The Australian Financial System in the 1990s

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1. Introduction

This paper examines the major developments in the Australian financial system over the 1990s and discusses how these developments might affect the nature and transmission of financial disturbances.[2]

The paper focuses on the following five issues:

- the losses by financial institutions in the early 1990s and the general resilience of public confidence in the financial system despite these losses;
- the transformation of the household sector's balance sheet, and the consequences for the balance sheets of financial institutions and the composition of Australia's foreign debt;
- the high level of profitability in the financial services sector in the face of increased competition within particular markets, and consolidation across the industry;
- the shift away from traditional intermediation through balance sheets of financial institutions towards intermediation through markets; and
- the strengthening of prudential supervision and the overhauling of arrangements for the regulation of the financial system.

These issues are discussed in Sections 2 through 6 of the paper.

Two recurring themes arise from this discussion. The first is that financial liberalisation looks to have been much more successful than appeared to be the case a decade ago. In 1991, the Reserve Bank devoted its entire Annual Conference to a stocktake of the benefits and costs of financial deregulation (see Macfarlane (1991)). While the various papers were able to point to some benefits, including more effective instruments of macroeconomic policy, wider access to credit and greater financial innovation, they also observed that interest margins remained relatively high, record losses were being recorded by financial institutions, and the framework for prudential supervision and regulation had not kept pace with changes in the financial system. At the time, there was a sense that liberalisation had promised much, but delivered relatively little, other than a speculative property boom and a lot of wasted investment.

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1. The views expressed in this paper are our own and not necessarily those of the Reserve Bank of Australia. We would like to thank the following for comments and assistance in preparing this paper: Les Austin, Patrick D'Arcy, Guy Debelle, Chay Fisher, Bryan Fitz-Gibbon, David Gruen, Chris Kent, John Laker, Adrian McMachon, Ali Razzaghipour and Peter Stebbing.

2. For reviews of developments in the Australian financial system over recent decades see Edey and Gray (1996), Financial System Inquiry (1997), and Grenville (1991).

Nearly ten years on, the scorecard is much more positive. Competition has increased (largely through pressure from new entrants), lending margins have fallen and the range of financial services has increased further. Financial institutions are stronger, risk is better managed, and the regulatory and supervisory frameworks have been overhauled. Financial markets have grown strongly, new forms of debt finance have emerged, and the range of risk-management products has increased. Notwithstanding this more favourable picture, public criticism of banks remains high, in large part due to increases in fees, the closure of branch networks, and continuing high levels of profitability.

The second recurring theme is that in contrast to the 1980s, it has been changes in the balance sheet of the household sector, rather than the corporate sector, that have altered the shape of the financial system. The increase in households' holdings of market-linked investments, and the declining share of wealth held in deposits, has prompted banks to focus their growth strategies on funds management. In turn, this is leading to a further blurring of the distinction between different types of financial institutions, and pressure for consolidation focused around the major banking groups. The increase in financial assets has also led to the development of markets in a wider range of debt securities, a proliferation of investment products, and a more important role for institutional investors. It has also helped prompt changes in the nature of financial regulation, with an increased focus on the arrangements for the protection of consumers of financial services, and a shift to a regulatory framework based on functions, rather than types of institutions.

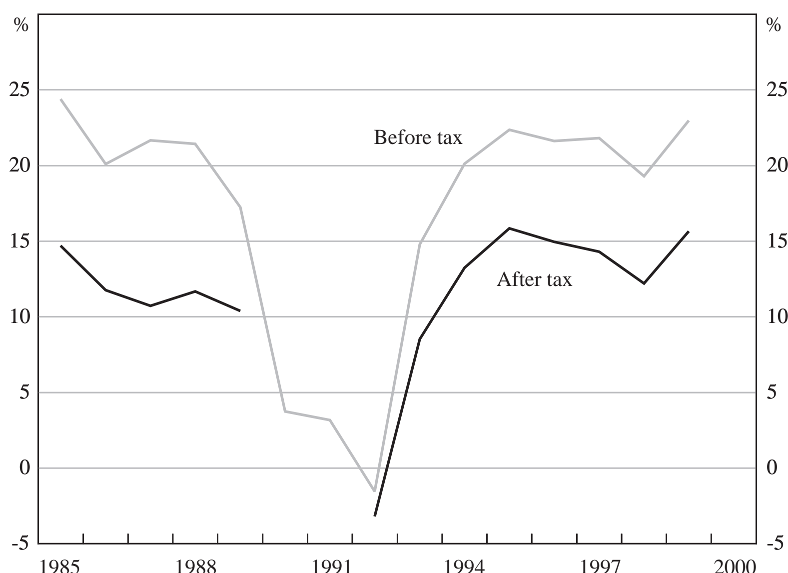
Among other things, the changes in the roles of financial institutions and markets, and in the balance sheets of the various sectors of the economy, have important implications for the nature and transmission of financial shocks. This issue is discussed in Section 7 of the paper. We argue that developments over the past decade have reduced the probability of serious financial headwinds being generated by problems in financial institutions, while at the same time, the probability of headwinds being created by developments in financial markets has increased. On balance though, we speculate that despite continued increases in the ratio of financial assets to GDP, the health of the macroeconomy is at less risk from developments in the financial sector than was the case a decade or so ago.

The paper concludes by raising some public policy issues that are likely to remain alive over the coming decade.

2. Losses Early in the Decade

The 1990s began with the banking industry experiencing its worst losses in almost a century. The sum of the individual losses (before tax) in 1990, 1991 and 1992 exceeded A$9 billion – equivalent to over 2¼ per cent of GDP in 1990, or over one-third of the aggregate level of shareholders' funds in the banking system in 1989 (see Figure 1 and Table 1).

Figure 1: Bank Profitability
Return on shareholders' funds



Note: Profit figures are adjusted to exclude the government assistance provided to the State Bank Victoria (SBV) and State Bank South Australia (SBSA). Adjusted after-tax figures for 1990 and 1991 are unavailable due to the large transfers between SBV, SBSA and their state government owners.

Source: Banks' financial statements

Table 1: Total of Individual Bank Losses Incurred in 1990, 1991 and 1992

Type of bank	**Total of individual losses** A$ billion	**Total of individual losses** % of shareholders' funds in 1989
State government owned	5.0	187
Foreign subsidiary	1.5	64
Private domestically owned	2.7	16
Total for banking system	**9.2**	**36**

Note: The loss figures are before tax and exclude banks that reported profits. The figures for shareholders' funds include all banks in the relevant category. Figures for SBV and SBSA have been adjusted to exclude government assistance.

Sources: Banks' financial statements

The largest losses were recorded by the State Bank of Victoria (SBV) and the State Bank of South Australia (SBSA). Both banks were owned by state governments and experienced pre-tax losses exceeding three times the 1989 level of shareholders' funds. Large losses were also recorded by Westpac and ANZ (two of the four major banks[3]) in 1992, following comprehensive market-based revaluations of their property assets; in Westpac's case this process led to a reduction of almost 40 per cent in the value of its property assets and collateral. While the losses by these two banks were large, they were easily absorbed by the banks' capital. In contrast, like SBV and SBSA, a number of the foreign banks recorded losses in the late 1980s and early 1990s that exceeded their shareholders' funds.

The main reasons for the difficulties of the early 1990s are well understood. Deregulation in the mid 1980s intensified competition and the desire by institutions to grow their balance sheets rapidly. This took place in an environment in which asset prices, particularly commercial property prices, were increasing quickly, and credit assessment procedures in many financial institutions had not adjusted to the new liberalised environment. The result was extremely strong credit growth secured against increasingly overvalued commercial property. In 1989, the combination of high interest rates and a softening of the commercial property market exposed the poor credit quality of some of the most risky loans. Then, as the economy went into recession and the decline in property prices accelerated, more broadly based credit quality problems became evident; by mid 1992, the ratio of non-performing loans to total loans had increased to 6 per cent.

The concentration of losses in banks owned by state governments and foreign banks occurred mainly because these institutions were the most aggressive in chasing market share. Without strong customer bases, they relied on relatively risky borrowers for rapid balance-sheet growth. Additional factors in the cases of SBV and SBSA included a rapid shift in the nature of the banks' businesses and limited external scrutiny (arising from the fact that the banks were not listed on the stock exchange, and that the boards were appointed by state governments intent on fostering rapid regional growth). Supervision of these institutions was also complicated by the fact that the Reserve Bank of Australia did not have formal legal powers regarding licensing, even though the institutions had given voluntary undertakings to meet the Reserve Bank's prudential standards.

In the face of the large losses, public confidence did become more fragile in 1990 and 1991, although this did not lead to widespread concerns about the stability of the financial system as a whole. There were, however, a number of runs on relatively small institutions, including a couple of banks that were formerly building societies. In general, these runs were stopped by public sector intervention.

The most significant run on a deposit-taking institution was on the Pyramid Building Society. After runs in February–March 1990, and again in June 1990, Pyramid's operations were suspended by the Victorian State Government and all

3. The other two major banks are the National Australia Bank and the Commonwealth Bank of Australia.

accounts were frozen.[4] Pyramid's problems caused some contagion, particularly for non-bank financial institutions in Victoria, with the highest profile case being the OST Friendly Society. Like Pyramid, OST was heavily exposed to the property market, and its problems were eventually resolved by a merger with IOOF (the largest friendly society). Pyramid's difficulties also contributed to runs on the Bank of Melbourne and Metway Bank (both previously building societies), with both banks experiencing a drop in deposits of more than 15 per cent over a couple of weeks. The runs stopped shortly after the Reserve Bank issued press releases stating that the banks continued to meet prudential standards and were soundly managed. The Reserve Bank did not provide emergency liquidity support in any of these cases.

Runs also occurred on a number of public trusts investing in either commercial property or commercial property mortgages.[5] The first of these, in March–April 1990, was on a mortgage trust, Estate Mortgage. This run came to an end when, in the face of mounting liquidity problems, the National Companies and Securities Commission froze redemptions. There were also runs on unlisted property trusts in the second half of 1990, as investors attempted to withdraw their funds before the fall in property prices was reflected in unit prices. In response, a number of trusts (not operated by banks) suspended withdrawals and extended redemption periods. In 1991, runs also spread to the bank-owned trusts. This raised the possibility of a broader loss of confidence in the financial system, particularly if banks also suspended redemptions, or undertook a fire sale of their property assets. In response, the Commonwealth Government announced a 12-month freeze on all property trust redemptions.

Weakened public confidence also affected life insurance companies, particularly National Mutual (the second largest life company). During the late 1980s, National Mutual competed aggressively for retirement savings by offering capital-guaranteed investment products, underwritten by its substantial reserves. In the early 1990s, however, falls in property and equity prices led to a sharp drop in National Mutual's capital reserves, creating doubts about its solvency. As a result, the insurer experienced heavy policy redemptions and a large decline in funds under management in 1991 and 1992, with public concerns reaching a peak in February 1993 after extensive media coverage of the problems. In response, the Insurance and Superannuation Commission issued a public statement indicating that National Mutual's capital and reserves exceeded minimum regulatory requirements and that it had sufficient liquid assets. While outflows of managed funds continued, changes in the company's management and a return to profitability in 1993 saw confidence gradually restored.

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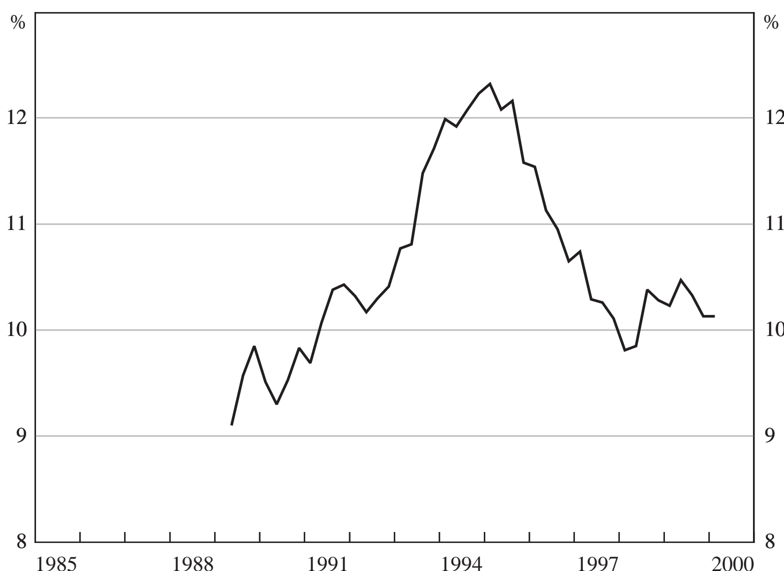
4. For comprehensive accounts of the Pyramid episode see Kane and Kaufman (1992) and Sykes (1994). Eastway (1993) provides a brief summary of the problems in non-bank financial institutions in the early 1990s.

5. There were also runs on a small number of financial institutions in the late 1980s, particularly following the share market crash in 1987. The highest profile cases were the runs in October 1987 on Rothwells and Spedley Securities (both merchant banks). Both institutions were eventually placed in liquidation.

In retrospect, given the various problems in 1990, 1991 and 1992, Australia was probably fortunate that it did not experience a more pronounced episode of financial instability. The various public sector actions were probably important in this regard. Also helpful was the fact that the institutions that experienced the largest losses (as a share of capital) were either owned by state governments (which *guaranteed* the repayment of deposits) or by foreign banks (which were prepared to recapitalise their Australian subsidiaries). Similarly, the domestic banks were not prepared to allow their loss-making non-bank subsidiaries to fail, for fear of reputational damage to themselves. Nor was the Government of Victoria prepared to allow the depositors in Pyramid to lose their deposits, ultimately guaranteeing the repayment of the nominal value of principal over a period of up to five years, although in present-value terms depositors did bear some loss.

At no time were there serious concerns about the safety of depositors' funds in the four large banks. Despite some large losses, the capital ratios of the major banks remained above regulatory minima, with the capital ratio for the system exceeding 9 per cent through the early 1990s (see Figure 2). A number of banks (most notably Westpac) did, however, make a concerted effort to increase their capital ratios immediately after the announcement of losses, so that by 1995, the system-wide ratio had increased to above 12 per cent. In part, this reflected new capital raisings, but at least 1 percentage point of the increase can be attributed to a change in the composition of banks' assets towards lower risk-weighted assets (i.e. housing loans).

Figure 2: Regulatory Capital Ratio for Banking System



Source: Reserve Bank of Australia *Bulletin* (Table B.6)

While the problems of the early 1990s did not undermine public confidence in the financial system, they did create strong 'financial headwinds' that retarded the economy's recovery from recession. While balance-sheet restructuring by the corporate sector was an important source of these headwinds, credit supply constraints arising from the difficulties experienced by financial institutions also played a role, although it is difficult to disentangle the various effects.[6] Many financial institutions significantly reduced their appetite for risk, with some announcing goals of large reductions in business loans. Consistent with a supply-side effect, the *share* of finance for the construction and purchase of commercial property provided by *banks* fell to historically low levels between 1991 and 1993. The financial headwinds were also evident in a substantial rise in interest-rate margins as banks attempted to restore strong profitability.

After the troubled years of the early 1990s, the Australian banking industry returned to strong profitability relatively quickly, largely thanks to the willingness of the household sector to significantly increase its borrowing, and by the banks' ability to charge large interest-rate margins (see Sections 3 and 4). By 1995, the after-tax rate of return on shareholders' funds had recovered to more than 15 per cent, and it remained around this level for the rest of the decade.

The only other sector of the financial system to experience serious difficulties over the decade was the reinsurance industry. In 1998 and 1999, losses by GIO, New Cap Re and Reinsurance Australia Corporation exceeded A$1¾ billion. In part, these losses reflected a large number of natural catastrophes and significant downward pressure on operating margins. While the losses caused problems for the owners of these firms, they had no discernible effect on the public's confidence in the insurance industry, or on the stability of the financial system more generally.

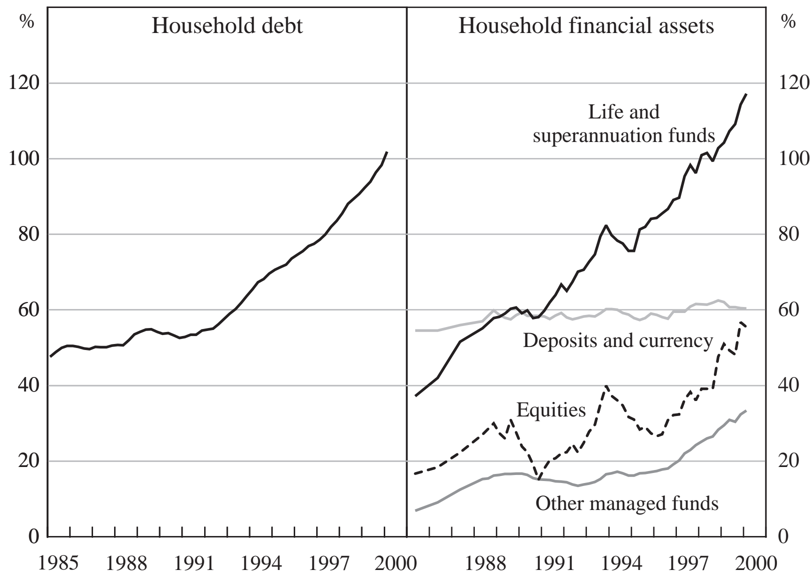
3. A Transformation of Balance Sheets

Arguably the most notable financial development of the 1990s was a deepening of the household sector's financial balance sheet. In line with developments in many industrialised countries, Australian household indebtedness increased strongly over the decade, as did the household sector's holdings of financial assets, particularly market-linked investments. A by-product of this financial deepening has been a marked change in the structure of the balance sheets of financial institutions, and, in turn, in the structure of Australia's foreign debt.

From 1992 onwards, household debt increased by at least 10 per cent every year, with growth peaking at 17 per cent in 1994. As a result, the ratio of household debt to household disposable income almost doubled over the decade, rising from 54 per cent in 1990 to almost 100 per cent at the end of 1999 (see Figure 3). Most of the additional debt was used to purchase residential real estate (Stevens 1997).

6. See Kent and Lowe (1998) and Lowe and Rohling (1993) for econometric evidence of these 'headwinds'.

Figure 3: Financial Liabilities and Assets of the Household Sector
Per cent of household disposable income



Sources: ABS Cat Nos 5206.0 and 5232.0; Reserve Bank calculations

The rise in indebtedness was, in part, made possible by the fall in nominal interest rates in the early 1990s. In the 1980s, high interest rates meant that loan servicing burdens were heavily skewed to the early years of the loan, restricting the size of borrowings and preventing some low-income households from obtaining a mortgage at all. Lower interest rates in the 1990s eased this constraint, and access to debt was also increased by a proliferation of new lending products. Particularly popular over the second half of the decade have been 'home equity' loans, which allow households to borrow against existing equity in their home, primarily by drawing against previous loan repayments. Household borrowing has also been supported by increases in the value of collateral arising from strong increases in house prices, particularly over the second half of the decade; for example, in both Sydney and Melbourne median residential property prices increased at an average annual rate of over 10 per cent over the years 1996 to 1999.

Relatively low nominal interest rates meant that interest-servicing burdens were low for much of the decade. However, recent rises in interest rates and the steady increase in indebtedness have brought the ratio of interest payments to household disposable income close to 8 per cent, which is only just below the peak recorded in 1990, and more than 1 percentage point above the average ratio during the 1980s.

On the other side of the household sector's balance sheet, holdings of market-linked financial assets also increased rapidly. At the end of 1999, the household sector's total holdings of financial assets were the equivalent of 245 per cent of household

disposable income, up from 160 per cent in early 1990. Of these assets, the share held in life offices and pension (or superannuation) funds rose from 39 per cent to 47 per cent, while the share held in cash and deposits fell from 39 per cent to 25 per cent. The household sector also increased its direct holdings of equities, particularly over the second half of the 1990s. According to the Australian Stock Exchange, 41 per cent of Australian adults directly owned equities in 1999, up from 20 per cent in 1997, and 10 per cent in 1991.

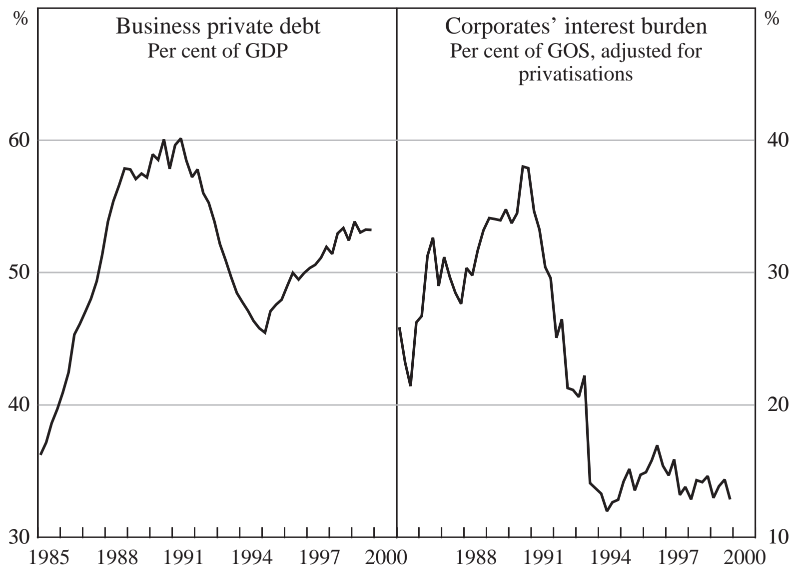
Most of the increase in aggregate holdings of financial assets has been due to valuation effects, rather than to higher savings. In contrast, the change in the composition of financial assets reflects two important structural factors. The first is the privatisation of government-owned assets and the demutualisation of financial institutions; at the end of 1999, these privatised and demutualised companies accounted for around 18 per cent of the stock market capitalisation. The second, and ultimately more important factor, is the introduction in 1991 of compulsory retirement savings in the form of legally mandated minimum employer contribution rates to pension funds (Edey and Gower, this volume; Edey and Simon 1996; Johnson 1999). The contribution rate was initially set at 3 per cent, but will increase to 9 per cent by 2002. This scheme has helped fundamentally change the way people save for retirement and the type of financial assets they hold. Little more than a decade ago, the household sector's major financial assets were direct claims on institutions, either in the form of bank deposits, or defined benefit pension schemes. Households held considerable institutional risk, but little market risk. Today, market risk is much larger, with the return on the bulk of households' financial assets directly determined by the performance of financial markets, rather than by the performance of financial institutions.

The net effect of the changes in the structure of the household sector's assets and liabilities has been a modest increase in leverage over the decade, although since 1995 there has been little change. Over recent years, the solid increases in the price of residential property (which accounts for around 60 per cent of households' conventionally measured assets) and the strong gains in the equity market have kept pace with the increase in indebtedness. At the end of 1999, the ratio of household debt to household wealth stood at around 13 per cent, compared with 10 per cent in 1990.

In contrast to the household sector, the corporate sector spent the first half of the decade unwinding the borrowing excesses of the 1980s. Between 1991 and 1995, the ratio of business debt to GDP fell 15 percentage points to around 45 per cent (see Figure 4). Over the second half of the decade, business debt increased at a faster pace than nominal GDP, although the ratio of business debt to GDP still remains well below the peak reached in the late 1980s. Interest-servicing burdens over the second half of the decade have been low by historical standards, reflecting the decline in leverage and low nominal interest rates.

These patterns in business and household borrowing are clearly reflected in the balance sheets of financial institutions. In 1990, 1991 and 1992, the ratio of aggregate credit to GDP declined as the corporate sector repaid debt, but then increased at a solid pace over the remainder of the decade due to the strong growth

Figure 4: Corporate Debt



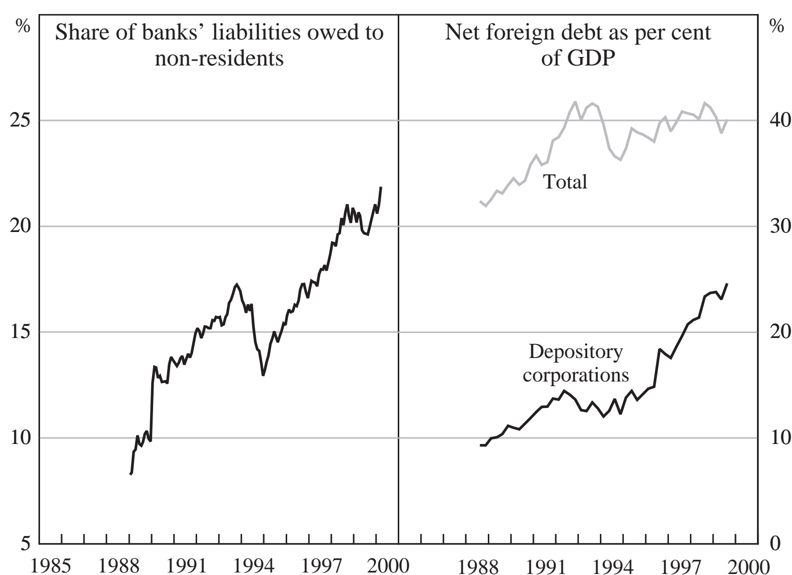
Sources: ABS Cat Nos 5204.0 and 5232.0; Reserve Bank calculations

in household borrowing. This strong growth has also meant that the share of mortgage loans in the total assets of the banking system reached a record high of nearly one-third in 1995, and despite some securitisation of housing loans by banks subsequently, this share has remained at historically high levels.

The combination of strong credit growth and subdued growth in domestic deposits has led financial institutions to rely increasingly on wholesale markets for funding, largely through issuing debt securities. Given the relative lack of domestic savings, many of these securities have been issued to non-residents. This has led to a rise in the share of the banking system's total liabilities owed to non-residents from less than 10 per cent in 1990 to over 20 per cent at present. At the same time, the corporate and public sectors have reduced their demand for foreign borrowing, so that now well over half of Australia's net foreign debt is now intermediated through financial institutions (see Figure 5).

While around 70 per cent of foreign borrowing by financial institutions is denominated in foreign currency, these institutions do not have large foreign currency risks, with the currency risk typically hedged through the swaps market. One indicator that the banks' foreign exchange risk is small is that the aggregate regulatory capital charge for the Australian banks' market risk (which includes foreign exchange risk) accounts for just 1 per cent of the total capital requirement, compared to over 5 per cent for the large Canadian and German banks, and over 10 per cent for the large Swiss banks.

Figure 5: Overseas Borrowings by Financial Institutions



Note: Depository corporations comprise banks, building societies, credit unions, money market corporations and finance companies.

Sources: ABS Cat Nos 5206.0 and 5302.0; Reserve Bank of Australia *Bulletin* (Table B.3)

4. Consolidation, Competition and Profitability

4.1 Financial conglomerates and consolidation

The increase in the household sector's holdings of financial assets is also creating significant pressure for change in the structure of financial institutions. In particular, it is forcing a convergence between types of institutions, with the main manifestation being a move by banks into funds management. This move is also being driven by a compression of lending margins and by the potential for banks to use their strong brand names and distribution networks to cross-sell financial products. The end result of these forces is greater pressure for consolidation, focused particularly around the existing major banking groups.

The first attempt to establish a truly diversified financial services firm occurred in 1990 with the proposed merger between the ANZ and National Mutual. The merger was, however, blocked by the Commonwealth Government on, amongst other things, the view that mergers between the four major banks and two largest life insurance companies were contrary to the national interest due to their likely effect in reducing competition (Keating 1990). This policy – which became known as the 'six-pillars' policy – remained in force until the Government's response to the Financial System Inquiry (widely known as the Wallis Inquiry) was announced in April 1997. While the Government accepted the Inquiry's recommendation that

mergers between the large banks and life offices be permitted, it announced that the prohibition on mergers amongst the four major banks would remain in force until there was evidence of increased competition, particularly in the area of small business lending (Costello 1997). This has been dubbed the 'four-pillars' policy.

Following the rejection of the ANZ/National Mutual merger, the two institutions formed a strategic alliance to cross-sell products. A similar alliance was established between Westpac and the AMP (the largest life insurer). Both banks, however, became increasingly dissatisfied with the arrangements, largely due to the constraints on their ability to develop their own funds management businesses, and both alliances were dissolved in the mid 1990s.

The first true financial conglomerate was formed in 1994 when the insurance group Colonial Mutual purchased the State Bank of New South Wales. A little over a year later, a second conglomerate was created with the merger of Metway Bank, Suncorp and the Queensland Industry Development Corporation. With the six-pillars policy in place, the major banks relied mainly on organic growth to build their funds management businesses. This strategy met with some success, although progress was relatively slow; over the decade the major banks were able to increase the share of total profits coming from their insurance and funds management arms from around 2–4 per cent to around 8–10 per cent. During the six-pillars period, the major banks' acquisitions strategies focused on the purchase of regional banks and, in a couple of cases, the extension of their overseas retail banking operations.

A bigger step in reshaping the future structure of the financial system took place in the first half of this year, with the Commonwealth Bank of Australia's (CBA) purchase of the Colonial Group (which has both banking and funds management activities) and the National Australia Bank's (NAB) purchase of MLC (a funds management group) from Lend Lease. These acquisitions will make the CBA and the NAB the two largest institutions in retail funds management, with a combined market share of over 30 per cent; collectively, the market share of the four large banking groups will be over 40 per cent, around double the level in the early 1990s. In terms of total funds under management (as opposed to retail funds), the CBA and NAB will rank one and three (with the AMP ranked two).

The four major banking groups have also increased their share of the total assets of deposit-taking institutions (see Table 2). The increase has been particularly noticeable in retail transaction deposits, with the majors' share rising from just less than 60 per cent in 1990 to over 66 per cent in 1999.[7] This increase largely reflects the CBA's purchase of the State Bank of Victoria (in 1991) and Westpac's purchases of Challenge Bank (in 1995) and the Bank of Melbourne (in 1997). This share will rise further to around 70 per cent when the CBA's purchase of Colonial is completed, and could increase even further in the next few years, with the major banks holding strategic shareholdings in the small number of remaining retail banks.

7. Retail transaction deposits are calculated as deposits (excluding term deposits and certificates of deposit) held by the non-financial private sector with banks and 'borrowings' (excluding bills of exchange and promissory notes) by building societies and credit unions from the non-financial private sector.

Table 2: Assets of Financial Institutions

	Number of institutions		Per cent of total assets of deposit-taking institutions		Per cent of total assets of the financial system	
	1990	1999	1990	1999	1990	1999
Deposit-taking Institutions						
Major Australian-owned banks						
– privately owned	3	4	44.4	62.6	21.7	29.0
– government owned	1	0	14.9	–	7.3	–
Other Australian-owned banks						
– privately owned	9	8	5.7	17.1	2.8	8.0
– government owned	4	0	15.4	–	7.5	–
Foreign-owned banks						
– subsidiaries	15	11	9.5	6.1	4.6	2.8
– branches	3	25	1.3	9.5	0.6	4.4
Building societies	51	19	6.4	1.8	3.1	0.8
Credit unions	279	219	2.4	2.9	1.2	1.3
Total					**48.8**	**46.3**
Other Financial Institutions						
Reserve Bank of Australia	1	1			3.5	3.2
Money market corporations	158	73			7.3	4.1
Finance companies	191	114			7.6	4.3
Life insurance and superannuation funds	87 061	203 310			21.4	25.9
Other managed funds	551	740			6.1	8.9
General insurance companies	166	115			4.4	3.9
Securitisation vehicles	31	51			0.8	3.4

Note: Data are for June 1990 and December 1999.

Sources: ABS Cat No 5232.0; APRA; Reserve Bank of Australia *Bulletin* (Tables B.3, B.7 – B.15)

Consolidation within and across the banking and insurance sectors has been facilitated by the privatisation of government-owned financial institutions, and the demutualisation of building societies and insurers. In 1990, one-third of the domestic assets of the banking system was controlled by five majority-owned government banks, including the largest and fifth-largest banks. Over the course of the decade, all five banks were either sold to the public or purchased by other banks. In a similar vein, most state government-owned general insurers were privatised. At the same time, the freeing of capital resources by demutualisation allowed private institutions such as the Colonial Group and AMP to launch takeovers themselves.

The building society sector also contracted over the decade with some of the larger societies converting to banks, and mergers amongst the smaller societies. While the number of credit unions also declined, the industry as a whole performed reasonably well over the first half of the decade, attracting customers with offers of lower fees. However, over the second half of the decade the industry has struggled to maintain its share of financial system assets.

The decade also saw a decline in the number of finance companies and money market corporations (known as merchant banks). Many of these institutions were originally established by banks (both domestic and foreign) to circumvent regulations, but when the financial system was liberalised, they lost much of their competitive advantage. In 1992, foreign banks were given the choice of operating as branches or locally incorporated subsidiaries, with many electing to operate as branches, which by law are not allowed to accept deposits less than A$250 000. This led a number of foreign-owned merchant banks to convert to a branch structure. The recent abolition of the non-callable deposit requirement on banks has further reduced the competitive position of the merchant banks, with taxation issues now being the main factor slowing their conversion to bank status. Most of the merchant banks are now operated by foreign-owned banks, sometimes alongside a licensed bank. There are relatively few remaining domestically owned merchant banks, with a number of the high-profile institutions closing after large losses in the late 1980s/early 1990s.

In contrast to the decline in government-owned banks and non-bank financial institutions, there has been a significant increase in the number of foreign-owned banks operating in Australia, as well as an increase in their share of total assets. However, with limited exceptions, these foreign banks have shown little interest in retail banking. Instead the focus has been on wholesale banking and funds management.

To date, there have been no purchases by foreign banks of large domestic banks. In contrast, a number of large insurance firms have been purchased by overseas institutions (e.g., AXA purchased National Mutual and ING purchased Mercantile Mutual). The different outcomes in banking and insurance largely reflect government policy, which for much of the 1990s prohibited a foreign bank purchasing any of the four major banks. This policy was relaxed following the Wallis Inquiry, although the Government has indicated that a large-scale transfer of ownership of the financial system to foreign hands remains contrary to the national interest. This new policy has not yet been tested, although continuing global consolidation of financial services firms may well see proposals for large cross-border mergers in the future.

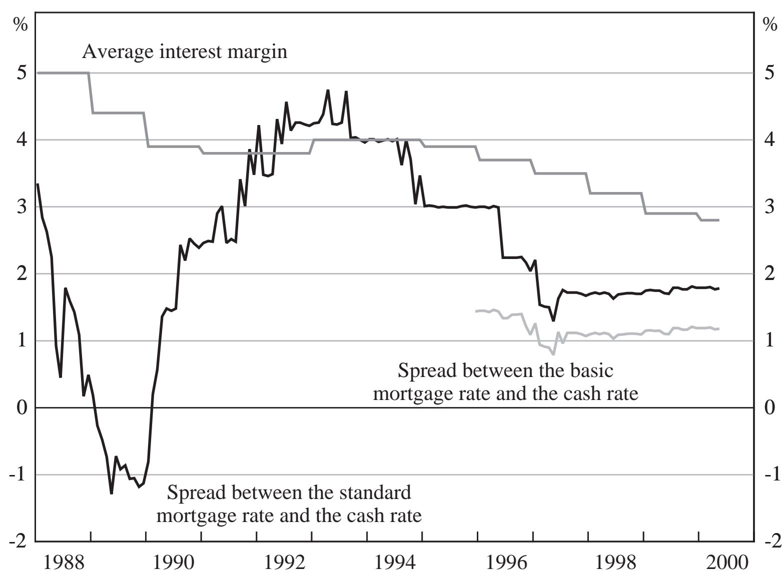
4.2 Competition and profitability

While the process of consolidation has probably not yet run its full course, there is little evidence to suggest that, to date, it has reduced competition. In large part, this is due to the entry of new firms in response to persistently high rates of return in specific markets, and incumbent firms responding with lower prices to maintain market shares.

The most compelling example is provided by the market for residential mortgages, where the margin between the standard mortgage rate and the cash rate fell from a historically high 4¼ percentage points in 1992/93 to be around 1¾ percentage points in 1999. The decline is even larger if one takes into account the introduction of 'no-frills' or 'basic' mortgages (see Figure 6).

The high margins in the first half of the decade generated extremely high rates of return on equity on housing loans, and were important in restoring the profitability of the banks. These high returns meant that the existing institutions were keen to attract new business. These institutions were, however, reluctant to chase market share by reducing their standard loan rates, as this would have reduced the profitability of the large stock of *existing* loans. The solution was to attempt to segment new and existing borrowers by offering discounted interest rates for the first year or so of a new loan (so-called 'honeymoon loans'). While aggressive marketing of these loans gave the appearance of strong competition, and did lead to a significant increase in loan refinancing, many existing borrowers continued to pay high margins, as did new borrowers at the expiration of the 'honeymoon' period.

Figure 6: Interest-rate Margins



Note: The negative spreads in the late 1980s are partly explained by the fact that in 1988 the Commonwealth Government announced a phasing out of the statutory reserve requirements (SRDs) with the banks agreeing to the *quid pro quo* that the savings be translated into lower lending rates.

Sources: Reserve Bank of Australia *Bulletin* (Tables F.1 and F.4), Reserve Bank calculations

More effective competition took a relatively long time to occur, and did not eventuate until mortgage managers entered the market.[8] The mortgage managers relied on a bank for their initial funding and for the development of the necessary securitisation procedures, although the bank concerned had essentially no existing mortgage portfolio. In contrast to established lenders, mortgage managers were able to offer lower margins without concern for the effect of this on the profitability of existing loans. During 1994, 1995 and 1996 they offered standard lending rates around 1 to 1½ percentage points below those charged by the existing lenders, and by late 1995, the mortgage managers accounted for almost 10 per cent of housing loans written. Faced with a declining market share, the established lenders introduced basic home loan products in 1995 to compete with the 'no-frills' products provided by the mortgage managers. Eventually, the established lenders also cut their margins on standard mortgages, dropping them by around ¾ of a percentage point in June 1996 and by ½ of a percentage point in the first half of 1997. Today, mortgage managers and banks charge similar rates, with the scope for mortgage managers to push margins lower constrained by the administrative cost of securitisation and the market premium on securitised assets. The effect of increased competition has been a significant narrowing in the margin between the average interest rate paid and received by banks, particularly over the past few years (see Figure 6).

Another market that has been transformed by the entry of new firms is retail stockbroking. In the early 1990s, it was not uncommon for retail investors to pay a 2 per cent commission on share purchases and sales. By mid decade this had halved to around 1 per cent. Today, commissions are as low as 0.1 per cent (a fall of 95 per cent over the decade!) and remain under downward pressure. As in the case of mortgages, new entrants were the driving force behind the price falls. A major catalyst for greater competition was the entry in 1996 of one of the large retail banks as a discount broker and its development of technology that allowed orders to be placed over the internet (introduced in March 1997). More recently, at least a dozen other firms, including specialist internet brokers, as well as all the major retail banks, have offered similar services. By the end of 1999 these discount internet brokers accounted for almost 15 per cent of all trades on the Australian Stock Exchange.

A third area that has been affected by stronger competition is the issuing of credit cards, although here competition has resulted in the proliferation of loyalty points schemes, rather than a decline in lending margins. In the early 1990s, lower nominal interest rates substantially reduced the cost to the banks of the interest-free period, whilst the introduction of annual fees (in 1993) provided a new income stream. In response, a foreign bank entered the market competing aggressively, partly through the introduction of a loyalty points scheme. Over the following few years, the incumbent issuers introduced similar schemes, with loyalty rewards equivalent to up to 1 per cent of the amount spent.

8. Mortgage managers originate home loans that are then pooled and on-sold to investors through the creation of asset-backed securities.

There are at least two possible explanations for why competition has taken this particular form. First, it is sometimes claimed that if a single financial institution were to unilaterally cut its credit card interest rates the average credit quality of its customers could deteriorate (due to adverse selection), and profitability could fall. Second, fees such as interchange fees are set by each credit card scheme, thus limiting the scope for individual banks within the scheme to adjust fees unilaterally.[9] Scheme-wide rules notwithstanding, there is little incentive for a bank to unilaterally cut the interchange fee that it receives whenever its customers use a credit card, since a reduced interchange fee would most likely depress, rather than boost, its market share. The result has been a distorted form of competition centred on loyalty point schemes. At the same time, there has been a five-fold increase in the number of credit card transactions over the decade, and a trebling since 1995.

In contrast to the above examples, it is difficult to point to obvious areas of increased competition in deposit markets over the 1990s. By the end of the 1980s, deregulation of interest rates and the establishment of cash management trusts had already led to the narrowing of deposit spreads, other than on transaction accounts. Spreads on these transaction accounts did, however, fall in the early 1990s due to the large decline in nominal interest rates. Although these spreads have subsequently widened a little, many transaction accounts still do not generate sufficient revenue to cover the costs of providing them.

While, overall, competition has increased despite greater concentration, the rate of return on equity in the banking industry has remained essentially unchanged over the second half of the decade, averaging 22 per cent on a pre-tax basis, and 15 per cent after tax.

From an accounting perspective, the sustained high returns can be explained by reductions in operating costs and growth in non-interest income being offset by lower interest margins. This can be seen in the lower panel of Table 3 which decomposes changes in the aggregate rate of return on equity for the four major banking groups plus St. George. Between 1995 and 1999, net interest income for these five banks as a ratio to their total assets fell from 3 per cent to 2.5 per cent, the effect of which was to reduce the average return on equity by almost 7½ percentage points. This negative effect on profits was offset by an increase in the ratio of non-interest income to total assets and, more importantly, by a fall in operating costs to total assets. A slight increase in leverage also made a small positive contribution to sustaining the return on equity. The table also shows the significant effect on profitability of the bad debts problems in the early 1990s.

9. The interchange fee is paid by the merchant's bank to the bank that issues the credit card. The merchant's bank recoups the interchange fee and other costs from the merchant through a 'merchant service fee', which averages around 2 per cent of the amount spent (Reserve Bank of Australia 1999). If an issuing bank unilaterally cuts its interchange fee it would simply reduce its revenues, thereby reducing the scope for offering loyalty points, with the likely result that it would lose customers.

Table 3: Explaining the Return on Equity for the Major Banking Groups and St. George

	1990	1995	1999
Rate of return on equity (after tax)	**9.71**	**15.46**	**15.42**
Leverage (ratio of assets to shareholders' funds)	16.33	14.67	15.27
Ratio of net interest income to assets	3.00	2.97	2.48
Ratio of non-interest income to assets	1.71	1.50	1.58
Ratio of operating costs to assets	2.91	2.74	2.32
Ratio of bad debts expense to assets	0.83	0.17	0.21

	Percentage point change from:	
	1990 to 1995	1995 to 1999
Change in rate of return on equity	**5.75**	**–0.04**
Accounted for by change in:		
Leverage	–1.37	0.62
Ratio of net interest income to assets	–0.47	–7.38
Ratio of non-interest income to assets	–3.31	1.27
Ratio of operating costs to assets	2.65	6.30
Ratio of bad and doubtful debts to assets	10.19	–0.57
Other (including abnormals and taxation)	–1.94	–0.29

Sources: Banks' financial statements and authors' calculations

The growth of non-interest income over the second half of the 1990s is largely explained by growth in fee income, particularly from services provided to the household sector.[10] The most notable examples are the introduction of mortgage fees and account-servicing fees; for example, it is now common for banks to levy monthly servicing fees of $4 on transaction accounts and $8 on mortgage accounts, whereas in 1990 such fees rarely existed. The introduction of these fees is part of the unwinding of cross-subsidies that has followed the downward pressure on lending margins. While, in aggregate, consumers of financial services have benefited from this process, the benefits have not been evenly distributed, with some consumers of previously heavily subsidised services clearly worse off. This has led to heavy criticism of banks by particular groups.

Notwithstanding the often strong public reaction to higher fees and charges, it has been the reduction in operating costs that has been the more important factor in sustaining high rates of return. This reduction has been achieved through a variety of means including the rationalisation of branch networks, the migration of transactions

10. Comparisons between 1990 and 1995 are distorted by the fact that the non-interest income figures in the early 1990s include significant revenue from assets acquired through loan defaults, and by the treatment of surpluses in staff superannuation schemes. See Reserve Bank of Australia (1999) for a discussion of recent changes in bank fees.

out of branches to low-cost electronic delivery systems and the automation of back-office processing. The outsourcing of some information technology functions has also played a role. Overall, the number of bank branches fell by almost a quarter over the decade, while the number of full-time equivalent employees in banks fell by around 20 per cent.

While the trends in profitability can be easily explained from a simple accounting perspective, it is more difficult to explain the apparent paradox of increasing competition and sustained high rates of return. Significant reductions in operating costs should ultimately lead to further reductions in interest margins, rather than sustaining high rates of return for shareholders. An important lesson from the 1990s is that the competitive pressures needed to drive margins lower are more likely to come from new entrants, rather than from firms with large existing market shares. The lesson becomes even more relevant in the current environment in which there is strong pressure for further consolidation.

While the regulatory and technological barriers to entry have been substantially reduced, some impediments still remain. Foremost among these are the strong brand names enjoyed by existing banks. Also important are taxes on financial transactions, such as mortgage stamp duties and the bank debits tax, which reduce the incentive for consumers to change financial institutions. The proliferation of electronic banking links, including direct credit of salaries and the electronic payment of bills has had a similar effect, as has the practice of some institutions charging various forms of entry and exit fees. It is also possible that technological developments have increased returns to scale. Research and development and the construction of new network infrastructure involve substantial fixed costs and risks that may be more easily borne by larger institutions.

One factor that has the potential to ameliorate some of these effects is the internet. It offers the promise of making entry easier and lowering switching costs. The experience of retail stockbroking provides a good example of how powerful a force it can be. In Australia, however, it is the incumbent banks with their strong brand recognition and their established customer bases that are dominating internet banking. Whether the internet can deliver on its promise of promoting competition is likely to be an important issue in the years ahead.

5. The Growth of Markets and the Commoditisation of Risk

Another major development in the 1990s was the growth in direct financing through financial markets. This growth has not, however, reduced the overall importance of banks in the financial system. Instead, banks are providing an ever-expanding range of *risk intermediation* and other financial services. By bundling and unbundling risks, and by developing instruments that allow those risks to be traded, banks themselves have underpinned much of the tremendous growth in financial markets over the past decade or so.[11]

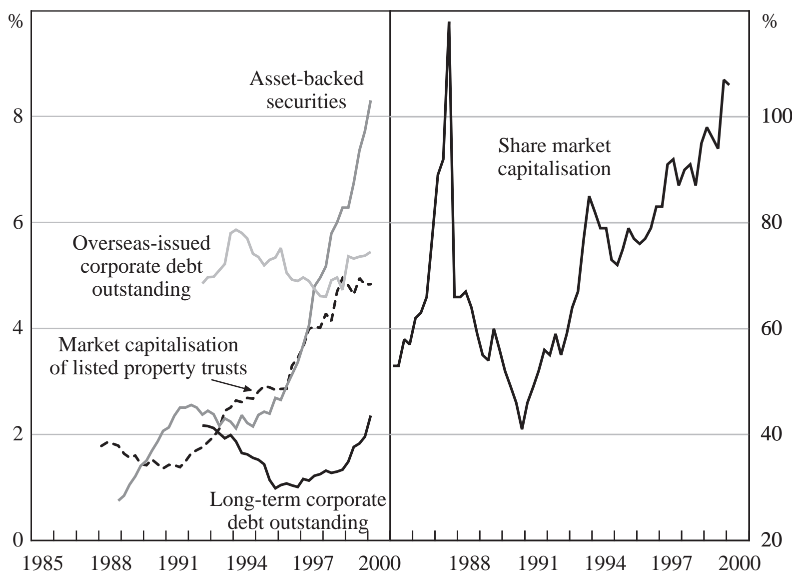
11. Allen and Santomero (1997) discuss how banks in the United States have recast their activities in the face of the growth of financial markets.

The clearest example of the greater role played by markets in financial intermediation is the emergence of a market in asset-backed securities, particularly mortgage-backed securities. The first securitisation programs were developed by state governments in the mid 1980s to finance loans to low-income households. When interest rates fell in 1990 and 1991, many of the fixed-rate loans made by these programs were refinanced causing the holders of the bonds to incur significant losses. After this troubled start, the market received a major boost with the development (by a bank) of a securitisation vehicle to finance lending by the mortgage managers. As discussed in Section 4.2, the high interest-rate margins of the early 1990s gave the mortgage managers the scope to undercut the established lenders, with the result being rapid growth in the issuance of mortgage-backed securities. Over recent years, banks have also begun to securitise their own mortgages as part of their capital-management strategies. The total value of asset-backed securities now outstanding exceeds A$50 billion (equivalent to over 8 per cent of total credit; see Figure 7). Approximately two-thirds of these securities are backed exclusively by residential mortgages, with others backed by financial securities, credit card loans and auto loans. Around one-quarter of the outstanding securities have been issued offshore.

Financial markets (in particular, listed property trusts) are also playing a more important role in the financing of commercial property. Over the decade, the number of listed trusts more than doubled and their total assets quadrupled, reducing the

Figure 7: Financing through Markets

As a per cent to total credit extended by financial institutions



Sources: ABS Cat No 5232.0; Australian Stock Exchange *Monthly Index Analysis*; Reserve Bank of Australia *Bulletin* (Tables D.2 and D.4)

share of commercial property financing conducted through banks' balance sheets. While these trusts do borrow from banks, increasingly they are also issuing their own debt securities.

In line with the reduction in corporate debt, the domestic corporate bond market contracted over the first half of the decade. The market then recovered, particularly in the last few years, although the domestic market remains considerably smaller than the offshore market. Both markets are dominated by security issues by financial institutions, with banks continuing to be the main source of debt funding the vast majority of Australian firms.

The stock market has shown more consistent growth over the decade. Since 1990, the market capitalisation of the Australian Stock Exchange (ASX) as a ratio to GDP has more than doubled, to over 100 per cent, bringing the value of equity in listed companies to a level roughly equivalent to the value of credit extended by financial institutions (see Figure 7). While the bulk of this growth is due to valuation effects, there have also been substantial issues of new equity; over the decade as a whole new equity issues were the equivalent of 55 per cent of the increase in credit. Despite the growth of the Australian stock market, the value of listed equity relative to the size of the overall economy remains well below that in the United States and United Kingdom.

Growth in equity market turnover has also been rapid, with the ratio of annual turnover to market capitalisation increasing from around one-third in 1989/90 to more than half in 1998/99. Part of this increase can be attributed to changes in the infrastructure for trading and settlement. In 1990, the ASX moved all share trading from open-outcry floor trading to an electronic system. It also introduced an automated settlement system, so that by 1998, all shareholdings in domestic companies had been converted to electronic (uncertificated) form. In the past few years, the fall in retail brokerage charges, the introduction of internet-based brokers, and the strong performance of the stock market have also contributed to the strong growth in turnover.

More generally, much of the recent growth in financial markets, particularly in trading volumes, is not directly related to the increase in the value of securities outstanding, but rather to the increasing marketability of risk through financial instruments, particularly derivatives. Improvements in technology and data have allowed a wide range of previously unpriced risks to be priced. Banks have played a central role in this process, using financial markets to manage their own balance sheet risks and to provide risk-management services for their customers. For example, over the decade the banks' outstanding interest rate swaps increased around five-fold, while currency options outstanding increased around six-fold. Moreover, banks remain dominant in the foreign exchange market, accounting for more than 80 per cent of foreign exchange turnover in 1999 (see Table 4). Similarly, banks remain the main providers of underwriting and placement services for corporate debt issues and stock market capital raisings.

The trend towards the commoditisation and marketability of risk is exemplified in the emergence, late in the decade, of a market for credit derivatives. These

Table 4: Banks and Financial Markets

Instrument	**Banks' share in annual turnover** 1998/99, per cent	**Percentage increase in banks' outstandings** Dec 1989 – Dec 1999
Spot foreign exchange	89	–
Foreign exchange forwards	89	80
Foreign exchange options	84	512
Cross-currency swaps	59	156
Government debt securities	42	0
Forward rate agreements	78	17
Interest rate swaps	61	398
Interest rate options	37	316
Equity derivatives	14	117

Note: Banks' share in turnover excludes in-house transactions

Sources: AFMA-SIRCA (1999); APRA

derivatives essentially create a market in credit risk, allowing financial institutions to separate the businesses of originating and financing loans on the one hand, and the acceptance of credit risk on the other. The Australian Financial Markets Association (AFMA) estimates the size of the Australian credit derivative market at the end of 1999 at between A$3 billion and A$5 billion in gross contract value (AFMA 2000). To date, the market has primarily involved Australian banks buying credit risk protection from internationally active banks and securities houses. However, if developments abroad are any indication, the development of a two-way market in which the Australian banks both buy and sell credit risk is likely in the future.

An expansion of exchange-traded derivatives has also helped increase the marketability of risk. At the start of the decade, the Sydney Futures Exchange (SFE) offered just seven different contracts.[12] By the end of 1999, 25 contracts were traded, with new contracts including futures covering 12 individual shares, a variety of stock market indices, wheat, and electricity. The SFE also introduced several new types of derivatives including overnight options and serial options, as well as trading in contracts over oil, natural gas, coal and metals though a linkage with the New York Mercantile Exchange. Similarly, the ASX introduced more flexible options (allowing traders to customise some of the key features of the contracts such as expiration date) and share ratio contracts (which reflect a company's share price performance relative to the overall market). At the same time, turnover in traditional exchange-traded derivatives has grown enormously. For example, over the decade turnover in bank-bill and government-bond futures and options more than doubled

12. Three-year and ten-year government bonds, 90-day bank bills, the Australian dollar, the All Ordinaries Index, wool and live cattle.

as a ratio of GDP; by 1999, annual turnover in bank-bill derivatives amounted to more than twelve times annual GDP, while bond derivatives turnover was almost three times GDP.

The growth of financial markets has opened up new sources of finance and allowed new risks to be traded. Managed properly, this process can lead to better pricing and allocation of risk and more stable and efficient financial and non-financial institutions. However, it also opens up greater possibilities for institutions to purchase risk and to increase their leverage to changes in market prices. As the events surrounding the 1997 Asian crisis and the near-collapse of the US hedge fund Long-Term Capital Management demonstrated, the costs of mismanaging these risks can be high. Fortunately, Australia escaped this episode relatively lightly, with the main effects limited to a temporary increase in exchange rate volatility, a widening of credit spreads and a decline in new debt issuance (Grenville 1999).

6. Regulation of Financial Services

The difficulties experienced by financial institutions in the late 1980s – early 1990s highlighted shortcomings with risk-management practices within financial institutions and the arrangements for the prudential supervision of financial institutions. As a result, much of the first half of the 1990s was devoted to overhauling risk-management and supervisory processes to ensure a more stable and robust financial system. Over the second half of the decade, the focus turned to ensuring that the regulatory framework not only contributed to the stability of institutions, but also promoted competition, enhanced investor protection, and was sufficiently flexible to deal with continuing innovation in the financial services industry.

In terms of the supervision of deposit-taking institutions, the most important responses to the problems of the early 1990s included: the introduction of targeted, risk-based, on-site bank reviews by the Reserve Bank;[13] moves to strengthen consolidated supervision (for example, the application of large-exposure limits to the bank in combination with its non-banking subsidiaries); the development, in conjunction with the accounting profession, of guidelines for the measurement and reporting of impaired assets; the passing to the Reserve Bank of formal responsibility for the supervision of banks owned by state governments; the clarification of the role of auditors and bank directors in the oversight of risk management; and the establishment (in 1992) of the Australian Financial Institutions Commission to set uniform, national prudential standards for building societies and credit unions.

The supervision of insurance was also substantially improved. An important step in this process was the passage of the *Life Insurance Act* in 1995, which upgraded solvency standards and financial reporting requirements, increased the responsibilities of the directors, auditors and actuaries of life companies, and strengthened the

13. In 1992 the Reserve Bank began on-site reviews of banks' credit risk management. On-site reviews of banks' market risk management commenced in 1994.

Insurance and Superannuation Commission's (ISC) regulatory and enforcement powers. In addition, the ISC commenced on-site reviews of life insurers in 1992, and expanded the scope and frequency of its inspections of general insurers and superannuation funds.

The shift to targeted on-site reviews by the Reserve Bank and the ISC reflected a broader shift away from rule-based supervision towards supervisory practices that focus on the way that institutions measure and manage their key risks. One example is the approach taken to market risk. Here, banks have been allowed to use their own risk-measurement models to determine capital requirements, provided that the models are technically sound and the broader risk-management environment in which they are used is robust. This same general approach has recently been applied to liquidity risk in deposit-taking institutions. Rather than imposing a minimum liquidity ratio, as had been the case in the past, the emphasis has moved to ensuring that institutions have a robust liquidity-management policy, including a demonstrated ability to meet a five-day 'name' crisis.[14] Recent proposed changes to the Basel Capital Accord are likely to see this risk-based approach extended to include other risks, including credit risk and operational risk.

With the completion by mid decade of most of the reforms needed to correct the problems identified in the early 1990s, the Commonwealth Government established the Wallis Inquiry in 1996. The Inquiry, which submitted its final report in March 1997, recommended a major rearrangement of financial regulation, shifting from a regulatory structure based on institutions, to one based on functions (Financial System Inquiry 1997). In large part, this recommendation was prompted by the blurring of the distinctions between different types of financial institutions discussed above. The recommendation was accepted by the Commonwealth Government, and there are now separate regulatory agencies with responsibilities for prudential supervision, market conduct and the payments system.

Responsibility for the prudential supervision of banks, building societies, credit unions, insurance and superannuation funds was assigned to the Australian Prudential Regulation Authority (APRA), which commenced operations in July 1998. This brought to an end the Reserve Bank's role in bank supervision. Responsibility for market conduct and disclosure in the financial sector was assigned to the Australian Securities and Investments Commission (ASIC), which was also given responsibility for the enforcement and administration of the Corporations Law and consumer protection across the financial system. The Reserve Bank retained responsibility for monetary policy and the maintenance of financial system stability. In addition, a Payments System Board was established within the Reserve Bank with responsibility to promote safety, competition and efficiency within the payments system.

To date the new regulatory structure is working well, with effective co-ordination mechanisms having been established between the various regulatory authorities. Communication between the Reserve Bank, APRA and ASIC is facilitated through

14. A name crisis is one in which an individual institution has difficulty in retaining or replacing its liabilities due to events specific to that institution.

the Council of Financial Regulators, and by the Reserve Bank and ASIC both being represented on the board of APRA. APRA also has a seat on the Payments System Board. However, despite this promising start, the reality is that the ability of the new arrangements to deal with a financial crisis has not yet been tested. Indeed, the effectiveness of the co-ordination arrangements is likely to be an important factor in future assessments of the Wallis reforms.

One area where the benefits of regulatory reform are already apparent is in the harmonisation of prudential standards across financial institutions (Carmichael 1999). Most progress has been made in developing a set of consistent standards that apply to all deposit-taking institutions. Similarly, APRA is working towards greater consistency in the treatment of life and general insurance by strengthening the prudential supervision of general insurers. The process of harmonising supervisory arrangements across deposit-taking institutions and insurance companies is also underway, although progress here is slower, reflecting the complexity of the task. APRA has, however, already announced a liberalisation of the range of activities that can be carried out within a financial conglomerate containing an authorised deposit-taking institution, and expanded the range of organisational structures available to conglomerates.

Apart from changes in the structure of regulatory agencies, the second half of the 1990s saw increased attention being paid to the protection of retail investors and consumers of financial services. In part, this was a reaction to the rise in the household sector's holdings of financial assets and the introduction of mandatory retirement savings. A significant step in this direction was the implementation of the *Uniform Consumer Credit Code* and various industry codes of practice in 1996. More recently, the proposed *Financial Services Reform Bill* will subject organisations providing retail financial services to extensive disclosure requirements. It will also require these organisations to put in place arrangements for compensating people for losses resulting from the inadequate provision of promised services.

The increasing importance of markets and growing complexity of financial instruments has also spurred improved disclosure in wholesale markets. In 1991, the 'checklist' approach to prospectuses was replaced with a requirement that prospectuses include all information that a reasonable investor and his/her adviser need to make informed decisions. In 1994, the Australian Stock Exchange upgraded its continuous disclosure requirements, and in December 1996 Australian accounting standards were widened to include disclosure requirements for financial institutions. In many respects, the disclosure arrangements in Australia now compare favourably with those abroad, although the requirements that apply to deposit-taking institutions are less comprehensive than is the case in some other countries. One example of this is that deposit-taking institutions in Australia are not required to publish their regulatory capital ratios, while in a number of other countries the ratios are disclosed quarterly.

The Wallis Inquiry also recommended a number of reforms to promote competition in the financial services sector, particularly in the payments system. An early initiative of the Payments System Board was to widen access to Exchange Settlement Accounts at the Reserve Bank to institutions other than deposit takers. The Board is also undertaking a joint study with the Australian Competition and Consumer

Commission on interchange fees for credit and debit cards.

While the Wallis Inquiry recommended changes to many aspects of financial regulation, it endorsed the *status quo* in a couple of areas, despite the fact that current arrangements differ from accepted international practice. The first of these relates to the regulation of merchant banks. As mentioned in Section 4, most merchant banks operating in Australia are subsidiaries of foreign banks, and perform functions identical to those performed by authorised (investment) banks. However, unlike the licensed banks, the merchant banking operations of foreign banks are not subject to Australian prudential regulation, contrary to the Basel Committee's Core Principles for Effective Banking Supervision. The Wallis Inquiry supported this position largely on the grounds that merchant banks were not involved in retail business. This conclusion, however, sits oddly with the fact that banks conducting essentially identical business are subject to prudential regulation. In this light APRA is currently reviewing regulatory arrangements that apply to foreign banks' operations in Australia.

The second area is deposit protection arrangements. While Australia is unusual in not having an explicit deposit insurance scheme, the Wallis Inquiry concluded that the current arrangements, under which depositors receive preference over other liability holders in the liquidation of a deposit-taking institution, provide the best form of protection. In discussing the cases for and against deposit insurance, the Inquiry noted the possible adverse effect of deposit insurance on market discipline, and the difficulties that the high level of concentration in the Australian banking industry created for a self-funded scheme. Somewhat surprisingly, the issue generated little public discussion.

One important consideration not addressed by the Inquiry is whether governments would allow retail depositors in an authorised institution to suffer losses. The absence of failures of private banks in Australia for almost seventy years makes this difficult to judge. However, the experience in other countries suggests that governments find it extremely difficult to allow depositors to incur losses, even when they have no legal responsibility to protect, or guarantee, deposits. Arguably, the commitment not to bail out depositors is most credible in regimes in which there is a well-defined and widely understood deposit insurance scheme. While such a scheme does not preclude the government from extending broader protection, particularly in a systemic crisis, it does provide the realistic option of limiting protection to an amount that has been publicly announced in advance. Without such a publicly defensible limit, there is a risk that political pressure could lead to a guarantee of all deposits in a failed institution.

7. The Nature and Transmission of Financial Shocks

The various developments discussed in the preceding sections have altered the nature and allocation of financial risk within the economy and changed the way in which financial disturbances are likely to affect the normal processes of financial intermediation. This section of the paper discusses these changes, focussing on two issues in particular. The first of these is the impact of the changes in household

balance sheets on the nature of risks faced by the household sector. The second is the impact of developments over the 1990s on the robustness of financial institutions and markets to financial disturbances.

7.1 The household sector

Earlier we discussed three important changes in the structure of the household sector's balance sheet over the 1990s, namely:

- an increase in indebtedness;
- an increase in holdings of financial assets; and
- a switch away from deposits towards market-linked investments.

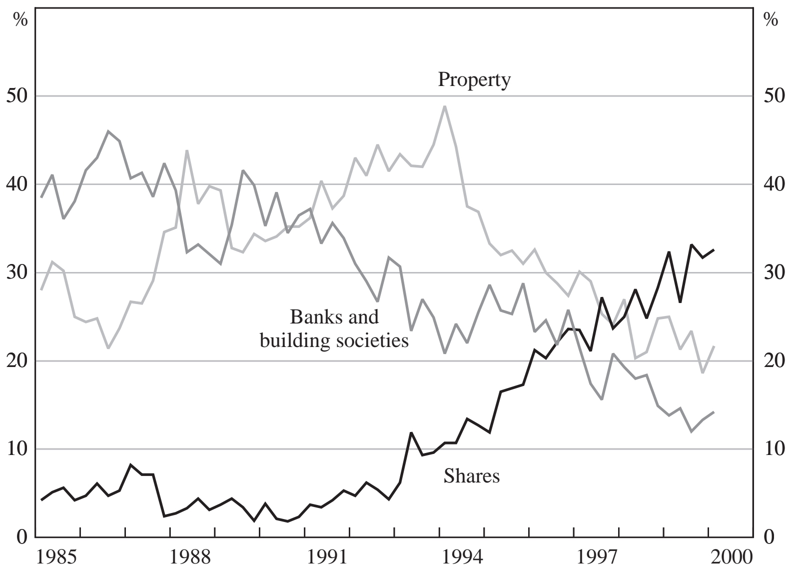
Taken in isolation, these changes have made the household sector, as a whole, more sensitive to changes in economic conditions and asset prices than was the case in previous decades. For example, the rise in indebtedness means that the effect of an increase in interest rates on aggregate interest payments by the household sector has almost doubled over the past ten years. Similarly, today, the additional wealth created through a 1 per cent rise in the value of households' financial assets is equivalent to $2^1/2$ per cent of annual household disposable income, compared with $1^1/2$ per cent a decade ago.

At the same time as balance sheets have become more exposed to a given change in interest rates and asset prices, economic and financial conditions seem to have become more stable. After the problems of the early 1990s, economic growth has been strong, inflation and interest rates have been low, and the stock market has performed well. Variability in growth, inflation and interest rates has also been low by historical standards (see Tables 1 and 2 in Gruen and Stevens (this volume)). Thus, while the sensitivity to economic and financial conditions may have risen, overall riskiness may not have increased.

Indeed, one broad interpretation of recent developments is that the changes in household balance sheets have, in part, been the result of a reassessment of the riskiness of debt and of holding equity investments. Some support for this interpretation can be seen in the responses to the Westpac-Melbourne Institute's *Survey of Consumer Sentiment*, which show that an increasing number of people view the stock market as the wisest place for their savings (see Figure 8). Certainly, the strong performance of the stock market has, in many people's eyes, increased its attractiveness as a place to invest. In addition, the absence of both large interest rate cycles and increases in unemployment have made people more confident in taking on debt. The increase in debt might then be interpreted as a sensible reaction to a more stable macroeconomy.

Whether or not this interpretation is correct depends in large part on an assessment of whether the relatively stable economic and financial conditions experienced in the 1990s are likely to continue. While judgements in this area are difficult, sustained low inflation and improvements in the monetary policy framework make a recurrence of the large interest rate cycles of the 1980s unlikely. So too does the increase in indebtedness itself, as it increases the impact on household consumption of a given

Figure 8: Wisest Place for New Savings
Per cent of survey respondents



Source: Melbourne Institute of Applied Economic and Social Research, Melbourne University, *Survey of Consumer Sentiment*

change in interest rates. On the other hand, the recent very strong performance of the stock market and the sustained strong output growth for much of the 1990s are certainly unusual by the experience of recent decades.

While overall assessments of risk are difficult, it is less ambiguous that the sensitivity of household consumption to movements in asset prices has increased as holdings of market-linked financial assets have risen. While, to date, there is scant empirical evidence of this effect, there are at least two reasons to suspect that it is indeed the case. First, changes in financial wealth, unlike changes in many other forms of wealth, are readily observable, making it easier for consumption to respond to a given change in wealth. Second, the larger holdings of financial assets have increased the potential for bubbles in asset markets to affect measured wealth, and thus consumption. Offsetting these factors, to some extent, are the diversification benefits that come from households holding a wider spread of assets.

Changes in wealth are easily observable when wealth is held in assets that are traded in markets. Changes in other forms of wealth, such as human capital, equity in unlisted companies, and public sector assets, are less easy to observe and measure. For example, while the value of human capital should rise in response to an expected improvement in future productivity (by increasing the flow of future wages), the increase is not directly observable and is difficult for individuals and potential lenders to recognise and measure. In contrast, the same expected improvement in

future productivity is reflected rapidly in the value of financial assets traded in markets. By telescoping all expected future returns into a current market price, financial assets provide an observable and readily verifiable way of measuring wealth. Thus, as the holdings of these assets increases, it becomes easier for households to observe changes in their wealth. This increase in 'observability' is likely to make consumption more sensitive to changes in wealth, and also allows households to use more of their wealth as collateral for borrowing.

The increased holdings of market-linked assets have also made a larger share of the household sector's wealth subject to the risk of price bubbles. In general, it is difficult for bubbles to occur in the value of non-traded assets, such as human capital or bank deposits. Similarly, bubbles are unlikely to occur in the value of wholly owned government assets, or in the household sector's valuation of its implicit claim on public sector pensions. In contrast, both equity and property markets have a long history of bubbles generated as the result of waves of excess optimism or pessimism about future economic conditions. If a bubble occurs and the inflated asset prices are viewed by the household sector as permanent, consumption is likely to increase. Conversely, when the bubble inevitably collapses, and asset values return to their true economic value, consumption may decline sharply. The potential for this type of reaction to affect aggregate consumption increases as the holdings of potentially 'bubbly assets' grows relative to current income.

While consumption is probably becoming more sensitive to changes in asset prices, the size of the change needs to be kept in perspective. Despite the increase in holdings of marketable financial assets, these assets still represent a relatively small share of the household sector's total wealth. Holdings of equities (both directly and indirectly) are equivalent to a little less than $1^1/4$ years' household disposable income. In contrast, the value of property assets is the equivalent of over four years' income, while the value of human capital, properly measured, would surely be much higher still. Thus, while changes in financial wealth are becoming larger relative to current income, the impact that these changes have on overall wealth is still relatively small. Furthermore, the effect of asset-price bubbles on consumption is likely to be diluted if households seek to smooth consumption and therefore respond to movements in wealth with less than proportionate, and lagged, changes in consumption. Lettau and Ludvigson (1999) present evidence for the United States to suggest that this is indeed the case. They show that when wealth is temporarily higher than its long-term trend with consumption and labour income, consumption is held temporarily below its trend relationship with wealth, in anticipation of lower future returns. Financial liberalisation, by opening up new sources of debt finance, has made it easier for households to smooth their consumption. Also, as households' holdings of financial assets have increased, portfolios have become more diversified, making overall wealth less sensitive to price changes in particular markets.

Changes in the structure of households' balance sheets have also affected the way that risk is allocated between households. Perhaps the best example is the privatisation of government-owned assets. Prior to privatisation, the entire community bore the financial risk associated with the performance of the assets, since poor performance implied a lower stream of dividends to government, and ultimately higher taxes or

lower spending. A good illustration of this is the Victorian experience in the early 1990s, where poorly performing state-owned assets, including the State Bank of Victoria, were partly responsible for significant increases in taxes and cuts in government services. While the incidence of higher taxes and lower government spending was not evenly spread, most of the community bore at least some of the burden. In contrast, once assets are privatised, the risk of under-performance is borne directly by the private owners, and this is a narrower group of people. For example, only 15 per cent of adult Australians directly own shares in Telstra, while less than 3 per cent own shares in the Commonwealth Bank and 1 per cent in Qantas, all of which were previously owned by the entire community.

This change in who holds the risk can alter the way that financial shocks play out. Again, a good example is the case of government-owned banks. As discussed in Section 2, the large losses by the State Bank of Victoria did not lead to a run by depositors, with deposits guaranteed by the Victorian Government. If instead, the losses had been concentrated in the hands of the depositors, the probability of a run on the bank would surely have been higher, as would a general loss of confidence in the banking system. This is not to say that the disappearance of government-owned banks has increased the risks to which the household sector is exposed; rather it has changed the nature of those risks, and the way that they are allocated.

7.2 Financial sector

Changes in the financial system have also affected the robustness of the normal processes of financial intermediation to various disturbances. The balance sheets of financial institutions appear safer and better managed than they were a decade ago.[15] As a result, the risk of financial headwinds originating from large losses by financial institutions has probably fallen. On the other hand, the rise in the importance of financial markets has increased the probability of headwinds originating in market-related disturbances.

A reduction in financial institution risk is suggested by a number of factors, including the following:

i. *a shift by banks into assets with relatively low credit risk*. As noted earlier, the strong growth in household sector borrowing has seen the share of housing loans to total banking system assets rise to historically high levels. While the average credit quality of residential mortgages may have declined a little over the decade, the shift into housing loans, and away from commercial property lending, has undoubtedly reduced the overall riskiness of banks.

ii. *improved market scrutiny and discipline.* An important element here has been the demise of banks that operated with government guarantees or were not listed on the stock market. The increase in the reliance on debt securities, rather than deposits, has also prompted an increase in disclosure of information, and greater market scrutiny of that information. As part of this process, most banks

15. For evidence suggesting that the Australian share market views banks as having become less risky over the decade see Gizycki and Goldsworthy (1999).

now have credit ratings.

One area where clearer market signals and increased scrutiny have been particularly important is commercial property lending. Over the 1990s, an increasing share of commercial property investment has been financed by listed property trusts. This means that individual projects now receive greater market scrutiny, and movements in the price of property trusts provide a continuous and easily observable signal about the market's assessment of commercial property investments. It also means that a fall in commercial property prices is less likely to directly affect the health of financial institutions.

iii. *greater diversification of profit sources*. The share of income earned abroad has increased, providing some protection from the domestic credit cycle; over the decade, the share of the profits of the four major banking groups earned overseas rose from 22 per cent to 33 per cent. The share of banks' income earned from non-interest revenue has also risen with the move into funds management, insurance and other fee-for-service activities. The shift away from corporate lending has also seen a decline in credit risk concentrations, with the number of large exposures falling considerably.

iv. *an improvement in internal risk-measurement and management methodologies*. All banks now manage risk on a consolidated basis and most now use credit-grading systems that provide detailed information on changes in loan quality (Gray 1998). Other advances in risk-measurement techniques include the development of Value-at-Risk models of traded market risk and the use of more sophisticated scenario analysis in the assessment of liquidity risk. In turn, risk management has been strengthened through the use of derivatives to hedge banks' exposures to interest rate and exchange rate movements.

v. *an improvement in financial system infrastructure*. The introduction of a real-time gross settlement system (RTGS) for high-value interbank payments in 1998 significantly reduced interbank settlement risk, as did changes in legislation that gave greater legal certainty to netting agreements. In addition, the Corporate Law Economic Reform Program has included initiatives to improve corporate governance and disclosure, update the way in which accounting standards are set and give greater legal certainty to the conduct of derivative markets.

While these factors have reduced risks, there are also some forces working in the opposite direction. One of these is the potential for problems in the funds management arm of a conglomerate to adversely affect the banking business of the conglomerate; perhaps the best Australian example of this is the problems in the unlisted property trust sector in 1991 (see Section 2). While financial regulators have gone to considerable lengths to ensure that businesses within a conglomerate deal with one another on an arm's length basis, and banks disclose that they do not guarantee the performance of funds management products, commercial pressures have the potential to force a bank to support its troubled funds management business.

The trend towards consolidation also raises the issue of whether the economy has become more exposed to the health of just a few large institutions (Harper 2000). The

fact that the four major banking groups have increased their market share suggests that the exposure to these groups has increased over the decade, although the effect is relatively small. More significant would be a round of mergers amongst the big four banking groups. This would see the Australian financial sector become highly concentrated by international standards. While a number of countries have banking groups with higher ratios of global assets to home country GDP than would be the case in Australia (most notably, Switzerland and the Netherlands), few countries would be more reliant on just two domestic financial services firms. This issue of concentration of exposure was important in rejecting recent proposals for bank mergers in Canada.

One factor that is probably helpful in reducing the economy's concentration of exposure to just a few institutions is the growth of financial markets. As Alan Greenspan (1999) recently noted, banking crises in countries that have active securities markets tend to be less painful than in countries without such markets. In his language, these markets provide a 'spare tire' that can be called upon if the primary forms of financial intermediation fail. By providing an alternative form of finance, they provide valuable macroeconomic insurance against some of the adverse effects of a banking crisis. In this respect, further development of these markets in Australia provides an important diversification benefit.

This diversification benefit is buttressed by improvements in financial market infrastructure. The legal reforms and improved disclosure practices that have reduced risk in financial institutions have also improved the functioning of financial markets. The unification of the state-based system of regulation of securities markets at the start of the decade, greater market liquidity and improvements in transaction and settlements technology have all been helpful in this regard. In addition, to the extent that growth in markets has extended the range of risks that are now tradeable, there is greater potential for risks to be transferred to those who are best able to bear them.

As usual though, there is a potential downside. Occasionally, markets malfunction and liquidity dries up. The events surrounding the near collapse of Long-Term Capital Management provide the most recent high-profile example (McDonough 1998). In that episode, not even investment-grade bond issuers in the United States could find reasonable buyers for their securities due to an abrupt reassessment of the riskiness of corporate debt and a rise in risk aversion. In Australia too, credit spreads increased and new debt issues by Australian companies fell significantly. At one point there were grave concerns about the potential for a costly 'credit crunch' in the United States, but in the final result this did not materialise, and there was little, if any, effect on the health of the macroeconomy. Nonetheless, as the role of markets continues to grow, and the products traded become more complex, the potential for sudden shifts in risk premia to generate macroeconomic effects must surely increase. Perhaps the best insurance against this is a strong banking system that is ready and able to provide liquidity in periods of market stress.

Determining the net effect of the various developments in the financial system on the robustness of the process of financial intermediation is a difficult task. Nevertheless,

our judgement is that, on balance, the financial system is probably sounder than it was a decade or so ago. This judgement is partly conditioned on the observation that problems in financial markets can often be resolved relatively quickly, provided that policy responds promptly and appropriately and that the overall financial system is robust. Thus, while the range of risks has increased, policy is better able to deal with these new risks than it is with threats to the stability of the financial system caused by the failure of institutions. On balance then, we judge that there has been a decline in the likelihood of serious financial headwinds originating from a breakdown in the process of financial intermediation. On the other hand, the deepening of household sector balance sheets has probably increased the likelihood of financial headwinds originating in the household sector's response to changes in financial and economic conditions.

8. Policy Issues

While the developments of the past ten years have raised many policy issues, three in particular are likely to remain current over the next ten years. These relate to competition, investor protection, and the management of system-wide risk.

The first issue is how to ensure robust competition in the provision of financial services, especially in the face of increasing pressures for consolidation, both domestically and across national boundaries. The Government has made it clear that an increase in competition is a prerequisite for a relaxation of the 'four-pillars' policy. An important lesson from the 1990s is that strong competition is more likely to come from institutions without substantial market shares, rather than from well-established firms. While the internet holds out the promise of lower entry barriers and the formation of a strong competitive fringe, the impact to date has been relatively small. Another potential source of new competition is non-financial firms moving into the provision of financial services. Again, to date, this has not occurred to any significant extent, however continuing changes in regulation, information technology, and the nature of banking make such a move more likely. A major policy challenge will be to harness the competitive benefits of both the internet and the entry of non-financial firms, without exposing investors, and the financial system more generally, to significant increases in risk.

The second issue is investor protection arrangements. Continued growth in households' holdings of financial assets is likely to lead to greater interest in the arrangements for the protection of retail consumers of financial services. In particular, compulsory retirement savings will increase pressures for improved disclosure and, probably, for greater investor choice. The rise in financial assets is also likely to focus greater attention on the level of management fees, and the value-added provided by the funds management industry. The arrangements for the protection of depositors are another area that may attract more attention. Given that the Wallis Inquiry rejected deposit insurance, the challenge for government when faced with the failure of a deposit-taking institution, will be to allow the current protection arrangements to play out, even if this means that small depositors suffer losses. The risk is that such an outcome is not palatable, for either political or systemic reasons,

and that repayment of deposits is guaranteed, despite the lack of a formal guarantee scheme. If such an outcome is likely, there is an argument that it is better to have an explicit deposit insurance scheme in place before problems develop. Doing so would provide the government with a realistic option of limiting the call on the public purse.

The third issue is the interaction between macroeconomic and prudential policy in the management of system-wide risk. Over recent decades, financial systems in many countries have experienced significant stresses, partly as a result of the build-up of risks across the entire financial system. The policy challenge is to identify and measure these risks, and to determine how monetary and prudential policies should best respond. Recent improvements in risk management and supervisory processes are helpful in this regard, although in a number of areas there remains considerable scope to more accurately measure movements in risk through time. Doing so would reduce the procyclicality of the financial system, and would lessen the probability of system-wide financial imbalances developing.

Overall, the challenge facing policy-makers over the next decade is to manage institutional consolidation and financial market growth in a way that both protects investors and strengthens the broader stability and efficiency of the financial system.

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