

## **APPENDIX A: TRENDS IN THE AUSTRALIAN FINANCIAL SYSTEM**

### **Introduction**

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

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

3. The section that follows has a general overview of the main trends in the financial sector and relates those trends to the changing demands of the users of financial services: the government, household and business sectors. The remaining sections deal in more detail with banks and other credit institutions, the life insurance and superannuation sector, and the growth of financial conglomerates.

### **Overview of main trends**

#### ***The financial system in the 1950s and 1960s***

4. While the 1950s might seem a remote starting point for analysis, the period provides a good stylised model of what might be called the “traditional” financial system, and many of the important trends to be analysed can be traced back to that time. The discussion that follows makes use of a basic distinction between the *credit institutions* (or *financial intermediaries*) sector, comprising those institutions whose core functions involve borrowing and lending,<sup>1</sup> and the *managed funds* sector,

---

<sup>1</sup> The main groups are banks, merchant banks, finance companies, building societies, credit unions and pastoral financiers.

comprising mainly life insurance and superannuation funds along with other investment vehicles like unit trusts. Emerging areas of competition and "functional overlap" between the two areas are discussed further below.

5. Table A1 illustrates long-run trends in the structure of the credit institutions sector. It can be seen that, until the 1950s, financial intermediation was largely synonymous with banking. In 1953, banks accounted for 88 per cent of the total assets of this sector while the next largest group, pastoral financiers, had only 4 per cent. A summary balance sheet for banks at around the same period (Table A2) shows the main elements of what might be regarded as the traditional bank product mix. Deposits were raised mainly from low-cost sources, with non-interest-bearing cheque accounts and low-interest savings bank deposits together funding almost 90 per cent of the balance sheet. Fixed deposits represented most of the remainder. On the asset side, almost half the balance sheet was invested in government securities or held in Statutory Reserve Deposits (SRDs) with the RBA, and around 40 per cent accounted for by loans. With interest rate controls in place, bank loans were rationed and available only to the most creditworthy of borrowers. Banks faced little competitive pressure from other institutions, which had not yet begun their rapid development, and the system was not open to foreign bank entry or to offshore transactions. Banking business was essentially a low-risk proposition conducted at regulated prices.

**Table A1: Assets of Credit Institutions**  
Per cent of total

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

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

**Table A2: Balance Sheet of the Banking Sector**  
\$ million, June 1956

	Trading banks	Savings banks	Total	% of total assets
<i>Liabilities</i>				
Non-interest bearing deposits	2336		2336	43.0
Savings bank deposits	–	2289	2289	42.1
Fixed deposits	514		514	9.5
Other (excludes capital)	142		142	2.6
<i>Assets</i>				
SRDs	521	na	521	9.6
Government securities	415	1704	2119	39.0
Loans	1945	364	2309	42.5
Other	366	119	485	8.9
Source:	Reserve Bank of Australia, Occasional Paper 8.			

6. The other main part of the system was the managed funds sector, which in terms of assets was around one-third the size of the banks. This comprised principally life offices and superannuation funds, which offered very different services from banks in the form of long-term, highly tax-favoured saving plans. There was some overlap with banking functions in the provision of mortgage lending by life offices, which helped to satisfy the demand for mortgages unmet by banks. This area of lending activity was quite substantial in the 1950s and 1960s but subsequently declined, for reasons discussed in a later section.<sup>2</sup>

7. From this sketch can be identified the three elements of what might be called the traditional bank business mix; namely, lending, deposit-taking and the provision of transactions services.<sup>3</sup> An important issue is the extent to which these three services need to be provided in a single institution. In this respect a central part of the developing story concerns the emergence of new financial products and new institutions that can compete separately for profitable lines of business, without taking on the whole of the banking product mix. This sort of competition was not possible in the 1950s and 1960s when securities markets were undeveloped and separation of deposit and lending functions, as is now exemplified by cash management trusts and mortgage securitisers, was not possible.

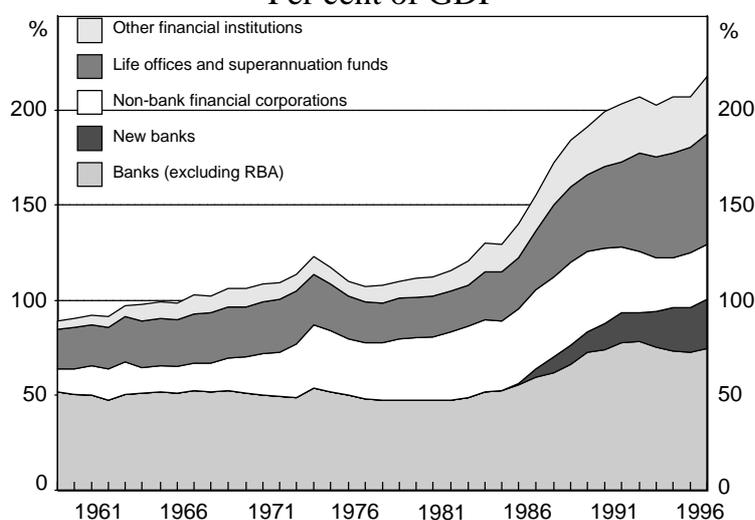
<sup>2</sup> More recently, life offices have again become active in the mortgage market.

<sup>3</sup> A fourth element, the passive holding of government securities, is best thought of as something separate and only incidentally important in the early postwar period, rather than being part of the core business of banking; it was a product of regulation and of the high levels of government debt incurred during the war.

### *Development of financial institutions*

8. Overall growth of the financial system and its institutional subsectors is illustrated in Figure A1. System assets more than doubled as a ratio to GDP between the 1960s and 1990s, with most of that growth occurring in the immediate post-deregulation period in the second half of the 1980s. This has been followed by a period of slower growth but the long-term trend still appears to be upward, consistent with patterns in other countries and with theoretical notions of “financial deepening” as an economy grows. That is, the demand for financial services, broadly defined, tends to increase faster than the increase in income.

**Figure A1**  
**Total Assets of Financial Institutions**  
 Per cent of GDP



Source: Reserve Bank of Australia Bulletin.

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

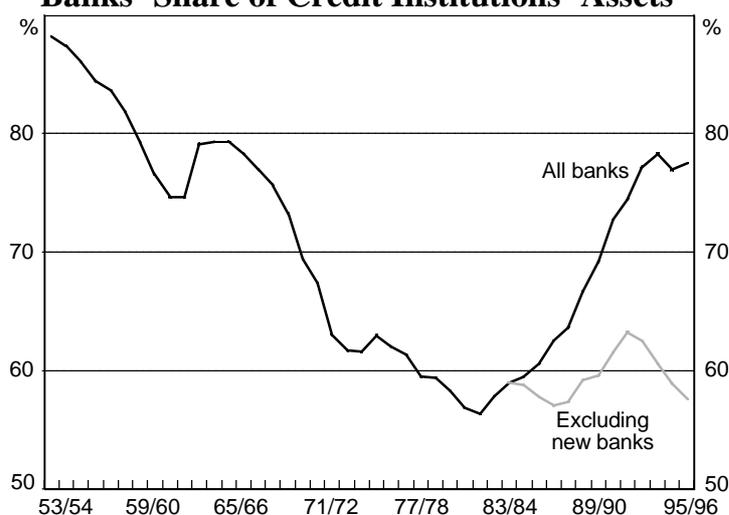
10. A strong reverse trend in these market shares has been observed in the post-deregulation period as the banks' ability to compete with NBFIs improved. In addition, banks reabsorbed non-bank affiliates onto their balance sheets and there were a number of prominent non-bank institutions, particularly building societies, which found it advantageous to convert to banks in the late 1980s and early 1990s. A one-off easing of restrictions on foreign bank entry in the mid 1980s, and the more open entry policy adopted since 1992, saw the foreign bank presence increase, in part at the expense of the merchant bank sector.

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

12. The shifting market share of banks *vis-a-vis* other credit institutions is illustrated more starkly in Figure A2, which shows banks' assets as a share of the total credit institutions sector. This declined steeply to a low point of 57 per cent in 1981 before recovering equally dramatically to almost 80 per cent by 1993, its highest share for thirty years.

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

**Figure A2**  
**Banks' Share of Credit Institutions' Assets**



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

### *The non-financial sectors*

14. Before turning to a more detailed analysis of competitive forces within the intermediation sector it will be useful to look at trends in the financial demands of the other parts of the economy which are the financial sector's clients.

#### *Government*

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

*Corporate sector*

16. By international standards, leverage within the Australian corporate sector has traditionally been relatively low, and this remains the case despite a substantial increase in corporate borrowing in the late 1980s. Average debt-equity ratios of Australian companies are slightly lower than in the US, Canada and the UK, and significantly below those in European countries and Japan which have very different banking systems and methods of corporate governance (Table A3).<sup>4</sup>

---

**Table A3: Debt-Equity Ratios of Non-Financial Enterprises**

---

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

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

---

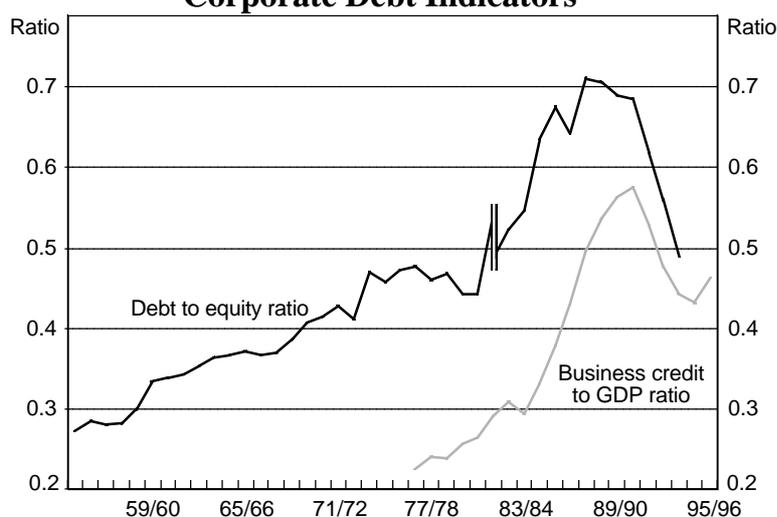
17. The Australian historical experience seems broadly consistent with the pattern of increasing corporate debt observed in other low-leverage systems, particularly in the US and Canada. Starting from a low base in the 1950s and 1960s, the average debt-equity ratio in Australia has been on a sustained upward trend, accelerating sharply in the second half of the 1980s before the subsequent period of debt reduction observed more recently (Figure A3). The spike in leverage in the late 1980s is in fact understated by the data in Figure A3 based on a continuous sample of companies, since many of the companies whose leverage increased most dramatically at that time did not survive the period and are therefore excluded from the continuous sample.<sup>5</sup> Notwithstanding the substantial debt reductions that took place in the early 1990s, the volume of corporate debt outstanding remains considerably higher relative to GDP than was the case in the early 1980s, and the most recent data suggest that corporate borrowing has again begun to increase.

---

<sup>4</sup> Some caution is needed in comparing balance sheet ratios across countries because of differences in accounting practices.

<sup>5</sup> See Mills, Morling and Tease (1993).

**Figure A3**  
**Corporate Debt Indicators**



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

18. An unusual characteristic of the debt component of Australian corporate financing is the limited use made of direct borrowing through the issue of corporate securities. Corporate borrowing demands in Australia have traditionally been met mainly by credit institutions - that is, by banks, merchant banks and finance companies, with the largest part of the market being accounted for by banks. Currently only around 10 per cent of the aggregate corporate balance sheet is financed by debt securities.<sup>6</sup> In this respect the pattern of corporate financing in Australia differs from those in the larger English-speaking countries, particularly the US and the UK, where debt security issuance has historically represented a sizeable proportion of overall corporate sector funding.<sup>7</sup> A possible explanation is the smaller size of the Australian economy and the relatively small number of Australian companies that would be considered large on an international scale.

19. The fact that direct forms of financing have not been more important to date, however, provides little guide to the future and conditions seem likely to favour an expansion in the corporate debt market. One factor is the increased sophistication of institutional investors and increased demand from that source for good quality debt. In Australia, the expected expansion in the funds management and superannuation sector could be an important catalyst in this regard. The potential for growth could be further enhanced if attempts to rein in the growth of government debt are successful in the years ahead, as there could then be an increase in demand for alternative securities.

<sup>6</sup> This figure excludes bank bill finance.

<sup>7</sup> Data presented by Tease and Wilkinson (1993) suggest that, in flow terms, security issuance provided funding of comparable magnitude to bank loans for the corporate sectors of both countries in the 1980s.

20. Trends here will have an important bearing on the long-term role of banks. One view<sup>8</sup> is that technological improvement is continually reducing the information costs associated with direct financing even for relatively small companies. An alternative view<sup>9</sup> is that banks (or credit institutions more broadly defined) seem likely to retain at least that part of lending linked to the small-to-medium business sector where the practical difficulties of assessing creditworthiness are much greater, technological improvements notwithstanding, than for larger companies. It could, of course, be argued that the issue is more involved than suggested by either of these views. Corporate demands for finance tend to be diverse, with required borrowings linked variously to long-term capital investments at one extreme or to the need for shorter-term standby and liquidity facilities on a day-to-day basis. While direct forms of financing could be an efficient means of obtaining longer-term funds, a major role would still exist for intermediated forms of financing in satisfying shorter-term requirements, even where the largest borrowers are concerned. It could also be argued that, even if there is a significant shift towards direct forms of financing, banks would be well placed to provide the associated services of origination, underwriting and distribution.

### *Households*

21. The data in Figure A4 illustrate the household sector's position as a net holder of financial assets and show that both sides of the aggregate household balance sheet have undergone a trend expansion over several decades. Notwithstanding this trend, and the fluctuations in some of the balance sheet components, an immediately striking feature of the asset side of the balance sheet is the relative stability of household deposit holdings. These currently stand at just under 40 per cent of GDP and have shown only minor fluctuations around a very gradually rising trend since the early 1960s. There seems to be reasonably close substitutability among deposits of competing intermediaries, suggested by the fact that the trend in total deposits is much more stable than either the bank or non-bank components of that aggregate. This could be argued to be consistent with a fairly stable level of desired deposit holdings relative to income, driven essentially by transaction and short-term saving requirements, with the institutional split between banks and non-banks being influenced by the relative attractiveness of their interest rates.<sup>10</sup> This behaviour can be contrasted with the much greater variation in household assets held with life insurance and superannuation

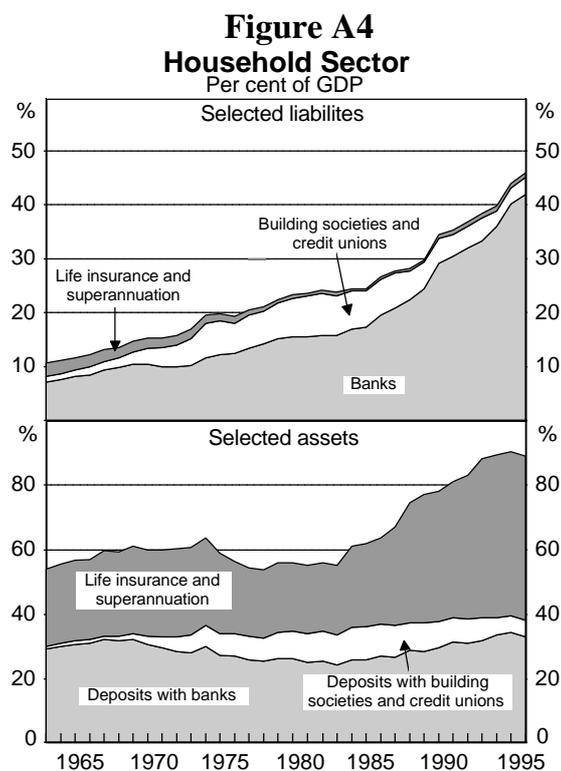
---

<sup>8</sup> Bisignano (1991).

<sup>9</sup> Goodhart (1988).

<sup>10</sup> This view is consistent with more detailed evidence presented by Dilnot (1990).

funds, which did not appear to give rise to any offsetting fluctuations in deposit holdings. In other words, household behaviour seems to make a clear distinction between deposits with intermediaries and balances with funds managers.<sup>11</sup>



Source: Occasional Paper No. 8.

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

### Financial intermediation and securities markets

23. Within the credit institutions (intermediaries) sector, two main trends have been important in shaping the competitive environment. The first, already outlined in the preceding section, was the development of financial regulatory policy and its interaction with performance of the different groups of intermediaries. In broad outline, banks lost market share up to the mid 1980s but regained it rapidly once deregulation allowed them to compete for business on more equal terms. As is evident

<sup>11</sup> A separate question concerns the substitutability between superannuation and other non-deposit stores of household saving, which is not addressed here. See Morling and Subbaraman (1995).

referring back to Table A1, banks now dominate the intermediation sector to an extent not seen since the 1950s and 1960s, accounting for almost 80 per cent of the total assets of this group of institutions.

24. The second trend, elaborated below, has been the unbundling of the banks' traditional product mix. This refers to the increasing capacity for new entrants to bid separately for components of banks' traditional business without offering a comprehensive range of banking services. This trend suggests that, even in an environment where banks are not hampered by regulatory constraints, there may be increasing competitive pressure on the most profitable parts of their traditional business base.

### **The bank product mix**

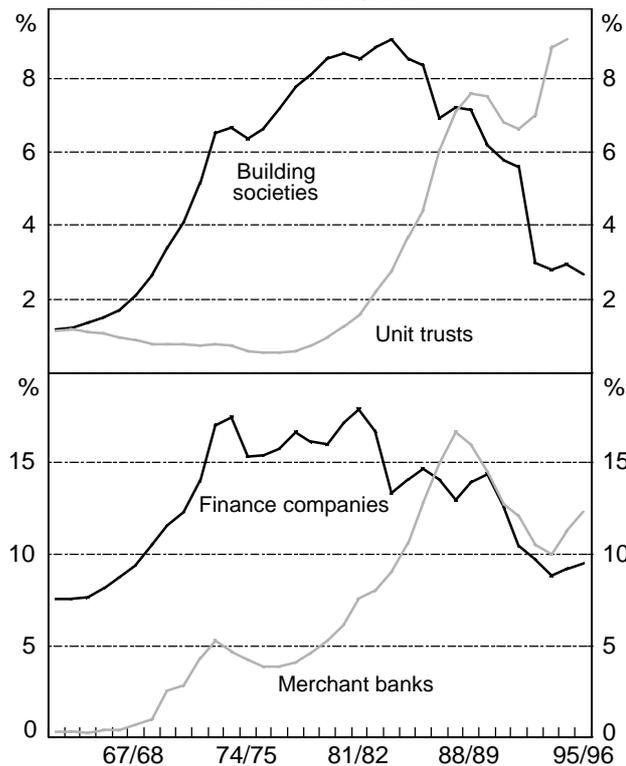
25. As argued earlier, the traditional mix of products provided by banks can be viewed in broad terms as comprising three elements – deposit-taking, lending and providing transactions services. This, of course, has never been the complete picture and in recent years bank activities have expanded well beyond the traditional product range, as evidenced by the growing proportion of banks' income accounted for by fees as opposed to net interest earnings. Nonetheless, net interest income continues to provide the bulk of the aggregate profits of Australian banks.<sup>12</sup>

26. An important issue in relation to the basic economics of the banks' product mix concerns the extent to which the joint products within the mix are separable. In other words, to what extent can the markets for these services be competed for separately rather than delivered jointly by full-service institutions? Historically, there has always been some scope for specialist institutions to compete with banks on a partial range of services. Important examples in the 1960s and 1970s were the building societies and finance companies, which could be thought of as offering limited ranges of deposit and lending services independent from the more comprehensive services, including transaction facilities, available from banks. These institutions grew rapidly in those decades (Figure A5), although the growth was much more a result of their ability to operate outside of key regulatory controls than to the specialist characteristics of their product lines.

---

<sup>12</sup> Currently around 60 per cent of banks' income is accounted for by net interest. This figure understates the importance of intermediation business since it excludes bill acceptance fees, which are really a form of intermediation income.

**Figure A5**  
**Non-Bank Financial Intermediaries Assets**  
 Per cent of GDP



Source: Reserve Bank of Australia Bulletin.

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

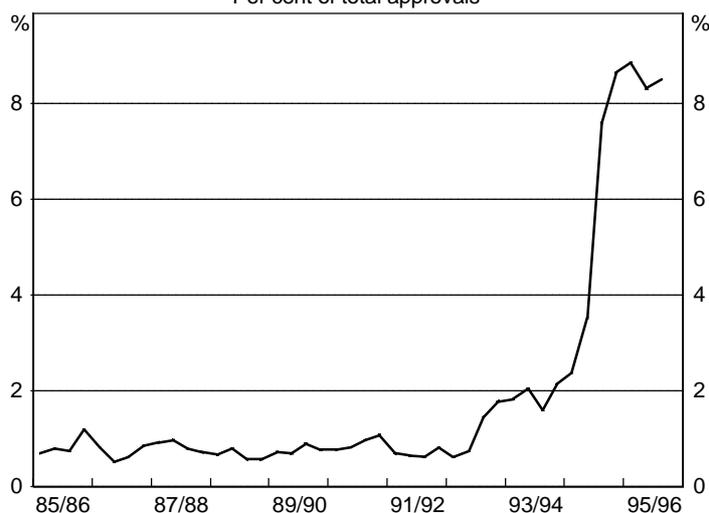
28. First, on the deposit side, was the growth of cash management trusts, the first of which was established in 1981. Although these are, strictly speaking, funds management rather than deposit-taking institutions, they offer a service that from the point of view of the customer is akin to a short-term retail deposit offering close to wholesale rates of interest. Cash management trusts remain relatively small in aggregate (currently with around \$7 billion in total assets, or around 3 per cent of aggregate household deposits) but have had an important impact on competition for the marginal depositor, and hence on the pricing of banks' own deposit services. In this way they have contributed to the competitive pressures that have seen a steady erosion of banks' low-cost deposit base.

29. A second example, on the lending side, was the growth of merchant banking. This occurred in two distinct phases – one in the late 1960s and early 1970s, and the

other in the 1980s (see Figure A5). Asset price inflation and an expanding demand for credit played a role in both episodes, with these institutions being active lenders at the more speculative end of the risk spectrum. Regulatory constraints on banks also clearly played a big role in the earlier episode but it is significant that merchant banking activity continued to expand rapidly in the mid 1980s after those constraints on banks were removed. Merchant banks engage in a wide range of financial activities but an essential characteristic of much of their activity is to provide loans to businesses, funded by borrowing in domestic financial markets or from non-residents. In this way, they perform the lending and credit assessment functions associated with traditional banking without taking deposits from households. Merchant bank assets expanded to a peak of around 13 per cent of the financial intermediaries sector in 1988 but then contracted sharply for several years. Nonetheless, they remain a significant presence as the largest of the non-bank intermediary categories, currently accounting for just under 10 per cent of total intermediaries' assets.

30. The third and most recent example of specialist competition is the growth of mortgage managers. These have been in existence since at least the 1970s but it is only in the past few years that they have grown dramatically and emerged as a significant, though still small, competitor to banks in the housing loan market. They currently account for about 8 per cent of new housing loans, compared with a market share of less than one per cent only a few years ago (Figure A6). Mortgage managers arrange housing loans funded ultimately by the issue of mortgage-backed securities that are, in turn, mainly held by institutional investors. The growth of this market provides a good illustration of the potential for separation of certain forms of lending from deposit-taking functions in the financial intermediation sector, and also illustrates the role that funds managers can play as providers of funds to specialist institutions.

**Figure A6**  
**Mortgage Managers' Housing Lending**  
Per cent of total approvals



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

31. It should be noted that the process of disentangling traditional banking products by specialist institutions or entities is still in its infancy in Australia. In the US, where disintermediation has been a feature of the financial system for a decade or more, almost two-thirds of residential mortgages and half of the outstanding credit-card receivables are now funded through the wholesale markets via securitisation programs. Other entities, such as state and local authorities, are increasingly looking beyond the banking system to fund their activities via the issue of securities backed by their receivables (water, electricity, gas etc). These practices have the potential to erode further the traditional market for bank funding in the US and there is no reason to believe that the process will not go further in Australia.

### **Competition and margins**

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

33. The pricing structure described above is clearly not one the banks would ideally want. There is a strong economic logic to pricing transaction services more in line with costs, and indeed a wide range of transactions fees have been introduced by banks in recent years. These appear, however, to remain well short of full cost recovery.<sup>13</sup> The low-price regime on transactions services is essentially inherited from history and banks have faced strong public resistance to changing it. Nonetheless, the situation seems unlikely to be sustainable indefinitely, and changes are occurring.

---

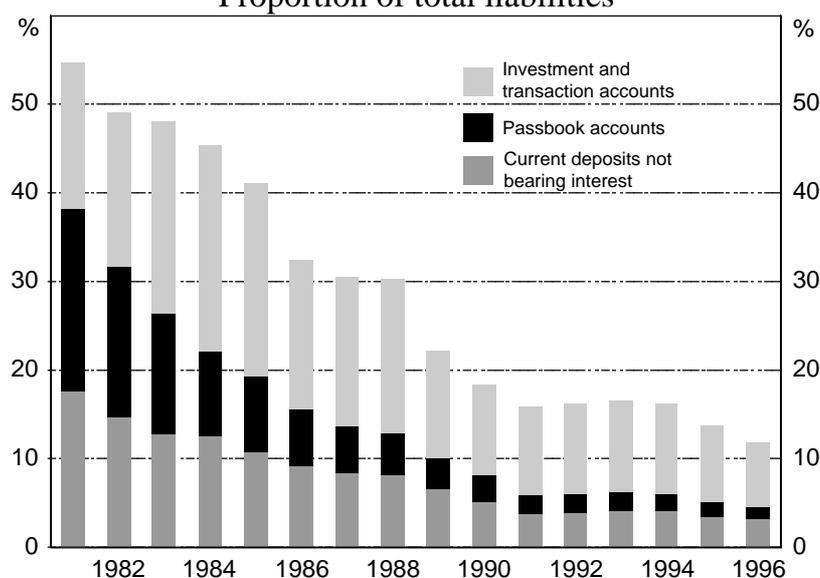
<sup>13</sup> The Prices Surveillance Authority report (1995) concludes that bank transaction services are priced significantly below cost on the basis of allocations of infrastructure costs in line with standard accounting principles. See also Burrows and Davis (1995) for a discussion of the economics of cost allocation for joint products.

Banks will be unable to compete with specialist institutions while they are required to cross-subsidise payments services which their competitors do not offer.

34. The need to cross-subsidise transactions services and maintain an expensive infrastructure network have important implications for banks' competitive position, particularly when viewed in conjunction with another development, the decline in banks' low-cost deposit base (Figure A7). Low-cost deposits - defined here as non-interest-bearing accounts, statement savings accounts and passbook accounts - currently represent about 12 per cent of the major banks' total deposit base. This is down from over 50 per cent in 1980 and from even higher levels in the 1960s and 1970s. The trend can be attributed to a number of longer-term factors including the effect of periods of high inflation in sensitising depositors to differences in rates of return, as well as competition from non-bank competitors, particularly cash management trusts. This shift in the composition of deposits has been an important source of upward pressure on banks' average cost of funds relative to money-market interest rates.

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

**Figure A7**  
**Low Cost Deposits of Banks**  
Proportion of total liabilities



Source: Reserve Bank of Australia Bulletin.

36. Against this background it is useful to look at what has happened to margins between deposit and lending rates. The Campbell Committee expected that deregulation would lead to reduced margins by increasing overall competition and removing constraints that had channelled competition into non-price areas such as the extension of branch networks (see Valentine (1991)). There has been considerable debate as to whether these and other expected benefits of financial deregulation have been realised, and some borrower groups such as small businesses have expressed concerns recently about high margins.<sup>14</sup> These concerns partly reflected the fact that key lending rates fell less than one-for-one with cash rates during the extended period of cash-rate reductions in the early 1990s, which was in turn related to banks' tendency to smooth their main lending rates over the course of a cycle. There was also concern that heavy loan losses incurred by banks made them reluctant to cut gross margins.

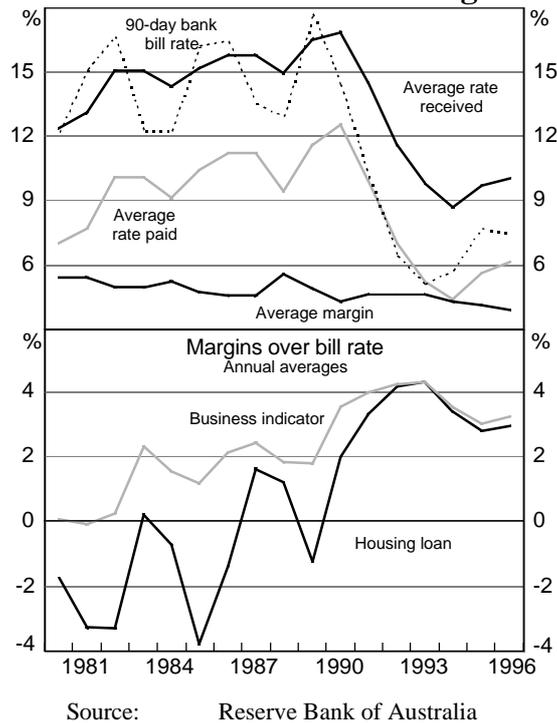
37. The data in Figure A8 suggest that average margins have been fairly stable although showing some tendency to fall since the early 1980s. Two features of the data seem particularly striking. The first is the way that average deposit rates and average lending rates have moved together over the course of a number of interest rate cycles. These averages seem much more closely related to each other than to developments in general securities-market interest rates such as the 90-day bill rate. Secondly, abstracting from cyclical movements, both deposit and lending rates have moved upward relative to the bill rate over a period of time. This is true both for the averages depicted in the upper panel of Figure A8 and for the main indicator lending rates. Similar behaviour has been observed in a number of other OECD countries that deregulated their financial systems.<sup>15</sup>

---

<sup>14</sup> For a discussion of these issues in an Australian context, see Fraser (1994) and the papers in Macfarlane (ed) (1991). See also Edey and Hviding (1995) for a discussion of other OECD countries' experiences.

<sup>15</sup> See Edey and Hviding (1995).

**Figure A8**  
**Bank Interest Rates and Margins**



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

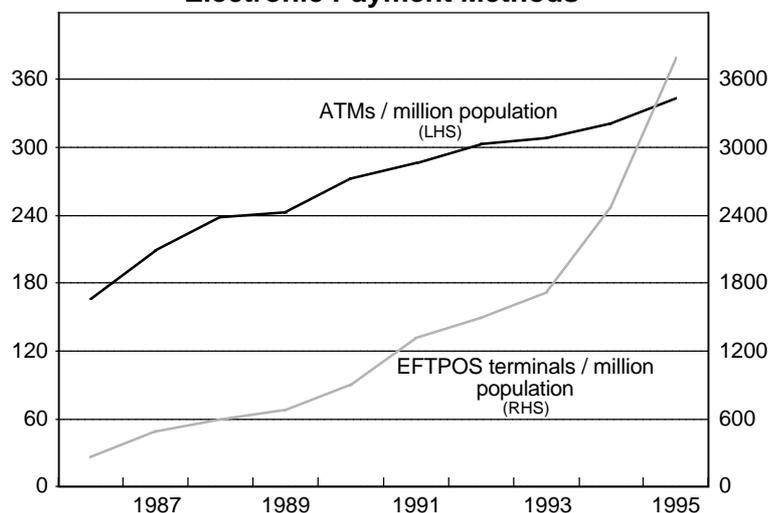
39. The banks have been responding to these pressures on a number of fronts. In the housing loan market, banks have substantially narrowed the gap between their standard mortgage rates and the bill rate, first by raising mortgage rates less quickly than the bill rate during 1994, and more recently by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

40. Banks have also sought to reduce costs through measures to increase operating efficiency, particularly through reductions in branch and staff numbers, and they have accelerated their move toward more efficient modes of product distribution - mobile banking, telephone, Internet and so on. Increased account fees can also be thought of primarily as a cost containment measure, since these fees are still pitched well below cost and appear to be designed mainly to discourage excessive use of transactions facilities. Particularly important has been the structuring of fees to encourage a shift to

electronic payment methods. There has been considerable expansion of the ATM network and the number of EFTPOS terminals in recent years (Figure A9), and these and other card-based payment systems now account for more than half the volume of remote payment transactions.<sup>16</sup> A by-product of this technology, however, and of banks' relatively low transaction charges, has been a greatly increased capacity for bank customers to make low-value transactions. To an important degree the result has been to stimulate demand for additional transactions services rather than significantly displacing demand for over-the-counter transactions at bank branches.<sup>17</sup>

41. Against the background of these developments, banks have also set their eyes increasingly on the burgeoning superannuation and funds management sector as a potential long-term offset to these pressures. Aggregate funds under management currently total over \$300 billion and, on latest estimates, banks already control around 25 per cent of that total. Growth of banks' activities in this area has been rapid over the past five years, and they have gained market share (Table A4).

**Figure A9**  
**Electronic Payment Methods**



Source: Australian Payments System Council Annual Reports.

<sup>16</sup> See Mackrell (1996).

<sup>17</sup> Prices Surveillance Authority report (1995, p. 179).

**Table A4: Assets of Funds Managers<sup>(a)</sup>**  
 Control by ultimate manager<sup>(b)</sup> (%)  
 As at June

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

(a) Excludes general insurers.

(b) Some estimation involved.

(c) Includes State Bank of NSW funds management operations.

Source: Reserve Bank of Australia.

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

### Financial markets

43. Growth of financial market activity has been a major feature of financial sector development since the 1970s. Important early developments were the freeing of certificates of deposit (CD) rates in 1973, subsequent growth of the CD and commercial bill markets, and the introduction of a bill futures market in 1979.<sup>18</sup> Additional impetus came from the introduction of market tenders for treasury notes (1979) and government bonds (1982), the float of the exchange rate and removal of exchange controls in 1983. New foreign bank entrants after 1985 further stimulated growth and innovation. Another important factor has been the growth of the funds management sector and the associated demand for risk-management and financial trading services. In a sense, the increasing liquidity of the main financial markets created a momentum of its own by making it increasingly possible to compare funds managers' performances over short periods and thereby stimulating competition among them as to comparative rates of return. This in turn generated demand for high-frequency financial trading and for new instruments of risk management. Financial market volatility was itself also a factor in stimulating trading activities and demand for risk management products.

44. In many of these areas, the Australian market is quite large in international terms. Australia has the ninth largest foreign exchange market and the sixth largest interest rate futures market in the world, ahead of a number of countries with much larger economies. The markets have also become increasingly sophisticated, though the products most heavily traded have been at the simpler end of the spectrum. Issuance and trading of corporate bonds remain relatively small, however, underlining

<sup>18</sup> This was the first interest-rate contract offered on an exchange outside the United States.

the point that the growth of financial markets has been primarily related to the risk management function of these markets, rather than to any shift to securitisation of financial flows to the business sector. Growth of the main markets is summarised in Table A5.

**Table A5: Average Daily Turnover in Financial Markets**  
\$ billion

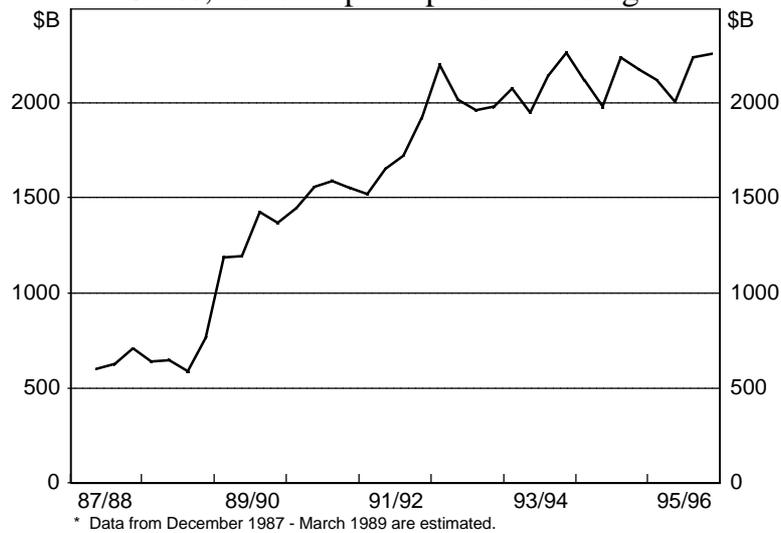
Year ended June	Commonwealth Treasury bonds		State Govt bonds		Bank Bills		Equities		Prom-issory notes	Foreign exchange		
	Physical	Futures	Physical	Futures	Physical	Futures	Physical	Futures	Swap	Spot	Forward	
1980	0.1	–	–	–	–	–	0.03	–	–	–	–	–
1985	0.3	–	–	0.3	0.5	0.07	0.07	–	0.8	2.0	0.3	
1990	1.2	1.7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

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

45. Much of the development and innovation in these markets occurred within the banking system. Similarly, trading activity in the new financial markets has been largely dominated by banks. For example almost 90 per cent of foreign exchange dealing and around 80 per cent of over-the-counter interest-rate derivatives dealing fell to these institutions.<sup>19</sup> Figure A10 shows the rapid expansion in banks' derivative activities, especially over the latter part of the 1980s. Financial market growth has thus provided an important field for banks to expand their activities during the post-deregulation period.

<sup>19</sup> For a review, see Reserve Bank of Australia (1996).

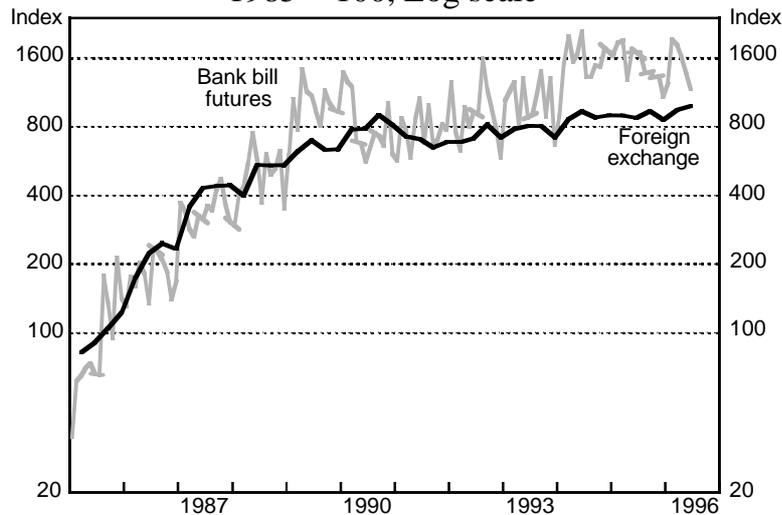
**Figure A10**  
**Banks' Derivatives Activity**  
 Gross, notional principal outstanding



Source: Reserve Bank of Australia internal.

46. Financial market trading is highly competitive and margins on established products generally thin. This has been increasingly the case in recent years. Good returns can be obtained if new products or new financial markets can be exploited but growth and profitability potential decline as the 'product cycle' matures. This phenomenon is clearly evident in the two largest financial markets (foreign exchange and bill futures) illustrated in Figure A11, although to some extent the recent slower growth may be related to more stable trading conditions and a consequent reduction in demand for risk management products. A number of major market players have reduced their financial trading activities or withdrawn from particular segments where profitability is lowest. Since 1994, many banks have greatly scaled down their proprietary trading (active position-taking).

**Figure A11**  
**Financial Market Turnover**  
 1985 = 100, Log scale



Source: Reserve Bank of Australia and Sydney Futures Exchange.

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

### Profits, productivity and efficiency

48. Although banking was highly regulated prior to the 1980s, with controls over most lending rates and various controls over the composition of bank asset portfolios, entry was also tightly restricted. While the former influence acted to limit profitability of the banking sector, the latter would tend to have enhanced it. Available data suggest that profitability of banking in Australia, in fact, grew steadily over the 1960s and 1970s, probably reaching a peak by the early 1980s (Figure A12). At that point, profitability in banking appeared to be well above the average of other Australian industrial sectors (Table A6).

**Figure A12**  
**Major Banks: Profitability**



Source: Banks' financial statements.

**Table A6: Earnings**  
 Per cent of shareholders' funds

	1980-82	1990-92	1994	1995
Banks and finance	14.6	3.5	14.4	16.0
All companies	10.8	4.9	7.2	8.0

Source: Australian Stock Exchange Financial and Profitability Study.

49. Following deregulation profitability stabilised, albeit at a relatively high level, in the first half of the 1980s as the combination of increased freedoms within the system interacted with greater potential for price competitiveness and, around the middle of the decade, increased competition from new entrants to the market. Over this period, Australian banks sought to expand their operations both domestically and internationally in the search for new sources of revenue and comparative advantage. For some, this expansion was halted and reversed in the early 1990s. There were tentative signs by the middle years of the 1980s, however, that profitability in banking may have begun to ease a little from the high points of earlier years.

50. Further interpretation of the effects on profitability of the structural changes in the financial sector was complicated greatly in the late 1980s and early 1990s by the effects of the first post-deregulation cycle in the banking sector (and the most significant cycle in the banking system since the 1930s). Profitability in the banking system fell sharply with the collapse of the asset boom which had fuelled much of the speculative lending activity of the late 1980s, and the recession of 1990/91. While the timing of losses varied, all the main groups of banks - major, State and others - registered overall losses at some point between 1990 and 1992. Foreign banks as a

group were the hardest hit with losses amounting to 30 per cent of their capital in 1990 alone. Between 1986 and 1990, aggregate foreign bank losses absorbed an amount equal to their original start-up capital. State banks lost heavily over the period (with concentrated effects in Victoria and South Australia) and some major banks suffered large losses in the early 1990s. Similar episodes of losses, in some cases more severe, were experienced in the non-bank sector (particularly amongst merchant banks), as well as in the banking systems of other countries over a comparable period.<sup>20</sup>

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

### **Funds management**

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

---

<sup>20</sup> Similar experiences occurred in a range of different countries over a comparable period (the United States, Japan, parts of Europe, Scandinavia). This suggests that the processes which led to the cycle in the banking sector in Australia were not unique and may have been derived from basically similar underlying causes (see Macfarlane (1989), Borio (1990) and BIS (1993)).

management sector,<sup>21</sup> considering first the historical sources of growth of these institutions and then competition between funds managers and intermediaries.

### **Life insurance and superannuation: sources of growth**

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

54. The first was a shift in the tax treatment of superannuation. Prior to 1983 superannuation was taxed at extremely low effective rates, with contributions fully deductible, earnings untaxed, and only a small tax on final benefits. Subsequent tax changes (the most important of which were made in 1983 and 1988) reduced this concessional treatment substantially by introducing or raising taxes at all three of these levels; the treatment remains concessional relative to other financial savings, but much less so than previously.

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

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

---

<sup>21</sup> Many of the products supplied by life offices are capital backed - and, in that sense, like deposits - but the ultimate return to investors/policyholders depends also on investment performance. Cash management trusts and other unit trusts are also, strictly speaking, funds managers.

timetable for supplementary contributions by employees of three per cent, with a matching contribution from the federal government, to bring the total contributions rate to 15 per cent by 2002.

57. The higher contributions rates resulting from these policies can clearly be expected to have a major impact on the industry, and indeed on the financial system as a whole, in future decades.<sup>22</sup> Already the proportion of employees covered has increased dramatically from around one-third of private-sector employees in the early 1980s to around 90 per cent at present. But this increase has yet to have a significant impact on the sector's overall asset growth, which is explained largely by other factors outlined below.

58. Trends in the superannuation sector's overall size and its sources of funds are summarised in Figures A13 and A14.<sup>23</sup> Broadly, the historical growth of the superannuation sector can be divided into three phases. The first, which ended in the early 1970s, was one of moderate and fairly steady growth. In the second phase, which comprised most of the 1970s, superannuation assets shrank relative to nominal GDP, largely reflecting poor earnings performance and high inflation. The third phase, from the early 1980s onward, has been one of rapid expansion in which total assets more than doubled as a ratio to GDP, although this may have slowed down in the latest few years. The data presented in Figure A14 divide the sources of superannuation asset growth between net new contributions and a residual representing earnings on existing assets and capital gains. Although net contributions have fluctuated significantly in some periods, it is apparent that most of the variation in overall growth performance is attributable to variation in the earnings and capital gain component, rather than in contributions.<sup>24</sup> The three growth phases outlined above correspond broadly to periods of moderate, negative, and high real rates of return on financial assets, as summarised in Table A7.

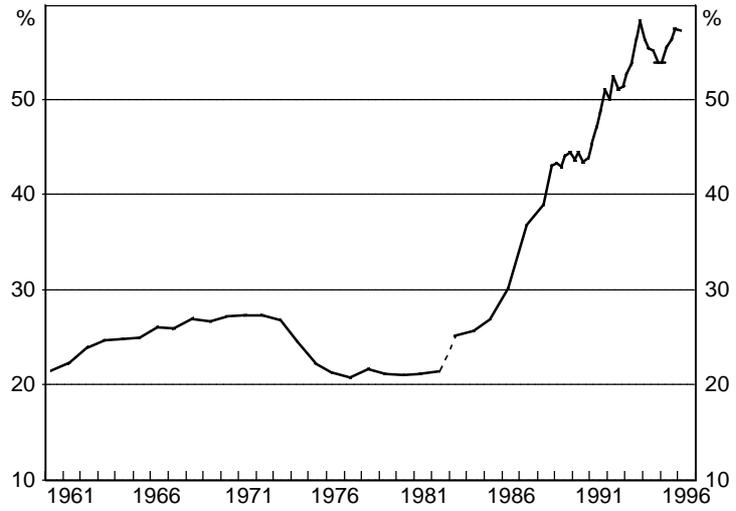
---

<sup>22</sup> Projections by Knox (1995) suggest that the superannuation sector could roughly double as a ratio to GDP, from its current level of 40 per cent, over the next 25 years, eventually reaching something like four times GDP when the system reaches its peak asset holdings.

<sup>23</sup> For statistical purposes this discussion treats life insurance and superannuation funds as a single aggregate because their activities are similar and much of the historical data does not distinguish between the two.

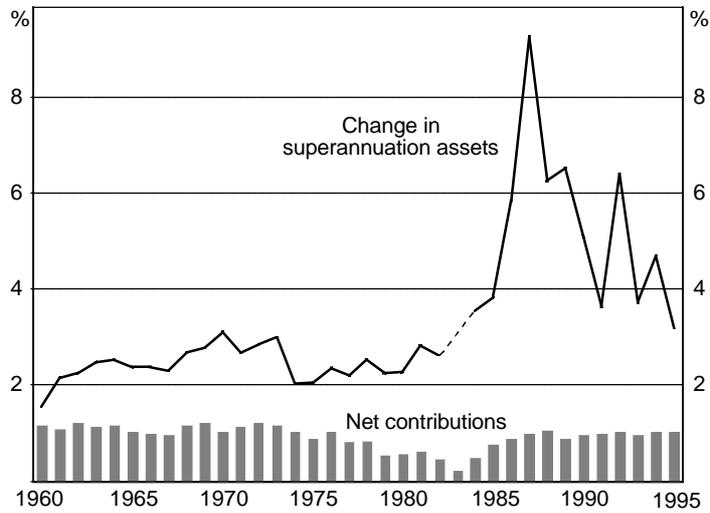
<sup>24</sup> Capital gains are likely, however, to be understated in the 1960s and 1970s, and overstated in the early 1980s, as a consequence of the widespread use of historical-cost valuations prior to the 1980s.

**Figure A13**  
**Assets of Life Offices and Superannuation Funds**  
 Per cent of GDP



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

**Figure A14**  
**Net Contribution and Growth in Superannuation Assets**  
 Per cent of GDP



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

**Table A7: Superannuation Fund Earnings Rates**

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

Source: ABS Cat. Nos: 5204.0 and 6401.0. Earnings defined as the difference between change in assets and net contributions.

59. Aggregate net contributions to superannuation funds do not yet show the upward trend expected to result from the compulsory plan.<sup>25</sup> A number of reasons can be given for this. First, there is a strong cyclical influence on net contributions, likely to have been important in the recession periods of the early 1980s and early 1990s. Secondly, many employers were already satisfying, at least partly, the requirements of the compulsory plan under pre-existing voluntary arrangements. This has allowed some scope for absorption of the compulsory scheme into existing arrangements, and has meant that the aggregate effect of the new compulsory schedule has been relatively small so far; but it can be expected to increase as the mandatory contributions rate increases significantly above levels currently prevailing. Thirdly, an important factor in the second half of the 1980s was the phenomenon of overfunding of existing defined-benefit schemes. High rates of return meant that surpluses were accumulated in many of these schemes, enabling the employers who sponsored them either to withdraw funds, or to finance their superannuation liabilities with reduced contributions.

60. To summarise these trends, it is apparent that almost all of the variation in the growth of superannuation funds' assets in recent decades is attributable to changes in the funds' earnings rates, combined with the fact that the long-term nature of superannuation accounts tends to mean that earnings are locked in and automatically reinvested. Although a sustained lift in net superannuation contributions is projected for the future under current policies, it has not yet occurred. This observation is relevant to debate as to the potential for compulsory superannuation to divert household funds that would otherwise have gone to financial intermediaries.<sup>26</sup> On the basis of the trends outlined above, claims that this has already occurred to a significant degree would not be substantiated. Nonetheless, competition for new savings between banks and superannuation funds is likely to be an important issue in the future.

<sup>25</sup> A point of caution is that the available data in this area have in the past been subject to substantial revision.

<sup>26</sup> This issue was discussed by the Martin Committee Report, House of Representatives (1991).

### Competition with credit institutions

61. This raises the more general question of whether funds managers and credit institutions are coming more directly into competition, through overlap in their functions or increasing similarity of product lines.

62. A good general case can be made that the two sets of institutions have operated in fairly distinct markets. On the assets side of the respective balance sheets, the banks' core business of direct lending can be contrasted with the life and superannuation sector's main investments in debt securities, equities and property. However, one area of overlap historically was that life offices were significant mortgage lenders for a period of time up until around the early 1970s. Their involvement in mortgage business reflected a number of conditions prevailing at the time, including the banks' inability to meet fully the underlying demand, and the relatively early stage of development of alternative mortgage lenders. The life offices were also able to link their loans with the provision of whole-of-life policies which benefited from generous tax treatment. Life-office mortgages were generally on fixed-interest terms, which meant that their profitability declined substantially as the general level of interest rates rose in the 1960s and 1970s. Total direct lending by life offices has declined steadily in relation to their balance sheet, dropping from around 40 per cent of assets in the late 1950s to around 7 per cent at present. Similarly, superannuation funds at present have only a small involvement in direct lending (Table A8).

**Table A8: Assets of Superannuation Funds**  
December 1995

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

Source: ABS Cat. No: 5232.0.

63. In terms of liabilities, the basic differences in financial structures of credit institutions and funds managers have already been noted. Superannuation fund liabilities are the long-term savings of their members, whereas bank liabilities are a combination of transaction balances, short-term savings and marketable debt

instruments. The banking system in Australia has not traditionally been an important vehicle for longer-term saving,<sup>27</sup> so the competition with the long-term savings institutions for household sector funds has not been particularly strong. This short-term/long-term distinction reinforces the conceptual distinction between capital-guaranteed deposits with intermediaries, and funds under management which are subject to investment risk. On the basis of these two sets of distinctions, intermediaries and funds managers have historically been competing for household funds in quite different areas of the market.

64. In a number of respects, this neat division is becoming less clear cut. Specialist funds management institutions, such as unit trusts, are able to offer a range of short-term investment services, some of which closely resemble deposits, and these institutions have grown substantially in recent years. Increasingly, banks are offering the same services, but not on the balance sheet of the bank itself. Also important is that the superannuation sector has become a major holder of essentially mobile or short-term savings of retirees. This trend has been boosted by increasing rates of early retirement, the wide availability of lump-sum retirement benefits and the advent of rollover funds, which retain the status of tax-favoured superannuation vehicles but offer some of the characteristics of shorter-term savings.<sup>28</sup> This has provided a category of relatively high-wealth individuals with a highly attractive alternative to standard deposits for holding what are fairly liquid balances. Another important consequence of these developments is that the funds management sector has itself become an important provider of funds to credit institutions. For example, around \$40 billion or 15 per cent of superannuation assets are currently held as bank securities or deposits with financial institutions, a significant proportion of these institutions' liability base. Growth of these "wholesale" sources of funds to the banks represents a potential source of upward pressure on their average cost of funds.

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

---

<sup>27</sup> This view is documented by Edey, Foster and Macfarlane (1991).

<sup>28</sup> Following rule changes in 1992, rollover-fund operations can now be carried out within ordinary superannuation funds.

## Financial conglomerates

66. As noted above, one of the responses of banks to the growing demand for superannuation and other funds management products has been to purchase or establish such operations in subsidiary companies. At the same time, some insurance companies have established intermediary subsidiaries or formed associations with banks to take advantage of their extensive distribution networks. Consequently, financial conglomerate structures have become more common and now dominate the financial system, with the top 25 holding 70 per cent of aggregate financial assets, and conglomerates in total accounting for around 80 per cent.

67. Financial conglomerates in Australia are not extensively diversified in the sense that most are dominated by either a bank or an insurance company. Very few have significant involvement in non-financial activities. Of the 25 largest conglomerates, 9 include a bank which accounts for more than 75 per cent of the group's total Australian assets, 3 include a life office with at least 75 per cent of group assets and 4 have a funds management arm of similar size. Table A9 shows that conglomerates headed by banks account for almost 60 per cent of financial system assets, a little higher than in 1980.

**Table A9: Financial System Assets**  
Per cent of total

	1980	1996
Banking groups	56	59
Insurance groups	18	23 <sup>(a)</sup>
Other	29	21

(a) Includes State Bank of NSW and its subsidiaries, which are ultimately owned by Colonial Mutual.

Source: Reserve Bank of Australia

68. The growth of conglomerates and the common practice of selling products of the component companies from common distribution points has contributed to perceptions of blurring in distinctions between banks, insurance companies and other financial institutions.

## APPENDIX B: OVERSEAS SUPERVISORY ARRANGEMENTS

69. This Appendix summarises the organisation of prudential supervision in a range of OECD and other countries.<sup>29</sup> It concentrates on three main issues:

- which countries use the “mega-regulator” model;
- the role of central banks in prudential supervision; and
- reasons for any recent changes in supervisory arrangements.

70. Among the countries studied, the supervisory structures are organised in a variety of ways and the different national systems do not always fit conveniently into neat categories.<sup>30</sup> Nonetheless, some broad generalisations can be made:

- although there are a number of countries that combine *some* supervisory jurisdictions, only a small minority combine responsibility for all the main institutional groupings in a single prudential regulator;
- most central banks are heavily involved in bank supervision, either as the sole supervisor or by sharing responsibilities with another agency. Where central banks do not have the primary formal responsibility for bank supervision they still, in most cases, devote significant resources to monitoring the financial system and maintain an interest in system stability;
- related to this, the central bank almost always has a key role in the payments system, running settlement accounts for banks and providing some form of lender-of-last-resort facility;
- while we are not aware of instances in recent history of the bank supervision function being taken away from a central bank, there are several examples of bank supervisory responsibilities being moved into the central bank, or to a subsidiary of the central bank.

### The “mega-regulator” approach

71. The exact definition of the “mega-regulator” concept is somewhat arbitrary. On the broadest possible definition, such a regulator would have responsibility for prudential supervision of all financial institutions as well as being responsible for product regulation and competition policy in the financial sector. We are aware of no example of a national system that gives such wide responsibilities to a single regulator.

---

<sup>29</sup> Information in this Appendix has been gathered from a variety of sources including direct from the supervisors.

<sup>30</sup> Regulatory structure charts for most of the countries discussed in this Appendix are available from the Reserve Bank.

Sweden is perhaps the closest approximation to this extreme, combining wide supervisory responsibilities and product regulation in the one agency. In virtually all countries, however, the three broad regulatory areas of prudential supervision, product regulation and competition policy are separated, with competition policy in the financial sector generally the responsibility of the economy-wide competition authority.

72. A more practical approach to the “mega-regulator” concept is to focus on the allocation of responsibilities *within* the field of prudential supervision. A number of countries have agencies which are responsible for supervision of more than one of the main groups of financial institutions. The allocation of responsibilities in these countries is summarised in Table A10. The table defines a “mega-regulator” in the prudential sphere as one that combines responsibility for the three main industry groupings of banks (or credit institutions generally), insurance, and funds management operations. On this definition there are four countries with mega-regulators outside the central bank: Denmark, Norway, Sweden and Japan. Of these, the Japanese regulator is located in the Ministry of Finance while the others are stand-alone regulators. In addition, Singapore has a “mega-regulator” which is part of the central bank.

73. The Scandinavian “mega-regulators” were established in the late 1980s and early 1990s through the merger mainly of insurance and bank supervisors. These mergers took place in 1986 in Norway, 1988 in Denmark and 1991 in Sweden. The Danish regulator’s coverage was further expanded in 1990 to include mortgage credit institutions. A number of reasons were given for merging the supervisory authorities in these countries. These included the emergence of financial conglomerates and the growth of competition across traditional institutional boundaries. There was also a view that staff resources could be used more efficiently by gathering the supervisory expertise together into one organisation. In Norway, for example, there had reportedly been difficulties in keeping up with market developments and in attracting staff, particularly for the insurance regulator, and it was felt that a combined agency would generate improved performance in this regard. Notwithstanding these expectations, it appears that the organisation of supervisory resources within the Scandinavian “mega-regulators” still reflects the fundamental differences between banks and insurance companies. The regulators have made some moves towards supervision of bank/insurance conglomerates but continue to require specialist staff groups focussing on the different component entities.

**Table A10: Range of Supervisory Functions in Countries  
with Broadly-based Supervisors**

Country	Banks/credit institutions	Insurance companies, pension funds	Securities companies	Other
<u>“Mega-regulator” outside the central bank</u>				
Denmark	Credit institutions	Insurance, pensions	Securities companies	Fund management
Japan	Banks	Insurance	Securities companies	Fund management
Norway	Credit institutions	Insurance, pensions	Stockbrokers	Fund management
Sweden	Credit institutions	Insurance	Securities companies	Fund management
<u>“Mega-regulator” within the central bank</u>				
Singapore	Banks	Insurance	Securities dealers	Fund management
<u>Other countries with broadly-based supervisors</u>				
Canada	Banks	Insurance, pensions		
Finland (part of central bank)	Credit institutions		Securities brokers	Fund management
Germany	Credit institutions			Fund management
Malaysia (central bank)	Credit institutions	Insurance		
Netherlands (central bank)	Credit institutions			Fund management
Switzerland	Banks		Securities dealers (from 1997)	Fund management

74. A number of other countries have financial supervisors with broadly based responsibilities but whose scope falls short of the “mega-regulator” definition adopted in Table A10. Finland has a combined supervisor for credit institutions and securities markets (the Financial Supervision Authority) but a separate supervisor of insurance companies. As discussed below, the Financial Supervision Authority was brought under the administration of the central bank in 1993. Canada has a broadly-based supervisor, the Office of the Superintendent of Financial Institutions, responsible for federally-incorporated institutions. It emerged in the late 1980s out of a perception that the regulatory system needed to be rebuilt following some financial failures. Its creation also reflected a general view that financial developments were moving ahead of existing regulatory arrangements. The separate supervisory agencies covering banks (which was not the central bank), insurance companies and pension funds were merged, but the new authority does not have general responsibility for the funds-management industry.

75. In Germany, the Netherlands and Switzerland the bank supervisor has responsibilities for funds managers and collective investments but not for insurance, which has a separate supervisor in each country. The grouping of banks and funds managers reflects the universal nature of banks in those countries, so that bank supervisors' regulation of collective investments was a natural progression from their involvement in banks' securities activities.

76. A proposal to merge prudential supervisory authorities in a stand-alone regulator was recently considered, and rejected, in South Africa. The issue was investigated in 1992 by the Jacobs Committee and subsequently by the Melamet Committee, which recommended that a single prudential supervisor be established. After public comment and close examination of the proposal, however, the Government decided to continue with South Africa's existing regulatory structure where the central bank supervises banks, and the Financial Services Board supervises all other financial institutions (there is a separate Registrar of Companies). As discussed further below and in Appendix C, a move in the opposite direction was recommended but not implemented in Norway. In 1992, a parliamentary inquiry recommended bringing the existing “mega-regulator” under the central bank, but the proposal was not adopted by the full parliament.

### **Involvement of central banks in supervision**

77. The preceding section has outlined a limited number of cases where the main prudential regulator of banks is a “mega-regulator” outside the central bank, but this is not the dominant pattern. In the majority of countries, it is the central bank that has primary responsibility for supervision of the banking system, sometimes in conjunction with responsibility for other types of financial institutions as well. The overall pattern is illustrated in Table A11: of the 27 countries listed, 17 place responsibility for bank supervision primarily with the central bank, and in another four countries the central bank shares the responsibility with other agencies. In only six cases does the central bank have little or no involvement in bank supervision.

**Table A11: Degree of Central Bank Involvement in Bank Supervision**

Primary Responsibility	Shared Responsibility	Little or No Involvement
Australia	Germany	Austria
Finland	Japan	Belgium
France	Switzerland	Canada
Greece	US	Denmark
Hong Kong		Norway
Iceland		Sweden
Ireland		
Italy		
Luxembourg		
Malaysia		
Netherlands		
New Zealand		
Portugal		
Singapore		
South Africa		
Spain		
UK		

78. There are four countries listed in Table A11 where the central bank shares close monitoring of the banking system with another agency (or agencies): sometimes, as in Germany and Japan, this occurs despite formal responsibility resting with another body. The Federal Reserve System in the US is the primary supervisor for bank holding companies and state-chartered member commercial banks. Other banks, including some owned by bank holding companies, are supervised primarily by the Office of the Comptroller of Currency, the Federal Deposit Insurance Corporation, and by state supervisors. Each of these supervisory agencies has a role in supervising the US operations of foreign banking organisations. Because of the often overlapping roles of the various supervisory agencies, there is a close degree of co-operation among them.

79. In Germany, the Bundesbank is closely involved in the supervision of banks. It carries out on-site inspections and reviews and follows up on reports by external auditors before they are passed on to the Federal Banking Supervisory Office (FBSO). Despite not being the primary supervisor, the Bundesbank employs more supervisory staff than the FBSO. Under German legislation, the FBSO and the Bundesbank “...shall communicate to each other any observation and findings which may be of significance for the performance of their functions”. The FBSO can be required to consult with the Bundesbank before changing policy directives (eg Principles Concerning Capital or Liquidity). Nonetheless, the FBSO has prime carriage of legal responsibilities connected with supervision; these include granting and withdrawing

banking licences, ordering special audits or issuing special instructions to banks' management.

80. The Ministry of Finance in Japan supervises banks, insurance companies and securities companies and markets. Bank supervision is conducted in conjunction with the Bank of Japan (BOJ), whose supervisory role lies mainly in bank examinations, and is based on contractual agreements struck between the BOJ and financial institutions at the time they open current accounts with the BOJ. The BOJ uses off-site and on-site techniques in supervising banks. Information gleaned from on-site visits is passed onto the Credit Department. The BOJ is also involved in decisions regarding both privately-managed payments systems and those in which final settlement is made through the BOJ accounts.

81. In the Scandinavian countries where the central bank is described as having little or no involvement in bank supervision (Denmark, Norway and Sweden), the supervisory authority is a "mega-regulator". The central bank in each country is nonetheless the lender of last resort, there is generally some degree of formal or informal co-operation with the supervisory authority, and the central bank maintains an interest in financial system stability. The Swedish Riksbank for example has recently noted that it "cannot disregard the stability of particular institutions because the failure of a sizeable institution may constitute a systemic risk".<sup>31</sup>

82. The Bank of Canada appears to have the least involvement in bank supervision of any central bank studied. However, the Bank of Canada has acted as lender of last resort to banks and has recently acquired statutory responsibility for payments system policy. Appendix C discusses problems that have resulted from the Bank of Canada effectively outsourcing credit assessment procedures for its lender-of-last-resort role. Partly as a consequence of those problems, the Financial Institution Supervisory Committee was formed and the Bank of Canada has taken a somewhat closer interest in financial system issues in recent years.

### **Recent moves to shift supervisory responsibility involving the central bank**

83. The involvement of central banks in bank supervision has been extensively debated in a number of countries in recent years, both at the official level and among academics. These debates are reviewed in detail in Appendix C. There have been at least four countries in recent history where a shift in the institutional responsibility for bank supervision has occurred: Spain (1962), Luxembourg (1983), Finland (1993) and Hong Kong (1993). In each case the supervisory responsibility was moved from a separate authority into the central bank, or into a subsidiary body of the central bank.

84. In Finland the banking crisis of the early 1990s prompted a review of regulatory arrangements in 1992 (see Aranko (1994) and Tuya and Zamalloa (1994)). Prior to that review, bank supervision was the responsibility of a separate Banking

---

<sup>31</sup> Sveriges Riksbank, Quarterly Review, No 1, 1996, p. 72.

Supervision Office. The old regulatory arrangements were criticised on several counts, including an excessive focus on judicial compliance rather than risk evaluation, underfunding of the banking supervisor, and inadequate provision of information to the central bank. The working party responsible for the review recommended that the Banking Supervision Office be incorporated into the administration of the central bank. This recommendation was accepted by the parliament. The working party felt that the two organisations had parallel objectives, that the central bank was better resourced, and that there were considerable gains in efficiency that could be realised by combining the two institutions. To prevent conflicts of interest, the decision making processes of the Bank of Finland and the supervision area are separate; each has its own board. The Board of the Financial Supervision Authority (which is chaired by the representative of the Bank of Finland) also has representatives from the Ministry of Finance and the Ministry of Social Affairs and Health (which supervises insurance companies and pension funds).

85. Another recent example of bank supervision being brought into the central bank comes from Hong Kong. In April 1993, the Hong Kong Monetary Authority was formed by merging the office of the Exchange Fund (monetary policy) with the office of the Commissioner of Banking (bank supervision). The merger aimed to ensure that the central banking functions of maintaining monetary and banking stability were properly co-ordinated and conducted, particularly in the lead up to 1997 and beyond. Primary influences on the changes were a series of banking crises in 1982-86 and the BCCI collapse in 1991, which illustrated the importance of the central bank having a close knowledge of the banking system if it was to respond quickly to requests for emergency liquidity support.

86. There are also two recent examples of a shift in supervisory responsibilities being recommended by an official inquiry but not implemented. In Norway, a parliamentary inquiry recommended moving supervisory responsibilities into the central bank in 1992. As in Finland, the proposal reflected serious dissatisfaction with the performance of the supervisory regime in the recent banking crisis; however, unlike in Finland, the proposal was not adopted by the parliament. In South Africa two recent government inquiries recommended moving bank supervisory responsibilities to a “mega-regulator” outside the Reserve Bank, but again the proposal was not implemented. These debates, along with those in other countries where the central bank’s supervisory responsibilities have been reviewed but not fundamentally changed, are discussed in Appendix C.

## **APPENDIX C: SHOULD BANK SUPERVISION BE CARRIED OUT BY THE CENTRAL BANK OR BY A SEPARATE AUTHORITY?**

### **Introduction**

87. This appendix reviews the literature on the institutional separation of monetary policy and bank supervision and discusses the background to some recent proposals for institutional change. In summary, it finds three main arguments for bank supervision to be combined with monetary policy in the central bank and three offsetting arguments which advocate bank supervision being placed in a separate institution.

88. The three main arguments for bank supervision to be combined with monetary policy in the central bank are:

- a central bank has responsibility for financial system stability, and will have to play a central role in the resolution of a financial crisis due to its capacity to quickly provide system liquidity or lender-of-last-resort loans. It should, therefore, always be in a position to assess the health of the banking system, rather than having to rely on a report from another body;
- a thorough knowledge of the health of the banking system contributes to better monetary policy; and
- a combined authority is likely to give appropriate weight to economic efficiency in framing regulation.

89. The three main arguments for a separation of bank supervision and monetary policy are:

- ultimately it is taxpayers' money that is put at risk when banks are supported, so it should be taxpayers (through their government) who make decisions about bank rescues;
- there is a potential conflict between the goals of monetary policy and supervision; and
- the reputation of the bank supervisor would be damaged by a bank failure. If the supervisor is in the central bank, the loss of reputation would also affect the central bank's credibility in its monetary policy responsibilities.

90. As in so many such discussions in economics, there is no unanimity about which set of arguments are more powerful. Similarly, there is no single institutional model; some central banks have direct responsibility for supervision of the banking system, while others do not. A recent survey by the International Monetary Fund found that central banks are the primary bank supervisor in over 60 per cent of member countries (Tuya and Zamalloa (1994)). In many of the countries in which the central

bank is not the primary supervisor, it devotes considerable resources to bank supervision. Among G7 countries, the central banks are the principal or joint supervisor in six countries; Canada is the exception. A fuller account of arrangements in the main industrialised countries is given in Appendix B. The remainder of this Appendix provides a brief overview of the evolution of central banks' supervisory responsibilities and reviews the debate on whether supervision should be conducted by the central bank.

### **Some history**

91. Central banks have long had responsibility for both monetary policy and the stability of the financial system, although the latter historically has played a more important role in their formation. The original European central banks had two initial roles: providing financial concessions to the government and facilitating the development of the payments system (by controlling note issue and the country's metallic reserves) (see Goodhart (1988)). Their ability to provide cash eventually saw them take on the role of provider of liquidity to the banking system. From this responsibility evolved a broader responsibility for the stability of the financial system.

92. For countries establishing central banks in the twentieth century, the maintenance of financial stability has often been the prime consideration from the outset. Indeed, in the US, concern about the stability of the banking system following the banking problems of 1907 was the principal reason for the founding of the Federal Reserve. The importance of supervision in maintaining system stability is reflected in the preamble to the Federal Reserve Act (1913) which calls on the Federal Reserve to establish more effective supervision of banking (see Volcker (1984)).

93. In Australia, the preservation of financial stability was also a factor in the origins of central banking, although it played a less explicit role than in the US. The proximate reason for providing the Commonwealth Bank with central-bank-type responsibilities (in 1924) was to gain greater control over note issue. This move took place in an environment in which the private banks were seen by many people as a major source of financial and economic instability, particularly after the banking problems in the 1890s. The establishment of central-bank functions in the Commonwealth Bank was seen as a tentative step towards creating a more stable financial system.

94. The Banking Commission of 1937 explicitly acknowledged that the central bank had a role in supervising, and maintaining the integrity of, the financial system. The Commission argued that the central bank should play an active role in the supervision of the system and should take control of any bank which was unable to meet its immediate obligations. In the following years, banks became subject to greater regulatory control, and by the time the Banking Act (1945) was drafted, depositor protection was seen as a key responsibility of the Commonwealth Bank. This responsibility was transferred to the Reserve Bank with the 1959 Banking Act (see Dwyer (1985) and Schedvin (1992)).

95. Prior to widespread deregulation of financial systems, prudential requirements were often a by-product of the regulations designed for macro-economic management. Controls over the structure of banks' balance sheets and their interest rates were designed to limit risk taking by banks and to serve a macro-economic role. As the financial system was deregulated, the mechanisms of monetary control became more clearly separated from those of prudential supervision. Deregulation also saw the focus of supervision move towards monitoring and understanding credit and market risk, rather than imposing restrictions on the activities that financial institutions can undertake.

### **Public inquiries and academic discussion**

96. Recent years have seen increased attention given to the question of whether both monetary policy and bank supervision should be in the central bank, or whether bank supervision should be in a separate institution. Much of the debate has been stimulated by proposals for regulatory reform following problems in the banking industry in a number of countries. As a result, the main contributions have been from official sources - central banks, parliamentary committees and government departments and agencies. Academics have also contributed to the debate, but many have been more interested in the wider issue of whether regulation of the financial system is needed in the first place.

### **Official positions**

97. The most extensive debate has occurred in the US. The issue received considerable attention in the early and mid 1980s as a result of the Task Group on Regulation of Financial Services Report (Bush (1984)). This group argued that removing the Federal Reserve from involvement in bank supervision might "undercut the long-term stability of the financial system" (p. 48). Seven years later (1991), the US Treasury argued for a raft of reforms which included a proposal for two regulatory agencies, with the Federal Reserve being responsible only for the state-chartered banks. More recently, the Clinton Administration proposed to merge the four bank regulators into a single banking regulator outside the control of the Federal Reserve system. This latest proposal was largely motivated by the desire to reduce supervision and to reduce the possibility of "regulatory shopping".

98. On each occasion the Federal Reserve argued strongly in favour of maintaining its supervisory role (see for example, Volcker (1984), Corrigan (1991a), Federal Reserve Board (1994), Greenspan (1991, 1994) and Syron (1994)). The line of argument has been that the Federal Reserve's system-stability obligations require it to have practical knowledge of the banking system and the authority to influence banking organisations' actions. The Federal Reserve has also argued that the information gained as part of its supervisory responsibilities is important in the formulation of monetary policy, and that a stand-alone supervisor, without macroeconomic responsibilities, would have a long-term bias against risk taking, which would inhibit economic growth (see later).

99. The Bank of England's role in supervision has also been subject to considerable debate, again largely in response to the failure of financial institutions. In 1984, as a result of the collapse of Johnson Matthey Bankers, the government commissioned a report into supervision arrangements. The Committee and a subsequent government White Paper recommended that bank supervision remain with the Bank of England, and that this role be strengthened by the creation of the Board of Banking Supervision within the Bank (see UK Treasury (1986)). The Bingham (1992) Inquiry into the collapse of BCCI re-affirmed this arrangement.

100. In 1993 another inquiry was conducted, this time by the Treasury and Civil Service Committee of the House of Commons (this inquiry also considered the role of the Bank of England in monetary policy). It concluded that "there is no overwhelming case for separating out the responsibility for prudential supervision to a separate body" (p. xxviii). The Committee recognised that the main argument against a separate regulator was that the Bank of England needed to undertake some oversight of the banking system in its capacity as the lender of last resort. It also concluded that conflicts between monetary policy and supervision are rare, and that when they do arise, they do so regardless of *who* is responsible for supervision.

101. In the wake of the collapse of Barings there were renewed calls for the Bank of England to lose its supervisory function. Again, the Bank of England argued against such a move with Governor George saying that he thought there were strong links between monetary policy and supervision, and that there is a synergy between "prophylactic supervision" and the lender-of-last-resort function of central banks (Australian Financial Review (1996)).

102. In Norway, a parliamentary working party was established in 1992 to review regulatory arrangements (see Norges Bank (1992) and Tuya and Zamalloa (1994)). The working party recommended moving supervision into the central bank by incorporating the Banking, Insurance and Securities Commission into it. While the proposal was supported by the central bank, it was rejected by the parliament, on the grounds that there was a conflict of interest between supervision and monetary policy, and that it would centralise too much power within the central bank. The Banking, Insurance and Securities Commission therefore remains separate.

103. There have been two recent examples - Finland and Hong Kong - of responsibility for bank supervision being shifted into the central bank from an outside authority, both in 1993. The background to these cases is discussed in detail in Appendix B. In both cases, the decision reflected dissatisfaction with the performance of the previous supervisory arrangements and a view that there were important synergies between bank supervision and monetary policy responsibilities.

104. While most central banks have argued that they should be responsible for bank supervision, not all have done so. The Bundesbank is the most frequently quoted example. Tietmeyer (1991) has argued that "a successful monetary policy does not require that the central bank itself be given full control over the banking system and thus for banking supervision; indeed, this could even reduce the effectiveness of

monetary policy. Experience also shows that central banks that are not charged with such additional responsibilities enjoy a higher degree of *de facto* independence” (p. 185). This public statement is weakened by the fact that the Bundesbank has more staff involved in monitoring the condition of the banking industry (including bank inspections) than are employed in the main supervisory authority.

105. The Bank of Canada stands out because it has virtually no role in bank supervision. In 1986, the Inquiry into the Collapse of the CCB and Northland Bank (the Estey Inquiry) examined the structure of bank supervision in Canada. In submissions to the Inquiry, the Bank of Canada argued that there was an inherent conflict between the conduct of monetary policy and financial supervision. The Inquiry's Report also noted that there was no support in any of the submissions for the Bank of Canada to have control of supervision but did point out a number of problems arising with the Canadian arrangement (see later for more discussion).<sup>32</sup>

106. The Swedish central bank also has little role in bank supervision. A 1989 committee of inquiry examined the question of whether the stand-alone bank supervisor (as it was at that time) should be brought under the central bank, and recommended against such a move. The main reason for the recommendation was a view that it could undermine the perceived independence of the central bank, because bank supervisory rulings would be subject to administrative review by other parts of the government.

107. The involvement of the central bank in supervision has also been extensively debated in South Africa. In the early 1990s, the South African Reserve Bank (which only began supervising banks in 1987) was criticised when a number of financial institutions failed. Subsequently, the Bank became a defendant in litigation when investors who had suffered losses claimed financial assistance from the Bank. While the Reserve Bank had no formal responsibility for deposit protection, it felt that there was a misguided perception that it had a "duty of care" to protect depositors. It argued that this perception could undermine its credibility as a monetary authority.

108. In response, the government commissioned two inquiries. The Jacobs Commission on Equal Competition for Funds recommended that the government establish a Financial Regulation Policy Board and that the Registrar of Deposit-Taking Institutions (the Reserve Bank's supervision department) report to this Board, rather than to the Reserve Bank. The subsequent Melamet Inquiry into Financial Supervision argued that the government should establish a *single* regulatory body for the entire financial system (the Financial and Investment Services Commission). While both inquiries envisaged the Reserve Bank losing its supervisory responsibilities, this did not occur. The Registrar of Deposit-Taking Institutions remains within the Reserve Bank, although the government did establish a Policy Board to help formulate and co-ordinate regulatory policy (see South African Reserve Bank (1992 and 1993)).

---

<sup>32</sup> Crow (1993) provides a brief summary of the Bank of Canada's approach to financial stability.

## Academic discussion

109. Principal contributions by academic economists have come from Goodhart and Schoenmaker (1993, 1995), Mishkin (1992 and 1994) and Goodfriend and King (1988). Goodhart and Schoenmaker conclude that there is no overwhelming case in either direction, with the strongest argument in favour of combined functions resting on the role that the central bank plays in preventing/resolving payment and financial system problems. On the other hand, they argue that the central issue in deciding who should be responsible for supervision should be who pays the bill in case of a bank failure. They conclude that the government's role as the ultimate source of funds swings the balance towards separate institutions, although they acknowledge that the institutions would need to work closely together. Against this, Schoenmaker (1995) has recently argued that since the European Central Bank will be the only body that could alleviate a general liquidity crisis in the European monetary system, it will need to be closely involved in bank supervision and need to develop a capacity to understand and monitor the potential for systemic risk.

110. Mishkin (1992) comes down strongly in favour of the central bank having supervisory responsibilities. There are three planks to his argument. First, he argues that financial crises are defined by periods in which asymmetric information becomes so intense that financial institutions are not able to perform their intermediation function adequately, with adverse implications for the real economy. Second, in such periods, the central bank has a legitimate and important responsibility to provide directed liquidity to the system through lender-of-last-resort loans. Third, if such loans are to be made, the central bank needs to have regulatory oversight of potential borrowers to reduce moral hazard problems and to ensure that borrowers are financially sound.

111. In general, economists who see an important role for the lender-of-last-resort facility also see the central bank as undertaking bank supervision (see, for example, Brimmer (1989) and Calomiris (1993)). In contrast, those who believe that there is no compelling rationale for the public provision of lender-of-last-resort loans, argue that a central bank should not have supervisory responsibilities. Perhaps the most frequently cited paper is Goodfriend and King (1988). They argue that the existence of lender-of-last-resort loans leads to an increase in risk taking, and that the system is better served if open market operations are used to inject liquidity into the system in a (potential) crisis.<sup>33</sup> They conclude that because the central bank should not make lender-of-last-resort loans, it does not need to undertake supervision. By inference, a similar conclusion would probably be drawn by those who have recently argued for the abolition of the discount window in the US (for example, see Kaufman (1991) and Schwartz (1992)). These authors argue either that the lender-of-last-resort function should be performed by the private sector, or alternatively, replaced by central bank open market operations. The usual argument against the lender-of-last-resort facility is

---

<sup>33</sup> See Corrigan (1991b) and Summers (1991) for why open market operations are not sufficient to deal with a crisis.

that when deciding to make loans the central bank will err by supporting insolvent institutions. This will blunt market discipline and produce riskier less-efficient banks (see Bordo (1990)).

### **The arguments in detail**

112. The various issues and arguments can be classified under three broad, but related, headings:<sup>34</sup>

- the role that the central bank plays in preserving system stability;
- the synergies and conflicts between supervision and monetary policy;
- organisational and cultural issues.

### ***The role of the central bank in preserving system stability***

113. The strongest argument in favour of the central bank having supervisory responsibilities is that it is uniquely positioned to prevent and resolve financial system crises. By virtue of its macro-economic responsibilities, its daily involvement in financial markets and its central position in the payments system, the central bank has the ability to react quickly to financial disturbances. This makes it the best-placed institution to protect the real economy from financial system shocks.

### ***A financial crisis?***

114. Defining a financial crisis is difficult but a central feature must be that a crisis has the potential to cause a contraction in economic activity (see Corrigan (1991b) and Mishkin (1994)). Mishkin argues that the definition needs to incorporate some reference to the process of financial intermediation. He argues that: “a financial crisis is a disruption to financial markets in which adverse selection and moral hazard problems become much worse, so that financial markets are unable to efficiently channel funds to those who have the most productive investment opportunities” (p. 9).

115. The financial system can be subject to disturbances from many sources: the collapse of a bank through poor commercial loans, a disturbance in securities markets, problems in the payments system and rumours concerning the solvency of a bank. Whether or not these disturbances constitute a financial crisis depends on their potential to undermine the process of financial intermediation. In some cases, a bank failure will have no implications for the rest of the financial system. In other cases, confidence effects and the direct links through the payments system can have important implications for other institutions. By increasing uncertainty as to the creditworthiness of counterparties, financial disturbances have the potential to

---

<sup>34</sup> Goodhart and Schoenmaker (1995), Tuya and Zamalloa (1994) and Federal Reserve Bank (1994) provide the most detailed discussion of the arguments. See also Shull (1993), Swinburne and Castello-Branco (1991) and de Swaan (1994).

undermine the confidence that institutions have in their credit assessment procedures and thereby damage the process of financial intermediation, perhaps with severe macro-economic consequences.

116. It is usual to think of a financial crisis as resulting from a bank failure (usually due to it making poor commercial loans). This is the sort of situation that is discussed in most of the literature dealing with crisis management (see later). However, it is not the only disturbance which could threaten to create a financial crisis. Increasingly, the source of the disturbance is something that occurs in a financial market, such as the ones listed below (see, for example, Brimmer (1989), Calomiris (1993), Corrigan (1991b), Mishkin (1994) and Federal Reserve Board (1994)):

- (i) *The failure of Penn Central Railroad (1970)*. The failure of Penn Central to meet its commercial paper obligations caused the commercial paper market to seize up. As a result, firms with maturing obligations could not issue new notes and therefore sought to borrow from banks. In these uncertain circumstances, there was some unwillingness on the part of banks to extend credit until the Federal Reserve made it clear to the banks that it would provide the necessary liquidity through the discount window, although the banks remained responsible for the credit risks involved in lending to their business borrowers. (A similar experience occurred in Sweden in 1990; when the commercial paper market crashed, even well-managed non-financial companies found it difficult to raise finance (Davis, 1992).)
- (ii) *The Ohio and Maryland thrift problems (1985)*. ESM, a small securities firm in Florida, defaulted on its loans to an Ohio thrift when it incurred losses in its government securities trading business. This triggered runs on privately insured thrifts in Ohio and Maryland. The institutions were closed and their reopening was conditional on their being found eligible to access the Federal Reserve's discount window and obtaining federal insurance. Under the Federal Reserve's direction, examiners entered the institutions to evaluate assets that might serve as collateral and to monitor currency outflows. As a result, the Federal Reserve was able to expeditiously provide discount window loans and meet all demands for currency. Corrigan (1991b) argues that the problems in these thrifts came very close to producing full-scale grid-lock in the entire mortgage-backed securities market, and had the potential to produce systemic damage.
- (iii) *The stock market crash (1987)*. The fall in share prices meant that large margin payments had to be paid by brokers. As a result, brokers sought extra loans from their bankers. However, as banks became more risk averse and more concerned about their capital ratios, they became less willing to extend this credit. This threatened a collapse of the clearing and settlements system and the possible failure of securities firms. To counteract this, the Federal Reserve announced that it was ready to serve as a source of liquidity to the system, making it clear that it would provide discount loans so that the banks could lend to their brokerage clients.

- (iv) *The Drexel Burnham failure (1990)*. The problems at Drexel meant that market participants were extremely reluctant to deliver securities or to make payments to Drexel. This reluctance could have brought the liquidation of Drexel's mortgage-backed securities to a halt. Had this occurred, capital markets would have been interrupted and the financial system would have become more vulnerable, as all players became much more uncertain about the creditworthiness of their counterparties. This could have led to a major disruption to the process of financial intermediation. Given this risk, the Federal Reserve used its knowledge of the payments system, the institutions involved, and its close working relationship with key personnel to develop procedures with the banks and securities houses that allowed the orderly winding down of Drexel's securities.

117. In each case, developments outside the banking system threatened the stability of the financial system. Credit rationing intensified and liquidity threatened to dry up. In each case, the Federal Reserve's understanding of the linkages between securities markets, the payments system and commercial banking, and the linkages between the financial system and the macroeconomy, allowed it to design responses which removed these threats at no cost to the taxpayer.

118. Looking forward, the rapid pace of technological change and innovation in financial markets increases the chance that other shocks will originate outside the banking sector, but quickly involve the banks in their transmission to the wider economy. When new instruments are evolving rapidly, the potential for a re-evaluation of their pricing is high, particularly if the pricing is extremely complicated. Calomiris (1993) notes that one of the reasons that the failure of Penn Central had such a large effect on the commercial paper market was that the market had grown so quickly in the 1960s that few had stopped to evaluate the risks and appropriate pricing of commercial paper. When the problem arose, risk assessments had to be updated and few were sure how to do this. Information about credit-worthiness and the real value of commercial paper became scarce. Davis (1992) suggests a similar situation occurred in Sweden in 1990. The repricing of junk bonds in the US in the early 1990s is another example.

#### *The role of the central bank*

119. Many economists argue that a central bank with supervisory responsibilities is the right starting point for preserving a stable and efficient financial sector. In a crisis, the central bank can inject liquidity into the market through open market operations, or in more extreme circumstances, lender-of-last-resort loans. It can also have an important impact on developments through what it says. Statements along the lines that "the Bank will ensure that the system has sufficient liquidity" or that "in the Bank's opinion, a particular institution is solvent" can, in certain circumstances, supply the information that the market is seeking, and head off a potential crisis.<sup>35</sup> The central

---

<sup>35</sup> As was done in the cases of the Bank of Melbourne and Metway Bank in 1990, and the Rural and Industry Bank of Western Australia in 1992.

bank can also play a leadership role in negotiating solutions to payments problems which threaten to bring down the system, and in negotiating the merger of a solvent institution with an institution that has closed.

120. Could another institution perform these roles of crisis containment and resolution? In principle it could, but in practice there would be difficulties. In many crisis situations prompt action is needed and this requires that the responsible institutions have an understanding of:

- the potential macro-economic implications of the crisis;
- the operation and dynamics of financial markets;
- the potential problems in the payments system; and
- the creditworthiness of the banks with which it is dealing.

121. For a central bank, the first three requirements are satisfied as a by-product of its other responsibilities, and the final requirement is met through it having supervisory responsibility for the banking system. An institution that was solely a supervisor would not meet the first three requirements, although it could try to keep itself well informed. It would also not have the daily contact with markets needed for prompt action, and so would have to rely on the central bank if this was required.

122. Knowledge of the quality of banks' balance sheets is essential, not only in responding to shocks originating in the banking system, but *also* to those in securities markets. If there is some shock that leads to liquidity drying up in a securities market, non-financial firms may turn to banks for liquidity support. Failure to provide that support might lead to major problems for non-financial firms. In such a case, the correct response may be for the central bank to lend to the private banks so that they have the funds for short-term liquidity support of solvent, but illiquid non-financial firms. In Mishkin's terminology, the central bank would be using the banks as its "delegated monitors" - that is, the private banks would be monitoring the creditworthiness of their customers, while the central bank monitors the creditworthiness of the banks to which it is lending.

123. The central bank may also be helpful in leading a rescue package for troubled institutions, or in attenuating fears that a problem in one part of the system could spread to other parts. In the US examples discussed above, the financial markets and the banking sector looked to the Federal Reserve to ensure that the financial disturbances did not turn into financial crises. Where central banks do not have supervision responsibilities, a stand-alone supervisor could play that role, although perhaps less well (see next section).

124. There are numerous examples of central banks co-ordinating rescue packages for troubled banks. Perhaps the most well-known example is that of the Bank of England organising the "Lifeboat" to support troubled "secondary banks" during 1974-75, and more recently during 1991-93, when several small and medium-sized

banks suffered a withdrawal of wholesale deposits. The Bank was also responsible for the rescue of Johnson Matthey Bankers in 1984; at the time, it feared that the failure of this institution could threaten London's position as the leading international gold bullion market. Other examples of central banks playing a leadership role in resolving bank failures include the Banca d'Italia (Banca Steinhauslin - 1981/82), De Nederlandsche Bank (Friesch-Groningse Hypotheekbank - 1982) and the Reserve Bank of Australia (Bank of Adelaide - 1979). Interestingly, in Germany in 1983, when Schröder Münchmeyer Hengst failed, it was the Bundesbank which initiated the rescue package, bringing in the Federal Banking Supervisory Office at a later stage (see Dale (1992)). Similarly, it was the Bundesbank which organised the winding up of Bank Herstatt in 1974. In contrast, in Belgium, Denmark and Switzerland, banking commissions have played the leadership role (for more details see Goodhart and Schoenmaker (1993)).

125. Goodhart and Schoenmaker (1993) examine 104 banking crises in a range of countries and conclude that where the central bank remains in charge of supervision, bank rescues are "somewhat more likely" to be solved with financing from commercial banks, rather than the public purse. However, they also argue that as competition in banking increases, the central bank (or anyone else) may find it more difficult to "encourage" private banks to help fund a rescue.

126. The international orientation of central banks is another argument in favour of assigning them supervisory responsibility (see Tuya and Zamalloa (1994)). This argument has two parts. First, financial shocks are increasingly likely to have an international element, so that it is helpful if the supervisory authority has an understanding of international financial markets and exchange rates. The central bank is likely to be better placed than other agencies, by virtue of its foreign exchange market operations and its responsibility for investing foreign reserves. Second, central banks are in frequent contact with one another and have well-established formal and informal lines of communication. This makes timely recognition of adverse developments in banks with international activities more likely. These relationships may also prove useful in formulating an international response to a world-wide financial disturbance.

*A stand-alone supervisor and system stability*

127. The alternative proposition to the one argued above is that the system stability objectives can be best satisfied with a stand-alone supervisor who is answerable either to parliament or to the Minister of Finance (see for example Hilton (1994) and Taylor (1995)). Proponents of this approach argue that the information collected by the supervisor could be passed onto the central bank where appropriate.

128. This argument is explicitly rejected by most central banks, and implicitly rejected by many others, who, even though they do not have formal responsibility for bank supervision, employ a large staff examining the health of the banking system. As the Federal Reserve (1994) notes "central banks in all but one G-7 country, in most

cases *de jure* but always *de facto*, are closely involved with the supervision of banks in their countries and internationally" (p. 22).

129. The one exception is Canada. Despite having lender-of-last-resort responsibilities, the Bank of Canada is reliant on the Office of the Supervisor of Financial Institutions (OSFI) for supervision of the banking system and assurances as to an individual bank's solvency. The Bank of Canada is comfortable with this arrangement and supports it publicly.

130. Critics of this type of arrangement see a number of problems. First, in a crisis, time is of the essence. Slight delays in the transmission of information or any ambiguity about its contents could have damaging effects. Second, without direct responsibility for supervision, the central bank's practical "hands-on" feel for what is happening would diminish. It would not have the person-to-person contacts that would enable it to broker a deal in a crisis such as accompanied the 1987 share market crash in the US. The Federal Reserve has argued that if its staff were forced in to the position of simply reading a stand-alone supervisor's reports, or even being relegated to the junior member of a supervisory team, "the tendency would be to retreat into a kind of ivory tower, adversely affecting both monetary *and* supervisory policy" (Volcker (1984) p. 549).

131. This point is illustrated by the German and Japanese arrangements. In Germany, while the Federal Banking Supervisory Office (FBSO) is the formal banking supervisor, the Bundesbank carries out on-site inspections and reviews and follows up on reports by external auditors *before* they are passed to the FBSO. Despite not being the formal supervisor, the Bundesbank employs more supervisors than the formal supervisory agency. A similar situation occurs in Japan, where the Ministry of Finance is the statutory supervisor, but the Bank of Japan conducts regular on-site inspections, and has a large supervision staff. This duplication of supervisory activities increases the total cost of bank supervision.

132. The Canadian experience in the mid 1980s provides an example of the practical problems which can arise when the central bank has no supervisory responsibilities. The Estey Inquiry noted that when CCB and Northland Bank were experiencing difficulties, "The Bank of Canada ... found itself in an invidious position in the events surrounding the collapse of CCB. The Governor of the Bank of Canada was seen as the leader of the banking system. Naturally, therefore, he was looked to for leadership in times of crisis. Indeed, it was taken for granted by all participants that the Governor of the Bank of Canada was the appropriate person to preside over the 22 and 24 March meetings to determine the fate of CCB. Unfortunately, the Bank of Canada is not clothed with the necessary statutory powers or staff to select the appropriate program in such circumstances and to guide its performance." (Estey (1986), p. 165).

133. The Canadian example illustrates the point that if the central bank has no supervisory responsibility, it has little option but to rely on the advice of the supervisor. In this episode, the supervisor originally assessed the banks as solvent and

the Bank of Canada arranged loans for the banks. The Bank of Canada was active in informing the public that the banks were solvent and in arranging liquidity support from other banks. This was despite its having no independent way of assessing the solvency of the institutions. Subsequently, the supervisor reversed its decision and the Bank of Canada stopped extending credit. The initial determination that the banks were solvent meant that depositor protection had to be extended to all depositors, not just insured deposits (those less than \$60,000).

134. Some economists support the Canadian-style system on the argument that the central bank is already a powerful institution, by virtue of its monetary policy responsibilities and that granting it supervisory responsibilities gives it too much power and reduces the “checks and balances” in the system. Another argument is that since taxpayers' money is often put at risk in bank rescue operations, it is the taxpayers, through their representative (the government-controlled supervisor), who should make any decision.

135. This latter line of argument can be criticised on a number of grounds. First, the taxpayer is going to be at risk whether the rescue is financed by a stand-alone supervisor or the central bank because the government owns both institutions. It is true that a stand-alone supervisor would probably be more directly answerable to the political process than a central bank, but that could cause a second problem in that it would increase the chance that political decisions would dominate economic ones. In Taylor's (1995) proposal for a stand-alone supervisor in the UK, he argues that the Treasury would need to indemnify the Bank of England for any support funds it provides at the request of the FSC (Financial Services Commission). This leads him to conclude that “The Treasury would therefore need to be closely involved in any decision to provide LLR support, although it would act on the advice of the FSC and the Bank” (p. 14). This implies that a committee representing three organisations, with at least one member under possible political pressure, would have to make a decision about whether to lend to a bank under extreme time constraints. Finally, the perceived independence of the central bank may be damaged by a system whereby the government directs the central bank to make loans to banks, or alternatively, by the central bank being obliged to extend credit to the supervisor (so that it can make loans to banks). The notion that the central bank does not lend to the government (or its agencies) and that the government does not direct the central bank to make loans to private firms is a cornerstone of responsible monetary management, and should not be discarded lightly.

***Are there conflicts or synergies between supervision and monetary policy?***

*Conflicts*

136. The argument is that if a central bank is the bank supervisor, then it will have divided loyalties, which will interfere with its monetary policy objective of maintaining low inflation. The usual situation envisaged is where the monetary authority wishes to raise interest rates for anti-inflationary purposes, but the regulatory authority opposes it because of the weakness of the banking system. This argument

suggests that if the two functions are separate, the monetary authority would go ahead and raise interest rates, regardless of what happens to the banking system. On the other hand, if the two functions are in the same institution, an internal compromise would be reached whereby interest rates would not be raised as much (or at all), resulting in a less anti-inflationary monetary policy.

137. A problem with this argument is that it seems to imply that the monetary authority should not take into account the condition of the banking system in setting monetary policy. But if it failed to, it could inadvertently bring about a financial crisis which could have large effects on economic activity and inflation, and hence result in worse monetary policy than otherwise. One way or another, the condition of the banking sector is a relevant piece of information for monetary policy and should be factored into the decision making process (see later for more detail). The argument for separation would have to rest on a different and more restricted form of conflict, whereby the combined institution deliberately chooses a setting of the monetary instruments which will give a sub-optimal economic outcome (including higher inflation), but will “prop up” some weak banks and hence preserve the combined institution’s reputation as a supervisor. This more precise form of the argument recognises that it is correct to take into account the condition of the banking system when deciding on monetary policy settings, but believes that a combined institution may misuse the information to serve its own self-interest.

138. Is there any empirical evidence for the idea that central banks have acted in this way? To the best of our knowledge, neither the literature on the subject, nor our observation of recent history, provide any such evidence. Australia and New Zealand, for example, which both have monetary policy and bank supervision combined in the central bank, went through a period of anti-inflationary monetary policy at a time of substantial bank losses in the period between 1989 and 1992. Looking back over that period, no-one has suggested that either central bank “went easy” on its monetary policy in order to “prop up” its banks and so preserve its reputation as a supervisor. To the contrary, most current views of the monetary policy of that time (which have benefited from hindsight) accuse it of having erred on the tough side.

139. There are two episodes in the US that are sometimes quoted (see Goodhart and Schoenmaker). The US abandoned the non-borrowed reserve base scheme for setting monetary policy in 1982 and moved to a more pragmatic system, which quickly led to a fall in interest rates. Many people attribute this to worries about the solvency of US money-centre commercial banks as a result of their exposure to LDC debt, but virtually no-one now feels that the change in monetary policy procedure was a mistake, or that it was inflationary. In the early 1990s, the Federal Reserve was accused of giving a high weight to the weakness of the Savings and Loans Industry (S&Ls) in setting its monetary policy. Again, there are few who would now say that monetary policy was too easy at that time, and, besides, the Federal Reserve was not the supervisor of the S&Ls and could not be accused of trying to protect its own reputation.

140. An alternative empirical approach has been provided by Heller (1991) who found that the average inflation rate for countries with separation of supervision and monetary policy was lower than for countries with both combined in the central bank. This result was necessarily based on a small sample, and heavily influenced by some Latin American countries where the central bank was responsible for bank supervision. Goodhart and Schoenmaker (1993) did their own compilation excluding these countries and still found that the average inflation rate was lower for countries where the central bank was not the bank supervisor. This is not surprising since Germany, Switzerland, Japan and the US, which have relatively low inflation, were in the group of countries where the central bank is not the sole bank supervisor. But the central banks in each of these countries do have some responsibility for bank supervision, although it is shared with other institutions (see Attachment B). They, therefore, would have some reputation as a supervisor to protect, so the comparison between the two groups is an ambiguous one.

141. Neither author claims much rigour for this type of exercise and Goodhart and Schoenmaker sum up by saying, "Our final conclusion is therefore that a Central Bank's involvement in supervision does not necessarily weaken its stance on monetary policy; and consequently we consider a Central Bank's inflation performance and its role in supervision as two, more or less, separate issues".

### *Synergies*

142. For monetary policy to achieve its objectives, it is important that the central bank has a good understanding of the transmission mechanism - the chain of events that lead from a change in the instrument of monetary policy to the final outcomes in terms of inflation and output. This is not an easy task as there is no mechanical link that applies over time; each cycle is different in intensity and the length of lag.

143. One important element in the transmission process is how the banking sector will react in its vital role of providing credit. The provision of credit always involves taking risks, and banks' attitude to risk will depend importantly on the health of their balance sheets. Will they pass on to their customers the full increase in official interest rates? Will they still compete aggressively for new business? Will they stay with their present credit standards, will they lower them to get new business, or will they raise them to protect themselves from future losses? In different circumstances, the results will be different. For example, in 1988 and 1989, the banks seemed oblivious to high interest rates and still competed vigorously for business, lowering credit standards by more than they had in earlier cycles. On the other hand, they became extremely risk averse in the 1990-to-1993 period, despite the lowest interest rates for 20 years.

144. Thus, a given tightening of the monetary instrument will have different effects depending on the health of the banking system. If it is in good shape, a tightening may produce a modest slowing, but if it is in bad shape, it could result in a severe contraction. In order to do the job of monetary policy properly, it is important to have

as thorough a knowledge as possible of the health of the banking system, and this would be most efficiently achieved by being the bank supervisor.

145. The argument that monetary policy will be better conducted if the central bank does not have responsibility for supervision amounts to saying that it will do a better job if it does not have access to full information. The alternative view - and the one the RBA would support - stresses the synergies between the two responsibilities. It believes that monetary policy would do a better job if it had all the available information at its disposal.

146. A counter to the above argument is to agree that the central bank should take into account the health of the banking system, but to point out that it could receive its advice on this matter from a separate supervisor rather than doing the job itself. Such advice would obviously be a help, but it is hardly the same thing as having direct knowledge of the situation. A stand-alone supervisor with no economic responsibilities or market involvement is bound to have a different perspective from an economic agency such as a central bank. The stand-alone supervisor would probably concentrate on judging the health as it was at a point of time, rather than assessing its susceptibility to possible changes in monetary policy.

147. The RBA attitude to this question is perhaps jaundiced by its recollection of the Pyramid Building Society episode. The Reserve Bank had no supervisory responsibilities in that case and had to rely on the assessments of the Victorian Registrar of Building Societies.

### *Organisational and cultural issues*

#### *The reputational argument for separation*

148. A good supervisor does not attempt to prevent individual banks from failing if they are badly managed and if the failure has no significant systemic implications. However, this is not widely perceived by the public, who tend to regard any failure as a sign of incompetence on the part of the supervisor. Supervision is a thankless task - there being no rewards during the long period of stability but often severe recriminations from the public, the press and politicians if a failure occurs.

149. For this reason, some commentators feel that it would be better if the reputation of only the supervisor was sullied when an institution failed, rather than having it rub off on to the monetary policy arm of a central bank as well. This is an argument which has been used often in the case of the UK, where the Bank of England has been severely criticised for the failure of Johnson Matthey Bankers, BCCI and Barings. There is some weight in this argument, although it has never been strong enough for a central bank to propose divesting itself of its supervisory functions.

#### *Cultural and incentive issues as arguments for a combined entity*

150. There are two arguments here of relevance, both of which favour a combined organisation rather than separation. The first argument is that a single regulator with a

focus on safety, and subject to the same sort of pressures described above, will have a long-term bias towards excessively tight supervision and will give less weight to the importance of flexibility and capacity to adjust to market forces. It would receive little, if any, credit for the ability of the banks to adjust to market forces and contribute to growth, but would be subject to severe criticism if an institution failed. These incentives could lead to supervisory policies which, at the margin, inhibit economic performance and possibly encourage the growth of financing outside the supervised sector. This is an argument that has been put regularly by the Federal Reserve in the US. It sees itself as having a better capacity to trade off safety versus adaptability than a more-narrowly focused regulator.

151. A related argument is that a stand-alone supervisor would develop a culture based on rules and their interpretation, and hence tend to be dominated by lawyers, and possibly accountants. In a central bank, however, while the supervisory wing may have some of these tendencies, it will have to battle constantly with the economists and financial markets professionals in the monetary-policy wing of the central bank. This creative tension would tend to reduce the extent to which an overly rules-based and legalistic approach was followed.

152. On balance, it is hard to weigh up these arguments, and much will depend on the point of view of the person doing the weighing up. If the aim is light regulation, and emphasis is on the need for market forces to play a large role, a combined supervisor would have the advantage. On the other hand, if the emphasis is on minimising the risk of failure, a separate supervisor would probably be superior.

## **APPENDIX D: INTERNATIONAL FRAMEWORK OF BANK SUPERVISION**

153. Much of the supervisory architecture in Australia is of fairly recent origin, and has been shaped in the full knowledge of international best practice. Finance must rank with telecommunications and air travel among the most international of industries. Australian financial institutions operate in a growing number of countries (for example, ANZ operates in 43 countries). A large number of foreign financial institutions operate in Australia (27 banking groups are foreign owned, a further 36 merchant bank groups have parents who are banks in their home countries, and 23 life insurance companies are foreign-owned). The supervision and regulation of the finance industry is as international as the industry itself. There are well-regarded and well-functioning international groupings of supervisors in each of the banking, securities and, more recently, insurance businesses. The constant refrain from the international conferences organised by these bodies over the past decade has been the need for harmonisation, co-operation and co-ordination.

154. In the area of banking supervision international harmonisation has been guided by the Basle Committee on Banking Supervision. This Committee was established by, and reports to, the Governors of the central banks of the G10 countries; its permanent Secretariat is located at the Bank for International Settlements in Basle, Switzerland. The Basle Committee's 1975 Concordat stated the principle that all international banks should be subject to effective consolidated supervision, and set out the division of responsibilities between home and host country supervisors. The Committee is probably best known, however, for its 1988 guidelines on the measurement and minimum levels for bank capital. These were developed to underpin a concerted response to the secular decline in bank capital. The definition of capital (Tier 1 and Tier 2 capital), the concept of risk weights which differentiated between broad classes of assets according to risks, the inclusion of off-balance sheet risks in the framework, and the 8 per cent minimum requirement, have been adopted by supervisors all around the world.

155. The original intention of the Basle Committee had been to produce a common capital standard for all internationally operating banks, but most countries adopted the BIS standards for all of their banks. It is not much of an exaggeration to say that it is no longer possible to be a bank and have a BIS capital ratio below 8 per cent. Close consultation between banking supervisors has meant that a reasonable degree of uniformity has been achieved in the implementation of the BIS capital regime. In Australia, it has been applied to all banks and also to building societies and credit unions.

156. In recent years the international banking community has agreed that the 1988 capital accord should be extended to capture the market risk in banks' trading activities. The design of the capital regime for market risk has involved consultation between international groups of banking and securities supervisors, consultation with groups of banks and consultation and opportunity to comment for non-G10 supervisors

like the RBA. In other words, a gigantic effort has been made over half a decade to come up with a system which, by its acceptability to the broad sweep of banking supervisors around the world, would ensure that the status of the BIS capital ratio as the global benchmark for a bank would be retained.

157. The Basle Committee over its twenty-year history has produced work on most aspects of banking supervision - restrictions on concentrations of risk/large exposures, liquidity management, risk management systems for derivatives, to name just a few. There is a global orthodoxy for the methods to be employed in supervising a bank. It is normal for the authorities to have requirements about who can own a bank, who can manage a bank, how much capital it needs, how much liquidity, how big a single exposure it can have, how much information it has to publish and how much it must report to the regulatory authority.

158. The RBA has been a keen contributor to the international development of the techniques of bank supervision. While Australia is not a member of the G10, the RBA maintains close links with the Basle Committee on Banking Supervision through its membership of the BIS. At each stage of the development of the common standards for imposing a capital requirement for market risk, Australia has made a comprehensive submission to the Basle Committee.

159. The Basle Committee has continued to aim for the implementation of effective supervision for all international banks. In 1992, it released Minimum Standards which contained four main principles:

- All international banks should be supervised by a home country authority that capably performs consolidated supervision.
- The creation of a cross-border banking establishment should receive the prior consent of both the host country and the home country authority.
- Home country authorities should possess the right to gather information from their cross-border banking establishments.
- If the host country authority determines that any of these three standards is not being met, it could impose restrictive measures or prohibit the establishment of banking offices.

160. The International Conference of Banking Supervisors in Stockholm in 1996 adopted a paper designed to strengthen the implementation of these principles. As implied by the second Minimum Standard, supervisors in host countries increasingly apply pressure on home country supervisors of banks wishing to expand internationally, to adopt internationally accepted approaches. The most notable example of this is the US, where the Federal Reserve rates the ability of a foreign head office to provide support to its US operations; this includes giving a specific rating to the quality of bank supervision in the home country. In Australia's case, US supervisors visit the RBA annually as part of their assessments. Similarly, the Bank of England has felt obliged to make assessments of the soundness of international

banking groups with a presence in their country, taking into account the quality of home country supervision. In short, there are great pressures for countries to conform to international norms in supervision.

161. Nevertheless, not all supervision policy reflects international agreements. In some areas such as definitions of impaired loans, and bank involvement in funds management and securitisation, the RBA has produced prudential guidelines without clear international precedents. This reflects a reaction to Australian experience with bad debts in the early 1990s, growth in banks' involvement in funds management and interest in securitisation.

162. In the area of securities market and insurance industry regulation, harmonisation has not been as successful as in banking but strong efforts are now being made through international bodies of supervisors. Australia has played a prominent role in the growing status of both IOSCO and, more recently, in the IAIS.

163. The trend towards conglomerate structures, which include banks, insurance companies and investment houses has not been restricted to Australia. Concern with the need to develop a consistent approach to the supervision of financial conglomerates is an international one. The Basle Committee, IOSCO and IAIS have formed a Joint Forum on Financial Conglomerates to develop internationally agreed standards for supervising such groups. Through the ISC and the ASC, Australia has two seats of twenty eight on the Forum. Its work is described in Appendix E.

164. The Joint Forum's mandate does not extend to reviewing the approaches of the banking, securities and insurance supervisors to the companies within their jurisdictions. The international community will, therefore, continue to think in terms of separate supervision for the banking, insurance and securities arms of a conglomerate. This illustrates that the need for a level playing field internationally for each of the banking, insurance and securities businesses, may be at least as powerful as the demands for a level playing field between the three different classes of financial institution domestically.

## APPENDIX E: OVERSIGHT OF FINANCIAL CONGLOMERATES - INTERNATIONAL DEVELOPMENTS

### The Tripartite Group

165. Internationally, supervisors have been investigating issues raised by the emergence of financial conglomerates. In July 1995, a report entitled "The Supervision of Financial Conglomerates" was produced by a Tripartite Group of banking, insurance and securities supervisors drawn from the main international groups of supervisors but acting in an informal capacity. The report identified a number of problems which financial conglomerates pose for supervisors, and discussed ways in which these problems might be overcome. Although not formally endorsed by the Basle Committee on Banking Supervision, the International Organisation of Securities Commissions or the International Association of Insurance Supervisors, the report has been seen as the basis for further collaborative efforts in the area. The key issues which it identified, and responses suggested, are outlined below.

#### *Access to information/co-ordination of regulation*

166. The recommendations of the Tripartite Group were based on the premise that, while the supervision of individual entities in a conglomerate continues to be of primary importance, it needs to be complemented by a prudential assessment from a group-wide perspective. A necessary implication of this finding is the need for close co-operation between supervisors - including the right to exchange otherwise confidential information. The Tripartite Group advocated the use of a lead regulator (or convenor) - most likely, the supervisor of the dominant operational business entity in a group - to facilitate the performance of these activities for each conglomerate. Some tasks identified for the lead regulator include making an assessment of group capital adequacy, informing supervisors of constituent entities about developments affecting the viability of the group, and co-ordinating combined regulatory action. It is not intended that the existence of the lead regulator interfere with the powers and responsibilities of the solo supervisor.

#### *Capital adequacy*

167. Banks, insurance companies and securities firms face different risks and are, therefore, subject to different prudential requirements. Consequently, supervisors face a fundamental problem in determining whether there is adequate capital coverage in a financial conglomerate. The attention paid to the capital adequacy issue reflects supervisory concerns about "excessive" or "double" gearing. It is possible for all entities in a group to fulfil their capital requirements on an individual basis, but for the own funds of a group as a whole to be less than the sum of those requirements. Such a situation occurs where the same own funds are used as a buffer more than once - for example, to cover the capital requirements of the parent as well as the subsidiary; this can lead to the under-capitalisation of a group. The Tripartite Group discussed this issue in some depth and concluded that the desired group-wide perspective could be

achieved either by adopting a type of consolidated supervision, or by a “solo-plus” approach.

168. Consolidated supervision focuses on the parent or holding company, although individual entities may (and the Group advocates that they should) continue to be supervised on a solo basis according to the capital requirements of the respective regulators. In order to determine whether the group has adequate capital, the assets and liabilities of individual companies are consolidated, capital requirements are applied to the consolidated entity at the parent company level, and the result is compared with the parent's (or group's) capital. Under “solo-plus” supervision, individual entities are supervised on a solo basis according to the capital requirements of their respective regulators but this supervision is complemented by a qualitative assessment of the group as a whole and, usually, by a quantitative group-wide assessment of the adequacy of capital.

169. The Group recognised several techniques by which capital adequacy can be assessed. It concluded, however, that some of these techniques (including consolidation) were suitable only for homogenous groups - that is, groups only consisting of banks or securities firms. In heterogenous groups (those including insurers, banks and securities firms), the nature of insurance liabilities, differences in valuation principles, the different correlation between asset and liability risks in insurance, and the definition of insurance capital requirements, mean that alternative techniques of assessing capital adequacy have to be employed. Notwithstanding this judgment, the Group stated that a range of techniques could provide an adequate insight into group-wide capital adequacy. It suggested that these techniques might form the basis of a set of minimum ground rules and that some form of mutual recognition of their acceptability by regulators would be desirable.

### *Contagion*

170. Contagion was recognised as one of the most important issues facing supervisors in relation to conglomerates. This problem manifests itself in two forms: psychological contagion - where problems in one part of a group are transferred to other parts by market reluctance to deal with a tainted group; and contagion resulting from the existence of extensive intra-group exposures. The Tripartite Group concluded that, while it is difficult for supervisors to guard against the former, the risk of the latter can be contained by regular liaison between group supervisors on the existence and nature of such exposures. It also advocated that supervisors be given powers to limit or prohibit imprudently large exposures.

### *Large exposures at group level*

171. A combination of large exposures to the same counterparty in different parts of a conglomerate can be dangerous to the group as a whole. While the Tripartite Group acknowledged that differences between the large exposure rules pertaining in the banking, securities and insurance sectors provide scope for regulatory arbitrage, it was accepted that these differences are unlikely to be eliminated in the near future. The Group proposed that the lead regulator concept be used as the way forward. The lead

regulator would be provided with information to enable it to assess large group-wide exposures to individual counterparties. Armed with such information, the lead regulator may then be able to identify “trigger points” of concern which, when reached, would prompt discussion on a case-by-case basis between the supervisors involved.

*Fit and proper tests for managers*

172. While most supervisors already have the power to check the fitness and propriety of the managers of the firms for which they are responsible, the rise of financial conglomerates means that it is possible that decision-making processes will be shifted away from individually-regulated entities to the parent or holding company level of the structure, enabling managers of other (perhaps unregulated) companies in the group to exercise control over the regulated entity. In order to deal with this problem, the Group recommended that solo fit and proper tests should extend upstream to managers able to exert a material influence on the regulated entity.

*Structure*

173. The way in which a conglomerate is structured is crucial to effective supervision. The Group counselled that supervisors need powers, at both the authorisation stage and on a continuing basis, to obtain adequate information regarding managerial and legal structures, and, if necessary, to prohibit structures which impair adequate supervision. Where supervision is impaired, supervisors should be able to insist that conglomerates organise themselves in a way that makes adequate supervision possible.

*Suitability of shareholders*

174. The Group was of the view that shareholders who have a stake in a financial conglomerate (enabling them to exert material influence on a regulated firm within it) should meet certain standards, and that supervisors should endeavour to ensure that this is the case by applying an appropriate test, both at the authorisation stage and on a continuing basis. Responsibility for applying such a test clearly rests with the supervisors of individually-regulated entities, but the Group advocated close co-operation between supervisors and the sharing of information on shareholders in this respect.

**Joint Forum on Financial Conglomerates**

175. The work of the Tripartite Group is being carried forward by a new body, the Joint Forum (JF). Unlike its predecessor, the JF is officially sanctioned by the Basle Committee, IOSCO and the IAIS. It has a mandate to draw up proposals for improving co-operation and the exchange of information between bank, securities and insurance supervisors, and to work towards developing principles for the future supervision of financial conglomerates. The JF is made up of nine members each from the Basle Committee, IOSCO and the IAIS. It is chaired by Mr Tom de Swaan, Executive

Director of the Netherlands' central bank, who was also chairman of the Tripartite Group. Australia is represented by the ISC and the ASC.

176. A focus of the work of the JF has been an examination of the concept of lead regulation, with discussion centred on two broad areas: the method of selection and the responsibilities of the lead regulator. While there is support for making the supervisor of the dominant entity in the group the lead regulator, supervisors are keen to develop a formula that permits flexible application. In recognition of concerns about national sovereignty members have agreed that international lead regulatory arrangements will not be reflected in domestic law. The JF does not envisage lead regulators acting as supra-national enforcement agencies.

177. The JF is supporting a system of asymmetrical information flows. Information flows upstream should be at the lead regulator's discretion; the lead regulator would probably request regular reports from solo supervisors in order to obtain a group-wide perspective. Information flows downstream would be less frequent in most cases in order to avoid information overload and the possibility that solo supervisors could become excessively reliant on the lead regulator. The JF's advocacy of the concept is based on the idea that the framework will promote mutual trust and co-operation of regulators.

178. The JF has undertaken some work looking at the mechanism for establishing a lead regulator framework. It has ruled out the viability of a fixed multilateral memorandum of understanding model. Instead, work has begun on a set of principles for bilateral memoranda of understanding which can accommodate inter-country variations. The JF is also examining the question of the adequacy of group capital. No consensus has yet emerged; however, the JF has agreed to establish a working group of its members to develop the Tripartite Group's findings and codify a set of principles. This group's objective will be to focus on techniques and principles of assessing capital adequacy. A particular concern will be the identification and prevention of double gearing.

179. As part of its efforts to identify gaps and overlaps in, and legal impediments to, effective supervision of financial conglomerates, and more broadly to understand better how these groups "tick", the JF has established a Task Force to co-ordinate a "mapping" exercise, extending some initial work undertaken jointly by US and UK supervisors on banking and securities firms. The proposed work involves the collection of extensive details for a selection of conglomerates from member countries on their corporate structures, operations, management structure/approach, and the supervisory and regulatory requirements they face. The Chairman has not indicated when he expects the work of the JF to conclude; however, there seems some interest in reporting an outcome to the mid-1997 summit of the G7 Finance Ministers.

## APPENDIX F: REFERENCES

- Aranko, J. (1994), "Reorganization of Financial Market Supervision in Finland", *Bulletin (Bank of Finland)*, 2, pp. 8-94.
- Australian Financial Review (1996), "The Governor Has Doubts", 3 June, p. 33.
- Bank for International Settlements (1993), *63rd Annual Report*.
- Bernanke, B (1994), "The Macroeconomics of the Great Depression: A Comparative Approach", National Bureau of Economic Research Working Paper Series No.4814, July
- Bernanke, B and H James (1990), "The Gold Standard, Deflation, and Financial Crisis in the Great Depression : An International Comparison", National Bureau of Economic Research Working Paper Series No. 3488, October
- Bingham (1992), *Inquiry into the Supervision of the Bank of Credit and Commerce International*, Her Majesty's Stationary Office, London.
- Bisignano, J. (1991), "Banking Competition, Regulation and the Philosophy of Financial Development: A Search for First Principles", London School of Economics, Financial Markets Group Conference, 8 November.
- Bordo, M. (1990), "The Lender of Last Resort: Alternative Views and Historical Experience", *Federal Reserve Bank of Richmond Economic Review*, 76, January-February, pp. 18-29.
- Borio, C.E.V. (1990), "Banks' Involvement in Highly Leveraged Transactions", Bank for International Settlements Economic Paper No. 28, October.
- Borio, C.E.V., N. Kennedy and S.D. Prowse (1994), "Exploring Aggregate Asset Price Fluctuations Across Countries: Measurement, Determinants and Monetary Policy Implications", Bank for International Settlements Economic Paper No. 40.
- Brimmer, A. (1989), "Central Banking and Systemic Risks in Financial Markets", *Journal of Economic Perspectives*, 3, 2, pp. 3-16.
- Burrows, G. and K. Davis (1995), "Costs and the Pricing of Retail Transactions Accounts", Inquiry into Fees and Charges Imposed on Retail Accounts by Banks and Other Financial Institutions and by Retailers on EFTPOS Transactions, report prepared for the Prices Surveillance Authority, No. 65, pp. J-1-J18, June.
- Bush, G. (1984), *Blueprint for Reform. The Report of the Task Group on Regulation of Financial Services*, July, Government Printer, Washington, D.C.
- Calomiris, C. (1993), "Is the Discount Window Necessary? A Penn-Central Perspective", *NBER Working Paper No. 4573*.
- Corrigan, E.G. (1991a), Statement before the Committee on Banking, Housing and Urban Affairs, US Senate, 15 May.
- Corrigan, E.G. (1991b), "The Risk of a Financial Crisis", in M. Feldstein (ed.), *The Risk of Economic Crisis*, University of Chicago Press and NBER, Chicago.
- Crow, J. (1993), "Central Banks, Monetary Policy and the Financial System", *Bank of Canada Review*, Winter, pp. 55-69.
- Dale, R. (1992), *International Banking Deregulation: The Great Banking Experiment*, Blackwell, Oxford.
- Davis, E.P. (1992), *Debt, Financial Fragility, and Systemic Risk*, Oxford University Press, Oxford.
- Dilnot, A.W. (1990), "The Distribution and Composition of Personal Sector Wealth in Australia", *Australian Economic Review*, No. 89 (Autumn).

- Dwyer, J. (1985), "The Political Economy of Trading Bank Regulation in Australia 1959-1985", Honours Thesis, James Cook University of North Queensland.
- Edey, M., R. Foster and I. Macfarlane (1991), "The Role of Superannuation in the Financial Sector and in Aggregate Saving: A Review of Recent Trends", Reserve Bank of Australia Research Discussion Paper No. 9112.
- Edey, M. and K. Hviding (1995), "An Assessment of Financial Reform in OECD Countries", OECD Economics Department Working Paper No. 154.
- Estey, W. (1986), *Report of the Inquiry into the Collapse of the CCB and Northland Bank*, Canadian Government Publishing Centre, Ottawa.
- Fraser, B.W. (1996), "Financial Regulation and the Financial System Inquiry", *Reserve Bank of Australia Bulletin*, August.
- Federal Reserve Board (1994), "The Views of the Board of Governors of the Federal Reserve System on the Consolidation of Bank Supervision and Regulation".
- Foster, R.A. (1996), *Australian Economic Statistics 1949-50 to 1994-95*, Reserve Bank of Australia Occasional Paper No. 8.
- Fraser, B. (1994), "Some Current Issues in Banking", *Reserve Bank of Australia Bulletin*, June.
- Goodfriend, M. and R. King (1988), "Financial Deregulation, Monetary Policy and Central Banking", *Economic Review Federal Reserve Bank of Atlanta*, 74, 3, pp. 3-22.
- Goodhart, C. (1988), *The Evolution of Central Banks*, MIT Press, Cambridge.
- Goodhart, C. (1995), "Some Regulatory Concerns", *LSE Financial Markets Group Special Paper No. 79*.
- Goodhart, C. and D. Schoemaker (1993), "Institutional Separation Between Supervisory and Monetary Agencies", *LSE Financial Markets Group Special Paper No. 52*.
- Goodhart, C. and D. Schoemaker (1995), "Should the Functions of Monetary Policy and Banking Supervision be Separated?", *Oxford Economic Papers*, 47, pp. 539-560.
- Greenspan, A. (1991), Statement before the Subcommittee on Financial Institutions Supervision, Regulation and Insurance of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives, 30 April.
- Greenspan, A. (1994), Statement before the Committee on Banking, Housing and Urban Affairs, U.S. Senate, 2 March.
- Heller, H.R. (1991), "Prudential Supervision and Monetary Policy", in P. Downes and R. Vaez-Zadah (eds), *The Evolving Role of Central Banks*, International Monetary Fund, Washington, D.C.
- Hilton, A. (1994), "UK Financial Supervision: A Blueprint for Change", *Centre for the Study of Financial Innovation Working Paper No. 6*.
- House of Representatives Standing Committee on Finance and Public Administration (1991), "A Pocket Full of Change: Banking and Deregulation", AGPS, Canberra, November.
- Kaufman, G. (1991), "Lender of Last Resort: A Contemporary Perspective", *Journal of Financial Services Research*, 5, 2, pp. 95-110.
- Knox, D. (1995), "Some Financial Consequences of the Size of Australia's Superannuation Industry in the Next Three Decades", paper presented at the Third Annual Colloquium of Superannuation Researchers.
- Llewellyn, D. (1992), "The Crisis and the Lessons", *Banking World*, October, pp. 20-23.
- Llewellyn, D. (1992), "The Performance of Banks in the UK and Scandinavia: A Case Study in Competition and Deregulation", *Sveriges Riksbank Quarterly Review*, 3, pp. 20-30.

- Macfarlane, I. (1989), "Money, Credit and the Demand for Debt", *Reserve Bank of Australia Bulletin*, May.
- Macfarlane, I. (1990), "Credit and Debt: Part II", *Reserve Bank of Australia Bulletin*, May.
- Macfarlane, I. (ed.) (1991), "The Lessons for Monetary Policy", *The Deregulation of Financial Intermediaries*, Reserve Bank of Australia, Sydney, pp. 175-201.
- Mackrell, N.C. (1996), "The Cheque's Role in Today's Payment System", talk presented to AIC Banking Conference on The Future of Cheques, 16 May.
- Mills, K., S. Morling and W. Tease (1993), "Balance Sheet Restructuring and Investment", Reserve Bank of Australia Research Discussion Paper No. 9308.
- Mishkin, F. (1992), "An Evaluation of the Treasury Plan for Banking Reform", *Journal of Economic Perspectives*, 6, 1, pp. 133-154.
- Mishkin, F. (1994), "Preventing Financial Crises: An International Perspective", *NBER Working Paper No.* 4636.
- Morling, S. and R. Subbaraman (1995), "Superannuation and Saving", Reserve Bank of Australia Research Discussion Paper No. 9511.
- Norges Bank (1992), "Financial Market Supervision - Should the Banking, Insurance and Securities Commission be Amalgamated with Norges Bank", *Economic Bulletin*, 2, pp. 142-152
- Prices Surveillance Authority (1995), "Inquiry into Fees and Charges Imposed on Retail Accounts by Banks and Other Financial Institutions and by Retailers on EFTPOS Transactions", Report No. 65, June.
- Quinn, B. (1993), "The Bank of England's Role in Prudential Supervision", *Bank of England Quarterly Bulletin*, May, pp. 261-264.
- Reserve Bank of Australia (1996), "Australian Financial Markets", *Reserve Bank of Australia Bulletin*, May.
- Schedvin, C.B. (1992), *In Reserve: Central Banking in Australia 1945-75*, Allen and Unwin, Sydney.
- Schoenmaker, D. (1995), "Lender of Last Resort - the European Central Bank", *Central Banking*, 6, 3, pp. 98-103.
- Schwartz, A. (1992), "The Misuse of the Fed's Discount Window", *Federal Reserve Bank of St. Louis Review*, 74, September/October, pp. 58-69.
- Shull, B. (1993), "How Should Regulatory Agencies be Organized?", *Contemporary Policy Issues*, XI, pp. 99-106.
- South African Reserve Bank (1992), *Annual Report and Bank Supervision Department Annual Report*.
- South African Reserve Bank (1993), *Annual Report and Bank Supervision Department Annual Report*.
- Summers, L.R. (1991), "Planning for the Next Financial Crisis" in M. Feldstein, (ed.), *The Risk of Economic Crisis*, University of Chicago Press and NBER, Chicago.
- de Swaan, T. (1994), "Prudential Supervision: a Central Bank Function?", in *Monetary Stability through International Cooperation*, Kluwer Academic Publishers, Dordrecht, The Netherlands.
- Swinbune, M. and M. Castello-Branco (1991), "Central Bank Independence and Central Bank Functions", in P. Downes and R. Vaez-Zadah (eds), *The Evolving Role of Central Banks*, International Monetary Fund, Washington, D.C.
- Syron, R. (1994), "The Fed Must Continue to Supervise", *New England Economic Review*, January/February, pp. 3-8.

- Taylor, M. (1995), "Twin Peaks: A Regulatory Structure for the New Century", *Centre for the Study of Financial Innovation Working Paper No. 20*.
- Tease, W. and J. Wilkinson (1993), "The Provision of Financial Services – Trends, Prospects and Implications", Reserve Bank of Australia Research Discussion Paper No. 9315.
- Thompson, G.J. (1996), "Prudential Supervision and the Changing Financial System", *Reserve Bank of Australia Bulletin*, April.
- Tietmeyer, H. (1991), "The Role of an Independent Central Bank in Europe", in P. Downes and R. Vaez-Zadah (eds), *The Evolving Role of Central Banks*, International Monetary Fund, Washington, D.C.
- Treasury and Civil Service Committee (UK) (1993), "The Role of the Bank of England", Report submitted to the House of Commons.
- Tuya, J. and L. Zamalloa (1994), "Issues on Placing Banking Supervision in the Central Bank", in T. Balino and C. Cottarelli (eds), *Frameworks for Monetary Stability*, International Monetary Fund, Washington, D. C.
- UK Treasury (1986), *Banking Supervision White Paper*, Her Majesty's Stationary Office, London.
- Valentine, T. (1991), "What the Campbell Committee Expected", in I. Macfarlane (ed.), *The Deregulation of Financial Intermediaries*, Reserve Bank of Australia, Sydney, p. 36-60.
- Volcker, P. (1984), "The Federal Reserve Position on Restructuring of Financial Regulation Responsibilities", *Federal Reserve Bulletin*, July, pp. 547-557.

**APPENDIX G: LIST OF ABBREVIATIONS**

ACCC	Australian Consumer and Competition Commission
AFIC	Australian Financial Institutions Commission
APCA	Australian Payments Clearing Association
ASC	Australian Securities Commission
ASX	Australian Stock Exchange
ATM	Automatic teller machine
BCCI	Bank of Credit & Commerce International
BIS	Bank for International Settlements
BOJ	Bank of Japan
CFS	Council of Financial Supervisors
DFSA	Danish Financial Supervisory Authority
EFT	Electronic funds transfer
EFTPOS	Electronic funds transfer at point of sale
ESA	Exchange Settlement Account
FBSO	[German] Federal Banking Supervisory Office
GDP	Gross Domestic Product
IAIS	International Association of Insurance Supervisors
IOSCO	International Organisation of Securities Commissions
ISC	Insurance and Superannuation Commission
JF	Joint Forum on Financial Conglomerates
NCD	Non-callable deposit
OECD	Organisation for Economic Co-operation and Development
PAR	Prime asset requirement
RBA	Reserve Bank of Australia
RITS	Reserve Bank Information and Transfer System
SFE	Sydney Futures Exchange
SSA	State Supervisory Authority
SVC	Stored-value card
UK	United Kingdom
US	United States



