Table 5). Overall, however, the activities of foreign banks remained relatively small compared to the long-established Australian banks. Their share of banking system assets rose to 14 per cent by 1996 as a result of new entries but, with only minor exceptions, their activities remained heavily focused on wholesale or institutional markets.[22]

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20. A minimum Tier 1 capital requirement was set at $20 million, and subsequently increased to $50 million.

21. For these purposes, retail activities were defined in terms of retail deposit-taking. In brief, branches were not permitted to take deposits from customers unless the initial deposit amount was $250,000 or more. Any deposits taken within foreign bank branches were not extended the benefits of the depositor protection provisions of the *Banking Act*.

22. The noteworthy exception was Citibank which established a highly innovative retail operation. It was very small, nonetheless, relative to most of the established banks.

Table 5: Authorised Foreign Banks in Australia

	1984	1986	1988	1990	1992	1994	1996
Branches	2	3	3	3	3	8	17
Subsidiaries	0	15	15	15	14	13	13
Total	2	18	18	18	17	21	30

Source: Reserve Bank of Australia.

3.4 Financial Markets

Growth of financial-market activity has been a major feature of financial-sector development since the 1970s. Important early developments were the freeing of the CD rate in 1973, subsequent growth of the CD and commercial bill markets, and the introduction of a bill futures market in 1979.[23] Additional impetus came from the introduction of market tenders for treasury notes (1979) and government bonds (1982) and the float of the exchange rate and removal of exchange controls in 1983. New foreign bank entrants after 1985 further stimulated growth and innovation. Another important factor has been the growth of the funds-management sector and the associated demand for risk-management and financial-trading services. In a sense, the increasing liquidity of the main financial markets created a momentum of its own by making it increasingly possible to compare funds managers' performances over short periods and thereby stimulating competition among them as to comparative rates of return. This in turn generated demand for high-frequency financial trading and for new instruments of risk management. Financial-market volatility was itself also a factor in stimulating trading activities and demand for risk-management products.

Important areas of growth were in the markets for foreign exchange and interest-rate products, where turnover grew dramatically in the late 1980s. The other area to expand rapidly was that of financial derivatives, including foreign exchange and interest rate futures, forwards, swaps and options. In many of these areas, the Australian market is quite large in international terms. Australia has the ninth largest foreign exchange market and the sixth largest interest rate futures market in the world, ahead of a number of countries with much larger economies. The markets have also become increasingly sophisticated, though the products most heavily traded have been at the simpler end of the spectrum. Issuance and trading of corporate bonds remain relatively small, however, underlining the point that the growth of financial markets has been primarily related to the risk-management function of these markets, rather than to any shift to securitisation of financial flows to the business sector. Growth of the main markets is summarised in Table 6.

Much of the development and innovation in these markets occurred within the banking system. Similarly, trading activity in the new financial markets has been largely dominated by banks. For example almost 90 per cent of foreign exchange dealing and

23. This was the first interest rate contract offered on an exchange outside the United States.

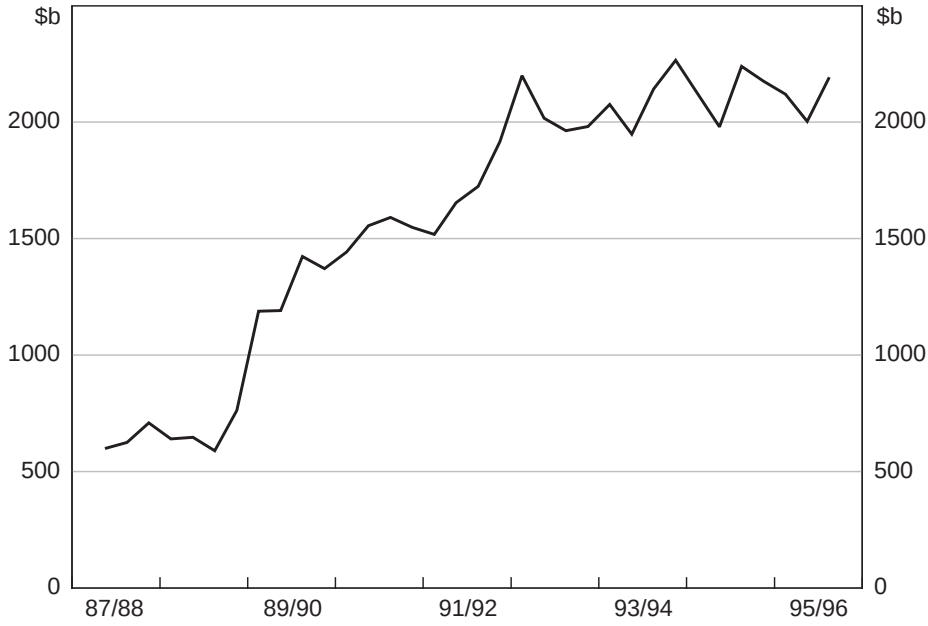
Table 6: Average Daily Turnover in Financial Markets
$ billion

Year ended June	Commonwealth treasury bonds		State govt bonds	Bank bills		Equities		Prom-issory notes	Foreign exchange		
	Physical	Futures		Physical	Futures	Physical	Futures		Swap	Spot	Forward
1980	0.1	—	—	—	—	0.03	—	—	—	—	—
1985	0.3	—	—	0.3	0.5	0.07	0.07	—	0.8	2.0	0.3
1990	1.2	1.7	2.0	1.7	11.4	0.23	0.19	0.5	7.5	8.6	1.4
1995	6.0	6.0	2.9	1.0	19.0	0.47	0.44	0.8	14.0	7.2	1.0

Source: Reserve Bank of Australia *Bulletin* and Occasional Paper No. 8.

around 80 per cent of over-the-counter interest-rate derivatives dealing fell to these institutions.[24] Figure 11 shows the rapid expansion in banks' derivative activities, especially over the latter part of the 1980s. Financial market growth has thus provided an important field for banks to expand their activities during the post-deregulation period.

Figure 11: Banks' Derivatives Activity
Gross, notional principal outstanding



Note: Data from December 1987 to March 1989 are estimated.
Source: Reserve Bank of Australia internal.

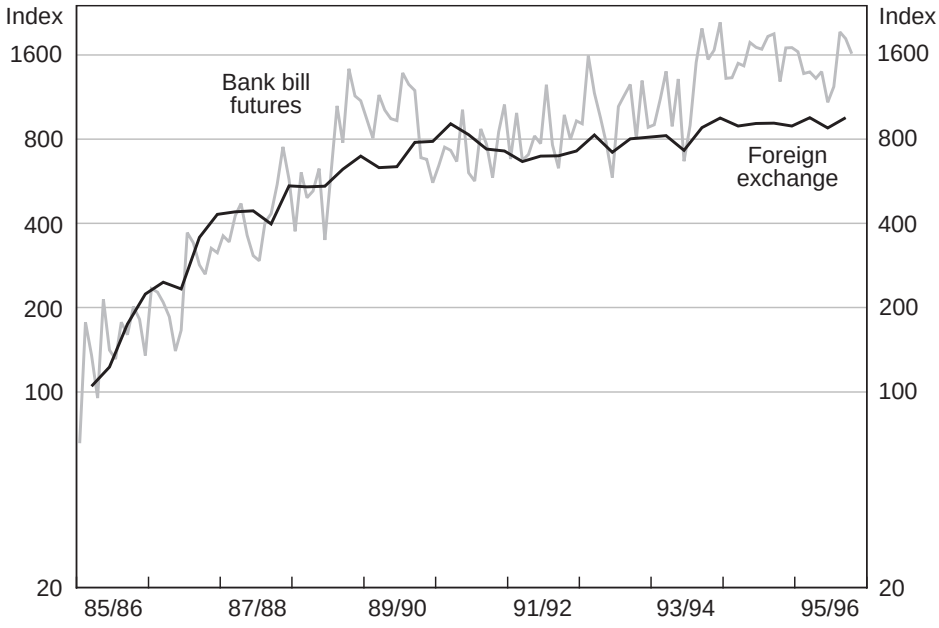
24. For a review, see Reserve Bank of Australia (1996).

Financial market trading is highly competitive and margins on established products generally thin. This has been increasingly the case in recent years. Good returns can be obtained if new products or new financial markets can be exploited but growth and profitability potential decline as the 'product cycle' matures. This phenomenon is clearly evident in the two largest financial markets (foreign exchange and bill futures) illustrated in Figure 12, although to some extent the recent slower growth may be related to more stable trading conditions and a consequent reduction in demand for risk-management products. A number of major market players have reduced their financial trading activities or withdrawn from particular segments where profitability is lowest. Since 1994, many banks have greatly scaled down their proprietary trading (active position taking).

This characteristic of the product cycle suggests that future profitability of financial market activities will depend on continued growth and innovation in these markets. On that score, prospects for growth are likely to be supported by continuing growth of the funds-management sector (see Section 4). The scope for continued product innovation, however, is hard to predict. Equity and commodity-related derivatives are gaining in interest amongst the more specialist market players and the more sophisticated institutions have begun to investigate the potential offered by the development of other new markets, such as the emerging market for electricity in a number of Australian states. There is also a very tentative examination of the scope for developing credit derivatives by some institutions, an innovation that is still in embryonic form even in the United States. Many institutions are looking also at the use of derivatives to differentiate and add value to their

Figure 12: Financial Market Turnover

1985 = 100, log scale



Sources: Reserve Bank of Australia and Sydney Futures Exchange.

balance-sheet products via the use of swaps and options, a potential growth area for derivative activities. The question remains, however, as to whether the next generation of developments within the financial markets will offer anything like the same potential for growth in revenues as occurred in the 1980s.

3.5 Profits, Productivity and Efficiency

Although banking was highly regulated prior to the 1980s, with controls over most lending rates and various controls over the composition of bank asset portfolios, entry was also tightly restricted. While the former influence acted to limit profitability of the banking sector, the latter would have tended to enhance it. Available data suggests that profitability of banking in Australia, in fact, grew steadily over the 1960s and 1970s, probably reaching a peak by the early 1980s (Figure 13). At that point, profitability in banking appeared to be well above the average of other Australian industrial sectors (Table 7).

The structural shifts to the financial system that followed deregulation saw some of the assumptions underlying banking in Australia begin to break down. Profitability stabilised, albeit at a relatively high level, in the first half of the 1980s as the combination of increased freedoms within the system interacted with greater potential for price competitiveness and, around the middle of the decade, increased competition from new entrants to the market. Over this period, Australian banks sought to expand their operations both domestically and internationally in the search for new sources of revenue

Figure 13: Major Banks' Profitability
Return on shareholders' funds

Source: Banks' financial statements.

Table 7: Earnings
Per cent of shareholders' funds

	1980-1982	1990-1992	1994	1995
Banks and finance	14.6	3.5	14.4	16.0
All companies	10.8	4.9	7.2	8.0

Source: Australian Stock Exchange Financial and Profitability Study.

and comparative advantage. For some banks, this process has continued to the present time. For others, the process of overseas expansion was halted and reversed in the early 1990s (see below). There were tentative signs by the middle years of the 1980s, however, that profitability in banking may have begun to ease a little from the high points of earlier years.

Further interpretation of the effects on profitability of the structural changes in the financial sector was complicated greatly in the late 1980s and early 1990s by the effects of the first post-deregulation cycle in the banking sector (and the most significant cycle in the banking system since the 1930s). Profitability in the banking system fell sharply with the collapse of the asset boom which had fuelled much of the speculative lending activity of the late 1980s, and the recession of 1990/91. While the timing of losses varied, all the main groups of banks – major, state and others – registered overall losses at some point between 1990 and 1992. Foreign banks as a group were the hardest hit with losses amounting to 30 per cent of their capital in 1990 alone. Between 1986 and 1990, aggregate foreign bank losses absorbed an amount equal to their original start-up capital. State banks lost heavily over the period (with concentrated effects in Victoria and South Australia) and some major banks suffered large losses in the early 1990s. Similar episodes of losses, in some cases more severe, were experienced in the non-bank sector (particularly amongst merchant banks) as well as in the banking systems of other countries over a comparable period.[25]

The response to the downturn in profits around the turn of the decade was a process of rationalisation which continues today. Costs, which had risen over the 1980s, became a new focus as did the viability of many of the overseas operations which had expanded in the previous decade. Domestically, the major banks especially sought to reduce the number of branches and to reduce staff levels, which had expanded rapidly between 1985 and 1989. These factors, together with improved economic conditions, and the eventual rundown in stocks of problem loans, saw profit levels in banking rise again to levels previously seen in the early to mid 1980s. Nonetheless a question mark remains concerning the extent to which banks will be able to maintain these levels of profitability as competitive forces become more pronounced in the period ahead. The widespread presumption, and one of the key themes of this paper, is that underlying banking

25. Similar experiences occurred in a range of different countries over a comparable period (the United States, Japan, parts of Europe and Scandinavia). This suggests that the processes which led to the cycle in the banking sector in Australia were not unique and may have been derived from basically similar underlying causes (Macfarlane 1989; Borio 1990; and BIS 1993).

profitability is on the wane, and it is this factor which has driven much of the debate on where the banking and financial system is headed in the longer term.

A more general question, and one that has been the subject of considerable debate, concerns the nature and extent of net public benefits from financial deregulation. The broad outlines of this debate are well known.[26] Financial deregulation was expected to bring a variety of efficiency gains, and a convincing argument can be made that many of these have been delivered – for example, increased diversity of choice for buyers of financial services, increased product innovation including a wide range of new retail banking services, higher returns to depositors and removal of non-price credit rationing induced by regulatory constraints. Moreover, as alluded to above, there are good reasons for thinking that reductions in lending margins are likely in the years ahead. The costs usually cited as coming from deregulation are those associated with the financial cycle that followed the deregulation period – the lowering of credit standards, excessive credit expansion and the resultant loan-losses and balance-sheet contraction that contributed to the severity of the early 1990s recession. Whether these transitional costs could have been avoided by alternative approaches to macroeconomic management or to financial regulatory policy is another question.[27] As far as regulatory policy is concerned, it is not clear that some sort of transition to a deregulated system could have been avoided, given the shrinkage of the regulatory base that was occurring under the old system. Of course, none of this debate is unique to Australia.

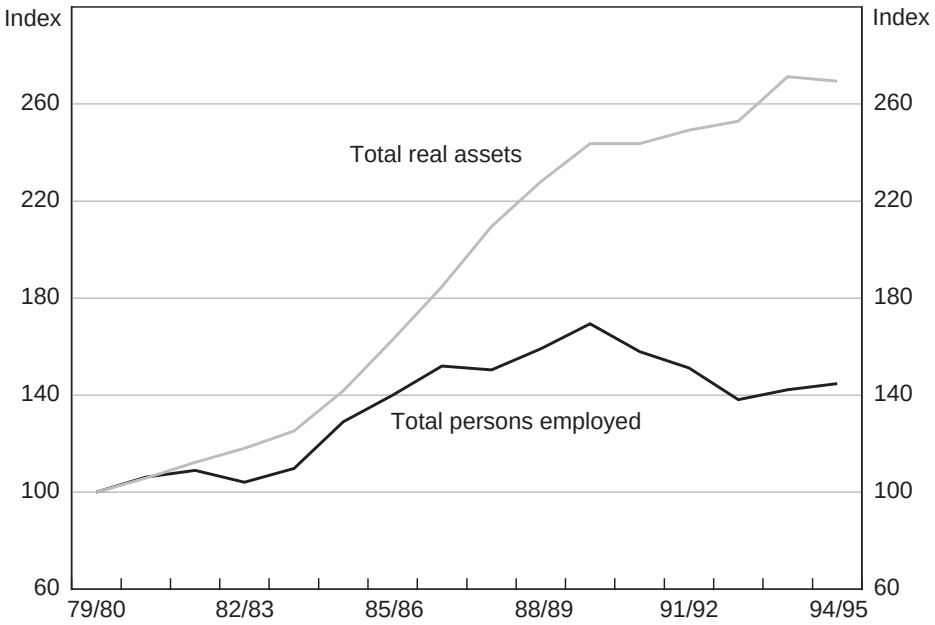
One reason that this debate has tended to be inconclusive is that there is no agreed method of measuring the financial sector's output and efficiency. Essentially two types of approaches are available – what might be termed the output and the income approaches.[28] Output-based approaches attempt to measure the production of services directly using indicators of the volume of services performed, such as transactions processed or assets under management. These measures are subject to the criticism that they do not necessarily capture the real value of output to the consumer – the argument that deregulation has induced greater financial turnover but that it is not particularly productive.[29] Income-based approaches aim to solve this problem by defining output as the real net revenue that financial intermediaries earn.[30] The problem with this is that it fails to distinguish price and volume movements – deregulation can be expected to have reduced the cost but raised the volume and quality of financial services supplied, and revenue measures do not separate these components.

For what they are worth, simple output indicators such as the one depicted in Figure 14, based on total assets, suggest that major increases in financial-sector productivity have occurred since the early 1980s. Here it is noteworthy that, after an initial period of growth in the mid 1980s, financial-sector employment has contracted

26. See Perkins (1989), Harper (1991), Phelps (1991) and Edey and Hviding (1995).
27. Concerning issues of macroeconomic management, and specifically monetary policy, see Macfarlane (1991).
28. For further discussion of these conceptual issues, see Colwell and Davis (1992). A third approach, where output is measured by the volume of inputs, essentially assumes zero productivity growth.
29. See Stiglitz (1993).
30. This is essentially the approach taken in the national accounts.

considerably, notwithstanding the continuing growth in financial activity. Moreover, in one important sense, that growth is understated by asset measures because off-balance sheet services have grown even faster. Other direct measures of productivity such as transactions processed per employee, ATM and EFTPOS facilities and the like, would similarly show major increases.

Figure 14: Financial Sector
Index 1980 = 100



Sources: Australian Bureau of Statistics Cat. No. 6203.0 and Reserve Bank of Australia *Bulletin*.

4. Funds Management

A basic distinction in principle can be made between intermediaries, which offer deposit and loan services on a capital-guaranteed basis, and funds managers, which manage but do not bear investment risk on behalf of their account holders. This distinction is reflected in the differing balance-sheet structures of the two types of institutions. Financial intermediaries require capital in order to shield depositors from investment risks whereas funds managers have a structure in which investment risk is borne by the members; in effect, members' funds are a form of equity. To a large extent the two sets of institutions have developed separately in Australia, and their structure and growth need to be explained in terms of rather different forces. It was also argued earlier that households have tended to view deposits and funds under management as quite distinct products and not closely substitutable; at any rate, the broad historical experience seems consistent with that interpretation. Nonetheless, a number of areas of growing competitive interaction between intermediaries and funds managers can be identified, including the increasing involvement by banks in funds-management activities already

discussed in Section 3. The discussion that follows focuses mainly on the life insurance and superannuation sector, which comprises the bulk of the funds-management sector.[31] We first look at the historical sources of growth of these institutions and then move on to consider the issue of competition between funds managers and intermediaries.

4.1 Life Insurance and Superannuation: Sources of Growth

Historically the life insurance and superannuation sector has represented around 20 to 25 per cent of the total assets of the Australian financial system. It is currently a little above that range, having grown rapidly in recent years. The structure of the industry has been influenced by a number of major policy developments during the past 10-15 years. Three were particularly important.

The first was a shift in the tax treatment of superannuation. Prior to 1983 superannuation was taxed at extremely low effective rates, with contributions fully deductible, earnings untaxed, and only a small tax on final benefits. Subsequent tax changes (the most important of which were made in 1983 and 1988) reduced this concessional treatment substantially by introducing or raising taxes at all three of these levels; the treatment remains concessional relative to other financial savings, but much less so than previously.[32] Ironically these changes, by reducing inequities and fiscal revenue costs, laid the foundation for subsequent expansion by making private superannuation a more suitable vehicle for mandatory saving. However, the successive layers of tax changes have enormously increased the complexity of superannuation and appear to have contributed to rising administrative costs for superannuation funds.

The second main policy development was the introduction of award superannuation beginning in 1986, when the Industrial Relations Commission endorsed a claim for a general employer-provided superannuation benefit, set initially at 3 per cent of income. This benefit was gradually incorporated into employment awards as they came up for renegotiation over the next several years. Payments were directed either into existing funds or into union-created industry funds which in other respects were the same as those already in existence (that is, managed by private funds-management firms); these funds now represent the fastest-growing part of the superannuation industry, although their asset base remains small. A consequence of this history is that many of the structural features of superannuation coverage for the newly-covered employees (for example, the choice of fund, and the nature of benefits provided) are written into awards which continue to govern those basic conditions under the newer government-mandated scheme.

The third main development was the introduction of the Superannuation Guarantee Charge in 1991. This gave the mandatory system its current basic shape by legislating a timetable for further increases in contributions and setting tax penalties for non-compliance. The target level of employer contributions, to be phased in over a number of years, was set at 9 per cent. Further policies announced in 1995 specified a

31. Cash management trusts and other unit trusts are also usually classified as funds managers, although in some respects (particularly in the case of cash management trusts) their activities resemble those of deposit-takers. Some aspects of these institutions are discussed in Sections 2 and 3.

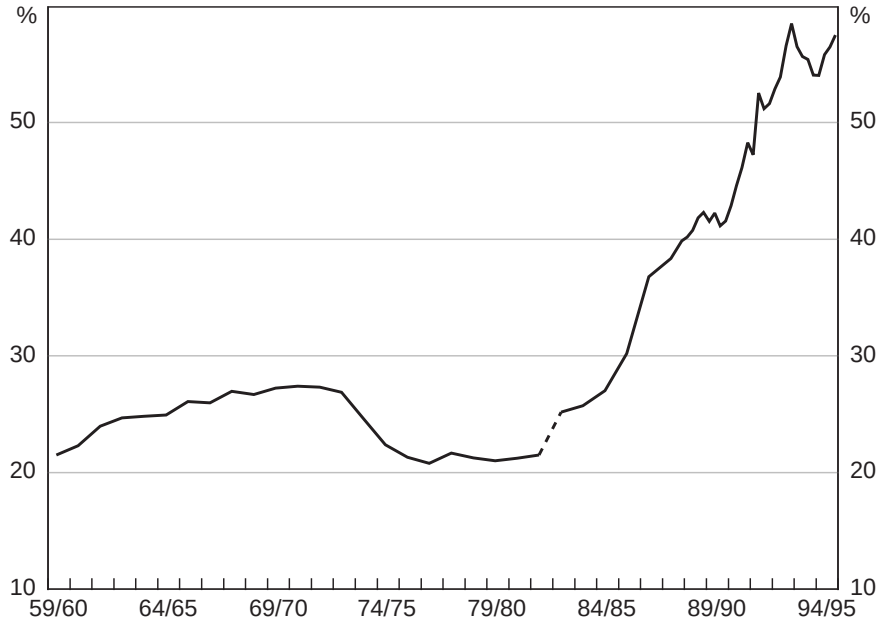
32. Fuller discussions of these tax issues are provided by Edey and Simon (1996) and FitzGerald (1996).

timetable for supplementary contributions by employees of 3 per cent, with a matching contribution from the federal government, to bring the total contributions rate to 15 per cent by 2002. These broad parameters now have bipartisan political endorsement, although the new government has indicated that the delivery method for the employee and government contributions could still be varied.

The higher contributions rates resulting from these policies can clearly be expected to have a major impact on the industry, and indeed on the financial system as a whole, in future decades – issues to be taken up by other papers in this volume.[33] Already the proportion of employees covered has increased dramatically from around one-third of private-sector employees in the early 1980s to around 90 per cent at present. But this increase has yet to have a significant impact on the sector's overall asset growth, which is largely explained by other factors outlined below.

Trends in the superannuation sector's overall size and its sources of funds are summarised in Figures 15 and 16.[34] Broadly, the historical growth of the superannuation sector can be divided into three phases. The first phase, which ended in the early 1970s, was one of moderate and fairly steady growth. In the second phase, which comprised

Figure 15: Assets of Life Offices and Superannuation Funds
Per cent of GDP

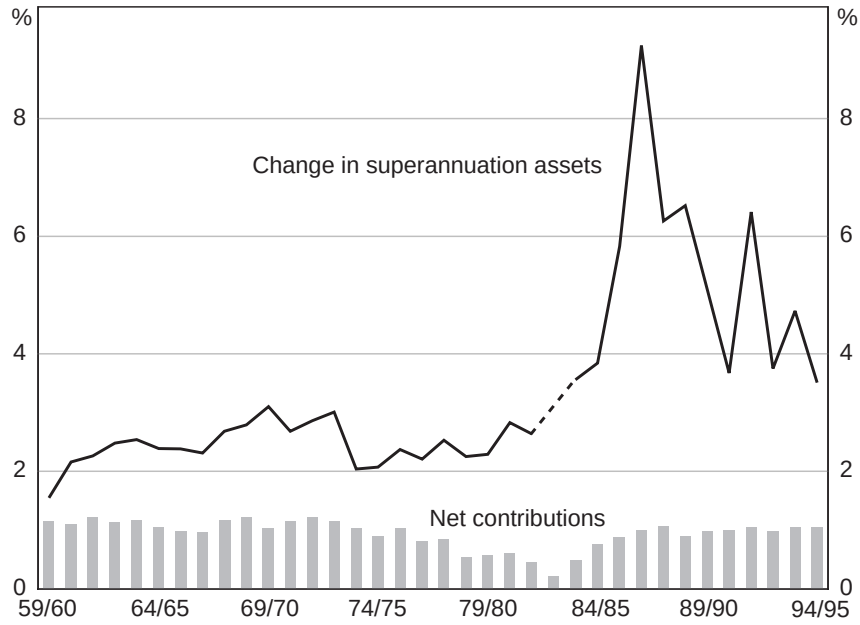


Sources: Reserve Bank of Australia Occasional Paper No. 8 and Australian Bureau of Statistics Cat. No. 5232.0.

33. Projections by Knox (1995) suggest that the superannuation sector could roughly double as a ratio to GDP, from its current level of 40 per cent, over the next 25 years, eventually reaching something like four times GDP when the system reaches its peak asset holdings.

34. For statistical purposes this discussion treats life insurance and superannuation funds as a single aggregate because their activities are similar and much of the historical data does not distinguish between the two.

Figure 16: Net Contributions and Growth in Superannuation Assets
Per cent of GDP



Sources: Australian Bureau of Statistics Cat. Nos 5204.0 and 5232.0 and Reserve Bank of Australia Occasional Paper No. 8.

most of the 1970s, superannuation assets shrank relative to nominal GDP, largely reflecting poor earnings performance and high inflation. The third phase, from the early 1980s onward, has been one of rapid expansion in which total assets more than doubled as a ratio to GDP, although this may have slowed down in the latest few years. The data presented in Figure 16 divide the sources of superannuation asset growth between net new contributions and a residual representing earnings on existing assets and capital gains. Although net contributions have fluctuated significantly in some periods, it is apparent that most of the variation in overall growth performance is attributable to variation in the earnings and capital gain component, rather than in contributions.[35] The three growth phases outlined above correspond broadly to periods of moderate, negative, and high real rates of return on financial assets, as summarised in Table 8.

On the basis of currently available data, aggregate net contributions to superannuation funds do not yet show the upward trend expected to result from the compulsory plan.[36] A number of possible reasons can be given for this. First, there is likely to be a strong cyclical influence on net contributions. They fell substantially in the recession of the early 1980s, when withdrawals related to early retirements are likely to have been

35. Capital gains are likely, however, to be understated in the 1960s and 1970s, and overstated in the early 1980s, as a consequence of the widespread use of historical-cost valuations prior to the 1980s.

36. These data should be interpreted cautiously, however, as they have in the past been subject to substantial revision.

Table 8: Superannuation Fund Earnings Rates

	Average earnings rate	Inflation rate
1960s	5.2	2.5
1970s	6.8	9.8
1980s	14.9	8.4
Early 1990s	6.8	3.0

Source: Australian Bureau of Statistics Cat. Nos 5204.0 and 6401.0. Earnings defined as the difference between change in assets and net contributions.

particularly important. This may again have been a factor in the early 1990s. In addition, many voluntary schemes contain a tranche of employee-contributed funds which do not have to be preserved to retirement but can be withdrawn on leaving a job.[37] There is also provision to allow early withdrawal of funds in cases of hardship. For all these reasons, recessions can be expected to result in significantly increased withdrawals from superannuation funds as jobs are lost. Secondly, many employers were already satisfying, at least partly, the requirements of the compulsory plan under pre-existing voluntary arrangements. This has allowed some scope for absorption of the compulsory scheme into existing arrangements, and has meant that the aggregate effect of the new compulsory schedule has so far been relatively small; but it can be expected to increase as the mandatory contributions rate increases significantly above levels currently prevailing. Thirdly, an important factor in the second half of the 1980s was the phenomenon of overfunding of existing defined-benefit schemes. High rates of return meant that surpluses were accumulated in many of these schemes, enabling the employers who sponsored them either to withdraw funds, or to finance their superannuation liabilities with reduced contributions. Finally, it is possible that increased tax rates on superannuation savings after 1983 have discouraged voluntary contributions.[38]

To summarise these trends, it is apparent that most of the variation in the growth of superannuation funds' assets in recent decades is attributable to changes in the funds' earnings rates, combined with the fact that the long-term nature of superannuation accounts tends to mean that earnings are locked in and automatically reinvested. Although a sustained lift in net superannuation contributions is projected for the future under current policies, there is little evidence of that so far in the available data. This observation is relevant to debate as to the potential for compulsory superannuation to divert household funds that would otherwise have gone to financial intermediaries.[39] On the basis of the trends outlined above, claims that this has already occurred to a significant degree would not be substantiated. Nonetheless, competition for new savings between banks and superannuation funds is likely to be an important issue in the future. Most

37. Recent regulatory changes restrict this right of withdrawal, subject to grandfathering of existing withdrawable amounts.

38. There is also a serious longer-term policy concern: the potential for funds to leak from the compulsory scheme due to incentives favouring early retirement and dissipation of accumulated savings. See Edey and Simon (1996) and FitzGerald (1996).

39. This issue was discussed by the Martin Committee report (1991).

projections of the impact of compulsory superannuation assume a degree of crowding out of other forms of saving,[40] implying a reduced flow of household funds into other savings vehicles as compulsory superannuation flows increase. To the extent that this occurs, however, it may affect households' direct asset holdings more than deposits with intermediaries, since the former are more likely to be regarded as closely substitutable with superannuation accounts.

4.2 Competition with Intermediaries

Related to this issue is the more general question as to whether the structure of financial institutions is changing in a way that brings funds managers and intermediaries more directly into competition, through overlap in their functions or increasing similarity of product lines. One aspect of this, already discussed in Section 3, is the involvement of banks in funds-management business through subsidiaries. In principle however, the existing regulatory and prudential guidelines keep these businesses separated. For example, banks are not permitted to offer funds-management products on their own balance sheets or to apply their capital directly to funds-management operations.

Putting that aspect aside, a good general case can be made that the two sets of institutions have operated in fairly distinct markets. On the assets side of the respective balance sheets, the banks' core business of direct lending can be contrasted with the life and superannuation sector's main investments in debt securities, equities and property. However, one area of overlap historically was that life offices were significant mortgage lenders for a period of time up until around the early 1970s. Their involvement in mortgage business reflected a number of conditions prevailing at the time, including the banks' inability to meet fully the underlying demand, and the relatively early stage of development of alternative mortgage lenders. The life offices were also able to link their loans with the provision of whole-of-life policies which benefited from generous tax treatment. Life-office mortgages were generally on fixed-interest terms, which meant that their profitability declined substantially as the general level of interest rates rose in the 1960s and 1970s. Total direct lending by life offices has declined steadily in relation to their balance sheet, dropping from around 40 per cent of assets in the late 1950s to around 7 per cent at present. Similarly, superannuation funds (to date at least) have only a small involvement in direct lending (Table 9).[41] The growth areas for investment by life and superannuation funds have for a number of years been in equities and foreign assets. More recently, however, some life offices have again become more active in the home-mortgage market, seeking to take advantage of the same kinds of competitive opportunities as the mortgage managers.

In terms of liabilities, the basic differences in financial structures of intermediaries and funds managers have already been noted. Superannuation fund liabilities are the long-term savings of their members, whereas bank liabilities are a combination of

40. Official projections are discussed in Saving for Our Future (1995). These assume that one-third of the projected increase in superannuation contributions is offset by reductions in other forms of saving. Similar non-official estimates are also available. See Covick and Higgs (1995) and Corcoran and Richardson (1995).

41. The 7 per cent balance-sheet share shown in Table 9 is likely to be overstated, as it includes loans to public authorities by public-sector superannuation funds.

Table 9: Assets of Superannuation Funds
December 1995

	$ billion	Per cent
Cash and short-term bank instruments	40.4	14.5
Loans	20.7	7.4
Fixed interest	53.7	19.2
Equities	99.2	35.6
Property	24.2	8.7
Foreign	37.2	13.3
Other	3.4	1.2
Total	279.0	—

Source: Australian Bureau of Statistics Cat. No. 5232.0.

transaction balances, short-term savings and marketable-debt instruments. The banking system in Australia has not traditionally been an important vehicle for longer-term saving,[42] so the competition with the long-term savings institutions for household-sector funds has not been particularly strong. This short-term/long-term distinction reinforces the conceptual distinction between capital-guaranteed deposits with intermediaries, and funds-under-management which are subject to investment risk. On the basis of these two sets of distinctions, intermediaries and funds managers have historically been competing for household funds in quite different areas of the market.

In a number of respects, this neat division is becoming less clear cut. Specialist funds-management institutions, such as unit trusts, are able to offer a range of short-term investment services, some of which closely resemble deposits, and these institutions have grown substantially in recent years. Increasingly banks are offering the same services, but not on the balance sheet of the bank itself. Also important is that the superannuation sector has become a major holder of essentially mobile or short-term savings of retirees. This trend has been boosted by increasing rates of early retirement, the wide availability of lump-sum retirement benefits and the advent of rollover funds, which retain the status of tax-favoured superannuation vehicles but offer some of the characteristics of shorter-term savings.[43] This has provided a category of relatively high-wealth individuals with a highly attractive alternative to financial intermediaries for holding what are fairly liquid balances. Another important consequence of these developments is that the funds-management sector has itself become an important provider of funds to financial intermediaries. For example around $40 billion, or 15 per cent of superannuation assets are currently held as bank securities or deposits with financial institutions, a significant proportion of these institutions' liability base. Growth of these 'wholesale' sources of funds to the banks represents a potential source of upward pressure on their average cost of funds.

42. This view is documented by Edey, Foster and Macfarlane (1991).

43. Following rule changes in 1992, rollover-fund operations can now be carried out within ordinary superannuation funds.

The banks clearly believe there are advantages to be gained from combining their intermediation role with funds-management activities, and have pushed for allowance of more direct involvement in retirement-saving products, as well as having introduced a range of over-the-counter investment products in recent years. These developments, and the changing nature of the funds-management sector itself, point to increasing areas of overlap between the products offered by banks and funds managers. Although the legal distinction between capital-guaranteed and other products is preserved, the system seems to be moving towards a spectrum of more closely substitutable products in place of the clear traditional dividing line between deposits and funds-management services.

5. Conclusions

A feature of the historical experience reviewed in this paper has been a widening of competition between banks and other suppliers of financial services. Developments in financial regulation have been an important, and familiar, part of the story. Regulatory constraints contributed to the loss of the banks' initial dominance of financial intermediation, and the removal of those constraints stimulated some of the important subsequent trends – a recovery in banks' market share, a general expansion in the volume and range of financial activity and stronger competition from new entrants. But to a significant degree, regulatory policies were responding to pressures for change rather than being an initiating force, and they were arguably more important in shaping the speed and timing of structural changes than their underlying direction.

The deeper underlying forces for change have been developments in technology, which transformed supply conditions in the industry, and their interaction with the cost and pricing structures of traditional intermediation. The net effect can be viewed as a general shift in the nature of the 'production technology' of financial services. Traditional banking involves a joint-production technology that produces deposit, lending and transactions services within a given institution. This structure has faced an increasing challenge from separate-production technologies: that is, from specialist enterprises that efficiently produce a single line of financial service, such as cash management accounts, payment services or securitised mortgages. Similarly, financial market trading can be seen as a specialist product that does not need to be part of a full-service banking operation.

This separation of basic product lines has had important consequences for the competitive position of the major banks. Already single-service providers have been able to compete vigorously with banks in key lines of business and, although banks retain a large share of deposit and loan markets, this competition has clearly begun to affect their interest margins. Competition has also put pressure on banks to reduce the cross-subsidisation of payments services, in turn contributing to the general trend towards separate pricing and production of individual services. The separation of product lines also affects the nature of the core business of banking. In contrast to the traditional structure, where the core business was readily identifiable as the joint production of deposit, loan and transactions services, there can increasingly be seen to be several separate core products, not all of which need to appear together in any one institution. In this sense, the special position of banks, at least within the financial intermediation sector, is becoming less easy to define.

It is important not to exaggerate the extent to which these trends have already progressed. The major banks continue to run large traditional deposit and lending businesses which still account for the bulk of their profits and for most of the assets of the financial intermediation sector. Securitisation is much less advanced in Australia than in several countries with otherwise comparable financial systems. Nonetheless, there has been a growing functional overlap between different providers of financial services, which can be seen as taking place on three levels.

The first level, and the one that is furthest advanced, involves competition between banks and other intermediaries. Although banks dominate the intermediation sector in terms of balance-sheet size, there is strong competition with other intermediaries and a high degree of overlap between the activities of the main groups of institutions – banks, building societies, finance companies and merchant banks. This has been amply testified by the ease with which business could move back and forth between these groups of institutions over the past few decades, reflecting the shifting advantages conferred by changes in regulatory policy.

The second level of the evolving competitive scene involves competition between intermediaries and funds managers. This is much less advanced than competition within the intermediaries sector but, in a number of respects, the traditional functional separation between intermediaries and funds managers has been breaking down. One aspect of this has been the growth of banks' own funds-management operations (although these remain separated from banks' on-balance sheet activities). At the same time there has been an increasing involvement of funds-management institutions in intermediation activities like mortgage lending. Also important has been the provision of short-term investment facilities by both banks and funds managers, which bring funds-management products more directly into competition with bank depository services.

Finally, there is a third level of potential development involving competition between financial and non-financial businesses. This has not occurred to any significant degree in Australia although there are a number of examples in overseas markets of non-financial businesses entering the market as financial service suppliers.[44]

All this raises the question of where are the remaining natural boundaries (if any) between the different suppliers of financial services. An important lesson from earlier regulatory policy experience was that regulations tended to break down where they placed artificial constraints on competition between institutions performing essentially similar functions. The analysis presented in this paper suggests that there has been a tendency for functional overlaps between institutions to increase but that, in a number of important areas (the second and third levels outlined above) this process has not yet gone very far. How far the process continues in the foreseeable future will depend importantly on the regulatory policy response, and particularly on whether policies are aimed at removing remaining institutional distinctions or reinforcing them.

44. See Llewellyn (in this volume) for a discussion of this trend.

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Discussion

1. Vince FitzGerald

Overall, this is an excellent background and discussion opening paper for this conference, presenting:

- a concise chronology of relevant changes in the Australian financial system;
- a well-selected portfolio of quantitative exhibits, in the familiar RBA style, showing some of the major trends; and
- a good discussion seeking to identify some of the drivers of change.

I have only a few points to make.

First, I think the paper could have brought out more strongly what a challenge the financial sector is becoming to taxonomers. We are increasingly – and correctly – talking about it in the same terminology we apply to other services markets – that is, in terms of *products* or services meeting particular customer needs, yet we have not traditionally collected data in these terms. No doubt this is partly due to the joint provision and joint pricing practices which so long prevailed – obviating the need for providers (such as banks) to maintain data on the output or volume, costs and pricing of separate financial services. Rather we collected data on financial stocks and flows, mainly in *institutional* categories. These categories looked fairly stable in the past but are plainly less stable now than the overall demand for the generic products.

For example, where can one find data on the markets for deposit services or transactions services? What prices are being received for what quantum of these services supplied by what providers to what customers? Assets, liabilities and even turnover data for types of institutions do not provide such measures. Banks may have dominated these areas historically, but what about the non-banks which were and are providers of essentially the same kinds of services (for example, building societies and other 'intermediaries', in the sense of this word adopted by Edey and Gray, many of which later became banks)? What does Figure 2 convey other than that some long-standing players in this market, who weren't formerly in the bank 'club', now are? Should we now also count, for example, payroll companies, IT companies like Microsoft or Intuit which are beginning to do transactions business in the United States and touching our market and others via the Internet? Telstra and Optus in the near future?

The paper does say at the outset that it will raise some questions about the boundaries between traditionally defined *institutions* which form the basis for existing supervisory/regulatory structures, but in fact it seems to accord these institutional boundaries – and indeed existing policy and regulatory structures themselves – considerable respect throughout and, if anything, goes out of its way to defend their continuing relevance. Two examples are the statement in Section 2.3.3 that 'household behaviour seems to make a clear distinction between deposits with intermediaries and balances with funds managers' and the one in Section 4 that 'a basic distinction in principle can be made between

intermediaries which offer deposit and loan services on a capital-guaranteed basis, and funds managers, which manage but do not bear investment risk'.

- In respect of the former quotation, it is clear that in the marketplace for accumulation savings products, term deposits are not a clearly distinct species, but sit closely beside such alternatives as debentures, annuities, unit trusts and life and friendly society bonds. The broad layers in Figure 4 tend to bury rather than reveal that there is this range of substitutes crossing the institutional boundaries.
- In respect of the second quotation, there is surely no 'basic distinction in principle' between deposits and at least some of the products of the funds-management sector (as defined by Edey and Gray), but rather a spectrum of sharing of risk. A capital-guaranteed life insurance product can be generically virtually identical with a term deposit; and equally relevant, *both* may be offered by diversified financial services groups, whether based around established 'banks' or established 'life offices'.

It does still seem true in Australia that the cultures are different as between 'bankers' and 'life insurance officers' or funds managers, but these cultures are being blended in the 1990s in most major diversified financial services groups, not just those based around established banks. Again, what we see is a progressive blurring of institutional distinctions.

Turning to another general comment, I think that in the explanations of factors driving change which are given in the paper, a little too much weight is given to policy and regulatory factors relative to the more fundamental or underlying (mainly economic) forces at work, which might loom larger if we took a more generic (rather than institutional) view of the financial sector.

A case in point is the growth of superannuation – a species of the generic class of accumulation savings products. In respect of superannuation, the discussion in the paper focuses heavily on the role of *policies*, especially the policy imposing compulsory minimum contributions, and major tax policy changes – while at the same time trying to explain why (despite compulsion) net contributions to the system have so far apparently accounted for so little of the growth in assets. I note in passing that the validity of the available data on net contributions is the subject of considerable debate among those familiar with these data and their sources. But my main point is that Australia's rise in this type of financial wealth accumulation is not very different qualitatively from that in the United Kingdom or the United States, for example. This similarity of trends is even clearer if the view is broadened to include not only pension or superannuation funds but mutual funds, unit trusts and so on. But in any event it certainly applies in respect of pension or superannuation funds alone, despite our very distinctive policies. Therefore it seems more likely that there are underlying common factors across these countries other than policy or institutional factors – for example, demography, or the long postwar period of rising overall personal wealth (suggesting a rising proportional allocation to longer-term financial accumulation products, typically invested in marketable securities) – but not much attention is given to these sorts of factors in the paper.

I note in passing that I think that the point in Section 4.1 about increased tax rates discouraging voluntary contributions to superannuation is incorrect. The incentive to make such contributions, particularly for upper income earners approaching age 55 (when they can access the funds) is still extremely strong – a shelter of over 33 percentage points at the point of contribution.

I believe further that Australian households are still able to target the overall shape of balance sheet they want – in broad generic terms – with so far only a modest effect from compulsory superannuation policies. Ability to leverage using dwellings as collateral is one obvious means that households are using to offset such policies. In this regard, I do not think that looking for competition for *flows* of new saving is the sole place to look for offsets to compulsory superannuation saving. Studies focusing on short-term substitution between flows find that the apparent offset is relatively small, but miss the bigger balance-sheet adjustments – that is, that households have increased their use of debt to the extent that they are now cashflow negative with banks, and have continued to reduce net saving rates steadily over the whole decade since award superannuation (the precursor to the Superannuation Guarantee) was initiated.

Finally, I agree with the distinctions drawn in the paper between the distinct businesses, activities or services (deposit-taking, lending, transactions etc). However, especially since we are now seeing any or all of them offered by providers with different institutional histories, I wonder whether we should not now de-emphasise the old institutional distinctions and concentrate on the functions themselves – as products or services which virtually any financial services firm (or group) can now offer.

In the Wallis Inquiry context, one implication is that specialisations in regulatory activity should perhaps in the future be organised around generic or functional categories of business (for example, payments services or deposit-taking or life insurance), regardless of what kind of financial services group offers them. And we clearly need to develop new views of how risks aggregate to the level of a financial services group as a whole from its various businesses, and indeed of what may now give rise to 'systemic risk'.

2. General Discussion

The discussion centred on the competitive pressures facing banks and their impact on pricing structures and profitability.

A key issue was that of 'unbundling' – the process whereby competition in banking was developing at the individual product level rather than on a full-service basis. This was putting pressure on banks to price each individual product more competitively, to reduce margins on the most profitable lines, and to cut cross-subsidies. Participants debated how far this process was likely to go.

In discussing this issue it was noted that analysis was hampered by a lack of relevant data on costs and prices at the product level. The information produced by banks has tended to be highly aggregated, with costs and prices averaged across a wide range of banks' activities. Some participants remarked that this style of reporting reflected the way banks themselves have traditionally thought about their operations: they have been concerned with overall market shares and with the average profits of their total operations, rather than being focussed on individual products and markets. It was remarked that this approach would have to change, since the main competition for banks was coming from the specialist service providers.

The vulnerability of banks to specialist competition would depend importantly on the extent to which their existing pricing structures involved cross-subsidisation: new entrants would target the most profitable products, which were the source of revenues for any cross-subsidies. The rise of mortgage managers was an important case in point.

Some participants took issue with analysis in the paper which concluded that there were significant cross-subsidies built into banks' traditional pricing structure. In particular it had been argued in the paper that loans and deposits tended to be priced on an average-cost basis, where the average margin cross-subsidised the provision of transaction services. Participants who disputed this pointed to a distinction between cross-subsidisation and price discrimination. The latter, which involves tailoring products and prices to the individual customer, was argued to be quite sustainable even in a competitive market, and could be viewed as a normal way for banks to recover fixed costs which could not be directly attributed to an individual product. It was argued that it can be hard to tell the difference between this sort of behaviour and cross-subsidisation without detailed information about the sources of banks' costs. Since this information is not available, it was argued that we should be cautious in drawing conclusions in this area.

Other participants argued that a strong element of cross-subsidisation was occurring. They felt this view was consistent both with Australian evidence and with experience overseas. One comment was that the pricing of bank services had been strongly driven by public pressure on the banks – particularly the resistance to higher transaction charges. But competitive forces would inevitably shift the industry, in time, towards a more rational pricing structure. Indeed, even if the 'price discrimination' view outlined above was accepted, the increasing sophistication of customers was likely to have a similar effect on the prices they could charge. The net effect would be a squeezing of margins on the most profitable of the banks' products. Another factor reinforcing this trend was the shift to low inflation. This meant that average nominal interest rates had fallen, and banks could no longer recover costs from low-balance high-transaction customers through the interest margin.

Two consequences of these developments were discussed. The first was that banks faced increasing pressure to charge more for underpriced services, particularly for transactions. This in turn might mean a more open market for transaction services with new entrants being attracted. If this were to occur, it would reduce the rationale for special regulation of banks, to the extent that such regulation was motivated by banks' special role in the payments system. The second was that bank profits were likely to come under downward pressure and that the returns on capital of the order of 15-20 per cent seen in the past could not be sustained.

There was also some discussion of trends in the superannuation sector. It was noted that high rates of return in recent years would have contributed to reductions in voluntary contributions where defined-benefit schemes are concerned, since less contributions would be needed to fund the final benefit. Even though defined-benefit schemes are no longer the norm, this sort of effect might still be important for 'target' savers making voluntary contributions.

The Role of Institutional Investors in the Evolution of Financial Structure and Behaviour

E. Philip Davis

1. Introduction

This article seeks to address the evolution of financial structure in the major OECD countries from a relatively novel perspective. Whereas much of the work in this area has focused on developments in banking as a central factor,[1] with capital markets and institutional investors seen as something of a 'black box', this paper maintains that the development of institutional investors has been a much-neglected driving force in financial change. In effect, to an extent that varies between countries, institutional investors have proven themselves able to fulfil many of the functions of a financial system better than their competitors (such as banks and direct holdings of securities by the household sector). While it is not asserted that all developments may be explained by institutionalisation, nor that their impact has been identical between countries, it is suggested that a focus on institutions provides both a novel perspective on 'banking' issues and also explains in itself some key developments in financial structure and behaviour.[2] Given that further development of institutional investors seems certain, not least in countries such as Australia, there are also important implications for the future.

The first three sections of the paper are broadly introductory. In Section 2 we examine data for the major OECD countries in order to assess – without analysis at this stage – the key changes in financial structure and behaviour that are actually observable empirically. Section 3 outlines the functions of the financial system, which provides an organising framework for the rest of the article. Section 4 provides an overview of the characteristics of institutional investors, and the comparative advantages they display in terms of functions, which together with fiscal and regulatory elements provide the main reasons for their growth.

Section 5, which is the core of the paper, examines the role of institutional investors in the evolution of financial structure and behaviour in recent years, in the light of these introductory sections. We organise this section using the various financial functions identified in Section 3, and show that in each case, institutions have played a major role in inducing financial change. More specifically, under the function of the financial system of *facilitating clearing and settling payments* we discuss institution/bank competition on the liabilities side as well as their effects on capital market structure. Under *pooling of funds* we assess institution/bank competition on the asset side and the relation of institutions to securities market development. *Transferring of economic*

1. Blommestein (1996) gives a succinct summary of this 'banking' view.
2. In making this suggestion, we follow the OECD (Blommestein and Biltoft 1996); see also Davis (1995a) and Huijser (1990).

resources covers institutions' effect on long-term saving (transfer over time) and cross-border investment (transfer over space). *Managing uncertainty and controlling risk* looks at the use of innovations such as derivatives by institutions. *Price information* notes aspects of capital market pricing and volatility and the effect of institutions thereon. Under *dealing with incentive problems* we examine corporate governance issues, debt finance and principal-agent problems in fund management. *Non-functional aspects* assessed include effects of institutions on regulatory provisions.

The concluding section looks briefly to the future, where the ageing of the population and the difficulties this may pose for social security systems make further development of institutional investors, and hence of capital markets, extremely likely. This could, for example, impinge further on the role of banks in the financial system, notably in countries where institutional development has not been marked to date, and may have particular implications for corporate finance and corporate governance. In addition, implications of the growth of institutions for monetary policies are considered.

2. Principal Developments Since 1970

In the period since 1970, there have been widespread changes in both financial structure and behaviour in OECD countries as banking sectors have been deregulated and capital markets have developed. In this section we provide data for the G7 countries which illustrate these changes, drawn from national flow-of-funds balance sheets. Summary averages are also provided for the G7, the 'Anglo-Saxon countries' (the United Kingdom, the United States and Canada) and for 'continental Europe and Japan (excluding the United Kingdom)' (Germany, Japan, France and Italy). The tables provide a view, first of the actual scale of the changes and secondly the degree to which they were apparent for the different countries. In practice, the broad directions of change are remarkably common, both for financial systems traditionally seen as 'bank-dominated' and 'market-dominated', although the scale varies.

Summary indicators of financial structure show that the overall size of the financial superstructure has tended to grow sharply over time (Table 1), with ratios of total financial assets to GDP rising from around four times GDP in 1970 to six times in 1994.[3] The overall degree of financial intermediation has risen (Table 2) in most countries, while the share of banks has tended to decline, even in the traditionally bank-dominated economies (Table 3). In contrast, the share of financial intermediation undertaken by institutional investors has risen sharply, albeit at a higher level in Anglo-Saxon countries. Banks' balance sheets tended to grow rapidly in the 1980s, but levelled off in the 1990s. Interest margins narrowed: banks' income streams have tended to shift towards fee income, while major increases in bad debts are apparent (Table 4).

As regards instruments (Table 5) as a share of total financial claims, the volume of securities outstanding has risen, notably in terms of bonds and money market paper, while the share of deposits and loans has declined. Reflecting the growth in the overall financial superstructure, the values of all types of financial claims have risen relative to GDP.

3. The table is based on the sectoral breakdown of the economy into households, companies, banks, other financial institutions, public and foreign sectors.

Table 1: Size Indicator of Financial Structure
Total financial claims as a proportion of GDP

	1970	1975	1980	1985	1990	1994	Change 1970-1994
UK	4.73	5.98	4.85	7.92	8.86	10.35	5.62
UK [a]	4.73	5.36	4.20	6.86	7.92	9.43	4.70
US	4.05	3.81	4.06	5.02	5.66	6.16	2.11
Canada	4.67	4.38	5.06	5.21	5.78	5.46	0.79
Germany	2.89	3.29	3.58	4.40	4.69	5.54	2.65
Japan	3.79	4.52	5.06	6.51	8.53	8.03	4.24
France	4.41	4.35	4.78	5.60	6.92	8.36	3.95
Italy	3.35	3.78	3.93	4.10	4.27	5.07	1.72
G7	3.99	4.21	4.38	5.39	6.25	6.87	2.88
Anglo-Saxon	4.03	4.27	4.39	5.60	6.52	6.93	2.90
CEJ[b]	3.82	4.06	4.48	5.16	6.04	6.49	2.67

Notes: (a) Excluding Euromarkets.
(b) Continental Europe and Japan.
Sources: National central banks.

Table 2: Financial Intermediation Ratios
Intermediated claims as a proportion of the total

	1970	1975	1980	1985	1990	1994	Change 1970-1994
UK	0.32	0.35	0.42	0.46	0.47	0.46	0.14
UK[a]	0.32	0.27	0.34	0.37	0.40	0.41	0.09
US	0.33	0.37	0.37	0.35	0.35	0.40	0.07
Canada	0.29	0.32	0.34	0.34	0.37	0.43	0.14
Germany	0.44	0.44	0.45	0.43	0.43	0.46	0.03
Japan	0.39	0.41	0.42	0.42	0.42	0.47	0.09
France	0.34	0.41	0.45	0.44	0.39	0.36	0.01
Italy	0.36	0.39	0.32	0.31	0.31	0.30	-0.05
G7	0.35	0.37	0.38	0.38	0.38	0.40	0.05
Anglo-Saxon	0.35	0.36	0.38	0.38	0.39	0.44	0.08
CEJ[b]	0.36	0.39	0.39	0.39	0.38	0.41	0.04

Notes: (a) Excluding Euromarkets.
(b) Continental Europe and Japan.
Sources: National central banks.

Table 3: Bank and Institutional Intermediation Ratios

Proportion of intermediated claims held by banks and institutional investors

		1970	1975	1980	1985	1990	1994	Change 1970-1994
UK	Bank	0.58	0.65	0.64	0.56	0.55	0.47	-0.11
	Instit.	0.28	0.24	0.26	0.33	0.32	0.36	0.08
US	Bank	0.58	0.59	0.58	0.53	0.44	0.33	-0.25
	Instit.	0.31	0.28	0.31	0.35	0.39	0.44	0.13
Canada	Bank	0.45	0.51	0.55	0.49	0.44	0.44	0.00
	Instit.	0.23	0.20	0.19	0.24	0.25	0.27	0.04
Germany	Bank	0.84	0.85	0.86	0.84	0.83	0.78	-0.06
	Instit.	0.10	0.11	0.12	0.15	0.17	0.22	0.12
Japan	Bank	0.45	0.40	0.36	0.34	0.38	0.34	-0.11
	Instit.	0.10	0.10	0.10	0.12	0.16	0.16	0.05
France	Bank	0.95	0.95	0.96	0.95	0.81	0.76	-0.19
	Instit.	0.05	0.04	0.04	0.04	0.18	0.23	0.18
Italy	Bank	0.98	0.98	0.98	0.92	0.95	0.93	-0.04
	Instit.	0.06	0.05	0.05	0.10	0.11	0.13	0.06
G7	Bank	0.69	0.70	0.70	0.66	0.63	0.58	-0.11
	Instit.	0.16	0.14	0.15	0.19	0.23	0.26	0.10
Anglo-	Bank	0.53	0.58	0.59	0.52	0.48	0.41	-0.12
Saxon	Instit.	0.28	0.24	0.25	0.31	0.32	0.36	0.08
CEJ[(a)]	Bank	0.80	0.80	0.79	0.76	0.74	0.70	-0.10
	Instit.	0.08	0.07	0.08	0.10	0.16	0.18	0.10

Notes: Data do not add to 1.0 owing to other financial institutions not classified as banks or institutional investors.

(a) Continental Europe and Japan.

Sources: National central banks.

Household sector balance sheets (Table 6) have seen an increase in both assets and liabilities relative to GDP. In all cases, net financial wealth has also increased relative to GDP, albeit more so in Europe and Japan. Within gross household assets, the share of deposits have fallen except in Japan and Canada (Table 7). Direct securities holdings have been flat or declining, notably for equities in Anglo-Saxon countries. In contrast, there has been a universal increase in asset holding via institutional investors. Institutions themselves, such as pension funds, hold far more equities and foreign assets than households, and less liquid assets (Table 8). Corporate finance (Table 9) has been less subject to common trends than household-sector finance. There has been an overall increase in financial liabilities, but this has covered both debt and equities. In countries other than the United Kingdom and Italy, there has been an increase in money-market and bond financing, while the loan ratio declined except in Germany and Canada (and for Germany this appears to be linked to reunification). The equity ratio has risen except in those two countries. Structures of equity holding have tended to move away from the household sector and towards institutional investors, either domestic or foreign (Table 10).

Table 4: Banking Sector Developments

(a) Change in lending/GDP ratio

	1970-1975	1975-1980	1980-1985	1985-1990	1990-1994
UK	-0.22	0.00	0.28	0.44	-0.10
US	0.06	0.15	0.08	0.09	-0.07
Canada	0.11	0.14	-0.09	0.10	0.05
Germany	0.14	0.16	0.15	0.01	0.20
Japan	0.23	0.18	0.33	0.36	0.11
France	-0.16	0.00	0.02	0.10	0.11
Italy	0.17	-0.20	-0.06	-0.05	0.14

(b) Non interest income/total income (per cent)

	1979-1984	1985-1989	1990-1992
UK	31	37	41
US	24	30	34
Canada	22	27	31
Germany	19	21	25
Japan	18	32	20
France	15	16	26
Italy	27	29	24

(c) Interest margins/assets (per cent)

	1979-1984	1985-1989	1990-1992
UK	3.2	3.0	2.8
US	3.0	3.3	3.6
Canada	2.5	2.9	3.0
Germany	2.2	2.1	1.9
Japan	1.1	0.9	0.8
France	2.5	2.3	1.7
Italy	2.7	2.9	3.2

(d) Provisions/assets (per cent)

	1979-1984	1985-1989	1990-1992
UK	0.41	0.86	1.20
US	0.35	0.83	0.89
Canada	0.49	0.74	0.64
Germany	0.41	0.37	0.38
Japan	0.02	0.04	0.08
France	0.55	0.53	0.54
Italy	0.66	0.48	0.52

Source: OECD Bank Profitability.

Table 5: Volume of Financial Instruments Outstanding
Ratio to GDP

		1970	1975	1980	1985	1990	1994	Change 1970-1994
UK[a]	Deposits	0.87	0.72	0.64	1.20	1.50	1.37	0.50
	Equities	0.83	0.51	0.43	0.84	1.14	1.64	0.81
	Bonds	0.37	0.26	0.30	0.50	0.32	0.43	0.06
	Loans	0.66	0.43	0.44	0.71	1.16	1.06	0.40
US	Deposits	0.65	0.71	0.67	0.71	0.64	0.57	-0.08
	Equities	0.85	0.54	0.58	0.64	0.63	0.90	0.05
	Bonds	0.68	0.69	0.69	0.93	1.19	1.37	0.69
	Loans	0.80	0.86	1.00	1.09	1.17	1.10	0.30
Canada	Deposits	0.74	0.80	0.99	0.90	0.92	0.89	0.16
	Equities	0.94	0.71	0.82	0.90	1.07	1.25	0.31
	Bonds	0.77	0.65	0.70	0.82	0.79	1.05	0.28
	Loans	0.79	0.90	1.04	0.94	1.04	1.09	0.31
Germany	Deposits	0.89	1.01	1.08	1.16	1.21	1.36	0.48
	Equities	0.28	0.27	0.23	0.41	0.47	0.50	0.22
	Bonds	0.23	0.29	0.35	0.57	0.62	0.95	0.73
	Loans	0.97	1.11	1.27	1.43	1.44	1.64	0.67
Japan	Deposits	0.97	1.17	1.44	1.72	2.12	2.20	1.23
	Equities	0.27	0.40	0.40	0.44	0.75	0.65	0.38
	Bonds	0.26	0.40	0.64	0.88	0.77	1.07	0.81
	Loans	1.13	1.36	1.54	1.87	2.23	2.33	1.20
France	Deposits	1.05	1.37	1.62	1.67	1.71	1.74	0.69
	Equities	0.92	0.63	0.72	1.22	1.77	2.69	1.77
	Bonds	0.15	0.19	0.23	0.42	0.51	0.67	0.51
	Loans	2.10	1.94	1.94	1.95	2.05	2.16	0.07
Italy	Deposits	0.95	1.21	1.17	0.97	1.08	1.14	0.19
	Equities	0.37	0.27	0.61	0.92	0.81	0.92	0.54
	Bonds	0.45	0.53	0.41	0.58	0.71	1.08	0.63
	Loans	1.19	1.36	1.16	1.10	1.05	1.19	-0.01
G7	Deposits	0.87	1.00	1.09	1.19	1.31	1.33	0.45
	Equities	0.64	0.48	0.54	0.77	0.95	1.22	0.58
	Bonds	0.41	0.43	0.47	0.67	0.70	0.95	0.53
	Loans	1.09	1.14	1.20	1.30	1.45	1.51	0.42
Anglo-	Deposits	0.75	0.74	0.77	0.93	1.02	0.94	0.19
Saxon	Equities	0.87	0.59	0.61	0.79	0.95	1.26	0.39
	Bonds	0.61	0.54	0.56	0.75	0.77	0.95	0.34
	Loans	0.75	0.73	0.83	0.91	1.12	1.09	0.34
CEJ[b]	Deposits	0.97	1.19	1.33	1.38	1.53	1.61	0.65
	Equities	0.46	0.39	0.49	0.75	0.95	1.19	0.73
	Bonds	0.27	0.35	0.41	0.61	0.65	0.94	0.67
	Loans	1.35	1.44	1.48	1.59	1.69	1.83	0.48

Notes: (a) Excluding Euromarkets.

(b) Continental Europe and Japan.

Sources: National central banks.

Table 6: Household Assets and Liabilities

Ratio to GDP

		1970	1975	1980	1985	1990	1994	Change 1970-1994
UK	Assets	1.82	1.33	1.16	1.81	2.07	2.48	0.66
	Liabilities	0.39	0.37	0.35	0.58	0.80	0.78	0.40
	Net fin. wealth	1.43	0.96	0.82	1.22	1.27	1.69	0.26
US	Assets	1.90	1.60	1.66	1.90	2.08	2.31	0.41
	Liabilities	0.48	0.49	0.55	0.58	0.68	0.72	0.23
	Net fin. wealth	1.42	1.11	1.11	1.32	1.40	1.59	0.17
Canada	Assets	1.48	1.38	1.54	1.58	1.74	1.95	0.47
	Liabilities	0.51	0.53	0.56	0.50	0.63	0.68	0.17
	Net fin. wealth	0.97	0.85	0.98	1.08	1.11	1.27	0.30
Germany	Assets	0.78	0.93	1.01	1.19	1.26	1.45	0.67
	Liabilities	0.38	0.42	0.50	0.57	0.54	0.61	0.23
	Net fin. wealth	0.41	0.51	0.51	0.63	0.72	0.84	0.43
Japan	Assets	0.98	1.20	1.44	1.81	2.20	2.41	1.43
	Liabilities	0.38	0.46	0.54	0.61	0.77	0.78	0.39
	Net fin. wealth	0.60	0.74	0.91	1.20	1.43	1.63	1.03
France	Assets	1.11	1.03	1.04	1.14	1.38	1.72	0.60
	Liabilities	0.41	0.43	0.44	0.45	0.46	0.55	0.13
	Net fin. wealth	0.70	0.60	0.60	0.69	0.92	1.17	0.47
Italy	Assets	0.92	0.92	0.87	1.12	1.68	2.04	1.11
	Liabilities	0.07	0.09	0.06	0.07	0.19	0.24	0.16
	Net fin. wealth	0.85	0.84	0.80	1.05	1.49	1.80	0.95
G7	Assets	1.29	1.20	1.25	1.51	1.77	2.05	0.76
	Liabilities	0.37	0.40	0.43	0.48	0.58	0.62	0.25
	Net fin. wealth	0.91	0.80	0.82	1.03	1.19	1.43	0.52
Anglo-Saxon	Assets	1.73	1.44	1.46	1.76	1.96	2.24	0.51
	Liabilities	0.46	0.46	0.49	0.55	0.70	0.73	0.27
	Net fin. wealth	1.27	0.98	0.97	1.21	1.26	1.52	0.25
CEJ[(a)]	Assets	0.95	1.02	1.09	1.31	1.63	1.90	0.95
	Liabilities	0.31	0.35	0.39	0.42	0.49	0.54	0.23
	Net fin. wealth	0.64	0.67	0.71	0.89	1.14	1.36	0.72

Note: (a) Continental Europe and Japan.

Sources: National central banks.

Table 7: Household Sector Balance Sheets

Proportions of gross financial assets

		1970	1975	1980	1985	1990	1994	Change 1970-1994
UK	Deposits	0.34	0.40	0.43	0.30	0.31	0.26	-0.08
	Bonds	0.07	0.08	0.07	0.02	0.01	0.01	-0.06
	Equities	0.24	0.16	0.12	0.11	0.12	0.12	-0.13
	Instit.	0.23	0.26	0.30	0.47	0.48	0.54	0.31
US	Deposits	0.28	0.36	0.33	0.30	0.25	0.18	-0.10
	Bonds	0.13	0.13	0.10	0.10	0.12	0.12	-0.01
	Equities	0.36	0.24	0.21	0.16	0.15	0.19	-0.17
	Instit.	0.22	0.26	0.28	0.35	0.41	0.44	0.22
Canada	Deposits	0.31	0.37	0.38	0.34	0.36	0.33	0.02
	Bonds	0.14	0.12	0.08	0.10	0.05	0.04	-0.09
	Equities	0.27	0.22	0.24	0.23	0.21	0.25	-0.02
	Instit.	0.22	0.20	0.21	0.25	0.28	0.31	0.09
Germany	Deposits	0.59	0.62	0.59	0.52	0.48	0.45	-0.15
	Bonds	0.08	0.09	0.12	0.15	0.16	0.14	0.06
	Equities	0.10	0.07	0.04	0.06	0.07	0.06	-0.04
	Instit.	0.15	0.15	0.17	0.19	0.21	0.28	0.14
Japan	Deposits	0.55	0.59	0.69	0.65	0.60	0.62	0.07
	Bonds	0.06	0.06	0.09	0.11	0.09	0.06	0.01
	Equities	0.12	0.10	0.07	0.08	0.09	0.07	-0.05
	Instit.	0.14	0.13	0.13	0.15	0.21	0.25	0.11
France	Deposits	0.48	0.60	0.59	0.50	0.38	0.32	-0.15
	Bonds	0.06	0.07	0.09	0.07	0.04	0.04	-0.02
	Equities	0.26	0.15	0.14	0.27	0.27	0.32	0.05
	Instit.	0.06	0.06	0.07	0.08	0.26	0.29	0.23
Italy	Deposits	0.45	0.63	0.58	0.42	0.35	0.29	-0.16
	Bonds	0.19	0.14	0.08	0.17	0.19	0.20	0.00
	Equities	0.11	0.02	0.10	0.10	0.21	0.24	0.13
	Instit.	0.08	0.07	0.06	0.11	0.08	0.09	0.01
G7	Deposits	0.43	0.51	0.51	0.43	0.39	0.35	-0.08
	Bonds	0.10	0.10	0.09	0.10	0.09	0.09	-0.02
	Equities	0.21	0.14	0.13	0.14	0.16	0.18	-0.03
	Instit.	0.16	0.16	0.17	0.23	0.28	0.31	0.16
Anglo-	Deposits	0.31	0.38	0.38	0.31	0.31	0.26	-0.05
Saxon	Bonds	0.11	0.11	0.08	0.08	0.06	0.06	-0.06
	Equities	0.29	0.21	0.19	0.17	0.16	0.18	-0.10
	Instit.	0.22	0.24	0.26	0.36	0.39	0.43	0.21
CEJ[(a)]	Deposits	0.52	0.61	0.61	0.52	0.45	0.42	-0.10
	Bonds	0.10	0.09	0.10	0.12	0.12	0.11	0.01
	Equities	0.15	0.08	0.09	0.13	0.16	0.17	0.02
	Instit.	0.11	0.10	0.11	0.14	0.19	0.23	0.12

Note: (a) Continental Europe and Japan.

Sources: National central banks.

Table 8: Pension Funds' Portfolio Distributions, 1994

Per cent

	Equities	Bonds and loans	Property and deposits	Liquidity	*of which*:[a] Foreign assets
UK	70	14	6	4	20
US	48	38	0	7	10
Canada	38	49	3	7	9
Germany	18	70	6	2	1
Japan	27	61	2	3	7
France	20	67	11	2	2
Italy	14	72	10	5	4

Note: (a) Included in data to the left.

Sources: National central banks.

Cross-border portfolio investment (Table 11) has increased sharply in terms of volume, while its nature has changed radically from mainly banking flows to flows dominated by securities. As noted, securities markets have tended to grow in terms of market capitalisation quite significantly (as seen in Table 5), and even more in terms of turnover (Table 12). But in addition there has been a change in their nature, in the case of securities markets from purely retail markets to a form of polarisation between retail and wholesale business, while in foreign exchange markets the importance of institutions has increased.

Overall price volatility (Table 13) has not shown a marked increase in bond, equity and foreign exchange markets, rather there is rather a correlation with fundamentals such as industrial production. But there have been periods of instability whereby relatively thin securities markets have tended to undergo crises of illiquidity while liquid markets have undergone large perceived deviations of prices from fundamentals. There have also been major banking crises. Recent episodes of instability are listed in Table 14 (Davis 1994, 1995b, 1995c).

Financial innovation has been rapid in the 1980s and 1990s. Particularly noteworthy is the growth of derivatives markets, and development of commercial paper (Table 15); also one could instance the expansion of securitised debt. Meanwhile, deregulation of both banks and of financial markets has proceeded rapidly. Virtually all OECD countries have abolished exchange controls; in the banking sector, the key changes have been abolition of interest-rate controls, or cartels that fixed rates, and abolition of direct controls on credit expansion (Table 16). In the capital markets there has been abolition of regulations on fees and commissions. Key changes affecting both sectors include removal of regulations restricting establishment of foreign institutions and of regulations which segment financial markets and institutions.

Table 9: Corporate Sector Balance Sheets

Proportions of gross liabilities; bonds include short-term paper

		1970	1975	1980	1985	1990	1994	Change 1970-1994
UK	Bonds	0.07	0.04	0.02	0.00	0.00	0.00	-0.07
	Equity	0.49	0.37	0.37	0.52	0.53	0.65	0.16
	Loans	0.15	0.23	0.22	0.16	0.21	0.12	-0.03
US	Bonds	0.14	0.18	0.17	0.18	0.18	0.16	0.02
	Equity	0.55	0.48	0.49	0.49	0.45	0.55	0.00
	Loans	0.15	0.17	0.13	0.13	0.13	0.13	-0.02
Canada	Bonds	0.12	0.09	0.08	0.11	0.13	0.18	0.06
	Equity	0.46	0.39	0.41	0.42	0.41	0.44	-0.02
	Loans	0.15	0.20	0.22	0.21	0.22	0.19	0.04
Germany	Bonds	0.03	0.03	0.02	0.02	0.02	0.08	0.04
	Equity	0.27	0.24	0.20	0.28	0.31	0.25	-0.02
	Loans	0.47	0.48	0.52	0.43	0.42	0.50	0.03
Japan	Bonds	0.02	0.02	0.03	0.04	0.06	0.06	0.03
	Equity	0.16	0.21	0.22	0.23	0.29	0.26	0.09
	Loans	0.48	0.46	0.45	0.48	0.45	0.47	-0.01
France	Bonds	0.03	0.04	0.04	0.04	0.04	0.03	0.00
	Equity	0.41	0.32	0.34	0.46	0.60	0.70	0.29
	Loans	0.54	0.62	0.60	0.48	0.41	0.28	-0.26
Italy	Bonds	0.08	0.08	0.04	0.02	0.03	0.03	-0.05
	Equity	0.32	0.21	0.52	0.57	0.48	0.46	0.14
	Loans	0.60	0.69	0.43	0.35	0.41	0.44	-0.16
G7	Bonds	0.07	0.07	0.05	0.06	0.07	0.08	0.01
	Equity	0.38	0.32	0.36	0.42	0.44	0.47	0.09
	Loans	0.36	0.41	0.37	0.32	0.32	0.30	-0.06
Anglo-	Bonds	0.11	0.10	0.09	0.10	0.10	0.11	0.00
Saxon	Equity	0.50	0.41	0.42	0.47	0.46	0.55	0.05
	Loans	0.15	0.20	0.19	0.17	0.18	0.15	0.00
CEJ[(a)]	Bonds	0.04	0.04	0.03	0.03	0.04	0.05	0.01
	Equity	0.29	0.25	0.32	0.38	0.42	0.42	0.13
	Loans	0.52	0.56	0.50	0.43	0.42	0.42	-0.10

Note: (a) Continental Europe and Japan.

Sources: National central banks.

Table 10: Ownership of Listed Shares by Sector

	Households		Non-financial companies		Public sector		Financial institutions		Foreign	
	1970	1992	1970	1992	1970	1992	1970	1992	1970	1992
UK	50	19	5	2	3	1	36	62	7	16
US	51	48	15	9	0	0	28	37	6	6
Germany	28	17	41	39	11	3	11	29	8	12
Japan	40	20	23	28	0	1	35	42	3	8
France	41	34	20	21	3	2	24	23	12	20

Note: 1970 except for the US (1981); and for France (1977).

Source: Berglöf (1996).

Table 11: International Investment Flows

Per cent share of total flows

	1975-1979		1995	
	Outflows from OECD countries	Inflows to OECD countries	Outflows from OECD countries	Inflows to OECD countries
Banking	49.5	72.0	9.2	5.4
Equities	5.1	3.2	35.0	35.7
Bonds	9.8	13.3	41.7	48.2
Direct investment	35.6	11.5	14.2	10.7

Source: Howell and Cozzini (1995).

Table 12: Capital Market Turnover

Per cent of GDP

	1977	1980	1985	1990	1993
UK	70	50	70	160	220
US	110	130	420	430	620
Germany	10	10	30	70	110
Japan	20	50	320	320	220
France	10	10	20	60	120
Italy	10	10	20	50	290 [(b)]
Euromarkets[(a)]	10	10	30	40	130

Notes: Estimates of the annual value of secondary market transactions in equities and bonds, including OTC transactions. A purchase and corresponding sale count as a single transaction.
(a) Total transactions settled through Euroclear and Cedel as a percentage of total GNP of G10 countries in US dollars.
(b) 1992.

Source: BIS.

Table 13: Market Price Volatility

Standard deviation of monthly percentage changes

		1965-1970	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995
UK	Bond total returns	1.2	3.4	3.5	2.6	2.4	1.9
	Share prices	4.0	8.7	5.1	3.3	5.2	3.3
	Exchange rates	1.2	1.3	1.9	2.0	1.8	1.7
	Industrial production	1.0	2.4	2.1	1.3	1.3	1.0
US	Bond total returns	2.0	1.7	2.5	3.0	2.3	1.8
	Share prices	3.4	4.3	3.2	3.5	3.9	2.2
	Exchange rates	0.2	1.3	1.2	1.8	1.6	1.6
	Industrial production	0.8	1.2	0.8	0.9	0.6	0.5
Canada	Bond total returns	1.2	1.5	1.9	3.4	2.1	2.0
	Share prices	4.0	5.1	5.1	5.2	4.7	3.0
	Exchange rates	0.5	0.7	1.3	0.9	1.1	1.1
	Industrial production	0.9	1.4	1.2	1.5	0.9	0.7
Germany	Bond total returns	1.1	1.4	1.7	1.6	1.5	1.4
	Share prices	4.3	4.3	2.5	3.2	6.0	3.6
	Exchange rates	0.9	1.6	1.1	1.1	0.8	1.0
	Industrial production	2.0	1.7	1.7	2.5	1.6	1.4
Japan	Bond total returns	0.1	0.6	2.1	2.1	3.5	1.9
	Share prices	3.3	4.7	1.9	2.8	5.2	5.0
	Exchange rates	0.2	1.6	2.6	2.1	2.5	2.5
	Industrial production	1.1	1.5	1.3	1.2	1.4	1.6
France	Bond total returns	0.7	1.0	1.6	1.9	2.2	1.7
	Share prices	3.9	4.0	4.2	4.8	6.2	4.0
	Exchange rates	1.1	1.3	1.1	1.2	0.7	0.9
	Industrial production	6.1	2.0	1.7	1.3	1.5	1.2
Italy	Bond total returns	0.9	1.8	1.9	2.0	1.9	2.6
	Share prices	3.8	7.3	6.2	7.0	7.0	5.7
	Exchange rates	0.3	1.3	1.7	0.7	0.6	2.2
	Industrial production	2.3	3.9	3.0	2.5	3.2	3.5

Source: BIS.

Table 14: Selected Episodes of Financial Instability 1970-1995

Date	Event	Main feature	Institutions' involvement
1970	US Penn Central Bankruptcy	Collapse of market liquidity and issuance	Moderate
1973	UK secondary banking	Bank failures following loan losses	Moderate
1974	Herstatt	Bank failure following trading losses	Low
1982	LDC debt crisis	Bank failures following loan losses	Low
1984	Continental Illinois (US)	Bank failure following loan losses	Low
1985	Canadian Regional Banks	Bank failures following loan losses	Low
1986	FRN market	Collapse of market liquidity and issuance	High
1986	US thrifts	Bank failures following loan losses	Low
1987	Stock market crash	Price volatility after shift in expectations	High
1989	Collapse of US junk bonds	Collapse of market liquidity and issuance	High
1989	Australian banking problems	Bank failures following loan losses	Low
1990	Swedish commercial paper	Collapse of market liquidity and issuance	High
1990-91	Norwegian banking crisis	Bank failures following loan losses	Low
1991-92	Finnish banking crisis	Bank failures following loan losses	Low
1991-92	Swedish banking crisis	Bank failures following loan losses	Low
1992-96	Japanese banking crisis	Bank failures following loan losses	Moderate
1992	ECU bond market collapse	Collapse of market liquidity and issuance	High
1992-93	ERM crisis	Price volatility after shift in expectations	High
1994	Bond market reversal	Price volatility after shift in expectations	High
1995	Mexican crisis	Price volatility after shift in expectations	High

Note: For detailed accounts see Davis (1994, 1995b, 1995c).

Table 15: Indicators of Financial Innovation

(a) Commercial paper outstanding as a proportion of GDP

	Market opening	1986	1988	1990	1992
UK	1986	0.1	0.6	0.7	0.7
US	1960	7.5	9.0	9.9	8.8
Canada	1960	3.2	4.0	4.6	4.4
Germany	1991	0.0	0.0	0.0	0.6
Japan	1987	0.0	2.4	3.6	2.6
France	1985	0.4	1.0	2.3	2.3

Source: IMF.

(b) Turnover in derivatives on organised exchanges (millions of contracts)

	1986	1988	1990	1992	1994
Total	315	336	478	636	1140
of which:					
In the US	288	251	311	340	510
In Europe	10	41	83	185	399
In Japan	9	23	61	52	71
Elsewhere	7	21	24	59	162
of which:					
Interest rate futures	91	156	219	330	628
Interest rate options	22	31	52	65	115
Currency futures	20	22	30	31	70
Currency options	13	18	19	23	21
Stock index futures	28	30	39	52	109
Stock index options	140	79	119	133	200

Source: Bisignano (1995).

Table 16: Selected Patterns of Deregulation

	1960	1980	1987	1990	1995
UK	IEC	IC	—	—	—
US	I	I	I	—	—
Canada	I	—	—	—	—
Germany	I	—	—	—	—
Japan	IEC	IC	IC	I	—
France	IEC	IEC	IE	—	—
Italy	IEC	EC	EC	E	—

Notes: I = Interest rate controls.
E = Exchange controls.
C = Direct controls on credit expansion.

Sources: OECD and national central banks.

3. Functions of Financial Systems

As background to the overall discussion, this section summarises the functions that financial systems are expected to fulfil. This provides a constant feature both of long-term developments and of more recent trends; evolution of institutional forms and of financial structure may be seen as a form of adaptation and improvement in the ways these functions are fulfilled, under pressure of competitive forces. In effect, whereas the institutional form taken by financial systems is subject to evolution through time, the *functions* fulfilled by the financial system in the context of its overall function of resource allocation are relatively fixed. Various paradigms have been proposed;[4] here we highlight and utilise that proposed by Merton and Bodie (1995). They focus on six functions, as follows:

- the provision of ways of *clearing and settling payments* to facilitate exchange of goods, services and assets. Banks, for example, may offer cheque accounts, cash cards and wire transfers, while money market funds may also offer transactions services or non-financial firms may offer credit cards. Systems for transferring payments and for trading, clearing and settling securities transactions may also fall under this heading;
- the provision of a mechanism for *pooling of funds* from individual households so as to facilitate large-scale indivisible undertakings, and *the subdivision of shares* in enterprises to facilitate diversification. Mutual funds, other institutional investors and banks provide means to pool funds, while securities markets and the process of securitisation of claims are examples of subdivision;
- provision of ways to *transfer economic resources* over time, across geographic regions or among industries. By these means, households may optimise their allocation of funds over the life cycle and funds may be optimally allocated to their most efficient use. A capital market facilitates efficient separation of ownership and control of capital, thus aiding specialisation in production. A range of financial intermediaries are active in these processes, not least pension funds, which facilitate saving for retirement and finance of corporate investment;
- provision of ways to *manage uncertainty and control risk.* Through securities and financial intermediaries, risk-pooling and risk-sharing opportunities are made available to households and companies. There are three main ways to manage risk, namely hedging, diversifying and insuring. The role of derivatives in this process has come to the fore in recent years. More generally, separation of providers of working capital for real investment (personnel, plant, equipment) from providers of risk capital who bear financial risk facilitates specialisation in production;
- providing *price information*, thus helping to co-ordinate decentralised decision-making in various sectors of the economy. Financial markets provide not only means to trade but also information useful for decision-making; for households, yields and securities prices provide information in consumption-saving decisions and in allocating portfolios. Firms may equally make investment and financing decisions on the basis of market prices. Central banks may use market prices as

4. Sanford (1994), Hubbard (1994), Kohn (1994) and Rose (1994), for example.

indicators of expectations. Not only prices *per se* but implied volatility (derived from options prices) may be relevant in this context; and

- providing ways to *deal with incentive problems* when one party to a financial transaction has information the other does not, or when one is agent of the other, and when control and enforcement of contracts is costly. Moral hazard and adverse selection are inevitable in such cases, but features of the financial system, such as delegation of monitoring by households to specialised financial intermediaries may reduce such problems. The issue remains, however, of how households may monitor the intermediaries themselves, or whether the latter have the right incentives to act in line with the interests of investors.

It will be seen in later sections that these functions have been increasingly fulfilled by institutional investors in recent decades. This is partly owing to financial innovations that have enabled securities market investors to fulfil many of the functions traditionally fulfilled by banks, thereby eroding banks' comparative advantage. But it also relates to a deterioration of the position of banks in the wake of widespread loan-losses; to institutions' superiority to direct holdings of securities by households; to the increased demand for longer-term saving as the population ages; and to some direct incentives to invest via institutions (such as fiscal benefits to pension funds). These tendencies have directly affected the patterns shown in the data of Section 2.

4. Institutional Investors

The theme of this paper is that the growth of institutional investors is perhaps the most important of the changes described in Section 2. It has had a pervasive effect on financial structure and behaviour in general, as institutions have assumed a more important role in fulfilling the overall functions of the financial system. In order to develop this point, it is necessary to go into more detail concerning institutional investors, first assessing their characteristics and then reasons for growth.

4.1 Characteristics of Institutions

Institutional investors may be defined as specialised financial institutions which manage savings collectively on behalf of small investors, towards a specific objective in terms of acceptable risk, return-maximisation and maturity of claims. The essential characteristics of institutional investors, which pervade the various effects traced in later sections, are outlined below.

Firstly, institutions provide a form of *risk pooling* for small investors, thus providing a better trade-off of risk and return than is possible via direct holdings. This entails, on the asset side, putting a premium on *diversification*, both by holding a spread of domestic securities (which may be both debt and equity) and also by international investment. There is also a preference for *liquidity*, and hence for use of large and liquid capital markets, trading standard or 'commoditised' instruments, so as to be able to adjust holdings in pursuit of objectives, in response to new information. Any holdings of illiquid assets such as property typically account for a relatively small share of the portfolio. A backup for the approach to investment is the ability to absorb and process *information*, which exceeds that of individual investors in the capital market. On the

other hand, unlike banks, institutions rely on public information rather than private. Most institutions have *matched assets and liabilities*, unlike banks, which tends to minimise the risk of 'runs' from such institutions (one exception is life insurers' 'Guaranteed Income Contracts'). Moreover, in many cases they have *long-term liabilities*, facilitating holding of high-risk and high-return instruments. There is however, a question regarding the stability of money market mutual funds, as, like banks, they seek to offer redemption of liabilities at par (other types of mutual fund may face attenuated difficulties of a similar kind).

Secondly, the *size* of institutions has a number of important implications. In terms of economies of scale, ability to *transact in large volumes* typically leads to a lowering of transactions costs. Size also enables them to invest in *large indivisible investments* (although there is a tension with desire for liquidity and diversification). Considerable *countervailing power* also results from size. This gives rise to ability to ensure fair treatment by capital market intermediaries on the one hand, and on the other gives potential for improved control over companies in which they invest, thus reducing adverse incentive problems.

Further characteristics arise from the process of *funds management*, a service involving management of an investment portfolio on behalf of a client. On the one hand it gives rise to an essentially *fiduciary* relationship to the ultimate investor, which often entails a degree of caution in the portfolio strategy and desire to limit risks incurred. On the other, such delegation raises *principal-agent problems*, as unless the funds manager is perfectly monitored and/or a foolproof contract drawn up, he may act in his own interests (for example, in generating excessive commission income) – or, particularly in Europe and Japan, in the interests of related financial institutions – and contrary to those of the liability holders. The various means used (particularly in Anglo-Saxon countries) to counteract such problems, however, mean that funds management gives rise in turn to potential for *herding behaviour*. This may arise notably from the desire of portfolio managers to show they are of good quality, for example in the context of short mandates, owing to the pressures exerted by performance measurement, or fear of takeover (for life insurers or closed-end funds).

The discussion above should of course not be taken to imply that types of institutions are homogeneous. Institutional investors comprise pension funds, life insurance companies and forms of mutual funds. The main differences stem from liabilities. *Pension funds* provide means for individuals to accumulate savings over their working life so as to finance their consumption needs in retirement. Returns on such funds may be purely dependent on the market (defined-contribution funds) or may be overlaid by a guarantee by the sponsor (defined-benefit funds). *Life insurance companies* have traditionally provided insurance for dependants against the risk of death at a given time in the future, but are increasingly used as long-term saving vehicles for pensions, to repay loans for house purchase and the like. *Mutual funds* differ from these long-term institutions by offering short-term liquidity on pools of funds, albeit at rates depending on current market prices, either via direct redemption of holdings (open-ended funds) or via ability to trade shares in the funds on exchanges (closed-ended funds).[5] They may provide this service either for individuals or for companies and other institutions. Money market

5. In practice, various hybrids also exist, with open-ended funds being traded and some untradeable closed-end funds.

mutual funds, by holding only liquid short-term money market assets, seek to offer redemption of holdings at par and hence provide payments facilities. Another special type of closed-end fund is a hedge fund, which seeks to pursue high returns at the cost of taking high-risk, leveraged positions.

4.2 Reasons for the Growth of Institutions

Section 2 showed that institutional investors play an increasing role in collecting savings, investing in securities and other financial assets, as operators in securities markets, cross-border investors and owners of companies. Logically, growth of institutions is explicable either in terms of the *supply* side – a changing comparative advantage in terms of the functions they fulfil (related to the characteristics described above) – or an increased *demand* for certain functions on behalf of end-users.

A combination of these factors is considered to be responsible for growth of institutions. On the supply side, innovations related to securitisation have reduced institutions' costs (for example, via improvements in capital market structure which lower transactions costs, improved availability of price information, and use of derivatives in risk control) and made them able to fulfil a wider range of functions (for example, by facilitating growth of money market funds and enabling loans to be securitised). Their own growing size has improved ability to exert control over borrowers. Meanwhile banks have offered less attractive products owing to regulatory burdens and the need to rebuild capital following loan-losses. On the demand side, institutions have been able to fulfil the need for long-term saving at high return and low risk that is increasingly required as the population ages – and which has been stimulated by fiscal incentives. To offer more detail on reasons for growth, we return to Merton and Bodie's functions of the financial system which were set out in Section 3:

- *clearing and settling payments*. Owing to technological advances and the innovation of money markets themselves, money market mutual funds have been able to develop, and to offer transactions accounts, based on units which are redeemable at par. Note, however, that growth may have been facilitated by the impact of loan-losses, regulations and reserve requirements on banks, as well as fiscal incentives. A further point to be made is that institutions have themselves influenced the structure of markets, for example by encouraging development of wholesale markets, as well as influencing the form of trading and settlements systems more generally. These developments have offered cost advantages to institutions over individual securities investors and banks;
- *pooling of funds.* As noted, pooling is a fundamental characteristic of institutions, which given their size and consequent economies of scale, they can perform much more readily than households. In this context, one may note the mutually reinforcing development of securitisation of individual assets (such as loans), which has provided a ready supply of assets in which institutions may invest in competition with banks;
- *transferring economic resources.* The most crucial point is that ageing of the population, combined with curtailment and/or growing lack of confidence in the promises of social security pension systems has led to increased demand for transfer of resources over time, via growth of pension funds *per se* and also to retirement

savings held in life insurance companies and mutual funds (Huijser 1990; Davis 1995a). More generally, there is in OECD countries an increased demand for long-term saving, related to accumulation of wealth. As regards transfer across space, one may highlight the increased amplitude of international portfolio investment by institutions, motivated by desires to diversify and reduce risk, which has supplanted the bank-driven flows which were typical of the 1970s;

- *managing uncertainty and controlling risk.* Institutions are well placed to use derivatives and other means of risk control on their portfolios – many of the related innovations have been introduced or developed especially to cater for institutional demand. On the liabilities side of their balance sheet they may provide forms of insurance to clients (life insurance, defined-benefit pension funds);
- *use of price information.* The ability of institutions to employ information at lower cost than individuals and competing institutions has been highlighted above, and this is an important additional reason for their growth;
- *dealing with incentive problems.* Institutions have a comparative advantage over individual investors in dealing with issues of corporate governance, given the size and voting weight that they can wield. More generally, institutions as a whole exert influence on governments not to adopt lax fiscal or monetary policies, for fear of the market consequences. On the other hand, it should be stressed that there are limits to institutional involvement. Banks' comparative advantages in overcoming asymmetric information in loans for small firms has ruled out securities market intermediation of their liabilities to date, and there are important incentive problems in the funds-management relation itself; and
- moving outside the functional framework, *fiscal advantages* have often been accorded to institutional investors.[6] The tax advantage of exemption of contributions and asset returns is common for pension funds, where provision of such funds is voluntary for companies or individuals. But life insurance contributions have also often benefited from tax exemption, and mutual funds in some countries also.[7] Equally, on the *regulatory side* institutions are not typically subject to minimum reserve requirements, an implicit tax on banks, although portfolio regulations on institutions may at times act in a similar way. The development of institutions has been an important catalyst for financial deregulation more generally.

5. Institutional Investors and Financial Change

This section, the core of the paper, seeks to analyse the role institutions have played in the financial changes summarised in the data of Section 2. We employ the Merton and Bodie functional framework to organise this section, following the discussion of reasons for growth of institutions set out above. Of course, there are some overlaps, since some of the trends cover more than one function.

6. The power of tax privileges is illustrated by the decline in institutional assets that may follow radical tax reform, such as removal of tax benefits on pension funds in New Zealand and on money market funds in France.

7. In some countries such as Germany, money market funds (in Luxembourg) have been an instrument of tax evasion.

5.1 Clearing and Settling Payments

5.1.1 Institution-bank competition on the liabilities side

Money market funds are diversified open-end investment companies that invest in short-maturity and highly rated debt securities. They seek to maintain a stable asset value per share of par, which is facilitated by the type of money-market securities in which they invest. Shareholders are allowed to redeem funds by use of cheques, thus giving transactions services identical to bank accounts. Besides being a major financial innovation *per se*, money market funds have two important effects on financial structure, namely providing competition to banks and spurring the growth of money markets. Their growth has been a particular feature of countries such as the United States and France (it is of interest that their development has been much less marked elsewhere, to date).

The development of money market mutual funds in the United States in the 1970s, a period of high money market rates, took the form of massive disintermediation of bank deposits, whose interest rates were subject to control, unlike the return on money funds. This development led to abolition of controls on interest rates for banks and thrifts in the early 1980s. But growth of money market funds continued, since yields remained higher than banks would offer, due to the effect of reserve and capital requirements on banks' spreads. Moreover, Mack (1993) argues that even longer-term mutual funds may provide effective competition for banks in the United States, given their liquidity, despite capital uncertainty. Similarly in France there has been a major expansion of money market funds, stimulated partly by tax incentives. In Japan, medium-term bond funds (Chikoku) have competed with banks by offering liquidity and higher yields than deposits. Competition on the liability side is an important aspect of the competition faced by banks in these countries, which has led to a narrowing of margins and greater risk taking (see 5.2.2 below).

Besides the direct effect on banks, one may highlight the effect on wholesale money markets of these developments. These markets have been a crucible for many of the financial innovations of recent years, notably CDs, CP, deposit notes, swaps and repurchase agreements (Stigum 1990). This has in turn encouraged corporations to switch to money markets for their short-term financing needs, thus disintermediating banks also on the asset side (see 5.2.2).

Meanwhile, there is a debate about possible risks of 'runs' from money market funds in the event of sharp price changes and a decline in market liquidity (Wojnilower 1995). Such runs may be seen as possible where money market funds offer implicit promises that 'par value' will be retained for their liabilities, as this relies on ongoing ability to liquidate assets at stable prices. Lack of diversification, credit risk on the assets held, use of leveraged plays by means of derivatives and declines in money market liquidity could all be reasons for inability to maintain par, which could induce panics and lead to runs from money market funds. If runs prove contagious, and there is widespread impulsion to sell assets, liquidity failure and price falls could intensify, to the detriment of the whole sector. Intense competition and lack of serious adversity so far could be reasons for managers to be complacent about risk, which are familiar to students of banking crises (Davis 1995b). Note that similar issues may arise for guaranteed income contracts sold by life insurers, as US experience has already shown.

5.1.2 Market microstructure

The development of institutional investors has had a pervasive effect on capital market structure. Their key demand is liquidity, that is, the ability to transact in large size without moving the price against them,[8] anonymously and at low transactions costs. Rapid and efficient settlement is also essential. They are relatively unconcerned by the firmness of investor protection regulation, as they have sufficient countervailing power to protect their own interests against market-makers and other financial institutions. But they are also extremely footloose and willing to transfer their trading to markets offering improved conditions. In effect, this feature renders the market for securities trading services 'contestable' (that is, any excess profitability is vulnerable to new entry).

Specialised wholesale markets which focus transactions and increase liquidity, usually centred on well-capitalised position-taking market-makers ready and able to facilitate large trades, have tended to benefit from their activity in recent years. Liquidity of wholesale capital markets may be aided by deregulation and reduction in commissions, that institutions have proven well placed to press for. Increases in liquidity should in turn be beneficial more generally to the efficiency of capital markets, and lead to a reduction in the cost of capital.

As regards equity markets, growth of institutions in the United States has led to development of off-exchange 'block trading', disintermediating the traditional specialists. London's SEAQ International is another example: in the late 1980s and early 1990s it benefited relative to competitors in continental Europe from features such as continuous trading, high capitalisation of market-makers (enabling them to handle large positions) and lack of transaction taxes on non-UK stocks. Its initial success was marked: in the early 1990s it carried out 50 per cent of French and Italian equity trading and 30 per cent of German, for example, and 64 per cent of global cross-border equity transactions, and 95 per cent of European cross-border transactions, were handled by SEAQ.[9] Its relative liquidity was reflected in transaction sizes – $275,000 compared with $25,000 in Paris and $50,000 in Frankfurt.

But contestability means such markets are not invincible. SEAQ stimulated deregulation and shifts from open-outcry call-auction markets to electronic continuous auction markets in continental Europe on centres such as Paris, Madrid, Brussels and Milan (Pagano and Steil 1996). Their competitiveness in trading domestic stocks was helped by their inherent informational advantages, as well as liberalised commissions, block trading, and dual-capacity intermediaries. These developments eroded SEAQ's comparative advantage and, combined with a lesser willingness of London market-makers to commit capital to their operations following some major losses, led to a decline in liquidity (although SEAQ remains popular for block and programme trades).

An emerging challenge to all traditional exchanges is posed by off-market trading via proprietary trading systems (such as Instinet in the United States and Tradepoint in the United Kingdom), which enable direct and anonymous trade to occur among institutions and broker-dealers. In effect, institutions provide their own liquidity in periodic

8. Whether they also require immediacy is open to dispute (Schwarz and Steil 1996).

9. Howell and Cozzini (1992). Note, however, that not all the trade was diverted; some was new trade generated by the rise of international portfolio investment by United States institutions (see 5.3.2 below).

call-auction markets in such systems. Profitability of market-making is hence under further pressure, encouraging 'proprietary trading' by securities houses. Meanwhile, the growth of institutions may entail a tiering of markets, with order-driven and heavily regulated domestic markets retained for retail investors and for small company stocks.

This section focuses on equity markets, but as discussed in IMF (1994), governments have also sought to modernise the infrastructure of bond markets, driven by the need to make their debt more attractive to international institutional investors (in effect, emulating the United States market practices). They hope thereby to reduce costs, in the context of abolition of exchange controls, which mean domestic funding would only be available at damagingly high interest rates. But they hence also provide infrastructure which private issuers could utilise. Measures taken by OECD governments include primary dealer systems; auctions; issue calendars; vehicles for financing positions (such as repos); abolition of withholding taxes;[10] derivatives markets; tailoring of issues; benchmark issues; improvements in clearing and settlement systems; and 'global bonds'.

5.2 Pooling of Funds

5.2.1 Security markets and institutions

Before assessing the effects of institutions on banks and households, it is relevant first to ask how the growth of institutions relates to that of capital markets in general terms. Following the discussion of Section 3, securities markets are conceptually means whereby claims may be subdivided and made tradeable to facilitate diversification. Despite the general trend for size of institutions to increase, the contrasts between countries in the size of both institutional sectors and securities markets raises the issue of whether securities markets are a precondition for development of institutional investors or whether institutions may emerge first, and then stimulate capital market development. Note that these arguments are broadly 'closed economy' based, a bias that may be justified given the tendency of institutions to invest domestically even in globalised financial markets.

In fact, there would appear to be a two-way relationship. Although institutions could develop on the basis of loans or property investment, their greatest comparative advantage is in the capital market. Loans require monitoring, so the customer relationship may give banks a comparative advantage there. Trading and risk-pooling are more efficiently undertaken in the capital markets where transactions costs are lower. Hence capital markets facilitate growth of mutual funds, and may encourage development of funded pensions. But institutions may also spur further growth of capital markets, as the recent example of Chile has confirmed. Unlike pay-as-you-go social security schemes, where there can be an immediate transfer of income to those who have not contributed (who are old at the outset), in funded pension schemes, or life insurance saving, the assets are built up while they are maturing, and this stimulates investment and the development of securities markets. Given their focus on real returns, institutions should be particularly beneficial to development of equity markets. Certainly there seems to be a correlation in

10. When New Zealand abolished withholding taxes on government bonds, the immediate fall in the bond yield was reportedly more than sufficient to cover the loss of tax revenue.

OECD countries between equity market capitalisation and the size of institutions. Equally, institutions are ready customers for bonds and securitised debt instruments.

5.2.2 Institution-bank competition on the assets side

The story of securitisation and of the banking difficulties of the 1980s are, we suggest, intimately linked, and institutional investors were crucial players in the overall developments that occurred, of 'competition-driven disintermediation into securitised money and capital markets' (IMF 1991).

An explanation of balance-sheet developments which led to major losses by banks in many OECD countries at the end of the 1980s and in the early 1990s must start with the LDC debt crisis. This led to a reduction in banks' credit ratings, and hence increased their cost of funds, *vis-à-vis* their major corporate customers, as well as leading to a need for wider spreads in order to rebuild capital bases. Such pressure on spreads was aggravated by tightened regulation of capital bases – which itself promoted securitisation by putting the heaviest risk-weights on bank loans, and the lowest on government bonds, as well as requiring less capital for trading than banking. Loss of credit rating and wider spreads both reduced banks' competitiveness as suppliers of funds to highly rated companies as compared with institutional investors operating via the securities markets. Companies accordingly switched part of their demand for funds to the money and bond markets. In parallel, as noted above, depositors often found their needs could be served more cheaply by use of money market instruments and money market mutual funds. Note that in the absence of institutions and securities markets, banks' customers would simply have had to pay higher spreads, as was indeed the case for small companies, for whom capital markets were not accessible, either directly or via pooled loans (see 5.6.2).

The loss of rating by banks is only half the story, however. Competitiveness of the securities markets was sharply improving, partly due to the growth in institutional investors themselves, following a shift by the household sector away from deposits (which expanded the supply of long-term funds),[11] but also due to supply-side factors such as large government deficits and privatisation, and other developments partly related to institutionalisation such as improved trading technology (see Section 5.1.2), deregulation of domestic securities markets and growth of rating agencies (which supplanted banks' role of credit assessment for many borrowers, thus reducing the value of bank relationships).

Financial innovations to service the needs of institutions have played a key role in this process, with financial products in effect migrating from banks to markets once they prove sufficiently standardised and high-volume (although the higher costs of banks as outlined above also proved to be an important incentive). Such migration has been accompanied by an increasing focus on public information disclosure (Bisignano 1995). For example, low-grade bond and medium-term note markets have enabled a broader range of companies than before to benefit from securities market financing – and have facilitated highly leveraged corporate restructurings. A further innovation was the expansion of packaging and securitisation of loans (such as mortgages and consumer debt), which besides involving institutions as investors, led to competition for banks

11. Hargraves, Schinasi and Weisbrod (1993) trace this pattern in the United Kingdom, United States and Japan in the 1980s.

from investment banks for origination and servicing fees. These developments coincided with deregulation and technical advances which entailed increased competition by foreign banks and non-banks even in areas where securities issuance was less viable (such as for business loans) and from money market funds on the retail deposit side, as noted in 5.1.1 above.

Besides the general demand of institutions for securitised assets, demand for some securitised instruments is closely linked to specific regulations. For example, minimum funding requirements for the United States and Canadian pension funds sharply increased demand for hedging (Bodie 1990). This stimulated the development of immunisation strategies (to match assets to liabilities) based on long-term bonds. The requirement of a fixed duration[12] for investment instruments in the context of such strategies in turn stimulated innovations in the United States and Canada tailored to funds' needs such as zero-coupon bonds, collateralised mortgage obligations and guaranteed income contracts (GICs) offered by life insurers. This in turn spurred the overall process of securitisation; of mortgages in the case of collateralised mortgage obligations and of loans and private placements in the case of GICs.

Commercial banks' responses to these challenges, in the context of deregulation of their own activities and difficulty of restructuring to remove excess capacity[13] were two-fold. First, there was a much greater focus on off-balance sheet and fee-earning activity (see Table 4), in order to economise on capital and share in the increase in securities market activity, taking advantage of their distribution networks and customer relationships. The activities in question included underwriting, broking, market-making, insurance business, and funds management itself. In effect, institutionalisation gave a spur to the 'universalisation' of banking even in countries such as the United Kingdom and the United States where activity of banks has been traditionally restricted (Rybczynski 1994). There was also increased penetration of previously segmented lending markets, particularly where their branch networks could be used (for example, for mortgage lending).

Second, there was increased balance sheet growth, focusing particularly on higher-risk borrowers, in order to maintain profitability. These included lending to property companies, to finance leveraged takeovers and in foreign markets. Often these patterns accompanied a shift from relationship to transactions banking (in parallel to the trend towards transactions-driven securities finance). In principle, shifts to higher-risk and unfamiliar markets should have been possible without major increases in risk to the banks if the associated risk had been priced accurately. The fact that major losses have been made by banks in many OECD countries suggests that risk pricing, or quantity rationing, were not accurate. Three main cases can be outlined as to how this could come about, namely accurate risk pricing *ex ante*, but unexpected developments generating losses *ex post*; deliberately inaccurate risk pricing to generate competitive advantages; and inaccurate risk pricing due to errors in credit assessment. Experience suggests the

12. Bodie (1990) suggests that fixed duration securities (and associated strategies) have little role in terms of household utility maximisation, as they are unable to hedge against the inflation risk to future consumption. The United States (and Canadian) defined-contribution funds nonetheless tend to hold significant quantities of fixed-duration instruments, partly due to the risk aversion of the members.

13. Bisignano (1995).

second and third played an important role (Davis 1995b): mispriced safety-net protection may have encouraged such errors, as they meant the cost of funds did not rise with risk.

The response to the losses that have been incurred in terms of further loss of competitiveness has included a wave of mergers, as excess capacity is removed (Berger, Kashyap and Scalise 1995). There also seems likely to be a second wave of securitisation and institutionalisation, following further the lines set out above. One point to note is that now that market-making itself is becoming less profitable (see 5.1.2), proprietary trading is becoming more important to both commercial and investment banks, which could increase risks.

5.2.3 Household sector portfolios

Transactions costs in securities markets, including the bid-ask spread, make it difficult for households of average means to diversify via direct securities holdings,[14] while excess risk incurred if diversification is insufficient is not compensated by higher return (as such risk is diversifiable to the market as a whole). Depending on the volume of assets available to invest, the costs that would need to be incurred to eliminate such risks on an individual basis are extremely high. Despite the relatively low levels of commission costs in the United States, estimates suggest that costs amount to 1.2 to 9.8 percentage points per year on a seven-year holding period. Even for an investor with $100,000 to invest, 150-200 basis points of commission would be incurred per year (Sirri and Tufano 1995). Liquidity is low in the case of direct holdings. Equally, individual investors would face the difficulty of controlling the companies in which they hold shares (see Section 5.6.1).

Accordingly, a feature of a number of OECD countries in recent years is that the share of households' portfolios held in the form of securities has tended to decline (Table 7), while the proportion of equities and bonds held via institutions has tended to increase. This pattern can only be explained in the light of the development of institutional investors, which offer superior forms of pooling. The reduced demand for transactions by retail investors that this tendency has entailed has in turn furthered the evolution of market structures towards wholesale market-maker based systems which were outlined in 5.1.2 above. One implication is that there is less need for the type of protective regulation of individual investors and of subsidies to their costs than has hitherto been the case. Equally, oversight of companies will shift to institutions, which opens a richer menu of means of corporate control (see 5.6.1).

5.3 Transfer of Economic Resources

5.3.1 Long-term saving

Development of institutions, especially those where savers enter into long-term contracts involving payments at regular intervals, has been linked closely to the increase in long-term saving – transfer of economic resources over time. This appears to have

14. Typically around 40 shares are needed to offer the same volatility as the market as a whole; in the United States the 'round-trip' commissions needed would amount to 12 per cent of value, even for a person of median wealth (Sirri and Tufano 1995).

involved both a switch of asset holdings towards longer maturities and also an increase in saving *per se* linked to the development of institutional investors.

Evidence suggests that the effect on the *maturity* of saving may be more important than its influence on the *aggregate volume* of saving: for increased contractual saving via long-term institutions is typically partly or wholly offset by declining discretionary saving although studies such as Hubbard (1986) and Poterba, Venti and Wise (1995) suggest a larger effect.[15] Taxation provisions and credit rationing are the main channels analysed as potentially leading to an effect of institutionalisation on saving. However, even the effect on saving of tax concessions that raise the return on institutional saving is ambiguous. For target savers it will lower overall saving, although saving by higher-income households may be boosted by tax incentives which raise the rate of return to saving above a certain level.[16]

To the extent that an effect on aggregate saving does occur, this may rather result from liquidity constraints on some individuals (especially the young), who are unable to borrow in order to offset obligatory saving via life insurance or pension funds early in the life cycle. Following this view, forced institutional saving may have interesting side effects in the case of financial liberalisation. It is notable that the household sectors in countries with large pension fund sectors such as the United States and the United Kingdom have also been at the forefront of the rise in private sector debt in the 1980s, as shown in Table 6 (Davis 1995b). The familiar story underlying this is of a release of rationing constraints on household debt following financial liberalisation, which allowed households to adjust to their desired level of debt. But in the context of pre-existing accumulation of wealth via institutions and high returns to institutional assets, this adjustment could be partly seen to entail borrowing by households to offset forced saving through institutions.

It can also be anticipated that, even in a liberalised financial system, credit constraints will affect lower-income individuals particularly severely, as they have no assets to pledge and less secure employment. Therefore forced institutional saving will tend to boost their overall saving particularly markedly (Bernheim and Scholz 1992). This point is of particular relevance in countries having or currently introducing compulsory private pensions such as Australia.

Meanwhile the effect of institutional growth on personal saving may be offset at the level of *national saving* by the impact of tax subsidies to personal saving, especially if they are financed by public dissaving. However, a switch away from social security to pension funding would probably have a major effect on saving, given the former has been shown significantly to depress saving in a number of countries,[17] notably for the first generation which has not contributed.

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15. On the United States, see Feldstein (1978), Munnell (1986) and the review in Smith (1990); on Australia see Morling and Subbaraman (1995).

16. Developing this argument, the suggestion is that up to a certain level of income, saving is of a target nature, that is, to assure a minimum standard of living at retirement. Such target saving may be diminished by higher rates of return generated by tax concessions. It is only beyond a certain level of wealth that households are freer to reallocate resources so as to increase retirement consumption beyond this minimum level. Such saving will be interest-rate sensitive in the normal way, as individuals substitute future consumption for current consumption.

17. See Feldstein (1977, 1995). However, analysts in countries such as Germany dispute this effect (Pfaff, Huler and Dennerlein 1979) and suggest social security had no effect on saving.

Abstracting from the likely increase in saving and wealth, the implications of growth in institutions, notably life insurers and pension funds, for *financing patterns* arise from differences in behaviour from the personal sector, who would otherwise hold assets directly. Portfolios of long-term institutions vary widely, but in most cases they hold a greater proportion of capital-uncertain and long-term assets than households. For example, equity holdings of pension funds in 1994 varied from 70 per cent of the portfolio in the United Kingdom, to 48 per cent in the United States, and 18 per cent in Germany (Table 8). But in each case they compared favourably with personal sector equity holdings, which were 12 per cent, 19 per cent and 6 per cent of gross financial assets respectively. On the other hand, the personal sector tends to hold a much larger proportion of liquid assets than institutions. These differences can be explained partly by time horizons, which for persons are relatively short, whereas given the long-term nature of liabilities, institutions may concentrate portfolios on long-term assets yielding the highest returns. But institutions also have a comparative advantage in compensating for the increased risk, by pooling across assets whose returns are imperfectly correlated.

The implication is that institutionalisation increases the supply of long-term funds to capital markets, and reduces bank deposits, even if aggregate saving and wealth do not increase, so long as households do not increase the liquidity of the remainder of their portfolios fully to offset growth of institutional assets. As was shown in Table 7, in fact, deposit shares have tended to decline in most countries over the past 25 years. Some offsetting shifts were apparent in econometric results of Davis (1988), which suggested that over 1967-85 the growth of institutions has been accompanied by a greater holding of deposits than would otherwise be the case, albeit insufficient to prevent an overall shift towards long-maturity assets. However, King and Dicks-Mireaux (1983) found little effect in Canada. On balance, results are consistent with an increased demand for long-term saving, which besides demographics may be related to rising overall income and wealth (where only a certain volume of saving is needed to cover contingencies).

5.3.2 Cross-border investment

The growth of international portfolio investment – the transfer of resources in the form of securities across national borders – is intimately linked to growth of institutional investors. As shown in Table 11, cross-border flows have been transformed since the late 1970s, from dominance by banks to a situation where securities represent over 75 per cent of both inflows and outflows from OECD countries.

This pattern is linked to developments on the banking side, namely that prior to the LDC debt crisis, banks were active lenders, intermediating the funds deposited by OPEC countries to LDCs. After the crisis, banks' willingness to lend to LDCs collapsed, capital bases were weakened and the fall in oil prices reduced inflows from OPEC. However, saving/investment imbalances between countries persisted, notably between the United States and Japan (see below). But these changing patterns of net flows, the size of which was determined by macroeconomic developments, tended to be more than accounted for by gross institutional flows, which ensured that portfolio flows predominated (and as a byproduct also strongly influenced exchange rates). In effect, there has been a sharp expansion of international investment by pension funds in recent years, as well as

for life insurers in some countries. The expansion of mutual funds has entailed a sizeable proportion of specialised funds investing only in foreign markets.

International investment has been apparent also in terms of holders of securities. Foreign holdings of French and German bonds rose from zero and 5 per cent in 1979 to 38 per cent and 25 per cent, respectively, in 1992 (note, however, that foreign central banks as well as institutions may be responsible). As shown in Table 9, foreign holdings of equities of German, French, UK and Japanese companies (virtually all by institutions) also rose in the 1980s. In this context, companies are increasingly seeking listings on major stock markets, to tap investor bases. Internationalisation has been accompanied by an increasingly active approach to international portfolio investment on behalf of institutions. Whereas in 1982 the United Kingdom pension funds held foreign equities for two years on average, in 1994 the average holding period was under 6 months (WM 1995), while the stock of foreign equities held by United Kingdom pension funds had risen from around $20 billion to $150 billion.

In addition to securities markets, international activity of institutions has also affected the foreign exchange market. Whereas it has traditionally been the preserve of the banks,[18] participants in foreign exchange markets have become more diverse, with the entry of institutional investors as direct players. Commentators suggested, for example, that involvement of mutual funds, pension funds and life insurers was the most novel feature of the 1992/93 crises of the ERM, and explained why speculative pressures rapidly increased (IMF 1993). International diversification meant such institutions would inevitably be affected by exchange rate turbulence; they are becoming increasingly willing to turn over investments rapidly and change the currency composition of their portfolios, given falling transactions costs and development of derivatives. Managers are exceptionally sensitive to any losses that could make their own funds perform badly relative to the rest of the market, thus encouraging adoption of similar strategies; they often separate exchange rate and investment risk for investment management purposes by hedging, thus encouraging a focus on exchange rates. And the resources available to pension funds and life insurers far exceed national foreign exchange reserves, so that relatively small proportionate portfolio shifts could lead to major pressures on exchange rates.[19]

The benefits of international investment for institutions, particularly in terms of risk diversification, have always been present. Why did diversification of institutions' portfolios increase so significantly in the 1980s and early 1990s? As noted in Dailey and Motala (1992), factors underlying growth in foreign asset holdings of institutions include those underlying retirement saving itself (better coverage of funded pensions, demographics, funding requirements, investment returns) and growth of the relative size

18. Banks are increasingly limited in position-taking by prudential requirements as well as internal risk-management rules; they are tending to focus on their role as intermediaries in the foreign exchange markets, providing liquidity, innovative portfolio strategies and advice to customers.

19. Long term institutions' involvement was not the only novel feature. Also active were hedge funds which seek to profit from movements in exchange rates and interest rates by leveraged investments, either selling vulnerable currencies forward, borrowing in the threatened currency, using their capital to finance margin requirements, or by establishing interest rate positions via futures to profit from an interest rate decline after a crisis. Corporate treasury operations have also expanded, meaning their funding, positioning and hedging operations can also lead to exchange rate pressures.

of institutions in domestic markets. But these do not explain growth in *portfolio shares*. Key autonomous factors underlying the general growth of international financial investment and trading must also be highlighted as having a causal significance. These include improved global communications; liberalisation and increased competition in financial markets, which have reduced transactions costs; improvement of hedging possibilities via use of derivative instruments; and marketing of global investment by external managers.

Abolition of exchange controls was an important factor underlying growth of international investment in countries such as Japan, the United Kingdom and Australia. But equally, it cannot be a complete explanation, as Germany, where long-term institutions hold few foreign assets, abolished exchange controls in 1959. Underlying parameters of regulation are the key remaining factor. Taking the example of pension funds (Davis 1995a), under the *Employee Retirement Income Security Act* (ERISA) the United States pension funds are subject to a 'prudent man rule' which requires the managers to carry out sensible portfolio diversification, and which is taken to include international investment. Australian funds are not subject to portfolio regulations.[20] The United Kingdom pension funds are subject to trust law and again follow the 'prudent man' concept; they are not constrained by regulation in their portfolio holdings. Japanese funds face non-binding ceilings on foreign asset holdings, currently 30 per cent. In contrast, Canadian pension funds have till recently faced limits on the share of external assets (but not their composition) as tax regulations limited foreign investment to 10 per cent of the portfolio, and 7 per cent for real estate. A tax of 1 per cent of excess foreign holdings was imposed for every month the limit is exceeded. The limit was raised to 20 per cent in 1994. Meanwhile German funds remain subject to the strict limits on foreign investment – only recently raised from 4 per cent to 20 per cent – imposed on life insurers.

It is also relevant to assess some economic implications. In a macroeconomic context, international portfolio investment by institutions may be an important conduit for savings to flow to countries with demand for capital in excess of domestic saving, and thus high returns to capital (as well as current account deficits). A particular example may be seen in the way institutional investors (notably in Japan, once exchange controls were abolished) played a key part in financing trade imbalances between the G3 countries over the 1980s, by investing heavily in United States bonds. This may be seen conceptually as facilitating a form of consumption-smoothing[21] that would not be possible in closed economies, whereby Japanese savers were able to postpone consumption via international investment while allowing American consumers to advance it via international borrowing (Bisignano 1993). This in turn helped to equalise returns on financial assets, making the world market portfolio more efficient. However, a risk is that inflows may allow countries to pursue ultimately unsustainable policies for longer than would be desirable.

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20. Taxation provisions, which enable domestic dividend tax credits to be offset against other tax liabilities, are reportedly a major disincentive to international investment (Bateman and Piggott 1993).

21. Such consumption-smoothing as highlighted here for the G3 is a general feature of capital flows among advanced countries, according to research by Brennan and Solnik (1989); they suggest that in recent decades it has yielded benefits in eight advanced countries equivalent to 4-8 per cent of total annual consumption in the early 1970s.

The example in this case is expansionary fiscal policy in the United States, which given the role of capital inflows in its financing can be seen as the United States government doing its own consumption-smoothing, transferring income from future generations of taxpayers to existing ones, in precisely the opposite direction to that required by ageing of the population.

Asset market effects of international investment are not confined to the transnational level. International investment may also help to relieve excessive pressure on domestic asset prices. In the mid 1980s the Japanese equity market might have been even more buoyant – perhaps dangerously so – if institutions could not invest offshore, while repatriation may have limited more recent declines. In the United Kingdom, the 1981 appreciation of sterling, which damaged the domestic economy, might have gone much further in the absence of capital outflows from the United Kingdom institutions. The Swiss pension fund and life insurance sectors have been accused of distorting the housing market, as a result of which constraints on foreign and securities investment have been relaxed.

5.4 Managing Uncertainty and Controlling Risk

As regards risk management, the focus of many analysts has been on recent innovations in international banking. BIS (1992), for example, showed how swaps, FRAs, interest rate options and short-term interest rate futures have complemented and substituted for traditional international interbank deposits, in the context of volatile interest rates and asset prices. However, the process of financial innovation – the invention and marketing of new financial instruments which repackage risk or return streams – has also been closely related to the development of institutional investors. On the liabilities side of their balance sheet, institutions may provide forms of insurance to clients (life insurance, defined-benefit pension funds); we do not develop this point further here (Davis 1995a).

The general process of securitisation, which itself may be seen as a means of pricing and trading risks of the securities markets, has already been discussed; here we highlight use of derivative instruments and innovative investment strategies. However, a general point to note before focusing on particular issues is the effect of institutional demand on the dynamics of innovation generally. Prior to the mid 1980s, most innovation originated in the Euromarkets, after that in the US domestic market. But increasingly over time, in cases where innovations proved essential to funds management, institutional investors have tended to press other markets to adopt similar innovations (equity and bond futures markets, and so on).

It has been noted that immunisation strategies are linked to securitisation. They also spurred development of markets for index options and futures, which in turn facilitate sharing and unbundling of risk. For example, pension funds writing call options on equities can be seen as converting them into short-term fixed-income securities for matching purposes. Another strategy is holding assets in excess of the legal minimum prescribed by funding requirements in equities, as long as their proportion is reduced when the market value of pension assets falls. This strategy is known as portfolio insurance or contingent immunisation, and has stimulated development of index options and futures markets and of programme trading more generally.

Another area in which institutions are active is use of derivatives in international investment. Whereas equity holdings are often left unhedged, bond investments are routinely hedged against currency risk. As discussed in Davis (1995a), stock index futures are seen as particularly useful in tactical asset allocation, facilitating rapid shifts between different national markets, which would later be translated into stocks. Derivatives might also be used for long-term strategic movements into markets or stocks, if they enable such shifts to occur without moving the market against the fund. This will be the case if the derivatives markets are more liquid than the underlying (as, for example, in Japan, where in mid 1991, outstanding futures contracts represented three times the daily number of shares traded on the stock market). Also, temporary adjustments in exposure could be obtained by purchase and sale of index futures without any transaction in the underlying (overlay strategies), thus avoiding disturbance of long-term portfolios (Cheetham 1990). Such strategies facilitate 'unbundling' of funds management into currency, market and industry exposure. Finally, institutions might invest cashflow awaiting long-term investment in derivatives, as it ensures the manager is always invested and will not miss an upturn. As noted, demands of these types by international investors have encouraged the development of options and futures markets to accompany domestic markets, which have themselves further encouraged international investment.

An emerging development of interest in the context not only of innovation but also cross-border investment and corporate finance is the creation of synthetic shares which replicate dividend and price behaviour of existing shares (but circumventing foreign ownership restrictions). These can increase liquidity for issuers without changing control structures. Other innovations enable investors to create and unwind controlling blocks of shares at low cost; this would reinforce destruction of existing control structures (Berglöf 1996).

5.5 Price Information

The tendencies for important changes to occur in the structure of capital markets as a consequence of institutional development have implications equally for their pricing behaviour. It is often suggested that the growing dominance of financial markets by institutional investors has led to heightened volatility.

Such hypotheses must, however, be formulated with care. In normal times institutions, having good information and low transactions costs, are likely to speed the adjustment of asset prices to fundamentals; this should only entail price volatility to the extent fundamentals are themselves volatile. This suggestion is supported by econometric analysis (Davis 1988) of the portfolio distributions of life insurers and pension funds in five of the G7 countries, which show they are strongly influenced by relative asset returns, particularly where there are few regulations governing portfolio distributions and low transactions costs, as in the United Kingdom and the United States. Adjustment to a change in such returns is generally rapid. Assuming adequate information and appropriate incentives to funds managers, this should imply an efficient allocation of funds and correct valuation of securities. In Davis' research, these results did not all hold where transactions costs are high and regulations are strict – for example, in Germany, Japan and Canada. In these countries adjustment to a change in returns is somewhat

slower.[22] It need hardly be added that market sensitivity generates an efficient allocation of funds and also acts as a useful discipline on lax macroeconomic policies (see Section 5.6.2). The liquidity that institutional activity generates may dampen volatility, as is suggested by lower share price volatility in countries with large institutional sectors. Evidence on average day-to-day asset price fluctuations shows no tendency for such volatility to increase (Table 13). It can be argued that securitised financial systems have important stabilising features (ease of marking to market, distance from the safety net, opportunities to diversify and spread risk).

In a global context, cross-border portfolio investment as outlined above should enhance the efficiency of capital markets, by equalising total *real* returns (and hence the cost of capital) between markets. Such a process occurs as investment managers shift between overvalued and undervalued markets. Increased efficiency enables capital to flow to its most productive use and for savers to maximise their returns.[23] It is aided by the increase in speed of information flows and the ability of institutions to conduct cross-border arbitrage using derivatives markets (stock index futures for equities, FRAs for money markets and swaps for bond markets).

The key offset to such stabilising tendencies seems to be the occurrence of episodes of 'one-way selling' by institutions, which may generate securities market instability. BIS (1986) for example suggests the key reason for one-way selling to occur in money markets is the increasing concentration of portfolios in the hands of few institutional investors, which may react similarly and simultaneously to news, transmitted increasingly rapidly by global telecommunication links; the fiduciary role of such investors; the fact they see their holdings as short-run, low-risk, high-liquidity assets; that they may have less detailed information than would a bank on which to base a credit decision, and less of a relationship reason (than banks) to support a particular borrower or keep a particular market functioning.[24] In Section 5.6.3 below we assess various incentive-based reasons why institutions may 'herd'.

One consequence seems to be the observation of occasional medium-term deviations of asset prices from levels consistent with fundamentals, generally in highly liquid financial markets, which raise concerns for monetary and financial stability. Examples are the stock market crash of 1987, the ERM crises of 1992-1993, the global bond markets in 1993-1994 and the Mexican crisis of 1994-1995. Common features of these events (Davis 1995c) included:

- heavy involvement of institutional investors in both buying and selling waves;
- bank lending being rather subordinate;
- cross-border investment flows;

22. The results also contrast with those for households and companies (Davis 1986) where adjustment to changes in returns tends to be slow, due to higher transactions costs and poorer information.

23. There is some evidence (Howell and Cozzini 1990) that international investment has tended to reduce the dispersion of real returns, although a longer run of data and more disparate economic performance between countries would be needed to prove it. It is clearer that *nominal* returns have tended to equalise, notably as capital controls are abolished (Frankel 1992). Indeed Bisignano (1993) argues that gross flows alone will only tend to equalise nominal returns; net flows of saving and investment are needed to equalise real returns. But large net flows have been common for some time, as highlighted above in Section 5.3.2, such as the flows between Japan and the United States.

24. Because of the loss of positive externalities from liquid markets, they may be induced to display club-like supportive behaviour.

- signs of overreaction to the fundamentals and excessive optimism prior to the crisis;
- at times, inappropriate monetary policies;
- a shock to confidence which precipitated the crisis, albeit not necessarily sufficient in itself to explain the scale of the reaction; and
- rapid and wholesale shifts between markets, often facilitated by derivatives.

Such volatility may have important macroeconomic consequences, generate inefficient resource allocations and lead to systemic risk via losses incurred by leveraged investors. The Mexican crisis showed that institutions are not immune to the sovereign risks that plagued banks in the 1970s.

A second consequence is the tendency of financial markets which are rather thin and illiquid to face complete liquidity failure when institutions begin to sell heavily (Davis 1994, 1995b). Examples are the ECU bond market crisis of 1992, the FRN market in 1987, junk bonds in 1987, Swedish commercial paper in 1990 and the Penn Central crisis in the United States commercial paper market in 1970. Market liquidity depends on all other holders not seeking to realise their assets at the same time; in other words there are externalities to individual behaviour. If doubt arises over the future liquidity of the securities market for whatever reason (it could be heightened credit risk or market risk), it is rational to sell first before the disequilibrium between buyers and sellers becomes too great, and market failure occurs (ie yields are driven up sharply, and selling in quantity becomes extremely difficult). The associated decline in liquidity of claims is likely to sharply increase the cost of raising primary debt in such a market (ie there will effectively be heightened price rationing of credit), or it may even be impossible to gain investor interest at any price (quantity rationing).

The nature of such liquidity failure may be clarified by analysis of the role of *market-makers*, who buy and sell on their own account, increasing or reducing their inventories in the process,[25] at announced bid (buy) or ask/offer (sell) prices. A market-maker provides (to buyers and sellers) the services of immediacy and a degree of insurance against price fluctuations. To be able to satisfy buyers of the asset, the market-maker may have an inventory of the asset in question (although the securities may be borrowed rather than purchased), together with access to finance for such inventories; the spread must obviously cover the cost of finance. There is a risk of a capital loss on the inventory through unforeseen changes in prices. Accordingly, the response of market-makers to 'one-way selling' where the new equilibrium price is uncertain is often simply to refuse to quote firm prices, for fear of accumulating stocks of depreciating securities, which itself generates a collapse of liquidity. Uncertainty is crucial; if there is a clear new market-clearing price at which buyers re-emerge, the market-makers will adjust their prices accordingly, without generating liquidity collapse.[26]

25. Unless they are able to 'cross' individual buy and sell orders.

26. Market collapse in dealer markets, even in the absence of generalised uncertainty, may also result from perceptions of asymmetric information (Glosten and Milgrom 1985). Market-makers face a mix of investors who are more (insiders) or less (liquidity traders) informed than they are. A relative increase in 'insiders' leads market-makers to widen spreads to avoid losses. This discourages 'liquidity' traders, who withdraw, increasing adverse selection. Some dealers may cease to operate. Once the insiders are too numerous and if their information is too good, bid and ask prices may be too far apart to allow any trade. Since a wide spread in turn prevents the insider from revealing his information by trading, shutting down the market will worsen subsequent adverse selection (that is, the proportion of insiders relative to liquidity traders) and widen the spread further.

Bingham (1992) argues that such collapses are particularly likely when returns to market-making are low, and hence investment banks are unwilling to devote large amounts of capital to it. In such cases, the secondary market, in effect, ceases to function. These patterns pose major risks to securitised financial systems given the central importance of liquidity to financial institutions (such as banks' funding via CDs, companies via CP, dealers/brokers via repos, money market funds on the asset side, and so on).

5.6 Dealing with Incentive Problems

5.6.1 Corporate governance issues

The development of institutional investors, and their growing dominance as owners of corporations (Table 9), has had a pervasive influence on corporate governance. The basic issue is simply stated. Given the divorce of ownership and control in the modern corporation, principal-agent problems arise, as shareholders cannot perfectly control managers acting on their behalf. Principal-agent problems in equity finance imply a need for shareholders to exert control over management, while also remaining sufficiently distinct from managers to let them buy and sell shares freely without breaking insider trading rules. If difficulties of corporate governance are not resolved, these market failures in turn also have implications for corporate finance in that equity will be costly and often subject to quantitative restrictions.[27] In this context, there are well-known systemic contrasts between the behaviour of financial institutions and markets in the major OECD countries, notably as they relate to the financing and governance of companies. The general division is between the 'Anglo-Saxon' systems and the systems which prevailed historically in continental Europe and Japan. We would characterise the traditional distinction between the two systems in terms of the finance and control of corporations as that between *direct control via debt* and *market control via equity.* (Davis 1993b, 1995a).

Direct control via debt implies relationship banking along the lines of the German or Japanese model. This typically involves companies forming relationships with a small number of creditors and equity holders. There is widespread cross-shareholding among companies.[28] Banks are significant shareholders in their own right and in Germany are represented on supervisory boards both as equity holders and as creditors. They have also been able to exert control through the voting rights conferred on them by custody of bearer shares of individual investors who have surrendered their proxies. Meanwhile, the influence of other (institutional) shareholders is often limited by voting restrictions, countervailing influence of corporate shareholders and lack of detailed financial information, as well as the right of other stakeholders (employees, suppliers, creditors)

27. In practice, new equity is typically issued by established firms with good reputations in the markets and prospects for steady dividend growth; by firms being floated for the first time; for high return/high risk ventures which cannot be wholly financed by debt; and to restructure the balance sheet of firms in 'financial distress'. Finally, experience shows that – probably owing to the difficulties outlined above – equity markets are highly unreliable as a source of funds, being subject to cyclical 'feasts and famines'.

28. Although bidirectional cross-holdings are typically means of cementing alliances or collusion rather than exerting control.

to representation on boards. Implicitly, monitoring of managers is delegated to a trusted intermediary – the bank.

Meanwhile, as regards *market control via equity*, the principal advantage of takeover activity is that it can partly resolve the conflict of interest between management and shareholders: those firms which deviate most extensively from shareholders' objectives – and which consequently tend to have lower market values as shareholders dispose of their holdings – have a greater likelihood of being acquired. The threat of takeover, as much as its manifestation, acts as a constraint on managerial behaviour. Institutional shareholders, both directly and via non-executive directors can have an important role to play in this context both in complementing takeover pressure as a monitoring constraint on management behaviour, and in evaluating takeover proposals when they arise.

The willingness of banks – and institutions, via junk bonds – to finance highly leveraged buyouts and takeovers in the 1980s brought to the fore a new form of control, *market control via debt*. A key source of conflict between managers and shareholders stems from firms' retention policies. Debt issue can ease tensions, since by increasing interest payments, the internal resources at managers' disposal are reduced. This forces them to incur the inspection of the capital markets either via debt issue or equity issue for each new project undertaken. Jensen (1986) argues that desire for improved corporate control by means of debt could have been an important motivation behind the wave of leveraged takeovers and buyouts in the 1980s. A disadvantage of increased gearing is that potential conflicts between shareholders and debtholders become more intense.[29] Jensen and Meckling (1976) suggest that shareholders in highly leveraged firms have an incentive to engage in projects that are too risky and so increase the possibility of bankruptcy. If the projects are unsuccessful, the limited liability provisions of equity contracts imply that creditors bear most of the cost.[30]

Institutions in countries such as the United States have however, been increasingly disenchanted with takeovers[31] and buyouts. Combined with new regulations on United States institutions, this brought to the fore a 'corporate governance movement' based on *direct control via equity*. Of course, in all models of governance, boards of directors, and in particular non-executive directors, act as shareholders' representatives in monitoring management and ensuring the firm is run in their interests. Shareholder influence is ensured by their right to vote on choice of directors (as well as other elements of policy proposed by management). But these mechanism may be supplemented by

29. Perhaps more importantly, high leverage is likely to have various deleterious consequences. By raising the bankruptcy rate, it increases the incidence of deadweight bankruptcy costs arising from legal costs, diversion of managerial energies and breakup of unique bundles of assets, for example. And at a macro level increased corporate fragility is likely to magnify the multiplier in the case of recession (Davis 1995b).

30. But this benefit to shareholders may only be temporary. Since creditors are assumed to understand the incentives facing shareholders and are aware of the risks involved when loans are negotiated, ultimately the owner will bear the consequences of the agency problem in terms of a higher cost of debt.

31. This relates to increasing use of takeover defences by managers of weak companies and/or greenmail payoffs of raiders, regardless of shareholders' interests; increased dissatisfaction with managerial compensation and performance under the protection of such devices; high costs in terms of fees to investment bankers and the like.

direct links from institutional investors to management[32] either formally at annual meetings, or informally at other times. This is precisely what has been observed in recent years. A further important motivation has been development of indexing strategies, which force funds to hold shares in large companies as long as that policy is maintained, and thus encourage them to improve management of underperformers to boost overall asset returns.[33] Even active investors holding large stakes in a company must bear in mind the potentially sizeable cost of disposing of their shareholdings, thus again encouraging activism; in effect, they are driven to seek direct control due to illiquidity. With growing institutionalisation it becomes much easier and cheaper to reach a small number of well-informed key investors who will command a majority of votes (note, however, that such coalition-building is essential for effective institutional control to be exerted, as either owing to law or as a consequence of a strategy of diversification, institutions do not seek to hold large stakes in firms).

In the United States, the change in attitude was crystallised by two events: first a 1988 ruling by the United States Department of Labour (the Avon letter) that decisions on voting were fiduciary acts of plan asset management under ERISA,[34] which must be performed either directly by trustees or delegated wholly to external managers; and second, shareholder initiatives on ethical and social issues[35] (South Africa, the environment) in the late 1980s, which stimulated increased interest by public pension funds in the importance of proxy issues generally. The collapse of the takeover wave itself at the turn of the decade[36] helped to boost activism, by removing an alternative means of corporate control. Since these developments, United States funds have consistently voted on resolutions they might previously have ignored. Public funds such as the California Public Employees' (CALPERS) and New York Employees' (NYEPF) have been particularly active, notably in seeking to challenge excessive executive compensation and takeover protections, in seeking to split the roles of chairman and chief executive, remove under-performing chief executives,[37] ensure independent directors are elected to boards,[38] and that new directors be appointed by non-executives. These

32. Note that in countries such as Italy, direct control via equity is exerted in pyramidal groups of companies, where those (larger firms) higher up hold shares in those (smaller) lower down (OECD 1995).

33. This is an important observation, since it is often suggested in countries such as the United Kingdom that the longer-term relationships, close monitoring of company performance and large shareholdings needed for alternatives to takeover to operate will not be present in the case of indexation.

34. The United States shareholder activist movement was further encouraged in the early 1990s by two new rules from the Securities and Exchange Commission (SEC), the United States securities regulator. The first helped provide information; it enforced comprehensive disclosure of executive pay practices (salary, bonuses and other perks for the top five officers over a three-year period) as well as policy regarding their relation to performance of the company as a whole, and details of share price performance over five years relative to the index and a peer group. The second enabled investors to collude more readily: now any number of shareholders can communicate orally without restriction, so long as they are not seeking to cast votes for others.

35. Ethical investment more generally is playing an increasingly important role via specialised mutual funds.

36. This was attributable to such factors as recession, which made target companies less attractive to bidders and the retrenchment of banks from takeover finance, following their losses on property, as well as the anti-takeover strategies noted above.

37. Examples in the early 1990s include those of IBM, Westinghouse, Kodak, Amex and General Motors.

38. Celebrated cases include the CALPERS agreement to back Texaco management in a takeover bid, if they agreed to support independent directors, and CALPERS and the NYEPF pressure on General Motors to accept a resolution for more than half the directors to be independent.

ends are reached by filing proxy resolutions and directing comments and demands to managers, either privately or via the press.

Broadly similar tendencies towards shareholder activism are apparent in other Anglo-Saxon countries such as the United Kingdom and Canada. In the United Kingdom, pressure from shareholders (and the Bank of England) led to formation of the so-called Cadbury Committee on corporate governance, which set a code of good practice. Its key recommendations include separation of chief executive and chairman, appointment of a minimum of three independent non-executive directors, disclosure of directors' pay, and that directors' appointments be only for three years. The National Association of Pension Funds has orchestrated pressure on managers to accept the Cadbury guidelines. More recently, institutional investors have been active in opposing lax and over-long executive contracts, pensions and share options, which were not covered in detail by the Cadbury guidelines. In Canada (Simon 1993), activism has been encouraged by the United States example, but also by poor performance of Canadian firms, and the scope for such pressure offered by the loosening grip of foreign multinationals and family owners. For example, in 1993 OMERS (The Ontario Municipal Employee Retirement System) one of the largest Canadian pension funds, published a list of proxy voting guidelines, covering executive stock options, LBOs, unequal voting shares and environmental practices. Successes of shareholder activism include concessions by companies to allow secret voting, boosting the numbers of non-executive directors and better disclosure.

Even in the bank-dominated countries such as Germany and Japan, United States pension funds have introduced shareholder activism, and often encouraged domestic shareholders to be more willing to stand up to the status quo. Many firms in continental Europe are already seeking access to international equity finance, and are accordingly being obliged to meet the needs for transparency, dividend payment and so on of Anglo-Saxon pension funds (Schulz 1993). French domestic shareholders have been active in a number of cases such as Suez and Navigation Mixte. It is notable that European countries are developing their regulations in this area, for example a new French law to protect minority shareholders in takeovers, under pressure from institutions. The scope of such convergence to date should not be exaggerated (Berglöf 1996), not least because of the large proportion of corporate firms which are private in continental Europe and Japan. However, as noted by Davis (1993a), possible convergence in behaviour on a 'modified Anglo-Saxon model' of corporate governance – direct control via equity – would be accelerated by development of home-grown institutions in response to demographic pressures. Introduction of pension funds in Italy in the wake of social security reform (OECD 1995) may be a forerunner of changes elsewhere.

5.6.2 Institutions as creditors

Given their willingness to hold foreign government bonds, the development of institutional investors is widely considered to have facilitated financing of budget deficits, as the constraint of domestic saving no longer applies. The more efficient are international capital markets, and hence the greater the substitutability of domestic and foreign assets in investors' portfolios, the less the effect of additional government borrowing on domestic interest rates. European countries have taken advantage of this,

as well as the United States, discussed above[39] (Bisignano 1993). In some ways this may be seen as desirable, as it helps to ensure non-monetary financing, and thus aids counter-inflation policies. On the other hand, correction of fiscal positions may also be delayed for longer than is desirable, as the government faces less budgetary discipline. Once market discipline begins to take hold, the process may be brusque, as outlined in Section 5.5.1 above: in effect, perceptions by international creditors of major disequilibria in an economy can lead to major shifts of funds, and governments may face a situation akin to a bank run, when the yield on government debt rises sharply and the exchange rate collapses (as in Mexico, and on a lesser scale in many OECD countries).

The limits of the financial-market functions of institutions are shown in the field of private debt finance: whereas they are ready holders of rated paper, they are in most cases not active in direct lending. Traditionally, there are considered to be four main factors that divide borrowers from banks and markets (Davis and Mayer 1991). These are, first, economies of scale: owing to transactions costs, small investors and borrowers use banks, while wholesale users can access bond markets. Second, information: banks have a comparative advantage in screening and monitoring borrowers to avoid problems of adverse selection and moral hazard which arise in debt contracts – market finance is only available to those borrowers having a good reputation. Third, control: banks are better able to influence the behaviour of borrowers while a loan is outstanding, and to seize assets or restructure in the case of default, than markets. And fourth, commitment: banks can form long-term relationships with borrowers, which reduces information asymmetry and hence moral hazard. Analysis of institutions and banks suggests that these differences continue to hold, but that boundaries are shifting, as highlighted by the development of rating agencies, junk bonds and securitised debt.

Reflecting these factors, institutions in the Anglo-Saxon countries tend either not to invest significant amounts in corporate debt, as in the United Kingdom and Australia, or to invest in instruments such as corporate bonds and securitised debt, as in Canada and the United States, where the services of rating agencies can be employed to assess credit quality. However, as recorded in Carey, Prowse and Rea (1993), United States life insurers have been significant investors in private placements[40] in recent years, employing their own credit screening and monitoring facilities. In Germany, most of the loans by institutions (registered bonds, borrowers' note loans and other loans) are to banks and public authorities, and only indirectly to firms. Thus banks retain the role that the theory above suggests reflects their comparative advantage in debt finance. Similarly, in Japan, many loans are arranged and guaranteed by the trust bank which manages the funds, or the commercial bank in the life insurer's industrial group, thus again leaving banks in the controlling position.

39. In 1992 foreign holdings were much lower in countries with major institutional sectors, such as the United Kingdom 12 per cent; Japan 6 per cent; the United States 18 per cent; Canada 20 per cent; than in France 38 per cent and Germany 25 per cent.

40. In effect, a hybrid between bank loan and public bond financing, requiring extensive screening and monitoring and negotiation of covenants (although since 1990, under SEC Rule 144a, institutions have been able to transact freely in such bonds, thus aiding liquidity).

5.6.3 Principal-agent problems in funds management

This final section relating to the functional analysis seeks to probe difficulties raised for the modern financial system by institutional investors in a more fundamental manner, by highlighting the outstanding principal-agent problems to which institutions are prone, which in turn pervade some of the effects on financial structure and behaviour outlined above (notably price volatility).

Funds management is a service involving management of an investment portfolio on behalf of a client. Unless the manager is perfectly monitored and/or a foolproof contract drawn up, he or she may act in their own interests (for example, in generating excessive commission income) and contrary to those of the fund. Various features of funds management can be seen as ways to reduce principal-agent problems. For example, pension fund managers in countries such as the United Kingdom and the United States are offered short (3-year) mandates, with frequent performance evaluation;[41] fees related to the value of funds at year-end and/or performance-related fees. At least in countries where performance figures are widely used, open-ended mutual fund and life insurance managers will suffer loss of new business if they underperform, while closed-ended mutual funds may be taken over. Disclosure itself is of course essential for these mechanisms to operate.

These means used to resolve principal-agent problems give rise to institutional behaviour which could induce capital market volatility. One is the desire of managers to show they are of good quality, for example in the context of short mandates. In the model of Scharfstein and Stein (1990), herding – whereby all managers move in the same direction to buy or sell assets – occurs because the market for funds management skills takes into account both the success of investment strategies and the similarity to others' choices. The first is not used exclusively, since there are systematically unpredictable components of investment, while good managers are expected to receive correlated signals (they all observe the same relevant pieces of information); hence all good managers may be equally unlucky. On the other hand, a manager who alone makes a good investment may be a lucky but poor-quality manager. So mimicking others is the best way to show quality. A related factor that could induce volatility is *regular performance checks against the market*. This may induce similar behaviour, and hence 'herding' to avoid performing significantly worse than the median fund.[42] As a consequence, institutions may, for example, adopt similar portfolio shifts even if their own information suggests a different pattern could yield better returns. This may in turn amplify shocks to prices.

Short time horizons may affect *information acquisition* and hence market dynamics (Froot, Scharfstein and Stein 1992). If assets were to be held forever, it would be rational to seek to gain information not held by others, but with a short time horizon – for reasons

41. Note that performance evaluation over a short period contrasts sharply with the nature of liabilities, whose maturity may extend to 25 years or more for life insurers and pension funds.

42. See Davis (1995a), who, after interviewing twelve fund managers on international investment strategies in London in 1991-1993 found: 'Most of the managers, but particularly those who are external managers, felt some pressure not to underperform relative to their peers, for fear of losing the management contract. Managers who could afford to act more freely, perhaps because of their firm's reputation, still felt a need to know the consensus in order to act in a contrarian manner.'

as above – it may be rational to concentrate on the same information as others, even if it is extraneous to fundamentals. This is because the larger the number of investors who study the information, the more quickly it enters the market, and the greater the benefit from early learning. Use of chartism may be a case in point.

But these specific mechanisms are not the only possible reasons for institutional herding. A simpler mechanism may underlie sharp movements by open-ended mutual funds, namely simple *purchases and sales* by households, which oblige the manager to liquidate assets immediately in order to redeem the units. This may be a powerful mechanism if households are risk-averse and subject to major shifts in sentiment. It may be increased by the shift to defined-contribution pension funds; the assets are typically held in mutual funds and their disposition is often at the discretion of the individual investor. Risk-averse investors may sell funds in response to short-run market moves, contrary to appropriate long-run time horizons of their (retirement) assets. Or mutual fund managers may transact repeatedly to generate commission income, thus generating market volatility. Other reasons for herding by institutions could include institutions' inferring information from each others' trades, about which they are relatively well-informed (Shiller and Pound 1989). Moreover, they may be reacting to news, which they all receive simultaneously, in a similar manner: such news may cause sizeable portfolio shifts in a world characterised by uncertainty if it causes funds to change their views about the future.

The *risk-management framework* may also play a role. If defined-benefit pension funds have strict minimum funding limits, they are subject to heightened shortfall-risk if asset values decline (Davis 1995a). This may encourage herding either via direct sales of equities for bonds or by the effects of hedging in so-called contingent immunisation or portfolio insurance strategies on market prices. More generally, as shown by Frijns, Kleynan and Quix (1995), tighter solvency requirements will shorten time horizons, with possible consequences as noted in this section.

Herding by institutions need not always be destabilising, it may speed the market to a new equilibrium price. Destabilisation would require institutions also to follow strategies which may be contrary to fundamentals and profit-maximising – buying high and selling low – so-called *positive feedback trading*. Cutler, Poterba and Summers (1990) suggest that institutions may *themselves* act in this manner. This may be a consequence of biases in judgement under uncertainty by funds managers, which leads to extrapolative expectations or trend-chasing rather than a focus on fundamentals. Certain investment strategies may also induce such behaviour, such as stop-loss orders, purchases on margin and dynamic hedging strategies. These may be common when there are minimum funding limits. Institutions may also seek *indirectly* to provoke positive feedback trading (DeLong, Shleifer, Summers and Waldman 1990), since in the presence of irrational investors such as households it is rational for institutions (such as hedge funds) to buy in the knowledge that their own trades will trigger further feedback trading by irrational investors, thus amplifying the effect.

The effects of herding have been largely covered in Section 5.5.1, namely heightened volatility of market prices and quantities, and/or liquidity failures at specific times. But one might add that herding may also entail a loss of diversification benefits (as markets move together) and may expose institutions themselves to major losses.

5.7 Non-Functional Aspects

One may distinguish aspects of the regulation of institutions themselves which have had an impact on financial change, from the broader forms of financial liberalisation that their growth and behaviour has, we suggest, helped to trigger. As regards regulation of institutions, an important point is the contrast with banking regulation, which helps to promote differing behaviour. For example, institutions do not face the strict capital and reserve requirements of banks and hence may be able to offer funds at a lower cost. On the other hand, more or less binding minimum funding and portfolio restrictions apply to life insurers and pension funds, which mean their portfolio allocation is not entirely free. Some changes in regulation have induced shifts in behaviour: the ERISA for the United States pension funds led to a focus on long-term bonds and derivatives for immunisation purposes, for example, as well as justifying international diversification. Under the European UCITS Directive, mutual funds must also diversify. It was noted above that new Department of Labour regulations helped promote the 'corporate governance movement' among United States institutions. Abolition of restrictions on the use of derivatives by United Kingdom pension funds led to a major increase in their use; and easing of restrictions on international investment by funds in countries such as Japan has had a major impact on their cross-border activity independent of that of exchange controls.

Institutions have also had an impact on financial liberalisation more generally. Several major types of deregulation can be discerned (see Edey and Hviding 1995):

- abolition of interest-rate controls, or cartels that fixed rates;
- abolition of direct controls on credit expansion;
- removal of exchange controls;
- removal of regulations restricting establishment of foreign institutions;
- development and improvement of money, bond, and equity markets;
- removal of regulations segmenting financial markets;
- deregulation of fees and commissions in financial services; and, partly to offset these,
- tightening of prudential supervision, particularly in relation to capital adequacy, which is often harmonised internationally. This point shows that liberalisation is not a removal of all regulation but a shift in its locus from structural to prudential regulation.

The main motivations of the authorities have been:

- to increase competition (and hence to reduce costs of financial services);
- improved access to credit for the private sector;
- to improve efficiency in determining financial prices and allocating funds;
- pressures from competition authorities to remove cartels;
- desire to maintain competitiveness of domestic markets and institutions;
- increased flexibility, responsiveness to customers, and innovation;
- securing a ready market for increasing sales of government bonds; and
- desire to secure stability of such a system against excessive risk-taking.

However, it would be wrong to see deregulation purely as a proactive shift by the authorities. In many cases, it was necessitated by structural and technological shifts which had already made existing regulations redundant. In this context, the role of institutions may be highlighted, whether indirectly or directly. Notably, it was the willingness of institutions to bypass domestic securities markets that led to deregulation of fee and commission structures that were contrary to their interests (as in the case of Big Bang in the United Kingdom). As noted, governments more generally have sought to streamline their domestic bond markets so as to satisfy the liquidity needs of institutional investors, in the hope of thereby reducing their own funding costs. The abolition of exchange controls in countries such as the United Kingdom and Japan can be seen in the light of a desire to ease upward pressure on the exchange rate via capital outflows, in the context of growing pressure by institutions to invest offshore. The United States deregulation of secondary trading of private placements (Article 144a) showed a recognition that institutions do not require elaborate investor protection – and was a response to fear of competition for domestic securities issuance generated by offshore issues of bonds to institutional investors.

Much of the banking deregulation outlined above was seen as necessary owing to the intense competition banks faced from institutions. The abolition of the United States interest-rate regulations (Regulation Q) owing to competition from money market funds is a good example; easing of reserve requirements is another (although clearly wholesale delocalisation of banking was also an implicit threat). The fact that institutional competition left banks with lower-quality credits made removal of controls on credit expansion on the one hand and capital adequacy regulation on the other, all the more urgent. Moreover, once the process of liberalisation began, one measure quickly led to others, due to desire to maintain a level playing field (within countries) and competitive equality (between countries).

6. Conclusion

It has been argued that the development of institutional investors has played a pervasive and often neglected role in the development of financial systems. This article has sought to clarify that role, by analysing changes wrought by institutional growth under the headings of the main functions which are fulfilled by the financial sector. It is relevant in conclusion to briefly assess implications for the future and for monetary policy.

The growth of institutional investors shows little sign of easing. The general features outlined in Section 4 making institutions attractive continue to hold, notably ageing of the population. But significantly, in many countries (notably in continental Europe) future demographic pressures on pay-as-you-go social security are likely to lead governments to seek to stimulate further growth of private pensions as a substitute for social security (Davis 1993a; Makin 1993). For example, if France and Italy were to develop schemes equivalent to those in the United Kingdom, the sums involved would be over a trillion dollars. And following the example of countries such as Chile, Singapore and Malaysia, it is considered that developing countries also have considerable scope for development of pension funds, assuming a pre-existing level of development of capital markets and of administrative skills (World Bank 1994).

The assumption of most financial market analysts has been that although there may be excess capacity in the banking sector, there will remain a role for depository institutions making non-marketable loans at fixed terms. Some economists would by contrast suggest that *all of banks' functions could be taken over by institutions* such as pension funds, life insurers and mutual funds operating via securities markets (together with rating agencies and other specialised monitors). They would point to the successful securitisation of personal loans, the ability of bond and commercial paper markets to serve an expanding range of companies, the development of corporate banking and treasury operations, and the success of money market mutual funds in countries such as the United States, in providing market-based means of transactions as well as saving (Browne and Fell 1994).

One counter-argument would point to the shift of banks into fee-earning business noted above. This includes not only their traditional role in the payments system, but also provision of backup lines of credit, broking and market-making fees and commissions, underwriting, forex, advice on mergers, proprietary trading in capital markets, income from origination and servicing of securitised loans, and institutional funds management itself. Indeed, analysts such as Boyd and Gertler (1994) show that if balance sheets are adjusted to allow for these services, much of the decline of banks in the United States disappears. A further counter-argument, asserting a continued role in banks' traditional business, must rely on banks' advantages in overcoming asymmetric information, such as for small firms, that rules out securities market intermediation. Recent studies of banks' uniqueness would seem to underpin this suggestion.[43]

There remains a great deal of scope for expanding international investment of institutions. Current portfolio shares of international assets are well below those which would minimise risk for a given return, and even below those that would appear optimal taking into account the share of imports in the consumption basket.[44] Equally, the uneven pace of demographic changes, as well as differences in saving and investment between countries (Grundfest 1990), suggest that net cross-border flows are likely to accompany,

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43. Emerging direct evidence of comparative advantages of banks over other forms of finance include signalling effects of bank lending relationships on the cost of other forms of finance, as other providers of external finance appear to take existing lending relationships and the associated agreement on the part of the firm to be monitored as a positive signal about firm quality (James 1987; James and Wier 1990). Fama (1985) and James (1987) show that borrowers and not depositors tend to bear the tax of reserve requirements in the United States. This suggests that borrowers obtain services from banks which are not obtainable elsewhere, otherwise they would shift to avoid the burden of the tax. Elliehausen and Wolken (1990) show the importance of bank lending relations to small firms and reliance of such firms on banks which are geographically close; see also Hannan (1991). This implies that imperfect substitutability is an important empirical phenomenon. Regarding the value of banking relationships, Slovin, Sushka and Polonchek (1993) found that borrowers from Continental Illinois bank had negative excess stock returns during its crisis and positive returns during the bank's rehabilitation. The size of the excess returns varied with the importance of the relationship between the bank and the borrower. Petersen and Rajan (1994) similarly found positive effects of close and committed banking relationships on firms' value. Meanwhile, Berger and Udell (1991) show that securitisation has not changed the importance of banks as monitors of debt claims holding illiquid assets, partly because the loans which are securitised are often held by other banks rather than direct investors. These studies suggest that banks do have a clear comparative advantage over other sources of finance, for certain types of transaction.

44. Such a limitation of international investment might be justified if PPP was not considered to hold in the long run.

and accentuate, further shifts by institutions. Such an expansion would magnify the effects of existing cross-border investment as outlined above. It could also bring risks of international investment in securities markets (such as those highlighted by the Mexican crisis) more to the fore.

A further suggestion is that *institutional growth can revolutionise financial structure*. As noted, countries such as Germany, Japan and, to a lesser extent, France are often characterised as 'bank-dominated', with close relations between banks and firms based on sharing of information unavailable to other investors, a preponderance of bank lending in corporate finance and relatively underdeveloped securities markets (Edwards and Fischer 1991; Davis 1993b). This is often seen as an advantage, giving scope for firms to obtain long-term debt finance for investment and R&D, and for banks to mount rescues of firms in difficulty. Bisignano (1991) has pinpointed key underlying features, such as a low level of public information disclosure by companies, scepticism regarding the allocative efficiency of markets, preference for 'insider control' and close holding of companies, and a maintenance of an informal rather than rule-based system for governing financial relations. Growth of domestic institutions free and willing to invest in equity seems likely, given pressure on social security pension systems. Complementing existing pressures from international institutions outlined in Section 5.6.1 above, growth of such domestic institutions, a class of institutions unlikely to be willing to be subordinate to banks, could in the opinion of the author (Davis 1993a) overturn this system and lead to convergence on the 'Anglo-Saxon' model.

The effect on corporate finance could be profound. Rather than the case at present, where equity holders are seen as equal partners with creditors and other stakeholders, there would be moves towards absolute primacy to equity holders, as ultimate owners of the firm. This could imply, for example:

- pressure on firms for higher and more sustained dividend payments;
- greater provision of information by firms;
- removal of underperforming managers;
- equal voting rights for all shares;
- pre-emption rights;[45] and
- equal treatment in takeovers.

To back up these requirements, institutions would demand laws and regulations such as takeover codes, insider information restrictions and limits on dual classes of shares, which seek to protect minority shareholders, as well as equal treatment of creditors in bankruptcy, to protect their holdings of corporate bonds. Shifts of corporate financing to securities markets would be reinforced by structural changes as outlined above, which will deprive banks of their comparative advantage in lending arising from superior information and ability to control firms. Partly due to free-rider problems,[46] securities market development would have the side effect of reducing banks' willingness to 'rescue' firms in difficulty. Companies would need to reduce their gearing in response

45. That is, the right of existing shareholders to first refusal on a new issue of shares, to prevent dilution of their holdings.

46. Because equity and bondholders would benefit from banks' actions.

to this, a move that would be facilitated by the increased demand for equities from institutions.[47]

Concluding with a summary of *monetary policy implications*, it is suggested that policymaking in an institutionalised and globalised environment is clearly a more difficult and uncertain process than in a purely domestic and retail/bank-based setting. For example, to the extent that equity, foreign-exchange and bond-market adjustments become recurrent features of international capital markets, monetary policy makers generally will have to take increasing account of the views and expectations of the global financial markets concerning their monetary policy and economic developments. They will need to be aware that, whereas markets may at times work on the basis of fundamentals and hence impose useful discipline on policy makers 'undermining policies which are not credible or sustainable' (Bisignano 1995; Browne and Fell 1994), at other times they may be subject to bubbles or trend-chasing 'amplifying the disruptive implications of collective misjudgments' in the words of BIS (1995). Massive and undetected overhangs of open positions may develop in markets, to be sharply unwound when the underlying market assumptions are proved incorrect.

These issues make convergence of economies – notably in adopting fiscal consolidation, but also low inflation and provision of a 'nominal anchor' – and co-operation between authorities yet more important. They may also present major dilemmas to the authorities when there is a potential conflict between growth and counter-inflation objectives, or indeed between monetary and financial stability more generally. Notably for countries defending exchange-rate pegs, the rapidity with which markets are able to react to news shortens the reaction times required of central banks, and necessitates action on the basis of less-complete information. Reserves are likely to be wholly inadequate against the scale of transactions that institutions can undertake, particularly given the ability to utilise derivatives to gain leverage, and hence greater stress is placed on the interest rate.

Bond-market globalisation, and the consequent tendency for foreign yields to have a greater influence on domestic bond markets may diminish the leverage of domestic monetary policy over the economy. Equally, the possibility of overshooting and movement for non-fundamental reasons reduces the clarity of the signals from bond yields. Conventionally these are seen as composed of three components, real yields, inflation expectations and uncertainty, where the use of index-linked bond yields and volatility of options prices enable an idea to be obtained of the size and movement of the inflation component. But the possibility of overshooting makes this potentially highly inaccurate.

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47. On the other hand, the position of banks will to some extent be protected by shareholding structures, which give them both stakes and voting rights on behalf of custodial holders. Medium-sized firms may prefer to avoid flotation to retain 'insider control'. Company statutes in countries such as Germany recognise the rights of stakeholders, including creditors, to a say in management. And company secrecy is to some degree protected by law, thus maintaining banks' comparative advantage over markets as a source of finance. Even if there is a broader switch to an Anglo-Saxon system, the banks could maintain control via dominance of securities issuance and funds management. And control over funds management could be used to avoid some of the changes in financial structure outlined above. However, in our view the Single Market and the superior performance of competitors from the United Kingdom and United States mean that such dominance cannot be guaranteed. On balance, the position of European banks would be weakened by institutional growth, but not wholly compromised.

As regards prudential policy, whereas institutions are not in general subject to runs, having matched assets and liabilities, liquidity failure of securities markets which may be generated by institutional behaviour may raise prudential concerns and lead to calls for a market-maker of last resort (raising a risk of moral hazard). Again, there are doubts about the stability of money market mutual funds. A point of major debate in the wake of the Mexican crisis was whether an international lender of last resort for countries is also needed in a globalised and institutionalised financial system. In this context, some have revived the well-known issue of a tax on gross foreign exchange transactions to slow the response of financial markets (Eichengreen, Tobin and Wyplosz 1995): others point out the well-known shortcomings of this suggestion (Garber and Taylor 1995).[48]

48. Notably that a country imposing such taxes unilaterally would face disintermediation, while a global tax could still be avoided by undertaking of separate positions and transactions, particularly via use of derivatives, to mimic a foreign exchange deal, necessitating application to an ever-wider range of instruments. And since success of such a tax would likely entail a decline in liquidity, and liquidity tends to be stabilising, it might have directly counterproductive effects on volatility.

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Discussion

1. Jeffrey Carmichael

True to its title, this paper provides a very comprehensive review of the role of institutional investors in the evolution of financial markets and structures over the past decade or two. Since I have little to add or object to in the author's excellent survey of the historical evidence I will do little more than summarise his main findings and focus my comments mainly on his interpretation of that history, where we do have at least some minor differences of opinion.

The Evidence

Davis puts together some very useful statistics in the tables. His main findings for the past two and a half decades are the following:

- the overall financial system has grown much more quickly than GDP;
- banks have lost market share to institutional investors;
- deposits have lost market share to tradeable securities; and
- international flows have increased sharply with a rising share of transactions accounted for by tradeable securities.

Analysis of the Trends

The thrust of Davis' paper is not simply that institutional investors are growing in importance, but that they have themselves been a driving force for change and, by implication, that we need to develop a new analytical approach or perhaps a new model of behaviour if we are to come to grips with the way in which financial markets might behave in the future. That may be a little too much of a caricature, but let me use it anyway as a means of focussing my comments.

While there are certainly some parts of Davis' story that fit this line of argument, there are others where I would question the direction of causality.

Davis works within the framework proposed by Merton and Bodie (1995), who identify six functions of a financial system, namely:

- payments services;
- divisibility services;
- savings services;
- risk-management services;
- information services; and
- incentive management services.

Davis argues that institutional investors have increasingly come to fulfil these functions more efficiently than banks. This, coupled with the deterioration of bank quality due to loan-losses, and the regulatory burdens borne by banks, is put forward as the main explanation of the growing dominance of institutional investors over banks. My reservation is that there is too much exogeneity about the story – institutional investors gained market share because they worked out how to beat banks at their own game.

The key question, in my view, is whether the shift in market structure reflects a shift in the market's preferences away from banks as institutions or away from the functions performed by banks. Have banks been losing market share to institutional investors because of some basic difference in their nature or because of artificial institutional barriers imposed by government? If it is the former, then we may need to rethink our models of behaviour. If it is the latter, we may need to rethink our regulatory structures.

From the perspective of the investor, the essential difference between the banking function and the institutional investor function lies in the nature of the promises being made. In the case of a bank, the promise is to repay a specified amount (principal plus interest) at a specified date in the future (often on demand) regardless of circumstances. An institutional investor, in most cases, promises to repay an amount defined by market circumstances at a specified date in the future: again, often on demand. Since both are capable of offering liquidity, payments services, savings services, and so on, the essential difference comes down to the capital guarantee. Whereas the bank promises to repay a fixed amount, the institutional investor promises a market-related repayment. There is thus a fundamental difference in the nature of the promise being made and the risk being borne by the investor. There are, of course, many hybrid variations in between these plain-vanilla extremes, including capital-guaranteed managed-fund products.

Leaving aside the fact that institutions have merged across the functional boundary to some extent over the past 25 years, what is likely to bring about a shift in investor holdings from bank-type products to institutional-type products? There are three main candidates:

- changes in investor preferences – for example, investors may have become wealthier, or less risk averse, or better informed, and so on;
- regulatory restrictions on investors, for example, compulsory retirement savings; and
- changes in relative prices, through changes in taxes, regulatory costs, technology, and the like.

While there may be some grounds for arguing that investors have become better informed over time (especially due to technological innovations), the impact is unlikely to have been major. Similarly, while direct regulatory imposts on investors have been major in some countries such as Australia, the *international* trend appears to hold for countries that have not experienced the same imposts.

This leaves price – or, from the institution's perspective, cost – as the most likely driving force for the international changes in market share. Again there is some variation across countries, but there can be little dispute that the cost faced by institutional investors in providing the six basic financial functions has declined substantially relative to the cost of delivery faced by banks. In part this is due to technology and in part it is due to regulatory costs. Since regulatory costs are imposed on institutions rather than on

functions, it is not surprising that institutional investors have found themselves able to provide many traditional banking services more cheaply than banks, and that banks have sought to diversify into the functions traditionally performed by institutional investors and to do so through subsidiary vehicles not subject to the same regulatory costs faced by banks. A third factor influencing price (emphasised by Davis) is tax distortions, which many countries have used to encourage retirement savings; again these have served to advantage institutional investors relative to banks.

My interpretation of these propositions is that there probably has been some natural shift in favour of financial products with an institutional-investor-type function due to technological advances – but that this has been amplified by a regulatory structure that has focussed on institutions rather than functions, by tax distortions that have done likewise and, in some cases, by direct regulatory restrictions on investors.

Thus, if I were looking for something to quibble over, I might dispute with Davis:

- the cause of the trends and whether or not they would have happened anyway as a natural consequence of technological innovation; and
- whether it is more useful to analyse the trends in terms of financial functions rather than institutions.

I would not dispute the need for analysts and policy makers alike to be aware of the implications of the changing patterns in finance. And, in this respect, Davis has hit the key points well:

- institutional investors will continue to grow and will become increasingly competitive with banks in traditional areas of banking;
- institutional investors will continue to expand cross-border trade in securities;
- institutional growth may change financial structure (in particular, it may force changes in corporate governance); and
- monetary and prudential management may become more difficult – volatility may increase, with trend-chasing and bubbles becoming more common.

To these I would add that:

- continuation of the current trend will put further pressure on the institutionally based regulatory structure; and
- the potential for wholesale markets to 'herd' will put pressure on our traditional thinking about competition, liquidity and disclosure of risks to retail customers.

2. General Discussion

The discussion focussed on the nature of competition between banks and institutional investors (or funds managers). In line with the author's main thesis, it was suggested that the basic functions of the financial system remained more or less constant but that the means of performing those functions were changing. At issue was the relative efficiency of two broad approaches to the provision of finance, typified by banks and institutional investors: banks make loans on the basis of private information and shield their

depositors from the resultant credit risk, whereas institutional investors facilitate flows by means of publicly traded securities and pass on the risk to the investors. What has happened in recent decades is that the latter form of financing has substantially increased as a share of the total.

The fact that the institutional investment sector was growing in all countries, despite widely differing tax and regulatory structures, suggested that some common causal factors were at work. One of these was likely to have been technological innovation, which had made it cheaper to access information and to compare investment products. This meant that the relative advantage that banks had had in assessing investment risks using private information had to some extent been eroded.

Another factor highlighted in the discussion was the rising level of income and wealth. It was argued that long-term savings were a 'superior' good (that is, the demand for long-term savings would increase more-than-proportionately with income). Those savings tended to be held with institutional investors rather than banks since the wealthier long-term savers were more willing to accept risk in order to gain a higher expected return.

Another contributor to growth of institutional investors was that these had traditionally been tax-advantaged in a number of countries, including Australia. This effect was reinforced by inflation-tax interactions which had strongly discouraged other forms of financial saving.

It was commented that the growth of institutional investors, and the related trend of securitisation, seemed set to continue. There was still considerable scope for some types of bank loans, particularly in the consumer area, to be bundled into standard packages and sold off to investors. This was already happening to a considerable extent in the United States. A consequence of this was that loan originators from outside the banking sector could enter the market and compete with the banks in areas of their lending business, as for example was occurring in the home mortgage area. Even in small and medium-sized business loans, traditionally viewed as the core of banks' lending activities, the experience of the United States showed that there was some scope for securitisation to occur. This was illustrated by the growth of private placement markets for the debt securities of small firms. Finally, it was suggested that institutional investors might take an increasing role in the payments system, as there was no necessary link between the provision of fixed-par deposit services and transaction facilities.

The implications of these developments for the banks were discussed. A general theme was that the decline of banking did not necessarily mean the decline of banks. In particular it was argued that banks were not excluded from participating in the growing funds-management business. There was no reason that a funds-management subsidiary of a bank could not be just as successful as the independent funds-management firms. There were no regulatory impediments to this, and indeed bank funds-management subsidiaries had been increasing their share of this market in Australia in recent years. Another comment was that the decline in traditional bank business should not be exaggerated. It was true that bank balance sheets had been declining as a share of the financial system, but they were still growing relative to GDP, while a narrower measure of traditional banking, the volume of deposits, had been roughly stable as a ratio to GDP. These trends suggested that the decline in traditional banking activities was a relative and not an absolute phenomenon.

Alternative Models of Financial System Development

Stephen Prowse

1. Introduction

Dramatically different systems of corporate finance and governance have emerged among the major industrialised countries in the postwar period. Even the casual observer notices large differences between the way firms finance and govern themselves in the United States and United Kingdom on the one hand, and in Japan and Germany on the other. In this paper I describe how firms obtain external finance and how the primary mechanisms of corporate governance operate in these four countries. In addition, I consider where the Australian financial system fits in on the spectrum that has the United States and United Kingdom on one end and Japan and Germany at the other. I analyse reasons for the dramatic differences observed in corporate finance and governance systems. I discuss some of the costs and benefits of each system. Finally, I evaluate the current pressures to change that each system is under, and make some prophecies as to how corporate finance markets will evolve in the future in each country.

These issues are of course fundamental to the theories of the firm, corporate finance and corporate governance that have exercised academics for many years. However, recently they have taken on a policy relevance that they have not enjoyed before. In the United States and United Kingdom there is an intense ongoing debate about the most preferred methods of financing and governing firms.[1] And in the past few years, both Japan and Germany have initiated substantial changes in their corporate finance markets. In Australia, the financial system has undergone significant changes since the early 1980s when the Campbell Committee recommendations were put in place, involving the lifting of interest ceilings on bank deposits, ending quantitative controls on bank lending, relaxing barriers to bank entry and allowing freer access to international capital markets. More recently the direction of the financial system has become a topic of debate once again with the recently announced inquiry into the structure of the financial system. Some of the areas likely to be examined are directly related to the finance and governance mechanisms of Australian firms.

Examination of the corporate finance systems in industrialised countries is also of value to policy makers in other countries considering revamping their financial systems. These include France and Italy, who are both undergoing privatisation efforts, as well as those ex-communist countries putting in entirely new systems of property rights, business law and financial markets. Finally, many of the emerging market countries of Latin America and Asia are also deciding how to craft the outlines of their rapidly

1. In the US, a recent manifestation of this is the Council on Competitiveness' 1992 report, 'Capital Choices: Changing the Way America Invests in Industry'. In the UK, it is the Cadbury Committee's 1993 report, 'The Financial Aspects of Corporate Governance'. See also Fukao (1995) for an overview of some of the policy-related issues on corporate governance.

developing financial markets. These countries would undoubtedly appreciate an understanding of the important differences in the corporate finance systems in the major industrialised countries, why such differences exist, the relative strengths and weaknesses of each system, and the pressures and prospects for change in these systems. This paper attempts to provide insight on these issues.

One argument in this paper is that the large differences we observe in corporate finance and governance between the industrialised countries are not just accidents of history or culture, but are the product of three aspects of the legal and regulatory environment under which each system has evolved. The first aspect relates to the legal and regulatory environment for universal banking and the ability of financial institutions in general to own large stakes in firms and play an active role in their governance (to be 'active investors' as Jensen (1989) puts it). Banks and other financial institutions in Japan and Germany have been allowed to be active investors in the firms to which they lend, whereas Anglo-Saxon financial institutions in general have not. The second aspect is the degree to which corporate securities markets[2] have been actively suppressed by regulatory fiat, taxation and/or cumbersome mandated issuance procedures. Relative to the Anglo-Saxon countries, Japan and Germany have had severe regulatory constraints on the development of their corporate securities markets. The third aspect is the degree to which securities markets have been 'passively' suppressed by the lack of any mandated standardised disclosure requirements for firms wishing to issue securities to public investors. Japan and Germany have lagged behind the Anglo-Saxon countries in mandating information disclosure by firms issuing securities. For this to influence securities market activity in these countries, there must be a public good aspect to the voluntary provision of information by firms to outside investors. I discuss some evidence on this issue.

Where does Australia fit on the spectrum that has the United States and United Kingdom on one end and Japan and Germany at the other? Overall, the Australian system looks much closer to those of its Anglo-Saxon cousins than it does to Japan and Germany. Equity markets are active and important sources of finance for firms, while banks' ties to firms are more of the arm's-length variety observed in the United States and the United Kingdom, than the 'insider' variety in Japan and Germany.

I also look at the relative costs and benefits of each system of corporate finance and governance. While particular advantages are claimed for both systems, it is impossible to say from the evidence which is the more efficient system overall, or even whether any efficiency differences are important enough in magnitude to be of practical relevance.

I identify some of the emerging pressures for change in corporate finance markets and draw some implications for the future development of financial systems in the industrialised countries. Rapid changes in technology, market innovation, the globalisation of financial markets and the increasing importance of small firms in the economy and of institutional investors in the financial markets have all put pressure on the finance systems of Japan and Germany – which have traditionally relied on regulatory suppression of non-bank sources of finance. These changes are already having an effect: both Japan and Germany

2. Throughout this paper, 'securities' refers to *any* traded corporate security, debt or equity.

have substantially deregulated their securities markets in recent years and vastly increased firms' access to non-bank sources of finance.

These changes have also affected Anglo-Saxon finance markets, although somewhat less drastically, probably because their greater reliance on securities markets has proved to be more consistent with the emerging pressures for change. Corporate finance markets that cater to small and medium-sized firms are growing rapidly in the United States, and are also sprouting in Australia. In addition, institutional investors are changing their view of their role in the corporate finance markets, and appear increasingly willing to take on a more active monitoring and governing role in the companies in which they invest.

Overall, these changes are moving the financial systems of the industrialised countries closer together. However, the focal point of this convergence is not the Japanese/German or US/UK system as it currently exists but an environment where financial institutions are free to be active owners *and* where securities markets are unhindered by regulatory obstacles.

In the following section, I describe the generic information problems of external finance and governance that all corporate finance markets face regardless of their nationality. I then lay out a description of the corporate finance and governance system in the United States, United Kingdom, Japan, Germany and Australia, explaining how each system addresses these problems and highlighting the major differences between countries, focusing on the major legal and regulatory factors I believe are the main determinants of these differences. Finally, I look at the factors that are making some systems of corporate finance untenable in today's world, and that, more generally, are inducing change in corporate finance systems in all countries.

2. Generic Problems of Corporate Finance and Governance

Corporate finance markets in all countries must address two generic information problems facing firms attempting to raise funds from outsiders: sorting and incentive problems.

Sorting problems arise in the course of selecting investments: firm owners and managers typically know much more about the condition of their business than outsiders and it is in their interests to accent the positive while downplaying potential difficulties. Sorting problems and their implications for corporate finance were first analysed by Leland and Pyle (1977) and Ross (1977), who emphasised that the choice of a particular capital structure was important in minimising such problems. More generally, sorting problems require that potential outside financiers conduct extensive information gathering and verifying activities into the firm's operations in order to minimise such information asymmetries.

Incentive problems arise in the course of the firm's operations. Firm managers have many opportunities to take actions that benefit themselves at the expense of outside investors. Jensen and Meckling (1976) were the first to address these issues. They stressed that a combination of methods is usually needed to align the incentives of managers and investors, including the use of an appropriate capital structure, the use of collateral and security covenants and direct monitoring. Diamond (1991) stressed the

role of reputation in mitigating incentive problems: managers of firms that have a stake in maintaining a good reputation with outside investors have strong incentives not to act opportunistically at the expense of such investors.

Problems of external finance thus cannot be separated from problems of governance. Both stem from very similar and related information problems. More importantly, outside investors will not extend external finance to firms without some assurance that mechanisms are in place to control the activities of the firm after funding. Indeed, the form of the governance mechanisms in place often will dictate the characteristics of the external financing.

It should also be clear that information problems are likely to vary with the size of the firm. In particular, they are likely to be worse for small firms. Smaller firms do not produce detailed information about themselves and are often too young to have a credible reputation. Larger public firms make available detailed information about their activities and usually have a clear stake in maintaining a good reputation among potential financiers. They suffer least from these problems. Methods of financing and governance are thus likely to vary between large and small firms. This has implications for how the structure of financial markets evolves in economies where small firms are becoming increasingly important.

The following section describes the structure of the American, British, Japanese, German and Australian financial markets and how they address these financing and governance problems.

3. Corporate Finance Systems in International Perspective

Corporate finance and governance systems in the industrialised countries have two defining characteristics. The first is the degree to which securities markets compete with intermediaries (typically banks) to provide external finance to firms. The second is the degree to which intermediaries have tight ties to the firms to which they lend and use such ties to monitor and influence the firm's decisions on strategic matters. Based on these characteristics, the US and UK systems of corporate finance and governance are broadly similar and very different from those that have existed in Japan and Germany. Securities markets in the United States and United Kingdom have been much more important in the provision of funds to firms than in Germany and Japan. Second, US and UK banks generally have had arm's-length relationships with the firms to which they lend, in contrast to the much tighter ties between banks and firms in Japan and Germany, where banks often take large equity stakes in the firms to which they lend, sit on the board of directors, and act as insiders with respect to the knowledge they have of the firm's operations and the influence they have over the firm's decisions.[3]

Based on these characteristics, the Australian system looks much closer to its Anglo-Saxon cousins – particularly the United Kingdom – than it does to Japan and Germany. Equity markets are an important source of finance for firms as they are in the

3. This is not to say there are not differences between the US and UK financial systems, or between Japan and Germany, but merely that such differences are of second-order importance when compared to the differences between the United States and United Kingdom on the one hand and Japan and Germany on the other.

United States and United Kingdom, while securities markets for debt instruments are about as developed as those in the United Kingdom, but well behind those in the United States. Finally, Australian banks' ties to their borrowers are more of the arm's-length variety observed in the United States and United Kingdom than the 'insider' variety observed in Japan and Germany.

3.1 Securities Markets and External Financing

The relative importance of corporate securities markets across industrialised countries differs dramatically, both in terms of size and liquidity. Table 1 shows stock market capitalisation as a proportion of GDP in 1994 for the five countries under study. Comparing stock market capitalisation can be misleading if there is a high degree of inter-corporate shareholding in one country, because these shares are double-counted.

Table 1: Stockmarket Capitalisation, 1994
As a percentage of GDP

	United States	United Kingdom	Japan	Germany	Australia
Unadjusted	75	112	78	24	68
Adjusted	70	95	40	11	64

Note: Adjusted figures are corrected for the double-counting of shares associated with inter-corporate shareholdings.

Source: Edey and Hviding (1995).

Table 1 adjusts for this bias by removing these shares from the calculation. Stock markets in the Anglo-Saxon countries are clearly larger than those in either Japan or Germany once a correction is made for the double-counting associated with inter-corporate shareholding. Note in particular that the size of the Australian stock market as a percentage of GDP is very close to that of the United States and much larger than that of either Japan or Germany. This pattern is also revealed by data on public equity issues over the past five years, shown in Table 2. Annual average public equity issuance (as a

Table 2: Gross Public Issuance of Equity
Annual average 1991-1995, as a per cent of 1993 GDP

United States	United Kingdom	Japan	Germany	Australia
1.2	2.1	0.65	0.04	1.6

Sources: US, Federal Reserve Board *Flow of Funds Accounts*.
UK, Central Statistical Office *Financial Statistics*.
Japan, Bank of Japan *Quarterly Bulletin*.
Germany, Deutsche Bundesbank *Monthly Report*.
Australia, Australian Stock Exchange *Monthly Index Analysis*.

percentage of GDP) is much higher in the United States, United Kingdom and Australia than it is in Japan or Germany.

Corporate securities markets for *debt instruments* (bonds, debentures and commercial paper) also differ dramatically in size across countries. Table 3 illustrates that the corporate bond market is by far the most developed in the United States, with Japan a distant second. The Australian and UK corporate bond markets are of equivalent relative size, while the German market is almost non-existent. The US and Australian commercial paper markets are the most active, reflecting the fact that these countries were among the first to allow its development.

Table 3: Corporate Bond and Commercial Paper Markets

Outstanding amounts of corporate bonds of non-financial corporations, 1993

Country	Per cent of GDP
United States	19.1
United Kingdom	2.7
Japan	5.1
Germany	0.1
Australia[(a)]	2.6

Outstanding amounts of commercial paper, 1992

Country	Per cent of GDP	
	All firms	Non-financial corporations
United States	9.1	2.0
United Kingdom	0.7	n.a.
Japan	1.8	n.a.
Germany	0.6	n.a.
Australia[(a)]	6.8	3.4

Note: (a) Australia is 1994.

Sources: Edey and Hviding (1995) and Australian Bureau of Statistics *Financial Accounts*.

The debt financing patterns of non-financial firms across countries is shown in Table 4. The table illustrates that in the United States almost 50 per cent of non-financial firms' credit market debt was in the form of securities in 1994, compared to less than 15 per cent in Japan, Germany and Australia, and about a quarter in the United Kingdom. In this respect, the United States is the clear outlier among the countries under study, by virtue of its extremely well-developed corporate bond market.

Table 4: Composition of Companies' Credit Market Debt, 1994
As a percentage of total credit market debt

	United States	United Kingdom	Japan	Germany	Australia
Intermediated debt	51	76	84	90	90
of which: from banks	16	45	n.a.	80	n.a.
Securities	49	24	16	10	10

Note: Credit market debt excludes trade debt. Intermediated debt refers to loans from financial intermediaries. Securities includes commercial paper and long-term bonds and debentures.

Sources: Edey and Hviding (1995); for Australia, Australian Bureau of Statistics *Financial Accounts*; for the UK, Central Statistical Office *Financial Statistics*.

3.2 The Structure of Corporate Ownership

The ownership structure of the corporate sector also differs dramatically across the five countries under study, especially with respect to the importance of banks as shareholders of firms. These differences are partially illustrated by simple inspection of the aggregate statistics on the ownership of listed companies in Table 5. This table reveals the heavier weight of banks in corporate ownership in Japan and Germany compared to the United States, United Kingdom and Australia. Unlike in Anglo-Saxon countries, banks are the most important large shareholders in firms in Japan and Germany. In Japan they own over 20 per cent of the outstanding common stock of

Table 5: Ownership of Common Stock of Listed Companies
Percentage of outstanding shares owned

	United States	United Kingdom	Japan	Germany	Australia
All corporations	44.5	62.9	72.9	64.0	38.9
Financial institutions	30.4	52.8	48.0	22.0	26.0
– Banks	0.0	4.3	18.9	10.0	1.2
– Insurance companies	4.6	—	19.6	—	18.1
– Pension funds	20.1	48.5	9.5	12.0	1.6
– Other	5.7	—	—	—	5.2
Non-financial corporations	14.1	10.1	24.9	42.0	12.8
Individuals	50.2	28.0	22.4	17.0	19.9
Foreign	5.4	6.5	4.0	14.0	41.2
Government	0.0	2.5	0.7	5.0	0.1

Sources: For Australia, Reserve Bank of Australia; for other countries, Prowse (1995a).

non-financial firms. In Germany, they own 10 per cent, but under current law they have great flexibility to vote, according to their own wishes, the additional 14 per cent of common stock owned by individuals but held by banks in trust for them. In contrast, banks in Anglo-Saxon countries own negligible amounts of the stock in non-financial firms. Also notable is the greater importance of non-financial firm holdings in Japan and Germany compared to the other three countries.

While the pattern of share ownership in Australia is broadly consistent with that of its Anglo-Saxon cousins in terms of the relatively low level of bank holdings and holdings by non-financial corporations, it differs from all the other countries under study in the very large share of outstanding stock owned by foreign entities. This clearly reflects the relative openness of the Australian economy as well as its traditional economic ties to the United Kingdom.

Some aspects of the aggregate shareholding pattern however do not seem to bear out the traditional distinction often made between the Anglo-Saxon countries and Japan/Germany. For example, the United Kingdom is closer to Japan in terms of the weight of the financial sector in aggregate holdings, while Germany is closer to the United States in this respect. Similarly, individual ownership in the United Kingdom and Australia is closer to that exhibited in Japan and Germany than in the United States. These aggregate figures however, reveal nothing about the *concentration* of ownership which is important from a corporate governance perspective. What is required is an analysis of the ownership patterns of a sample of firms in each country. This is illustrated in Table 6, which presents data on ownership concentration in a sample of US, UK, Japanese, German and Australian non-financial firms. Ownership concentration is significantly higher in Japan and Germany than in the United States and United Kingdom. The holdings of the largest five shareholders average over 40 per cent in Germany, 60 per cent more than in the United States, and almost double that in the United Kingdom. Japanese ownership is about one-third more concentrated than in the United States, and 60 per cent more so than in the United Kingdom.

Table 6 also illustrates that Australian ownership concentration is quite similar to that of its Anglo-Saxon cousins. The largest five shareholders hold on average 23.4 per cent of the outstanding shares in the largest ten non-financial firms in Australia, slightly higher than in the United Kingdom, but slightly lower than in the United States.[4]

4. Some caution should be used in comparing the ownership concentration numbers for Australia. Ownership concentration tends to vary inversely with the size of the firm. Since only a very small sample of Australian firms is employed here – the largest ten non-financial firms as measured by market capitalisation – measured ownership concentration might be somewhat higher if a larger sample was used that included smaller firms. In addition, the company reports on The Bloomberg Financial Network report custodian holdings in aggregate and do not report them on an individual beneficial basis. If one of the five largest beneficial holders' holdings are reported in the aggregate holdings of a custodian account, they would be missed in the ownership concentration measure reported here. However this may not be a source of great bias in the numbers shown here since most large Australian shareholders have their own in-house custodial services and do not use an outside custodian to manage their holdings.

Table 6: Summary Statistics of Ownership Concentration of Large Non-Financial Corporations

Percentage of outstanding shares owned by the largest five shareholders

	United States	United Kingdom	Japan	Germany	Australia
Mean	25.4	20.9	33.1	41.5	23.4
Median	20.9	15.1	29.7	37.0	18.5
Standard deviation	16.0	16.0	13.8	14.5	16.0
Minimum	1.3	5.0	10.9	15.0	10.0
Maximum	87.1	87.7	85.0	89.6	52.0

Samples: United States, 457 non-financial corporations in 1980.
United Kingdom, 85 manufacturing corporations in 1970.
Japan, 143 mining and manufacturing corporations in 1984.
Germany, 41 non-financial corporations in 1990.
Australia, largest 10 non-financial corporations in 1996.

Sources: For the United States and Japan, Prowse (1992); for the United Kingdom, author's estimates from data in Collett and Yarrow (1976); for Germany, Prowse (1993) and for Australia, author's calculations from company reports.

3.3 Merger and Acquisition Activity

One of the starkest differences between the Anglo-Saxon financial systems and those of Germany and Japan is the frequency of corporate takeovers. Table 7 illustrates that the market for corporate control appears much less active in Japan and Germany than in the Anglo-Saxon countries. Part of the reason for the much greater merger and acquisition activity in these countries is of course the larger number of companies listed on the stock market in the United States and United Kingdom. However, even normalising the dollar value of mergers and acquisitions by stock market capitalisation fails to alter the

Table 7: Average Annual Volume of Completed Domestic Mergers and Corporate Transactions with Disclosed Values, 1985-1989

	United States	United Kingdom	Japan	Germany	Australia
Volume (US$ billion)	1,070	107.6	61.3	4.2	9.1
As a percentage of total market capitalisation	41.1	18.7	3.1	2.3	10.3

Notes: Dollar values calculated at current exchange rates for each of the five years covered. Market capitalisation figures are for 1987. Australia is 1985 only.

Sources: For the United States, the United Kingdom and Germany, Securities Data Corporation, Mergers and Corporate Transactions database; for Japan, Yamaichi Securities Corporation, as reported in Beiter (1991). For Australia, Bureau of Industry Economics (1990).

impression that the merger market is much more active in the United States and United Kingdom – 15 to 20 times more so in the United States and 5 to 10 times more so in the United Kingdom.

Data on the frequency of merger and acquisition activity in Australia are hard to come by. What data are available suggest that Australia is closer to its Anglo-Saxon cousins in this regard than to Japan or Germany. Data from the Bureau of Industry Economics for 1985 reveal that, normalised for stock market capitalisation, merger and acquisition activity is about three to four times greater than in Japan or Germany, and a little over half as great as in the United Kingdom.

Table 8 shows the percentage of hostile offers (whether ultimately successful or not) made for firms as a percentage of all attempted transactions for the United States and continental Europe. The data reveal the much lower incidence of hostile takeover activity in continental European countries compared to the United States (data for Japan are unavailable). The differences in *actual, completed* hostile takeovers are even more striking. In the postwar period there have only been four successful hostile takeovers in Germany (Franks and Mayer 1993). Kester (1991) claims that the use of takeovers in large Japanese firms is very infrequent. Conversely, in the United States almost 10 per cent of the Fortune 500 in 1980 has since been acquired in a transaction that was hostile or started off as hostile.[5] While data are unavailable on the frequency of hostile takeovers in Australia, unlike in Japan and Germany, hostile takeovers do occur.

Table 8: Hostile Takeovers and Leveraged Buyouts as a Percentage of all Attempted Transactions, 1985-1989

	United States	United Kingdom	Rest of Europe
Hostile takeovers	17.8	37.1	9.6
Leveraged buyouts	20.0	5.9	2.7

Notes: Hostile offers are defined as those transactions in which the acquiring company proceeds with its offer against the wishes of the target company's management. Data include both completed and withdrawn transactions.

Source: Securities Data Corporation, Mergers and Corporate Transactions database.

3.4 Corporate Finance in the Anglo-Saxon Countries

These dramatic differences are indicative of the different ways in which the US and UK financial systems on the one hand, and the German and Japanese systems on the other, have addressed the problems of corporate finance and governance. In the United States and United Kingdom, there are firstly a host of stock and bond analysts, ratings agencies, and other advisors which analyse the operations and reports of large firms and offer opinions about whether the firm is worthy of new capital. Secondly, liquid

5. See Morck, Shleifer and Vishny (1989).

equity markets make credible the threat of a takeover of a poorly performing firm, helping to discipline management to act in shareholders' interests.

Thirdly, American and British firms have a large number of potential sources of external finance from which to choose, from banks to non-banks, intermediated sources and non-intermediated sources. Research on these markets in the United States has demonstrated that, just as firms vary in the degree to which they suffer from sorting and incentive problems, US corporate finance markets differ in the extent to which they are designed to mitigate these problems.[6] This provides a natural selection mechanism as to which firms use which markets. Thus, small firms – which suffer most from the information problems related to external finance and governance – are forced to raise funds in markets that have developed the greatest safeguards to mitigate such problems, such as the markets for private equity and bank loans. Medium-sized firms may be able to tap the private bond market, while some of the larger or more promising middle-market firms may also be able to issue public equity. Large firms that suffer least from information problems gravitate toward markets that have the fewest safeguards and where capital is the cheapest, such as the public bond and commercial paper markets.

The Australian financial system appears broadly similar to the systems of the United States and United Kingdom. There is a large sector devoted to analysing the operations of firms and making decisions about their worth. Liquid equity markets make mergers and acquisitions feasible. Equity markets are relatively active and an important source of finance, meaning that Australian firms have not been limited in their external financing options to banks. Finally, as in the United States and United Kingdom, ownership concentration is relatively dispersed.

3.5 Corporate Finance in Japan and Germany

Japanese and German firms, regardless of their size or the severity of their information problems, have traditionally relied much more on bank financing than have Anglo-Saxon firms, while securities markets have been much less important.

Banks consequently have a potentially powerful position as active monitors in both Germany and Japan. First, they have typically comprised the lion's share of external finance to firms and may therefore exercise influence through their control of the firm's access to external funds. Second, the loans they make are often short-term in nature. In normal times they would be rolled over on an almost automatic basis, but should questions arise about management strategy or quality, the bank always has the option of not renewing the loan at a fairly frequent interval. Finally, their large shareholder status means that they have both the incentive and ability to directly monitor management through their presence on the board and the votes they can exercise at the shareholders meeting.

Unlike in Anglo-Saxon countries, banks in Germany and Japan act as insiders to firms. One aspect of this relationship is bank ownership of equity of non-financial firms. They typically have great access to information about the firm's operations, and have the

6. See Prowse (1996).

ability to engage in monitoring and influencing management. Banks' dual role as important lenders and shareholders has given them a primary role in the financing and governing of firms.

4. Legal and Regulatory Determinants of Corporate Financial Systems

Why should corporate finance and governance systems differ so dramatically across countries? This fact poses a problem for the theory of corporate finance and governance. According to theory, there is a best way to organise and finance large firms, and so we should observe similar mechanisms of finance and governance in the large industrialised countries. The fact that we do not suggests that we should either attribute differences simply to accidents of history or culture or look to other factors which theory ignores – such as the laws, rules and regulations which govern the financial systems of industrialised countries.

In fact there are large legal and regulatory differences between the countries under study that affect the corporate financial systems in place. The differences are essentially of three kinds. First is the severity of the legal and regulatory restraints on large investors being 'active' investors in firms. These are affected by differences in the portfolio regulation of financial institutions, tax laws, insider trading laws, and antitrust laws. Anglo-Saxon laws are much more hostile to investors taking large influential stakes in firms than in Japan and Germany.

Second, there are differences in the degree to which sources of non-bank finance are actively suppressed. For much of the postwar period there has been 'active' suppression of corporate securities markets in Japan and Germany, taking a variety of forms including discriminatory taxation, regulatory fiat and cumbersome mandated issuance procedures.

Finally, there are differences in the degree to which corporate securities markets have been 'passively' suppressed by the absence of any strong mandated, standardised disclosure requirements by firms wishing to issue securities to outside investors. There are large differences in the disclosure requirements of Japanese and German firms on the one hand and Anglo-Saxon firms on the other. These differences may have been important in determining the relative speed of securities markets development in different countries if there is a large public good aspect to the production of information by firms seeking external finance, that only the imposition of government-backed disclosure requirements can solve.

4.1 Legal and Regulatory Restraints on Ownership of Corporate Equity

As Table 9 documents, financial institutions in Japan and Germany are given more latitude to own shares in and exert control over firms than they are in Anglo-Saxon countries.

Table 9: Legal and Regulatory Constraints on Corporate Control

Institution	United States	United Kingdom	Japan	Germany	Australia
Banks	Stock ownership prohibited or requires prior approval of FRB and must be 'passive'. Source: Glass-Steagall and BHC Act.	Bank of England may discourage ownership on prudential grounds. Capital adequacy rules discourage larger stakes.	Prior to 1987 banks could hold up to 10 per cent of a firm's stock. After 1987 can hold up to 5 per cent. Source: *Anti-Monopoly Act*.	No restrictions, apart from some generous prudential rules.	Prior to 1996 banks discouraged from stock ownership. After 1996, can hold up to 5 per cent of Tier 1 capital in equity, up to 0.25 per cent in any one firm.
Life insurance companies	Can hold up to 2 per cent of assets in a single company's securities. Can hold up to 20 per cent of assets in equities. Source: NY Insurance Law.	Self-imposed limits on fund assets invested in any one company stemming from fiduciary requirement of liquidity.	Can hold up to 10 per cent of a firm's stock. Source: *Anti-Monopoly Act*.	Can hold up to 20 per cent of total assets in equities. Source: Insurance Law.	Can hold up to 5 per cent of statutory funds in any one firm.
Other insurers	Control of non-insurance company prohibited. Source: NY Insurance Law.	—	Can hold up to 10 per cent of a firm's stock. Source: *Anti-Monopoly Act*.	No restrictions.	No restrictions.
Mutual funds	Tax penalties and regulatory restrictions if ownership exceeds 10 per cent of a firm's stock. Source: *Investment Company Act*, 1940, IRS.	Cannot take large stakes in firms. Source: *Financial Services Act*, 1986.	No restrictions.	No restrictions.	No restrictions.

Pension funds	Must diversify. Source: ERISA.	Self-imposed limits on fund assets invested in one company stemming from fiduciary requirement of liquidity.	No restrictions.	No restrictions.	No restrictions.
General	SEC notification required for 5 per cent ownership. Antitrust laws prohibit vertical restraints. Insider trading laws discouraging active shareholding. Bankruptcy case law makes creditor in control of firm liable to subordination of its loans.	Insider trading laws discourage large stockholders from exerting control. Source: *Insider Dealing Act*.	—	Regulatory notification required for 25 per cent ownership.	Regulatory notification required for 5 per cent ownership. 25 per cent ownership requires formal takeover bid. Insider trading laws discourage active shareholding.

Sources: For the United States, Roe (1990); for other countries, various national sources.

In the United States, financial institutions face significant constraints on their ability to take large stock positions in firms and use them for control purposes.[7] Banks are simply prohibited from owning any stock on their own account. Bank holding companies cannot own more than 5 per cent of a firm and their holdings must be passive.[8] Bank trust departments are allowed to hold equity for beneficial owners, but they cannot invest more than 10 per cent of their trust funds in any one firm, and there are often other trustee laws that encourage further fragmentation of trust holdings.

Other financial institutions also face strict rules governing their equity investments. New York insurance law, which currently governs almost 60 per cent of total life insurance industry assets, places a limit of 20 per cent of a life insurer's assets, or one half of its surplus, that can be invested in equity, and a limit of 2 per cent of its assets that can be invested in the equity of any one firm. Other States have similar rules. Property and casualty insurers are prohibited outright from owning a non-insurer. Mutual funds are subject to tax and regulatory penalties if they own more than 10 per cent of the stock of any one firm. Pension fund investments are governed by the *Employee Retirement Income Security Act* of 1974 (ERISA), which requires all pension funds to be diversified, allowing little room for an influential position in a company.

In addition to institution-specific constraints, US securities laws discourage concentrated, active shareholding by investors in general. First, all entities acquiring 5 per cent or more of a company are required to file with the SEC, outlining the group's plans and revealing its ownership and sources of finance. Second, any stockholder who exercises control over a firm may be liable for the acts of the firm. Third, insider trading rules restrict large active shareholders from short-term trading of stock they own. Thus, Bhide (1993) reports that pension fund managers are reluctant to own more than 10 per cent of a firm, because this would restrict the liquidity of their stake, which by law they have a fiduciary responsibility to protect. Fourth, SEC regulations have prohibited communication among large shareholders – until 1992 it was a violation of proxy rules for 10 or more equity holders to speak together about a firm's policies or management. Finally, the legal doctrine of equitable subordination discourages all creditors from taking equity positions in the company, since their loans are subject to subordination should they exert control over the firm.

In the United Kingdom, there are fewer formal restrictions on agents' ability to hold concentrated shareholdings in firms, but those that exist still appear substantial. Banks are usually subject to explicit Bank of England approval before they acquire significant shareholdings in non-financial firms. Banks' links with non-financial firms have also been subject to strict prudential rules which appear severe enough to have effectively precluded significant equity investments by deposit banks in the United Kingdom (Santomero and Langhor 1985). Insurance companies and pension funds in the United Kingdom typically operate according to self-imposed limits on their shareholdings in one company, for diversification reasons similar to those that have inspired US pension fund reluctance to take large stakes in individual firms (Minns 1980). And as in the United States, insider trading laws in the United Kingdom discourage investors from holding large equity stakes and using them for the purposes of corporate control since

7. For a detailed description of these restrictions, see Roe (1990) and Prowse (1990, 1995a and 1995b).

8. See Carey, Prowse, Rea and Udell (1993).

doing so makes them insiders and therefore vulnerable to prosecution under the *Insider Dealing Act*.

In Japan, there are far fewer regulations constraining particular financial institutions from holding corporate stock, or from using the stock they own for corporate control purposes. The sole restrictions derive from the *Anti-Monopoly Act*, which until 1987 limited a single bank's holdings of a single firm's shares to 10 per cent (the limit has since been lowered to 5 per cent). Insurance companies are similarly restricted to owning at most 10 per cent of the firm. Antitrust laws and insider trading legislation on paper look similar to those of the United States. However, there is widespread recognition that they are not enforced by the authorities.[9]

The institutional structure of the German financial system is based on the universal banking principle. Universal banks can hold whatever share of equity they like in any non-financial firm, limited only by a number of prudential rules which do not appear to be particularly binding and give banks wide latitude to own equity.[10] There are few other aspects of the legal and regulatory environment that restrict concentrated shareholdings. Antitrust laws have not been used to discourage inter-corporate shareholdings as they have in the United States. There has for a long time been no explicit legislation against insider trading: Germany has only recently adopted EC-mandated standards regarding minimum levels of shareholder protection.

In Australia, banks have traditionally been discouraged by the Reserve Bank of Australia from taking equity stakes in non-financial firms, except in cases where the firm has defaulted on a loan. However, from 1996 banks are permitted to hold up to 5 per cent of their Tier 1 capital in non-financial firms' equity, with individual investment limits of 0.25 per cent of Tier 1 capital. Apart from regulations on banks, there are few restrictions specific to other financial institutions that are meaningful. For example, life insurance companies and superannuation (pension) funds are subject to few limits on their equity investments. Life companies, which manage over 40 per cent of Australian pension-fund assets, are restricted to a limit of 5 per cent of statutory (policyholder) funds invested in any one company, but the size of most statutory funds means that this limit is not often approached.

There are however, a number of general regulations that may discourage active equity investments by financial institutions. The first is the requirement for notification of the Australian Securities Commission for equity investments of 5 per cent or greater in a firm. Ownership of 25 per cent stakes or greater require a formal takeover bid to be launched. Finally, insider trading rules discourage large financial institutions from representing themselves on the boards of corporations in which they own sizeable stakes.

Overall, while the panoply of rules and regulations affecting the role of financial institutions as active investors in firms are not nearly as restrictive as those in the United States, the specific restrictions on banks and the more general restrictions on all financial institutions may effectively prevent any Australian financial institution from becoming as active an investor in the firm as those in Japan and Germany.

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9. See *The Economist*, 19 May 1990.

10. The most onerous appears to be the requirement that total qualifying investments in equity and real estate should not exceed the bank's capital. A qualifying investment is one in which the bank takes a greater than 10 per cent share of the enterprise. See Deutsche Bundesbank (1991).

4.2 Suppression of Sources of Non-bank Finance in Japan and Germany

Table 10 documents some of the legal and regulatory restraints on access to external non-bank finance by non-financial firms in Japan and Germany in the postwar period. Unlike in the Anglo-Saxon countries, until the mid 1980s in Japan and until recently in Germany, there have been significant obstacles to firms raising external finance from sources other than banks.

Table 10: Legal and Regulatory Constraints on Non-Financial Firms' Access to Non-Bank Finance

Instrument	Japan	Germany
Commercial paper	Issuance prohibited until November 1987.	Issuance discouraged until 1992 by issue authorisation procedure and securities transfer taxes.
Domestic bonds	Stringent criteria for issuance of straight and convertible bonds until 1987.	Issuance discouraged until 1992 by issue authorisation procedure and securities transfer taxes.
Eurobonds	One-year approval period for foreign bond issuance until 1982. Restrictions on issuance of Euro-yen bonds until 1984. Withholding tax on interest income of non-residents until 1985. Eurobond issuance restrictions eased further in 1992.	Issuance abroad required prior notification of the authorities and was subject to maturity restrictions until 1989. Issuance of foreign currency bonds prohibited until 1990.
Equity	Heavy taxes on transactions in equities until 1988.	New share issues must be offered to existing shareholders first. 1 per cent corporation tax on all equity issues until 1992. Secondary trading in equities subject to securities transfer tax until 1992, ranging from 0.1 to 0.25 per cent. Annual net asset tax of 1 per cent on corporate net assets, payable irrespective of net income position.

Sources: International Financial Law Review (1990), Takeda and Turner (1992).

In Japan, these restrictions were gradually removed over the 1980s, but prior to this were very stringent. Until the early 1980s, the corporate sector had no direct recourse to capital markets for external finance. The domestic bond market was open to only a very few government-owned firms or electric utilities. The Bond Issuance Committee set severe eligibility requirements on issuers of corporate bonds through a detailed set of

accounting criteria that in 1979 permitted only *two* firms to issue unsecured straight and convertible bonds domestically. These requirements were gradually relaxed in the mid 1980s so that by 1989 about 300 firms were eligible to issue unsecured straight bonds.[11] Similar restrictions on access to the Eurobond market were relaxed in stages from 1982. Commercial paper issuance was prohibited by the authorities until 1987. While not directly restricted, equity issuance was discouraged by heavy taxes on transactions in equities until 1988.

Restrictions on non-bank finance in Germany have also been significant until even more recently. Issuance of commercial paper and longer-term bonds was hampered by requirements under the issue authorisation procedure and the securities transfer tax (Deutsche Bundesbank 1992). The issue authorisation requirements included obtaining prior approval by the Federal Ministry of Economics. Approval was granted if the credit standing of the issuer was satisfactory and if the application was supported by a bank. While this was little more than a formality for the large German firms, it added to the effective cost of a bond issue relative to a bank loan because firms could not generally issue the bonds at a time of their own choosing but were forced to wait for approval from the Ministry. The securities transfer tax often imposed a considerable burden on the secondary market for corporate securities, particularly at its short end. Foreign issuance of corporate debt has been subject to similar restrictions. Equity issuance and secondary trading of equities have historically been subject to a variety of taxes that have generally made equity uncompetitive with bank loans as a form of external finance (Döser and Brodersen 1990). Most important has been the legal requirements for employee representation on boards of public companies. These have been very important in discouraging the only form of organisation that is legally permitted to raise funds on the public markets (Borio 1990). Overall, these restrictions have made non-bank finance 'not a viable alternative for most German businesses'.[12]

In Australia, as in the United States and United Kingdom, there have been far fewer impediments on the development of corporate securities markets. For example, Australia was one of the first industrialised countries to allow the development of an active commercial paper market in the mid 1970s, compared to the United Kingdom (1986), Japan (1987) and Germany (1991). The issue of securities by corporations in Australia is governed primarily by the Corporations Law,[13] and, in the case of securities which are traded on a stock market or a securities exchange, the rules of the relevant exchange – in practice, the Australian Stock Exchange (ASX). The only type of security that a company is prohibited from issuing under the Corporations Law is a share warrant or bearer share which is transferable simply by delivery of the document evidencing legal ownership (that is, no requirement for registration by the issuing company).[14] The only possible substantial disincentive to issue securities in Australia would appear to be the stamp duty. Stamp duty is payable on the issue of corporate bonds at a typical rate of

11. See Nomura Securities (1989).

12. See Döser and Brodersen (1990).

13. The Corporations Law is enacted in each State and Territory, but effectively read as one law Australia-wide through mutual recognition of each jurisdiction (International Financial Law Review 1990).

14. This prohibition has its origins in the desire of State governments to protect stamp duty revenue on share transfers, since the instant nature of share warrant transfers would make collection difficult.

0.4 per cent. In addition, existing securities transferred to another party typically incur stamp duty at the rate of 0.06 per cent.

4.3 Fostering Non-Bank Finance through Disclosure Requirements

Quite apart from the active discrimination against non-bank finance for much of the postwar period in Japan and Germany, the lax disclosure requirements in these countries *may* have been an additional (passive) factor in discouraging non-bank sources of corporate finance.

Firms in Anglo-Saxon countries wishing to issue securities to the public have been required to disclose much more information than those in Japan and Germany. Results from a recent OECD survey illustrate this pattern.[15] In a study of multinational firms' consolidated financial statements, the OECD rated their disclosure relative to OECD guidelines as 'full', 'partial', or 'not implemented'. Table 11 illustrates the results for two areas of disclosure – operating results and sales. Two-thirds of the US firms and three-quarters of the UK firms surveyed had fully implemented the OECD disclosure guidelines for operating results; the rest had partially implemented them. In Germany none of the firms surveyed and in Japan less than 10 per cent of those surveyed had fully implemented the guidelines. The results for the disclosure of sales (and other areas not reported here) reveal a similar pattern.

Table 11: Selected Results from a Survey of the Implementation of the OECD Guidelines on the Disclosure of Information by Multinational Enterprises

Number of firms

Country	Implementation of guidelines on disclosure of operating results			Implementation of guidelines on disclosure of sales		
	Full	Partial	Not implemented	Full	Partial	Not implemented
US	34	19	0	35	18	0
UK	19	6	0	18	7	0
Japan	2	21	0	6	17	0
Germany	0	19	0	11	8	0
Australia	11	1	0	11	1	0

Source: OECD (1989).

Table 11 also reveals that disclosure requirements in Australia are as strict if not stricter than those of their Anglo-Saxon cousins, and much stricter than those of Japan or Germany. All but one of the 12 Australian firms surveyed had fully implemented the

15. See OECD (1989).

OECD guidelines on the disclosure of operating results and sales – the other had partially implemented them. Indeed, out of 11 reporting areas surveyed by the OECD, Australia was below average in only one area – the disclosure of the geographical areas where operations are carried out and the principal activities carried on therein by the parent company and affiliates. Overall, Australian company disclosure practices appear on a par with the most demanding in the world.

There is a fairly intense academic debate as to the effects of mandated corporate disclosure requirements, with no conclusive answer. One hypothesis is that mandated disclosure rules help firms make credible commitments to outside investors to provide honest and timely disclosure and protection from market manipulation or insider trading. In this view, for strategic, competitive reasons firms may not have sufficient incentives voluntarily to provide the financial information outside investors would require to consider extending such finance (for example, they may be afraid that competitors could take advantage of such information). Thus, absent a regulatory and legal framework requiring adequate, standardised disclosure to outside investors, the development of a liquid market for corporate securities may be effectively impeded.[16] The alternative hypothesis is that regulation unduly constrains the choices of firms and investors and prevents efficient contracting. In this view, firms have sufficient incentives to provide the optimal amount of disclosure to obtain external financing, and regulations mandating such disclosure are, at best, irrelevant, and at worst, burdensome on both firms and investors.[17]

Ultimately, the effect of mandated disclosure requirements is an empirical issue. Unfortunately there is only a limited amount of empirical work that bears on this topic. Stock price studies of firms before and after the US 1933 *Securities Act* suggest that mandated disclosure regulations impose costs on firms (Bentson 1973; Chow 1983). On the other hand, Sylla and Smith (1995) explain the differing speeds of development of stock markets in the United States and United Kingdom since 1800 on differences in mandated disclosure rules. They attribute the faster development of the stock market in the United Kingdom in the 19th and early 20th century to the various Companies Acts between 1844 and 1900 which required substantial disclosure by firms wishing to issue equity. Disclosure requirements were significantly less onerous in the United States until the 1930s, when the *Securities Acts* of 1933 and 1934 went beyond even what the British had put in place. Sylla and Smith claim these disclosure rules were responsible for putting the United States ahead of the United Kingdom in terms of the size and depth of the stock market in the immediate postwar period.

While this debate is far from settled, it is nevertheless possible that the marked differences in disclosure requirements between countries may be in part responsible for the differences in the relative speeds of development of securities versus intermediated markets.

16 Proponents of this view include Dye (1990), Dye and Magee (1991) and Demski and Feltham (1994).

17. Proponents of this view include Bentson (1973), Leftwich (1980), Phillips and Zecher (1981) and Watts and Zimmerman (1986).

5. Costs and Benefits of Different Systems of Finance and Governance

There is much debate about the efficiency of the different systems of corporate finance and governance in the industrialised countries, with no clear conclusion. While much of the academic and policy-related literature finds particular advantages in the financing and governing systems in a particular country, this has not translated into overall demonstrably cheaper capital for firms, nor obviously superior mechanisms of corporate control in any one country.

Without going into the detail of the individual studies on this broad topic, the consensus of the academic literature to date appears to be the following:

- there are a number of advantages to a system that allows large equity and debtholders of the firm to be the same agents, that encourages the concentrated holding of debt and equity claims, and where ties between financial institutions (typically banks) and firms are relatively tight. Cable (1985), Prowse (1990), Hoshi, Kashyap and Scharfstein (1990), Lichtenberg and Pushner (1992) and Elston (1993) all provide evidence suggesting that the concentrated holding of debt and equity claims by financial institutions (typically banks) in Germany and Japan mitigates the information problems of external finance and governance to a greater extent than in the Anglo-Saxon countries where ties between banks and firms are less tight;
- the Japanese and German system *may* be vulnerable to the 'who monitors the monitor?' problem. In systems where reliance is on direct shareholder monitoring, the large shareholders (typically the banks) have a particularly important role to play. However, if these institutions themselves are diffusely held there may be a problem in ensuring that they conduct the investment and monitoring function in an efficient manner. Although there is plenty of evidence that Japanese and German banks are diffusely held institutions (Prowse 1995a), there is to date no evidence on whether this has resulted in any problems of corporate control;
- takeovers are a costly and sometimes weak mechanism of corporate control. The cyclical nature of the takeover market means that there are periods when the takeover market literally shuts down, typically in recessions when finance is hard to obtain. In these periods the takeover threat may not be credible. In addition, takeovers are vulnerable to broad political and regulatory forces that have provided a large impediment to the market for corporate control in the United States in the early 1990s. Finally, in industries where for regulatory reasons takeovers are precluded, the corporate control mechanism may be weak (Prowse 1995b);
- countries where securities markets play an important financing role appear to embody some important strengths that the systems of Germany and Japan lack. Sahlman (1990) and Porter (1992) provide evidence that the US system appears better at funding emerging companies and new (often high technology) business activities than the German or Japanese system. Franks and Mayer (1992) argue that such a comparative advantage is the reason for the predominance of high-technology firms in the fields of oil exploration, biotechnology, pharmaceuticals and computer software in the United States. Porter (1992) claims that liquid United States capital

markets are able to reallocate capital from low to high-growth sectors more efficiently than in Japan or Germany; and

- the particular advantages of each system do not appear to translate into overall measurable aggregate differences in either the cost of external financing or the effectiveness of the corporate control mechanism. Both systems appear to have the power to cure the most egregious cases of management indiscipline. Conversely, both systems also have their embarrassing examples of breakdowns in corporate control. Kaplan (1993a, 1993b) reports that top management turnover exhibits *similar* sensitivities to measures of poor firm performance in the United States, Japan and Germany. Similarly, there are legions of cost of capital studies with no consensus as to which system delivers external finance to firms at the lowest cost.[18]

6. Pressures for Change in the Existing Systems

Static comparisons of the financial systems as they existed in the early 1990s miss a crucial point: the systems are evolving over time in response to a variety of external pressures. Overall, the legal and regulatory environment of the different countries appears to be converging, but the focal point of this convergence is not one system or another as it currently exists, but a new legal and regulatory environment that allows financial institutions to be active investors in firms *and* allows unfettered access to securities markets by firms seeking external finance. This evolution appears to be occurring most rapidly in Japan and Germany, probably because their traditional systems of finance and governance – which have involved tightly regulated securities markets – are most inconsistent with the emerging pressures for change.

What are the forces behind this evolution? I consider four trends that I believe are common to the major industrialised countries and which I believe will dramatically change systems of corporate finance and governance over the long term. These forces are:

- technology, particularly as it affects financial globalisation and market innovation;
- the changing nature of the firm;
- the growth of the institutional investor; and
- the increasing incentives for institutional investors to be active investors.

6.1 Technology, Financial Globalisation and Market Innovation

The most profound change is probably technology: the rapid growth of computers and telecommunications. Their spread has lowered the cost and broadened the scope of financial services, making possible new product and market development that would have been inconceivable a short time ago, and in the process challenging the institutional and market boundaries that in an earlier day seemed so well-defined. Technological innovation has markedly accelerated the process of financial globalisation. Both developments have expanded cross-border asset holdings, trading and credit flows and in response both securities firms and US and foreign banks have increased their

18. See, for example, Kester and Luerhman (1992).

cross-border locations. Market innovation has been as much of a reaction to technological change and globalisation as an independent factor. Overall, these combined forces have led to the development of global markets for corporate securities (equities, bonds and commercial paper) and intermediated loans, to which the large firms of all the major industrialised countries potentially have access. In particular these developments have made many of the statutes governing corporate finance in Japan and Germany form an increasingly inconsistent patchwork, and have increased the pressure to relax restrictions on access to non-bank finance that have been a major characteristic of the postwar legal and regulatory environment of these two countries.

Japan is the clearest example of the legal and regulatory environment changing in response to these pressures. The regulatory and legal structure of the Japanese financial system has been slowly changing since the 1970s under both domestic and international pressure for reform. From a corporate finance perspective, the most important aspect of Japanese deregulation has been the gradual and continuing removal of restrictions on non-bank finance. Rosenbluth (1989) argues that the regulation of Japanese corporate finance in favour of bank lending proved unsustainable in the face of growing competition from the Euromarkets, and the decline in profitability of bank lending after the removal of interest rate controls.

Ties between banks and large firms in Japan that have easy access to the Euromarkets and the developing domestic bond market are weakening substantially in response to this deregulation (Kester 1991; Hoshi, Kashyap and Scharfstein 1993). This has obvious implications for how corporate financing in Japan will evolve in the future. The deregulation has already increased Japanese firms' access to securities markets, both at home and abroad: while Japanese non-financial corporations obtained only 15 per cent of their total gross external financing from securities markets between the years 1970 and 1985, from 1986 to 1990 they obtained over 30 per cent of their external funds from bond and equity markets.[19]

The German legal and regulatory environment has also shown recent signs of changing. As part of the attempt to compete with London as a centre of finance, the authorities have relaxed many of the restrictions on corporate finance in recent years (Deutsche Bundesbank 1992). In addition, other aspects of the German legal and regulatory framework will have to change under the planned EC reforms. As in Japan, this is likely to increase the role of securities markets in the financing of German firms.

Technology, market innovation and globalisation are also adding to the pressure on authorities in the Anglo-Saxon countries to reduce the regulatory restrictions on banks being active investors in firms, particularly in the United States where these restrictions are probably the most severe. American commercial banks have been fierce lobbiers in favour of repealing the Glass-Steagall Act, which prohibits them from engaging in investment banking activities including the underwriting of corporate securities, and the holding of them on their own account. They claim such restrictions preclude them from effectively competing internationally with foreign banks who do have such powers, and domestically with non-banks who are also able to offer one-stop shopping financial services (loans, underwriting services) to firms. While Glass-Steagall has survived

19. See Bank of Japan (1992), Prowse (1995a).

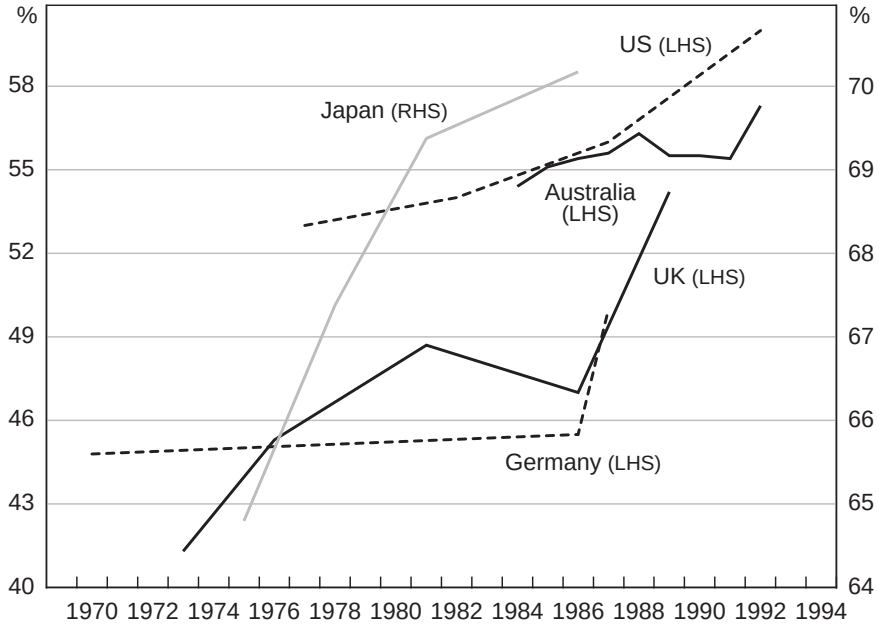
predictions of its demise for almost two decades, it is very likely that it will indeed be repealed before the turn of the century.

Banks in Australia have recently been given expanded powers to invest in the equity of non-financial firms. Last year, the Reserve Bank modified its policy on this issue to allow banks to make equity investments in, as well as providing loans to their business customers, up to certain prudential limits (see Table 9).

6.2 The Changing Nature of the Firm

Another force at work is the changing nature of the firm. Small and medium-sized firms have become increasingly important in the economies of many industrialised countries. Figure 1 shows the employment share of small businesses in the United States, United Kingdom, Japan, Germany and Australia from the early 1960s to recent years. While inconsistencies in the data caution against making comparisons *across* countries, the common trend *over time* for each country is rather more clear: small and medium-sized businesses have been becoming increasingly important in recent years, particularly in the United States, United Kingdom and Japan. In Germany and Australia, the trend does not seem as pronounced. In Germany, this may be because small and medium-sized firms

Figure 1: Employees in Small Enterprises
Per cent of all salary and wage earners



Sources: US, Prowse (1996); other countries, Bureau of Industry Economics (1992).

have historically always been a very important sector in the economy,[20] while the short time period for which data is available prevents drawing concrete conclusions for Australia.

The reasons behind this phenomenon are not entirely clear, but are very likely to be at least partly related to the evolution of the developed economies to an information-based structure. This has contributed to small firms' growth since many service and technology based firms tend to be small or medium sized. The increasing tendency for large firms to outsource many of their administrative functions to smaller firms (such as payroll, accounting and personnel) is also a factor in the growing importance of small firms in many countries.

The implications of this phenomenon for the corporate financial systems of these countries are somewhat more obvious: as small and medium-sized firms have increased in importance so has their demand for capital. Thus, there is pressure in many countries for an expansion of financial markets that can cater to the needs of smaller firms – in particular, those markets that can mitigate the information problems that smaller firms pose to investors. In the United States this has manifested itself in the extremely rapid growth of the private placement and private equity markets, which cater primarily to small and medium-sized firms. For example, the private placement market – which caters to medium-sized firms with revenues between about $100 million to $500 million – has grown very rapidly over the last decade and is now quite large. Average annual issuance in recent years is almost five times greater than in the early 1980s and in some recent years issuance has actually exceeded that of public bonds, even though individual issue sizes are much smaller than those in the public market.[21] Similarly, the private equity market – which caters to startup firms seeking venture capital and slower-growing medium-sized firms – has also expanded very rapidly. Indeed, although the private equity market is small compared to others, its growth since 1980 has been astronomic, much faster than other long-term finance markets. The private equity capital stock invested in small and medium-sized private companies in 1994 was about $40 billion, almost 15 times larger than in 1980.[22]

In addition to market-based changes, there have been changes in the legal and regulatory environment designed to reduce the regulatory burden of raising capital for small and medium-sized firms. Of particular note is the SEC's endorsement of the Small Corporate Offering Registration, which by simplifying disclosure requirements, allows small firms to raise equity publicly without incurring the large costs previously involved.

In Australia, there have also been a number of institutional and regulatory changes in the structure of financial markets designed to improve the access of small and medium-sized firms to equity capital. Several private companies are considering a number of proposals which potentially could revolutionise equity trading for medium-sized firms. AUSDAQ, a trading system designed for dealing in equities in small and medium-sized firms, is to

20. Harm (1992) reports that small firms – the so-called 'Mittelstand' – have always been a large share of the economy in Germany. Figure 1 should not be taken to contradict this notion, since comparing levels of importance across countries is extremely problematic owing to different survey techniques and coverage.

21. See Carey *et al.*(1993).

22. See Fenn, Liang and Prowse (1995).

become operational in 1996. In addition, there are proposals to establish a stock exchange catering to startups and other small companies which will have less stringent listing requirements than those currently applying to ASX listings, with no qualifying restrictions on capitalisation, length of trading record or the percentage of shares in public hands. This will be a formal mechanism to tap funds from private equity investors such as business angels and venture-capital companies. The idea behind both of these innovations is to improve the liquidity, efficiency and opportunities for exit in the equity market for small and medium-sized firms, thereby encouraging more investment capital into the market. In addition, like in the United States, consideration is being given to a number of proposals which would lower the costs of raising equity publicly for small firms by relaxing some disclosure and other requirements.[23]

Access to the Australian stock market by small companies wishing to make initial public offerings (IPOs or 'floats' in Australia) is also significant. There has been much discussion in the US press about the booming IPO market in the US. But the IPO boom in the United States appears puny in comparison with that in Australia in recent years. Annual average issuance of stock through IPOs over the past five years has been over three times higher (as a percentage of GDP) in Australia than in the United States.

In Japan and Germany, the historical reliance on banks might seem tailor-made for the financing of small and medium-sized firms. But the banks have appeared to be more concerned with lending to their large customers and small firms have consequently been ignored. Combined with the undeveloped nature of their securities markets, this has meant that smaller firms have found it difficult to access growth capital. Many medium-sized European firms now find it easier to do IPOs on the US NASDAQ exchange rather than raise capital domestically. This small-firm finance problem has been an additional factor in the pressures on regulators in Japan and Germany to open up their securities markets to a greater number of firms.

6.3 Increasing Importance of Institutional Investors

An important development in many industrialised countries in recent decades has been the growing importance of long-term institutional investors such as life insurance companies and pension funds. In the Anglo-Saxon countries, these institutional investors have come to dominate the capital markets, and many of the implications of this domination are still playing themselves out in terms of how firms are financed and governed in these countries. Perhaps more importantly, if current trends continue, institutional investors will also come to dominate Japanese and German capital markets. This would be a profound change for the corporate finance systems of Japan and Germany.

Table 12 illustrates the rapid growth of life insurance and pension fund assets in the five economies under study since 1970. Currently, these institutions are the most important institutional investors in the Anglo-Saxon countries, where their assets make up between 13 per cent and 27 per cent of total personal sector assets. In contrast, in Japan and Germany, they make up only 2 per cent of personal sector assets. Such

23. See, for example, The National Investment Council (1995).

Table 12: Life Insurance and Pension Fund Assets

Country	As a percentage of GDP		As a percentage of personal sector assets
	1970	1990	1990
United States	37	59	13
United Kingdom	43	97	27
Japan	8	41	2
Germany	10	22	2
Australia	26	39	16

Source: Davis (1992).

differences in the importance of institutional investors are primarily accounted for by the scope and certainty of the state social security system and the way private pensions are structured in different countries. For example, in Japan and Germany, relatively generous social security provisions have accompanied smaller private pension schemes. In addition, in Germany about two-thirds of the funds earmarked for the payment of private pensions is retained by the company as an unfunded liability. Only the remainder is invested outside the company via private pension funds. The funds retained by the company are used for general corporate purposes. The result is that there is less capital available for the capital markets and less demand for external financing than in Anglo-Saxon countries where the bulk of private pensions are channelled through private pension funds.[24]

However, given the rapid ageing of the populations of Germany and Japan over the next few decades, their governments are likely to limit social security commitments and stimulate private saving for retirement. This is likely to stimulate rapid growth of private pension funds. Australia provides a good example of this phenomenon already occurring. Currently every employer must contribute at least 6 per cent of their employees' salaries to a pension fund. By the year 2000 this share will rise to 9 per cent. In addition, by 1997 each employee must contribute 3 per cent of their salary to such a fund. This will spur rapid growth of pension fund assets in Australia in the first few decades of the next century.

What are the implications of institutional investors being big players in the corporate capital markets? As Davis (1992) notes, what we observe is that countries with large pension fund sectors tend to have well-developed securities markets, and vice versa. The question is, which is the causal factor? There are those who argue that, other things equal, the presence of large institutional investors in the market should encourage the development of securities markets, since their preferred investments traditionally have been in securities of various types rather than intermediated loans or real estate. However, Jensen (1989) argues that the investment philosophy of US public and private sector pension funds has been evolving recently. Whereas in the past a primary goal of pension

24. See Edwards and Fischer (1994).

funds was diversification, achieved by retaining many different investment managers each of whom traded an array of highly liquid public securities, recently such funds have increasingly participated in a select number of private illiquid investments and private pools of equity capital, making highly liquid public markets less essential to their operations. After all, since pension funds can project their cash needs well into the future based on predictable factors such as employee demographics, life expectancies and health trends, they do not have an inherent need for liquidity as much as the individual investor.

There is very likely some truth in both arguments. Proponents of the first argument can point to the considerable evidence that the presence of large institutional investors has improved the efficiency and degree of innovation in the public securities markets in the United States and United Kingdom (Davis 1992). However, there are signs in the United States that pension funds are beginning to turn to more illiquid investments. Indeed, regardless of their preferences for liquidity, there is considerable evidence that their holdings of public securities are becoming more illiquid simply because of their increasingly large holdings of such securities, and the trading costs involved with selling such holdings. This point is explored more fully in the next section.

6.4 Increasing Attraction of Active Ownership for Institutional Investors[25]

In recent years there have been signs that US and UK institutional investors are becoming more informed, active monitors of firms than has traditionally been the case. In the past, many institutional investors in the United States and United Kingdom were devotees of the *'*Wall Street Walk*'*, which involved selling the stakes of the companies in which the shareholder was unhappy with management behaviour. Recently however, it appears there has been a significant change in the costs and benefits of becoming a more active investor in firms that has led more and more institutional investors to become informed, active monitors of firms rather than simply passive holders of shares. While they have a long way to go before their behaviour can be compared to German and Japanese banks, it does appear that the attractions of becoming active investors will continue to increase in the Anglo-Saxon countries.

The driving force behind this change in the cost-benefit calculus of active monitoring is the increasing concentration of corporate ownership in the hands of the institutional investors, along with (in the United States) the relaxation of regulations that have made active investing by large shareholders difficult. Currently, the largest institutional investors in the United States (mutual funds, pension funds, and life insurance companies) each own over 1 per cent of the largest 1,000 companies listed on US stock exchanges. A 1 per cent investment might appear to be too small to give an institutional owner much incentive to monitor actively the management of the company, but in reality the opposite is the case: a 1 per cent ownership stake in a large US company is a huge investment that gives the institutional investor enormous incentives to act like an owner. For example, consider an institution that holds a 1 per cent stake in the common stock of GM. The market value of this holding is over US$450 million. Now consider the decision this

25. Much of this section is taken from Pound (1992).

owner faces when voting on a corporate issue. There may be the potential for the company's stock price to gain or lose 20 per cent depending on the initiative's outcome – which amounts to US$90 million of the 1 per cent owner's investment. Moreover, doing the Wall Street Walk and simply selling the stock could cost the 1 per cent owner as much as $4 million in trading costs (brokerage fees and the fact that selling such a large stake would probably push the price down). To this extent, the sheer size of this stake and the trading costs associated with selling make the institution 'captive'. The 1 per cent owner of GM thus has an incentive to spend considerable resources if necessary, to analyse the issue and persuade management to follow the preferred course. In many cases it may be cheaper for the institutional investor to do just this rather than to sell.

A large number of institutional investors, all performing the same cost-benefit analysis, creates a large constituency with incentives to press a value-maximising agenda on management. Thirty years ago, appealing to a majority of shareholders meant circulating material to tens or even hundreds of thousands of poorly informed individual owners. Owing to the increasing concentration of ownership in the hands of institutional investors, appealing to shareholders with sizeable voting power is much less costly: a dissident shareholder can reach a shareholder majority by contacting, say, 25 investment professionals all of whom understand the issues and can devote considerable expense to their analysis. This means a dissident investor should be able to press a serious counter-agenda with a controlling fraction of shareholders for much less than the $4 to $5 million typically associated with a full-control proxy contest – in some cases for as little as $250,000 to $500,000.

In fact, US institutional investors are already using shadow management committees, independent director slates and outside experts to critique management policy. These mechanisms allow investors to exert pressure on management. The increasing motivation for activism has in turn led to institutional investors pressuring the SEC to allow them more freedom to monitor management actively. In recent years SEC regulations precluding large shareholders from communicating with each other have been relaxed. In addition, there is a fierce debate over the degree to which the current restrictions on the ability of financial institutions to be active investors in firms act as impediments to more efficient governance.

In Australia, a similar pattern is emerging although it is as yet probably not as developed as in the United States. Greater-than-1 per cent ownership stakes in major firms are not uncommon. Many such owners may have started to perceive themselves as captive in the sense that simply selling such a large stake on the market in response to dissatisfaction with management policies or performance would involve prohibitive trading costs. Such investors may thus be becoming more interested in investing resources in governance activities rather than in 'wasting' them on trading costs.

7. Implications of Changing Legal and Regulatory Environments

The preceding discussion suggests that current mechanisms of corporate finance and control in all countries may simply not be viable in the long run. There is clearly some long-term convergence going on in the legal and regulatory environments of these

countries, and the focal point of this convergence is not the Japanese/German or US/UK system as it currently exists but an environment where financial institutions (including banks) are free to be active owners *and* where corporate securities markets are unhindered by regulatory and legal obstacles. What will be the primary mechanisms of corporate finance and control in such a system?

This is a difficult question to answer for a number of reasons. First, we do not have models among the developed industrialised countries we can look at where the legal and regulatory environment allows financial intermediaries to be active investors *and* allows firms easy access to securities markets. The closest thing to this model might arguably be the United States in the early 20th century. In the United States in the 1920s, firms had relatively free access to non-bank finance, securities markets were relatively active, and there were few restrictions on the ability of financial institutions to take equity and debt positions of a size to confer some control.[26] In this system, there might plausibly be some firms that would be able to solve their financing and governance problems better by using intermediated finance from intermediaries who also take active equity positions in the firm, and conversely, some that may solve their problems better by relying on securities markets for external finance and an active takeover market for corporate control. Just how and why this 'mix' occurs is a subject worthy of further investigation in the form of a more detailed analysis of this period in US financial history.

However, even if we had models that we could look at, they might not be very informative with regards to what would happen in different countries that adopted this freer regulatory environment with respect to corporate capital markets and institutional investors acting as active investors. This is because the starting-point of a system may be important. In particular, a convergence of regulatory environments may not imply a convergence of economic outcomes because institutional history matters. That is why continuing research on the institutional and regulatory differences between financial systems is likely to remain important.

26. See for example De Long (1990).

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Discussion

1. Mitsuhiro Fukao

Prowse's study compares the corporate finance and governance systems of major industrialised countries, including the United States, the United Kingdom, Japan, Germany, and Australia, and discusses their relative advantages and disadvantages. The author then examines the pressures for change in each system and their implications for the future evolution of financial systems.

The major points of Prowse's study are as follows:

- the large differences in corporate finance and governance systems among major countries mainly stem from differences in their legal and regulatory environments. In this context Prowse points out three key factors: the ability of financial institutions to play a role as active owners of firms, regulations and taxation of securities markets, and rules on disclosure requirements;
- the Australian corporate finance system is much closer to those in other Anglo-Saxon countries than to Japan and Germany;
- changes in technology, globalisation of financial markets, and the increasing importance of small firms and institutional investors in many economies have all contributed to pressures for change, but those pressures are much stronger on the Japanese and German systems than in Anglo-Saxon countries; and
- the changes analysed in the paper are moving the financial systems of the industrialised countries closer together. Japan and Germany are deregulating their securities markets and firms' access to non-bank sources of finance. At the same time, Anglo-Saxon countries, which have traditionally restricted the ability of financial institutions to behave as active owners of firms, are removing restrictions in that area.

Prowse's paper is a very ambitious one and he succeeds in conceptualising the major underlying currents for changes in corporate finance. I agree with his analysis of the general direction of change. Institutional investors are becoming more active as shareholders in many countries. The securities markets in Japan are gaining importance relative to bank-intermediated credit as a result of the removal of regulations. Large Japanese companies have shifted their source of funding from banks to securities markets and banks are trying to maintain their assets by increasing their lending to smaller companies. Disclosure requirements are gradually being standardised internationally and, sooner or later, the Japanese accounting system is likely to move towards the GAAP or IAS based system.

However, I have one reservation regarding Prowse's thesis on the convergence of corporate finance systems. In my view, there is an important complementarity between labour market and financial market institutional structures. In countries such as Japan and Germany, long-term employment plays an important role based on implicit contracts between employers and employees, a system that has both advantages and disadvantages.

While this system may allow Japanese and German firms to invest more in firm-specific human capital building, it would also make it more difficult for these economies to redeploy human resources from declining sectors to growing ones. But as long as a company wants to take advantage of long-term employment, it has to adopt a corporate structure that is compatible with this arrangement. The contract of long-term employment usually takes the form of an implicit contract because it is extremely difficult to write an explicit contract of long-term employment without adversely affecting the incentives of employees. Since the effectiveness of an implicit contract depends on the ability of management to give a credible commitment to employees, any firm which uses implicit contracts extensively has to have a financial structure that is consistent with this ability.

In Anglo-Saxon countries where the stock market functions as the market for corporate control, the management of a publicly listed company may suddenly be replaced with a new one due to a hostile takeover. As a result, the employees of the company cannot take the commitment of the existing management at its face value. For example, if the current management cannot ensure the continuity of commitment beyond its own tenure, employees would not invest their time and effort to acquire firm-specific skills. On the other hand, in Germany and Japan, the management of firms is better protected from the pressure of hostile takeovers. In Japan, for example, extensive cross shareholdings among firms, including financial institutions, make it very difficult to succeed in hostile takeovers.

This complementarity of labour and capital market structures is likely to continue. As long as the labour markets of Japan and Germany are fairly sticky, their capital markets, especially the market for corporate control, cannot be highly flexible. In my opinion, this is the fundamental reason for the absence of active markets for corporate control in Japan and Germany.

Finally, I would like to add two points on the corporate governance structure in Japan. First, in the Japanese corporate tax system, companies can avoid taxation on their dividend income under certain conditions. This relief from double taxation on corporate income is more generous in Japan than in the United States and may have facilitated the maintenance of a high level of cross shareholdings among companies. Second, the main customers of Japanese banks are now small companies because larger companies are shifting their sources of funding to securities markets. As a result, the equity stake held by banks is becoming less effective in affecting the management of customer firms. This is because banks cannot hold more than 5 per cent of the issued shares of Japanese companies, and this limit is rather small for closely held small companies.

2. General Discussion

There were two main themes of the discussion:

- the adequacy of finance for small business; and
- the relative performance of Anglo-Saxon financial systems compared with those based on the ‘universal banking’ model.

On the first issue, participants emphasised the importance of small businesses in the economy. One speaker compared the present period of economic development to the Industrial Revolution, when a wave of innovation had taken place on a similar scale. As had been the case then, small firms are currently playing a leading role in developing and applying new technology. Continuation of this process will require the availability of adequate finance.

Traditionally small businesses had relied mainly on banks for external finance but it was noted that a number of alternatives were emerging, giving some small businesses an expanded range of financing options. For example, several small to medium-sized Australian firms were now listing on NASDAQ in the United States. This was a market with a number of innovative features that seemed conducive to raising equity finance for smaller firms. Also noteworthy has been the rapid growth of initial public share offerings in Australia, particularly for mining ventures.

Notwithstanding these developments it was noted that non-bank sources of finance for small business were much less developed in Australia than in the United States. This was true with respect to both debt and equity finance. Particularly noteworthy was a lack of corporate bond markets in Australia. Some of the larger companies were able to issue corporate bonds on overseas markets but this vehicle was not really available to small firms. There was considerable discussion as to what might be the obstacles to further development of markets for small business finance in Australia.

Some participants emphasised that structural differences between the US and Australian economies contributed to the different levels of development in small-business finance. For example the US economy is much larger and inevitably had much bigger securities markets. Also significant was that utilities in the United States were often privately owned and were big issuers of debt securities, which then played an important role as benchmarks for the pricing of other private securities. It was suggested that a similar pattern might emerge in Australia if utilities are privatised, which could stimulate the growth of corporate bond markets more generally.

It was also suggested that financial institutions in Australia were not sufficiently innovative to take advantage of possibilities for developing small business finance. On the other hand, some participants thought that small business owners had unrealistic expectations. One comment was that they expected what was effectively equity finance at a debt return. In a similar vein it was suggested that small business needed to be educated as to what could be expected from financial markets. Their main need was for equity finance, and they needed to understand that the use of equity finance means giving up some control.

The second theme of discussion related to the performance of 'universal banking' systems, typified by Germany and Japan, in which banks have a much wider scope to provide equity finance to businesses than is the case in Anglo-Saxon systems. The important public policy issues were as follows.

- Which type of system gives the best results?
- Can it be assumed that market forces will ensure convergence to the best system?

It was commented that some recent studies have pointed to benefits of the Anglo-Saxon system in terms of generating higher rates of return on capital. Others argued, however,

that the evidence was not conclusive: there were numerous studies in the literature giving conflicting results. Several participants noted that there were tendencies for the different systems to converge. The internationalisation of financial markets meant that firms could increasingly tap international sources of finance where they were not available domestically. This in turn put pressure on the authorities to standardise disclosure requirements to ensure their companies were not disadvantaged in these markets. Notwithstanding these signs of convergence, the United States remained a big outlier in international terms, with much more developed small business finance markets than in other countries.

Banking in the 21st Century: The Transformation of an Industry

David T. Llewellyn

1. Introduction

A central theme of this paper is that, over the next decade and beyond, the banking industry (and financial systems in general) is likely to be subject to a major degree of structural and operational change. Some of the inherent comparative advantages possessed by banks (and which have sustained their dominant position) are being eroded. The pressures impinging on banks have the potential to transform the structure of the industry, the type of business undertaken by banks, the type and range of institutions conducting banking business, and the way that traditional banking business is undertaken. They are also likely to affect the internal structures of the banking firm as banks move towards a structure of *contract banking.*

The objective of the paper is to take an overall view of the banking industry, to pose a series of questions and in particular to focus on two central issues:

- the long run, secular pressures impinging on the industry; and
- the way these pressures may be resolved, in three dimensions – the changing structure of the banking industry, the business operations of banks, and the structure of the banking firm.

2. The Context

The reason why the changes could be so substantial is that there is a powerful combination of pressures operating on the industry, and some of these pressures challenge the very core of banking business: information and delivery. A dominant pressure derives from new technology with respect to information, trading and delivery of financial services. Industrial history shows that the development of new technology can have a major impact on any industry and has often done so. This is most especially the case when technology affects the very core of the business – in the case of banking: information, processing and delivery. In this respect, banking is no different from other industries. It is largely technology, and what follows from it, that will transform the banking and financial services industries.

In many countries, financial systems in general, and the banking sector in particular, are passing through a period of substantial structural change under the combined and inter-related pressures of: internal competition; declining entry barriers; changes in regulation; new information, trading and delivery technology; global competitive pressures; and fast-evolving strategic objectives of banks themselves and their existing and potential competitors. A series of universal trends have become evident all of which have major implications for the competitiveness of banks. The impact of these forces has varied in timing and degree between countries though many of the secular pressures on

the industry are universal. A central theme of the paper is that global pressures are likely to dominate country-specific factors in the future evolution of national banking systems.

Banks around the world face formidable challenges: they are losing some of their past monopolies and comparative advantages which have underpinned their dominant position in the financial system. In particular, as entry barriers into banking services are eroded, banks are increasingly facing competition from a wider range of actual and potential suppliers of banking services: the capital markets, money markets, non-banking financial institutions, and also 'non-financial banking institutions'. In addition, the development of electronic banking has in some countries enabled foreign banks to enter hitherto relatively closed domestic retail banking markets.

In some cases large corporate customers have been internalising some of their banking operations through 'in-house banks'. In many countries banks are shedding staff and closing branches with the introduction of new technology and alternative delivery systems. At the same time, squeezed by inroads into their traditional businesses and sharper competition, banks are expanding into new areas: insurance, life assurance, unit trusts and other services.

These trends are emerging in the context of major structural changes in financial systems: the relative growth of financial markets; the increasing institutionalisation of saving and investment business; the growing role of institutions in other functions of the financial system (see Davis in this volume); the rise in the role of institutional funds managers in the financial system; diversification of financial firms and the steady erosion of traditional distinctions between different types of financial institution; the entry of new types of supplier of financial services; a substantial growth in the variety of new and complex financial instruments; and the globalisation of financial markets.

3. Are Banks in Decline?

In some respects the role of banks in the financial system is declining and the value of the banking franchise has been eroded. A substantial literature (mainly related to the banking system in the United States) discusses these propositions. The usual evidence cited includes, from the United States:

- the declining share of bank loans in total corporate sector borrowing;
- the shift towards corporate sector borrowing in the commercial paper market (the immediate competitor to banks);
- the loss of corporate lending business to finance companies;
- the declining share of personal sector savings flows directed at banks; and
- the spectacular growth of money market mutual funds.

More general evidence includes:

- the trend towards securitisation in some national and international markets;
- the entry of non-bank financial institutions into traditional banking markets;
- the emergence of a new set of non-financial companies in the markets for retail and wholesale financial services;
- non-banks offering payments facilities; and
- the development of in-house company banks.

Banks are no longer the exclusive suppliers of traditional banking services. An extreme position has been put by Edwards (1993):

> 'An implication of a conclusion that banks have lost much if not all of their specialness is that banks ... no longer have a natural competitive advantage ... If our financial markets and institutions were being created for the first time in the 1990s banks might not be among the surviving institutions.'

The debate about banks possibly being in secular decline is more evident in the United States than in other countries. In some European countries, for instance, banks have been more protected through a legacy of regulation which has restricted competition; the capital market is less developed than in the United States, and entry barriers have been more powerful. Bisignano (1990) notes a more tolerant attitude in some European countries towards cartels and regulation which has restricted competition: 'Informal cartel arrangements, in some cases promoted by government regulations, provided stability at the cost of some inefficiency, borne largely by the retail banking customer'. In Japan, banks have to some extent been protected by the close relationship they hold with their large corporate customers.

However, regulatory approaches are changing and universally regulation has become less protective of banks as public policy priorities have shifted towards enhancing efficiency through competition. Thus, while pressures may have been more pronounced in the US banking system, Browne (1992) cites international evidence that banks are losing market share in lending business. Further, the pressures towards something of a secular decline of banks may have been concealed during the 1980s due to the stock-adjustment impact of deregulation (Benink and Llewellyn 1994). As noted also by Tease and Wilkinson (1993): 'One can characterise the financial deregulation of the 1980s as having both income – from the expansion in demand for financial services – and substitution – from heightened competition – effects on banks'.

However, great care is needed when translating the banks' loss of share in lending business (particularly to the corporate sector) to the more general notion that banking as an industry, and banks as firms, are in secular decline. The two are synonymous only to the extent that:

- the role of banks in financial intermediation is measured in terms of the volume of assets on the balance sheet; and
- banks do not compensate for the loss of some business by diversifying into other areas.

A central theme to be developed in later sections is that banks have certain core competencies or market advantages (for example, information, risk analysis, and so on) and that these can be used in a variety of different ways amongst which making loans and holding them as assets on the balance sheet is only one. The key to developing effective competitive strategies lies in identifying core competencies, making judgments about *how* they can be used, and in selecting the markets in which they can be exploited.

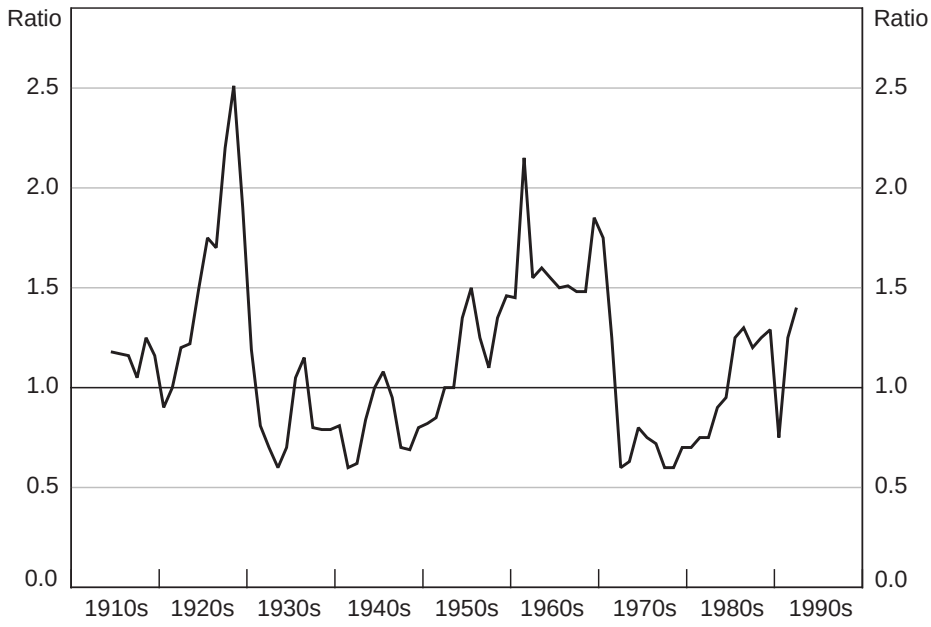
The value added by banks (the ultimate measure of their role in the financial system) is wider than the measure of bank assets. A later section argues that bank loans are in truth a bundled collection of *processes* (origination, risk analysis, administration, and so on) and that banks may supply these component services without holding the ultimate asset on the balance sheet. Thus a different perspective emerges if banks are viewed as

suppliers of financial services (including the component processes of loans) rather than as institutions which hold assets on the balance sheet. Focus on the latter exaggerates the declining role of banks.

In fact, even in the United States, data indicate that there is no clear evidence of banks being in secular decline when the focus is value-added, and when allowance is made for diversification into new business, much of which is off the balance sheet. Boyd and Gertler (1994) make adjustments to balance-sheet data to account for the different risk characteristics of different types of bank assets, and apply national income accounts data to the measurement of value added by banks. They conclude that there is no unambiguous evidence that banks are in decline in the United States. Similar conclusions are found in Kaufman and Mote (1994).

In a different way, Saunders (1996) seeks evidence for secular decline in terms of the stock market valuation of banks by observing the ratio of the market value (MVE) to book value (BVE) of the equity capital of banks (Figure 1). If the ratio exceeds unity and is rising, this indicates that the market's judgment is that profitability will be growing. This seems to have been the case through the 1980s and 1990s. However, this result is somewhat ambiguous because it reflects the market valuation after a series of adjustments have been made in the banking industry: including a massive reduction in the number of banks; considerable consolidation of the branch network and infrastructure; increased securitisation of assets; and diversification. Stock market data may simply reflect that banks have successfully *adapted* to secular decline pressures in their traditional business and do not deny that the pressures are substantial.

Figure 1: US Bank Average Ratio of Market Value to Book Value



Source: Saunders (1996).

4. The Banking Firm

Two essential characteristics distinguish the banking firm. In the first place, they issue money-certain liabilities on one side of the balance sheet which are used to fund money-uncertain and non-marketable assets on the other side. The key characteristic of a bank is its role in asset transformation. Secondly, bank liabilities are highly liquid and can be withdrawn on demand. This creates a potential vulnerability in that, if there is a bank run, a solvent bank can be made insolvent because its assets are not marketable. This in turn is because the value of a bank's assets is based on inside information possessed by the bank which cannot credibly be transferred to a secondary market.

As with any firms, banks exist for one of two generic reasons:

- they may have a particular expertise enabling them to do what other firms cannot do – they possess certain monopoly powers; and
- they do what technically can be done by others but they possess certain comparative advantages which give them an advantage in the market place.

It follows that any firm becomes potentially vulnerable if it loses a monopoly power (that is, others become able to do what was previously the exclusive preserve of the firm(s) in question), or its comparative advantages are eroded. In some areas of business, banks have historically had monopoly powers and comparative advantages. However, both are now under question in that there is now virtually nothing a bank does which could not be done by markets, non-bank financial firms, or non-financial banking firms.

In the context of the thesis that banks may be in secular decline, two perspectives immediately arise. Firstly, the thesis relates only to the traditional financial intermediation role and if this is in secular decline it does not necessarily mean that banks as firms are in decline, as other aspects of their business may rise in compensation: banks may transform the nature of their business and/or conduct the same business in different ways. Secondly, the question arises as to whether the factors and advantages that give rise to the financial intermediation role of banks can also be of advantage in non-intermediation business. Put another way, banks may have certain and enduring core competencies that are emphasised in the existence literature, focused on the financial intermediation role (information and monitoring advantages and so on) but which can also be applied in other business areas.

4.1 The Vulnerability of Banks

Banks could be said to be potentially or actually vulnerable for six general reasons:

- monopoly powers are being eroded to the extent that alternative suppliers of traditional banking services have emerged;
- banks may be losing some of their comparative advantages in the provision of their traditional services;
- the supply price of financial intermediation may have risen and the lending margin widened;
- alternatively, the costs of alternative suppliers of intermediation services have fallen;

- consumers may value the services of banks less, or their preferences may switch to alternative suppliers; and
- some of the factors that give rise to the existence of banks may themselves have become less powerful – the factors that account for the rationale of banks may have become weaker. This last point is considered in the next section.

4.1.1 Monopoly erosion

In many ways, banks have lost some of their traditional monopolies. In particular, the development of technology has lowered entry barriers as has the process of deregulation. The process of *deconstruction* (considered in further detail below) also means that new suppliers can offer competition to banks because they are no longer required to provide the full range of banking services, or to undertake all of the processes involved in supplying banking services. In addition, consumers now have more information about a wider range of alternatives to bank deposits for holding liquid funds. The development of money market mutual funds, for instance, which sometimes incorporate payments facilities, also challenges the traditional monopoly of banks in the supply of transactions balances.

4.1.2 Comparative advantage erosion

New technology and declining entry barriers have also challenged some of the traditional comparative advantages possessed by banks. In particular, disclosure laws have eroded some of the information advantages traditionally held by banks and the development of unit trusts and money market mutual funds also allow consumers to have diversified portfolios even with relatively small investments. Moreover, the development of credit scoring techniques means that the credit standing of borrowers can be assessed without the necessity of the information derived through an institution maintaining a borrower's current account.

4.1.3 Own margin

Clearly, if the banks' supply price of financial intermediation rises (as measured by the interest margin) banks may become relatively less competitive. This may be because they are locked into a traditional cost structure due partly to having invested substantially in a branch network which is no longer the only means of delivering financial services. At the same time, the cost of capital has in general risen for banks partly because the risk profile of banks has tended to deteriorate – due to competitive pressures, for instance. Further, competitive pressures have eroded the ability of banks to engage in cross-subsidy pricing, which in turn implies that previously subsidised parts of the business are less viable to the extent that banks are forced through competition to lower the price of previously subsidising components of the business.

For similar reasons, competition has eroded the endowment profits to the extent that competition is forcing banks to pay a rate of interest on a higher proportion of deposits and the rate of interest paid has moved closer to market levels. The power of competition

is evident in the pressure on banks throughout the world to cut costs, by reducing the numbers employed and by closing branches. In other words, banks seem to be under considerable pressure to lower the supply price of financial intermediation and to narrow the lending margin.

4.1.4 Lower costs of alternative suppliers

For the same reason, if the costs of alternative suppliers of traditional banking services have fallen relative to those of banks, banks again become vulnerable. In particular, financial innovation and the power of new technologies have tended to increase the relative competitiveness of the capital market *vis-à-vis* banks, and new delivery technologies have lowered the cost of alternative suppliers of financial services to the extent that they no longer need to develop a full branch network. Further, to the extent that regulatory costs imposed on banks are higher than those imposed on alternative suppliers of some of the services they provided, regulation has the effect of increasing the relative competitiveness of non-bank suppliers of traditional banking services.

4.1.5 Valuation of services

If consumers value the services offered by banks less than in the past, or their preferences shift to alternative suppliers, banks again become vulnerable. It may be, for instance, that the recent poor performance of banks in many countries have eroded some of the reputation advantages traditionally possessed by banks. Borrowers may also choose to have a more diversified structure of debt and to become less dependent on banks for the supply of credit. As financial markets have broadened and deepened, markets increasingly offer a wider choice of facilities than has been the case in the past. This is particularly powerful for corporate borrowers to the extent that competitive pressures in capital markets have become global in nature.

4.2 Existence of Banks

We may also consider the extent to which some of the traditional factors that give rise to the existence of banks may have become less powerful. The traditional theory of the banking firm (the ‘existence’ literature) emphasises eight elements:

- information issues;
- imperfect markets;
- delegated monitoring;
- control;
- the insurance role of banks;
- commitment theories;
- regulatory subsidies; and
- the special role of banks in the payments system.

A number of these are considered below.

4.2.1 Information advantages

Several theoretical approaches to the existence of the banking firm focus upon various information problems, and how banks are able to handle them more efficiently than the capital market and bilateral transactions between savers and borrowers. The information rationale for financial intermediation is that banks can solve *ex ante* (adverse selection) and *ex post* (moral hazard) contracting problems more efficiently than can be done either directly between ultimate borrowers and lenders, or through markets. Several factors are operating in the direction of eroding some of the banks' traditional information advantages *vis-à-vis* alternative suppliers of intermediation services. Firstly, technological developments have reduced the cost of acquiring and accessing information for alternative suppliers. Secondly, rating agencies have developed both to make information more widely available and accessible and to assess information on behalf of potential investors. Thirdly, disclosure laws (most especially in the United States and the United Kingdom) have been extended with the effect that companies now disclose more information. This means that, in some cases, information which was previously a private advantage to the bank has become more of a 'public good'. In each of these ways banks' information advantages have been eroded.

The development of information technology also increases the availability and access to information to alternative institutions other than banks. There is also something of a vicious or virtuous circle: as capital markets become more efficient, firms have a greater incentive to disclose more information in order to get access to capital market facilities. In turn, this increased supply of information also enables the capital market to function more effectively and act as a greater competitor to banks in their traditional lending business. As noted by Bisignano (1990): 'The comparative advantage that banks have in obtaining, and assessing, the creditworthiness of borrowers and of resolving the asymmetric information problems, appears to be declining, primarily in those countries with increasingly sophisticated capital markets'. In various ways, therefore, banks are losing some of their traditional information advantages that have been the core of their comparative advantage.

4.2.2 Imperfect markets

One general theory of the banking firm is that they exist because financial markets are imperfect and incomplete. However, the process of 'spectrum filling' (approaching the Arrow-Debreu state) reduces the number and extent of discontinuities in the range of market instruments. Borrowers now have a wider range of capital market instruments. Van Horne (1985) argues that securitisation and financial innovation lead to complete markets. In addition, new information and trading technology has reduced information and transaction costs in capital markets relative to bank lending costs (Karekan 1987). Technology has also reduced transactions costs in capital markets and, as already noted, has had the effect of reducing information costs and making information more publicly available for the capital markets. In general, the more complete are contracts, the easier they are to securitise, and the process of financial innovation generally has this effect: it enables more complete contracts to be constructed. Overall, market pressures have been eroding the market imperfections and incompleteness which have given rise to the banks' comparative advantage over markets (Eisenbeis 1990).

4.2.3 Delegated monitoring

A major theory of the banking firm is that of delegated monitoring: ultimate lenders choose to delegate monitoring activity to banks. However, along with the increased availability and lower cost of public information, the development of rating agencies also challenges the traditional role of banks as delegated monitors. As noted by Mayer (1994), monitoring can become a fee-based activity rather than an integral part of the bank loan process.

4.2.4 Control theory

Allied to monitoring is the related concept of control. A bank is in a better position to solve moral hazard problems on loan transactions through superior control mechanisms. It is more able to influence control over the behaviour of borrowers than can individuals and (sometimes) the capital market. Firstly, it is able to devise and enforce incentive-compatible contracts by, for instance, demanding an equity stake in the company (common in some countries), by setting conditions on the loan, and by establishing performance clauses for different tranches of a loan. Secondly, it can enforce contracts (and signal that it will always do so) which dispersed lenders often find uneconomic to do. Thirdly, the bank may demand a management stake in the company. Fourthly, it is able to demand collateral which enhances the incentive for the borrower to behave in the interests of the bank. In some ways a bank is able to act as a proxy shareholder even without an equity stake. Widely dispersed shareholdings may be an inefficient way of enforcing contracts. Thus the distinction between debt and equity in the role of control should not be drawn too rigidly. Overall, banks may have lower control and enforcement costs. However, as shareholdings in companies become more concentrated in the hands of a smaller number of large institutional shareholders, they in turn are able to exercise control more effectively. This again challenges one of the banks' traditional comparative advantages.

4.2.5 Insurance theory

Banks also implicitly provide insurance services that insurance companies are unable to provide because the risks do not meet the standard characteristics of explicitly insurable risks: losses being observable by all (no asymmetric information); the absence of moral hazard inducing the insured to behave in a manner that is prejudicial to the interests of the insurer; and the diversifiability of risks.

Lenders face the risk that they may need funds before the maturity of an imperfectly marketable loan. Liquidity needs are unexpected but not highly correlated between transactors. By pooling risks (having a large number of depositors each with uncertain future liquidity needs) the bank is able to predict its own requirement to meet its depositors' liquidity needs. The greater the number of depositors the more predictable is the liquidity requirement and the bank is able to minimise its own holdings of liquid assets to meet this demand. Thus by pooling risks the bank is able to provide liquidity insurance to risk-averse depositors facing private liquidity risks. It is this that enables banks to hold non-marketable assets. As put by Dowd (1996): 'The bank thus transforms imperfectly marketable, longer term assets into fully marketable, short-term liabilities,

and in the process provides its debt-holders with insurance against the contingency that they will be caught short by an unexpected liquidity shock'. The development of unit trusts and money market mutual funds has the effect of eroding the banks' traditional advantage as a supplier of liquidity insurance. Consumers who traditionally maintain liquidity in banks are now able to earn a higher rate of return in money market funds and at the same time secure the advantages of liquidity. This is especially the case in those funds which also offer payments facilities.

4.2.6 Regulatory subsidy

A further strand of analysis focuses not upon intrinsic advantages of banks but upon the implicit subsidies they receive through various forms of protective regulation; regulation which limits competition, deposit insurance, implicit lender-of-last-resort facilities and so on. Regulation may accentuate whatever economic advantages banks may possess and may create economic rents for them. There is a powerful strand in the history of regulation based upon the alleged dangers of 'excessive competition' (Llewellyn 1986). Regulation frequently has the effect of limiting competitive pressures and sustaining restrictive practices and cartels. However, the general trend of deregulation means that these protections have been gradually eroded. To the extent that regulation previously sustained excess capacity, the process of deregulation is likely to reveal the extent of such overcapacity. An industrial structure built up in a protected and uncompetitive environment is likely to be unsustainable in more competitive market conditions. In general, regulation has become less protective of the banking industry as public policy priorities have increasingly been given to enhancing competition and efficiency in the financial system.

4.2.7 Payments advantage

Some theories of the banking firm give emphasis to the advantage that banks have because they are an integral part of the payments system. However, banks are losing their monopolies in this sector of the financial system. The development of money market mutual funds and unit trusts with payments facilities offers a challenge to the banks' traditional monopoly in this area. Similarly, the development of credit cards and debit cards erodes this same monopoly, and an increasing proportion of transactions can now be executed without the need for even a temporary stock of funds in a traditional bank account. The development of electronic barter has enormous potential to undermine the banks' traditional monopoly in the payments system. In general, there is a challenge to banks based on a challenge to two traditional assumptions:

- that transactions require money; and
- that only banks can issue money.

Money is a convenient facility as it means that transactors do not need information about the standing of the payer, as would be the case if payments were made through the transfer of other assets. However, technology also facilitates the verification of the standing of transactors: a particular example is the development of smart cards. Information can now be easily stored in such cards which in turn can be issued by a variety of firms other than banks.

4.3 Assessment

In various ways, therefore, the related pressures of competition, deregulation, financial innovation and technology have eroded some of the comparative advantages of banks in their traditional financial intermediation business. In addition, new information and trading technology has reduced information and transactions costs in capital markets relative to bank lending costs (Kareken 1987). Financial innovation and technology (together with the development of rating agencies) are eroding transactions and information costs and market imperfections which have been the basis of banks' efficiency and comparative advantage over capital markets. Van Der Hoeven (1993) also notes that the development of financial markets has offered appreciable improvements in the form of better price formation and versatile risk management.

Regulation to some extent exaggerated the comparative advantages possessed by banks because it created something of a protected market environment. In effect, banks in some countries are losing their predominant role as deposit-takers and lenders to companies. Market pressures are eroding the market imperfections which gave rise to the banks' comparative advantage over intermediation in capital markets (Eisenbeis 1990). Financial innovation and technology are also eroding transactions and information costs and market imperfections which are the basis of financial institutions' efficiency over direct credit markets. In addition, banks' own cost structures (including the cost of capital) may also have eroded some of their comparative advantages. The recent loan-loss experience of banks in many countries suggest that banks are also subject to problems associated with asymmetric information and inefficient monitoring which some models of the banking firm highlight as the banks' potential major comparative advantage.

5. Some Basic Distinctions and Questions

Banks are no longer the monopoly supplier of banking services, but neither are they restricted exclusively to traditional banking business. It is therefore necessary, when considering strategic issues in banking, to make three fundamental distinctions:

- that between the demand for traditional banking services and the position of banks in supplying those services;
- that between these traditional services and the actual business conducted by banks; and
- the fundamental distinction between *industries* and *markets*.

An instructive analogy is found with the history of the stage-coach industry. In the 1860s it would have been correct to predict that the demand for travel services would rise exponentially: the *market* for travel was expanding. But it would have been a mistake to assume that stage coaches (an industry) would continue to be a dominant supplier of the service. Stage-coach companies disappeared not because the demand for travel declined but because new methods of providing travel services emerged. Conversely, it would have been a mistake to assume that stage-coach companies could only provide stage-coach or even travel services. As Wells Fargo demonstrated, the option of redefining the business in a fundamental way was a viable possibility. Indeed, Wells Fargo became most successful and profitable at the time that its traditional business was in

decline. The company took a radical, strategic view of the future and was prepared to fundamentally change the nature of its business.

Companies in any industry can become vulnerable in three circumstances, when:

- consumer preferences for products and services change;
- demand shifts away from traditional firms as entry barriers decline and new suppliers become available; or
- consumer preferences change as alternative ways of satisfying demand emerge.

Although the demand for banking services will continue to rise (and probably relative to incomes), this does not in itself mean that institutions called 'banks' will automatically be the suppliers of these services. However, neither does it follow that banks in the future will be conducting only the traditional banking business they have conducted in the past.

This leads to the third distinction noted above: between industries and markets. Stage-coach firms declined because they focused on a particular *product* (the stage coach form of travel) rather than the *market* for travel services. They viewed themselves as being in the stage-coach business rather than the travel business: they were product rather than market or customer orientated. Failure to distinguish between *industry* and *markets* can be a major error in strategic planning in any firm.

The essential skill in strategic planning in a changing market, technological and competitive environment is two-fold:

- to identify the firm's core competencies (how it can add value); and
- to identify which *markets* these core competencies can serve with comparative advantage.

In the United Kingdom, for instance, the retail store Marks & Spencer identified three core competencies as reputation, retailing, and a delivery capacity (its branch network) and judged (successfully) that these could be used to serve markets in a range of retail financial services such as loans and unit trusts. In other words, Marks & Spencer made a decision to use its core competencies in an entirely different market from its traditional business.

5.1 Five Basic Questions

With this preliminary background, five questions are posed.

- Are banks necessary for banking?
- Is banking necessary for banks?
- Is banking a declining industry?
- Are banks declining firms?
- Will the traditional integrated structure of the banking firm survive?

5.1.1 Are banks necessary for banking?

It would appear that the tentative answer to this is 'No' in that there is now little that banks do that could not equally be done by markets, non-bank financial institutions or

non-financial banking institutions. As entry barriers are eroded a wider range of competitors has emerged: department stores, companies such as GEC, Virgin Atlantic, a range of 'industrial banks', unit trusts and money market funds, telephone companies and so on. Alternative firms can and do provide some traditional banking services. In the United Kingdom, some life assurance companies have recently obtained banking licences and plan to offer a range of deposit and loan services. For instance, the Scottish Widows life assurance mutual offers four savings deposit accounts (including an instant access account). Similarly, the Prudential Corporation plans to offer a branchless deposit and mortgage lending operation by the end of 1996. Also in the United Kingdom, Marks & Spencer has a banking licence and sells a range of financial services and products and also makes general loans to retail customers. Tesco (the retail store) offers limited banking facilities and offers a rate of interest on credit balances substantially higher than banks. The Virgin Group (which is an airline and entertainments retailer) sells a range of financial products and also has declared ambitions to offer some banking services.

Although some traditional banking markets are being invaded by new types of banking firms, in general the newcomers or non-traditional banking firms have tended to concentrate on niche markets and have not threatened the basic intermediation and payments functions offered by banks.

The devising of viable competitive strategies is particularly challenging when it is not clear or certain who *future* competitors will be. The economics and competitive strategies of new entrants are difficult to fathom simply because they are different from incumbents. Competitive challenges also arise when new entrants are competing in a business which is subsidiary to their mainstream but which is a core business of incumbents. The latter consideration may have the effect of raising the contestability of a business in that, because it is not a core business of a new entrant, exit barriers to them may be low.

The implied increase in contestability of banking markets poses serious competitive threats to banks. New firms may enter banking markets but also have the capacity to subsequently exit the market at low cost. Such 'hit and run' competition offers permanently higher competition to incumbents even though the population of competitors may be constantly changing. In other words, low exit barriers for newcomers pose as substantial a competitive threat as do low entry barriers. Thus entry barriers into some banking services have declined and these are combined with low exit barriers to new entrants but high exit barriers for banks themselves. A recent example is the decision of AT&T in the United States to sell its leasing and financial business. As put by the *Financial Times* (5 June 1996): 'this ends one of the most successful forays into finance by a US industrial group'.

5.1.2 Is banking necessary for banks?

Again the answer seems to be 'No' except in the purely tautological sense that 'banking' might be defined as anything that banks do. In principle, banks need not be restricted to 'banking' business any more than Wells Fargo was restricted to stage coaching. Just as insurance companies have diversified into banking, so banks have diversified into insurance. Overall, the traditional distinctions between different types of

financial institution have been eroding rapidly and substantially, and even to the extent that it is debatable whether, in a decade's time, there will be clearly recognisable institutions called 'insurance companies', 'banks' and so on.

The question arises as to whether there are any *economic* or *regulatory* limits on the extent to which banks can diversify from their traditional financial business. The dominant trend is that banks have diversified considerably into a wide range of financial services. It remains to be seen whether, on any significant scale, they will diversify into non-financial business. The question also arises as to whether there must be a 'core' banking business to support a wide range of other financial and even non-financial services.

5.1.3 Is banking a declining industry?

A major question is whether, to any significant extent, banking could be said to be a declining industry in that the services provided by banks can be supplied more economically by institutions other than 'banks' and through markets. Historically, industries in some countries have declined because of various factors operating individually or in combination:

- the development of external competition and declining entry barriers (often due to new technology);
- the development of superior technology outside the traditional industry;
- the removal of protective regulation or subsidies;
- a switch in consumer demand away from traditional suppliers; and
- the emergence of alternative ways of demand being satisfied.

Some of these factors which have caused other industries to decline are now recognisable in banking. In three areas in particular, it could be said that banking is to some (albeit limited) extent a declining industry: on-balance sheet, large corporate sector business (where the capital market has become a powerful competitor); standard retail loans (where a process of *secondary securitisation* has developed, for example, with mortgages); and in the payments system.

5.1.4 Are banks declining firms?

This is not the same question as the last. A traditional industry can be in decline but not the firms within it. It clearly depends upon what strategic responses are made and the extent to which existing firms within an industry are able to redefine the nature of their business by diversifying away from areas where traditional advantages are being eroded.

5.1.5 Will the traditional bank structure survive?

The traditional banking firm is vertically integrated in that it itself manufactures and provides the products and services it offers to customers. The concept of *contract banking* challenges this traditional structure. The trend is likely to be in the direction of subcontracting banking services and processes to external specialist companies with the bank being a manager of a set of internal and external contracts. In effect, a bank becomes

a broker between the customer and a set of outside contractors whose activities make up the range of banking products and services.

6. Driving Forces

Over the next decade, banking as an industry, and banks as firms, are likely to face substantial structural change. The business of banking, the operation of the banking firm, and the structure of the industry could change radically. This is because of the combination of pressures that the industry is likely to face. It is the *combination* of pressures that is unique and which will transform the banking industry over the next decade. The dominant pressures may be summarised as follows:

- competitive pressures are increasing and coming from a wider range of competitors;
- the finance industry is becoming increasingly globalised;
- entry barriers into banking are declining, and declining faster than exit barriers;
- the potential for *deconstruction* (the unbundling of products and processes with each being supplied separately) allows 'cherry-picking' and lowers entry barriers, as new entrants are not forced to offer the whole service or product;
- competition is operating asymmetrically – banking can be invaded from outside more easily than banks can diversify out of finance;
- changes in regulation and a process of deregulation in particular are continuing;
- information, trading and delivery technology is transforming the industry;
- therefore, a major problem of *excess capacity* is evident, with respect to the number of firms, infrastructure, capital, and technology; and
- cross-subsidies are being eroded.

The evolution of national banking systems and the business of banks in particular countries is always and everywhere influenced by a combination of *country-specific* and *global* pressures. In the years ahead, the relative role of these two sets of forces is likely to change with global pressures becoming more decisive than country-specific factors. This might suggest that differences between national banking systems could become less pronounced.

6.1 Competition

The overwhelming pressure will continue to be increased competition. Contestability in banking has also been raised. Competition is not a new phenomenon in banking. However, three particular aspects to the way competition is evolving give it a new dimension:

- technology is eroding entry barriers and hence banks face pressures from a wider and more diverse range of competitors;
- as a result of deregulation, the regulatory environment has become less protective of the banking industry; and
- competition has increasingly become global in nature.

Banks will face more intense competition on both sides of the balance sheet: for deposits and loans. On the liabilities side, banks in many countries face increased competition from unit trusts, money market funds and life assurance companies. In many countries (the United Kingdom in particular) the proportion of personal sector assets in the form of liquid deposits is decreasing while that in illiquid, longer-term insurance and investment products is rising. In the United Kingdom some major life assurance companies have recently secured banking licenses in order to compete for traditional deposits.

There is now a wider range of substitutes for bank deposits. Browne (1992) notes that 'financial innovation has now provided savers with greater flexibility in managing their portfolios by enhancing the available instrument choice, and by making existing instruments more accessible'. Consumers also have more choice and are able to accept some asymmetric information risks in return for a higher interest rate whereas historically they have, to some extent, been locked in to bank deposits. Financial innovation, and the creation of new instruments, also enable risks to be hedged. Put another way, part of the return to intermediation has now been appropriated directly by the saver rather than by deposit-taking intermediaries.

It is partly because of these trends that banks in some countries now offer unit trust facilities within the group so that deposits lost by the bank are not lost to the group. In effect, an original process of disintermediation (depositors at banks switching to markets) has been followed by a countervailing process of *re*-intermediation as banks have come themselves to offer market instruments for investors. On the assets side, competition for loan business comes from capital and money markets and other institutions.

6.2 Globalisation

Competition has also increasingly become global in nature, in three respects:

- some customer groups have global financing options and are able to arbitrage between domestic, foreign, and international banks and capital markets;
- banks are not restricted to business within their own country; and
- as a result of regulatory entry barriers having declined, it has become easier for banks to locate in foreign countries.

Banks and financial markets face increasing competitive pressures emanating from a global financial system: the geographical domain in which competition operates has widened. National banking systems are increasingly in competition with each other as national financial systems effectively become subsets of a global system. This has a tendency to equalise the price of some banking services, to compete away relative inefficiencies and monopoly profits that might exist between different national systems, and to some extent to reduce the extent of differences between national systems.

6.3 Entry Barriers

Competitive pressures intensify most powerfully when competition develops from outside the traditional industry as entry barriers decline. This is partly because new

entrants often have different cost structures, are less bound by fixed costs, and are often more prepared to challenge traditional industry practices. Both *innocent* (for example, scale economies) and *strategic* (for example, cartels) entry barriers into banking will continue to decline. Technology is eroding some traditional *innocent* entry barriers (such as scale factors and the requirement for a branch network for the delivery of financial services), and competition and changes in regulation are eroding some traditional *strategic* entry barriers (such as restrictive practices, cartels and anti-competitive mechanisms).

6.4 Deconstruction

A further feature reducing entry barriers is the process of *deconstruction*. This involves the process of decomposing services into their component parts which may then be provided separately. These need not be undertaken by the same firm and if, for any reason, different firms have different comparative advantages in different parts of the process, the logical development is for each process to be supplied separately by the firm which has a comparative advantage in doing so. Firms which have an efficient capability for originating and administering loans (for example, because they have a branch network) may not necessarily be the most efficient at holding assets on the balance sheet. Similarly, in the United Kingdom and United States, credit card companies are subcontracting the administration of their business to outside organisations.

Another example is the process of *securitisation* of bank loans: a bank makes a loan, temporarily holds it on the balance sheet, but subsequently securitises it on the capital market. Equally, in some cases the monitoring of borrowers may be undertaken by rating agencies: monitoring does not have to be part of the credit process although this usually is the case with bank loans. As noted by Joss (in this volume), banks are increasingly looking at core elements of their business on a stand-alone basis rather than as necessarily part of an integrated business.

This process of *deconstruction* (or unbundling) effectively lowers entry barriers as it means that new organisations are able to enter a market because they need not be involved with the whole process: they are able to concentrate on that part of a business where they have a comparative advantage. New entrants often target niche markets. This is also related to the question of economies of scale. The major economies of scale in banking relate not to *institutions* but to *processes* and *functions*. In general, specialist providers tend to be more efficient than others.

One of the major pressures in the banking industry in the years ahead will be the deconstruction process where each institution concentrates on that part of the business and those processes in which it has a comparative and competitive advantage. In a similar way, developments in the application of options and asset pricing theory, securitisation, and the evolution of contingent claims and guarantees, have also led to a *deconstruction* of the services traditionally provided by banks into their constituent components. Some of these services can now feasibly be provided more efficiently in the capital market. For instance, the general development of 'pass-through' securities and securitisation in general has resulted in a segmentation of the origination, servicing, credit-evolution, and pricing of credit risk from the credit intermediation function.

6.5 Asymmetric Competition

Competition has a powerful impact on any industry. However, to some extent, competition works asymmetrically in the finance industry: developments in technology, and the general erosion of entry barriers into banking, mean that it is easier for non-bank financial institutions and non-financial institutions to diversify into banking than it is for banks to diversify out of financial services. Thus, while in the United Kingdom, Marks & Spencer (a retail store) offers a range of financial services (including loans), Barclays Bank does not sell men's and women's clothes and frozen food. Similarly, a subsidiary of British Petroleum has a banking licence but National Westminster Bank does not drill for oil.

As entry and regulatory barriers are eroded banks are likely to face competition from a wider range of competitors. Several examples in many countries can be cited where new entrants have been able to compete with banks in supplying some traditional banking services. In-house banks such as Volvo in Sweden, British Petroleum in the United Kingdom, and Renault in France, have all been able to internalise some of their banking operations and, to some extent, provide a limited range of banking services to others. Some large corporate customers have become more creditworthy, and have a higher credit rating, than their bankers, in which case it is not surprising that they both displace banks and to some extent offer banking services to others. Two of the largest corporate lenders in the United States are the General Electric Company and the Ford Motor Company. In some countries, car manufacturers have acquired their own banks for the provision of credit to sales agents. In the United States, industrial and transportation companies, manufacturers and retailers have acquired insurance companies, finance companies and leasing operations; General Motors and IBM offer short-term money market facilities and commercial loans to companies. The largest issuer of credit cards in the United States is a brokerage house, Dean Witter.

And yet to date, the extent to which banks have diversified outside of finance is very limited. This is partly due to regulation which often limits the ability of banks to diversify out of finance more than the ability of non-financial companies to diversify into banking and financial services. The significance of the partly asymmetric nature of competition is that banks are impeded in their strategy of extending the scope of the banking franchise in response to its declining value in traditional markets and business areas.

6.6 Regulation

Almost always and everywhere regulation has the potential to create and sustain *economic rents* and protection. This protection frequently leads to increased costs, buoyant profits, and excess capacity. Historically, regulation in banking has been protective and has often had the effect of limiting balance-sheet growth and the allowable range of business that banks can undertake. It has also had the effect of limiting competition on the premise that 'excessive competition' in banking can lead to increased risk and potential systemic hazards. Regulation in banking has often condoned restrictive practices and anti-competitive devices, and has in general had the effect of limiting price competition. In turn, profits in this regulated industry have been reasonably assured; there has been a high value attached to the banking franchise, and risks in banking have

been comparatively low as various forms of credit-rationing have been the norm. At the same time, costs tended to rise to exploit the economic rents created by a protective environment, and non-price competition has dominated price competition. This in turn has created an excessive cost structure. All of this created incipient excess capacity that was viable while the protection lasted but proved to be unsustainable in the absence of that protection.

The universal trend is that public policy priorities have shifted towards enhancing banking efficiency through competition, and in the process public policy has become less protective of the banking industry. As competition in banking becomes increasingly globalised, the ability of individual countries to stand aside from this general trend is strictly limited.

6.7 Technology

The power of technology will be, and has been, particularly decisive: it acts as both a threat and an opportunity to banks. It enables existing services to be provided more efficiently, it enables new services to be offered, it lowers entry barriers in some areas, and it changes the economics of delivery. This is not surprising in that technology has the power to transform the fundamental economics of any industry. In this respect banking is no different from other industries which have been transformed by technology. Technology has the potential to increase the availability and reduce the cost of information. This is a potentially powerful force as it both reinforces and challenges one of the banks' major core competencies: information. This is discussed further in a later section. Given that banks are ultimately in the 'information business', anything that affects the availability, cost and management of information must have a decisive influence on their business. A combination of new technology, the increasing role and power of rating agencies, and more extensive disclosure laws are eroding some of the banks' traditional information advantages. In some cases, information that was previously a private advantage to banks has become more of a public good.

6.8 Excess Capacity

If entry barriers are declining faster and more substantially than exit barriers, it is almost inevitable that excess capacity will emerge. However, the existence of excess capacity in an industry does not mean that new firms will not enter. If new entrants believe they have a competitive advantage *vis-à-vis* incumbents, it may still be rational to enter an industry which has excess capacity. In some areas this has occurred in financial services. The corollary is that there is more pressure on incumbents to adjust. The manner in which excess capacity is removed in the banking industry will be one of the major strategic issues that banks will face in the decade ahead. Compared with other industries, the concept of 'excess capacity' is more difficult to define and measure in banking. Four alternative concepts can be identified.

6.8.1 Excess capital

There is almost certainly an excessive volume of capital in the global banking industry in that, given the market and competitive conditions, it is unlikely that the required rate

of return on capital can be earned in the long run. It may be that the market is not big enough to support the current volume of embedded capital in the banking industry. The total volume of capital could be excessive for two reasons: firstly, regulation imposes an unsustainable capital requirement; and/or secondly, the business environment has changed in a way that means that the industry as currently structured, and the amount of business it is able to conduct, can no longer support current capital levels. This may be because new firms have entered or because demand has shifted away from banks (for example, switched to the capital market).

Excess capital (capital in excess of what is needed to support the current or expected level of assets) raises the required rate of return on assets in order to service the capital base. However, the same competitive conditions that have caused banks to lose some lending business also make it difficult to increase the rate of return on assets. Faced with excess capital, a bank has three broad strategic options:

- expand the balance sheet, perhaps by making more risky loans, which may lead to the erosion of lending margins and, if this induces banks to make loans without incorporating the true risk premium, in the end to a destruction of capital;
- make an acquisition (for example, purchase an insurance company), although there is ample empirical evidence that banks with excess capital often pay a premium when making acquisitions, making it difficult to subsequently earn a sufficient risk-adjusted rate of return on the investment; or
- repay capital to shareholders.

The last option may be the optimum strategy if regulation limits the extent to which bank capital can be deployed in new business areas – which does not, of course, limit where shareholders can invest externally to the bank. Many banks in the United States, and Barclays Bank in the United Kingdom, have made repayments of equity capital to shareholders. Shareholders have more options to allocate capital externally than banks have internally.

It is possible to have global excess capital in banking even while each individual bank believes it is short of capital. The two are not contradictory. If each individual bank is seeking to increase its share of a declining market, its own capital may be insufficient to support its planned business profile. But in aggregate, banks may have too much capital for the available amount of profitable business. In other words, the sum of individual banks' desired capital may be excessive in terms of the available volume of collective business. Thus there may be excess capital in aggregate even though each bank considers itself to be short of capital, because the planned or targeted volume of business of each bank sums to greater than 100 per cent of what is available.

6.8.2 Too many banks

It is also evident that there are too many individual banking firms, which prevents the exploitation of economies of scale. Although the empirical evidence with respect to economies of scale in bank firms is inconclusive, there are clear economies of scale in bank processes. Banks may merge in order to secure these economies. It is almost certain that there are economies of scale that can be reaped which are being denied by the current structure of the banking industry in many countries.

6.8.3 Excessive infrastructure

A third concept of 'excess capacity' relates to the basic infrastructure and branch network rather than the number of banks *per se*. In many countries the number of branches is excessive with an implicit unnecessary duplication of banking infrastructure: fixed costs and delivery facilities. This excess capacity can be reduced either by individual banks closing their branches or by merging banks and closing overlapping branches. In the 1992 abortive bid by Lloyds Bank for Midland Bank in the United Kingdom, a central argument was the need to rationalise the British banking system (and most especially the duplication of the branch network) and that this could most efficiently be undertaken through the latter route. Reduction of infrastucture has also been a motivation for bank mergers in many other countries. In effect, a co-ordinated strategy can be more effective and involve lower transactions costs than all banks acting unilaterally given that, in some cases, a major benefit from a branch closure can accrue to a competitor which is able to absorb a lost customer base without adding to its own costs. An alternative strategy when faced with excess distribution capacity is to attempt to supply more products and services through it. Faced with excess distribution capacity banks have two broad strategic alternatives: reduce capacity or pass more business through existing capacity. In this respect, there is a close parallel between excess capacity in capital and infrastructure.

6.8.4 Technology capacity

Developments in technology have themselves affected capacity in that new technology vastly increases the capacity of banks to supply services. It is unlikely that, given the economies of scale in new technology, the current number of banks can be sustained, as they cannot all apply new technology to its most economic extent. And yet banks individually will attempt to do so. This is a case of the fallacy of composition – what is viable for an individual bank is not necessarily so for all banks taken together.

6.9 Erosion of Cross-Subsidies

Cross-subsidisation is a common pricing strategy in multi-product firms including banking where, because competitive conditions between different banking markets are not homogeneous, prices of individual 'products' (for example, loans to different types of customer) do not accurately reflect relative costs and risks. Cross-subsidies exist between customers, products and processes. This necessarily implies 'subsidising' and 'subsidised' products, which also presupposes an ability to segment markets. As competition intensifies, however, and particularly as economic or regulatory entry barriers are lowered, it is frequently 'subsidising' markets which are targeted and this erodes the 'excess profits' earned by existing suppliers. This in turn forces a change in pricing strategies which, on the assumption that the cross-subsidisation was designed to raise overall profits, has the effect of eroding aggregate profits. It is partly because banks cross-subsidise parts of their business that new competitors have been able to enter some niche segments of banking business. However, this entry is also likely to erode the banks' ability to sustain cross-subsidies.

In many countries, banks earn significant endowment profits through 'free resources' (reserves and interest-free deposits). These endowment profits have been eroded due to competitive pressures and the deregulation of interest rates, and hence a significant traditional source of profits has become less powerful. Historically, the existence of endowment profits due to banks' access to cheap retail funds has acted as an entry barrier to foreign banks. To the extent that the cost of retail deposits rises towards the level of wholesale funds, the implicit competitive advantages enjoyed by banks with access to retail funds is eroded and foreign banks and new suppliers are able to compete on less disadvantageous terms.

Cross-subsidies within banks are becoming vulnerable both because entry barriers are declining and because of the process of *deconstruction* noted earlier. The general prediction is that, as competition develops (most especially in those countries where competition in banking is more constrained), the potential for banks to engage in cross-subsidising pricing behaviour will be eroded. This would be a further factor eroding overall profitability. The erosion of cross-subsidies has the effect of raising costs on some services, lowering profits, and, for reasons associated with endowment profits, can have the effect of lowering entry barriers.

7. Implications

The central theme so far has been that it is the *combination* of these pressures that is unique, and which is likely to induce major structural change in banking over the next decade to an extent that will transform the banking industry. Major implications are likely to follow from this combination of pressures and in three dimensions in particular:

- for the structure of financial systems in general and banking sectors in particular;
- for the business operations of the banking firm and the way banking business is conducted; and
- for the organisational structure of the banking firm.

These are considered in the following sections. With respect to the structure of financial systems and banking sectors:

- it is likely that banks will continue to lose some of their traditional business on both sides of the balance sheet;
- the relative role of banks in financial intermediation business is likely to decline;
- the structure of the industry will change, with a further concentration into a smaller number of larger firms;
- it is likely that a greater differentiation will emerge between different types of banks: comprehensive financial conglomerates, retail conglomerates, core-cluster institutions, specialist institutions and so on. The industry could become less homogeneous as different strategies are adopted. As different banks adopt differentiated strategies, a major issue in the future evolution of banking systems will be the conflict between specialist and conglomerate banks;
- the capital market will become a more significant source of funds for the corporate sector as companies bypass banks (*primary securitisation*) and banks will securitise a larger proportion of their retail loans (*secondary securitisation*). The latter

enhances the liquidity of the balance sheet and effectively creates an *ex post* market in bank loans;

- more institutions other than banks will provide basic banking services; and
- institutional investors will have an increased role in the savings and investment process.

7.1 Capital Markets and Securitisation

In some models, the existence of banks is viewed as an endogenous response to imperfect and incomplete markets (see Section 4.2.2 for a more detailed discussion). In a world of zero transactions costs, complete and symmetrically available information, with a complete set of markets to cover all possible future states, there would be no market role for banks as financial intermediaries (that is, their role in accepting deposits with one set of characteristics and creating assets with a different set). Although these conditions are not met in practice, the process of financial innovation and the creation of a wider range of financial instruments (spectrum filling) has reduced the degree of market imperfections and incompleteness, (Llewellyn 1985, 1992) and the number and extent of discontinuities in the range of market instruments.

In addition, banks' own cost structures (including the cost of capital) may also have eroded some of their comparative advantages. This has been accentuated by the lesser ability (due to increased competition) of banks to cross-subsidise corporate lending business. In addition, the development of financial markets has offered appreciable improvements in the form of better price formation and versatile risk management. The growth of rating agencies has also to some extent challenged the *ex ante* screening and *ex post* monitoring of firms which have traditionally been undertaken by banks.

Thus, banks have been losing some of their traditional advantages *vis-à-vis* the capital market for corporate sector business. In many countries, banks have been losing share in the financing of the corporate sector. It is also the case that very large corporate customers are able to borrow on the capital market more cheaply than the banks themselves. A further factor in the securitisation trend has been the introduction, through financial innovation, of new standardised financial instruments suited for mass trade in secondary markets (Horngren 1990). In addition, there has been the development of new analytical methods for valuing complex contingent claims, particularly the Black-Scholes model in the valuation of options which has contributed to the development of organised markets for standardised options. A further decisive factor has been the rapid development in information technology which has meant that the bundling and unbundling of financial assets into new packages that might be of interest to investors has become feasible for trading in organised secondary markets.

The growing institutionalisation of personal savings and the scale of institutionalised savings has reinforced other factors inducing financial flows through markets rather than banks. Thus the trend towards securitisation has been a product of changes in the market and economic environment, shifts in the relative efficiency of bank and capital market facilities, and capital and profitability constraints on banks. On the other hand, the same process of financial innovation has also eroded the distinction between banking and capital market facilities in several respects: many of the capital market instruments are

based upon floating interest rates; banks have become holders of capital market instruments; many instruments (swaps being an obvious example) straddle banking and capital markets, and others – note issuance facilities (NIFs) and revolving underwriting facilities (RUFs) – combine banking and capital market instruments. It is also the case that banks are involved with arranging these facilities for corporate clients and hence it is not business lost entirely.

Banks specialise in providing and holding loans that are not readily marketable. The growth of securitisation implies a potential decline in the demand for services traditionally provided by banks, especially for the corporate sector. Overall, the capital market has become a more formidable competitor to banks and this is likely to develop further in an increasing number of countries.

In effect, banks in some countries are losing their predominant role as deposit-takers and lenders to companies. Joss (in this volume) argues that banks are losing some of their traditional advantages, and that there are whole categories of traditional lending business (such as standardised consumer credit and large corporate loans) that banks are no longer suited to fund. He argues that: 'It is mostly borrowers with unique, non-standard credit needs that will rely heavily on banks and finance companies for their funding requirements'.

Securitisation does not necessarily pose a serious threat to banks. Two views may be identified: the *Market* and *Banker* schools (Gardener 1986). The former implies a continuing and inexorable decline in the traditional role of banks. More extreme proponents within this school go further and postulate that securitisation marks the potential demise of many kinds of banks altogether as they lose their comparative advantage in exploiting market imperfections. The alternative school argues that securitisation is merely one further step in the development of the modern banking firm, and that banks will continue to adapt and innovate in response to changing market conditions. In particular, banks will participate in the securitisation process by acting as brokers and arrangers. In the process the traditional intermediation role will be displaced by arranging, placing and underwriting business.

In general, a central issue in the future evolution of national financial systems, and the international system, will be growing competition and tension between banks and markets: capital and money markets in particular. Financial innovation has enhanced the relative attractiveness of capital markets for many large corporate borrowers. This does not necessarily imply a loss of business for banks, as banks are involved in the capital market operations of their corporate customers. However, it implies that the way banks earn profits from their corporate customers will shift more towards off-balance sheet business compared with the interest margin on on-balance sheet business.

7.2 Consolidation of Structure

The combined pressures identified earlier are likely to induce a further consolidation into a smaller number of larger banks within the banking industry. The BIS (1992) notes that 'forces are obliging many banks to consolidate ... whether the competition stems from within the industry or outside it, from other financial intermediaries, open capital markets or even non-financial companies themselves'. A 'merger movement' has become a pronounced feature of the US banking industry, which is viewed as a 'solution'

to excess capacity, poor profitability and a lack of capital – and a means of reducing costs, making more viable the implementation of technology strategies where the economies of scale may be substantial (Frazer 1991). There has also been a marked increase in the number of mergers and acquisitions in banking in EC countries. Major banking mergers have taken place in Austria, Denmark, Italy, Japan, the Netherlands, Norway, Sweden and Spain. There has already been a large reduction in the number of credit institutions in Sweden through mergers and a reduction in the number of co-operative and savings banks. The financial crisis in Scandinavian countries has accelerated the pace of restructuring and consolidation.

Overall, the likely trend in many countries is for a reduction in the number of independent banking units and a concentration into a smaller number of larger units. In Italy, the regulatory authorities have been encouraging bank mergers in order to create stronger and more competitive banking firms and in anticipation of a more competitive market environment.

7.3 Strategic Responses: The Business of Banks

All of this requires successful banks to take a radical approach to strategic planning. The pressures outlined earlier have major potential implications for the type of business conducted by banks and the way business is conducted. This was the second major implication noted earlier of the pressures operating on the banking industry. New analysis and perceptions may be needed about: the nature of the industry; the position and business of the banking firm; the way that banks provide their services; and the range of services offered. In particular, there is a need to distinguish between the fundamentals of banking: what banks actually do; and the way they do it.

The starting point is to identify the fundamentals, or core competencies, of the banking firm, that is, what gives banks competitive advantage. The fundamentals of banking are essentially:

- information advantages;
- risk-analysis expertise;
- monitoring of borrowers and enforcement of loan contracts;
- broking potential (bringing various counterparties together);
- delivery capacity; and
- acting as the core of the payments system which acts as the first point of contact with customers.

Banks' overwhelming advantage is the information they have on their customer base which is obtained through economies of scale, investment in information systems and expertise, and economies of scope or synergies. By managing a customer's account, and through the bank's continuous monitoring of customers, a bank necessarily acquires information that can be used in various ways. Information gained through one part of the business operation can be used in others. One reason, for instance, why banks in Germany have a particularly close relationship with their large corporate customers is the accumulation of information gained by the banks through the continuous monitoring of their customers, and much of this information cannot readily be transferred either to other

banks or the capital market. Alternatively, the customer may choose not to make information public for competitive reasons but is willing to share it with its banker on an exclusive basis. In this way the bank gains a monopoly advantage over its competitors including the capital market, most especially in cases where disclosure laws are not very demanding.

Banks are essentially in the 'information business'. In this regard, banks need to focus on two elements: the gathering, storing and retrieval of *data*, and the transformation of that data into usable *information*. Banks have a great deal of data but there is also enormous potential to transform this into valuable information.

These six elements are the banks' core competencies. In essence, banks have traditionally used their comparative advantages to specialise in the provision, holding and monitoring of loans that are not readily marketable. However, they can be used in a variety of ways. Thus, information advantages can be used by a bank to make loans, underwrite capital market issues of their customers, conduct broking operations, and can be used as a basis for cross-selling a variety of products and services. They can also be used to signal the creditworthiness of their customers on the capital market. There is no unique way in which core competencies can be used. As noted in an earlier section, the skill in developing competitive strategies in a changing market environment is to identify core competencies and markets in which they can be applied with comparative advantage.

Thus, the question of what is the fundamental business of banks is different from the question of what banks do. The theme is that individual banks need to identify their core competencies, as they will differ from one bank to another. This is the necessary starting point in strategic planning exercises. The above are likely to remain the core competencies of banking firms, even if in some areas they have become less powerful.

While the core competencies may be permanent and enduring, how banks exploit them changes over time and, at any point in time, is influenced by a combination of:

- current technology;
- regulation;
- the power of entry barriers;
- competition; and
- the strategic objectives of potential new competitors.

When formulating business strategies, in an environment when the banking industry is subject to substantial structural change, the bank needs to do four things at the outset:

- define its particular and basic core competencies;
- identify which markets these competencies can effectively service;
- select the range of products and services to offer; and
- define the way that core competencies can be applied.

This may mean taking a view about what business the bank is in. A bank needs to define how its core competencies can be used to competitive advantage and this may be different than in the past. The successful development of corporate strategy is ultimately a question of defining core competencies, and developing alternative ways of exploiting them.

These considerations are likely to alter the business profile of the banking firm:

- while much of what banks currently do will gravitate towards markets (*primary* and *secondary* securitisation), banks will be able to exploit their core competencies (for example, information and risk analysis) to service this process for their customers;
- banks will move yet further in the direction of financial services firms and conglomerates of separate businesses rather than purely financial intermediaries;
- a declining proportion of banks' income will be earned through the net interest margin and from on-balance sheet business;
- a wider range of services will be offered;
- off-balance sheet business will develop further;
- a wider range of delivery channels will be offered to customers;
- new ways will emerge for conducting banking business;
- the internal management of banks will continue to change with increasing emphasis on cost-management strategies, pricing strategies, the sustainability of cross-subsidies, increased emphasis on risk analysis and management, and so on;
- the structure of the banking firm will change – banks will move in the direction of *contract banking* and emphasis will be given to core competencies where banks become managers of internal and external contracts on behalf of their customers; and
- the *virtual bank* will emerge as an alternative to the fully integrated financial firm.

In the face of increasing non-traditional competition, together with the growth in domestic and international capital markets, banks are attempting to diversify and redefine their businesses. The traditional financial intermediation role of banks (most especially with respect to the corporate sector) is likely to become a relatively less important part of the overall business as banks diversify into providing a wider range of services. The universal trend towards *bancassurance* (Borio and Filosa 1995; Llewellyn 1995), where insurance and deposit-taking are mixed within the same firm, is a powerful example of diversification. In turn, this will erode what are in some countries traditional or regulatorily imposed distinctions between the six major sectors of finance: commercial banking, investment banking, securities trading and broking, insurance, and funds management. There has already been a blurring of the distinctions between different types of financial institution in many countries (Borio and Filosa 1995).

Overall, banks will be under constant pressure to manage costs strategically and to seek economies wherever they can be secured. A major issue is how far banks can go in this process without a fundamental re-engineering of the business: this is discussed below in the context of *contract banking*. This in turn has implications for the pricing of bank products and services and the continuing viability of cross-subsidies. The general prediction is that, as competition develops yet further, the potential for banks to engage in cross-subsidising pricing behaviour will be eroded. This would be a further factor eroding overall profitability.

7.3.1 Technology and delivery

A major strategic issue to be addressed by banks is the role of technology in changing the economics of delivering financial services (Howcroft and Lavis 1987). Technology has a major impact on the way banking and financial services are delivered. In particular, it reduces the dependence on the branch network as a core delivery mechanism. In this respect, what historically has been one of the banks' major competitive advantages (the branch network which acted as an entry barrier) may have become one of their most difficult problems as a significant part of a bank's cost structure is determined by its basic infrastructure. With the development of new technology a wide range of alternative delivery mechanisms becomes available and most especially through electronic media: telephone, home banking, interactive television and so on.

The likely future pattern is that banks will develop delivery matrices (Figure 2) with differentiations made both between products and services on the one hand and between different customer groups on the other. Banks will offer choice in delivery. Thus, Figure 2 indicates that a given service will be offered to different customer groups through a range of alternative delivery channels, and that a given customer will also use a range of alternative delivery mechanisms. Choice in delivery will be a key element in successful

Figure 2: Delivery Matrix

		Customer group					
		1	2	3	4	...	N
Product/Service	A	X	●	●	★		★
	B	X	●	▲	■		■
	C	X	X	X	X		X
	D	X	★	■	▲		▲
	⋮						
	N	X	▲	★	▲		■

● X ■★▲ etc are delivery mechanisms.

Examples of customer groups:	Individuals; high-wealth individuals; small firms; medium-sized firms; large firms; governments etc.
Examples of products and services:	Loans; deposits; life assurance; mortgages; payment services etc.
Examples of delivery systems:	Branches; telephone; postal; TV; personal computers.

competitive strategy. However, this is likely to be expensive as, to allow for customer choice, excess capacity may be needed in each delivery mode. This in turn is likely to lead to the explicit charging for different delivery mechanisms.

7.3.2 Further securitisation

Increasingly banks will come to securitise a significant proportion of their assets which will have major implications for their business. Firstly, it implies that fee income will become an increasing proportion of banks' total income relative to margin income. Secondly, it implies that the relative sizes of the capital market and banks in the financing of the corporate sector will shift towards the capital market. Thirdly, it also implies that the liquidity of banks' balance sheets will increase to the extent that they hold securitised assets on the balance sheet. In effect, the securitisation of assets and the banks' holdings of such assets, means that one of the traditional special characteristics of banks (the holding of non-marketable assets) is being challenged. Fourthly, the nature of banking business will change as banks become managers of securitised assets (*Economist* 1992). It may also mean that banks will increasingly operate as originators and packagers of credit risk which are ultimately assumed by others. In some senses, securitisation undermines much of what banks have traditionally been paid for: analysing non-standardised credit and holding them in the form of non-tradeable assets against their own capital.

Securitisation does not mean that banks lose corporate sector business. Large firms will continue to use banks for loans even though they may be able to borrow more cheaply in capital markets, for several reasons:

- maintaining lines of credit with banks acts as an insurance against adverse developments in the capital market;
- it allows borrowers to develop a diversified liability structure;
- bank borrowing acts as a signal to the market of the borrower's creditworthiness and the bank's judgment based on inside information; and
- capital market issues are frequently accompanied by backup lines of bank credit and guarantees.

The further development of securitisation is likely to mean that the role of banks in the process of company financing will change. It also implies that the rate of growth of banks' balance sheets is likely to be considerably lower in the future than in the past. At the same time, the process of securitisation in its various forms means that the traditional rigid distinction between capital-market and bank financing will increasingly become less evident.

In the final analysis, banks exploit their comparative advantages and this can be done in various alternative ways. Securitisation is an example of this. Securitisation means not that banks lose business altogether but that they use their comparative advantages in different ways in the securitisation process: as underwriters; offering parallel loans; credit enhancement; holding assets in securitised form by purchasing the bonds issued by capital market institutions to buy the portfolio of loans from the bank; acting as brokers and arrangers, and so on. The nature of the banks' business changes in the process as does the form of remuneration: fees rather than margin.

Securitisation could lead to a reconfiguration of banking. Even with widespread securitisation the incremental value of banks would largely be preserved. They would originate and service assets, while also processing the attendant risk in order to sustain these activities. Banks would therefore continue to screen and monitor borrowers, design and price financial claims and provide risk-management services.

For these reasons, the relationship between banks and the capital market is both competitive and complementary.

7.3.3 Off-balance sheet business

Banks are able to use their core competencies in a variety of different ways and not only through on-balance sheet loans. There has been a trend in many countries for off-balance sheet business and income to rise as a proportion of banks' total business and income. This trend is likely to continue. There is a powerful parallel between on and off-balance sheet business in two respects: the same basic function and service is being provided, and the same core competence (for example, a bank's information advantage) is being applied. Lewis (1988) shows that this applies to the two major areas of off-balance sheet business: contingent claims (loan commitments, guarantees, swaps and hedge transactions, and investment banking activities) and financial services (loan-related services, trust and advisory services, brokerage and agency services and so on). Thus on and off-balance sheet business are alternative ways of exploiting the same core competencies. For instance, an information advantage can be used either to make on-balance sheet loans (with profit earned through the interest margin) or to offer a guarantee or backup line of credit to a borrower making a capital market issue (with profit earned through fee income).

8. The Paradigm of Contract Banking

The third dimension where the pressures outlined earlier are likely to have a major impact is with respect to the nature and structure of the banking firm. The underlying economics of the banking firm is changing radically. The conventional image of a bank is of a vertically integrated firm providing each of the subcomponents of particular services and products: it provides the whole product or service. As a bank has a range of services and products, the image is of a vertically and horizontally integrated firm. However, the basic economics of the banking firm have already begun to change, and the process is likely to accelerate in the years to come. A two-fold distinction needs to be made: between *delivery* and *manufacture* of banking services, and between the services and products the customer ultimately demands (for example, loans) and the components and processes that go to make up those products and services. Thus, what the customer demands is different from what the bank supplies.

It is instructive to consider industries other than banks because, to some extent, banks are moving towards the model adopted by firms in other industries. Take, for instance, a Jaguar car: a high-performance and quality machine. When a customer buys the car, the appearance is that the Jaguar company presents to the customer an integrated service. In fact, of the many thousands of parts that go into making the car, the Jaguar company itself produces virtually none. Most of what is presented to the customer is a repackaging

of products manufactured by other companies, but to the Jaguar company's specification, design requirements and high standards. The reasons for this are obvious and taken for granted: the economies of scale are different in the manufacture of the various component parts, and different suppliers have different comparative advantages and expertise. In other words, for the Jaguar company the transactions costs of combining contracts for the external supply of components are less than the economies of scale that could be derived from Jaguar manufacturing all of the component parts. What the Jaguar company successfully does (the value it adds) is essentially three-fold: it maintains a powerful and successful customer interface; it efficiently manages a complex set of external contracts; and it has a particular expertise in design and assembly.

This process, common in the manufacture of goods, has not been the norm in banking where traditionally the banking firm has offered an integrated service by providing the services, and its components, itself. However, as already noted, the process of *deconstruction* (components of products and services being identified separately) changes this picture. It enables particular subcomponents of products or services to be subcontracted (outsourced) and to be supplied by other firms on a contract basis. Similarly, *deconstruction* enables a bank to provide a particular subcomponent of a service to competitors. Thus, a bank may subcontract the administration of its credit card operation while at the same time exporting to other banks its risk-analysis capacity. The potential exists because the economies of scale in bank processes vary. By subcontracting a particular process, a small bank may be able to buy into economies of scale that it could not achieve itself.

A bank is a complex firm and within it four key roles are distinguished:

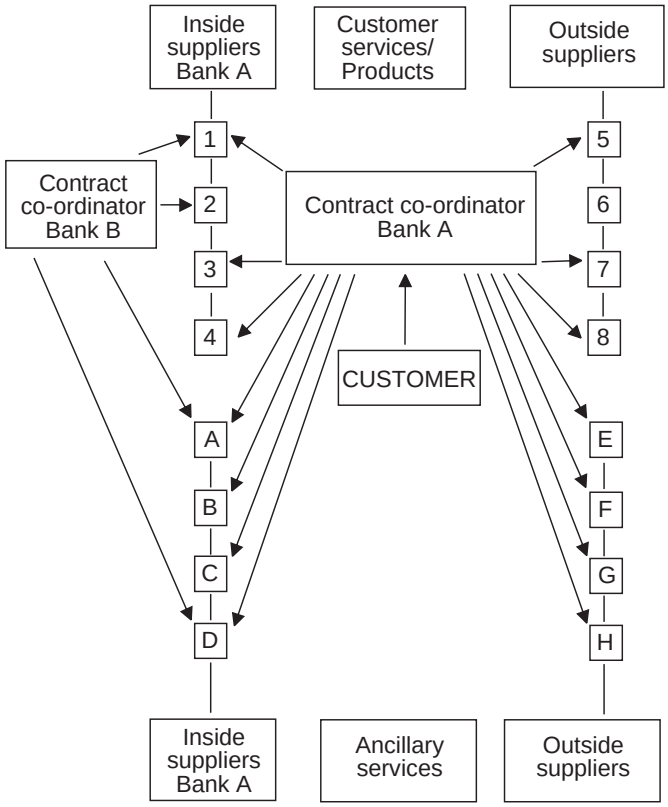
- a customer interface and the management of customer relationships;
- the supply of a range of products and services;
- a range of ancillary services (services which are not explicitly demanded by the customer but which are an integral part of what *is* demanded, for example, risk analysis and administration); and
- a supplier of alternative delivery mechanisms.

Thus the banking firm can be viewed as a firm which has an interface with a customer base (supplying a range of apparently integrated products and services) and demanding a series of support services in order to supply the services. Thus, a distinction is made between the final products and services that the customer demands and the various components of that product or service the bank supplies (for example, risk analysis, administration and so on).

The central issue is which of the components are supplied internally, which are subcontracted, and which are exported. Core competencies of particular banks are relevant in this. Thus, what may appear to a customer as an integrated product or service is in fact a series of *deconstructed* components which may or may not be supplied from within the bank. The bank defines the components and decides which are to be supplied internally and which subcontracted. In effect, a series of contracts are established by the contracting bank with internal and external suppliers. This is illustrated in Figure 3. The customer has a demand for a series of products and services (1, 2, 3 and so on) and has a contract with a bank (a contract co-ordinator) to supply those services. The bank in turn

has a series of contracts with internal and external suppliers of those services and products (the arrows show the supply of contracts). The subcomponents of these products and services (that is, A, B, C and so on) may also be supplied either internally or externally. Thus Bank A has contracts with internal suppliers of components A, B, C and D, but subcontracts components E, F, G and H. Similarly, Bank B buys in from Bank A products 1 and 2 and components A and D.

Figure 3: Example of a Contract Banking Structure



What might be termed *contract banking* implies a bank offering a full range of services, but where the bank co-ordinates inputs from a wide range of different companies. The core is a contract the bank has with its customers to supply a set of services or products of a particular standard. In turn, the bank contractor has a set of contracts with a range of internal and external suppliers of the components of these ultimate products and services. The value added by the bank contractor is in the management of these contracts.

Various forms of outsourcing are available: third-party processors, service bureaus, and facilities-management contractors. In addition, two or more parties might establish a joint venture to undertake certain activities on a joint basis.

A major form of outsourcing is third-party processing on a line-of-business basis. Those functions that are most automated or specialised tend to be the most outsourced partly because this is where economies of scale potential are greatest. As already noted, developments in information technology have lowered the cost of performing information-intensive activities, providing economies of scale can be reaped. Examples of outsourcing include: mortgage processing, credit card administration, cheque processing, network operations and management, credit card issuance, student loan processing, trust processing, securities safe-keeping, ATM driving/switching, retail lockbox, applications development and management, data centre and balance reporting. As technology becomes more intense and specialised and requires heavy investment, it tends to be disaggregated, that is, technology operations are broken apart and split up amongst a number of highly specialised technology companies which supply similar services to several banks.

There are several reasons why outsourcing is undertaken:

- to reap economies of scale that cannot be attained internally;
- some technology projects last only for a short period;
- some areas may be too specialist to be undertaken internally;
- skills can be enhanced when technologists work on several projects;
- a particular expertise may not be available internally and may be uneconomic to acquire;
- to spread costs and risks; and
- to break an internal monopoly when services are supplied exclusively internally.

The obvious hazard in outsourcing is that the bank may unwittingly introduce its customers to a potential competitor.

If external contracts are made, issues arise about setting performance standards, monitoring standards, and sometimes moral hazard problems when the external supplier has a lesser stake in the outcome than the bank itself. However, these are not different issues from those that arise when internal suppliers are involved. The key question is whether these functions can be performed more efficiently with internal or external contracts. Clearly, the costs of managing external contracts is part of the overall judgment. In some cases the costs of monitoring external contracts, including potential moral hazards, may be prohibitive.

At the same time, some banks may themselves become suppliers of outsourcing services for other banks including their competitors. Thus, if there are significant economies of scale in a particular process a bank can secure these economies in one of four ways: by being big; by outsourcing; by forming joint ventures with others; or by the bank investing in a process and supplying the excess capacity to others. As an example, a bank may decide to establish a cheque-processing facility and to provide the same service to others.

In a competitive market all firms (including banks) are under pressure to gain cost advantages wherever they can be secured. In some cases banks may have gone as far as they can in cutting costs without a more fundamental re-engineering of the business such as is implied in *contract banking*. If technology has the effect of increasing the economies of scale, the issue becomes how banks can reap such economies. As noted, economies

can be secured either internally or externally but in some cases it may require a fundamental re-engineering of the bank. However, paradoxically, the technology which increases the economies of scale in bank processes, combined with the ability to deconstruct products and services and have components priced and supplied independently, means that both small and large banks can coexist, and that there will be greater variety in the structure of banking firms. This is because economies of scale are in bank processes rather than in banks *per se*.

Thus, the concept of the fully integrated bank is becoming outdated. In effect, the bank is a 'manager of contracts' (internal and external) on behalf of its customers. This involves a new definition of the business of banks and a new way of managing relationships with customers:

- maintaining the customer interface;
- designing products and services;
- setting standards;
- establishing internal and external contracts;
- monitoring suppliers (internal and external contract holders);
- enforcing standards;
- protecting against moral hazard, most especially when contracting with outsiders; and
- creating a set of internal and external incentive-compatible contracts.

The skill is to manage these contracts more effectively and efficiently than alternative suppliers. In this sense, a bank is no different from any other firm.

At its extreme, the possibility of the *virtual bank* emerges. This has an interface with its customers and seemingly supplies a set of integrated services and products. And yet it may do nothing itself other than to manage a set of contracts with external suppliers. It is a contractor of other firms' products and services and a co-ordinator of a network of contracts and services. It is, in effect, a broker between the customer and the ultimate supplier of services which go to make up the final products and services demanded by the customer. This may mean that comparatively small *virtual banks* can exist side by side with large banks. They may provide the full range of banking services with the customer being unaware that the bank is in truth a network of alliances with specialist providers.

What in practice is likely to emerge is a spectrum of different types of bank. At one end of the spectrum will be the traditional fully integrated bank which, because of the economies of scale in bank processes, will be very large. At the other end of the spectrum lies the *virtual bank*. In practice, the majority are likely to lie within the polar boundaries of the two with some services being provided internally and others outsourced. It is ultimately a question of the balance between internal and external contracts and many alternative structures are likely to emerge. The development of outsourcing does, however, mean that there can be a role for the small bank in a market and technology environment where many banking operations require large scale to be economic. Thus, while there will be a trend towards more consolidation in the banking industry, there will still be a place for the smaller bank, though it will not have the traditional structure.

An implication of much of the analysis of this paper is that banks will be under constant pressure to cut and contain costs as a permanent feature of strategy. The economies of scale to be derived through the application of technology will be one of the routes of this pressure. However, if economies of scale relate predominantly to bank *processes* rather than *institutions*, and external contracts can be managed efficiently, the existence of economies of scale does not mean that only large banks can be competitive and will survive.

Two conflicting pressures are emerging. On the one hand, technology (to the extent that it raises economies of scale) leads to the emergence of large banks and the consolidation of the banking industry. On the other hand, and working against this trend, the process of *deconstruction* and *contract banking* mean that there are alternative ways of securing the competitive advantages of economies of scale.

8.1 Wholesale vs. Retail Business

Throughout the previous analysis *ad hoc* distinctions have been drawn between wholesale and retail banking business. Many of the pressures identified are more evident in wholesale than retail sectors of banking business. In order to formalise the distinction the arguments are summarised in Table 1. While the pressures and outcomes are more

Table 1: Wholesale vs. Retail Banking

Issue	Wholesale	Retail
Internal competition	Intense	Weaker but newcomers important as: • behave differently; • exit barriers low
Entry barriers	Disappearing	Barriers remain in some areas
Exit barriers	Low	High for incumbents but low for newcomers
Regulation	Declining	Increasing
Technology	Advancing rapidly	Advancing rapidly
Competition from non-banks: financial	Increasing rapidly	Rising but limited to selected business areas
Competition from non-banks: non-financial	Increasing rapidly	Rising but limited to selected business areas
Competition from markets	High	Low
Cross-border competition	Intense	Very low
Diversification	Increasing rapidly	Increasing rapidly
Securitisation	High	Low
Contract banking	Will occur	Will occur
Excess capacity	High	Rationalisation but more obstacles
Deconstruction	Developing	Developing
Payments	Challenge of markets	Challenge of markets
Customer loyalty	Low	High because of transactions costs

evident in wholesale business (where competition from markets has been particularly powerful) they are also developing in retail business and the differences are eroding.

9. Assessment

In various ways the related pressures of competition, declining entry barriers, deregulation, financial innovation and technology have eroded some of the comparative advantages of banks in their traditional financial intermediation business. Regulation in the past to some extent exaggerated the comparative advantages of banks because it created something of a protective market environment. Now, because of deregulation, banks in some countries are losing their predominant role as deposit-takers and lenders to companies. Market pressures, financial innovation and technology are eroding transactions and information costs and market imperfections which have been the basis of banks' comparative advantage over direct credit markets. In addition, banks' own cost structures (including the cost of capital) may also have eroded some of their comparative advantages.

Above all, banks are no longer the exclusive suppliers of banking services: there are many traditional activities of banks that can now be undertaken equally well by markets and other types of financial and non-financial companies. In addition, with the exponential development of information, trading and delivery technology, the value-added in the banking business is increasingly passing away from banks to specialist technology companies. Banking used to be about banking firms which used technology to supply services. Perhaps the new model is that it is about technology which has a financial services component!

The overall impact of these factors can be focused in a general proposition: *the value of the banking franchise is being eroded.* For all the reasons discussed, banking markets are less the exclusive preserve of banks. As put by Bisignano (1990): 'With the decline in the franchise value of banks, the banking systems in some countries are shrinking'.

However, this does not necessarily mean a pessimistic outlook for *banking firms* as the business of the banking firm is likely to change towards the provision of a wider range of financial services relative to the traditional financial intermediation and on-balance sheet roles. Banks are not so much in decline as re-creating themselves.

The successful development of corporate strategy is ultimately a question of defining comparative advantages, and developing alternative ways of exploiting such advantages. Thus, while banks may continue to have information advantages with respect to their customers, this does not necessarily mean they are only to be exploited in the form of making loans and/or holding loans on the balance sheet. Information advantages can be exploited in many other ways such as servicing the capital market. While banks may lose market share in some of their traditional markets, they will gain and develop other business and use their core competencies in different ways.

The combination of diversification, *deconstruction* and *contract banking* implies that banks are diversifying horizontally but becoming more specialist vertically. The management challenges to doing this successfully are formidable.

A series of secular pressures on the banking industry has been identified including the impact of declining entry barriers in widening the range of competitors. Two contrasting

views may be summarised. At one end of the spectrum is the view that banks are losing their historic comparative advantages and that their role in the financial system is in permanent decline. The alternative polar view is that the pressures are transitory and that many of the new entrants will find that they have no enduring core competencies in financial services. The truth is likely to be within the two polar cases. Banks will continue to be subject to secular pressures which are moving against them. However, they retain powerful core competencies and these can be exploited in new ways and in different markets, thus limiting the extent of any secular decline. However, this may require a radical review of what business banks are in, and how core competencies can be exploited for competitive advantage. It may also require a restructuring of the banking firm.

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Discussion

1. Andrew Mohl

Professor Llewellyn's paper outlines quite definitively why banking is an industry under pressure, focusing on the related pressures of competition, declining entry barriers, deregulation, financial innovation and technology. I have no reason to challenge the particular arguments as they have been thoroughly researched and are broadly self-evident to anyone who watches TV or reads a newspaper. My comments on the paper are from the perspective of a former central banker cum-private banker cum-bancassurance executive. They are also heavily based on Australian observation although I believe they have wider international context.

Banks' Evolution into Financial Services

My first main point is that major banks in Australia have for some time now recognised and reacted to the proposition that they are in fact no longer in the business of banking, defined to be the provision of loans and advances, deposits and transaction payment services. They are instead in the business of financial services, defined to be the provision of all types of products and services that are important to the customer's financial well-being. This is why ANZ, for example, owns a life company, a trustee company, a unit trust company, a lenders' mortgage insurance company, a general insurance company, a stockbroker, and so on, in addition to its banking licence. For my sins, I have the responsibility of managing most of those non-bank legal entities and determining how best to deliver those products and services to the market while creating ever-increasing shareholder value.

The impact of the banks in these areas has been significant. In retail managed funds, for example, the four major bank subsidiaries feature in the top ten with CBA second in size, ANZ fifth, Westpac seventh, and NAB ninth, accounting in total for over 20 per cent of the market. A related point to this is that major life companies in Australia are also no longer in the business of life insurance, which itself is changing quite radically in terms of product, pricing and distribution but, like the major banks, are really in the business of financial services.

To be sure, banks and life offices are at present very different in their cultures, skill sets, service delivery processes, and so on, but the pressures in the marketplace are bringing about a substantial convergence in strategies and business objectives. The illustrations of this are everywhere: for example, AMP launching Priority One, Colonial buying State Bank of New South Wales and National Mutual's alliance with Advance. Less clear is the role of the general insurers who have had limited success in expanding outside their traditional product set.

This convergence is, of course, also one of the important forces that have led to the Wallis Inquiry, as some have begun to question, *inter alia*, the wisdom of institutional supervision when institutions more and more behave and look like each other. That is a subject, however, best left for another time. Instead, let me move to my next important point.

Banking Groups' True Competitive Advantages

The paper identifies the fundamentals of banking and concludes that banks are essentially in the 'information business'. I would argue this differently. When I look at the increasingly competitive marketplace, I conclude that in essence ANZ, along with every other major bank or life office, in effect only has two basic competitive advantages:

- it has a brand name; and
- it has customer relationships.

The value of the brand and the themes that customers identify with a particular brand vary from organisation to organisation. Marketing areas track this in detail. Our research indicates we have a very strong brand, and this is worth a fortune as we seek to deliver shareholder value in the modern day delivery of financial services.

The customer relationships, over three million in total, are similarly invaluable. Notwithstanding the Australian media and politicians' pastime of 'bank bashing', most Australians are very satisfied with their bank and even more so with their branch manager and staff, and likely to exit only in extreme circumstances. This access to, regularity of and often longstanding nature of our relationship with, customers gives us both the potential to cross-sell other products and services but also constitutes a major barrier to new entrants seeking to win over these customers.

Beyond that, I doubt we have much to compete with that has any sustainable value. Risk assessment can be accessed via mortgage insurers and/or credit scoring systems in the case of personal lending. Risk assessment in the case of mid-market lending will probably go much the same way in time. Payments services can be accessed via cards (issued by banks or non-banks), or phone, EFTPOS services and the like. Products can be bought from all and sundry with even the most innovative product copied within a matter of months, if not sooner.

Branch banking was, of course, the foundation for both the creation of brand equity and customer relationships above, but it has obviously had its best days. Contrary to many others, I believe branch distribution will continue to be prominent in future distribution although I don't expect to see non-banks rushing in to create similar new bricks and mortar distribution.

Banking Groups' Ability to Compete in Highly Competitive Markets

My third point is that the paper leads one to believe that banks are likely to have faced a very tough time meeting financial hurdle rates. If banks operated previously in a protected and comfortable competitive environment, they will surely have suffered in financial terms in this new world of collapsing barriers to entry, deregulation, rapid innovation and powerful new technologies. The reality, to date at least, suggests this is not happening, and indeed the opposite appears to be the case. The Edey and Gray paper contains a chart on major banks' profitability that shows that returns on equity are presently as high as at any time in the past 35 years and in inflation-adjusted terms are at record highs. Returns on equity in top-performing US banks are even higher. Another measure is the premium of market to book value. The four major banks presently are in

the range of 150 to 180 per cent, indicating that the market takes a strongly positive view of the value of the franchises and infrastructures held by the major banks.

How can this be so?

As in most other markets, the stifling of competition in banking only succeeded in creating a highly inefficient industry that gave customers poor value for money. As a result, the 'returns' from protection were largely dissipated in a range of ways, including the usual culprits of major overstaffing, credit excesses, head office grandeur, expensive and mostly ill-conceived acquisitions, and the like. Customers battled on with branches open 34 hours a week, housing loans a prized scalp, no interest paid on cheque accounts, no telephone enquiry centres, no ATMs, no EFTPOS terminals, no financial advisers, or any of the rest of what we now regard as standard services from a bank.

The response of banks to competition has been subject to fits and starts but at the end of a decade has truly been very substantial. Australian banks are now much leaner, return-driven, customer-focused, sales-oriented and internationally-minded in their business approach. They have shed thousands of staff, hired many more thousands at all levels – from part-time tellers to CEOs (in the case of Westpac) – and are rapidly seeking to build skills in the areas of customer segmentation, database marketing, distribution channel economics and risk grade pricing, to name just a few.

Of course, the real force of competition is only just beginning, and we are all to be properly tested. In that regard, I must say I wonder whether returns on equity of 18 per cent or more can be sustained by even the best major player in an environment of 2-3 per cent inflation, a view which I presume is shared by Ian Macfarlane, judging by reports of his recent speech.

At least until now, however, I think the observed experience has been that the traditional players have added back more shareholder value in their response to the increased competitive pressures than they have lost in shareholder value from the reality of those pressures. That is, I would suggest that competition and bank profitability have both gone up. So much for economic theory!

Contract Banking in Practice

My final point relates to the emergence of contract banking. This is no more or less than the process of unbundling at work as management seeks out more cost-effective ways of delivering value to customers.

The best example of this in my view is the celebrated Charles Schwab in the US which has evolved from a discount broker to become one of the leading distributors of other managers' mutual funds through a range of distribution channels. The reorganisation of major banks is similarly forcing them to consider outsourcing an increasing array of activities and/or contracting out activities where they have substantial competitive advantage. This is already part of the way we do business at ANZ Funds Management as we have a broad array of strategic partnerships with general and life insurance underwriters, superannuation administrators, external advisory groups, and the like, as we focus on our preferred area of distribution versus product origination.

Concluding Remarks

Banking groups have been facing the full challenge of competition for over a decade now. They have survived far better than many first thought. Think of a really successful foreign bank in Australia if you can, aside from Citibank, of the original 16 new entrants. They are now confronting an intensification of those pressures.

My contention is that they can fully meet this challenge, by leveraging off their brands and customer relationships. That said, we have a saying inside ANZ that success in financial services is 10 per cent strategy and 90 per cent execution. The hard work is therefore largely in front of us.

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2. General Discussion

The discussion focussed on three main issues:

- the unbundling of banks' traditional products (what the author referred to as 'deconstruction');
- dividing lines in the financial system between different types of institutions; and
- the nature of banks' core competencies and the long-term role of banks.

On the first issue the paper had argued that unbundling was likely to be an important driving force for further change: competition would take place more and more at the level of individual products and processes. A consequence would be greater diversity in the finance industry because institutions would tend to specialise rather than necessarily aiming to be full-service providers. The question was raised as to why this unbundling process was occurring. Presumably the traditional structure had evolved because bundling had been efficient. Why had this changed?

It was suggested that there were two possible answers to this. One was that technological change was lowering the relative cost of individual services, making them easier to split up – for example, it was easier than in the past to set up a mortgage business outside a major financial institution. The other answer was that the competitive environment had changed. Bundling might have been inefficient in the past but could not be challenged because of entry barriers which have now come down.

Some participants thought that the importance of unbundling had been overemphasised: we should not accept as inevitable that further unbundling would happen, or would happen quickly. The home mortgage market was cited as an example. It had taken some years for the current competitive pressures to develop and, despite intense competition and advertising of low interest rates, many customers still displayed considerable inertia. This experience suggested that banks would continue to have some important advantages in defending their traditional business base. Many customers had an inherent tendency to stick with banks, possibly related to banks' role in payment services.

The second main issue of discussion concerned the dividing lines among financial institutions. Participants emphasised that the traditional dividing lines were becoming

less meaningful as financial businesses were increasing their activities outside their traditional areas. This was happening at several levels: banks were developing their financial service subsidiaries, non-bank financial institutions were offering some traditional bank-style products, and companies from outside the financial sector altogether were moving into some areas of financial services. The whole process illustrated the dramatic decline in entry barriers in markets for financial services.

It was argued that there were important asymmetries in this process. Banking could be invaded from the outside more easily than banks could invade other markets. Equally important was the question of exit barriers. Outsiders entering markets for financial products faced very low exit barriers and therefore faced very little risk in entering such a market on a trial basis. Examples cited were the UK retailer Marks & Spencer, which was offering some consumer financial services, and the development of 'in-house' banks by a number of large industrial corporations. These companies could easily exit from financial service activities if they proved unprofitable. Banks on the other hand were not diversified and could not get out of key markets without shutting down. It was argued that this situation would lead to increasing competitive pressure on banks, and possibly even to pressure from banks to be able to diversify into non-financial activities. If that were to happen it would further undermine the distinction between financial and non-financial enterprises.

A number of policy implications of these trends were discussed. It was argued that some dividing lines between institutions needed to be drawn because, if not, the central bank would end up regulating and underwriting the whole financial system. This would clearly be unacceptable.

Other participants thought that the special status of banks in the financial system would be hard to maintain. Banks were expanding into non-bank financial services through subsidiaries, but customers did not always recognise the distinction between banks and their subsidiaries. This gave the subsidiaries a marketing advantage as they were perceived to have bank support. To level the competitive playing field, it was argued that the special status of banks had to be removed, or the firewalls between banks and their subsidiaries had to be more strongly enforced.

The third main issue concerned the 'core competencies' of banks – their underlying sources of comparative advantage. It was argued that the process of unbundling was making the core competencies harder to identify, since the old notion of banks as full-service suppliers was breaking down. Instead each bank would have to identify its particular area of strength. The notion of a bank's brand name and customer base as sources of comparative advantage was challenged. If the fundamental economics of the finance industry were changing, the banks would have to respond. The example of IBM was cited as illustrating that the advantages of a prestigious name could have a short shelf life in times of change.

Developments in the Business of Banking

Robert Joss

1. Introduction

There are four core components which make up the business of banking and each has been undergoing dramatic change in its own right. They are: credit, savings, payments and risk management. These four elements used to be closely interrelated, both in an operational sense and in a financial sense. However, in the last decade or so, banks have increasingly looked at each of the core elements on a stand-alone basis. New players have entered the market, and as a result banks have become more competitive and more rigorous about the investment and pricing decisions being made in relation to each of the core elements.

Further, new technology has allowed the entry of new niche marketers resulting in each of the component businesses undergoing disaggregation. Whereas previously banks competed at each stage of the business system, they can now choose to compete within that business system.

Timely identification of the forces causing the dramatic changes and of the trends towards greater disaggregation, and their likely financial implications, is crucial for the ongoing development of profitable business strategies for a large bank such as Westpac. The challenge is to rigorously assess the businesses the bank is in, identify where its real strengths and strategically critical roles lie, and to capitalise on these.

Banks must very precisely identify the areas of business where they have or could have some advantage, and they must rework these and build on them, utilising whatever systems or technology are available to ensure they keep pace with international best practice. Similarly, there might be whole categories of business where it no longer makes much sense for banks to compete from the perspective of profitability or the efficient use of capital. Banks, like other corporate entities, have to recognise that what once may have constituted a fundamental component of their business, may no longer make any economic sense to perform, either because customer requirements have altered or because someone else can do it better. Let me illustrate by taking a brief look at each of the four core elements of banking.

2. Credit

Banks have always been suppliers of credit to worthy borrowers with the capacity to undertake and finance productive investments. The business of providing credit is made up of origination, funding and servicing. Each element of this business requires different sets of skills and qualifications. A large bank such as Westpac can add real value to the origination and servicing portions of the credit business, but not as much to funding all credit business.

The origination side of the credit business firstly involves finding the customer. Getting a customer on the books requires selling skills, be the target an existing or a new

customer. Over the last decade, banks have developed these selling skills and they have also developed new, more cost-effective channels for selling by using mobile lenders and direct marketing, including systematic use of the new sophisticated telephone banking centres. Thus, while banks may no longer have an exclusive franchise on selling credit, they are potentially well placed to compete effectively provided they carefully segment and have in place the appropriate credit-origination skills. Their large customer base can provide them with a distinct competitive advantage.

Credit origination involves assessing the risk, understanding who is and is not creditworthy, structuring the credit (pricing, length of loan, variable/fixed rate) and understanding the cashflows sufficiently to know how the money will be paid back. Highly analytical and knowledge-based skills are required when trying to assess risk and evaluate the probability of repayment. The more experience you have in dealing with large volumes of credit business, the less the likelihood of getting caught out with bad risks. And the greater the number of lending propositions that are assessed, the greater the scope for introducing time and money saving formula-based approaches to the origination process. Banks have developed and refined these skills over a long period of time.

The servicing side of the credit business is also where experience and economies of scale come into play and where costs can be lowered by introducing processing efficiencies. Servicing credit is all about ensuring that the monthly credit payments are made and that the paperwork is kept up to date and accurate. Servicing credit involves information management through efficient processes and technology, and systematic and rigorous debtor management.

A bank with a big customer base and with centralised, highly efficient credit assessment and processing capacity is well placed to carry out both the origination and servicing sides of many credit businesses, not only for its own customers but potentially for other financial institutions whose size does not warrant investment in such efficient backoffice infrastructure.

However, banks, big or small, are less well suited to funding whole categories of credit business. The best sources of funds for credit are institutions that pay little or no tax on their earnings and institutions which do not have to put up their own capital when providing funds for credit. A bank has to set aside capital for any loans it keeps on its balance sheet, and it then has to pay tax on the interest earnings. On the other hand, a mortgage trust or superannuation fund has no similar capital requirements and the latter is also in a tax-advantaged position which allows it to accept a lower gross return, helping bring down costs for borrowers.

Banks also incur regulatory compliance costs if they want to fund credit via deposits, which costs must inevitably be factored into the pricing of the deposit and/or the credit offered to the borrower. All in all, in the current taxation and regulatory environment, banks are not as well positioned to fund all types of credit as cheaply as are other institutions, particularly consumer credit that can be standardised into a commodity product and aggregated for securitisation. Banks already can and will increasingly securitise such loans, just as non-bank mortgage originators securitise them, and then leave it to non-bank institutions to take up the securities.

In the same vein, most large corporates with good credit ratings discovered years ago that to use the bank as a middleman for their standard borrowings was often inefficient and that they could lower their borrowing costs by going to the securities markets directly.

It is mostly borrowers with unique, non-standard credit needs that will rely heavily on banks and finance companies for their funding requirements. Rural enterprises, the self-employed and small and medium sized businesses which do not have access to the securities markets and whose credit requirements are far less easy to standardise for securitisation will all continue to look to banks for their credit needs. And these loans will be financed in the same way as they are now: on banks' balance sheets, not by the securities markets. Similarly, even large corporates will still need to deal with banks for tailored, non-standardised credit such as a bridging loan, or even short-term working capital.

In summary, banks will continue to perform a useful role in funding the credit for the non-standardised segment of the commercial and personal borrowing markets, but their capacity to perform the same role efficiently with standardised consumer and large corporate credit is far more limited.

Not only is the overall credit business becoming increasingly disaggregated into its component parts of origination, funding and servicing, but the component parts themselves are undergoing further disaggregation. The challenge for a bank is to clearly identify the elements of the credit business where it can compete effectively, and to appropriately cost and price any activities it undertakes. Cross-subsidisation between the components will not be an option, since efficient third-party providers will swiftly appear to offer better value to whichever customer or product segment is paying for the cross-subsidy.

3. Savings

The flip side of the credit business is the savings business. People with excess funds for present day purposes or a requirement to build up capital for the future set aside money via savings. Savers choose where to invest their funds based on some combination of yield, likely capital appreciation, liquidity, security, income stream and tax-effectiveness. And there are many vehicles to choose from: banks, building societies and credit unions all offer savings accounts and term deposits, but other options available include listed shares, property, unit trusts, mutual funds, superannuation funds, single-premium products, antiques or works of art or even newer tax-effective investments such as infrastructure bonds.

Despite the increasing choice of savings options, banks will continue to play a critical role in providing a highly secure and liquid medium for savings for those segments of the population that are more risk averse or with high liquidity preference. But it needs to be recognised that intermediation in the savings process by depositories such as banks is costly and the product set a bank can manufacture, in its role as a bank, is relatively limited in the current regulatory regime.

Historically, banks have intermediated in the savings process on three dimensions: they have intermediated on size, risk and time. By contrast, banks' main competitors in the savings arena, the funds managers, intermediate only on size leaving the investment

and interest rate risk with the investors. In the past 15 years, relatively few major financial service organisations have failed and this has helped foster a lack of understanding of the precise risk intermediation implicit in the competing products offered by banks versus non-banks. But the good fortune and good management that has allowed Australia to have a relatively healthy financial sector does not diminish the differences in the type of risks associated with different categories of savings products.

Both banks and funds managers intermediate on size, pooling many small investors' savings into larger volumes of funds suitable for investment in higher return and more diverse alternatives than the individual investor could alone orchestrate. However, intermediation on risk and time is typically only carried out by banks and similar deposit-taking institutions.

A bank guarantees both the capital and the interest on all its savings products. However, the safety of a bank deposit, the capital guarantee, comes at a cost. That is, the regulatory requirement for a bank to hold 1 per cent of deposits in non-callable deposits at reduced rates of interest and 6 per cent of liabilities in prime assets. Further, when a bank offers a fixed rate for a term deposit, it, not the investor, bears the risk of interest rate variability. The cost of taking on this risk, combined with regulatory compliance costs, lowers the return for the investor.

By comparison, non-bank organisations offering investors the option of saving via a fixed-income trust do not have the same regulatory imposts put on them. Nor do they bear the risk of any credit deterioration over the period of investment. Hence, their capacity to hold out the promise of higher returns is greater than it is for banks. However, the consumer needs to understand the risks associated with the higher return.

Banks also intermediate on time, particularly as regards at call deposits at a particular interest rate. The investor expects instantly withdrawable funds, perfect liquidity, while the bank may have invested those funds, or a proportion of them, in a longer term asset such as a mortgage. It is the bank's problem to manage the timing mismatch, not the investor's. In comparison, far greater restrictions apply to most investments offered by funds managers in terms of the flexibility the investor has to withdraw funds and be guaranteed a particular yield or a particular capital sum. The interest rate risk and associated price volatility is borne by the consumer.

A bank also has less flexibility in the type of savings vehicles it can assemble for investors. A mutual fund or balanced trust investment can offer higher prospects of return than can a bank deposit because it can invest not only in fixed-interest investments and housing mortgages, but in commercial and retail property and equities, either in the domestic or international markets.

Thus, from the customer's perspective, intermediation in the savings business seems to be more efficiently handled by funds than by banks. Less intermediation on risk and a wider array of investment options give rise to higher yield prospects, which are attractive to many consumers. However, the increased level of risk in non-bank savings products is not always recognised or acknowledged by the customer.

In addition to being free of many regulatory imposts and their associated costs and having greater freedom to invest, funds managers also do not have to carry the overhead costs of the banks' branch networks. The costs of the branch networks have traditionally

been absorbed by banks in their pricing of savings and credit products, but in today's competitive environment there is much less capacity to do so.

However, while the existence of an expensive branch network does not make a positive contribution to the pricing of a savings product, it does offer banks a customer acquisition and product distribution advantage that most funds managers do not have. Banks have enormous customer bases into which they can tap and they are developing increasingly efficient alternative distribution channels through which they can gain access to their customers and vice versa.

In the current regulatory environment, banks should perhaps pay more attention to these distribution strengths when devising strategies for their savings businesses. For some banks it may make sense to develop their own subsidiary funds management businesses to manufacture products for their own distribution. For others, the optimum strategy may be to offer their distribution capacity for use by external specialist funds managers rather than build or try to maintain their own funds management businesses.

The trends in the savings business will continue to be towards disaggregation of the funds manager and distribution function and to more explicit recognition of what is and is not absolutely safe when it comes to savings products. Banks will have to continue educating consumers to understand that both the guaranteed capital and return associated with bank savings products and the convenience of branch access for savings products come at the cost of yield.

4. Payments

The payments business is all about helping people, companies and governments move value. The payments business is really made up of two components: one element comprises the various means by which the many different forms of payments are physically transacted and the other comprises the means by which all the transactions are settled or cleared. Until the early 1980's, both parts of the payments business were effectively the sole province of banks. Banks' access to the centralised clearing system, allowing for the settlement of all payments, and their exclusive ability to be able to offer cheque accounts (which once were virtually the only means by which companies and individuals could participate in the payments system), were a source of great value to banks. However, the value and cost that customers get from being able to access the payments system was not well understood, and still may not be. The lack of understanding resulted in banks not adequately pricing transaction services and in cross-subsidies evolving between the transactions/payments part of banking and the savings and credit businesses.

Because historically there was no interest paid on cheque accounts, banks could afford to build or lease lots of branches in order to make it convenient for their customers to open cheque accounts. Indeed, the only way in which banks could market effectively and ensure a steady growth in business was to continue to build new branches wherever there was a newly identified customer base emerging. While cheque account holders did not receive any interest on their balances, they equally did not have to pay for the convenience of being able to go to a branch in any suburb or country town and have branch staff attend to their needs.

A variety of developments have had an impact on this once simple, bank-run payments system. First, subject to regulation, other institutions such as building societies and credit unions were allowed to become participants in the transactions part of the payments business. Banks no longer were the only organisations to offer cheque accounts – you could get access to a cheque account via your building society or credit union or as an add-on to your cash management trust investment. Second, the restriction on paying interest on cheque accounts was lifted. In so doing the main source of revenue for maintaining and further expanding the branch network was lost. The dilemma was soon faced: customers' preference for the convenience of branch access versus their perhaps even stronger preference for earning competitive rates of interest on cheque accounts and all other deposits. The dilemma was further compounded by customers having learned not to associate use of the payments system, including making transactions in branches, with any costs.

In today's environment, cross-subsidisation will ultimately have to end. Customers want competitive pricing to be available for each of their credit and savings products, and this will make it impossible for banks to continue using the margins in the savings and credit businesses to pay for the costs associated with providing a payments, transactions and settlement service. However, the market is still grappling with trying to appropriately value the payments system and apply prices to its various components in a manner that truly allows it to be a stand-alone business.

The challenges of pricing transaction services are great. In a normal business increased usage or purchase of a product will add to revenues and eventually, after the break-even point is reached, it will incrementally add to profitability. In the case of banking services, increased cheque writing, branch visits and ATM usage adds to a bank's costs but not necessarily to its revenues because revenues are mostly dependent on the size of the balances in the accounts. Equitable pricing of transaction, savings and credit services is required from the customer's perspective and it is also required if a bank is to make correct strategic decisions and have flexibility in its capacity to adapt to a changing market.

Technological innovation is also changing the way transactions can be carried out. Electronic funds transfer, automatic teller machines, EFTPOS, increased usage of debit and credit cards, stored value cards, telephone banking and computer banking all have the potential to offer greater convenience and more cost-efficient payment solutions. Technology also offers the potential to reduce the inefficient and wasteful movement of money by means of tonnes of paper and millions of staff hours of processing cash and cheque transactions in hundreds of branches and backoffices.

Having the ability to deposit a cheque and withdraw funds at an ATM at 11.00 pm rather than between 10.00 am and 3.00 pm at a branch is a new, and obviously more convenient way of facilitating payments between parties. Technology does not take away the requirement to make payments. Rather, it offers the prospect of much greater convenience for the execution of transactions, and of lower costs, provided banks are able to substitute the new for old. What banks cannot afford to do is keep the old branch network for facilitating payments and simply add on the new technology. New players in the market will invest only in the new technology and their costs will be commensurately lower. For banks to be able to compete they must somehow substitute the new for the old,

to arrive at a much better balance of costs and consumer choices. Customers are not prepared to pay the cost of operating both the old and new technologies.

Every country needs an efficient and safe payments system, one that can always be relied on to deliver the promised value exchange service. Banks are good at facilitating value exchange via the payments system and have a record of innovation and unquestioned reliability in this area. It was banks that introduced EFTPOS, increasingly sophisticated ATMs and on-line access to bank accounts for corporate customers. The banking sector will continue to make further investments in technological innovations.

Ongoing developments in computer and communications technology and the trend that has developed for non-banks to participate in various forms of the transactions part of the payments business will result in more and more non-bank competitors seeking to earn revenues from some portion of the payments system. Taxi companies and government transport organisations are issuing prepaid cards, retailers are setting up their own EFTPOS networks and Australia Post and DigiCash are providing registration and verification systems for Internet payments. These developments are all indicative of the change and diversification the payments business is undergoing.

That said, for entities that are not banks to play a core role, in particular a settlements role, in the payments system in the same way that banks do is not something that any country's regulators will undertake without careful consideration. For a payments system to operate effectively there must be complete integrity in the clearing mechanism that allows counterparty settlements to take place. A non-bank organisation would have to have a very large and strong balance sheet and be prepared to have its activities suitably regulated in some way if it was to become a core participant in the payments system in the same way that banks are. Gaining participatory access to the payments system comes at a considerable cost and that cost would have to be borne by any would-be new participants if the system's integrity is to be maintained.

The payments business is much like a chain, with value exchanged and honoured from participant to participant. Like any chain, it is only as strong as its weakest link. The international distress caused by such obscure institutional names as Bankhaus Herstatt, Penn Square Bank and Drysdale Securities, underline the critical components of strength and integrity as prerequisites for payments system participation. Don't forget the payments business is both enormous and essential. In a country like Australia it is not unusual for all our payments systems together to turn over the equivalent of our annual GDP every five days.

5. Risk Management

Risk management has always been a core part of the business of banking. A bank's internal risk-management policies and activities are essential to its business. They are required to ensure adequate liquidity, appropriate matching of assets and liabilities, maintaining the value of the loan portfolio, preserving the integrity of deposit funds and payment flows and ensuring that the overall operations are run efficiently and with integrity.

As a result of having to develop their own risk-management capabilities, banks have also been in the position to be able to offer their corporate customers risk-management

products and services. Banks offer a wide array of treasury products that help corporate customers manage their interest rate, foreign exchange and commodity price risks.

From this point it was a logical step for banks to move into offering consumers risk-management products to fill out the overall package of available financial services. Products such as life insurance and home and car insurance are logical adjuncts to the savings and credit products banks offer their customers. But a bank needs to carefully assess the most appropriate way of participating in this broader risk-management market.

With risk-management products there is an underwriting function and a distribution function. An experienced specialist insurance company is often better placed to carry out the risk assessment, the actuarial evaluation and pricing, than is a bank, because the development of expertise and economies of scale operate in insurance just as do they do in banking. The insurance company may then choose to carry some of the risk itself and the rest it will lay off with other specialists. A bank's balance sheet is not necessarily as well suited to carrying insurance risks.

On the other hand, insurance companies may be less well placed than banks to carry out the distribution function for certain risk-management products. Insurance companies do not have the extensive customer access which banks have nor do they generally have the range of relatively low-cost, newer distribution channels that banks have been developing for customer access.

The continuing evolution of the financial services sector will see further unbundling of risk management into its component parts, with each part being undertaken by those organisations that can carry it out most efficiently and at the lowest cost. There will be further disaggregation and more market segmentation and specialisation in both the underwriting and distribution functions. And while the overall boundaries between what constitutes an insurer versus what constitutes a bank may continue to blur, the blurring will not necessarily extend to which organisation is best suited to administer or provide one of the disaggregated parts of each industry. The skills that it takes to be really good at underwriting and even distributing insurance products are not necessarily the same as the skills required for credit or savings or making the payments system work with complete integrity. Just as not all banks would make good insurers, so too not all insurers are destined to be great bankers.

6. Conclusion

There are dramatic changes taking place in each component of the businesses within banking. This requires the development of new skills and new ways of doing business. If banks are to be truly competitive, each element of their business will need to be carried out to a standard that matches the world's best practice.

Whether or not a bank is operating in the international arena or in the domestic marketplace, international standards will apply to the provision of competitive banking services. There are developments and trials taking place around the world aimed at getting each aspect of banking more efficient and less costly to provide. The technology that emerges has no national boundaries, therefore future standards will be set by whatever is international best practice in each unbundled area of the business.

It would be foolish for any bank to think it could continue to carry out all the current functions of banking at a standard that matches international best practice. Each bank, or financial services provider, will need to carefully identify where the competitive dynamics sit for its particular circumstances, identify its strengths and develop these to world standards. In the areas of its business where it cannot match international best practice, the bank or financial services organisation will need to look for solutions in outsourcing and/or the formation of operational and financial alliances, or consider withdrawing altogether.

Successful banking in the future will require a deep understanding of the four components of banking and of the different trends and evolutionary paths emerging in each. There will continue to be more disaggregation and more disintermediation, and new kinds of disintermediation. But far from banks being left behind the emerging developments, banking will continue to remain at the centre of all the change. Banks, as institutions, have existed and evolved for hundreds of years. They have consistently met their community's needs for credit, savings, payments and risk-management services; and have adapted these services to embrace whatever new technologies have emerged: from telephones to computers and now the Internet. Despite the many existing changes we see ahead, the world still needs institutions to deliver the component services we label as 'banking'. The banks who will prosper in this environment will be those which understand what is going on and can adapt their businesses accordingly.

A Banker's Perspective on the Future of the Financial System

William Ferguson

1. Introduction

The changes affecting the banking industry are well known and widely discussed. The key questions are how quickly these changes evolve, the form in which they will take root, how existing institutions adapt to them and the ultimate impact they have on the efficiency, stability and safety of financial markets. Citibank itself has been at the forefront of many of these changes and they are totally altering the way we do business, just as they are restructuring the industry in which we do business.

Banks have dominated the provision of financial services for several centuries providing five basic services: financing (debt and sometimes equity capital); safekeeping and investment services; payments and settlement mechanisms/systems; risk-management techniques; and financial information and advisory services. This domination has been due to various factors but certainly a protected franchise derived from the state as licensor and regulator, together with the relative simplicity of the services provided, demanded and required by the end-users, have been pre-eminent.

The late modern industrial period for banking began in the 1930s and lasted some 50 years into the early 1980s. During this period, banking was relatively stable, though alternative models were adopted in the functional separation of the United States and the universal banking of Europe. The forces of change were already at work in the early 1970s to undermine this equilibrium. And certainly since the 1980s the industry has been subject to enormous pressures to change driven primarily by technology, deregulation and globalisation. The five basic services still exist but banks are no longer the sole providers and customers are increasingly sophisticated in the type of products they require, what they are willing to pay for them and how they want the services delivered.

As practitioners we deal with the issue of adapting to changing times and it is no less urgent and threatening to the large institutions like ourselves than it is to the smaller players. The marble plaque commemorating the New York Clearing House building contains the names of some 134 banks of which only seven or eight are left as members. This serves as a vivid reminder of what happens over time and the imperative of adapting to change if one is to survive.

We all operate in the same environment, we see the same trends but what should we do – as bankers, as non-bank financial service providers and as guardians of the public interest? Making the task even more challenging are the often unanticipated consequences of identified trends. Where you end up is not always where you seem to be headed. It is also not clear how quickly the trends will evolve. History would indicate a strong tendency to overestimate the pace of change in the financial services industry. There is considerable viscosity built in through special interest groups, regulatory barriers and consumer conservatism related to their financial affairs.

I believe that the slower pace of change is advantageous in that it gives us more time to carefully consider options and strategies, by both practitioners and regulators, without the need to rush into new business strategies, altered structures and new systems. A clear understanding of this point will help ameliorate some of the difficulties often created by overreaction and undue haste.

In my brief comments, I want to make several observations about the underlying trends in the financial services industry that I think are pertinent to the Australian banking scene. These include: the unavoidability of the fundamental changes underway; the dual impact of globalisation; changing cost and performance dynamics; risk management; and the major changes ahead in consumer banking. In doing so, I am more than mindful that the regulatory environment is a critical element in how the Australian financial system develops, and in particular the role of banks in that system. However, I intend to make only passing reference to this important dimension adequately covered elsewhere.

2. Unavoidability of Fundamental Changes

My first observation is that the Australian financial sector is subject to all the same trends we see in the United States and Europe. These trends will continue and intensify, not diminish, and they will have an increasing impact upon the Australian market. The result, I believe, is that in the not too distant future in the OECD countries, the banking industry as we know it today will no longer exist. Institutions called banks will remain for either the simple and relevant reason of customer awareness or for more complex and important regulatory reasons. But the provision of the five basic financial services will be from a very different industry structure with a different profile of providers. The point is that markets are more efficient than institutions and the process of banks being disintermediated by capital markets and more efficient, competitive non-bank providers of financial services will not abate.

The institutions – or 'holding companies' – that evolve from the likely series of new entrants, amalgamations, takeovers (hostile and friendly), and organic growth over the next few years, will be operating along a spectrum of service positions. Some providers will be operating in a manner which is characterised by traditional bank balance sheet intermediation but to a more restricted customer base. Other providers will be underwriting capital market fundraising activities, managing investment funds, selling investment instruments, issuing credit cards, offering insurance, and so on. More and more we will see specialty providers. Universal banks will remain but in a very re-engineered structure with more disaggregated and focused service delivery. Overcapacity and inefficiency is everywhere which means continued consolidation at the same time we experience diversification of providers. Regulation will dictate the framework for the extent, speed and exact form of how these changes and institutions evolve.

The dynamic underpinning to this evolution has both demand and supply characteristics. The demand side will be the dominant one. It will be the services that the end-users want, the products they like, the style of delivery which is most convenient to them and whether the relationship is transaction-specific or long-term, which will primarily dictate how the provider responds; not, by and large, the provider determining what the customer needs. Individual providers have the big task of anticipating these needs and responding before others do. And in that intensely competitive arena, while customers will invariably win

out, the challenge for providers will be to win market share, maintain profitability and minimise risk. The challenge for the regulators will be to ensure that industry standards and the soundness of the financial system are maintained without impeding innovation or imposing high costs.

In the Australian context, the above considerations imply that there will be an evolution towards further consolidation, fewer domestic providers, more specialisation and a greater share for non-bank and international providers. Obviously the recommendations of the Wallis committee and the government's position will either facilitate or inhibit these trends.

3. Globalisation

My second observation relates to the impact of globalisation on Australia. A relevant question, is how can a strictly local 'player' remain competitive?

As more sophisticated corporate and individual customers require increasingly competitive products, many traditional domestic providers find it difficult to match global institutions. Similarly as more customers engage in business or investments overseas, local providers encounter barriers to meeting best of class services on their own. For most it is a matter of critical mass, resources or the inclination to undertake the difficult task of establishing an international network, be it via branches, representative offices or acquisitions, and that is fair enough. Recent history clearly underlines how difficult such a process can be, particularly if it is undertaken more by way of 'keeping up for the sake of keeping up'. The demand for global services and for best of class products will not diminish, however; it will only grow. While I am sceptical about the ability of local banks to compete broadly for the business of sophisticated and/or internationally orientated customers, I believe some can do so selectively in areas where they have special competencies. Beyond that they can also form alliances and outsource, and in fact will do so. I have a suspicion that the going will be tough for the smaller local banks in this area. Capacity to deliver global products and to satisfy global needs will be the hallmarks of successful major financial service providers in the future, be they of domestic origin like the 'Big Four', or of foreign origin like Citicorp. Large regional or global financial institutions will increase market share at the expense of smaller, local players. But there will also be consolidation among regional and global players with fewer players at this level as well. This trend argues for the emergence of possibly one or two Australian-based banks that can compete effectively regionally if not globally.

In part this issue will be determined by the regulators. Will they let large multinational organisations, or for that matter large domestic organisations, absorb smaller banks? Or will they preserve an independent role for them? In the former case, I see similarities between what has occurred in the computer services industry and accounting professions, with the development of big organisations which have the capacity to easily stretch over national boundaries and provide services more competitively and comprehensively. Smaller bank players, to the degree that they survive, will have largely niche roles. Under either alternative, a major issue for the larger traditional domestic banks is the extent to which they want to become really international, or whether they want to focus their abilities on building up a strong regional business in Asia and the Pacific. And in pursuing their desired strategy, they will need to determine how they go about it: whether they

decide to rely more on their own resources, or whether they see merit in expanding through affiliations with other local, regional or international banks.

4. Another Aspect of Globalisation

My third observation is that globalisation presents an opportunity for Australia, for I believe the country has the capacity to develop as a major regional financial services centre. Clearly Australia is already a reasonably large financial centre in this part of the world but it has tended to take a back seat to Tokyo, Hong Kong and Singapore. There are various reasons for this, some economic or financial and some to do with inertia. Notwithstanding this, the trend to disaggregate and create centralised processing and service centres, as well as the trend toward 24-hour trading not just in financial markets but in corporate banking, investment management and transaction banking, requires access to sophisticated financial service centres around the globe. With its well-educated workforce, its supportive political, economic and legal systems, its favourable time zone and, increasingly, its competitive cost base, Australia has a very good opportunity to establish itself as a favoured domicile for regional operations centres. The more that this occurs, it will strengthen the local financial sector, which in turn will attract more regional operations. Certainly the trend is for further consolidation in designated centres and Australia should be able to be one of those centres. What is lacking is a widely held vision that such a role is possible for Australia and the commitment to leverage its natural advantages and create a more hospitable environment through continued tax reform, liberalisation of immigration policies, more competitive transport and telecommunication facilities and continued improvement of financial trading markets.

5. Cost and Performance Dynamics

My fourth observation is that in the intensely competitive world of modern banking, the imperative to reduce costs and increase productivity will be unrelenting, as will the pressure for improved operating performance. Banks have tended to be high-cost organisations with low and inconsistent returns on equity. That luxury is no longer available. As is the case with other 'traditional' industries such as retailing and manufacturing, the pressure on margins from competition is growing. With a limited capacity to raise prices, a reduction in unit costs is the only solution. The 'easy' way of doing this is to reduce overheads and this process is continuing. The harder way is to boost productivity. That is where technology and the pursuit of high-volume, low-cost products in different markets will come to the fore.

It is only recently that years of investment in technology and gradual liberalisation has resulted in major productivity improvements. The trend is accelerating. Whole new delivery systems are emerging based on ATMs, telephone banking, PC-based banking, and now the Internet. We are also seeing rapid developments in electronic data interchange, image processing, laptop sales support systems, computer trading, computer-driven risk management and a whole array of new automated product-processing systems.

Globalisation is permitting consolidation as previously discussed and the resources to create world-class facilities and leverage global supplier relationships. The cost and

performance pressures will also result in increased outsourcing and new forms of alliances between banks and non-banks, particularly technology providers.

6. Risk Management

My fifth observation relates to the implications for risk management. Because of the intensity of competition, risk-management standards will be under pressure, and continued vigilance is therefore required to ensure that the excesses of the recent past are not repeated. Moreover, as we move further towards a global economy, we are in many respects still relying on risk-management systems geared to a less integrated world. And with increased global linkages comes greater vulnerability to events from which we may have previously assumed we were immune.

The old problems of bad debts and non-performing loans for banks are unlikely ever to go away. The economic cycle and human nature – both from the perspective of greed and the capacity for errors of judgment – will ensure that. But in addition, risk issues are changing because of globalisation, the changing nature of products, the complexity of payments and settlement issues and the impact of new entrants. If banks and other financial institutions, in pursuit of market share – or perhaps survival – are led into ever more marginal transactions or activities for which their monitoring systems are really not designed, problems will emerge again. This has obvious implications for systemic risk and economic management.

An onus to avoid such outcomes is obviously on the regulators, but the more important onus is on each organisation in the industry itself. It will be important for us to monitor and assess emerging risks and potential problems over the medium term. While working out exactly when and how the next financial problem is likely to occur is impossible, this should not prevent financial organisations from being at the forefront of judging where, how and why potential risks will build. In doing so, the relaxation of risk-management guidelines in the face of competitive pressure and the inadequate appreciation by senior management of exactly what risk the organisation is exposed to (and this a real concern given the knowledge gap between many new derivative and capital market instruments and senior management career experience) are just two of the issues to which organisations need to be sensitive.

Another area of concern grows out of the rapid increase in risk exposure by many of the emerging non-bank players in the financial system. Their lack of experience in many cases with credit problems could lead to a repetition of the mistakes of the generation of bankers who experienced the pain of the bad loan problems of the early 1990s.

Despite the liquification of our balance sheets and the big changes in products and innovation, we are not necessarily taking on any less risk. Risk assumption is only taking a different form. This need be of no concern as long as we are confident that the new and highly automated risk-management systems in place are accurately measuring the extent of our exposures. It will prove to be a nasty shock if we discover that, in the event of a major financial problem, our theoretical risk models have given us a loss profile which is substantially different to what is actually incurred in the real market. One need look no further than the 1987 stock market crash and the more recent problems with some major derivative deals in the wake of the 1994 bond market sell-off in order to gain an appreciation of this point.

Overlaying all of the above is the technological revolution in risk information processing. Many of our new financial products are possible only because of the capabilities of computers to process and analyse high volumes of data and market variables quickly and accurately. This is not inherently bad; quite the contrary, many of these products are greatly improving our ability to manage exposures generally. But it is new and different, involving large volumes and with limited experience. I do not wish to sound alarmist, but this is an area that needs continuous review.

7. Consumer Banking

My sixth and final observation is that often most of the attention in discussing the changes in the banking industry relates to wholesale banking. There are many reasons for this, ranging from the initial disintermediation of corporate borrowing that began the current restructuring of the banking industry, to the fact that most major bank CEOs and senior officers are corporate or investment bankers. But retail banking is in many ways undergoing even more fundamental and revolutionary changes than wholesale banking, with far-reaching effects.

While the change is just beginning in Australia, as alternative providers of mortgages have entered the market and retail funds managers have grown, overseas it is a major area of change. Consumers in the United States no longer keep the majority of their funds in the banking system. Fidelity's mutual funds have grown to over US$400 billion in 1996 making its 'deposit base' larger by far than any US bank.

Growing consumer wealth is driving demand for new products. The consumer is interested in convenience, good service, low costs and competitive rates. Technology and deregulation are providing flexibility to consumers and lower costs. Suppliers have multiplied rapidly and high service/product quality and 'fair value' are required for brand loyalty.

In Australia, like the United States, we see growing consumer wealth underpinned by an ageing population, and the concomitant rise in savings and disposable funds in search of attractive investment outlets and the growing sophistication of customers interacting with mushrooming technology.

From the supply side there are more service providers than just banks, for example, brokers, insurance companies, and funds or mutual fund managers, which can provide retail services across a range of products either packaged or unbundled.

From only a few years ago, when bank passbooks were slipped down a chute for signature verification, when account balances were depicted in neat handwriting and bank managers decided whether to grant loans on the basis of the length of time applicants had been clients, not only of the bank, but of particular branches, we have come a long way. The retail world is now one of ATMs, CATs, EFTPOS, credit, debit and charge cards issued by banks or non-banks, home banking and now the Internet. With rapidly improving network security, transaction execution is just around the corner. In fact, it has already begun. Many banks offer on-line banking through Intuit's Quicken Software; Microsoft Money offers a similar service. And this is just the beginning: in the end a banking function can be a few lines of application code on a network. And thus we are on the way to electronic money – freely exchanged over communication networks

and other electronic media – the foundation for which is already being laid as we move to automated payroll credits, debit cards, scriptless securities, and the like. Customers can choose from a smorgasbord of investment and loan products. While it might seem that a lot has already been undertaken, I consider that the changes have only just got under way.

I expect to see a further proliferation of retail services, especially in the investment and deposit areas but also extending to financing activities and the payments system. As the 'high-end' corporates become more separated from traditional banking services, switching to the capital markets and independent service providers, banks are going to increasingly concentrate on the 'middle market' and consumers in their quest for business. Small businesses and consumers are therefore going to have before them an even more extensive, possibly bewildering, array of options.

For some, this may seem a rather strange conclusion given the ever-increasing number of bank branch closures and the introduction of fees, both of which are often equated with reductions in consumer service. But the reduction in cross-subsidies will permit a clear quantification of the economics of viable service provision and hence the capacity to deliver better, more targeted products. The closure of branches, while the end of an era, marks the acceptance that customers can be serviced by an increased proportion of behind-the-scenes bankers using new technology in a variety of ways, such as over a telephone, a computer line or a 'kiosk' in a store.

The critical issue will be how customers react to these and other changes. The bottom line, I believe, is that the reaction will not be adverse and that customers will increasingly appreciate the improved services available to them. From the providers' perspective, they need to keep firmly in view the fact that only through technology and the drive to be innovative can they attract and retain consumer customers. As previously stated, the consumer is loyal to individual organisations for four basic reasons: convenience; low costs; service levels; and competitive rates. More sophisticated consumers will appreciate factors such as global reach. But the capacity to deliver on the above factors will determine the success or failure of organisations involved in the retail sector.

8. Conclusions

In summary, banking definitely has a future and it will be an exciting one. But it is unclear exactly what role traditional banks will play, assailed as they are from all sides by an array of competition: ever-larger banks, specialised banks, global banks and, not least, a variety of non-bank competitors. I believe that there is a role for many existing banks but not without change and we should be under no illusion that this will come easily.

Similarly, it will be difficult for the regulators as well to effectively promote economic efficiency, prudential soundness and the public interest in such a vastly different environment. We can all take comfort from the earlier observation that while the change process is irreversible it moves slowly, with time for both practitioners and regulators to digest, analyse and respond wisely. I have no doubt that this will be the case in Australia.

An Industry Perspective on the Future of the Australian Financial System

Tony Cole

As three of the four industry perspectives are being offered by bankers, I have decided to concentrate my brief remarks on the likely impact of funds management and particularly compulsory superannuation on the financial system and its regulation.

Over the next half century the OECD member countries will experience a pronounced, synchronised demographic cycle. Very high aged and total dependency ratios will pose fiscal problems for governments and erode the household sector's saving capacity.

A decade before ageing begins its impact on Australia we are already experiencing a chronic savings deficit. This is most easily seen in our current account deficit which has averaged a little over $4^1/_2$ per cent of GDP over the past 15 years. Through that period there has not been one whole year in which the deficit has been less than 3 per cent of GDP – the level which the government's economic advisers suggest is the highest average level which is sustainable in the longer run. One consequence of this long run of deficits has been a large increase in the level of Australia's foreign debt and other obligations – from 21.4 per cent of GDP in 1980 to 58.5 per cent in 1995.

There are differing views among economists about whether current account deficits (and savings shortfalls) matter. I belong to the camp who think they do. It seems obvious to me that countries with large net foreign obligations have less national economic sovereignty. Perhaps partly because they have been persuaded by people like me, both major political parties in Australia seem to agree we have a problem.

The scarcity of domestic and international saving seems likely to be a dominant feature of the environment in which our financial system evolves and functions until mid-way through the next century. In this environment there will be little cheap money around. Investment returns should be high on average and the cost of servicing our overseas debt and obligations will also be high.

As Malcolm Edey and Brian Gray showed in the first paper presented at this conference, government intervention and regulation have played a dominant role in the past evolution of our financial system. Government's response to the savings problem is already affecting its future. That response contains three strands – compulsory superannuation, fiscal contraction and building a community expectation of less adequate publicly provided pensions. All will have significant impacts on the financial system.

Compulsory superannuation and declining confidence in the public pension system will combine to increase the flow of household savings into superannuation funds. Life offices and superannuation funds are already receiving around 50 per cent of the total flow of household investments in financial assets, a dramatic increase on the 20 per cent they received in the 1970s.

The net impact of compulsory superannuation will increase dramatically over the next few years. Compulsory contributions will rise from their current levels of 6-7 per cent

of earnings to 12 per cent. Additional government co-contributions of up to 3 per cent are scheduled for most employees. As the level of contributions increases it becomes more and more difficult for individuals to offset the impact of the system by reducing their other saving. As compulsory retirement saving was phased in, people responded by reducing their existing saving. Not surprisingly existing superannuation and other long-term savings were the first to feel this effect. To date the system's impact has largely been on the way long-term savings are held rather than its level.

Because of compulsory preservation, it is difficult to see that compulsory superannuation savings can be as close a substitute for 'other' savings – people will still need to hold transactions and precautionary balances. For these reasons it seems likely that the second half of compulsory superannuation will have a larger impact on total saving than the first half.

Overall then, compulsory superannuation should increase total saving and funds management's share of the total, but it will not 'crowd out' bank deposits. Because of the interaction of inflation and taxation of full nominal interest, and because of their place in the risk/return spectrum, bank deposits are not a wealth accumulation vehicle. They are largely held for other reasons for which superannuation balances cannot substitute.

The proposal to create Retirement Savings Accounts (RSAs) which enjoy superannuation tax concessions will partly overcome the taxation issue and might therefore divert some of the superannuation flow to the balance sheets of the banks. Because of the relatively poor underlying returns bank deposits offer for long-term investors, however, the appeal of RSAs is likely to be limited to those with small balances and those who place a high premium on convenience or the regulatory comfort provided by the 'bank' label.

Fiscal contraction will also have an impact on the financial system. As superannuation assets grow very rapidly the supply of one of the major asset classes – government bonds – will stagnate or contract as governments have less need to issue new debt. While it is probable that the asset allocation patterns of superannuation funds will continue to move towards real or growth assets, there will be a continuing increase in the absolute demand for debt instruments. Some of this will no doubt be satisfied by increased take-up of foreign government paper, a trend we are already seeing for risk-diversification reasons. But it is also likely that interest will grow in private sector debt instruments.

Past attempts to establish a corporate bond market in Australia have not been successful. Domestic lenders' preferences for the highest quality credits have resulted in wide margins for other borrowers who have therefore found offshore issues more attractive. More recently, floating-rate issues backed by mortgages have had a better reception.

What does the future growth of compulsory superannuation mean for banks and for their roles as providers of transaction services and credit? My short answer is not as much as many people think.

As institutions, the primary focus of superannuation funds is on accumulation. Their systems are designed around that function. They could not become providers of transaction services without reinventing themselves. It is hard to see a business need which will be sufficient to justify the costs involved. Any challenges to banks as

transaction service providers will come from elsewhere. In the long run, of course, this is a vital issue for the banks as it is their role in the payments system which underpins their special position in the regulatory system. Indirectly, the funds management industry might help create increased opportunities for non-bank competitors to enter the transaction services market. As the banks are forced to unbundle their products and charge an economic price for transaction services it will become increasingly attractive for telecommunications companies and others to enter the market.

It is useful to consider the impact of compulsory superannuation on the banking system's credit provider role on a sector by sector basis. Loans to individuals account for almost 40 per cent of the total assets of Australian banks and lending for housing represents more than 80 per cent of loans to individuals. We have recently seen the banks' dominance of this sector come under attack through securitisation. A significant contribution to this has come from the superannuation members' home loan scheme. This product is not home lending by superannuation funds. The lending and servicing of borrowers, and the securitisation, is being provided by a life office. Superannuation funds have provided the initial financial contributions and their investment managers may invest in the securities generated (as they have in securitisations more generally). The badging of the retail product has assisted the life office in its marketing of loans. The payoff for superannuation funds has been in the promotion of brand loyalty.

In the past, market shares in household credit have shifted dramatically between the banks and non-banks. These shifts were generally in response to regulatory changes and at times imposed high costs on borrowers, both in terms of access to credit and its price. Such factors have little to do with current market developments. Traditional banking has been losing market share to more competitive products. The banks are now responding and, while their recent dominance of the sector might not be restored, should be able to retain a strong presence. It is through this process that deregulation is providing benefits to consumers.

The second sector is credit for small and medium business. I am aware of efforts being made by National Mutual to replicate their home loans product for small business lending. The banks have a comparative advantage in business and risk assessment for small business borrowers. This flows from their role as providers of transaction services and their continuing presence on the ground in business centres. It will be difficult for funds managers to challenge their dominance. I will be surprised if the degree of success is even close to that in housing. Nevertheless the additional competition will be beneficial. Again the motivation for superannuation fund participation in the scheme seems largely to be promotion of the fund to people who may have a role in deciding what fund a firm's employees should join.

As to the larger end of town, I have already suggested that as government debt-issues contract, funds managers might look again at this market. The banks can probably expect new competition for prime corporate business. I would note that this is already a highly competitive area with competition between the banks and from overseas keeping margins low. It is not clear that the banks have a lot to lose in terms of profitability or that the funds have that much to gain.

Players in a deregulated market have to expect challenges from new directions. Just as the banks have cherry-picked the markets of the non-bank sector, life offices and funds

managers will cherry-pick the banks' most profitable services. Bundled services and cross-subsidised services will feel the pain as the market ensures users pay. As this progresses the banks will find that the removal of cross-subsidies will also open the previously subsidised services to competition. That was always going to occur under deregulation and represents a move to more efficient markets.

In sum, banks will be under continuing pressure in most areas of their business from non-bank competitors, including the investment managers employed by superannuation funds. In assessing their future business prospects, however, it is important to note that the banks' own subsidiaries are aggressive competitors in the funds-management business. While compulsory superannuation poses threats to some bank businesses, the banks themselves have been quick to seize the opportunities it also provides. While the portion of the business the Reserve Bank prudentially supervises seems likely to shrink, there is no reason at all to expect the businesses in a broader commercial sense to do so.

An Investment Banking Perspective on the Future of the Financial System

Rob Ferguson

1. Introduction

The forces which are shaping the financial markets of the future – globalisation, technology, regulation – are being widely discussed. In this paper I want to focus on some current institutional developments which will affect banking and investment banking over the next five to ten years.

2. Excess Capacity in Global Banking

It is well known that in the global banking industry there is an excess of capital in aggregate. Some banks recognise this and are reducing capital by share buy-backs. Others are doing what banks traditionally do with excess capital: use it to expand, even if these expansion moves are questionable. In particular, several of the large European universal banks have excess capital and substantial market capitalisation. Their aim is to use these attributes to convert their domestic strength into a global investment banking presence. This is happening at a time when there is also excess capacity in world investment banking.

Investment banks aspire to be leading participants in all or nearly all of the following activities: corporate finance, both public and private; mergers and acquisitions; sales, trading and research of equities, foreign exchange, fixed income securities and derivative products; and investment management and related operational services.

Increasingly, those aspiring to success in these activities are striving for a global reach which typically comes from being part of a global organisation. These organisations seek global reach because many of their customers are now involved in global competition and there is a strong conviction that to hold your customers you must offer them global skills.

Who are the aspirants in this game? A recent (April 1996) research paper by Rafael Soifer of Brown Bros Harriman and Co New York listed sixteen names:

US-based	*European-based*
Bankers Trust	ABN Amro
Goldman Sachs	Barclays
Lehman Bros	CS Holdings
Merrill Lynch	Deutsche Bank
J.P. Morgan	Dresdner Bank
Morgan Stanley	HSBC Holdings
Salomon Inc	NatWest Group
	Swiss Bank Corp
	Union Bank of Switzerland

On the European list all the aspirants are also large retail banks. In contrast, there are no retail banks on the US list. Bankers Trust used to be involved in retail but shed these activities long ago while J.P. Morgan historically operated as a wholesale bank. The other US names are non-banks with a background in either equity or fixed-interest sales, trading and research.

This lack of retail banks on the US list largely reflects regulation. Commercial and investment banking were legally separated in the US between 1933 and 1990. In Europe on the other hand, commercial banks have dominated the investment banking and broking business for generations and this is where the model for the universal bank – the bank involved in retail and wholesale banking, investment banking, insurance and funds management – evolved.

At present, many of the European aspirants are cross-subsidising their thrust into global investment banking from their entrenched domestic retail or wholesale banking oligopolies. The European firms are very large in terms of market capitalisation and seem prepared to accept lower returns on equity than their US counterparts. For example, HSBC Holdings is currently valued in terms of market capitalisation at five times that of Morgan Stanley, six times that of Bankers Trust and ten times that of Salomon Inc.

The obvious way to establish a position in global corporate finance would be to buy one of the leading US houses. However, this is prohibitively expensive because market prices reflect the high profits which those houses have been earning from the long equity bull market in the United States.

As an alternative strategy, to get a foot in the door, the European banks have been aggressively buying staff out of the US investment banks – individuals and whole groups – in some cases doubling or tripling already high remuneration. This thrust comes in spite of the fact that of the 16 aspirants for an enduring role as a global investment bank, less than half are likely to make the cut. That is because there is excess capacity in investment banking. It has been a booming business for many years, thriving on the turbulent financial environment which has been with us for two decades. Investment banks have grown and added capacity, but the environment in which they prospered may have changed.

I believe February 1994 may have marked the end of an era of transition from regulated finance to deregulated finance. That transition required changes in the attitudes and behaviour of investors, institutions, market-makers and regulatory authorities and as they all felt their way, they had to cope with sharp changes in fiscal and monetary policies, inflation, surges of speculation, and the like.

In February 1994 the bond bull market collapsed and triggered the end of the speculative use of derivatives and Latin America and South East Asia bull markets. The fact that the bond bear market was largely unconnected to fundamentals, just like the 1987 equity crash, showed that it was a phenomenon largely due to too many players getting on board. Even the supposedly smart players were hurt. So perhaps the markets have come to understand the rules of the new deregulated game and what happens when everyone runs in one direction against a background of steadier fiscal and monetary policies.

So where does all this lead? There is a sense in which the players are right to see a future in global investment banking. The corporate finance/underwriting/equity business

is becoming globalised, in tandem with its globalising corporate clients. The business was once predominantly domestically based with funding and merger and acquisition technique as its products. These have now been commoditised and the business is increasingly about the provision of industry-specific global strategic advice; for example, Goldman Sachs can deal with Telstra because they follow telecommunications world-wide. This means they can talk the dynamics of the technology as well as the changing commercial issues of the business.

At the same time as this global future is realised, excess capacity will be squeezed out – a rationalisation that may be assisted, after the 1996 US election, by reform of the Glass-Steagall Act, prompting European investment banking aspirants to acquire US investment banks. European banks seeking to acquire US banks may be joined by large US banks of the size of Bank of America, Chase and Nations Bank with aspirations to be universal banks. Eventually there may be six or eight 'winners' in the global investment banking race.

In the meantime, there will be upheaval. The US players will be weakened by loss of staff and by more mercenary attitudes in those who remain. There are questions about how effective 'bought' staff will be as they may have cultural differences with other 'buy-ins' and the buyer, and they may have short time horizons.

At the end of the day, the firms that survive this battle will be those with strong cultures and a coherent business strategy. Those who use the cheque book to grow will find, as many banks have in the past, that growth in investment banking tends to be organic, given the fragile nature of investment banking cultures.

3. Impact on Australia: Non-Funds Management

How will these developments affect Australia? First let's look at the non-funds management parts of investment banking, where the changes caused by global rationalisation are very likely to be of the 'tail wagging the dog' variety, that is, consequences of other more fundamental international strategic moves. A recent example was the Swiss Bank acquisition of Warburgs, leading to SBC in Australia merging with Potter Warburgs. Fortuitously, this created a very strong Australian investment banking arm for SBC Warburgs due to a complementary set of skills in businesses in the two merged firms. Future local mergers driven by overseas developments are unlikely to be so complementary.

More interesting are the parallels in Australian banking and investment banking. Just as European banks, who have, as universal banks, always strived to be all things to all people, Australian commercial banks, given the same opportunity, have tended to have similar aspirations. This reflects the oligopolistic origins of both industries and the cosy regulated environment that preceded them.

In Europe, commercial banks are much more firmly entrenched across the retail, wholesale, investment banking and funds management horizon. No doubt there are enormous cross-subsidies with retail banking providing the bulk of this. But the cross-subsidisation is not solely driven by excess returns in one area of their business. Several of these banks earn returns at or below 10 per cent return on equity (on undervalued assets). So the subsidy also comes from the past to the present.

By contrast, Australian commercial banks' aspirations to universal bank activity may have passed their peak. One particular manifestation of this is a reduced desire to be involved in stockbroking and other forms of wholesale/retail research and securities sales and distribution activities. On the other hand, Australia's major banks continue to aggressively pursue corporate business even though for many years most large corporates with good credit ratings have been able to bypass banks and go directly to the securities markets.

Why do Australian banks continue to pursue this type of corporate business? Again, the answer is cross-subsidisation – mainly from the home mortgage business. However, this source of cross-subsidisation is being rapidly eliminated and this will force our big banks to price each business properly. As this trend unfolds, our big banks will be forced to focus on what they do well. Corporate activity at the creditworthy end of the market may not be amongst those activities.

For Australian investment banks, once the big banks focus on their areas of expertise, opportunities should emerge to service corporate borrowers with unique non-standard credit needs. These borrowers will be of the type who need a combination of debt and equity raised for them by their investment bank. It is at the point of intersection of debt and equity that investment banks have a special capability but heretofore this skill has been blunted by big bank cross-subsidisation of corporate businesses.

Investment banks have amongst their core competencies sales and trading of securities, in particular debt and derivative securities in a trading-room environment. The big banks compete in these areas but again heavily cross-subsidise. As cross-subsidisation declines, the big banks will review and reduce these activities and create opportunities for investment banks.

On the other hand, the likely rationalisation of global aspirants into six to eight major players will mean reduced activities in Australia by those who miss the cut. Already we have seen a major trend for international banks and investment banks to rationalise their trading-room activities in the one time zone. In South East Asia, representation in Singapore, Sydney, Tokyo and Auckland is giving way to an approach that chooses one location. Sydney has tended to lose out to Singapore in this process.

So far the withdrawals from Sydney have been by players outside the 16 aspirants but as the list of aspirants reduces, we will see further withdrawals from Australia. For global products like foreign exchange, the liquidity consequences of these withdrawals will be minimal, but for more domestically based products, like Australian dollar securities, the impact will be more severe.

The obvious question raised by the likely exit of Australian capacity to other parts of the region is, why? It seems Singapore and Hong Kong are seen as both 'closer to the action' but also much more business-friendly, not so much in terms of taxation, but in terms of the lack of complexity in setting up operations compared to Sydney. Ironically, Australia has become a substantially lower-cost location for these activities, but this message does not seem to have got through Australia's other perceived disadvantages.

4. Impact on Australia: Funds Management

In Europe, funds management was part of the universal banking model and so most European aspirants to global investment management have substantial, albeit old-fashioned, funds-management businesses primarily operating out of their domestic market.

In the United States, funds management and investment banking tended to be separate historically at the wholesale level, so firms like Goldmans, Salomons and even Morgan Stanley downplayed these funds-management activities mainly because of the concern that other institutional clients would not like to see them competing as funds managers when they were also brokers. The end of fixed-rate commissions on Wall Street ended the need for this concern but it has taken a long time for the US investment banks to build their own funds-management capability. On the other hand, Bankers Trust has always been in the funds-management business; Merrill Lynch, as a retail broker, felt less constrained on the competitive issue and so built a huge retail or mutual funds business; and J.P. Morgan as a non-equity broker was traditionally a funds manager.

So the field of global investment banking aspirants is presently very uneven in terms of funds-management capability but almost universally there is a view that this should be a core business. Morgan Stanley has a declared aim of 50 per cent of revenue to come from funds management (currently 30 per cent) and most other competitors would agree with such an objective. Funds-management income is seen as higher quality (the stockmarket puts a higher premium on it) and less volatile (usually associated with higher quality) and so there is a world-wide scramble on at present for global investment banking contenders to build this aspect of their business. This scramble coincides with generational changes at many individually owned funds-management businesses that blossomed in the early 1970s and now are huge businesses with great value and complexity, and that are seen by some to fit better into global organisations.

The merger trend in funds management has some parallels to the desire of European banks, after London's 'Big Bang', to buy into the stockbroking business. The cultural differences between funds management and banking are as wide as they are between banking and stockbroking. Investment banks with their equity sales and distribution backgrounds may be more successful acquirers of funds-management businesses than banks, but stockbroking and funds-management cultures are also very different so it will be interesting to see if firms manage to turn the huge goodwill payments their acquisitions will cost into durable earnings streams.

In Australia, the big four banks, as universal banks, have long been involved in funds management but have struggled with the cultural divides, especially over the last decade or so. One of the issues that the banks in Australia will have to decide is what part of the funds-management business they want to operate in. If pressure from the demise of cross-subsidisation forces them to focus on core competencies, they will have to ask which part of the business suits them.

Put simply, funds management is really three sub-businesses. First, manufacturing – the creation of products and the achievement of investment returns; second, distribution of product to clients; and, third, the processing of all of the transactions involved in product sales and product management.

Product creation is, not surprisingly, a 'creative' business and the culture that fits in such a business often doesn't fit in a bank. Retail banks are basically giant distribution systems with large client lists that can be sold multiple products. Inherent in the sales of these products are big transaction-processing jobs that a bank can do well if it develops this core competency.

I believe banks will ultimately decide that they can add value primarily at the distribution sector of the chain, rather than product manufacture. If they can manufacture a good product to put through their own distribution, all the better. But given that distribution is the retail bank's greatest strength, they are unlikely to want to jeopardise it by selling their own product at the expense of other products that could satisfy customers more. Just as retail stores stock many products, including their own, I believe retail banks will also move this way. Already some have recognised this. On the processing front, while banks can be competitive here, there may be other specialist providers who offer an outsourcing product that establishes industry-wide standards of service and price that all players, including banks, will have difficulty matching.

Undoubtedly the most significant development in the funds-management industry for many years is the Superannuation Guarantee Levy (SGL). Interestingly, this and the associated consequences – in particular the move from defined-benefit to defined-contribution superannuation schemes – have not been really closely analysed by government or the industry in terms of their impact on the industry's future structure. However, the impact of the accelerated move to defined-contribution superannuation is profound. It will fundamentally change the savings landscape from one where individual savers via superannuation relied on others to guarantee their retirement income, to one where savers will now invest their own retirement income. Put simply, savers who in the past either chose a banking system or an employer to take away their investment risk will now become at-risk investors.

There are three types of competitors trying to win market share in the new superannuation business that has arisen out of the SGL:

- banks which traditionally looked after savings on their own balance sheet;
- insurance companies which used a combination of balance sheet and agency relationships to manage money; and
- funds managers which manage money on an agency basis.

Each group has strengths and weaknesses in the battle for market share. Banks have huge client lists but high-cost distribution. If they can lower their distribution costs, their client lists can allow them to build powerful distribution profits based on fee income rather than balance sheet returns.

The SGL by its compulsory nature has led to the Retirement Savings Account (RSA) debate which, if successful, should give the banks a very useful way of gaining new long-term clients. RSAs in themselves may not be very profitable, just like money boxes were presumably unprofitable, but they will give banks a chance to cross-sell other products to RSA holders once they get a sufficient balance to warrant the resort to a balanced portfolio of equities, debt and property. Certainly this will mean low returns for some years for banks on these accounts, but ultimately it should help them build a loyal client base that will have an appetite for cross-selling of products.

The problems the banks will have to overcome in optimising this business are numerous, and in addition to moving away from their costly bricks-and-mortar distribution there are the cultural problems involved in having sales forces selling with a commission agent mentality in a culture that presently finds that approach alien.

For insurance companies, their culture long ago adjusted to the commission approach but the high cost of their commission sales forces is a problem. Insurance companies have long been involved in the superannuation industry and are advantaged in that they have been able to quickly capitalise on the potential to sell SGL-related products through their sales forces. Once again these products may be low return in the initial stages, be they to individuals or to small companies wanting the convenience of record-keeping and simplicity. Over the medium term insurance companies, as with the banks, will develop loyal customers who can be cross-sold other higher-margin products as they accumulate assets.

Funds managers' origins in Australia tend to be from wholesale sources. Accordingly they do not have the huge but expensive distribution systems and instead rely on third-party providers of distribution channels. This is both a strength and weakness. Funds managers, like banks and insurance companies, will have to ask themselves what are they good at in the list of manufacture, distribution and processing. Some may do all of them well – but they will be few and far between.

For funds managers who have been in the mutual fund business since it blossomed in 1982, there will be a need to change the structure of the business to one that is oriented towards long-term saving rather than retirement lump sums. The mutual fund industry blossomed in 1982 because of the 1982 recession and the need of those made redundant in the recession to invest lump sums. The retail funds-management industry has continued to emphasise this market but must now shift to a much different long-term savings market where banks and insurance companies are more formidable competitors. Equally, third-party distributors of mutual funds will need to make a similar transition.

It is apparent then that whatever changes arise from technological advance or regulatory review, they will impact on a system that is already undergoing significant upheaval, with investment banks adjusting to the post-1994 environment and with banks restructuring in the face of declining cross-subsidisation.

5. Competition

Before concluding, I would like to comment briefly on the competitive debate that will be an important part of the Financial System Inquiry chaired by Stan Wallis.

The big event of recent times is the break in mortgage rate pricing which has underwritten a lot of low-return activities of the banks. Now that the genie is out of the bottle it will be very hard for the banks to avoid pricing each business to produce an adequate stand-alone return. This will mean, as I have said, expansion in some areas and shedding of activities in others. In the absence of Trade Practices constraint, the flow-through of these forces would be achieved by merger amongst the big banks leading to the emergence of two big banks. However, while this would undoubtedly allow for greater efficiency via rationalisation of a bloated branch network that has been paid for by mortgage margins, the question is where will the competition come from once these economies have been realised.

It is worth noting that banks acquiring insurance companies, the so-called bancassurance route, is far less likely to be the rational route. Merging the antiquated distribution systems of two hierarchical organisations that need dramatic change will be a very challenging exercise. Insurance and banking mergers would be exercises of scope rather than of scale and rationalisation, at a time when the market is telling all of us to narrow our scope to what we are really good at.

It is also worth asking why, when deregulation brought competition to many areas of banking, it did not see effective competition in the mortgage business? There are many reasons, but the main reason seems to be that the existing banks could see that if one broke ranks they would all break ranks, and there was no one bank that could benefit by upsetting the applecart. In other words, they all had a lot to lose as it funded the rest of the business. Typically you would have expected the innovative small players, in this case the regional banks, to bring price competition. But they had more to lose than the big banks because of their building society origins and the dependency they had on housing loans. In the end, the competition came from outside the banking system. This competition took an offshore idea that required a sophisticated capital market to provide an effective alternative to the banks. Deregulation delivered the sophisticated capital market and ultimately (but slowly) the alternative developed and forced the banks to respond.

Given the above, one is tempted to argue that future competition will also tend to come from outside the banking system and therefore the acceleration of concentration inside the banking system will be offset by continuing competitive forces from outside.

One area where external competition is less likely to be effective in the short term is lending to small and medium-sized businesses: those businesses that are not big enough to access the capital markets. Such businesses could be vulnerable to oligopolistic pricing behaviour, but here the conundrum is that at present the margins on this sort of business are well below those charged in other, more open, banking markets. The reason is that these customers are currently also enjoying the benefit of the mortgage margin umbrella, but this umbrella is coming down.

As indicated above, further concentration in banking may not necessarily be bad news for investment banks. If concentration allows a more rapid move to rational pricing, that could lead to increased opportunities for investment banks in some areas. On the other hand, concentration in funds-management distribution, if that were to occur, would not be advisable. This central question – how to balance the efficiency of a concentrated banking sector with the competition needed to keep the industry honest – is one for the Wallis Inquiry to ponder.

General Discussion

There was a wide-ranging discussion on the underlying economics of banking. One important aspect of this was the role of joint production costs for the banks' core services of credit, savings and payments. To what extent should these be thought of as inherently joint-cost products, with production costs unable to be broken up? The response to this question was that historically they had been joint-cost products, but that new players were now able to produce them on a stand-alone basis. This meant that the joint providers now needed to provide these services as efficiently as the specialists.

Closely related to this was the question of cross-subsidisation. Participants argued that retail payment services in Australia were, on average, cross-subsidised from interest margins. This had been a response to public demand: the public had seemed to prefer to pay more on the interest margin in order to support the low-fee regime for transactions. The cross-subsidies were uneven – the most heavily subsidised customers were those with low average balances but high transaction volumes. It was noted that Canadian and New Zealand banks had quite a different pricing structure. They had narrower interest margins but higher transaction fees more closely related to costs. As a consequence there had been no opportunity for specialist mortgage originators to expand in those markets. It was argued that, given the increasing pressure on margins in Australia, there would inevitably be a move toward higher transaction charges here as well.

This raised the question of whether transaction service markets might become more open and banks might lose their special position as transaction providers. On this point it was suggested that banks were likely to maintain their central position in this market. Wholesale payments were already being priced competitively on a marginal cost basis and this business had not left the banks. The same would be true in the retail area. It was anticipated that banks' role in transaction services would continue to be a core advantage for their overall business. Notwithstanding the move towards stand-alone products there were still some important synergies. For example, banks' role as transaction providers gave them opportunities to cross-sell other products.

Another major issue concerned economies of scale and scope in banking. This had an important bearing on the industry's efficiency and on the possibilities for improving efficiency through mergers and acquisitions. Comments generally took the line that there were important economies of scale to be realised in certain bank *processes*, but not in geographical expansion or in expansion across lines of business. With regard to processes it was argued that bank branches were often well below the optimal size and that there could be considerable gains from branch rationalisation. One way of achieving this could be through 'in-market' mergers (mergers among banks in the same geographical area) which could potentially raise efficiency by reducing branch numbers and increasing the average branch size. 'Cross-market' expansion on the other hand was regarded as much more risky. Successful geographical expansions in retail banking were quite rare, NAB and Citibank being exceptions. And it was regarded as risky to attempt to expand into completely new areas of expertise by takeover.

Although branch networks needed to be rationalised, they were regarded as having an important continuing role for the banks. It was noted in particular that, while machines and telephone networks could service many customer needs, branches were still highly effective in meeting some basic needs and in attracting new customers. What was needed was to reduce the number of branches to bring them up to an efficient average size.

In contrast to retail banking, which had a strong local character, investment banking was argued to be developing increasingly on a global scale. Participants involved in the industry thought that we were seeing the demise of a distinctively Australian investment banking sector, and its increasing international integration. The same was true in funds management, at least at the wholesale level, although at the retail level the business had to retain a local character.

A further issue for funds management was the problem of 'short-termism'. It was remarked that competition among funds managers led to a focus on comparative rates of return over quite short periods. The question was raised as to what could be done to encourage a longer-term, forward-looking focus. The problem seemed hard to solve as it was hard to stop people using the 'rear-view mirror' to assess funds managers. But it was important for people to understand that past performance in funds management was a poor predictor of future performance. It was more appropriate to assess funds managers on the basis of their strategies than on historical returns.

A final issue concerned the impact on banks of securitisation. The trend seemed to be that the best assets of the banks were the ones most likely to be securitised and taken off the balance sheet. This meant that banks would be left with a portfolio of loans of lower average quality than was typical in the past. One response to this point was that it would not be a problem, provided loans were correctly priced to reflect the risk. But it was suggested that this could be an issue for bank supervisors to give attention to in the future.

Regulating the New Financial Markets

Richard Dale

1. Introduction

Financial markets have been transformed over the past two decades by three key developments. Firstly, the dismantling of barriers to international capital flows and the process of globalisation have resulted in a massively increased volume of cross-border financial transactions. Secondly, the functional integration of hitherto discrete areas of financial activity has led to the emergence of financial conglomerates combining traditional banking with securities operations and other non-bank business. Finally, financial innovation has produced a vast new market in derivative products that simply did not exist 15 years ago.

These developments have no doubt raised the efficiency of financial markets. But they have also greatly complicated the task of regulatory authorities by increasing the potential for financial instability. The new global markets offer fresh channels for the transmission of financial shocks – both across borders and across market sectors. Furthermore, given the speed at which today's markets react to adverse news, the response time available to regulators in an emergency is drastically reduced. Finally, because financial institutions can adjust their risk exposures so easily, it is no longer possible for market participants to assess the risk characteristics of those with whom they deal – a problem of opacity that undermines the capacity of financial institutions to police each other.

This paper assesses the regulatory implications of recent financial market developments. The next section considers the underlying case for regulation of financial services; Sections 3 and 4 examine the new market environment facing regulators, drawing on the lessons of the Barings collapse; Section 5 assesses the regulatory response to recent financial market trends; and the final section provides a summary and conclusion.

2. The Rationale for Regulation

The case for regulating financial institutions can be made on three broad grounds. First, there is the consumer protection argument. This is based on the view that depositors and investors cannot be expected to assess the riskiness of financial institutions they place their money with, nor to monitor effectively the standard of service provided by such institutions. The consumer protection rationale gives rise to three categories of regulation: first, compensation schemes designed to reimburse all or part of losses suffered through the insolvency of financial institutions; secondly, regulation in the form of capital adequacy requirements and other rules aimed at preventing insolvency; and, finally, conduct of business or market practice rules intended to ensure that users of financial services are treated fairly.

The consumer protection rationale for regulation is closely related to another concern. If depositors or investors are to be reimbursed for losses incurred through the insolvency

of financial institutions then there will be little or no incentive to exercise care in the choice of depository or investment institutions. This in turn means that risky institutions will be able to attract business with the same ease and on the same terms as more prudently run firms, thereby undermining financial market discipline and increasing the incidence of insolvencies. The ensuing losses must then be borne by the deposit insurance scheme, investor protection fund, or ultimately, the taxpayer. Prudential constraints on financial institutions' risk-taking then become necessary in order to limit such losses and to offset the regulatory incentives in favour of excessive risk-taking. This 'moral hazard' argument is the one rationale for regulating financial institutions that commands general support in the academic literature.

Among supervisors themselves the rationale for financial regulation that gives most cause for concern is systemic risk – that is, the risk that the failure of one or more troubled financial institutions could trigger a contagious collapse of otherwise healthy firms. It is, above all, their alleged susceptibility to contagious disturbances that distinguishes financial institutions from non-financial firms. In the words of a member of the Board of Governors of the Federal Reserve System:

> 'It is systematic risk that fails to be controlled and stopped at the inception that is a nightmare condition ... The only analogy that I can think of for the failure of a major international institution of great size is a meltdown of a nuclear generating plant like Chernobyl. The ramifications of that kind of failure are so broad and happened with such lightning speed that you cannot after the fact control them. It runs the risk of bringing down other banks, corporations, disrupting markets, bringing down investment banks along with it ... We are talking about the failure that could disrupt the whole system.'[1]

Increasingly, the danger of systemic disturbances and contagious disorders is invoked by regulators as the main justification for regulating financial markets. Yet among academic commentators there is an ongoing debate as to whether financial contagion is a real-world problem demanding remedial action in the form of preventive regulation (for example, capital adequacy requirements) and/or an official safety net (lender of last resort and deposit insurance). The more conventional view is expressed in the following remarks by the United States economist, Martin Feldstein:

> 'The banking system as a whole is a "public good" that benefits the nation over and above the profits that it earns for the banks' shareholders. Systemic risks to the banking system are risks for the nation as a whole. Although the management and shareholders of individual institutions are, of course, eager to protect the solvency of their own institutions, they do not adequately take into account the adverse effects to the nation of systemic failure. Banks left to themselves will accept more risk than is optimal from a systemic point of view. That is the basic case for government regulation of banking activity and the establishment of capital requirements.'[2]

However, other academic commentators challenge this view of the world. George Benston and George Kaufman argue that the US banking system is inherently stable, that contagion is not a problem and that the only justification for capital adequacy regulation is the need to limit losses to taxpayers through government-provided deposit insurance. The following quotations amplify the Benston-Kaufman rejection of systemic

1. LaWare (1991), p. 34.
2. Feldstein (1991), p. 15.

risk as a basis for financial market regulation:

> 'We do not view banks and the banking system as inherently fragile ... Nor ... do we find that bank failures are any more contagious or any more costly than failures in other important industries ... The evidence shows that runs were not a major cause of bank failures ... depositors appear capable of differentiating between solvent and insolvent banks, just as they can differentiate between tampered and untampered drug and soft drinks products, and dangerous and safer modes of transportation ... the lender of last resort should provide liquidity to the banking system as a whole through open market operations (macroliquidity) rather than directly to individual banks through the discount window (microliquidity) ... banking appears to be no more unstable than most other industries, whose failure rate is no less than that of banks ... The cost of individual bank failures is relatively small and not greatly different from the failure of any non-bank firm of comparable importance in its community ... Government should be no more concerned with the failure of individual banks that with the failure of any other individual firm in any industry.'[3]

The Benston-Kaufman belief in the robustness of the financial system and their rejection of the need for official safeguards against systemic risk, runs counter to regulatory practice throughout the industrialised world. In the words of Mr Alan Greenspan, Chairman of the United States Federal Reserve Board, 'there will always exist a remote possibility of a chain reaction, a cascading sequence of defaults that will culminate in financial implosion, if it is allowed to proceed unchecked'.[4] It is the fear of such an implosion, as well as lesser contagious disorders, that has shaped recent international regulatory initiatives in banking, securities and derivatives markets. It is also the basis for the lender of last resort function as exercised in the United Kingdom and elsewhere.[5]

These, then, are the main considerations behind the regulation of financial institutions: consumer protection, moral hazard (a consequence of consumer protection) and systemic risk. In addition it should be noted that a further major regulatory objective is to achieve competitive equality – between financial institutions from different countries, between functionally distinct financial firms (banks, securities firms and insurance companies) that carry on the same kinds of business, and between rival financial centres. Concerns about competitive equality do not provide an independent justification for financial regulation but they do often provide an important impetus to international regulatory co-ordination initiatives. For instance, the European financial market directives have been framed with the explicit objective of achieving a 'level playing field', and the original motivation behind the Basle Accord on minimum capital standards was the perceived need to avoid competitive distortions associated with uneven national capital requirements.

The three main justifications for financial regulation described above apply in different ways to different segments of the financial services industry – that is, to banks, securities firms and insurance companies. The basis for the regulation of each of these segments of the financial services industry is considered below.

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3. Benston and Kaufman (1995), pp. 211, 227, 233-235.
4. Greenspan (1996), p. 8.
5. Dale (1995b), pp. 326-333.

Banks are subject to deposit insurance and other forms of consumer protection, in part because banks' balance sheets are opaque and depositors are therefore not in a position to assess the riskiness of their deposits. Depositor protection in turn gives rise to moral hazard. But the case for bank regulation also rests heavily on systemic risk – that is, the alleged potential for destructive bank runs that can endanger not only individual institutions but the stability of the banking system as a whole. According to this view, bank runs are caused by depositors seeking to withdraw their funds in response to the fear of bank asset losses that could lead to insolvency. Given the nature of the deposit contract (that is, a fixed nominal claim) those who run first can expect to be repaid in full, while those who delay withdrawals risk losing some or all of their deposit balances. Therefore, depositors have a (rational) propensity to run at the first sign of trouble.

The more recent academic literature does not rely on any loss in the value of a bank's underlying assets to explain the occurrence of bank runs.[6] The focus instead is on a bank's transformation services – specifically the conversion of illiquid assets (bank loans) into liquid claims (bank deposits) – and the fact that a bank's loan portfolio is worth significantly less in liquidation than on a going concern basis. All that is required to make a run possible – and rational – is that the liquidation value of the loan portfolio is less than the value of the liquid deposits. This approach explains how runs can occur even in the case of healthy banks, since the victim institution will be forced to dispose of its assets at liquidation prices, thereby threatening insolvency.

For investment firms the case for official regulation is much less clear.[7] The traditional approach has been to focus primarily on the risk to investors. However, investment firms can be (and often are) required to segregate investors' cash and securities in special accounts, so that in the event of a firm's insolvency its clients' assets are protected from the claims of general creditors. If that is done, it is difficult to see why additional protective measures are required in the form of capital adequacy requirements. The investor protection argument for regulatory controls becomes even less persuasive if investors also enjoy the benefits of an investor compensation scheme.

There is a second rationale for regulating investment firms, based on the need to reassure counterparties, including banks and other creditors, who might otherwise be reluctant to deal with such firms. Settlement procedures have an important role here because if settlement is on a delivery versus payment (DVP) basis, counterparty risk and associated regulatory concerns can be much reduced. Beyond this, it is worth pointing out that investment firms are well placed – because of their liquid assets – to arrange secured financing which does not give rise to full counterparty risk exposure, and that in the absence of capital adequacy requirements this is no doubt how most of their borrowing would be arranged. Finally, concerns about counterparty risk do not provide a strong case for *official* regulation. If investment firms perceive it to be in their interest to reassure counterparties about their financial strength, they will presumably find means of doing so. Indeed, this has been the impetus behind the self-regulation of its member firms by the New York Stock Exchange since well before the US Securities and Exchange Commission was established in 1934. Credit rating agencies may also fulfil

6. See Diamond and Dybvig (1983, 1986).

7. See Dale (1994), pp. 394-401 (Part I) and pp. 464-473 (Part II).

a self-regulatory function, as they do in the case of unregulated US holding companies that issue debt to fund their securities subsidiaries.

The third and most important argument for the regulation of investment firms is founded on the view that the default of unregulated investment firms could cause systemic problems. Official concerns over the potential for systemic disturbances were, for instance, reflected in a recent OECD study of risks in securities markets, which noted that 'the extreme systemic threat arising from a collapse of securities prices, is that default by one or more large securities dealers will lead to further defaults and that the failures will extend into the core of the banking system and cause a breakdown in the flow of payments in settlement of financial transactions throughout the world'.[8]

This proposition, suggesting as it does that the default of an investment firm may involve social costs equivalent to the collapse of a bank, deserves careful scrutiny. The assets of a non-bank investment firm consist largely of marketable securities and there will therefore be little difference between their value on a going concern basis and in liquidation, in marked contrast to banking assets – which are worth considerably less in liquidation. This means that a troubled investment firm will generally be able to wind down its business in an orderly manner, meeting its obligations by prompt asset disposals at close to book value. On the liabilities side too, investment firms are generally less vulnerable than banks, because much of their funding is secured and in any case cannot be immediately withdrawn, as can bank sight deposits. To the extent that funding is curtailed, an investment firm will generally be able to contract its way out of trouble. In short, investment firms are much less vulnerable to contagious liquidity and solvency crises than are banks.

The real problem is not the vulnerability of investment firms, but the vulnerability of banks within a financial market regime characterised by increasing integration of banking and securities business. Where banks themselves undertake securities business, or belong to financial groups that include an investment firm, the solvency of the bank is inextricably linked to its securities operations. This is obviously the case if the bank itself engages in securities activities, but it is also true if it does so at one remove through a related investment firm, since it is inconceivable that the related entity could default without irreparably damaging the credit standing of the bank.

The evolution of mixed banking and securities businesses may therefore create a situation in which the heavy social costs associated with bank failures are carried over into the securities markets. Arguably, it is the mixing of banking and securities business within banking groups, rather than the special characteristics of investment firms, that provides a rationale for the regulation of the latter.

The economic rationale for the regulation of insurance companies is based on the fact that it is costly for consumers to properly assess an insurer's financial strength in relation to its prices and quality of service.[9] In addition insurers may increase their risk after policyholders have purchased a policy and paid premiums. Therefore, in the absence of regulation, imperfect consumer information and agency problems may result in a level

8. OECD (1991), p. 15.

9. See, for instance, Klein (1955).

of insolvencies exceeding the social optimum. Accordingly solvency regulation, in the form of requirements relating to capital resources, asset quality and asset-liability matching, are intended to limit insolvency risk in accordance with society's preference for safety.

On the other hand insurance companies are not generally regarded as systematically sensitive since their liabilities are relatively long-term and not susceptible to runs (in contrast to banks). Even so, if insurance companies are affiliated to banks it is quite possible that difficulties originating with the insurance operations could, through reputational damage, have an adverse impact on the related bank entity. Therefore, as with securities firms, there may be a case based on systemic risk for regulating insurance businesses linked to banks.

3. The New Market Environment

Within the past two decades international financial markets have been transformed by three key developments: globalisation of the financial services industry; functional integration of banking and securities business; and financial innovation, particularly in the derivative products area. Each of these developments poses major problems for financial market regulators whose responsibilities are typically segmented by industry classification (for example, banking, securities, insurance) as well as by national boundaries. This section considers the changing shape and structure of international financial markets, and the need to adapt traditional regulatory mechanisms to accommodate the explosion in cross-border financial activity conducted by multinational financial conglomerates.

The globalisation of banking markets has been proceeding apace since the 1960s and has continued to gather momentum since 1980.[10] For instance, at the end of 1994 the stock of cross-border bank assets was more than $4^1/_2$ times its level of 15 years earlier, while measured as a fraction of the combined GDP of OECD countries, these assets have risen from 20 per cent in 1980 to around 35 per cent in 1994.

In securities markets the process of globalisation has been more recent but nevertheless spectacular. The extent of globalisation is reflected in the growth of cross-border and cross-exchange securities transactions; the number of foreign listings; and the emergence of multinational securities firms servicing this business from offices spread across the world. Between 1980 and 1994 cross-border securities transactions in industrial countries expanded from less than 10 per cent of GDP to well above 100 per cent of GDP. Within the equity sector, cross-exchange and cross-border transactions have increased rapidly as a percentage of world equity turnover to the point where one in four stock market trades conducted world-wide involves either a foreign security or a foreign counterparty. Parallel trends can be seen in the issuance of international bonds and equities (quadrupling between 1985 and 1994), the volume of global foreign exchange turnover (tripling between 1988 and 1993) and in securities settlements through the two major Eurobond clearing organisations, Euroclear and Cedel (expanding six-fold between 1988 and 1993).

10. On the globalisation issue, see Grundfest (1990).

There are several dimensions to the globalisation of securities business. The most traditional form is the purchase of foreign securities on the home exchange of the issuer or the issuance of securities in a domestic market by a foreign entity (examples of cross-border transactions). Closer integration occurs where a security is issued in its domestic market but subsequently listed on one or more foreign markets or where a security issued and listed on one market is traded in another (a cross-exchange transaction). Finally, the closest integration of all occurs where securities (for example, global bonds or international equity issues) are distributed internationally at issue and specifically designed to be traded in more than one market.

An analysis of the reasons for globalisation of financial markets is beyond the scope of this study. However, a variety of factors have clearly played a part in the process, including the phased abolition of exchange controls, improved access to information about foreign securities due to the revolution in information technology, and greater appreciation by institutional investors (who increasingly dominate securities markets) of the benefits of portfolio diversification. But whatever the precise explanation for the globalisation trend, the indications are that it is set to continue.

Another key development in international financial markets is the increasing tendency for banking and securities business to be combined within financial conglomerates, thereby eroding the traditional distinction between commercial and investment banking.[11] To an important extent the fusion of these two types of business is due to deregulation initiatives in major financial centres. In London, the rules of the Stock Exchange were amended in 1986 to allow acquisition of member firms by outsiders, including banks. In a one-step change banking and securities businesses were combined, thereby ending the separation of these activities which had been a feature of the UK financial services industry for some 300 years. In the United States the Glass-Steagall Act of 1933 still formally separates banking from securities businesses, but through liberal interpretations of this statute the US regulatory authorities have in recent years permitted the US banks to develop significant securities operations through special-purpose affiliates. Furthermore, there is a widespread consensus within the United States that Glass-Steagall should be repealed and moves are afoot within Congress to enact the necessary legislation. In Japan, too, the tight restrictions that were imposed on banks' securities activities after World War II have been gradually loosened. In particular, the Financial System Reform Law that came into effect in 1993 allowed commercial banks and securities firms to expand into each others' business territory by establishing separate subsidiaries. Finally, Brussels has followed the universal banking model in establishing a common regulatory framework for the single European financial market, thereby freely permitting the mixing of banking and securities business across the European Union (EU).

The above deregulation initiatives, coupled with the economies of scope that financial institutions evidently believe can be secured from combining banking and securities business, have given considerable impetus to the proliferation of financial conglomerates.

11. For a full analysis of the integration of banking and securities business, see Dale (1992).

In the words of Mr Andrew Large, Chairman of the United Kingdom Securities and Investments Board:

> '... over the past 5-10 years, the institutional deregulation initiatives in different countries have combined with huge advances in computing power and communications technology, to create a totally new breed of financial intermediary. [They] have embraced the theory of financial risk management which applies portfolio theory to the range of risks associated with the securities business ... The key characteristic of this approach is that it seeks out the common elements of risk wherever they may lie in a portfolio and manages them centrally. These firms no longer respect the traditional boundaries between markets or the old institutional boundaries between banking, securities and insurance. They are in the risk-management business pure and simple, and they operate on a large scale and on a truly global basis.'[12]

As with globalisation, the indications are that the erosion of traditional distinctions between banking and securities business is set to continue – if only because deregulation in this area still has some considerable way to go in both the United States and Japan.

Finally, modern financial markets are characterised by extraordinarily rapid changes due to financial innovation.[13] One of the most important facilitating factors here is the revolution in information technology and the associated dramatic fall in computing costs (Table 1).

Table 1: United States Department of Commerce Computer Price Deflator

1990 = 1,000

1960	125,000
1970	19,000
1980	3,620
1990	1,000

Source: Herring and Litan (1994), p. 14.

The ease and cheapness of gathering, processing and disseminating information has encouraged financial innovation in a number of areas, including the development of screen-based trading systems, the conversion of cashflows from specific assets into marketable securities ('securitisation') and, above all, the proliferation of derivative products (futures, options, swaps, forward rate agreements and related hedging instruments). Whereas in the mid 1980s only the United States and a handful of other countries had futures and options exchanges, by the early 1990s nearly all OECD countries – not to mention several emerging markets – had established exchanges which at a minimum traded contracts on money market interest rates, bonds and equity indices.

There are some signs that the hectic pace of financial innovation may be slackening, but innovative developments over the past fifteen years or so have already transformed the nature of global financial markets in a manner that poses a formidable challenge to regulators.

12. Large (1994), p. 1.

13. See, for instance, Miller (1986).

4. Regulatory Implications

4.1 Global Markets

The globalisation of banking and securities markets adds a new dimension to the regulatory problem. Globalisation in this context means three things: the cross-border delivery of financial services to foreign residents; the penetration of foreign financial markets by branches and subsidiaries of multinational institutions; and transactions between banks and investment firms from different countries that give rise to inter-jurisdictional counterparty risk.

Banking and securities regulators are presented with a number of formidable difficulties associated with globalisation. Systemic risk may be increased through contagious financial disorders originating in poorly regulated financial centres; depositors, investors and counterparties may be exposed to foreign jurisdiction risks which they are not in a position to monitor or control; and the co-existence of uneven national regulations and global markets may severely distort competition between financial institutions.

There are several alternative approaches to dealing with these 'geographic interface' problems. One possibility would be to allow, and perhaps even encourage, regulatory competition between rival financial centres in the hope that regulatory standards would eventually converge around some socially optimum level. It would still be necessary to decide whose rules were to apply to which institutions. If host country rules applied, then foreign banks and investment firms would have to be subject to mandatory incorporation in the host country (since a branch, having no separate legal identity, stands or falls with its parent). Under such a regime there would be regulatory equality within each jurisdiction, but competition between financial centres would be subject to regulatory distortions. Furthermore, cross-border provision of financial services could affect competition within domestic markets.

Alternatively, while retaining the regulatory competition model, it might be considered preferable to apply home country regulation on a consolidated basis to both branches and subsidiaries operating in other countries. Here, all institutions from a particular country would be subject to the same regulatory standards wherever they operated, and the competitive distortion associated with different regulating regimes would affect not financial centres but institutions of differing national origin.

The major weaknesses of the regulatory competition approach are that it does not deal with the danger of cross-border financial contagion, it may confuse depositors, counterparties and investors dealing with multifarious regulatory regimes and (perhaps most importantly from a political standpoint) it leaves open the potential for serious competitive distortions associated with uneven national regulation.

A quite different approach to globalisation is to impose minimum standards of prudential regulation through multilateral agreement. The main difficulty here is to determine appropriate limits to the harmonisation process. Recent multilateral initiatives in this area are considered in Section 5 below.

4.2 Regulating Financial Conglomerates

The fusion of banking, securities and other financial business also raises important regulatory issues.[14] Three closely related problems need to be addressed here: firstly, what is the most appropriate corporate structure for mixed-activity financial firms; secondly, should the supervisory regime be institutional (a single agency responsible for the entire business) or functional (different agencies responsible for specific activities); and, finally, should the various businesses within a conglomerate (banking, securities, insurance, etc) be consolidated for supervisory purposes and, if so, how?

So far as corporate structure is concerned there are various alternatives. At one end of the spectrum there is the separation model which prohibits ownership links between, for instance, banks and securities firms. At the other end there is the universal banking model which allows non-banking financial business to be conducted within the bank entity itself. Between these extremes banks may be required to conduct non-banking financial business through separately incorporated subsidiaries. Alternatively, a financial holding company structure may be mandated, in which banks and non-bank financial activities are conducted by specialised subsidiaries of the holding company. Where the separate subsidiary or holding company structure is chosen, there is a further question as to the appropriate business relationship between the bank entity and its non-bank subsidiaries or affiliates. Should there be 'funding firewalls' preventing the bank from lending to its related businesses? And should the related businesses be able to trade under the same name and out of the same offices as the bank?

Another question that arises in this context is whether financial institutions, for example, banks and securities firms, that conduct a given type of business should be subject to the same regulatory regime in respect of that business. Or should there be separate regulatory regimes for banks and securities firms, even if this means treating the two types of institution differently when they are engaging in the same activities? Clearly, this choice between functional and institutional regulation may affect the competitive relationship between banks, securities firms and other non-bank financial firms which have overlapping business interests. The more general view expressed, for instance, in European financial market directives and Basle regulatory guidelines is that like activities should be treated identically for supervisory purposes, regardless of the category of institution.

However, not all supervisory authorities accept this view. For instance, Mr Alan Greenspan has stated that the Federal Reserve Board 'does not believe that competitive equity requires that an identical oversight regime be applied to all players in a marketplace, provided competition from whatever source ensures adequate customer choice'.[15] The Board's concept of competitive equity is evidently based on effective competition rather than parity of regulatory treatment or the level playing field. Indeed the Board's view is that disparities in the competitive environment for financial institutions are inevitable so long as banks are protected by an official safety net and are therefore subject to special regulatory safeguards.

14. On the regulatory implications of functional integration, see Dale (1992).

15. Greenspan (1995b), p. 9.

Closely related to the question of corporate structure is the issue of consolidated supervision. When a bank has a securities subsidiary or affiliate, should the bank regulator take account of the risks incurred by the securities operations and, if so, how?[16] Should the two parts of the business be fully consolidated in an accounting sense for the purpose of calculating capital adequacy and other prudential ratios? And, in particular, should a bank be consolidated with its related securities entity so as to eliminate transactions between the two and thereby remove large exposure restrictions that might otherwise apply to the bank's funding of its securities unit? These are important policy issues that have to be addressed when considering how best to supervise the new breed of financial conglomerates.

The answers to these questions about the regulation of financial conglomerates depend crucially on the 'specialness' of banks and the interdependence of risks incurred by related financial entities. If banks are viewed as special because their activities give rise to systemic risk and if banks can be brought down by problems originating in a non-bank subsidiary or affiliate, then there are three possible regulatory approaches. These are:

- ban ownership linkages between banks and non-banks;
- impose strict firewalls between banks and related non-banks in order to insulate the former from risks incurred by the latter (though there may be legitimate doubts as to whether such firewalls can be effective); or
- regulate bank-related financial firms to the same standard of solvency risk as banks.

If this last alternative is adopted, there is a clear danger that, in the interests of competitive equality, non-bank investment firms will be subject to unnecessarily stringent regulatory arrangements.

If, on the other hand, the Benston-Kaufman view of financial markets is accepted, and banks are *not* viewed as special, they can be allowed to engage freely in non-bank, and indeed non-financial, activities presumably using whatever corporate structure they prefer (although if there is deposit insurance, any activity funded by deposits would need to be regulated in order to combat moral hazard).

Choices about functional versus institutional regulation, as well as about consolidated supervision, follow from the fundamental decision on whether risks within a financial conglomerate are to be pooled or segregated. Broadly speaking, where risks are pooled institutional regulation plus consolidated supervision is most appropriate; while for regulatory regimes that seek to insulate banks from risks incurred by related non-bank entities functional regulation is appropriate and consolidated supervision less relevant.

4.3 Regulatory Challenge of Financial Innovation

The third feature of modern financial markets noted above is the rapid pace of financial innovation, as reflected particularly in the remarkable expansion of derivative products trading. Large-scale derivatives activity presents a number of regulatory problems. However, one key difficulty associated with derivatives deserves to be

16. See Tripartite Group (1995).

stressed at the outset. What makes derivatives different from more traditional financial transactions is not the type of risk to which they give rise but rather the speed at which these risks can be transformed and the complexity of the transformation process. The result is a loss of transparency which can make risk assessment much more difficult for:

- internal management;
- external counterparties; and
- regulators.

In the words of Mr William McDonough, President of the Federal Reserve Bank of New York:

> 'Formerly you could look at the balance sheet of a financial institution and quickly get a sense of exposure and risks ... today, balance sheet information is clearly inadequate for this purpose ... the fast pace of activity in today's market renders financial statements stale almost before they can be prepared.'[17]

Management faces formidable difficulties in monitoring, controlling and verifying the risks incurred by derivatives dealers. Excessive risks may be incurred because risk parameters have not been set, because risk limits are themselves too permissive, because mistakes cause the limits to be breached or because, as in the Barings case, dealers engage in unauthorised trading which is incorrectly reported. Given the crucial importance of internal risk-management procedures in controlling derivatives risks, the question is whether standards in this area should be governed by industry-led self-regulatory initiatives, international supervisory guidance and/or national regulatory arrangements.

Financial innovation in general, and derivatives trading in particular, has also created transparency problems for regulators. Assessment of capital adequacy involves a comparison between the level of capital and the risk of the activity that it supports. Since capital is the residual of assets less liabilities, the concept of capital adequacy becomes difficult to apply when portfolios are turning over rapidly and risk profiles being transformed at increasing speed. In the words of Mr Alan Greenspan:

> '... it is unlikely that an occasional snapshot of a portfolio composition can serve as a basis for evaluating the riskiness of a dynamic strategy. With instruments trading that represent highly leveraged exposures, a large chunk of capital can disappear, and then reappear, all within the trading day. Supervisors may have to resort to basing their analyses chiefly on assessments of managerial capabilities rather than of the portfolio held at a given instant.'[18]

Given this radical shift in supervisory focus the formidable task facing regulatory authorities is to gauge an institution's competence in managing risk – a question considered in Section 5.

Derivatives activity also presents financial markets with a new kind of transparency problem. Traditional banking has always been associated with transparency difficulties due to the fact that the main stock-in-trade of banks – non-marketable commercial loans – cannot be readily assessed by outsiders. Large-scale derivatives trading, whether undertaken by banks or securities firms, has added a new dimension to the transparency problem in financial markets, although here the difficulty arises from the speed and complexity of risk transformation. The 1992 Promisel Report noted that, in the context

17. McDonough (1993), p. 9.

18. Greenspan (1995a), p. 3.

of increased derivatives trading, '... even a sophisticated outsider, not having access to the internal information systems that support management risk assessments can, at best, make only an informed guess as to the nature of a firm's risk exposures'.[19] More generally, the report expressed concern about the interconnection between non-transparency and funding instability in the following terms:

> 'In a crisis situation, a lack of transparency might cause firms to back away from troubled institutions and, perhaps, from other institutions, perceived to be subject to similar stress. As a result of this behaviour, which reflects incomplete information, disturbances can spread more quickly and more broadly across firms and markets.'[20]

The appropriate response to problems of market transparency is more extensive disclosure of financial information. But in the context of fast-moving derivatives business the difficulty is to formulate effective disclosure rules that do more than provide an outdated snapshot of risk exposures.

The combined effect of globalisation, functional integration and financial innovation has made financial markets much more difficult to police. The dangers confronting regulators in the new financial environment are well illustrated by the collapse of Barings in February 1995. Barings failed partly because it was involved in large-scale derivatives business which senior management did not fully understand (a problem of financial innovation); partly because it was active in far-flung markets (notably Singapore, Tokyo and Osaka) whose local regulators communicated neither with each other nor with the UK regulatory authorities (a problem of globalisation); and partly because there was regulatory confusion over the appropriate scope of consolidated supervision of Barings' mixed banking-securities business and, in particular, the way in which Barings' banking arm was able to fund its securities operations in Singapore (a problem of functional integration). These and other difficulties associated with the Barings collapse are considered more fully in an Appendix but the affair does underline the point that regulators have a long way to go before they can claim to be on top of the recent dramatic changes in global financial markets. The following section examines progress to date in meeting the regulatory challenge.

5. The Regulatory Response

This section considers the various official and private sector initiatives that have been implemented or proposed in response to the transformation of financial markets brought about by globalisation, functional integration and financial innovation.

5.1 Globalisation

Bank regulators began to appreciate the need for international supervisory co-operation over twenty years ago, when the Basle Committee on Banking Supervision was established following the collapse of Herstatt Bank in 1974. Since then, the Committee has focused on four key areas: the allocation of regulatory responsibilities (Basle Concordat of 1975 as revised 1983); exchanges of information and supervisory

19. Promisel Report (BIS 1992b), p. 28.

20. Promisel Report (BIS 1992b), p. 34.

collaboration (1990 addendum to the Concordat); supervisory standards (post-BCCI recommendations on minimum standards 1992); and harmonisation of minimum capital adequacy standards (1988 Basle Accord on capital adequacy, as supplemented by the 1996 agreement on market risks).

Looking back at the Basle Committee's activities over the past two decades, two features stand out. First, whereas the Committee was originally established with a view to encouraging gradual regulatory convergence, this goal was displaced in the late 1980s by the perceived need to establish a common regulatory framework, an approach that culminated in the Basle Accord of 1988 and subsequent market risk guidelines. This shift in emphasis coincided with the emergence of competitive equality as a major policy objective alongside that of systemic stability. Second, the functional integration of international financial markets has obliged the Committee to become increasingly involved in securities market regulation, particularly in the area of derivatives. This new concern with securities market risks is also reflected in the increasing co-operation between Basle and the International Organisation of Securities Commissions (IOSCO) discussed below.

Securities regulators have lagged well behind bank regulators in developing mechanisms for international supervisory co-operation. This is due partly to the fact that securities markets have been viewed as posing less of a danger to systemic stability than banking, and also because IOSCO has a looser and larger membership than the Basle Committee on Banking Supervision. Over recent years IOSCO has adopted a number of resolutions covering such matters as money laundering, international accounting standards, clearance and settlement and the supervision of financial conglomerates. In 1991 IOSCO's Technical Committee entered discussions with the Basle Committee on a co-ordinated approach to capital adequacy standards for banks and securities firms. However, negotiations broke down in 1992 because the Technical Committee could not itself reach agreement on position risk requirements for equities.

More recently, there has been closer co-operation between the Basle Committee and IOSCO. In 1994 the Technical Committee and the Basle Committee issued co-ordinated guidelines on risk management for OTC derivatives business; in early 1995 the same two committees issued joint guidelines to supervisors world-wide on the information necessary to evaluate derivatives risks incurred by banks and securities firms; and at its July 1995 conference in Paris IOSCO adopted the so-called Windsor Declaration on co-operation between supervisors of futures and options markets. This Declaration had been issued in May 1995 – in response to the Barings collapse – by representatives of regulatory bodies from sixteen countries responsible for supervising the activities of the world's major futures and options markets.

Apart from official regulatory co-ordination initiatives undertaken through the Basle Committee and IOSCO there have been an increasing number of private sector moves aimed at strengthening prudential standards in international financial markets. The Group of Thirty has proposed minimum standards relating, *inter alia*, to netting arrangements, settlement procedures, and managerial oversight of derivatives risks. The US-based Derivatives Policy Group has established good practice guidelines for the management of derivatives business by broker-dealers. And in early 1996, 49 exchanges and clearing houses announced an agreement to exchange information on their members' risk exposures in different markets.

In responding to the challenge of globalisation, regulators have to determine the appropriate balance between national autonomy in regulatory matters and international co-ordination or harmonisation. Since the economic case for financial market regulation is based on externalities, the boundaries of regulatory co-ordination should presumably be determined by the extent of external effects. In this context, Herring and Litan have argued that measures aimed at consumer protection rather than systemic stability should be governed by national preferences. On the other hand, they suggest that 'a global perspective eventually may be the appropriate domain to deal with systemic risk since the externalities may be global in scope'.[21] However, the question then becomes one of identifying those elements of international markets which could give rise to systemic risk. Such risk is most obvious in international banking which is also the area where cross-border co-operation is most fully developed. For the reasons explained above, systemic concerns now extend to major securities firms (especially bank-related entities) whose regulation is increasingly subject to international scrutiny. But there is also a question as to whether the emerging global regulatory framework should embrace organisation of *markets*, and not merely participant *institutions*.

In particular, the extraordinary expansion of financial activity both within and across national borders has focused attention on the role of payments and settlement systems which have been described as 'the connective tissue of all financial and real economic activity'.[22] Given such a pivotal role, payments and settlement systems provide a ready channel for the dissemination of systemic crises which may typically be triggered and spread by a failure to settle obligations.

Policy makers have long recognised the importance to systemic stability of orderly funds transfer (payments) systems.[23] This perception is reflected in central banks' active involvement in interbank clearing systems – an involvement that may embrace ownership, operation, auditing, rule formulation and enforcement as well as the extension of intra-day credit to participants. More recently there has been growing concern over the systemic risks associated with the clearing and settlement of securities and derivatives transactions[24] where central bank involvement has traditionally been less active.[25]

The most fundamental policy issue relating to securities and derivatives settlement and clearing is the extent to which these arrangements should be subject to regulatory oversight by national authorities. The case for official involvement is based on externalities in the form of systemic risk, for example, the risk that the settlement failure of one participant will lead to settlement failures of other participants due to unexpected liquidity shortfalls or credit losses.[26] If these other participants have no credit relationship

21. Herring and Litan (1994), p. 85.

22. Borio and Van Den Bergh (1993), p. 63.

23. See, for instance, Bank for International Settlements (1990a, 1990b).

24. Clearing and settling securities transactions involves *matching* of the terms of trade, calculation of the resulting obligations of counterparties (*clearance*), the discharge of those obligations (*settlement*) through the *final transfer* of securities (*delivery*) and the final transfer of funds (*payment*). *Clearing houses* are typically involved in both the clearing and settlement of transactions.

25. For a discussion of policy concerns see Bank for International Settlements (1989,1992a and 1994a).

26. Credit risk may involve replacement cost risk or principal risk; liquidity risk arises where a counterparty does not settle on due date, thereby causing other counterparties to withhold settlement.

with the original failing participant and if also the costs of these third-party effects are not internalised within the clearing house, then externalities exist.

On the other hand, where a clearing house takes on the counterparty risks incurred by its clearing members, the impact of contagious settlement failures will be felt by the clearing house itself. Under these circumstances the clearing entity has a direct interest in formulating prudential rules and operating procedures that minimise such risks. In other words, the clearing house has an incentive to address the issue of systemic risk, the 'system' in this context being limited to the clearing house membership. However, externalities remain because of the potential spillover effects of a clearing house collapse on other clearing houses as well as the payments system.

Some central banks have taken the view that, in order to strengthen market incentives to control risk and reduce 'moral hazard', official involvement in the operation and regulatory oversight of securities and derivatives settlement should be minimised.[27] According to this view regulators should instead focus their efforts on strengthening payments systems so as to insulate the core banking sector from disturbances originating in securities settlements. Other central banks, however, believe that they should be closely involved in the design and operation of securities and derivatives settlement systems and emphasise in particular the importance of explicit loss-sharing rules that would apply in the event of a settlement failure.

The debate has now moved to consideration of the case for harmonisation of minimum prudential standards for payments and settlement systems. In January 1996 Mr Brian Quinn, Executive Director of the Bank of England, suggested that internationally agreed minimum standards might be desirable in this area and that high on the priority list would be common requirements for access, financial standards and liquidity requirements. In more general terms, Mr Quinn emphasised the need for a broader approach to regulatory co-ordination.

> '... the regulatory net is being extended all the time, both as regards institutions – banks and securities companies – and as regards payments and settlement systems serving the needs of financial groups taking advantage of the opportunities to conduct their business on a global basis. I do not think it should be otherwise if we are to reduce the risks of failure in one part of the financial system spreading internationally.'[28]

Expressed differently, wherever there are heavy concentrations of counterparty risk involving major financial institutions, systemic risk is present. It is the task of international regulatory co-ordination to ensure that these potential flashpoints are subject to appropriate safeguards.

5.2 Functional Integration

The response of national authorities to the diversification of banks into non-bank financial activities has been divergent.[29] As a result, mixed-activity financial groups in the three major financial blocs (the United States, European Union and Japan) have contrasting corporate structures.

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27. See Borio and Van den Bergh (1993), p. 31.
28. Quinn (1996), p. 6.
29. See, generally, Dale (1996).

In the United States the Glass-Steagall Act remains in being but so-called 'Section 20' bank subsidiaries have limited powers to undertake securities business within the terms of the Act. 'Firewall' restrictions on intra-group financial transactions are imposed in order to prevent risk being transmitted from Section 20 securities units to the bank. Recent proposals for repeal of Glass-Steagall have featured a modified corporate structure, in which the bank and its non-bank affiliates become subsidiaries of a financial holding company and firewalls are interposed between the bank entity, its parent and affiliates.

In Japan banks and securities firms are now permitted to expand their activities into each other's business territory through the establishment of specialised securities and banking subsidiaries. Firewalls, of a kind, are interposed between the parent entity and its subsidiary but these are designed to prevent conflicts of interest and undue marketing influence rather than the transmission of business risks.

Finally, within the European Union, the Capital Adequacy Directive's trading-book approach permits banks to engage freely in securities activities either directly (for example, on the bank's balance sheet) or through securities subsidiaries. In either case securities activities, as defined by the trading book, are subject to a capital adequacy regime separate from that for the banking business.

Implicit in these divergent regulatory regimes are very different assumptions about the nature of non-banking financial risks and the potential for cross-infection within financial conglomerates. The 'pure' Glass-Steagall model assumes that securities operations can destabilise banks and that banks cannot be insulated from risks incurred by securities subsidiaries or affiliates. The Section 20 subsidiary regime and the proposed US holding company model assume that funding firewalls can prevent risks being transmitted from non-bank financial firms to banks. The Japanese regulatory regime requires separate incorporation of banks' non-bank operations, not to segregate risks but rather to prevent joint marketing of bank and non-bank financial services. Finally, the European regulatory framework is anomalous in that it seeks to segregate banking and securities risks for capital adequacy purposes, but makes no attempt to insulate banks from their non-bank activities.

Within these financial market regimes regulation tends to be functional rather than institutional, with bank and securities regulators employing different supervisory techniques. In particular, whereas the principle of consolidated supervision lies at the heart of bank regulation, consolidation has not generally been applied by securities regulators. This dual approach seems difficult to justify in a situation where a bank may be brought down by a subsidiary of its securities arm (as happened in the case of Barings).

It should also be emphasised that until quite recently there was little effective co-operation between bank and securities regulators at the international level. Most importantly the Basle Committee and IOSCO have so far failed to agree on common capital adequacy standards for banks and non-bank securities firms. However, there are reasons for believing that closer collaboration between Basle and IOSCO is now in prospect. The Basle Committee's capital adequacy guidelines on market risks have been explicitly formulated with a view to securing agreement with securities regulators and joint discussions are proceeding on this subject. There have also been joint initiatives between Basle and IOSCO on risk management for derivatives and on supervisory

information about derivatives activities. And, finally, at their Halifax Summit in June 1995 the governments of the Group of Seven countries gave further impetus to these developments by calling for closer international co-operation between banking and securities regulators.

5.3 Regulatory Response to Innovation

As indicated in Section 4.3 the central problem associated with financial innovation generally and derivatives trading in particular is that the transparency of financial markets tends to be obscured. This lack of transparency has implications for the managers of financial institutions, for regulators and for counterparties. Each of these parties is considered in turn.

At the management level, the derivatives industry itself has responded to the need for sophisticated management of derivatives activities. The Group of Thirty in its 1993 study of derivatives made recommendations addressed to dealers and end-users, aimed at strengthening risk-management techniques and procedures.[30] These recommendations cover such matters as mark-to-market valuation of derivatives positions, the quantification of market risk and credit risk, the use of multi-product master agreements with close-out netting provisions, the separation of the risk-management and dealing functions, and accounting and disclosure practices.

Another major industry initiative was J.P. Morgan's decision in October 1994 to release for general use its own proprietary risk-management model, RiskMetrics, together with a data set covering daily estimated volatilities and correlations across a large number of asset classes and instruments. J.P. Morgan's decision to make its own risk-management techniques available to the marketplace is in part a reflection of the industry's self-interest in improving transparency in derivatives and strengthening risk-management procedures. However, regulators have generally taken the view that industry self-regulation is not enough in this key area. For instance, IOSCO has stated unequivocally that 'adequate operational and financial risk control mechanisms cannot be left solely to the influence of market forces'.[31] Accordingly both the Basle Committee (in respect of banks) and IOSCO (in respect of non-bank securities firms) have issued detailed guidelines on risk management which are aimed at both regulatory authorities and market intermediaries.[32] The areas covered include oversight of the risk-management process by senior management, the measurement, control and reporting of risk exposures and internal controls and audits. For instance, on the question of risk measurement, the Basle Committee proposes that any institution active in derivatives dealing should be able to monitor its credit and market exposures (using mark-to-market valuations) at least daily, while 'some' (unspecified) institutions 'should also have the capacity, or at least the goal, of monitoring their more actively traded products on a real-time basis'.[33]

National authorities have moved towards implementation of these internationally agreed guidelines in their own jurisdictions. Thus the United States Comptroller of the

30. See Group of Thirty (1993).

31. IOSCO (1994), p. 5.

32. Bank for International Settlements (1994a), IOSCO (1994).

33. Bank for International Settlements (1994a), p. 7.

Currency in October 1994 published a handbook on 'Risk Management of Financial Derivatives' for use by bank examiners, providing comprehensive guidance on minimum standards of risk management to be expected of national banks. The handbook makes clear that the lack of an adequate risk-control function relative to the level of derivatives activity conducted by a bank will be reviewed as an 'unsafe and unsound banking practice' – a ruling that opens the way to active supervisory intervention in cases where banks' risk-management systems are considered to fall short of the specified minimum standards.[34]

It may be said, therefore, that in the area of risk management a rather awkward regulatory regime has emerged, combining industry self-regulatory initiatives, international supervisory guidance and national regulatory arrangements.

While the management of institutions active in derivatives business must focus on the measurement, monitoring and control of derivatives risk, regulators must also have a clear view of such exposures in order to apply capital adequacy requirements. The final Basle capital standards for market risk, published in January 1996, allow the use of proprietary in-house models for measuring market risks as an alternative to the standardised measurement framework set out in the original proposals.[35] Under this alternative approach banks would be given an incentive to strengthen and develop their risk-management systems, and capital requirements would more accurately reflect the risk characteristics of individual banks. In addition, the supervisory task is in some ways simplified: the regulator sets the risk parameters and validates each bank's risk-assessment methodology but is not encumbered with a vast volume of statistical returns. However, there are some potential problems. In the first place, regulators may find it extremely difficult to evaluate the most sophisticated risk-management models – a question of regulatory transparency. In addition the transparency of financial markets (see below) may also be reduced, because only banks and their regulators will know the basis on which risks have been measured, in contrast to the present situation, where Basle capital ratios are generally published and well understood.

It was pointed out in Section 4.3 that the appropriate response to problems of market transparency is more extensive disclosure of financial information. A working group of the Euro-currency Standing Committee of the G10 Central Banks followed up the policy recommendations of the Promisel Report by publishing in September 1994 a discussion paper on public disclosure of market and credit risks ('Fisher Report').[36] In connection with derivatives, the authors noted the increased disparity between market participants' ability to assess and manage their own financial risks, and their relative inability to assess the riskiness of other market participants on the same terms. They suggested that in order to reduce this information gap financial institutions should adapt for public disclosure the information generated by their internal risk-management systems. The new information would complement but not substitute for conventional accounting disclosures which cannot be expected to capture a firm's risk characteristics. More specifically, the Fisher

34. See Comptroller of the Currency (1994).

35. Bank for International Settlements (1996).

36. Bank for International Settlements (1994b).

Report suggests that institutions should disclose periodic quantitative information covering the following:

- market risks plus performance in managing those risks; and
- counterparty credit risk plus performance in managing credit risk.

Because there is no consensus on best practice for measuring such risks it is recognised that for the time being at least there can be no strict comparability of disclosure and information. The report does, however, suggest various possible disclosure models. For instance, market risk disclosure might take the form of high, low and average value-at-risk calculations that occurred during the reporting period for holding periods of one day and two weeks. Similarly, disclosure of market risk performance could involve a comparison between average daily value-at-risk and the average daily change in a portfolio's market value. The purpose here would be to determine whether the frequency of large decreases in a portfolio's value is significantly larger or smaller than the confidence level of the value-at-risk calculation.

The Basle regulators believe that disclosure of such quantitative information will have several benign consequences. First, according to authors of the Fisher Report, 'if firms with superior risk-management systems begin to disclose information adapted from these systems, this process could institute a dynamic competitive process leading to enhanced disclosure practices and greater market transparency'.[37] Second, increased transparency is expected to create market incentives for better risk-management practices, since those firms with superior techniques will enjoy a higher credit standing. Finally, and perhaps most importantly, increased transparency should (so it is argued) help to stabilise financial markets by preventing ill-informed panics and funding withdrawals from institutions whose credit standing is in doubt.

There is, however, a difficulty here. Unless market risks are disclosed on a real-time basis, the true risk profile of an institution at any point in time will not be known – since as Ms Susan Phillips of the United States Federal Reserve Board has pointed out: 'with derivatives and highly liquid securities, risk profiles can change drastically, not only day to day, but hour to hour and minute to minute'.[38] The Fisher Report does not address this issue.

There is also an opposite concern. To the extent that transparency *is* imposed and market participants *can* view clearly the up-to-date risk profiles of their counterparties, the scope for discretionary action by central banks is largely removed. Put another way, transparency may be a safeguard against ill-informed panics, but when an institution really is faced with a potential solvency problem the market's verdict will be immediate, savage and final. Indeed, it is worth reflecting that the present emphasis on transparency is at odds with central banks' traditional response to financial crises, which is to fudge the solvency issue and buy time, as exemplified by the LDC debt crisis, the 1980s crisis in the United States savings and loan industry, the United Kingdom secondary banking crisis of 1974-1975 and the Japanese banking system's bad loan crisis of 1992-1995.

37. Bank for International Settlements (1994b), p. 6.

38. Philips (1994), p. 3.

While the multilateral groupings (Basle and IOSCO) have responded to the derivatives challenge by focusing on the adequacy of internal controls, the measurement of risk and financial disclosure, the United States has developed a unique self-regulatory model for derivatives activities. Several major United States securities firms have chosen to conduct their derivatives activities through special-purpose broker-dealer affiliates which, paradoxically, have a higher credit rating than the broker-dealer or its parent. These derivatives product companies (DPCs) achieve a superior credit rating (typically triple-A) through elaborate measures designed to insulate the DPC from the credit risk of the sponsoring company. The importance of the superior credit rating is that many risk-averse counterparties are prepared to deal only with the strongest credits, particularly where long-term contracts (for example, swaps) are concerned.

A DPC typically will execute a contract with a counterparty and simultaneously execute a mirror contract with its sponsor. Such back-to-back contracts interpose the creditworthiness of the DPC between the counterparty and the DPC's sponsor, while also transferring market risk from the DPC to the sponsor.

Under the DPC regime OTC derivatives business is transacted by an unregulated affiliate of the broker-dealer, which nevertheless has a higher credit rating than the broker-dealer or its parent. This is possible because the credit rating agencies perform a surrogate regulatory role in specifying an appropriate corporate structure as well as operating procedures for DPCs, and in monitoring DPC behaviour to ensure compliance with such procedures.

However, the co-existence of SEC-regulated broker-dealers and self-regulated derivatives affiliates creates a dilemma for policy makers.[39] If the self-regulation regime is effective, then one has to ask whether SEC regulation is necessary; and if it is not effective then surely the SEC and not the credit rating agencies should be regulating the derivatives affiliates. Furthermore, there is a danger that the 'firewall' mechanisms of the DPCs, together with procedures for transferring market risk exposures from the DPC to the sponsoring company (or its affiliate), could be creating a high-risk entity within the group that is regulated neither by the SEC nor by the credit rating agencies, but whose default could pose a threat to the broker-dealer.

6. Summary and Conclusions

It has been shown that the case for regulating financial institutions rests on three kinds of argument: consumer protection, moral hazard and systemic risk. Regulatory authorities have become increasingly concerned with the last of these rationales, although such concerns are not necessarily shared by academic commentators, some of whom deny the existence of systemic risk.

The economic basis of regulation varies according to the type of institution. Banks are generally viewed as uniquely vulnerable to systemic risk; investment firms and insurance companies on the other hand, have traditionally been subject to regulatory regimes that stress investor or customer protection as the main objective. However, as the boundaries between banking and non-bank financial activities have become blurred, and banks have

39. See United States General Accounting Office (1994).

diversified away from their traditional lending business, regulators' concerns about systemic risk have extended beyond the banking sector to embrace securities business and other non-banking financial firms.

In recent years the task of regulators has been greatly complicated by three key financial developments; namely, globalisation, functional integration and financial innovation.

Globalisation may extend the boundaries of systemic risk by creating the potential for cross-border contagious financial disorders. In other words, the externalities associated with systemic risk become world-wide in scope. Globalisation calls for a common framework because financial shocks can no longer be confined to the jurisdiction in which they originate. Bank supervisors have already evolved an embryonic international regulatory regime by establishing agreed guidelines on:

- the allocation of regulatory responsibilities;
- the adequacy of supervisory standards; and
- capital requirements.

Securities regulators, on the other hand, have a long way to catch up – and perhaps little time to do so – if upheavals such as the Barings collapse are not to be repeated. Meanwhile regulatory attention has shifted from institutions to payments and settlement systems where large concentrations of counterparty risk can have systemic implications.

Functional integration, involving the mixing of bank and non-bank financial activities, raises formidable regulatory difficulties. The main issue here is whether the full panoply of bank regulation needs to be carried over to banks' non-traditional business or whether the bank entity can somehow be insulated from risks incurred by these non-bank financial operations. This issue is further complicated by questions of competitive equality which, increasingly, feature in the formulation of regulatory policy.

The regulatory response to functional integration has left unresolved a number of problems. First, national authorities have adopted divergent approaches to the central issue of risk segregation versus risk pooling within financial conglomerates. Second, the implications of allowing banks to freely fund their securities and derivatives trading operations with deposit liabilities (as in the Barings case) have not been properly addressed. Third, the separation of regulatory responsibilities, at the national level, between bank and securities regulators seems increasingly archaic in a situation where the two businesses have become closely integrated. Fourth, at the international level it is surely time to consider the establishment of an overarching co-ordinating body to subsume some of the activities of the Basle Committee and IOSCO – whose record of mutual co-operation in any case leaves much to be desired.

Finally, financial innovation in the form of large-scale derivatives trading has resulted in a loss of transparency in financial markets that poses problems for management, regulators and counterparties. For management the main emphasis must be on internal controls; and for counterparties the accepted solution is increased financial disclosure. Regulators, however, face a particular difficulty in that reliance on periodic bank examinations and reporting requirements becomes futile when a bank can transform its proprietary trading position and overall risk profile almost instantaneously through the use of derivative products. The regulatory response has been to develop an entirely new

approach to capital adequacy assessment based on internal risk models. This focuses on the process by which portfolios are selected and risks are managed, rather than the instruments held at a point in time. In the words of Mr Alan Greenspan, 'supervisors may have to resort to basing their analysis chiefly on assessments of managerial capabilities rather than on the portfolio held at a given instant'.[40]

What is certain is that large-scale derivatives trading reinforces the processes of globalisation and functional integration by creating new linkages between financial markets. Above all, therefore, the explosion of derivatives business strengthens the case for a global approach to prudential regulation embracing the full range of activities undertaken by the new financial conglomerates.

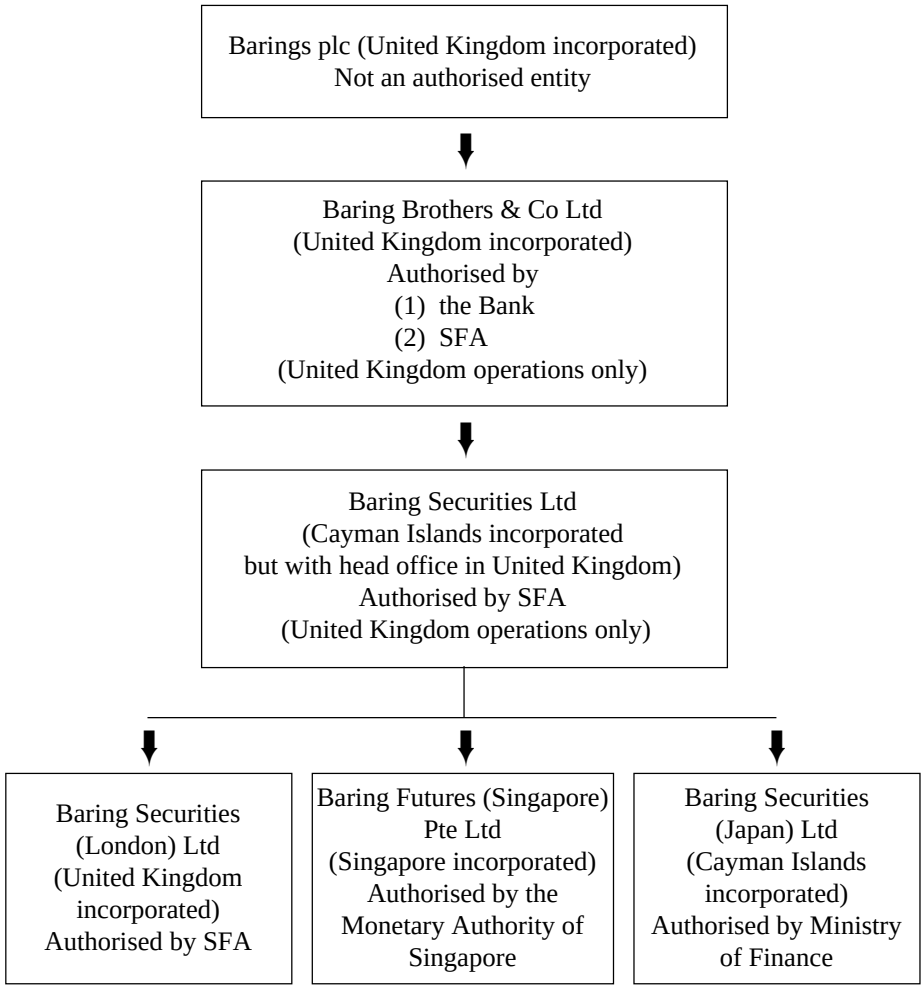
40. Greenspan (1995a), p. 3.

Appendix: The Barings Disaster – A Warning to Regulators

At the time of its collapse in February 1995 Baring Brothers and Co Ltd (BB & Co) was the longest established merchant banking business in the City of London with total assets of around £6 billion and deposits of some £3 billion.

The parent holding company was Barings plc which had two major subsidiary operations, BB & Co, and Baring Asset Management Holdings Ltd. BB & Co had a securities subsidiary, Baring Securities Ltd (BSL), which in turn owned Baring Securities (London) Ltd (BSLL) and whose overseas subsidiaries included Baring Futures (Singapore) Ltd (BFS) and Baring Securities Japan Ltd (BSJ) (see Figure 1).

Figure 1: Barings Group Companies (Selected)



Source: Barings Report, p. 324.

An unusual feature of this corporate structure is that the voting share capital of Barings plc was held by its executive management while the non-voting share capital, which was exclusively entitled to ordinary dividends, was held by the Baring Foundation, a United Kingdom registered charity.

At the end of February 1995 Barings faced collapse, having incurred massive losses on unauthorised derivative trading undertaken by Nick Leeson, the chief trader and general manager of its Singapore securities unit (SFL). An attempted rescue operation orchestrated by the Bank of England failed and on Sunday 26 February the Barings group was placed in administration. This Appendix considers the managerial and regulatory weaknesses that led to the collapse. The discussion draws heavily on the Bank of England's own report on the Barings collapse ('The Barings Report').[41] That report examines three levels of protection that might have been expected to prevent the build-up of concealed losses at BFS: namely internal management controls, the external auditing process, and supervision by relevant regulatory authorities.

So far as Barings' own management is concerned, the evidence is damning. Leeson was allowed to combine back and front office responsibilities in Singapore; he was not properly supervised, due in part to confusion over who was supposed to be reporting to whom; and, crucially, Barings' banking operation in London (BB and Co) funded BFS via Barings Securities Ltd (BSL), on a no-questions-asked basis; that is, without proper regard to (1) the need to assess counterparty risks, (2) the need for verification of funding requests and reconciliation of records, and (3) the need to establish whether the funds requested were for client or proprietary trading. Finally, senior management failed to make enquiries as to how a supposedly risk-free arbitrage operation could generate extraordinary profits.

The external auditors, Coopers and Lybrand, also come in for some criticism. Coopers and Lybrand Singapore completed an assessment of BFS's internal controls in November 1994 and concluded that these were satisfactory. The report observes that 'this conclusion was ... not readily compatible with the fact that there was a lack of segregation between front and back office'.[42] The report also comments that 'we do not consider that Coopers and Lybrand London performed sufficient tests to satisfy themselves that the controls over payments of margin and the associated accounting balances were operating effectively'.[43]

A final layer of protection is provided by the supervisory process. In order to appreciate the Report's findings in this area it is necessary to understand the division of regulatory responsibilities. The Bank was responsible for supervising BB and Co on a consolidated basis, meaning that even where the Bank had no direct supervisory responsibility for, say, an overseas subsidiary, it still had to take account of risks in the subsidiary that might affect BB and Co. The Securities and Futures Authority (SFA) was responsible for supervising BSL and BSLL – although the SFA's supervision in contrast to the Bank's approach, was *not* conducted on a consolidated basis (see below). This

41. Bank of England (1995). (Hereafter cited as 'Barings Report') – see also Dale (1995a), pp. 1-5 and Dale (1995c), pp. 1-2.

42. Barings Report, para 13.47, p. 242.

43. Barings Report, para 13.50, p. 242.

meant that in practice the relevant foreign regulatory authority (for example, SIMEX in the case of BFS) had exclusive supervisory responsibility for Barings' overseas securities subsidiaries as far as the SFA was concerned. Finally, the Bank had the role of 'lead regulator' for the Barings Group as a whole, meaning that it was responsible for co-ordinating the supervisory functions of the United Kingdom regulators.

The report contains two major criticisms of the Bank's supervisory performance in relation to Barings. First, it points out that there was confusion over a considerable period as to whether Barings' margin exposure to overseas exchanges should be subject to the general 25 per cent limit on large exposures – an ambiguity that permitted an open-ended build-up of Barings' exposure to SIMEX. Second, the Bank allowed Barings' banking operation (BB and Co) to be 'solo consolidated' with BSL: under this supervisory arrangement the banking and securities businesses were consolidated and there was then no limit on the intra-group funding of Barings' securities operations by Barings' banking arm. The report notes that the *de facto* solo consolidation of BSL and BB & Co (technically, the matter remained under review) was the first time that a substantial securities company had been solo consolidated with a bank and meant in effect that BB & Co was able to remit large advances to BSL for on-lending to BFS, ostensibly to finance client trading but in fact (as it transpired) to finance unauthorised speculative activity.

In assessing the supervisory performance of the SFA the report raises one absolutely fundamental question. It points out that the SFA did not consider the level or nature of BSL's exposure to its overseas subsidiaries because 'it does not regard itself as having any obligations with regard to subsidiaries (whether the United Kingdom or foreign) other than those which apply to ordinary counterparties who might expose the member firms to risk'.[44] However, the report states unambiguously that 'in monitoring the financial resources of BSL the SFA should have had regard to the financial soundness of BSL's subsidiaries including BSJ and BFS insofar as the operations of the subsidiaries were capable of affecting the financial integrity of BSL'.[45]

Finally, the report states that it was not possible to make detailed enquiries as to the overseas regulation of Barings, and that no conclusions can therefore be reached on this aspect of Barings' collapse.

The report's final conclusions on the lessons to be drawn from Barings naturally follow closely the various criticisms noted above. There are exhortations to management about the need to understand the business they are engaged in, and to establish tight internal controls. The Bank, too, is urged to increase its understanding of non-banking businesses undertaken by banking groups. However, the enquiry team do not believe that there should be any fundamental change to the framework of regulation in the United Kingdom. For instance, the idea of introducing routine on-site bank inspections by the Bank is rejected in favour of a regime which makes greater use of reports commissioned from reporting accountants, particularly in the area of internal controls. It is suggested that if necessary, reporting accountants should be required to go outside the United Kingdom. Reservations are expressed about the principle of solo consolidating

44. Barings Report, para 12.153, p. 226.

45. Barings Report, para 12.105, p. 217.

a bank and a substantial UK securities firm on the grounds that, because the bank may incur exposure to its securities subsidiary without limit, the Bank inevitably places increased reliance on regulation of the securities subsidiary by the SFA. Concern is also expressed about the role of comfort letters and guarantees, the supervisory treatment of which needs to be co-ordinated internationally.

Looking at the report's conclusions overall, certain points stand out. Firstly, exhortations to management do not seem to be a very effective way of strengthening banks' internal controls. What is surely needed here is some consideration of managerial *incentives*. As noted above in the case of Barings, the voting share capital of Barings plc was held by its executive management and the non-voting share capital was held by the Baring Foundation. The executive management voted themselves a remuneration policy under which approximately 50 per cent of profits before tax went directly into a bonus pool, the consequence being that at director level the ratio of bonus to basic salary was typically 75:25 or more.

In other words, Barings resembled a partnership so far as distribution of *profits* was concerned, but management was protected by limited liability in respect of *losses*. It is hardly surprising, therefore, that top management did not look too closely at the source of Leeson's trading profits, which were contributing significantly to the bonus pool. After all, if Leeson was taking unauthorised risks a large part of the profits arising therefrom would go to management while catastrophic losses would be borne by others, including non-voting shareholders (ie the Barings Foundation). More generally, Barings' unique financial structure, with its asymmetrical distribution of risks and rewards, created powerful incentives in favour of excessive risk-taking – a magnified version of the moral hazard problem that characterises all banking businesses.

In this context too, it is interesting to note the different risk-reward profiles of a bank-related derivatives trader and a bank depositor: the former faces zero downside risk and potentially unlimited returns (through bonuses) on high-risk positions, whereas the bank depositor faces zero upside returns and potential losses limited only by the size of his/her deposit. Under these circumstances no rational depositor would agree to place funds with an organisation that intended to use the proceeds for trading, unless the deposit liabilities were explicitly or implicitly guaranteed.

Another feature of the Barings Report is the confusion it reveals about the scope and purpose of consolidated supervision. In the first place, while the report refers to the difficult issues raised by the solo consolidation of a bank and a securities firm, it does not state clearly what these issues are. But one obvious danger is that a securities firm may be able to expand risky business on the basis of 'soft' funding from its affiliated bank, as indeed was the case with Barings. The fundamental question here is how appropriate it is for banks – and bank deposits – to be used as a source of funding for an affiliated securities firm, given that bank deposits represent 'subsidised' funding to the extent depositors are protected by the official safety net. Arguably, 'funding firewalls' should be imposed to prevent bank deposits being used to provide high-risk, aggressively managed securities businesses with cheap financing that does not reflect the risks involved.

Under present EU Directives and the United Kingdom rules, banks are not effectively prohibited from financing their securities operations through bank deposits. Admittedly,

EU large-exposure rules require banks to obtain prior authorisation for related entity exposures of over 20 per cent of capital, but the requirement is subject to various waivers and discretionary exemptions. Above all, there is nothing to prevent banks from undertaking securities or derivatives trading on their own balance sheets, thereby bypassing intra-group large-exposure limits altogether. The EU regime is in stark contrast to the proposals recently put forward by the United States Treasury as part of the planned Glass-Steagall reforms being considered by Congress – the Treasury would:

- repeal only Section 20 of the Glass-Steagall Act (which currently prohibits banks from being affiliated with a securities firm);
- require that securities activities be undertaken by a separately incorporated subsidiary of the bank; and
- impose funding firewalls between the bank and its related securities unit.

A second consolidation issue raised by the report concerns the contrasting approaches of bank and securities regulators. Under the Basle Concordat bank regulators are obliged to include foreign subsidiaries in their consolidated supervision of banking groups. Securities regulators, on the other hand, are subject to no such obligations and indeed the SFA has stated quite clearly in relation to Barings that it made no attempt to assess the risks posed by BSL's foreign securities operations (including BFS). For a mixed banking and securities business such as Barings, characterised by large intra-group financial flows and complex cross-guarantees and comfort letters, this dual approach makes no sense whatsoever since the parent bank is exposed to the risks incurred by *all* its affiliated units, including overseas securities operations.

Finally, while the report urges the SFA to 'clarify' the extent to which it should take into account the risks posed by subsidiaries of securities firms, it does not suggest how this might be done. Indeed, it is difficult to see how a regulator can properly take into account risk elsewhere in a group which might affect the authorised institution (as the Bank is required by statute to do) if it has no formal powers to supervise such entities. In other words, regulators inevitably have to rely largely on foreign supervisory authorities to ensure that overseas subsidiaries are prudently managed.

The last point highlights the fundamental weakness of the Barings Report, which is the absence of any proper consideration of the international regulatory dimension, this being outside the authors' terms of reference. Given the multinational character of Baring's financial activities, the reliance placed on local jurisdiction supervisory authorities, and the crucial importance of international supervisory co-ordination, such an omission limits the usefulness of the Report's findings.

Conclusions

Barings was an unusual player in the new global financial markets, firstly because its securities operations were large relative to its banking business and, secondly, because its financial structure gave it the characteristics of a partnership protected by limited liability. These features may have interacted in a way that encouraged a relaxed attitude to risk-taking, at least on the securities side of the business.

Nevertheless, the Barings collapse highlights important regulatory failings that touch on each of the three characteristics of modern financial markets noted above – namely globalisation, functional integration and financial innovation. In the area of globalisation, regulators in Singapore, Japan and the United Kingdom failed to co-ordinate their roles internationally, underlining the absence of any multilateral agreement on supervisory co-operation in securities markets. On the question of functional integration, there was no clear policy on (1) whether or to what extent Barings' banking arm should fund its securities affiliates or (2) how the principle of consolidated supervision should apply to the various parts of the group. And, finally, financial innovation lay at the heart of the Barings' collapse, insofar as neither Barings' top management nor regulators seem to have fully understood the nature of the derivatives arbitrage operations in Singapore that were supposed to be generating such large profits.

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Discussion

1. Murray Sherwin

Richard Dale has provided us with an interesting survey of current regulatory and supervisory challenges. His focus is on three developments that are influencing the shape of financial markets – namely globalisation, functional integration, and innovation, especially in the form of derivative products.

Underlying the discussion of these three developments is the theme that, in essence, the world is becoming a more dangerous place for financial intermediaries, and therefore, for the supervisors and regulators of those intermediaries. As a consequence some regulatory response is required. Those developments deserve examination.

Globalisation

Globalisation is assumed to increase risks for banks because 'it offers fresh channels for the transmission of financial shocks'. Of course, the other side of the argument, as Dale allows, is that globalisation also facilitates the wider diversification of economic risk. Why is globalisation a concern? A few possibilities occur:

- financial intermediaries gain opportunities to expose themselves to risk in jurisdictions which they do not understand. That is no more than an argument that any new activity is likely to be risky as the new entrant works its way up the learning curve. However, it certainly isn't obvious, at least to me, that there is inherent or undue difficulty in managing that risk if the management has a mind to try;
- national settlement systems are not integrated, leading to increased Herstatt risk as the volume of cross-border transactions grows. This is not a proposition that I would take issue with at all – it simply highlights the need to make progress in dealing with Herstatt risk generally; and
- if the soundness of financial institutions is indeed dependent on supervision, then there is a greater chance that some risks will fall through the cracks when business spreads across different jurisdictions. That is also true, but is also increasingly being dealt with by national supervisory agencies.

Functional Integration

As with globalisation, those who worry about functional integration and its implications for financial risk would seem to be facing an increasingly ulcer-prone future. The blurring of boundaries between institutional groups within the financial sector is now well underway and is not about to reverse. It is not just that banks now sell insurance, or that insurance companies sell loans, or that they all deal in securities; more fundamentally, the financial products themselves are blurring at the edges. Banks are writing multi-option facilities (where the client can switch between loan and underwriting facilities) and hedging products are looking more like insurance. In essence, anything that involves cashflows can be present-valued, and risks that can be priced or hedged can be

re-engineered and repackaged to meet the particular and diverse needs of some client or other. Given financial products which involve an amalgam of lending, underwriting, and insurance all wrapped into one, the traditional 'functional' basis of regulation and supervision becomes increasingly difficult to sustain.

If functional integration is inevitable, is it inevitably dangerous or risky? The argument that functional integration is dangerous seems to rest largely on the proposition that integration allows banks to exploit their cheaper funding, while taking on riskier activities such as securities dealing and derivatives trading. This, in turn, seems to hinge largely on the existence of deposit insurance or other similar safety nets for banks or their clients (this being the route which allows banks to lower their cost of funds relative to non-bank financial intermediaries).

Having banks involved in derivatives or securities trading is not, of itself, anything special. Banks have always invested in risky assets – indeed understanding, accepting, and managing risk is a key component of what banks do to add value to the community. A bank with exposure to market risk as well as credit risk is not inherently riskier than one with just exposure to credit risk. The real problem – as Dale notes – is one of the interaction of balance sheet risk and creditor protection. The problems of moral hazard and associated risk/return dislocations which emerge when deposit insurance or other protective devices are available to banks is well understood. The fact that such problems arise does not constitute a case for strenuously resisting functional integration. However, it may be a case for having a fundamental look at the nature of protection afforded to bank creditors.

Financial Innovation

The sources of increased risk associated with derivatives identified in Richard Dale's paper relate to two principal points:

- balance sheets have become more opaque because derivatives are so complex and because derivatives allow banks to alter their risk positions rapidly, thereby rendering reported risk positions at best obsolete and irrelevant or, at worst, misleading; and
- operational risk is increased because dealers are able to enter into very large unauthorised transactions.

On the first point, derivatives, in some senses, can be *less* opaque than traditional credit exposures. It is difficult to value many loans at any point, and to the extent that credit exposures involve embodied options or agency problems, predicting how their value will evolve over time is no simple exercise.

By contrast, it is possible to reduce the main risk dimensions of derivative instruments to their physical equivalent, and to aggregate the risk of a portfolio to a single value-at-risk (VAR) measure. While there is certainly some way to go before we are all talking the same language with respect to VAR measures, there is certainly the potential for derivative exposures to be more transparent than credit exposures.

On the question of how quickly risk can be shifted via derivatives, it does seem that disclosure can still be an effective means of constraining imprudent behaviours. A

requirement to disclose *peak* intra-period exposures, as well as the more traditional end-of-period exposures, is a very powerful sanction on imprudent behaviour. Unless a bank believes that there is a good probability that it will not be around for the next period's report (in which case it does have an incentive to go for broke) the bank will find peak exposure reporting requirements a very real constraint on risk-taking.

There can be little dispute that the growth of derivatives trading has materially increased operational risk. A single employee can encounter both the incentives, and the means, to put the bank (or, indeed, any other entity) at risk. What Richard Dale is silent on is the relative strength and comparative advantage of private incentives in managing this particular risk, as opposed to public supervision approaches.

The New Zealand perspective is that the management and boards of financial institutions are best placed to combat operational risk. It certainly isn't obvious that extending international co-operation in supervision can do a lot to help. In any event, institutional failure arising from operational risk arguably poses less of a systemic threat than, say, default through credit risk. Failure from operational risk is essentially random, and there is little reason to suspect that the failure of one financial institution through operational risk says much about the solvency of others. By contrast, credit risk is much more likely to be correlated across financial institutions, and hence, give rise to more serious contagion risks.

Richard Dale usefully reviews the Barings failure and concludes that it illustrates important regulatory failings. The alternative view is that, from a systemic perspective, it was a damn fine little failure – the costs fell about where they should have, on management and shareholders; depositors lost nothing; the UK Government contributed nothing; markets continued relatively unscathed; a few smaller banks with large security operations had to pull their horns in a little bit, but there were no contagion effects. On the positive side, boards and management everywhere were given a graphic lesson in the importance of understanding operational risk, and for good measure, a demonstrably poor management team exited the market.

Richard Dale's conclusions, at several points, come back to suggestions that regulatory responses are called for to deal with the evolving risks identified. A common theme is the importance of enhanced co-operation between supervisors – in different countries, across different institutional groups, across different functional activities. The tone of my reactions to these various evolutionary forces in financial markets is somewhat different. To my mind the necessary agenda for regulators and supervisors includes the following:

- to recognise that the developments to which Richard Dale refers – globalisation, functional integration and innovation – are not going to go away, and certainly will not be regulated out of existence;
- to recognise that there are real welfare costs to regulatory responses that prevent the public from having access to innovations which are themselves being driven by fundamental changes in technology, consumer choice, or competitive advantage;
- to be very modest about what supervision can achieve;
- to begin working very hard on encouraging the public (and even more, the politicians) to be correspondingly modest in their expectations of financial sector

regulation and supervision. The persistent political reaction to bank failures which sees more and more supervisory effort being thrown at banks is surely counterproductive;

- to reorient the work of regulators and supervisors. The task, surely, is not to commit to finding ways to prevent bank failures. Rather, the key task is to put ourselves into a position where it is easier to allow banks, even big ones, to fail;
- to clarify our thinking on what is really important in regulation and supervision and why. Only then will it be possible to concentrate regulatory and supervisory resources on the smallest possible core of the financial system. It seems clear that the key objective is systemic stability. Current developments world-wide in the implementation of RTGS payment systems are a major step forward in dealing with systemic risk. The next substantive challenge is to deal with Herstatt risk. As a goal for supervision, depositor protection must surely have a limited life expectancy – except perhaps in the 'narrow bank' context. Depositor protection complicates too many boundary issues in a world of growing functional integration, creates competitive neutrality problems between institutional groups, and is the source of much of the moral hazard problem that we grapple with. Moreover, the public seem increasingly prepared to go without depositor protection, as illustrated by the rush into mutual funds and similar savings vehicles in many countries; and
- finally, when thinking about supervision and regulation, we need to focus very closely on how best to align private incentives with public interests. Public disclosure of financial risk material is a very powerful force in that regard and deserves a prominent position in the supervisors' armoury.

2. General Discussion

The discussion revolved around three main issues:

- the goals of financial regulation;
- firewalls; and
- 'are banks special?'.

Participants discussed a number of possible goals of financial regulatory policy. It was commented that the goals were sometimes unclear, and that existing regulatory policies were being asked to do too much. What was needed was to identify the core rationale for regulating particular institutions or activities.

Two main views were expressed. One view was that the main rationale for financial regulation arose from systemic risk and from the potential for liquidity crises. Banks and other deposit-takers were inherently vulnerable to liquidity problems because their main assets were non-marketable loans which were worth considerably less in liquidation than on a going-concern basis. This meant that liquidity problems could lead to cases of insolvency even in sound banks. The usual regulatory safeguards included capital standards, supervision and central bank liquidity support.

There was some debate as to whether there was an analogous liquidity risk associated with securities markets: that is, whether financial markets could become illiquid to an extent that would generate solvency problems in institutions. Some participants thought that this could not occur, since markets were always liquid if sellers were willing to accept a low enough price. Others thought there had been examples of market illiquidity which in certain circumstances could give rise to systemic concerns. The role of policy was to ensure that markets had adequate liquidity and to ensure that institutions were adequately capitalised to have a buffer against risk.

The second main view of regulatory policy was that the essential rationale came from the political imperative to protect depositors. Policy could not take a disinterested view of any loss of depositors' money, and there was a strong public demand to have some core of safe assets that could be held by risk-averse savers.

It was pointed out that these two views had overlapped to a considerable extent in traditional financial systems, where banks were clearly distinct from other financial institutions. Policies aimed at institutional solvency of banks had served the dual purpose of protecting depositors and promoting systemic stability. The situation became more complicated once banks were significantly engaging in activities outside of traditional banking business. If the scope of regulation and official support were extended to the whole of banks' expanded operations, it would undermine regulatory equality between banks and other institutions in the banks' new areas of activity.

The situation was further complicated by the unbundling of banks' core functions, and the increasing scope of banks and other financial institutions to specialise rather than offering a comprehensive range of services. These trends meant that policymakers would have to decide what combination of the traditional core activities was the real focus of regulatory concern. More generally, they would have to decide whether banks were to be regulated because they were called banks, or because of the particular activities they were engaged in. If the latter was the case, then those activities should be regulated equally for all institutions engaged in them.

A second major issue was the question of 'firewalls'. Regulatory systems generally allowed banks to engage in a wide range of financial services through subsidiaries, but banks were not permitted to underwrite the solvency or performance of their subsidiaries with the bank's capital. In this way banks were intended to be protected from the effects of the failure of a subsidiary. Participants debated whether this kind of firewall could really be effective. Some participants thought that markets recognised the effectiveness of firewalls in some parts of the financial sector, by giving different credit ratings to different members of a financial group. Others argued that firewalls were generally ineffective. Banks could not allow their subsidiaries to fail without damage to their own reputations, and consumers generally did not recognise the distinction between banks and their subsidiaries. Indeed, the marketing advantage conferred by a bank's brand name relied on some public perception that banks stood behind their subsidiaries' products. This in turn was argued to give bank subsidiaries an unfair advantage in the markets in which they operate, because of the parent banks' perceived access to public support. This pointed to a need to strengthen the firewalls, for example though improved disclosure of the fact that bank capital could not be used to support a subsidiary.

The more general question of what makes banks special was also discussed. Participants discussed the traditional view that banks' special status came from their unique combination of activities: their role in the payments system, illiquid loan portfolios and deposit liabilities. A number of participants commented that this special position was being eroded. In particular the process of securitisation meant that banks could package and sell off their assets to an increasing extent, so their role as holders of non-marketable loans was being reduced. Similarly, the process of unbundling was changing the basic character of many financial enterprises. On the other hand it was pointed out that these processes take time and that it is not yet known how far they will go. Another view was that banks had originally been seen as special largely because of their role as retail deposit-takers. A corollary of this view was that the regulatory focus should not be on banks *per se* but on retail deposit-taking activities generally.

Regulatory Policy Issues in Australia

Graeme Thompson

1. Introduction

The pace of development in the Australian financial system over the past decade and a half has been dramatic. The size of the sector has more than doubled in real terms, while the range and sophistication of products and instruments has expanded rapidly. The use of complex products such as derivatives has grown apace. Technological advances are revolutionising the delivery of financial services and are making available much more sophisticated alternatives in the payments system. Greater sophistication in financial arrangements is also allowing services to be offered in new ways and by new players. In Australia, as elsewhere, a trend for funds-management vehicles to grow faster than the traditional institutions is evident, as is the related growth of capital markets at the expense of intermediaries. Consequently, competitive pressures on established institutions, including the banks, are intensifying. While professional financial markets have been globalised for some years, modern communications technology offers the prospect of a more globalised market for retail finance.

Some of these trends, which are explored in greater detail in the paper by Edey and Gray in this volume,[1] have raised important questions about Australia's financial regulatory structure and for the framework of bank supervision. This paper seeks to address some of these. Section 2 considers the broad objectives of financial regulation in Australia. The following sections discuss some of the key regulatory issues.

2. The Objectives and Structure of Financial Regulation in Australia

Although the features of financial systems vary from country to country, depending on their stage of economic development and the structure and philosophies of government, it is possible to identify common themes or objectives underlying financial regulation. Broadly speaking, regulation is justified on three grounds:

- a concern with the stability of the financial system;
- a desire to protect the interests of users of financial services in situations where information concerning the characteristics of products, or the riskiness of institutions offering them, is hard to assess; and
- the need to encourage appropriate levels of competition and efficiency in markets.[2]

Ultimately, the success of a financial system is measured by its capacity to facilitate the nation's long-term economic growth and prosperity. And the success of any system

1. Llewellyn , in this volume, describes the trends affecting banking in a more general context; see also Borio and Filosa (1995).
2. These broad objectives are described at more length in many places, including by Dale (in this volume).

of financial regulation depends on its achieving those stability and other desirable characteristics in the financial system at reasonable cost in terms of moral hazard risk[3] and restraint on institutional flexibility and innovation.

It is useful to classify financial regulation in Australia according to its various types and objectives. Competition policy is left aside, since there need be no unique competition policy for the financial sector.

Prudential supervision, which is the main subject of this paper, may be defined as supervision directed at institutional solvency, and is exercised over banks, building societies, credit unions, life insurance, general insurance offices and some superannuation funds – entities which have obligations with a promised minimum value. The promised value of such liabilities will, of course, increase over time, as interest is credited to deposit accounts or bonuses added to insurance amounts. The agencies which conduct such supervision are the Reserve Bank (RBA) in respect of banks; the Insurance and Superannuation Commission (ISC) for insurance companies and defined-benefit superannuation; and the Australian Financial Institutions Commission (AFIC) for building societies and credit unions. These agencies, together with the Australian Securities Commission (ASC), are represented on the Council of Financial Supervisors, established in 1992 with the main objective of promoting effective liaison and co-ordination among the regulatory agencies.[4]

Other regulation and supervision focuses not on the viability of legal entities, but on the products (or services) offered and the competence of those offering (or advising about) them and the integrity of markets in which products are traded. Several related objectives can be identified under this heading of *product regulation*. One is to ensure that information disclosed by providers is sufficient for investors to make well-based decisions (which may of course include a decision to invest in a highly risky venture), with the ultimate objective of promoting efficiency in financial markets. Much of the ASC's regulation in relation to managed funds and securities traders (as well as non-financial corporations) has this goal. There are also regulations dealing with the competence and integrity of investment trustees and managers. Another area of product regulation is concerned with fair treatment of consumers – ensuring that they are properly informed about the conditions of contracts, including charges; providing for avenues for complaint and redress when disputes arise; and so on. Sometimes it is required that information be provided in a way which facilitates comparison of competing products or services. Examples of such regulation include the ISC's disclosure standards for life insurance policies, the uniform consumer credit laws and the code of practice agreed between the banks and the Government. Distinctions are often made between retail and professional customers.

A grey area is the oversight of accumulation superannuation funds, where the ISC exercises quasi-prudential supervision in seeking to ensure that trustees' investment strategies are not excessively risky; for instance, it requires asset portfolios to be diversified and has recently promulgated standards for risk-management systems

3. Moral hazard refers to the possibility that, in the presence of official supervision, banks will adopt riskier business strategies in the expectation of a bailout if problems occur, or that depositors and other creditors will be less discriminating in their choice of institution.

4. Council of Financial Supervisors, Annual Reports.

governing the use of derivatives. This role has arisen because Government policies which promote saving in the form of superannuation give rise to community expectation that funds will be managed responsibly. Such supervision does not, of course, have the objective of institutional viability or solvency.

This classification system is useful when considering how financial regulation might be organised. Prudential supervision is about risk management, while product regulation is largely about standards of service and quality of information.[5] Consequently, the skills and knowledge required by the relevant regulators are different. Moreover, as long as financial products, such as home loans, are not uniquely identified with particular institutional groups, the relevant product regulator will necessarily deal with several groups. As financial services are provided by a widening range of institutions, product regulators, in the interests of competitive equity, need to expand their purview.

Prudential supervisors, on the other hand, must be concerned with a financial institution as a whole – its deposit-taking, lending, investment in liquids, capital structure and so on – since risks to its solvency may arise in any area.

Inevitably there will be overlaps in regulatory authority where a prudentially supervised institution offers services which are subject also to product regulation, such as information disclosure. In principle, there need be no inconsistency between the two, but in practice issues can arise which require some co-ordination among the respective agencies.[6]

3. Some Key Regulatory Issues

Structural changes in the Australian financial system raise many inter-related policy issues, four of which are discussed in the following sections:

- how prudential supervision should be organised;
- the particular question of the central bank's role;
- the competitive impacts of bank supervision, which will come under closer scrutiny as technological and other changes increase the range of potential players in the system; and
- evolution in bank supervision.

This discussion touches only tangentially on supervisory issues associated with the increased globalisation of finance.[7]

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5. An alternative classification system is proposed by Goodhart (1995), in which a 'system stability' objective is distinguished from 'investor protection'. A practical problem with this in thinking about organisation is that prudential supervision of financial firms not threatening system stability is placed in the latter category, when the techniques and skills involved for this are virtually identical to those required for system stability supervision and quite different from those required for other sorts of investor protection. See also Taylor (1995).

6. Note that there can be some trade-off between prudential supervision and product regulation, in that regulation to do with information for savers might be tougher for institutions which are only lightly supervised. For instance, finance companies – which are not prudentially supervised – have to issue prospectuses with more detail than is normally made available to intending bank depositors.

7. See Dale in this volume.

4. Organisation of Supervision

The present organisation of financial supervision and regulation has been under scrutiny recently, with the thrust of much comment being toward combining the existing agencies into a smaller number. The main justifications advanced for this rely on 'blurring of the distinctions' among the main traditional groups of financial institutions, as well as generalised concerns about the 'burden of regulation' which might be reduced if there were fewer agencies.

One could, of course, argue that institutional arrangements are considerably less important than ensuring that the objectives of supervision are appropriate, and that it is conducted competently with full regard for costs and benefits. But, how supervision is organised can affect its efficiency and cost, and have competitive effects. Capable supervisory resources will be scarce, and there might be considerable diseconomies if identical supervisory tasks are spread over more agencies than necessary. On the other hand, of course, a monolithic supervisory structure might bring about inefficiencies through stifling innovation and forcing financial activities into the one mould. (US debate on regulatory organisation often goes as far as extolling the virtues of competition among regulators of similar financial activities.)

The most extreme position is that all regulation and supervision for the financial system should be placed under control of a single regulatory authority. This model envisages an agency covering not only prudential supervision but consumer protection, market conduct, competition and so on. A major drawback would be that the range of tasks falling under the all-encompassing agency would be exceedingly broad – from issues associated with conduct in financial markets (dealer practices, market conventions), consumer codes and protection, legal questions associated with disclosure and the like, through to the complex and often technical issues associated with risk management within financial institutions. Clearly, the training and skills required to carry out these functions are very diverse, and bringing them into the one agency is unlikely to result in any efficiencies. The differences in objectives and cultures would produce an institution which was difficult to manage and unlikely to be clearly focussed on the various tasks for which it had responsibility. Further, some of these responsibilities, for example, competition, should be conducted on an economy-wide basis and it would be inefficient to have an agency specifically concerned with the financial system also dealing with them.

The remainder of this section considers the case for combining *prudential* supervisory functions. As indicated earlier, there are only three important prudential supervisory agencies in Australia – the RBA, the AFIC and the ISC.[8]

The first justification, in principle, for combining agencies could be that present arrangements have *individual* financial institutions (as opposed to conglomerates comprising two or more institutions) being supervised by more than one agency, leading to overlaps, conflicts and inefficiencies which could be resolved by collapsing these

8. This generalisation leaves aside some fringe institutions, such as friendly societies, which are supervised by State agencies. AFIC, in fact, sets prudential supervision standards for building societies and credit unions which are then implemented by agencies in each State.

agencies into one jurisdiction. This argument has no force in Australia, where the statutory responsibilities of the prudential supervisory agencies are clearly defined, and no individual institution is subject to oversight by more than one. Institutions will, as noted earlier, be subject to both prudential supervision and product regulation. The relevant agencies should aim to co-ordinate their requirements to resolve any inconsistencies but, given their different objectives, overlaps should not be a major problem.

A second argument for combining agencies is that the current institutional groupings on which prudential supervision is based are no longer meaningful, and that all financial institutions are converging to one standard model or, at least, to very similar ones. The evidence for this contention is weak. Notwithstanding the substantial innovations of recent years, it remains possible to identify two broad classes of financial institutions, distinguished primarily by the nature of their contracts with those supplying funds to them.

The first category is firms which offer a 'capital-guaranteed' or 'capital-backed' product to savers – that is, which promise to repay the initial investment or some other fixed sum, and whose promise is backed by the holding of capital. These include deposit-takers (or intermediaries, in Edey and Gray's discussion) and insurance companies (for some products). The purposes to which institutions put the money raised from the public are conventionally restricted, and capital is required to be held as a buffer against losses which could threaten the repayment of funds. Supervision is justified on the grounds that it is inefficient for households and others to have to make judgments in the conduct of their daily affairs about the health of various complex financial institutions.

The second category comprises firms which offer to manage investors' money on a best endeavours basis – sometimes with undertakings about 'capital stability'. These are the various funds-management vehicles, including accumulation-based superannuation.

This basic two-way classification is likely to be durable in the face of financial system change because there are severe practical difficulties in the one legal entity offering both types of product. There has, of course, been some practical blurring in the sense that some investment managers, through their choice of assets, can offer products with similar characteristics to bank deposits. The main example would be cash management trusts (introduced in 1981); another is some Approved Deposit Funds which have certain characteristics similar to term deposits. The legal form and characteristics of such products, however, remain distinct from capital-backed deposits.

The main significance of the classification is that only institutions in the first category are subject to prudential supervision, since only they may become insolvent. Funds-management institutions are (with the exception of accumulation superannuation funds) subject only to forms of product regulation – such as disclosure regimes and competency standards for trustees and managers. Moreover, there would appear to be only limited synergies between the two forms of official oversight, notwithstanding the combination of life insurance and superannuation regulation under the ISC which arises, in part, because life offices have historically been substantial offerers of superannuation investments.

Indeed, there are strong reasons for their *not* being carried out by the one agency. Prudential supervision, as defined, necessarily carries with it some official 'comfort' –

though usually, as in Australia, short of a guarantee – for depositors about solvency and the maintenance of promised nominal values.[9] This may involve the use of public funds, but can also be achieved through the organisation of a takeover by a stronger institution or an officially managed workout. There should be no expectation of such support in the case of managed funds. Yet investors might assume that some obligation for adequate investment performance is implicit if the same agency has responsibility for both types of institution, the more so when a capital-backed institution has an ownership linkage with the funds manager. Any arrangements which encourage the perception that the generality of managed funds are no more risky than deposits would constrict the risk spectrum, increase moral hazard and the implicit 'safety net', and reduce the efficiency of the mechanism by which savings are allocated to investments of varying characteristics, including risk. If investors, being well-informed of the risks, are prepared to accept uncertainty about investment returns, the government should not intervene in the absence of external effects.

Beyond the broad two-way classification, institutions in the capital-backed class fall into two[10] distinct sub-categories:

- intermediaries or deposit-takers, whose liabilities are relatively liquid and which hold out that money invested will be repayable in full either on demand or at the completion of an agreed period, usually with interest added. Whether all deposit-takers should be subject to the same prudential rules depends largely on community preference. Among deposit-takers, banks have generally been the more closely supervised for reasons which are discussed below; and
- insurance companies, which offer products combining a simple contract promise (payout on death or other future event) and annuities. With such products, the exact amount of payouts will depend on investment performance. Life insurance offices also offer investment-linked products managed on a best-endeavours basis. However, their capital-backed and investment-linked products are segregated into different statutory funds.

Clearly, there are significant differences in the modes of operation of these capital-backed institutions and in the nature of the risks involved in their meeting their obligations. For instance, insurance companies have long-term liabilities with ill-defined value, while their assets are generally marketable with readily ascertainable values. Banks, in contrast, tend to have relatively short-term liabilities, with assets which are difficult to liquidate and to value. Consequently, the applicable prudential supervisory regimes are different and there would be few (if any) efficiencies in bringing their

9. No prudential supervisory system can *guarantee* against institutional failure. It can only reduce the likelihood of failure and facilitate the resolution of one institution's failure (whether through merger or liquidation) in a way which limits the damage to other parts of the financial system. Goodhart (1995) argues that an optimal regulatory system *should* involve occasional institutional failures, because avoiding these would be too expensive in terms of limiting risk-taking and innovation.

10. A third, rather special, category comprises *defined-benefit* superannuation funds, where the fund has an obligation to make a future payment which is determined by criteria such as the member's final salary, age and years of employment. Such funds, which are declining in importance, are provided mainly as part of employment contracts rather than on a 'public offer' basis and ultimate payment depends partly on the ongoing viability of the employer.

supervision together.[11] Furthermore, as discussed later, the failure of an intermediary is more likely to be a concern for financial system stability.

Another argument for combining supervisory agencies draws on the fact that certain institutional groups are now offering products which traditionally have been the preserve of others. An example would be home lending by life insurance companies. The argument is that these products should be subject to the same prudential capital rules in each case. The capital adequacy rules for banks' housing loans have, however, been determined as one part of the supervisory regime for the overall activity of banks – with the ultimate objective of bank solvency – and it might or might not make sense to align a particular component of those prudential requirements across different groups. Of course, even if that were desirable, harmonisation would not necessarily depend on any amalgamation of regulatory agencies.

The final argument for combining supervisory agencies is that the challenges of different institutions being joined under common ownership in *financial conglomerates* can be met most efficiently by having one regulator for the entire entity.

Many conglomerates will, of course, be answerable to more than one agency because of the different jurisdictions to which constituent companies (often including a capital-backed intermediary and an investment manager) belong. There might be some administrative economies for such conglomerates if they were answerable to only one agency, but these will be limited while ever different supervisory and regulatory requirements apply to their components.

More substantial arguments for having one agency overseeing conglomerates stem from the related tasks of limiting contagion risk from one entity in a conglomerate to another, and of appraising the overall health of a conglomerate with several capital-backed components. Where the major entities in a conglomerate are supervised,[12] these tasks call for effective communication and co-ordination among the relevant regulatory agencies, and put a premium on transparent corporate structures. As long as prudential supervision of different members – such as banks and insurance companies – remains specialised, it is questionable whether a single agency would be more effective than two or three working together. An international consensus is emerging that, for most financial conglomerates, a convenor or lead regulator should be nominated to organise group-wide financial assessments, exercise authority over special-purpose holding companies and co-ordinate crisis response.[13]

Since, in the Australian context, there are rarely more than two prudential supervisors for any conglomerate, it seems practicable to manage the growth of conglomerates through such mechanisms. The Council of Financial Supervisors presently provides an effective forum for discussing conglomerate issues and devising solutions to these

11. Glading (1995) argues, 'There is no likelihood that the prudential rules for banks and life insurance companies will coalesce – at least in the foreseeable future ... we should understand that a mega regulator would not remove the imperative that banks and life companies need to be regulated in quite different ways, because of the differing nature of their balance sheets' (p. 28).

12. Conglomerates pose greater difficulties when major components – such as non-financial firms – are not subject to supervision. Such conglomerates are, however, rare in Australia.

13. Tripartite Group (1995).

problems. It has recently proposed to Government legislative changes dealing with facilitating exchange of information among agencies and with regulation of special-purpose holding companies in financial conglomerates.

A detailed consideration of the organisation of *product regulation* is beyond the scope of this paper, but financial system developments suggest the likely greater need for reform here than in prudential supervision. This is because, while the distinctions between two or three basic classes of institution remain relevant, particular financial products and services are being offered from a widening range of sources (including firms whose business is largely non-financial). The presumption must be that, in the interests of effective competition for customers, similar regulatory treatment should apply to similar products regardless of their source. There also appear to be a larger number of agencies involved in product regulation and some rationalisation could well yield efficiency gains.[14] As far as possible, these activities might fall to an agency with economy-wide responsibility for fair treatment of consumers and dispute resolution.

As noted earlier, there is no case for a substantially different *competition policy* to apply in the financial sector, so responsibility should lie with an agency covering the entire economy. There does, however, need to be a mechanism for resolving a situation where a merger of financial institutions would be in the interests of financial system stability, but might be judged as potentially anti-competitive.

5. Supervisory Role of the RBA

Central banks generally have responsibility for financial system stability,[15] which is complementary to their responsibility for price stability. They consequently take a keen interest in the condition of those parts of the financial system where problems could result in systemic instability.

There appears to be no generally accepted, objective definition of financial system instability, but it may be taken to refer to circumstances involving significant disruptions to credit flows with consequential impacts on the real economy, or involving violent swings in financial prices due to disruptions in asset or derivatives markets including liquidity shortage.

Historically, concern about the former has focussed on *banks* because of their combined roles of maturity-transforming intermediation and payments. The collapse of a bank would have two undesirable impacts on the economy. Credit flows to its own borrowers would be interrupted and, given the information-intensive nature of much bank lending, these customers might not readily find other sources of finance. While this is clearly a greater concern the larger is the bank, the failure of even a small bank might damage other larger banks – either through its direct credit and payment system linkages with them, or through confidence effects. This could, in turn, cause broader disruption to credit flows and to the household sector's access to holdings of liquid wealth.

14. The RBA, for instance, has become involved with monitoring codes of practice and security standards in electronic funds transfer, activities which do not contribute at all to its prudential supervision role, or other roles, and should probably be located elsewhere.

15. For the RBA this responsibility derives from its broad charter which extends to the 'economic prosperity and welfare of the people of Australia'.

A standard description of banks as a potential source of systemic damage is:

> 'Governments throughout the world regulate banks because the combination of loans financed by demand deposits has, historically, been a volatile mix, leading to costly banking panics. If the banking system becomes insolvent, potentially large costs are borne because the payments system is disrupted, borrowers become illiquid, and information about borrowers is possibly lost. Banking system insolvency is caused by a banking panic, an event in which bank depositors *en masse* demand cash in exchange for their deposits. Banks cannot honour these demands because markets for bank loans are not sufficiently developed. Markets for loans do not exist because of the expense of producing information about the riskiness of borrowers and the incentive problems of inducing banks to monitor borrowers if the bank has nothing at stake (having sold the loan).'[16]

In Australia concerns about such systemic risk – as well as a desire to protect the liquid wealth of household savers – motivate the RBA's monitoring and supervision of banks, for which its responsibilities are specified in the *Banking Act*.[17] There are two related objectives. The first is 'the encouragement and promotion of the carrying out by banks of sound practices in relation to prudential matters', where prudential matters means, *inter alia*, the conduct of a bank's affairs in such a way as to keep itself in a sound financial position, and not to cause or promote instability in the financial system. The second task, which applies only to locally incorporated banks, is to 'protect the interests' of depositors if a bank gets into serious difficulty. For this purpose the RBA is empowered to take control of and manage a bank.

The main advantages of the central bank's being supervisor of the banking system are:

- this gives it a direct hand in protecting the stability of the financial system for which it has ultimate responsibility, since the banking sector remains not only the largest segment in the financial system but also the most likely source of such instability;[18]
- as supervisor, it is in a better position to assess quickly the need for lender-of-last-resort assistance to a bank which is in difficulty or suffering a loss of depositor confidence;
- by supervising banks, it gains a first-hand knowledge and 'feel' for financial market conditions and for the behaviour of those institutions which are a key element in the transmission of monetary policy changes to the general economy. This can be an important input to monetary policy decisions. There are more likely to be complementarities between supervision and monetary policy than conflicts, and any conflicts which do arise will need to be resolved however the various responsibilities are allocated;

16. Gorton (1994), p. 108.

17. Note that not all intermediaries have been obliged to become 'banks', with the *Banking Act* providing for an exemption from the requirement to be authorised as a bank and supervised by the RBA where 'a person desires to carry on any banking business in Australia but does not desire to carry on the general business of banking'. As discussed later in this paper, there is a real question about the ongoing tenability of this feature of Australia's system.

18. Significantly, it is uncommon (though not exceedingly rare) for central banks to supervise insurance companies, securities firms, funds managers and so on. I am not aware of any countries where the central bank supervises such institutions *without* also having responsibility for bank supervision. The value of central bank involvement in supervision has been recognised in reallocation of responsibilities in recent years *to* the monetary authorities in Finland and Hong Kong.

- a bank supervisor is likely to be more effective in foreseeing and mitigating threats to bank stability if it has a close understanding of macroeconomic conditions and developing trends; and
- banking supervision is inter-related with a central bank's policy and operational roles in the payments system.

The main arguments in overseas debates against central bank supervision have been the likelihood of greater moral hazard when the supervisor has its own substantial financial resources which may be called upon to fund a bailout, and the view that there are potential conflicts with monetary policy.[19]

Notwithstanding the apparent preponderance of points in favour of central banks conducting bank supervision, in many countries they are not the primary regulators of the banking system. In all such cases, however, arrangements have been formed for close liaison with the supervisory agency. Commonly, those central banks also devote substantial resources to banking system analysis, to varying extents 'shadowing' the banking supervisor. Often the central bank is closely involved in making supervision policy (for instance, in Germany); in some cases, it is effectively a second supervisor (for instance, in Japan).

Ongoing structural changes in the financial system are raising questions about the scope of banking and, by extension, the supervisory role of the central bank. Remembering that the main reason for its direct involvement in supervision is the responsibility for financial system stability, is the RBA's current role in relation to the banking system still appropriate? Should its supervisory focus be broader because systemic problems are now as likely to arise in other places (or, perhaps, because the RBA needs explicit authority over bank associates to protect banks effectively from contagion)?

These issues are summarised neatly in the following quote:

> 'Should central banks be directly involved in supervision, and if so, of which institutions? The first part of this question has always been a subject of debate, with powerful pros and cons. I do not deny the strength of the moral hazard counter-argument, which points to the risk that supervision may bring with it destabilising expectations of support from the central bank. But I am closer to those who advocate bank supervision by central banks, mainly on the basis of the argument that it is difficult to draw a practical distinction between systemic and micro-prudential responsibilities. The prevention of systemic risk can hardly be effective without intimate knowledge of the participants in the market and the linkages between them. At the same time, I do recognise that the blurring of the line of demarcation between banking and other financial intermediaries raises some tricky questions. Why should central bank supervision stop with an ill-defined group of intermediaries, namely banks? If it were extended to other institutions, *where* should it stop? The "globalisation" of supervisory duties in the hands of central banks would not only enlarge the areas covered by the moral hazard risk; it would also put an excessive operational burden on them. There is surely a point beyond which the drawbacks would begin to offset the advantages derived from effectively ensuring systemic stability.'[20]

19. Others argue that any supervisor will periodically be judged incompetent because banks will inevitably fail or suffer large losses, and that if the central bank is the supervisor its credibility in monetary policy will suffer. This may have some substance, but very few central bankers with responsibility for bank supervision consider it sufficient justification to seek to discard that role.

20. Lamfalussy (1992), p. 13.

Those who place store on the greater moral hazard risks in central bank supervision will argue for reduced involvement, and may find further support for this in the prospective relative decline of traditional banking. The case will be argued all the more strongly if such proponents are also convinced by the case for combining all supervisors into one agency.

It follows, however, from Edey and Gray's analysis that the Australian banking sector remains the appropriate, primary focus for supervision concerned with systemic instability. This sector still contains the vast majority of financial activities with the classic bundle of characteristics which have caused banks to be a particular focus of prudential supervision: maturity-transforming intermediation, opaque asset portfolios and participation in the payments system. Introduction of real-time gross settlement for high-value interbank payments from 1997 will reduce the risk of instability flowing through the payments system.[21] But a substantial proportion of domestic payments will continue to be settled on a net deferred basis, as will the large volumes of international payments for which banks are responsible.

Systemic risks do not arise to the same extent with life insurance companies whose liabilities are less liquid (and are thus less susceptible to a 'run') and which do not have the same linkages with each other as banks do through market trading and the payments system.[22] Even more clearly, the expanding funds-management sector does not pose the same risks. Not being capital-backed, the value of claims on these institutions is linked to the prices of their assets. If there are sharp falls in the value of assets in a fund there would be wealth effects for its investors, but none of the other consequences which could follow the collapse of a bank. There are, for instance, no credit links with other funds (as there are between banks) and, by and large, these funds invest in commoditised loan assets whose issuers would be able fairly readily to find alternative purchasers if one or more funds managers left the market.

As in most other countries, however, there are financial intermediaries now supervised as 'banks' in Australia whose activities are not predominantly of the classic banking kind – firms engaging in investment banking and treasury business. These tend to be regarded as banks because at least a part of their activities is usually of the traditional kind (there has not been the clear demarcation between commercial and investment banks which applies in some other countries), but also because the volume of their trading activities and settlement exposures with other banks mean they have been considered to warrant similarly close supervision for the protection of systemic stability.[23] Without adequate capital, they would be unable to continue operating and their capacity to meet immediate obligations to other intermediaries would be in question.

There are also some financial institutions whose activities resemble very closely those of traditional (and non-traditional) banks which are *not* authorised under the *Banking Act*

21. Goodhart (1987) argues that, even without any role in payments, the other classical features of banks would make them critical to financial system stability.

22. Although life offices offer some liabilities with functional similarities to deposits, these account for only 5 per cent of aggregate deposit-type savings.

23. As well as having 47 per cent of total financial system assets and over three-quarters of intermediaries' assets, Australian banks are responsible for some 80 per cent of trading volumes in derivatives.

and supervised by the RBA – capital-backed intermediaries such as money market corporations, building societies, credit unions and finance companies. Many of these have exemptions from RBA supervision on the grounds that, while they carry on 'banking business', they do not carry on the 'general business of banking'. As this distinction loses whatever meaning it may have had in the past, it needs to be asked whether these intermediaries should be supervised by the RBA according to the same prudential framework as applies to authorised banks.

On one view, that which emphasises moral hazard risk, the test of 'likely damage to system stability' should remain paramount in determining the scope of central bank supervision. A practical difficulty is, of course, knowing exactly how and where to draw the line between different intermediaries, and how to recognise early enough the need for adjustment in the line over time. A size test could be adopted on the grounds that a very small 'bank' poses only trivial risk to the system. If so, would this be measured by capital, assets, daily trading volumes or some combination? And would the drawing of any arbitrary line have undesirable competitive impacts? The administration of the *Banking Act* has resulted in clear *legal* distinctions being made between those intermediaries which are authorised as banks and those which are not, but these distinctions have looked particularly arbitrary since entry restrictions for foreign banks were liberalised in 1992. Some of these have taken the opportunity to apply for a banking authority, while others with virtually identical operations in Australia have chosen not to.

Another view on this question, one emphasising efficiency and competitive considerations, would have the central bank supervise all those intermediaries engaged in bank-like sets of activities. In this scenario, the RBA would assume supervisory responsibility for building societies, credit unions, money market corporations and, perhaps, finance companies. This could result in a compression in the perceived spectrum of risk among intermediaries, but that appears only to be in line with the community's preference – at least as regards intermediaries gathering household savings. There could also be an extension of moral hazard risk. To mitigate this, it would be all the more important to change the common perception that RBA supervision is an absolute guarantee against institutional failure. One useful step to this end would be to recast the *Banking Act*, removing the widely misunderstood references to 'depositor protection' and restating the RBA's dual responsibilities as prudential supervision (to reduce the likelihood of institutional failure) and crisis management (in the event that a failure occurred). The provision for depositors to have first claim on assets in Australia would be retained.

Regardless of where the RBA's direct supervisory authority starts and finishes, it needs to take a broad interest in financial system developments, both domestically and globally. While the greatest vulnerabilities are in banking, it is clearly possible for financial instability to arise in other quarters, including from overseas. This has always been so, but such risks have almost certainly become greater in the past decade with the vastly increased volumes of financial market trading. Consequently, a central bank has to be familiar with all major financial markets and to liaise regularly with other prudential supervisors. It needs to take a keen interest in the robustness of systems for clearing and

settling securities transactions.[24] As noted recently by the Governor of the Bank of England:

> 'Whatever view one takes of these particular issues [who should have prime carriage of bank supervision], two things seem very clear. First, that any central bank must monitor developments in the banking system very closely, and that will necessarily involve monitoring what is happening in individual banks. And, secondly, a central bank cannot, in the modern world, limit its view to developments in the banking system alone. Because systemic threats can originate in other parts of the financial system, and because of the speed with which they can be transmitted through the system, we must necessarily take a very close interest in the financial sector as a whole.'[25]

6. Bank Supervision and Competition

The process by which certain banking services are being cherry-picked by specialist providers raises a difficult competitive challenge for the banks themselves, and poses some questions for policy makers. Technological change is facilitating this trend by giving new players access to bank customers without their having to duplicate the expensive branch network through which banks have traditionally reached depositors and borrowers. It is being aided by developments in information processing and other financial technology which promote the growth of securitised, as opposed to intermediated, borrowing. It is also being encouraged by banks' traditional pricing structures which have incorporated a substantial element of cross-subsidisation, leaving them vulnerable to specialist competitors for those services which have had wide profit margins, and by apparently greater willingness of consumers to shop around.[26]

So far, erosion of the banking sector's pre-eminent position has not run very far in Australia, but the pace of change has accelerated in the past couple of years. The Government's policy of encouraging household saving for superannuation purposes will add momentum to it. It is, therefore, hardly controversial to assume that the banking sector will become a smaller proportion of the financial system – at least as measured by assets under control – although the extent and speed will, of course, depend on the competitive responses of the banks. Particularly important in this respect will be how quickly they manage to roll back the cross-subsidisation in their pricing, cut the costs of increasingly outmoded branch networks and exploit the delivery systems made available by new technology. Banks will also, no doubt, reshape their activities by applying their competence and knowledge to the expanding types of finance, for instance in underwriting the issue of securities.

Australian banks are also relatively free to establish subsidiaries for 'non-bank' financial activities – funds management, superannuation, securitisation, and so on. Competition policy can, of course, impose some constraints here, and there are some supervision requirements designed to protect banks from reputation and other risks arising from the activities of their non-bank associates. Banks have, however, begun to

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24. Regulators of securities – in Australia, the ASC – also have an interest in such systems through their concern for high standards of competence and integrity in the conduct of these markets. See Large (1996).

25. George (1996), p. 10.

26. See Edey and Gray (1996) in this volume for a detailed exposition of these developments.

respond to intensified competition from funds managers by establishing their own subsidiary operations, and some have been conspicuously successful. More recently, they have set up their own mortgage origination and securitisation vehicles.

Whatever progress is made in these areas, more intense competition will draw attention to the competitive costs of bank supervision. Traditionally, bank regulation has been seen as conferring monopoly advantages on banks, protecting their profitability if not their market share. Although the evidence is not clear-cut, it appears that the average profitability of banks has declined a little following deregulation in the first half of the 1980s. Deregulation allowed the banks more freedom in pricing and in lines of activity, but also exposed them to greater competition both with each other and with new players taking advantage of liberalised rules for banking authorisation and participation in the Australian financial system in other ways.

Experience with deregulation and more competitive markets, and the heavy banking losses early in the 1990s,[27] have resulted in an intensification of prudential supervision to protect banking system stability, both in Australia and internationally. Like the earlier regime of regulation this confers certain benefits on banks, as well as imposing various restraints.

The benefits include:

- enhanced market standing, which reflects in average funding costs (both domestically and overseas);
- higher general status in the community;
- participation in the payments system though exchange settlement accounts with the RBA; and
- opportunity to establish operations in foreign markets which would otherwise be denied.

The value of the first and second aspects probably varies over the cycle, with banks seen as a particularly safe haven when the economy is in recession and some financial institutions are in difficulty through loan-losses.

The restraints of prudential supervision include minimum requirements for capital and holdings of prime assets, limitations on large individual credit exposures and open foreign exchange positions, and so on. There are also conditions to be observed by banks regarding their involvement with non-bank activities, including securitisation and funds management. These requirements do not impinge on the funds-management operations in their own right, other than on representations about the nature of bank support for investment performance. There are also costs associated with data compilation and transmission, executive time devoted to consultation with supervisors and the cost of additional work by external auditors at RBA request.[28]

27. See Thompson (1993).

28. Banks have to hold 1 per cent of their liabilities (less shareholders' funds) in non-callable deposits earning a below-market rate of interest. This is not a prudential supervision requirement, but a revenue measure. When the interest rate was reduced by a 5 per cent discount in 1995, it was also described as being in the nature of a payment for the benefits which accrue to banks from being authorised by the Government.

Neither the costs nor benefits of supervision can be estimated with any precision, although the gross costs do not appear to be particularly significant at present. They are almost certainly a considerably less important source of competitive disadvantage than banks' high operating costs, inappropriate pricing structures and shifts in consumer preference. Most banks are, for instance, holding capital clearly in excess of the RBA's requirements and large exposure limits are rarely approached, except by the smaller foreign-owned subsidiary banks. It is, however, likely that those structural changes in the financial system which are facilitating competition from new players are eroding the value of the net benefits – or exacerbating the impact of the net costs – of supervision.

Should prudential supervision be made less onerous to help banks maintain their competitive position? This would be very difficult to justify if it left the banking system more vulnerable to instability. Some commentators have, indeed, suggested that bank capital standards could have to be raised if their balance sheets become riskier when denuded (by securitisation) of relatively high quality housing and corporate loans. It might, on the other hand, be possible to justify less restrictive supervisory requirements if banks eventually become a much smaller component of the financial system and therefore a less significant potential source of instability. It is too early to judge what the relative importance of these factors might be.

I also note that, realistically, bank supervision could not be modified significantly as long as Australian banks aspire to extensive involvement in international markets. The trend is to international conformity in supervision standards, rather than the reverse.

Another response to the emergence of new competitors for banks would see prudential regulations extended to them. If these new suppliers of financial services were performing the same roles which have given banks their distinctive character, they would meet the 'threat to system stability' test described earlier and the case to bring them under bank-like supervision would be strong.[29] By and large, however, the new entrants are *not* offering the same *package* of financial services which distinguishes banks – they are unbundling that package and offering individual elements such as mortgages or capital-stable liquid investments.[30]

To illustrate the issues here, a topical example of new competition for banks is housing loans from mortgage originators, at least half of which are funded by mortgage-backed securities issued through special-purpose vehicles. There have been suggestions that mortgage originators or the associated securitisation vehicles should be subject to prudential capital requirements similar to those applying to housing loans on a bank's balance sheet. But these requirements are to protect banks from insolvency, an objective which is not relevant for the originators or their securitisation vehicles, neither of which has deposit-type liabilities. Funding for their loans comes through marketable securities issued in professional capital markets, while the originators themselves are agents with no significant balance sheets of their own. The failure of an originator (or several of them)

29. Non-bank financial intermediaries also compete in bank products, but their competitive advantages over banks are not so great because, as capital-backed intermediaries, they are mostly subject to bank-type supervision, either directly or through parent firms.

30. Similarly, it is hard to see significant threats to systemic stability in the activities of new players in the retail payments market.

would have no significant ramifications for investors or the broader financial system. There would, at most, be some inconvenience until a new servicing agent was appointed for existing loans. Investors in a securitisation scheme might, of course, find that returns are less than expected, or even negative, but such losses do not have the same potential impacts on continuing credit flows or on the payments system as may flow from losses in a bank.[31]

The appropriate course for bank supervisors appears to be to maintain the current broad framework of supervision,[32] while accepting that banking groups will increasingly diversify into 'non-bank' activities. This will increase the prominence of the supervisory challenges posed by conglomerates. There is no doubt that, in particular, the supervision policies aimed at protecting a bank from reputation damage due to the poor performance of its funds management associates will need to be vigorously enforced, including disclosure standards and restrictions on the extent to which a bank may use its own capital to support the performance of an associated funds manager. If these policies cannot be made to work effectively, and they could well create some friction with banks' commercial preferences, there would be a major expansion in the range of investments for which the community might look to official support if performance expectations are not realised.

Another policy issue is whether it matters that banks are likely to become a smaller part of the financial system. Would there be an adequate supply of relatively safe deposit-type savings products, or will savers be 'forced' to more risky investments? Will there be an adequate supply of loans to small and medium businesses?[33] As long as the reshaping of market shares is being driven fundamentally by market forces and not by officially imposed costs and restrictions, there seems little reason for concern on this score.

7. The Approach to Bank Supervision

The forces of change in the financial system will pose numerous challenges for banking supervisors.

As already noted, these will include adapting supervision in response to banks' increasingly operating in conglomerate structures with insurance companies and funds managers. This will require more communication with other regulators and greater attention to limiting contagion risks.

Another issue will be dealing with the trend for banks to outsource components of their operations. This will no doubt increase as banks seek to spread the costs of expensive technological infrastructure, build mutually beneficial alliances with telecommunications companies and other specialist suppliers, and concentrate their own resources on those activities where they have comparative advantage. Supervisors will need to be satisfied that this trend does not compromise the capacity of banks to manage their risks effectively.

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31. The need to align capital requirements for similar risks more closely across *capital-backed* institutions such as banks and life insurance companies should be investigated.

32. Likely directions in implementing this framework are discussed in the following section.

33. Gorton (1994), p. 109.

Supervisors are also having to deal with the increasing complexity of banking. This complexity is associated in large part with the widespread use of derivative products which hedge, but can also create, risks for banks. Often the dimensions and the sources of these risks are difficult to assess, as are the channels through which problems might flow between institutions and across markets. At the same time, the linkages among markets (including internationally) and modern communication mean speedier transmission of disturbances. Banks are also relying on more sophisticated and complex techniques to determine asset pricing, capital allocations and loan provisioning. These developments are in part a response to intensified competition, but also reflect the availability of computer-based techniques and data processing capacity.

Effective supervision will require supervisors to be familiar with these new techniques, particularly as banks contend that supervisory standards should place more reliance on their internal risk-management systems and less on 'broad brush' rules of thumb (such as the Basle capital adequacy framework for credit risk) which have the advantage of simplicity, but which are less finely tuned to risk-management needs than are the more sophisticated banks' own systems. This need is illustrated by the debate over capital adequacy standards for market risk where banks argued, with substantial success, for supervisory capital charges to be based on their internal models rather than a standard model, as originally proposed. Certain minimum criteria have been specified to ensure a degree of consistency across banks and countries.

If similar approaches can be adopted more widely, they offer the joint prospects for supervision to become more effective while also being less prescriptive and costly for banks. This might help, in turn, to offset some of the competitive disadvantages flowing from bank supervision. For instance, moves in this direction might be possible when the capital standards for credit risk are revised, with the possibility of recognising bank-developed systems for credit scoring and dynamic provisioning and avoiding the need for parallel internal and supervisory systems of capital allocation.[34]

Another benefit in this approach of placing more weight on a bank's own management systems is to emphasise clearly the responsibility of managers and directors for its prudent operation. Some would argue, however, that arrangements which entail supervisors effectively 'signing off' on banks' internal systems also increase moral hazard risks by making it harder for a supervisor to abstain from providing support for a bank which subsequently gets into difficulty. Supervisors need indeed to be alert to such risk, but even if there is a moral hazard price it might still be worth paying for a more market-oriented form of supervision entailing a lower regulatory burden for banks.

The other element of the trend toward more 'market-friendly supervision'[35] involves encouraging more informative public disclosure about banks' activities, thereby enhancing market disciplines as a supplement to official oversight. Such efforts should certainly be pursued in co-operation with the accounting profession and some significant progress has been made, particularly in relation to derivatives trading and asset quality. But the same complexity in banking which renders more challenging the supervisor's task, together with the fact that exposures in large trading positions can change very quickly,

34. Greenspan (1996).

35. Padoa-Schioppa (1995), Crockett (1995).

would seem to militate against heavy reliance on disclosure as an effective substitute for on-going prudential supervision – including assessments of the integrity of risk-management systems – by an official agency.

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Discussion

1. Claudio Borio

The paper by Mr Thompson is a comprehensive, concise and tightly argued discussion of prudential regulation in Australia. I would like to put the paper in a broader context, highlighting the key features of the world-wide transformation of the financial industry and the basic dilemmas facing the authorities in charge of safeguarding financial stability.[1]

The Background

Just as the years spanning the late eighteenth and early nineteenth centuries have gone down in history as those of the Industrial Revolution, so the last decades of the twentieth century and beyond may well be identified in retrospect with a Financial Revolution.[2] Some twenty years ago a unique configuration of economic, political and technological forces began to take shape. Their subsequent operation would transform the financial industry. Whether the verdict of history will be as positive in the case of the recent revolution as in that of its predecessor is a moot question. That verdict will depend on the ability of the authorities and market participants jointly to harness the forces of change.

The main features of structural change are by now well known: a quantum leap in the variety and complexity of new instruments; a blurring of functional distinctions between different types of institution, with combinations of business lines ranging from traditional commercial and investment banking to insurance and in some cases even non-financial activities; the internationalisation and globalisation of finance; the institutionalisation of savings; an unprecedented surge in trading and hence in payment and settlement flows (see Figure 1); and a marked heightening of competitive pressures.

These developments have gone hand in hand with greater downward pressure on profit margins, especially in traditional intermediation activities (Table 1). Credit ratings of banks have generally tended to weaken. A rising proportion of banks' revenue has come from non-interest sources; for the larger and more international institutions, trading has played an increasing role. As the environment facing banks has become more difficult, providers of financial capital in general, and of equity capital in particular, have grown more demanding regarding the returns expected on their funds. Accordingly, financial capital has become irreversibly more expensive at the margin.

All this has transformed the nature of banking. Passive intermediation has gradually given way to more active management of risk. The value-added that banks can provide to the community has increasingly come to depend on their ability to redefine, measure and manage the risks they face, whether in connection with strategic business decisions or in their day-to-day activities.

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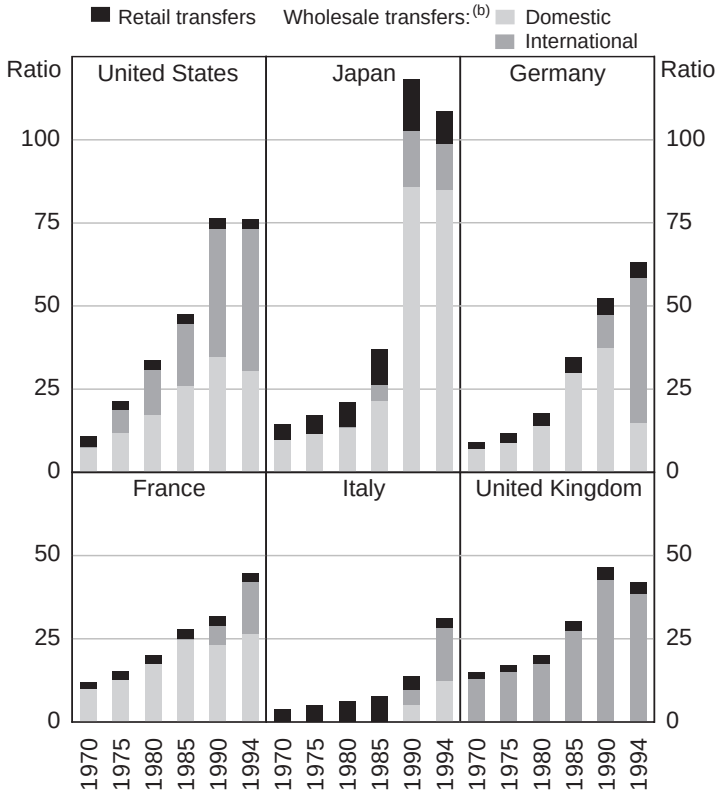
1. A broad overview of these themes, including their policy implications, can be found in BIS (1992a), Chapter VIII, Lamfalussy (1992) and, more recently, Borio and Filosa (1994) and Crockett (1995).

2. See also Merton (1992).

Figure 1: Indicators of Trends in the Value of Payments[a]

Ratio of the annual value of funds transfers to GNP



Notes: (a) Payments through the main interbank funds transfer systems.

(b) The breakdown into domestic and international is based solely on the specialisations of the systems; for the United Kingdom, such a breakdown is not feasible.

Looking ahead, there is little reason to believe that the forces of change will abate. Deregulation has not yet fully run its course. Even in industrial countries such as the United States and Japan, restrictions on business lines are being further eroded. In the European Union, it is probably only a matter of time before the pension fund and mortgage lending sectors are exposed more fully to the rigours of competition. And the creation of a common currency could represent the single most important event in the years to come, with the potential of greatly increasing competitive pressures in the retail segments of the industry. Moreover, the pace of innovation, especially in the area of information technology, is unlikely to slow down. In particular, the longer-term impact of various forms of 'electronic banking' could be far-reaching, especially in the retail sector. The direct on-line provision of financial services, including payments services, could profoundly alter the shape of the industry: it makes banks vulnerable to a new set of potential competitors, such as software houses and network providers, and is bound to put increasing pressure on traditional bricks-and-mortar branch networks. The first 'virtual banks', delivering services exclusively on-line, were launched in the United States

Table 1: Long-Term Accounting Indicators of Banks' Performance[a]

Countries	Pre-tax profits			Non-interest income		
	1980-1982[b]	1986-1988	1990-1994	1980-1982[b]	1986-1988	1990-1994
	As a percentage of assets			As a percentage of gross income		
United States	1.0	0.7	1.6	24	30	35
Japan[c]	0.5	0.6	0.2	14	24	1
Germany	0.5	0.7	0.5	29	30	29
France	0.4	0.4	-0.1	16	17	46
Italy	0.7	1.0	0.8	26	29	26
United Kingdom	1.1	1.0	0.7	29	37	43
Canada[c]	0.5	1.0	1.1	22	27	36
Australia	0.9	1.2	0.7	n.a.	40	42
Belgium	0.4	0.4	0.3	15	22	26
Finland	0.5	0.5	-1.6	49	58	53
Netherlands	0.3	0.7	0.6	25	26	30
Norway	0.6	0.0	0.2	27	30	29
Spain	0.7	1.1	0.6	18	20	27
Sweden	0.3	0.8	0.5	30	31	44
Switzerland	0.6	0.7	0.6	47	49	51

Notes: (a) For Australia, Belgium, the Netherlands and Switzerland, all banks; for other countries, commercial banks only.

(b) For France, Australia and Belgium, 1981/82; for Canada, 1982.

(c) Fiscal years.

Source: OECD.

in the past year. Considerable progress is also being made in ensuring the security of electronic payments, including electronic substitutes for cash. Given the strength of these supply-side forces, the environment is set to become more competitive. This is true even though in the longer term the demand for financial services can be expected to continue to expand rapidly, as ultimate investors and fund users grow richer and more sophisticated.

These background trends have important implications for the structure and performance of the financial industry. First, the restructuring under way is likely to intensify. The forces of arbitrage across instruments, markets, institutions, space, time, as well as legal and regulatory jurisdictions will continue to be the main driving factor shaping the industry. Second, the restructuring will not be painless.[3] Some sectors will have to shrink and adjust. In particular, the number of deposit-taking institutions should continue to fall (Table 2), bricks-and-mortar branch networks to be cut (Table 3) and employment to be

3. For an analysis of the restructuring of the banking industry, including the role of the current merger and acquisition wave, see BIS (1996a), Chapter V.

Table 2: Banks' Restructuring, Number of Institutions and Size Concentration[a]

Countries	Number of institutions						Concentration: top five (top ten)		
	1980[b]	1990	1995[c]	Peak (since 1980)			1980[d]	1990	1995[e]
	Number				Year	%[f] Change	Percentage share in total assets		
United States[g]	35,875	27,864	23,854	35,875	1980	-34	9 (14)	9 (15)	13 (21)
Japan	618	605	571	618	1980	-8	25 (40)	30 (45)	27 (43)
Germany[h]	5,355	4,180	3,487	5,355	1980	-35	n.a.	n.a.	17 (28)
France	1,033	786	593	1,033	1984	-43	57 (69)	52 (66)	47 (63)
Italy	1,071	1,067	941	1,109	1987	-15	26 (42)	24 (39)	29 (45)
United Kingdom	796	665	560	796	1983	-30	63 (80)	58 (79)	57 (78)
Canada	1,671	1,307	1,030	1,671	1984	-38	n.a.	55 (65)	78 (88)
Australia	812	481	370	812	1980	-54	62 (80)	65 (79)	67 (79)
Belgium	148	129	150	163	1992	-8	64 (76)	58 (74)	59 (73)
Finland	631	498	352	631	1985	-44	63 (68)	65 (69)	74 (83)
Netherlands	200	180	174	200	1980	-13	73 (81)	77 (86)	81 (89)
Norway	346	165	148	346	1980	-57	63 (74)	68 (79)	58 (71)
Spain[i]	357	327	318	378	1982	-16	38 (58)	38 (58)	49 (62)
Sweden	598	498	112	598	1980	-81	64 (71)	70 (82)	86 (93)
Switzerland	478	499	415	499	1990	-17	45 (56)	45 (57)	50 (62)

Notes: (a) Deposit-taking institutions, generally including commercial, savings and various types of mutual and co-operative banks; for Japan, excluding various types of credit co-operative; for Canada, excluding trust and loan companies (in 1994, 83 institutions).

(b) For France and Canada, 1984; for the United Kingdom, 1983; for Finland, 1985; for Spain, 1981.

(c) For Japan, Finland and Sweden, 1994.

(d) For France, 1986; for Italy, 1983; for Finland and the Netherlands, 1985; for Switzerland, 1987.

(e) For Japan, the United Kingdom, Belgium and Switzerland, 1994; for Finland, 1993.

(f) From peak to most recent observation where applicable.

(g) Excluding credit unions: 1995, 12,067; percentage change, -36 per cent.

(h) For number of institutions, western Germany only. Data for the whole of Germany: 1995, 3,784; percentage change, -30 per cent.

(i) Concentration data for commercial and savings banks only.

Sources: British Bankers' Association, Building Societies' Association and national data.

Table 3: Banks' Restructuring, Number of Branches[a]

Countries	1980[b]	1990	1995[c]	Peak		
	Number ('000s)				Year	Percentage change[d]
United States	58.3	67.7	69.6	69.6	1994	—
Japan	18.5	24.8	25.7	25.7	1994	—
Germany[e]	39.3	39.8	37.9	40.0	1985	-5
France	24.3	25.7	25.5	25.9	1987	-2
Italy	12.2	17.7	23.9	23.9	1995	—
United Kingdom	20.4	19.0	16.6	21.2	1985	-22
Canada	8.8	8.7	9.4	9.4	1994	—
Australia	6.3	6.9	6.7	7.1	1993	-6
Belgium	7.8	8.3	7.8	8.5	1989	-8
Finland	3.4	3.3	2.1	3.5	1988	-39
Netherlands	5.5	8.0	7.3	8.0	1989	-9
Norway	1.9	1.8	1.4	2.2	1987	-37
Spain	25.8	35.2	36.0	36.0	1995	—
Sweden	3.7	3.3	2.7	3.7	1980	-27
Switzerland	3.7	4.2	3.8	4.2	1990	-10

Notes: (a) Deposit-taking institutions; for the United States, Japan and Australia, excluding various types of credit co-operative; for Canada, excluding trust and loan companies (in 1994, 908).

(b) For France and the Netherlands, 1981; for Australia, 1987.

(c) For the United States, Japan, the United Kingdom, Canada, Belgium, Finland, the Netherlands, Sweden and Switzerland, 1994.

(d) From peak to most recent observation where applicable.

(e) Western Germany only, excluding commission agencies of Bausparkassen. Data for the whole of Germany: 1995, 48.2; percentage change, -2 per cent.

Sources: British Bankers' Association, Building Societies' Association and national data.

reduced and requalified (Table 4). Finally, the process will add to the risk of instability. The episodes of financial instability that have accompanied the transformation of the industry so far have shown that the benefits of a liberalised environment are not a free good.[4] Strains may therefore reappear, especially as in several countries competitive pressures interact with stubborn cost structures.

4. At the root of the instability experienced in several countries in recent years was an asset price/credit expansion cycle exacerbated by deregulation (for example, BIS 1993a and Borio, Kennedy and Prowse 1994). Whether this was a one-off phenomenon is still a hotly debated issue (see the analysis therein).

Table 4: Banks' Restructuring, Employment and Staff Costs

Countries	Employment[a]						Staff costs[b]		
	1980[c]	1990	1994[d]	Peak			1980-1982[e]	1986-1988	1992-1994
	Number ('000s)				Year	%[f] Change	As a percentage of gross income		
United States[g]	1,900	1,979	1,891	2,136	1987	-12.0	36	31	27
Japan	612	597	618	622	1993	-0.6	44	33	39
Germany[h]	533	621	658	658	1994	—	48	44	39
France	399	399	382	401	1988	-5.0	47	44	44
Italy	277	324	332	333	1993	-0.3	46	48	44
United Kingdom	324	425	368	430	1989	-15.0	47	38	36
Canada	170	211	202	211	1990	-4.0	42	33	33
Australia	265	356	311	356	1990	-13.0	n.a.	n.a.	n.a.
Belgium	68	79	76	79	1990	-5.0	41	33	39[i]
Finland	42	50	36	53	1989	-32.0	43	33	24
Netherlands	113	118	112	119	1991	-6.0	42	41	38
Norway	24	31	23	35	1987	-34.0	42	35	30
Spain	252	252	245	256	1991	-4.0	47	43	37
Sweden	39	45	42	46	1991	-5.0	29	23	22
Switzerland	84	120	112	120	1990	-7.0	40	37	33

Notes: (a) In deposit-taking institutions; for Japan, excluding credit co-operatives; for Canada, excluding trust and loan companies (employment in 1995, 25,000); for Australia, finance and insurance industry.

(b) For Belgium, the Netherlands and Switzerland, all banks; for all other countries, commercial banks (OECD definition).

(c) For France, 1985; for Australia, the Netherlands and Sweden, 1984; for Spain, 1981.

(d) For Italy, Australia, Norway and Spain, 1995.

(e) For France and Belgium, 1981/82; for Canada, 1982.

(f) From peak to most recent observation where applicable.

(g) Employment data excluding credit unions: 1994, 1,732; percentage change, -14 per cent.

(h) For employment, western Germany only. (Data for the whole of Germany: 1994, 728.)

(i) 1992.

Sources: For staff costs, OECD; for employment, British Bankers' Association, Building Societies' Association and national data.

The Policy Challenge

If the background just described adds to the urgency of setting up an effective prudential framework, the changing structure of financial services complicates matters substantially. Admittedly, over time the policy framework has evolved towards a much more market-oriented approach, mirroring the transformation of the industry. Nevertheless, reconciling the prevailing *laissez-faire* philosophy with safeguards against instability is proving unexpectedly difficult. This is true even if the mandate to safeguard stability is interpreted narrowly to refer to *systemic* stability only. Such difficulties are apparent in three key areas: coverage, the pursuit of a level playing field and capital standards.

In the present liberalised financial industry the *coverage* of supervision and regulation on systemic grounds should arguably be broader than in the previous compartmentalised world. On efficiency grounds, banks have been allowed to extend their range of activities. In order to secure systemic stability, the authorities have perceived a need to extend the coverage of official supervision to those activities as well.[5] Experience has shown that no legal or functional safeguards can effectively insulate separate units of a financial enterprise at times of stress; hence the present attempts to broaden the application of the principle of consolidated supervision.[6] If efforts are not successful, supervisory gaps could endanger stability. If they are, official supervision may reach too far, that is, to activities that, when not performed by banks, need not represent a systemic threat.

The pursuit of a *level playing field* exacerbates this dilemma.[7] The ideal of fair competition is a cornerstone of any properly functioning market. Moreover, eliminating competitive distortions is seen as instrumental in bringing about stability: experience has shown that uneven competition and regulatory arbitrage are quite capable of creating strains. Considerable efforts have been made in this area in recent years across both geographical and institutional lines. Clearly much more can be done. Yet given the possibility for banks to combine activities freely, the pursuit of a level playing field calls for a further extension of regulatory coverage across the institutional spectrum, that is, to those non-bank firms that perform some of banks' activities. If the principle is applied strictly, coverage could even embrace non-financial companies. The risk of an excessive reach of regulation, and of the associated 'safety net', is obvious.

Similar tensions are involved in formulating the methodology of supervision. *Capital standards* have played a central role. Raising and refining the minimum standards has strengthened the banks' cushion against losses. Moreover, it has also helped to shift the balance in exerting discipline on institutions back towards market participants, primarily by making shareholders more vulnerable to an institution's risk profile. No doubt the standards have contributed to the renewed focus on profitability, as opposed to mere size

5. As discussed in Thompson's paper, liquidity transformation (holding 'illiquid' assets against 'liquid' liabilities) and involvement in payments and settlement systems are two functions that can potentially generate systemic problems. They lie at the heart of banks' activities. It is of course institutions, and not functions that go bust and their failure is an important source of, and mechanism for the transmission of, financial disruptions.

6. On this issue, see Borio and Filosa (1994), Tripartite Group (1995) and, for further steps forward, Padoa-Schioppa (1996).

7. For a critique of the pursuit of a level playing field, see for example, Benink and Llewellyn (1995).

or growth, as a guide to business policy. Nevertheless, any such standards are a form of interference in management. Striking a balance between the regulators' and management's judgment is proving difficult; witness the controversy over the restrictions on the use of banks' own internal models to calculate the standards for market risk. Achieving such a balance is especially important in the current regulatory environment: with the dismantling of other restrictions on banks' operational freedom, capital standards are likely to be a major force influencing the competitive advantage of institutions in the years ahead.

In comparison with these dilemmas, other issues seem to be of secondary importance or more straightforward, *at least conceptually*. Should, for instance, the central bank be in charge of supervision? As Mr Thompson cogently argues, even in cases where the central bank was not *de jure* in charge, *de facto* it would still need to have access to sufficient information about individual financial system participants because of its inevitable role in crisis management. Similarly, should supervisory agencies, at present structured along institutional lines, be combined into a single agency? The issue is subordinated to the need to ensure a sufficient flow of information and to the harder question of the necessary degree of harmonisation regarding the methodology of supervision. Once that is determined, the exact scope for organisational economies would follow naturally.

Policy Responses

The basic dilemmas involved in reconciling the prevailing *laissez-faire* philosophy with safeguards against instability are alluded to at several points in Mr Thompson's paper. I am not convinced, however, that they are stressed sufficiently. This may partly be due to the broad rationalisation provided for prudential standards, identified with maintaining the solvency of individual institutions on what read very much as investor protection concerns.[8] This view has historically taken it for granted that coverage should naturally extend beyond deposit-taking institutions. It may also reflect the judgment that, at least at present, regulatory concerns have second-order competitive implications across types of institution or that their potential impact on stability is essentially benign.

I think that these dilemmas are likely to become even more apparent in the years ahead. This is because the interaction between arbitrage and prudential restrictions will, if anything, intensify. Technology will broaden the spectrum of possibilities for redefining, relocating and delivering financial services. Competitive pressures will heighten the incentives to do so.[9] For instance, while still in their infancy, the potential of credit derivatives is enormous. And the entry of non-financial firms in payments and settlement services will doubtless raise thorny issues.

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8. 'Supervision is justified on the grounds that it is inefficient for households to have to make judgements in the conduct of their daily affairs about the health of various complex financial institutions' (Section 4). The tension between investor protection and systemic stability as policy goals is discussed in more detail in, for instance, Borio and Filosa (1994) and Goodhart (1995).

9. On the issue of credit risk management more broadly and its implications for supervision, see Crockett (1995) and Yellen (1996).

There are two broad lines of action that can help to alleviate these dilemmas. The first is to strengthen the *market orientation* in the methodology of supervision, a point mentioned at the end of Mr Thompson's paper.[10] In essence, this involves mimicking and/or upgrading the market disciplinary mechanisms on individual institutions. The second is to sharpen the *systemic orientation* of policy. This essentially means limiting the knock-on effects of failures of institutions or markets so as to lighten the burden on, and increase the flexibility of, the prudential oversight of individual firms.

Some of the policies aimed at strengthening the market orientation of the framework are well known: greater emphasis on the adequacy of internal risk-management systems than on rigid rules or controls, greater reliance on public disclosure, and a narrowing of the scope of those forms of intervention that provide protection without commensurate oversight, thereby numbing incentives to constrain imprudent behaviour. Other policies have sometimes received less attention and go beyond the narrow confines of prudential standards. They relate essentially to issues of corporate governance and to broader constraints on the operation of market forces, some of which may hinder the restructuring under way in the industry. These policies include favouring ownership structures more sensitive to the operation of market forces (for example, privatisation) and weakening obstacles to the adjustment of capital and labour, notably by easing constraints on, and improving the effectiveness of, the takeover mechanism and by reducing inflexibilities in the labour market.

A sharper systemic orientation calls for a close attention to the functioning and organisation of markets. Paramount in this context is improving the safety and soundness of payments and settlement systems, a key channel for the transmission of financial disruptions. The task here is to adapt the systems so that they can smoothly handle the unprecedented growth in traffic flows and the concomitant increase in the scale of liquidity and credit risks.

There is no doubt that initiatives to strengthen the market and systemic orientation of policy have been stepped up in recent years. A few examples may suffice. The recent acceptance, subject to a number of qualitative and quantitative criteria, by the Basle Committee on Banking Supervision of the use of banks' internal models for the calculation of market risk, represents a fundamental philosophical shift in the right direction. Significant efforts have been made in the area of disclosure, as illustrated by the 1994 report on public disclosure of market and credit risk by the Group of Ten central banks (BIS 1994b) and by the guidelines published by the Basle Committee on Banking Supervision and the International Organisation of Securities Commissions (IOSCO) in November 1995. Deposit insurance schemes have come under closer scrutiny, as highlighted by the introduction of risk-related premiums in the United States in 1993. And in the same country the implementation of 'prompt corrective action' has provided a noteworthy answer to the perceived bias of belated intervention by supervisors while at the same time overcoming the abrupt and disruptive character of the operation of market discipline on financially distressed institutions. More generally, central banks have sought to ensure that credit and liquidity risks in payments and settlement systems

10. This point is stressed in, for example, Basle Committee on Banking Supervision (1992), Padoa-Schioppa (1995) and Crockett (1995).

are better understood and managed, not least by having banks carrying a greater share of the burden. The move towards delivery-versus-payment and Real Time Gross Settlement are essential elements of this strategy.[11]

This list of initiatives is by no means intended to suggest that progress has been commensurate with the size of the challenge. It would indeed be very easy to provide an even more demanding agenda of what is yet to be done. Nor is it intended to indicate that appropriate answers to the many issues involved have been found. Rather, it illustrates that certain broad directions of policy have been identified. A sharper focus on these holds forth the promise of a stronger financial system, one where regulatory arbitrage would have less reason to display its muscle, where individual agents and markets would bear a greater share of responsibility in line with the greater freedom they enjoy and where the failure of individual institutions would not necessarily be identified with the failure of regulation and supervision as long as the system was resilient enough to absorb the damage.

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11. For specific initiatives, see BIS (1990), BIS (1992b), BIS (1993b) and BIS (1996b). An overall discussion of the issues can be found in BIS (1994a), Chapter VIII and, in more detail, Borio and Van den Bergh (1993). Unfortunately, academics in general have not as yet devoted proper attention to these problems, partly because the nature of payments system risk has been misunderstood (Borio 1995).

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2. General Discussion

The discussion covered a wide range of issues including:

- costs and benefits of regulation;
- the regulation of superannuation funds;
- synergies between bank supervision and monetary policy; and
- the case for a 'mega-regulator'.

It was widely accepted that some regulation was needed. One rationale was to preserve the integrity of the payments system, which required some regulatory and prudential oversight of banks. In this context it was remarked that the move to 'real time gross settlement' (RTGS) in the payments system would not entirely eliminate payment risks but would change the nature of that risk. In addition to the payment-risk issue, there was an important focus on the wider issue of systemic risk, related to the potentially disruptive effects of failure of financial institutions. Finally, investor protection was a concern across a wide range of financial products.

Financial regulation also had costs. Participants emphasised that the main potential sources of costs were not the operational costs of the regulators themselves but the compliance costs and potential distortions arising if regulations were inappropriately designed.

It was suggested that the investor protection concern could be increasingly relevant for superannuation funds. The superannuation sector in Australia rests largely on non-discretionary contributions, either award-based or by employer requirement. Consent of the beneficiaries as to the choice of fund, the nature of benefits or the investment strategy is often not obtained. In these circumstances the investors might legitimately expect some official protection. One comment was that it was inconceivable people could reach retirement age and find that their contributions had been stolen or wasted through mismanagement.

A suggested solution would be to give investors the choice of fund, but this raised other issues. At present superannuation funds were often locked in for long periods, but that would change if widespread switching was allowed. If confidence in a fund was lost, the fund might have to dispose of assets at discounted prices, at a high cost to remaining policyholders. Moreover, it was just as hard for an ordinary household to assess the health of a superannuation fund as to assess a bank. This scenario suggested that systemic risks traditionally ascribed to banking could also be relevant in the superannuation sector.

Other participants emphasised the essential differences between products of different institutions. Banks and insurance offices essentially deal in fixed-value commitments whereas funds managers deal in investments with no promised fixed value. Banks and insurers in turn have fundamental differences: banks hold illiquid assets against liquid liabilities, whereas insurers hold liquid assets against uncertain long-term claims. These differences necessitated different approaches to regulation and required different types of expertise in the regulatory authorities.

There was considerable discussion as to how the main regulatory institutions should be structured. Some scepticism was expressed as to the need for prudential supervision

and monetary policy to be kept in the one institution: it was argued that the synergies were hard to demonstrate. Others argued, however, that the lender of last resort facility created a crucial link between the two functions, and that central banks typically retained a role in bank supervision even when they were not the main supervisory authority.

There was an active discussion of the 'mega-regulator' idea (the proposal to amalgamate regulatory authorities into a larger body). Arguments in support included a general desire for close co-ordination of the different regulatory functions, and a view that the development of financial conglomerates necessitated the development of a regulatory authority covering all the areas of a conglomerate's activities. A number of difficulties of the mega-regulator approach were also raised. One was that there may be high costs in merging diverse regulatory bodies and that any gains from synergies and streamlining were likely to be small. Another argument was that merging regulatory bodies might not be in the public interest as some debates were best held in public (between organisations) rather than behind closed doors in a single organisation. Others emphasised the important basic differences that still existed between the main groups of financial institutions, requiring specialist areas of regulatory expertise to be maintained. Finally, it was argued that prudential supervision needed to be kept separate because it carried an implication of access to official support, and that this should not be spread too widely. Embedding prudential supervision in a wider regulatory body might encourage perceptions of official support for the financial sector in general.

Some participants remarked that these arguments were hard to evaluate. A final comment was that the content of regulation was much more important than the structure of the regulatory authorities. Other countries had fallen into the trap of focusing excessively on shifting the institutional responsibilities for regulation. This had little impact when there was no change in the basic principles. The first priority had to be to state the objectives of regulatory policy before considering whether institutional changes were needed to achieve them.

Summaries of the Papers

The Evolving Structure of the Australian Financial System

Malcolm Edey and Brian Gray

During the past two or three decades structural change in the Australian financial system has been rapid. The system has grown substantially in assets and volumes of activity, has become much more open and competitive, and has undergone some significant shifts in market shares. There has also been much innovation in financial products and delivery systems. In analysing these historical trends a useful distinction can be made between two major parts of the financial system: the financial intermediaries (or credit institutions), of which banks form the largest part; and the funds mangers, typified by superannuation funds and unit trusts. Although the overlaps between these two institutional groupings are increasing, their historical trends have been driven by rather different forces.

Within the intermediaries sector two broad processes of change have been evident. The first involved the interaction between regulatory policy and financial innovation. Prior to the main thrust of financial deregulation in the late 1970s and early 1980s, banks lost market share to less heavily regulated institutions, a trend that eventually gave impetus to the move to deregulate. In the post-deregulation period, these trends in market share were reversed and, in the process, the system was opened to greater competition.

The second main historical process has been a shift in the economics of production of banks' traditional financial services – what is often referred to as a process of 'unbundling'. This entails a move toward production and pricing of key products on a stand-alone basis, stimulated by the development of specialist suppliers such as mortgage managers or cash management trusts. Competition from these sources has put pressure on the traditional full-service suppliers (the banks) to cut margins and to reduce cross-subsidies.

In the funds-management sector, and particularly the superannuation funds, the driving forces have been somewhat different. Policy changes in the areas of taxation and compulsory contributions have had an important impact on the structure of the industry. However, the most important factor behind the rapid growth of the industry since the early 1980s has been the high average rate of return accumulated on fund investments over that period. The available data do not yet show the increases in net new contributions to the funds expected to result from increases in compulsory contributions.

Notwithstanding the historical differences between the two sectors, there have been increasing areas of overlap between them. For example, banks have become more active in funds-management business through subsidiaries, and funds-management institutions have become more active in areas of traditional bank business such as mortgage lending. These developments pose a challenge for regulators as to where are the appropriate regulatory boundaries between the different groups of institutions.

The Role of Institutional Investors in the Evolution of Financial Structure and Behaviour

E. Philip Davis

In the period since 1970 there have been widespread changes in financial structure in all the major economies, as banks have been deregulated and capital markets have developed. The broad directions of change have been remarkably similar. They include a sharp increase in the overall size of financial systems and an increase in the market shares of institutional investors or funds managers. Banks' market shares have correspondingly tended to decline, while securities markets have grown rapidly in both size and sophistication. The broad trends can be summarised as an increasing role for institutional investors and securities markets, and a declining relative role for traditional banking.

Conventional approaches to explaining these trends have focused primarily on the behaviour of banks. However, a good case can be made that the development of institutional investors themselves has been an important driving force. The growth and impact of these institutions can be analysed in terms of six basic functions that financial systems are expected to fulfil. The six functions are:

- clearing and settling payments;
- pooling of funds;
- transferring economic resources;
- managing uncertainty and controlling risk;
- providing price information; and
- dealing with incentive problems.

While the institutional forms taken by financial systems are subject to evolution through time, these basic functions are relatively fixed. The growth of institutional investors can be viewed as reflecting changing comparative advantages in performing each of these functions, as well as an increased demand for certain functions by end-users. With respect to the demand side, an important factor has been population ageing, which is likely to have stimulated the demand for long-term accumulation products that institutional investors typically provide.

Conditions for further expansion in the relative size of the institutional investment sector appear to remain in place, and the growth has shown little sign of easing. Further change in this direction could have important implications for monetary policy, for international financial linkages, and for corporate financial structures. There appears to be a great deal of scope for expanding international diversification by these investors, and for increased cross-border financial flows as a result. In the area of corporate finance, significant changes in financial structure and control could be implied if there is a major increase in the share of finance provided by institutional investors.

Alternative Models of Financial System Development

Stephen Prowse

Dramatically different systems of corporate finance have emerged among the major industrialised countries in the postwar period. At one end of the spectrum are the market-dominated systems of the Anglo-Saxon countries, characterised by active markets for corporate debt and equity securities, arm's-length relationships between banks and non-financial businesses, and high levels of mandated public disclosure. At the other end are the bank-dominated systems of Japan and Germany, where banks are much freer to take the role of active investors in firms and where securities markets are correspondingly less important.

Historically the Anglo-Saxon financial structures, typified by firms in the United States and the United Kingdom, have had much lower debt ratios than firms in Japan and Germany and, within that structure, a higher reliance on non-bank sources of debt. In most respects the financial structure of Australian companies is similar to those in the United States and the United Kingdom, except that markets for corporate debt securities in Australia are much less developed.

The large differences in corporate finance among the industrial countries are the products of three aspects of the legal and regulatory environment of each system. The first relates to the regulatory environment for 'universal banking': banks in Japan and Germany (universal banks) have been allowed to be active equity investors whereas Anglo-Saxon banks have not. The second aspect is the degree of regulatory suppression of corporate securities markets, while the third relates to the degree of mandated disclosure in those markets. These regulatory aspects are much more favourable to the development of securities markets in the Anglo-Saxon countries than in Japan and Germany. In particular it can be argued that mandated disclosure, which is relatively strong in Anglo-Saxon systems, is a public good that promotes market development.

Evidence on the relative merits of the two systems is inconclusive. In any case, the different financial systems of the industrial countries appear to be coming closer together. Corporate finance systems are being transformed by technological change, globalisation of markets and the increasing importance of small firms in the economy. These changes have put pressure on Japan and Germany to deregulate securities markets, allowing increased access by firms to non-bank sources of finance. In the Anglo-Saxon countries small business finance markets are growing and institutional investors appear willing to take on a more active role.

These developments suggest a degree of convergence toward a system with characteristics of both the polar models: where financial institutions are free to be active owners and where active security markets for corporate finance are available. But complete convergence seems unlikely, as institutional history will continue to matter.

Banking in the 21st Century: The Transformation of an Industry

David T. Llewellyn

Banks have been under competitive pressure as a result of financial innovation and fundamental technological changes that have affected the very core of banks' business. These pressures will continue and banks will become increasingly exposed to competition from securities markets, from non-bank financial institutions and from non-financial firms undertaking their own banking activities. It may be that traditional banking business is in decline, although this need not imply that banks as firms are in decline provided they make appropriate strategic responses to these pressures. Banks have enduring core competencies in information processing and in monitoring and control of debtors, and these strengths can be applied in areas quite separate from traditional 'banking' business.

The changes affecting banks and their strategic responses have implications for the structure of the banking industry, the nature of banking operations and for the organisational structure and activities of banks as firms. It seems likely that the traditional structure of an integrated bank will become increasingly inappropriate in the modern financial system, where markets and other institutions may provide banking services more cheaply than is possible for a vertically and horizontally integrated banking firm.

Financial innovation and declining entry barriers have enabled a process of 'deconstruction', whereby financial services that were once provided as bundles can now be subdivided into their component parts. The logical outcome of this process is that each component of a financial service can be provided separately by those firms possessing a comparative advantage in their production. This implies that the provision of financial services can increasingly be undertaken by specialist firms, and in particular that certain classes of loan will be securitised rather than held on banks' balance sheets.

Similarly, if financial service providers can become more specialised, it is likely that the structure of the banking industry will evolve to reflect this. Thus while technological change has allowed significant scale economies to be reaped in bank processes, these need not imply that all banking firms need to become very large to take advantage of these economies. Instead, an industry structure denoted as 'contract banking' may arise, where the banking firm that has a primary relationship with the ultimate customer subcontracts with both internal and external suppliers for various components of each financial service. In this way, a bank will effectively become a broker of financial services mediating between financial suppliers. There will be room for a spectrum of banking firms, from the small and specialised to the large firms built on scale economies.

Australian Industry Perspectives on the Future of the Financial System

Robert Joss, William Ferguson, Tony Cole and Rob Ferguson

Deregulation, globalisation and technological change have generated a transformation in the structure of the finance industry and the services it provides, creating benefits for customers of financial institutions and challenges for the institutions themselves. Four views of the implications of these changes for the financial sector were presented from various parts of the industry. All concurred that there were substantial changes occurring, quite separate from the effects of deregulation, that required a response from industry participants and from banks in particular.

Banks will increasingly have to examine their business on a product-by-product basis and focus only on those for which they possess a competitive advantage over alternative providers. These competitors may not be under the same regulatory constraints, may be tax-advantaged in some cases, or may have very different cost structures from the banks. Superannuation funds will become increasingly important in Australia as a result of two factors: the scheduled increases in mandatory contributions and the heightened demand for long-term wealth-accumulation products that arises as households become wealthier.

These changes are not occurring so rapidly that institutions and regulators will be unable to respond appropriately. Moreover, banks are likely to retain a key role in the financial sector because of their core competencies, arising from their branch networks, infrastructure for large-scale information processing, and their role in the payments system.

The impact of financial market globalisation will be greatest on wholesale markets and on investment banking businesses. Some consolidation of the investment banking industry around a smaller number of players is expected as a correction to the current excess capacity. This suggests a likely diminution of the role of the larger Australian banks in funding large and highly creditworthy corporations, and possibly a smaller role for Australia as a regional headquarters for global investment banking operations.

The requirement for a global presence will also be felt in other areas of banking business. This could create pressures for increased concentration of the domestic industry, with fewer large banks and smaller banks engaged in niche markets or as specialist providers.

Regulating the New Financial Markets

Richard Dale

Regulation of financial markets is generally based on three main rationales. The first is that consumers cannot be expected to have the skills to assess the health of a financial institution and therefore need to be protected from loss in the event of its insolvency. A second rationale arises from the moral hazard problem of financial firms being able to take on more risk than is optimal because of the official protection that regulation provides. Finally, regulation is justified as a means of preventing systemic or contagious

disturbances where failure spreads from one firm to other previously solvent firms. This last reason, while a matter of debate in the academic literature, commands general acceptance among practitioners.

With these goals in mind, the regulatory system must be appropriate to the financial system as it stands. The financial sectors in many countries have been transformed by the globalisation of communications and of markets, by the increasing integration of different types of financial firms and by innovations in the range of financial products available. The challenge for regulators inherent in these changes is evidenced by the collapse of the Barings group and the circumstances leading up to it.

Increasing globalisation and sophistication of financial markets have a number of regulatory implications. Globalisation could result in greater risks of cross-border systemic contagion, making it appropriate for national regulatory systems to take account of this risk, and also to ensure that competitive distortions do not occur because of national differences in regulation. It is also necessary for regulators to have a clear view of the true risk position of an institution, which may change swiftly and dramatically through the use of sophisticated risk-management products such as derivatives.

The response of regulators has included some element of reaction to all of these changes. International co-ordination of prudential requirements for banks is in its early stages. Increasing conglomeration of different types of financial institutions has also induced some increases in the level of co-operation between regulators of different parts of national financial systems. The increasing sophistication of financial products has induced regulators to make greater use of banks' internal risk-management systems.

Much remains to be done before the regulatory scheme is fully consistent with the developments in financial markets. In particular, regulators of securities markets have not adjusted to these changes as much as have bank regulators. International co-ordination and regulatory convergence are still at a very early stage and have been hampered by a lack of co-operation on the part of multilateral peak organisations of the various regulatory authorities. There is still as yet no consensus on the degree to which a securities firm should be regulated, particularly if it forms part of a conglomerate financial institution together with a bank. Finally, in many cases, prudential regulation and assessment of the risk position of financial institutions have not kept up with financial innovations such as the use of derivative products.

Regulatory Policy Issues in Australia

Graeme Thompson

Two broad types of financial regulation can be identified. The first type, prudential supervision, may be defined as supervision directed at institutional solvency. It is exercised over institutions whose main business involves dealing in fixed-value obligations: banks and credit institutions; insurance; and defined-benefit superannuation funds. The second type of regulation, product regulation, is concerned with disclosure, market conduct and fair treatment of consumers with respect to particular products or services. Prudential supervision is motivated importantly by concerns with financial system stability, while product regulation is primarily concerned with safeguarding the

interests of imperfectly informed investors. As long as financial products are not uniquely identified with institutional groups, the two types of regulation will inevitably overlap to some extent, although this need not imply any inconsistency between the two.

Structural changes in the Australian financial system raise a number of issues for regulatory policy, and for prudential supervision in particular. The first concerns the organisation of prudential supervision: the question of whether there could be efficiency gains from combining the main supervisory agencies. Arguments for combining these agencies generally focus on potential overlaps between the current jurisdictions or on the argument that many institutional groupings are becoming less meaningful. However, some institutional distinctions remain robust, including a basic distinction between intermediaries and managed funds. There are strong arguments for keeping the prudential authorities for those two groups separated, in order to avoid encouraging perceptions of official support for financial institutions being spread too widely.

A second issue concerns the supervisory role of the Reserve Bank, where the issue revolves around the potential for synergies or for conflicts between the RBA's two main functions of monetary policy and bank supervision. International practice as to the organisation of these two functions is varied. Some central banks combine the two functions while in other countries there is a separate bank supervisory agency. But even where the functions are separated, central banks' general concern with financial system stability has led to arrangements for close liaison with the supervisory agency, and commonly to central banks also devoting substantial resources to banking system analysis.

Finally, there are two related issues concerning the competitive impact of supervision policy and the conduct of that policy. The increasing sophistication of financial products points to a need to develop new techniques of financial supervision with greater flexibility. Rule-based approaches to supervision are likely to become less useful because they fail to capture the rapidly-changing risk associated with financial and derivative markets. This suggests a need to supplement the traditional methods with approaches based more heavily on public disclosure and on the evaluation of risk-management systems in financial institutions.

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