

## **Australian monetary policy before deregulation**

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### **Abstract**

This paper surveys the interdependent evolution of the Australian financial system, monetary policy, and regulation in the years leading up to deregulation in the 1980s. I question a Whig view of progress from *dirigisme* to *laissez faire*. Instead I suggest that the main policy trend in was one of increasing state power in pursuit of macroeconomic policy goals, with deregulation pursued to the extent that it facilitated (or did not hinder) that power. First, I describe a ‘deregulation before deregulation’ as non-bank financial institutions filled niches banks were prevented from occupying, and the adaptation of monetary policy in response. Second, I discuss the period of monetary targeting. The pursuit of monetary targets drove a renaissance of direct banking controls. While monetarism was a failure in its own terms, it was a success in establishing the dominance of monetary policy over other branches and aims of policy. Finally, I discuss the effects of deregulation in strengthening the banking system against its non-bank competitors, facilitating a more predictable market-based policy transmission channel through interest rates.

### **1. Introduction**

The development of monetary policy through the 1960s, 1970s and 1980s is often portrayed as a story of movement from regulation to deregulation, or from a state-centred system to a market-centred system. This is the basic story, for example, which Schedvin (1992) sees underlying his intricately detailed history (though it leaves off in 1975):

Running through the story of monetary management was a gradual swing of the pendulum of central banking philosophy towards liberalisation and to reliance on markets as the fulcrum of action. As the memory of depression and war faded, suspicion of the markets receded. The change was imperceptible at first, became more pronounced in the 1960s, and gathered momentum with global financial integration following the breakdown of Bretton Woods and the revolution in electronic communication. Towards the end of the period covered in this book, the myth of market invincibility emerged that helped to dismantle the remaining tangle of regulation and create a largely free environment for financial institutions. (Schedvin, 1992: 544)

It would be easy to integrate this story into a broader narrative of the ‘rolling back of the state’ in favour of markets. But the state-market dichotomy is problematic – certainly ideologically important to ‘neoliberalism’ as a political project, and to some of its opponents, but questionable from a perspective which sees states and markets as mutually-dependent structures. From this point of view, it makes little sense to say that where the market is, the state is not, and vice versa, i.e., to see the political-economic system as a zero-sum game. The overt aim of policy, after all, is not to restrict the

economic system for the sake of restriction, but to improve its functioning. The power or capacity of policy is better judged in terms of its ability to attain its objectives.

Considered in this way, there is no contradiction between seeing policy as becoming both more market-oriented and more powerful. It is still necessary to be explicit about what 'more market-oriented' means: the phrase evokes certain associations but is in itself too vague. On the one hand, it means that the chains of causation between policy instrument and target came to rely less on directives to non-state actors and more on voluntary trading with them. On the other hand, it also refers to 'deregulation', or the removal of state-imposed restrictions on non-state actors. This was certainly a feature of the later part of the period – but it is important not to overstate the extent to which the structure of the financial system is described by regulation. The financial system can evolve considerably under a particular system of regulation, which is mainly a set of negative proscriptions rather than a positive blueprint for the system. In some ways the term 'deregulation' may mislead if it gives an impression of a one-way process of the removal of restrictions, when the real process is often about the removal of restrictions made obsolete by the system's evolution, and their replacement by a new regulatory program.

In either case, again, there is no necessary connection between a more 'market-oriented' or 'deregulatory' policy and a weaker policy apparatus considered in terms of policy's ability to achieve its targets. I argue to the contrary in this paper that monetary policy continued to be strengthened on balance over the period. In fact, policy's movement towards market orientation happened largely *because* such shifts strengthened monetary policy, *given the direction of evolution of the financial system itself*. Though there was certainly an ideological element favouring the shift, a mode of policy strategy was unlikely to have been selected if it was dysfunctional for policy, particularly when the magnitude of the problem of inflation made such large demands on monetary policy.

In Section 2, I discuss the maturation of market-based policy in the 1960s and early 1970s, in the context of a changing financial system. The evolution of the market and its institutions was a relatively independent cause of the policy shift, making certain market operations possible that were previously not. At the same time, I emphasise that the banking regulation developed in the 1950s remained a necessary precondition for this policy, since banks continued to be the major players in the financial markets and their lending behaviour a key source of variation in the money supply.

In Section 3, I discuss the monetarist period of policy from the mid-1970s to the early 1980s. Monetary targeting was imposed politically on the central bank and did not reflect an internal conversion to Friedmanite monetarism. However, monetary policymakers were not opposed to the tightening the projections entailed. The monetarist framing enabled a strengthening of monetary policy by any means necessary to chase the targets – via bank regulation as much as by market operations. Even so, policymakers faced increasing difficulties meeting the projections for a variety of reasons. The projections were retained longer than they would otherwise have been, mainly so as to play to market expectations. A critical aspect of the monetarist period is that it involved, at least in its early years, increasing recourse to active use of banking controls as policy instruments – in a partial reversal of the apparent trend to 'market oriented policy' – as policy sought to deal with the accumulating instability of the early 1970s. A teleological narrative of a one-way drive towards the market would have difficulty accounting for this reversal. But it presents no problem to my account, based on the strategic selectivity of *functional* policy.

Finally, in the concluding section, I discuss the Campbell Financial System Inquiry and the deregulatory movement of which it was a part. I argue that although deregulation would make

*monetary targeting* intractable, it was, again, functional for monetary policy in a broader sense. The rationalisation of the complex of regulations that had evolved in an *ad hoc* way alongside the evolution of the financial system had the potential to further strengthen policy, because it strengthened the competitiveness of the trading banks on which policy still relied, and facilitated effective open market operations. Thus it was strategically selected.

## **2 Banks, markets and monetary policy into the 1970s**

### *Policy, banks and markets*

As I have detailed elsewhere, in the 1950s a bank-centred monetary policy was progressively undermined by the development of non-bank financial institutions. (Beggs forthcoming) Finance companies grew to fill a niche in the environment which existed in part because of demand for consumer credit which the banks were not allowed to supply, and in part because of a demand for financial assets of greater yield (but greater risk) than the banks were able to offer, given regulatory interest rate maxima. This eventually forced policy to move towards a greater degree of interest rate flexibility. Thus the immediate reason for interest rate variation playing a more important role as a policy instrument was to defend a bank balance-sheet-centred monetary policy. This depended on the trading banks not continuing to lose market share to non-bank financial institutions, which in turn required that their interest rates be competitive with these rivals (even though these ‘rivals’ were often subsidiaries of the trading banks). Figure 1 shows that the non-bank financial institutions did indeed retreat in the first half of the 1960s; the proportion of financial assets held by trading banks stabilised, while the savings banks expanded. From the perspective of the onward march of market-based policy, this was a reversal.

However, the initially defensive nature of the use of interest rate variations should not be seen entirely in terms of financial innovation threatening a monetary policy that was dirigiste by choice. It was not central bankers who favoured low, inflexible interest rates, but the broader coalition of political forces behind ‘cheap money’.<sup>1</sup> The central bank had consistently favoured more flexible exchange rates, and the shift can be seen as a strengthening of its position: the gain of an instrument for monetary policy. Furthermore, the development of the finance companies in the 1950s had been bound up with the deepening of a market for private fixed-interest securities and the emergence of a money market (i.e. for short-term paper), which the authorities promoted and guided in the hopes of eventually fostering more capacity for open-market operations. Central bankers saw open-market operations, involving voluntary transactions, as a more subtle policy technique than the system of variable impositions on bank balance sheets, which put them in continual tension with the trading banks.

But for most of the 1960s the central bank remained the main player in the market for bonds (short and long-term), such that the very existence of a market depended on state involvement, and the great bulk of fixed-interest securities were still government bonds. Turnover on the public ‘on ’change’ market based in the stock exchanges was much smaller than the ‘off ’change’ market between banks and other institutions, and the central bank was necessarily heavily involved in both to smooth mismatches between buyers and sellers. Effectively the Reserve Bank worked as a broker, because there were many more desired small-scale sales of bonds than desired small-scale purchases: buyers

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<sup>1</sup> Although, again, flexibility was more important to central bankers than an absolutely higher rate. “The Bank was only slightly less addicted to cheap money than Treasury; the chief difference between them was the degree of interest rate flexibility within the regime of cheap money.” (Schedvin 1992, 343)

could simply subscribe to regular new issues.<sup>2</sup> To talk about ‘market determined’ interest rates in such an environment as something opposed to ‘state determined’ interest rates would be misleading: it is difficult to distinguish between the provision of liquidity to a market and the support of rates.

In the 1960s, the use of interest rate shifts as a policy instrument was almost as common as movements in the Statutory Reserve Deposit (SRD) ratio quarantining bank reserves. (See Figures 2 and 3.) But the channels of transmission through which interest rates were presumed to affect aggregate demand were different from textbook neoclassical-Keynesian (IS-LM) conceptions, and the view that interest rates normally work via the *demand* for credit. Scepticism about the interest-elasticity of demand for credit (at least within the range of thinkable variation) remained. Instead, interest rates were supposed to work at least as much through the *supply* of credit. It was the structure of relative rates that mattered here, with policy aiming to influence the attractiveness of bank deposits vis-à-vis other short-term instruments, on the grounds that a shift from the former to the latter facilitated a greater volume of credit for a given supply of bank reserves. (See Beggs, forthcoming.) Reserve Bank Deputy Governor J. G. Phillips (1971 [1964]: 77-78) explained the thinking in a public lecture in 1964, saying that “[s]cope to vary interest rates... means that steps can be taken to make bank deposits more competitive with other forms of short term investments.”

For this reason, Rowan (1980: 122-23) describes the 1960s as “the Radcliffian period” in Australian central banking, after the chair of the British government’s appointed Committee on the Working of the Monetary System, which reported in 1959. Radcliffe (1959) emphasised the relationship to expenditure of all liquid assets, rather than means-of-payment alone. It followed from this that the spread of interest rates between more and less liquid assets would be important to policy.<sup>3</sup> It is clear from Phillips’ mid-decade discussion of the workings of policy that the central bank continued to be concerned mainly with the quantity of available (or potential) credit and its relationship to aggregate expenditure. This meant a preoccupation with the complex of market relationships by which the banks and nonbank financial institutions stretched the liquidity of the system during an upswing, rather than thinking in terms of an institutionally flat, predictable relationship between the money supply, nominal income and interest rates.

In terms of the quantity relationship, policymakers believed the velocity of money would be variable. The variability of velocity would be irreducible to a stable function with respect to ‘*the*’ interest rate, because differences *between* interest rates on different deposits or instruments would result in the transfer of funds between institutions with different capacities for leverage. Furthermore, the precise relationships involved would be difficult to predict and unlikely to remain stable thanks to the flux of the institutional environment. Therefore, policy had come to resemble a complicated game in which policymakers needed to co-ordinate all available instruments – the Statutory Reserve Deposit ratio (modifying available trading bank reserves), variations in bank interest rate maxima, and open market operations – in response to moving targets, as non-financial units shifted their funds around in line with changing expectations and competition among financial institutions. For example, Phillips explained the counter-inflationary action of 1963/64 as follows:

[M]onetary measures were directed to influencing both the supply of and demand for liquid assets. Calls to statutory reserves were made progressively to immobilise increases in the

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<sup>2</sup> Then-Reserve Bank Governor Coombs’ testimony to the UK Radcliffe Committee on Australian monetary policy arrangements is an excellent source of information on the technical workings of the market and government involvement in it – though the picture was changing rapidly even as he spoke. (Coombs 1981)

<sup>3</sup> Chick (1977: 58-74) gives a valuable interpretation of the Radcliffe approach from the perspective of structuralist post-Keynesian monetary theory.

banks' liquid assets; the rate of banks' lending was to be firmly contained... and the central bank, in its open market operations, moved more firmly to the position of a reluctant buyer and a willing seller... These actions were supplemented in April 1964 by a rise in bank interest rates designed to ensure continuing support for fixed deposits and to dampen the climate of expectations about the future course of asset prices. Fixed deposit facilities were also made more attractive to investors by reducing the minimum term for large deposits from three months to thirty days... The increases in bank interest rates were followed promptly by similar adjustments in other rates, including bond yields. (Phillips, 1971 [1964]: 80)

The policy of the 1960s, then, was flexible, and involved market operations, but was rather baroque and continued to depend on direct controls over the banking system. These actions in 1963/64 revived trading bank political pressure against the Statutory Reserve Deposit system, which the Reserve Bank withstood, but which strengthened its resolve to shift the weight of policy onto other instruments as much as possible. (Schedvin, 1992: 349)

A vision of 'normal' central banking based mainly on open market operations in an undifferentiated, level field of perfectly substitutable financial assets beckoned. Such was the Platonic monetary policy of the *General Theory*, with only two alternative stores of value, money and bonds. It was also the vision of the monetarists, who worked with a very broad conception of potential stores of value including real capital goods and commodities in general, but kept to a strict division between 'money' and everything else. Between these poles, the portfolio theory pioneered by Tobin (1961; 1963; 1969) and Brainard and Tobin (1968) offered a vision of high substitutability between assets (including real capital assets) of varying degrees of liquidity, but in which expectations of profitability and risk appetites were moving parts. In such a system, the transmission of policy works not only through the supply of and demand for money, but also through the supply of and demand for government debt instruments of various profiles, which play the role of money substitutes. This, as Chick (1978: 95) notes, has some similarities to the Radcliffe vision, in that a range of forms of liquidity are considered. However:

Consumers, firms, the banking system, other intermediaries, and the stock market have disappeared, as they did in IS-LM analysis. People and institutions are replaced by a portfolio of assets: money, Treasury bills, bank deposits, and machines, for which there are demands and supplies. The identity of the demanders, suppliers, and owners is unknown. Only the government retains its identity. It conducts policy, changing asset supplies. (ibid: 98)

Such a consideration can be read into Phillips' (1971 [1964]) discussion of the difficulties facing policy in the mid-1960s. Policy cannot be indifferent to institutions because the kind of institution holding an instrument makes a difference to how much liquidity it contributes to the system as a whole. Australian policymakers were necessarily aware that the financial markets were *not* an undifferentiated, level field, but a *tiered* system involving multiple levels of liquidity. That is, banks must stand ready to pay net outflows with central bank liabilities, while non-bank financial institutions and non-financial units make payments largely with bank liabilities. When securities are sold between levels of the hierarchy, it makes a difference to the capacity of the system to develop liquidity from a given supply of central bank liabilities.

So Phillips notes that open market operations have a different impact depending on what kind of institution is on the other side of the transactions. If the banking system buys new bonds and the government spends the money so raised, "bank deposits of the community rise and the level of bank cash is restored [so] the money supply and banks' holdings of liquid assets... have increased". But if

non-banks buy the debt, “money supply (bank deposits) and bank cash decline and the supply of money substitutes (bonds) rises; if the government spends the funds raised, money supply and bank cash return to former levels... money supply and bank cash are unchanged, but the supply of liquid assets (money supply plus bonds) has increased.” (ibid: 81) Clearly the same basic principle applies not only to such initial sales of government debt, but to sales of government debt between banks and non-banks, which do not involve the authorities at all. This explains why, so long as policymakers aimed to use credit and liquidity (or potential expenditure) as intermediate targets, the active use of the flexible bank balance sheet controls was necessary.

One reason the authorities fostered the growth of a money market, maintaining lender-of-last-resort facilities with dealers of short-term securities, had to do with this multi-tiered conception of liquidity described by Phillips (1971 [1964]). Money market funds worked primarily by attracting deposits from the public in competition with the banks and investing the funds in government securities. Their balance sheets were highly sensitive to yields on those securities, which drove the interest rates they offered depositors. Open market transactions between them and the central bank had a stronger impact on the liquidity of the banks and non-bank public than transactions between the central bank and the trading banks.

This is because a purchase of a security from the Reserve Bank by a money market dealer, funded by a deposit attracted from the public, reduced bank holdings of central bank money without leaving a government security on the trading bank’s balance sheet in return. For bank purposes a government security was almost as liquid as central bank money – and the LGS liquidity convention trading banks adhered to set a minimum ratio of cash, Treasury Notes *and* government securities holdings to deposit liabilities, not cash alone. Gurley and Shaw (1960), whose monetary theory has some resemblance to the liquidity approach of the Radcliffe Report, argue that the interest elasticity of demand for money, or liquidity, would increase with the progress of financial innovation. From the perspective of IS-LM analysis, this was destabilising, a shifting or morphing of the money-demand curve in an unpredictable way. But from the point of view of Australian policymakers, it could also hold out the prospect of a more effective, more direct link between instrument (interest rates under the control or influence of the authorities) and target (expenditure). Added to this was the prospect that the *level* of interest rates could be used as a more direct channel of policy, as well as working through the channel of institutional liquidity via relative rate adjustments. Although, as discussed in Beggs (forthcoming), economists of the 1950s generally did not believe the interest-elasticity of *investment* would be very high, opinion on this shifted in the 1960s, so that there was more confidence in the ability of policy to affect the demand for credit and not only its supply.<sup>4</sup>

More powerful market interest rate effects on both the demand for liquidity and the demand for credit would allow policy to rely less on the direct management of bank liquidity. That is not to say that the banking controls developed in the 1950s would become irrelevant. Even if policy worked entirely through open market operations, the chain of policy would still run through bank balance sheets, as banks remained the main supplier of liquid assets. The predictability of the effect of open market operations depended on some stability in the money (or broader liquidity) supply, and therefore in bank balance sheets. The struggle to impose liquidity constraints on the trading banks in the 1950s would thus have been necessary no matter how deep the money market. It is only that the banking controls would not have needed to be *varied* as an instrument of policy: movements in interest rates on bonds would control bank liquidity through quite voluntary non-bank portfolio shifts. It is

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<sup>4</sup> Griliches and Wallace (1965: 326) suggest that econometric tests in the 1960s began to find a significant interest rate effect on investment simply because of greater interest rate variance in the (United States) data.

interesting to note that central bankers in the 1960s considered expanding the scope of open market operations to private securities to improve their effectiveness. Phillips (1971 [1964]: 84) complains: “The fact that open market operations are confined to government securities tends to limit the efficiency of the technique... the central bank’s capacity to influence the structure of debts and assets and money flows would be enhanced if it were possible to deal in other marketable assets that were widely held by the community.” Although government securities continued to dominate the market, shifts in their yields would affect the cost of capital to firms only with a lag. He does not say why this road was not tried, but it surely involved an ideological opposition to the idea of the central bank funding private enterprise.

#### *Market development in the 1960s and 1970s*

In the mid-1960s the prospect of a policy based on open-market operations was still a projection into the future. Financial markets were deepening, but it was a slow, evolutionary process. Figure 4, displaying the amount of Commonwealth Government debt held by different classes of institution, gives some sense of the expansion of the market. It can be seen that the share held by banks remained within 45-50 per cent of the total in most years until the late 1970s, at which point there is a substantial rise in the proportion held by nonfinancial units. In itself, this division says little about market turnover, for which statistics are not available. It would possibly be more relevant to distinguish between active traders and more passive holders than between banks and non-banks, but again, there are no data to enable this distinction. It can be assumed, however, that savings banks were less active traders than trading banks, because the regulatory requirement that they hold a large proportion of their assets in government securities kept them relatively passive investors. If it can also be assumed that non-bank financial institutions and other holders are generally active traders (though this may be less true of certain sub-classes such as pension funds), then the conclusion can be drawn that the market was becoming gradually more active and less-reliant on government support.

The Committee of Inquiry into the Australian Financial System (Campbell et al (1980; 1981) reveals that turnover in government debt greatly increased in the 1970s, suggesting that financial evolution had sped up despite the confusion of high and volatile inflation. Unfortunately the lack of earlier turnover data mean it cannot compare this period with the 1960s, but it notes a quadrupling in turnover on stock exchanges in Commonwealth Government securities between 1973/74 and 1978/79, to \$1.7 billion. Most such on-exchange trading was in longer-term bonds (five-year plus), and Campbell et al (1980: 194) conclude that even at the end of the decade “it is not a well-developed market”. The off-exchange market in Treasury notes and shorter-term bonds – mainly between banks and specialist money market dealers – was much bigger (\$15 billion turnover in 1978/79) and had doubled in size since 1973/74.

Alongside the expansion of trading in government debt was a maturation of markets for private securities. Figure 5 shows that, in contrast to the 1950s, corporate debt issues generally exceeded capital raising via equity throughout the 1960s, and dwarfed it in the 1970s. Data on holdings of this debt, volume outstanding or turnover are not available, but clearly the market was maturing rapidly. Much of the corporate debt was short-term, and the development of a commercial paper market was encouraged by the central bank in the 1960s. (Campbell et al, 1980: 194-95)

As in the 1950s, finance and property companies accounted for the bulk of this borrowing, except during the mining booms of 1968-72 and the turn of the 1980s, so much of it was about a different form of intermediation rather than of disintermediation. (See Figure 6.) Also as in the earlier decade, the deepening of the market was bound up with the emergence and growth of new kinds of institution.

To some degree, in fact, it was a *reemergence*. Figure 1 shows that non-bank financial institutions began to reverse their post-credit crunch decline in market share in the mid-1960s, and their share of total institutional assets grew at a rapid rate in the early 1970s.

Figure 7 breaks down the non-bank category to show what form this growth took. Three types of institution dominate the growth: finance companies, permanent building societies and money market corporations. Finance companies were the major force of the first round of financial innovation in the 1950s, discussed in Beggs (forthcoming), and consolidated and re-emerged after being hit hard by the 'credit squeeze' of 1960/61. They raised money mainly by issuing bonds and notes, much of it with a maturity of less than two years and held by households. They filled a niche by offering relatively high yields on relatively short-term but riskier instruments, and lending for purposes not covered by the banks. Consumer credit, especially for cars, continued to be important but the higher-risk end of business lending grew faster in the 1960s, and there was a turn to real estate in the 1970s. The sector was concentrated, with the seven finance company groups majority-owned by the trading banks accounting for almost half the sector's assets, although there was also a 'long tail', with 30 per cent of assets held by 160 company groups. (Campbell et al, 1980: 139-45)

Permanent building societies concentrated on real estate and were mostly co-operative non-profit institutions. Nevertheless they had an important impact on the market, being financed almost entirely through call deposits and withdrawable share capital. They borrowed very short term and lent very long term, mainly for owner-occupier mortgages. Their rapid growth is mainly a story of the 1970s, based on the rapid growth in household demand for mortgages beyond the capacity of the banks to provide it, and was symbiotic with the emergence of mortgage insurance facilities. They grew mainly at the expense of the savings banks, and thus represent a re-routing of household-to-household intermediation. Because savings banks were subject to regulatory requirements to hold 40 per cent of their assets in liquid and public securities, the building societies were able to extend much more housing credit for a given quantity of deposits, which they could attract by offering better interest rates to depositors. A side-effect was therefore a decline in the 'captive market' for government securities and an increase in the proportion held by active traders. (Campbell et al, 1980: 125-32, 155-60; 1981: 184-85)

Though the smallest of the three categories, the rise of the money market corporations was the most remarkable from the perspective of monetary policy. (In fact the measure by assets understates their relative importance because their turnover was very high and they played an agency role.) These became known in Australia as 'merchant banks', but as Schedvin (1992: 382) notes this was "strictly a misnomer", as they had little in common with the classic merchant banks of Europe. On the other hand, 'money market corporation', their regulatory definition, overstates their concentration at the short-term end of the market. They played a variety of roles in the financial system, advising and underwriting for large companies and public authorities as well as trading securities on their own account across the liquidity spectrum. They grew into a number of niches left by the regulation of the trading banks and competed vigorously with those banks and other institutions, and among themselves. They were of vital importance to the evolution of the system as a whole in this period because of their interstitial position and quickness to find opportunities to engage in arbitrage between different kinds of instrument and institution, thus helping to knit the liquidity/risk spectrum together into a more continuous form. (Campbell et al, 1980: 145-51)

Finally, they were immensely important in linking the Australian financial system into international markets. Figure 7 shows that their initial burst of growth came between 1968 and 1973, a period of great capital inflow, which they were both directly a part of and facilitated. Because foreign banks

were prohibited from entering the Australian market as banks, they invested in subsidiaries which were not, technically, banks, but which did bank-like things and rapidly exploited the regulatory handicaps of the trading banks: “As the authorised banks did not pay interest on deposits of less than 30 days and, in any case, had to meet SRD requirements, the merchant banks were presented with an open field at the very short end of the money market.” (Schedvin, 1992: 388) One important consequence was that short-term market rates began to be influenced by movements in the Euromarket at a time when policy was attempting tighter conditions than prevailed overseas.

The 1970s were a period of consolidation and slower growth, and the fortunes of the money market corporations were volatile – the collapse of Mineral Securities in 1971 emphasised the risk element in their securities and triggered a panic; the credit squeeze of 1974 induced more collapses. By late in the decade it was common to see the sector as overcrowded, a product of a bubble: “The wave of optimism certainly did not carry through to the profit and loss account.” (Tsong and Yuill, 1981 [1978]: 80) Their spreads between interest paid and received were lower than those of the trading banks and other institutions, though this was compensated somewhat by their high degree of leverage. In any case, the narrowing of spreads reflects the fulfilment of the money market corporations’ historic mission so far as Australian financial markets were concerned – as catalysts of the homogenisation of financial space, filling out the possible paths of intermediation between the portfolio choices of nonfinancial units regarding how to store their wealth, and of borrowers about how to access money-capital. Because of the involvement of these institutions across the range of markets, and their ability to create new instruments, they intensified the interconnection between different institutional classes.

The ‘other’ category in Figure 7 is composed of credit co-operatives, pastoral finance companies, and authorised money market dealers. Credit co-operatives were non-profit institutions distinguished from building societies primarily by not being very involved in mortgage financing; pastoral finance companies have a long history in Australia and specialise in managing the particular liquidity and financing issues of farmers. The nine authorised money market dealers were of significantly more functional importance for monetary policy than the bulk of their assets suggests (\$2 billion in 1983). As discussed in Beggs (forthcoming), these developed mainly out of brokerage companies and were fostered by the central bank at the end of the 1950s through the provision of lender-of-last-resort facilities – the only non-bank institutions to enjoy this. In return they “observe a capital gearing ratio, a requirement to invest the great bulk of their funds in shorter-term Commonwealth Government securities and a commitment to make and develop a secondary market in government paper.” (Campbell et al, 1980: 152) Their funding came primarily from at-call and short-term deposits, with a deposit minimum of \$50,000 meaning most depositors were large firms, public authorities and banks. The essential differences from the money market corporations were (1) that they did not create their own *tradable* short-term instruments; (2) they dealt primarily in government securities; and (3) that they were the proximate vehicle for the central banks’ open-market operations in the money market. (Tsong and Yuill, 1981 [1978]: 79-80)

### *Eclectic policy*

That the Reserve Bank was placing greater weight on interest rates as an intermediate target, and open market operations as an instrument, was apparent by the early 1970s. J. G. Phillips, then Governor, gave another public lecture in 1971 indicating that the bank had “been coming to regard [open market operations] as the key instrument of monetary policy”. (Phillips, 1981 [1971]: 27) At the same time, he explained that monetary policymakers now thought in terms of a variety of channels between its instruments and the ultimate target, still aggregate expenditure. The quantity of credit remained the

focal point, but now interest rates were seen as the most important way for policy to influence it. The Radcliffe-like attention to the institutional balance sheet effects of interest rates was replaced by a Tobin-like vision of portfolio substitution: “As individuals seek to adjust [to interest rate changes] by shifting away from assets that have become less attractive, interest rates on other assets also change, and the process continues until actual holdings of all assets have been brought into line with desired positions.” (ibid: 20) Besides the credit effect, interest rates would also have a wealth effect on expenditure by changing the value of existing bonds and equities, and to some extent the quantity of money would affect expenditure directly, though Phillips was at pains to explain that the authorities did not have very tight control over the money supply, and the discussion of the quantity effect can only be described as half-hearted: “If money were showered from the roof of the Reserve Bank, it would, among other things, raise spending on goods.” (ibid: 21)

However, institutions remained part of the story insofar as financial markets are regulated:

In a completely free market, rationing of credit would be made effective purely by price. In most economies, however, there are various constraints, such as imposed or traditional maximum rates of interest charged by lenders. In such cases, the lenders have to resort to non-price rationing. (ibid: 20)

For this reason, the direct, variable controls on trading bank balance sheets – the Statutory Reserve Deposit system in conjunction with the LGS convention stipulating a minimum ratio of cash and government securities to deposits – would continue to be necessary. This raised the question of why the bank interest rate maxima continued to be used as a policy instrument, if the price mechanism would have been perfectly adequate in an unconstrained market. Phillips’ answer was simply that the direct rate controls were faster and more certain than the working of market rates through the spectrum. However, he made clear that the Reserve Bank had to take into account market interest rate pressures in setting the bank rates, because otherwise in the long run financial innovation would re-route around the banks: “as time goes on the market tends to find ways around a direct control”. (ibid: 28)

After the recovery from the 1960/61 credit squeeze, monetary policy was not seriously tested for the rest of the decade: according to Rowan’s (1980: 84) schema, policy was not set for more than ‘moderate restraint’ until the last quarter of 1968. However, when policy was further tightened in mid-1969, the newly eclectic use of instruments was in evidence. As can be seen in Figure 2 above, calls to the Special Reserve Deposits were very mild in comparison to earlier tightening episodes, and there was no variation in the LGS minimum.<sup>5</sup>

However, the Reserve Bank operated in the market to drive yields on government securities to post-war record heights (at least in nominal terms), and progressively raised a range of maximum banking rates. It approved the introduction of negotiable certificates of deposit by the trading banks, as a way for them to compete in the short-term securities market with the emergent money market corporations, although a maximum rate of 4.5 per cent limited their effectiveness at first. (Schedvin, 1992: 441-43) The higher official rates were successfully transmitted to corporate bonds across the liquidity spectrum: Figure 3 shows this with respect to the 12-month debenture rate.

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<sup>5</sup> Assessment of the policy stance should not, however, be confused with assessment of policy action – since the instrument of policy (in this case the SRD ratio) was not the only influence on the intermediate target (trading bank liquidity as measured by the LGS ratio), a given variation in the instrument may reflect a judgement of the strength of other influences as much as a desired movement in the intermediate target. See Davis and Lewis (1978: 20-26) for a discussion of ‘the indicator problem’.

The Bank was initially happy with its timing, but the impact of the serious tightening on bank advances did not begin to be apparent until halfway through 1970 – a lag of at least a year, blamed on the continued predominance of the overdraft form of most trading bank lending, as it was in the 1950s: “the rate of growth of limits responded to restraint fairly rapidly; but as one would naturally expect, the usage of limits increased very markedly.” (Rowan, 1980: 164) The volume of borrowing on the capital market continued to increase through 1970 despite the higher rates, but finally in the first quarter of 1971 “virtually collapsed”, while the equities boom peaked in early 1970 and began to fall in the third quarter. Meanwhile, the rate of growth in finance company credit slowed during 1969 but did not decline until 1971. (ibid: 165-66)

Timing continued to be a weakness of policy, then, and policymakers did not foresee the recession beginning just as policy was beginning to take its full effect in 1971. Policy was reversed late in that year when the extent of the rise in unemployment became apparent. Domestic monetary conditions in 1971 and 1972 were being disrupted by an intense inflow of capital from overseas attracted by the internationally-high interest rates and expectations of revaluation. Because the central bank was committed by the fixed exchange rate to purchase the incoming foreign currency with Australian dollars, this inevitably had a major impact on money supply growth. However, the impact on the intermediate targets of policy – interest rates and credit growth – is less clear: rates remained high through 1971 until policy shifted into an expansionary setting, and the fall in official bond yields preceded that of private bonds, although the latter eventually fell further and faster in 1972. (See Figure 3)

In 1973, following the Whitlam Labor election victory the previous year, monetary policy was enlisted as an element in the counter-inflation strategy, which also included the revaluation of the currency and tariff cuts. It became progressively tighter over the year as the ‘policy mix’ strategy required it to take on a greater burden to allow for the expansion of government expenditure, and it was intensified again following the double dissolution election in 1974. Again, interest rates were the central element of the strategy, with Statutory Reserve Deposit calls used but still to a smaller degree than in the 1950s and 1960s, though (non-binding) lending directives were still issued to the banks. Figure 3 shows that the rise in Commonwealth bond rate came in two dramatic waves, with 10- and 2-year rates peaking at almost 11 per cent in 1974, double their level in 1972. Of course this mirrored a similar spike in inflation, so that real rates were in fact lower than they had been at the beginning of the decade, but the nominal leap was of great importance to financial institutions that borrowed short to lend long – which is to say, most of them. The yield curve inverted so that short rates were higher than long. The impact of policy, then, ran very much through the balance sheets of institutions; it was far from a frictionless cascade of rates through undifferentiated portfolios. “Liquidity management continued to carry the burden of monetary policy.” (Schedvin, 1992: 498)

The trading banks, with their access to lender-of-last-resort facilities, were never at risk of failure. Their term deposit and overdraft rates were moved upwards in lockstep. As Figure 2 indicates, however, their liquidity was severely drained, with a large scale sell-off of government securities and only last-resort borrowing from the central bank keeping them above the LGS convention commitment. (The extent to which the banks’ apparent LGS ratio depended on this borrowing does not show up in the chart, but it began in April 1974 and continued for several months, totalling more than 3 per cent of deposits by August, at penal interest rates of about 15 per cent. (Rowan, 1980: 217; Schedvin, 1992: 506-07) In addition, the government entirely lifted the ceiling on their certificate of deposit rates, allowing the banks an unregulated rate for the first time, which promptly leapt to nearly 18 per cent in a money market environment in which 90-commercial bill rates reached 21.75 per cent. (Schedvin, 1992: 506)

These banks, in fact, had acted as a buffer for the rest of the financial system in the early stages of restraint, with net bank credit (new lending minus repayments) accelerating until mid-1973 – once again the overdraft system made it difficult for lending to be quickly restrained from the supply side. (Rowan, 1980: 214-15) There was no sign of a slowdown in non-bank institutional credit or private capital raisings in nominal terms before 1974, but given the rate of inflation its steadiness meant some real restraint. In 1974, the amount financed by finance companies fell back strongly even in money terms. (ibid: 221) By mid-year the most exposed institutions were in serious trouble, and the collapses of Mainline, a property company, and Cambridge Credit Corporation in August and September respectively were followed by a run on building societies, which were funded mainly through household call-deposits. This prompted the Acting Treasurer to promise lender-of-last-resort action if necessary. (Schdevin, 1992: 513-15) The extreme tightness in the money market, signalled by the above-20 per cent interest rates, drove the central bank to temporarily broaden its open market operations to bank-accepted commercial bills from May 1974. Outside the financial sector, many firms were in trouble, in desperate need of credit to bridge the gap between rapidly growing wage costs and slower growth in receipts as real demand fell back. The collapse in share prices across the year rivalled that of 1930, and by the end of 1974, the Sydney All Ordinaries index had fallen to half its level of its 1973 peak.

The ensuing downturn was fast and deep, and monetary policy was again reversed to expansion from the last quarter of the year. There had already been releases from the Statutory Reserve Deposits during the squeeze; these now accelerated and Commonwealth bond yields brought back down somewhat, though the yield curve remained inverted and the rate on Treasury notes was held above 9 per cent. (See Figures 2 and 3) The severity of the financial crisis was not only a lesson to the authorities about the limits to policy – “it probably represented something like a maximum in the speed and severity with which monetary policy can be reversed in the direction of restraint” (Rowan, 1980: 227) – but also that interest rate adjustment, even through open-market operations, was not a smoothly manipulable lever for managing private sector portfolios and expenditure in a predictable manner. It necessarily worked through interlocking institutional balance sheets, actively managed in such a way that policy could take a long time to have any appreciable impact, and then snap as expectations shifted and provoked a sudden run towards liquidity. Australian central bankers were facing the same dilemma as their counterparts in the United States. As Minsky (1982: 199) writes:

The Federal Reserve therefore is in a dilemma. It is dealing with a very sophisticated and convoluted financial system in which the available financing is responsive to demand. The existence of this complex system means that a great many payments have to be made among the financial institutions and that a set of financial relations exists that depends upon the availability of bank financing as a ‘fallback’ source of funds. The Federal Reserve can bring a halt to an inflationary process only as it forces high enough interest rates so that units which need refinancing are found to be ineligible for financing in the market because of inadequate expected profits or cash flows.... Since the mid-1960s the Federal Reserve has been able to force a contraction only as it has taken the economy to the brink of financial crisis... Disorderly conditions and widespread overt or covert failures in financial markets draw forth lender-of-last-resort intervention. The Federal Reserve intervenes to halt that which it has triggered. Intervention and government deficits set the stage for a subsequent inflationary expansion.

The conditions of 1974 provoked the government to consider the possibility of bringing the non-bank institutions under central bank control in the same manner as the trading banks. As discussed in Beggs (forthcoming), constitutional law had previously prevented the central bank from regulating the

balance sheets of the finance companies in this way. The Financial Corporations Act of 1974 was intended to be a supplement for the Banking Act, but covering “any corporation whose sole or principal business in Australia is borrowing money for the provision of finance” as well as any company for whom more than 50 per cent of its assets in Australia arose from the provision of finance, and retail companies whose instalment credit finance exceeded a certain amount. It required these firms to regularly supply balance sheet information to the Reserve Bank. Part IV subjected them to “such controls as may be prescribed in respect of asset ratios, lending policies and interest rates.” (Campbell et al, 1980: 250-51) However, although the information gathering came into force and would become very useful to policymakers at the Reserve Bank, Part IV was never proclaimed and its measures did not come into operation. It was soon buried in the political chaos of 1975 and the subsequent change of monetary strategy and government.

### **9.3 “Through fire or over ground which moves”: monetarism in Australia**

Changes in policy thinking have occurred, but they have not resulted in a wholesale recasting of implementation procedures. [Davis and Lewis, 1978: 13-14]

#### *Long and variable lags: monetarism and the econometricians*

The government and Reserve Bank worked with a money supply target between March 1976 and January 1985. Australia was one of the first countries in the world to adopt the monetarist advice and focus policy through such a target. Yet policymakers within the central bank were generally ambivalent about monetarism. They found monetary targets useful in disciplining governments’ fiscal policy and legitimating non-stimulatory policy and wage restraint at a time of high unemployment. But by no means did this require that they believe in monetarist theory. In any case, the monetary targets did not simplify the operation of monetary policy. Since the money supply was not under the direct control of the central bank, it meant focusing on an intermediate target, replacing (or supplementing) aggregate demand on the chain to price stability, now privileged above high employment and seen as its prerequisite. In itself, this redirection does not say much about the manner in which instruments were deployed in pursuit of that goal. Here I will argue that the commitment of the government to monetary targets helped the central bank to further strengthen its instruments and position within the financial system.

Opinion among Australian academic economists about the merits of Friedmanite monetarism was divided, especially among those specialising in monetary economics. If monetarism is taken broadly to mean that the quantity of money, however defined, matters to the determination of nominal aggregate income and/or the price level, and therefore matters to the transmission process of monetary policy, most monetary economists subscribed to it. This was not controversial, though whether particular attention to it would improve models of the economy was more so. Fewer would support the proposition that the quantity of money is the most important or unique determinant of macroeconomic conditions, with velocity stable or predictable, or that it was more helpful to think in terms of money quantity and velocity (or demand for money) than in terms of income-expenditure flows. Fewer still believed the authorities had unproblematic control over the money supply – and no-one believed the money supply was directly an instrument of the central bank.<sup>6</sup> The question of whether there should be discretionary monetary policy at all, or whether policy should follow some rule, was separate from the question of whether that rule should relate to the growth of the money

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<sup>6</sup> As Friedman himself told his Australian television audience, “you cannot simultaneously control your money supply and have a fixed or rigid exchange rate between the Australian dollar and other currencies.” (*Monday Conference*, 14 April, 1975)

supply. No doubt, though, the continuing problems of timing and lags in the policy transmission process, described above, bolstered professional support for monetary targeting among those who were otherwise less than convinced by monetarist arguments.

The notion that maintaining a steady, moderate growth in the money supply would stabilise prices depended on the stability of the demand function for money: not that money-demand was proportional to income alone, but that it had a steady relationship involving a number of identifiable factors, such as the interest rate. A large number of econometric studies of the demand for money in Australia were published in the 1970s: Davis and Lewis's (1978: 36-45) survey discusses twelve.<sup>7</sup> These studies assumed that the money stock was usually on or approaching the demand curve, because units could dispose of excess balances, and would do so until they left the system (e.g. by deposit cancellation through bank debt repayment or payment to the Reserve Bank, including for foreign exchange) or were absorbed by interest rate and/or price level increases. Excess balances could be absorbed by price level increases, most writers believed, because money demand would be related to *real* rather than nominal income.

Econometric estimation of the models typically involved an equation relating real money demand to real income and the rate of interest.<sup>8</sup> Some also incorporated additional variables for inflationary expectations, while others assumed the influence of inflation would work through the nominal interest rate. Decisions had to be made about which definition of money and which rate of interest to work with – and different studies used M1, M2 and M3, and rates from the 90-day commercial bill rate through 12-month bank fixed term rates, to 10-year Commonwealth Government bonds, in various combinations. (Davis and Lewis, 1978: 37-38)

Clearly there was a lot of room for experimentation with different variables and lags. All the studies estimated money demand functions that were stable for data from the 1950s and 1960s. Though the estimations of interest and income elasticities varied substantially, there was general agreement that demand for money was interest-inelastic (elasticity less than 0.5) and income-elastic (elasticity of around unity, though there was a lot of variation between studies).

However, there could be a lag of several quarters from the time of disturbance before adjustment was complete – many of the studies concluded that only half to two-thirds of the adjustment towards desired money balances would be complete within a year. As Adams and Porter note, “these lags do not sit easily with our preconceived notions that money markets facilitate rapid adjustment within the hour, let alone the quarter or the year.” (Quoted in Davis and Lewis, 1978: 41) A typical argument was that the lags resulted from imperfect financial markets with inflexible interest rates, as well as inertia on the part of wealth-holders, so that portfolios and rates adjust only gradually over time. Lewis (1978), however, presents a more complex argument: short-term interest rates adjust fairly quickly to clear the money market, but the relationship between income and the money supply is cyclically variable (e.g., with demand for money balances declining in an upswing) and tends only to

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<sup>7</sup> The stability of the demand for money was not of interest to monetarists alone: Adams and Porter (1981 [1976]: 137) point out that the neoclassical-Keynesian IS-LM framework also depends upon a money demand function, although it should be clear from previous that Australian policymakers did not operate or think in IS-LM terms, i.e. that policy targeted the interest rate by shifting the money supply curve to meet the money demand curve at the appropriate point.

<sup>8</sup> Wealth and ‘permanent income’ played a small role in the Australian literature compared with their importance elsewhere: “There are few estimates of private wealth in Australia, and no generally accepted set of weights for calculating permanent income.” [Davis and Lewis, 1978: 39]

adjust to equilibrium over a longer period. This implies that ultimately the initial interest rate effect on income may shift the long-run demand schedule for money balances before equilibrium is reached at its original level. The gulf between Lewis's hypothesis about the transition and those of others illustrates how open to interpretation the econometric evidence was. It was as capable of incorporation into a neoclassical-Keynesian model as into a monetarist model.

The stability of demand for money in the 1950s and 1960s appeared to break down in the 1970s. Norman and Purvis (1975) extend the models of earlier studies estimated with 1950s and 1960s data (Norton, Cohen and Sweeny (1970) and Valentine (1973)), and find them to predict the early 1970s poorly. Davis and Lewis (1978: 41-42) show that "all the errors of prediction follow a fairly common pattern... where out-of-sample predictions commence at 1972(1)." The length of lags also appears to vary, "suggesting some change in the nature of the adjustment process". This meant either that the models had neglected to include one or more relevant variables that would have maintained their stability, or alternatively that the actual structural relationships evolved over time. A similar breakdown in stability was common to the literature worldwide.

These difficulties in establishing that a stable money-demand function existed might seem to have undermined the monetarists – as Adams and Porter (1981 [1976]: 139) put it, "if demand functions turn out to be relatively unstable, this takes some heat off the monetary authorities – the finger points more at the marketplace than at the government sector." But it proved no great obstacle for the 'practical monetarists' urging policy implementation of money supply targets. The demand-side instability could be considered a reaction to instability in the money supply. The instability of the demand function in the 1970s "is in line with the notion (of Friedman and others) that money demand would be less stable in a period marked by dramatic and unforeseen changes in prices, interest and exchange rates." (ibid: 150) The authorities' fixing of exchange and interest rates, along with the series of strong, sudden policy reversals, caused the money supply to move erratically, and this, combined with the uncertainty of high and volatile inflation, upset hitherto stable money demand.<sup>9</sup> Policy committed to a steady rate of growth for the money supply could restore stability in the demand schedule. Further, while the path of the short-run adjustment process may move around, monetarists were confident of the ultimate long-run relationship between money supply and price level, with real interest rates and output determined by non-monetary factors. This was the notorious 'long and variable lags' argument, which effectively isolated the monetarist argument from falsification by transitory, short-run data, while turning the argument against the critics: if we cannot understand the complex processes by which monetary impulses are transmitted through countless portfolio decisions, how can the authorities be expected to make useful decisions?<sup>10</sup>

There was thus considerable room for scepticism to coexist with conversion within the community of professional economists. There was also a substantial gap between the complexity of the disputation in academic journals and conferences, and the rhetorical career of monetarism in the media and politics. Hughes (1980: 44) writes that monetarism was a "minority taste" among academics but had a "vocal following in the business world". Of course journalists had no trouble finding academic

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<sup>9</sup> They also argue that movements in money balances were much larger than the errors in the money demand model estimated from pre-1970s data, so that the degree of the function's instability should not be overstated – it did not completely break down.

<sup>10</sup> On the moving goalposts of the monetarist debate, see Blaug (1992: 192-205). Chick (1977) provides a detailed explanation and post-Keynesian structuralist critique of the dynamics, implicit and explicit, involved in the monetarist-Keynesian controversy.

defenders of monetarism, but the standards of evidence and debate were different. John Nevile, then Professor of Economics at the University of New South Wales, later reported his annoyance during Milton Friedman's 1975 visit that the statistics and charts he used in his public and media appearances were misleadingly simplistic, implying conclusions he would not have maintained or got away with in the academic literature. (Courvisanos and Millmow, 2006: 125)

### *Implementing the targets*

The economists in the Reserve Bank and Treasury were representative of their profession, though with perhaps a greater appreciation of the practical problems and possibilities of policy. That is to say, there would have been general approval of the idea that the availability of money or liquidity mattered, even if the ultimate target was credit or expenditure, but serious scepticism that it was *all* that mattered. Governor Phillips, in the 1971 speech referred to above, discussed Friedman's work, concluding that

The similarity between this and the results of those who have extended Keynesian liquidity preference into theories of optimum portfolios of assets should be obvious enough. At this level of generality, there is little difference between the various schools on the theory of demand for money. The differences that have been so well publicised seem to have arisen either from different assessments of the relative significance of the factors mentioned above or from selection of the 'best' empirical measure of the theoretical concepts. (Phillips, 1981 [1971]: 17)

By 1976, when the Fraser government imposed monetary targeting, the scholarly debate was old hat. According to Guttman (2005: 274), who interviewed officials of the time thirty years on, "Friedman's visit had little or no impact on thinking within the Reserve Bank and Treasury."<sup>11</sup> When journalists asked Treasury officers about control of the money supply in the mid-1970s, "they encountered a... marked lack of enthusiasm. Treasury was actively promoting inflationary expectations as an economic product, but not monetarism." (Hughes, 1980: 45) One reason was that control of the money supply conflicted with the Treasury's determination to maintain a high fixed exchange rate.

Phillips' successor as Reserve Bank Governor, Harold Knight, in office from 1975 to 1982, over most of the monetary targeting period, was very circumspect about his views and publicly deferential to the government's strategy. In any case, whatever monetary policymakers thought of monetarism as a theory, there was a great deal of affinity between the *practical consequences* of a monetary target and central bankers' desire for tighter policy. Pursuit of a monetary target was a political elevation of monetary policy to hegemony, clearing the ground of obstacles like the 'cheap money' objection to high interest rates and bank objections to liquidity management, and also subordinated fiscal and exchange rate policy, which had previously undermined tight money. As the Reserve Bank's submission to the Campbell Committee of Inquiry into the Australian Financial System put it, monetary policy was being asked to "pick its way as best it can 'through fire or over ground which

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<sup>11</sup> Then-Deputy President of the Conciliation and Arbitration Commission Joe Isaac reported to Guttman that Friedman's visit "was a rather amusing episode because I don't think he had any effect on our thinking at the time. I mean we'd heard about it before; it was nothing new to us. Our feeling was there he goes again with  $MV \equiv PT$ , we've done the Fisher equation to death; it's not going to help very much now. We were suspicious of his econometrics on causal grounds. Obviously these things must add up – it's an axiom, it's an identity – but there are no causal connections indicated there. So I don't think Friedman's visit made any kind of impact."

moves”, and the monetary target at least provided it with a path and cleared away some of the obstacles. (Reserve Bank, 1979: 7.3)

The discussion of monetary targeting in the Campbell Committee’s report in 1981 shows little trace of any Friedmanite inspiration or faith in a special relationship between the money supply and the price level. Rather, *some* publicly announced target is justified on such grounds as that

it provides an additional encouragement to the authorities to control the budget deficit... it provides market participants with information concerning policy intentions... to the extent that it is taken as an affirmation of the Government’s resolve to pursue a disciplined monetary policy, it can contribute to a favourable climate of expectations.... (Campbell et al, 1981: 53)

That the intermediate target should be some monetary aggregate, rather than bank reserves, an interest rate, or nominal GDP, is defended *not* on the basis of a predictable relationship with the price level or any ultimate target, but on the grounds that it is predictable, controllable, and “imposes a discipline on governments and on various groups of decision makers in the economy”. [ibid: 54] The particular aggregate targeted – M3<sup>12</sup> – was selected, however, because of a “fairly close relationship with nominal income” and because it “embraced a large part of the private sector’s liquid assets and the authorities could regulate it *through the use of direct controls on the banking system*”. [ibid: 55-56, emphasis added]

Of course, M3 was not under the direct control of the authorities: most of it was made up of private bank liabilities, and the rest was cash the public chose to hold instead of bank liabilities. The proximate creator of money, then, was the banking system. The banks were limited in their capacity to expand their liabilities by their own liquidity situation – by the size of their cash and liquid reserves, and by their liquidity preference. This was ultimately constrained by the LGS ratio convention (and in the case of the trading banks, by LGS-like balance sheet regulations), but the banks were not typically at this limit and so had some discretion.

The textbook ‘money multiplier’ approach divides the sources of money supply changes into changes in the monetary base (liabilities of the central bank) and changes in the ratio of the money supply to this base. This multiplier can be decomposed into components depending on the proportion of the private sector’s money balances held as cash (i.e. base money) rather than private bank deposits, the required ratio of private bank reserves to monetary liabilities, and the ratio of private bank excess reserve holdings to monetary liabilities. The point of such a division is, according to Brunner [1973: 489], “to construct a framework which decomposes the money stock in the most informative manner into two components. One *reflects completely the behaviour of the authorities* and the other describes approximately (and dominantly) the *variations due to the public’s and banks’ behaviour*.” If the private sector behaviour generating the multiplier is constant or predictable, the authorities can control the money supply by managing the base.

However, “the assumptions implicit about public and bank behaviour in the Australian work have not always coincided with the view of overseas writers who derived the approach.” (Davis and Lewis, 1978: 46) Not only were there difficulties in predicting the banking system’s leverage from its reserve base, but there were problems in policy control of the base itself. The latter issue was related to competing policy targets with monetary effects. Specifically, so long as the exchange rate was

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<sup>12</sup> That is, cash in the hands of the public and non-government, non-interbank current deposits with trading banks (M1), plus non-government, non-interbank fixed deposits with trading banks, plus certificates of deposit, plus all savings bank deposits.

pegged, the central bank was compelled to pay domestic currency for foreign exchange to whatever extent the market demanded at that rate. The same principle applied with respect to pegged interest rates on official bonds. Banks could easily 'make position' by selling government securities at a predictable price, and in the tightest conditions could resort to lender-of-last-resort borrowing from the Reserve Bank.

Thus up to the mid-1970s at least, it was more typical for Australian economists to treat the money supply as demand-determined, as discussed above. In other words, that the money supply was endogenous was an entirely mainstream proposition, supported even by those sympathetic to monetarism. For the latter, the point was to change the system so that this was no longer the case. As Douglas Purvis, another visiting Canadian Chicago graduate, put it:

Several proposals for institutional change were suggested which might make the existing system more compatible with the model. This is not done in the belief that there is anything sacred about the model but rather because those features of the system which gave rise to the problems in using the model are the same features which render precise short-run control of the money supply difficult. (Purvis, 1976: 81-82)

If Australian policymakers traditionally had less control over the monetary base than the money multiplier approach suggested, they had in their banking controls instruments of influence over the multiplier itself. Thus Brunner's strict division between the base as being under policy control, and the multiplier as not, did not describe their policy problem. In Australia, targeting the money supply meant a combination of (1) subordinating the competing policy objectives with impacts on the base (exchange rate, interest rate and fiscal policy) to the monetary target; (2) using the direct controls to manage bank liquidity; and (3) influencing the *demand* for money via income. The third, demand-side element had no role in the monetarist program, and made no sense within its theoretical system, because causation was supposed to run from the money supply *to* nominal income. But policymakers did not necessarily hold to this paradigm, so it was perfectly possible to see the transmission process working in reverse: for example, with high interest rates and/or rationed credit slowing income-expenditure growth the old-fashioned way, and thereby slowing the growth of demand for money to meet the targets.

The Budget Speech statements dealing with the monetary target broke down the components of money supply growth not into base and multiplier, but as follows:

change in M3 =  
government domestic budget deficit  
+ change in Reserve Bank holdings of gold and foreign exchange  
- change in private non-bank holdings of government securities  
+ change in advances of trading and savings banks  
+ balancing item (Davis and Lewis, 1978: 46)

The Reserve Bank's *Annual Report* took a similar approach, except that the budget deficit did not appear as a separate item, and instead of *subtracting* changes in non-bank holdings of government securities, it *added* changes in the banking system holdings, including those of the Reserve Bank itself. These treatments amounted to the same thing, since the budget deficit would contribute to

banking system holdings of government securities, except to the extent that the non-banks purchased them. (ibid: 45)

From the perspective of the money multiplier approach, the most curious thing about separating the components out in this particular way is that a fundamental divide is made between bank and non-bank balance sheets, but *not* between the balance sheets of the central bank and the private banks. *The movement of a government security between the Reserve Bank and a private bank makes no difference to M3 formation* according to this breakdown, whereas according to the textbook money multiplier approach, the sale of a government security by the central bank to a private bank would reduce the monetary base, and given a constant money multiplier, reduce the money supply to a greater extent. The reason for the Australian difference is that the reserve requirement – the LGS convention (and the similar, tighter, restriction on the savings banks) – includes government securities as well as cash among the stipulated minimum reserves. As discussed above, this was a legacy of the central bank's maintenance of fixed yields by buying and selling whatever quantity of these securities the market demanded at the going price, so that they were almost as liquid as cash. Insofar as the central bank now allowed yields to vary, their liquidity had lessened, but the reserve requirement nevertheless continued to include them.

Figure 8 shows the percentage point contribution of each of the above factors to M3 growth before and during the money-targeting period. The first thing to notice is the difference made by exchange rate flexibility. In the first three years of the decade, central bank purchases of foreign exchange were responsible for a large proportion of the money supply growth: not only directly, but also indirectly via the effect on bank reserves, as some of the substantial expansion of bank lending was made possible by the inflow, particularly in 1972/73.

Following the revaluations of 1972/73, foreign exchange had a much smaller impact on the money supply for the rest of the decade. In the early 1980s, when market pressures on the exchange rate were again resisted to some degree, it returned as a contributor, so that monetary policy had to lean against it in pursuit of the targets. In 1984/85, after the float, of course foreign exchange no longer made any difference to the money supply; but by then monetary targeting was almost finished. Fiscal policy's contribution to restraint of the money supply in the targeting period can also be clearly seen. The Fraser government progressively tightened the budget until the recession of 1982. The contribution of this to monetary restraint can be seen particularly in the three years from 1979/80.

The rest was a job for monetary policy. The change in intermediate target in itself made no difference to the modus operandi of policy: as in previous periods of tightening, it worked by restraining bank balance sheets and open market operations – exactly as it did when the target was credit-financed expenditure. The biggest difference in the workings of policy was simply the vigour with which it was pursued. 1976 saw the immediate reversal of any previous intent to ease off supposedly dirigiste bank-centred policy in favour of a 'market-based' approach:

The [Statutory Reserve Deposit] ratio, for example, was changed six times in 1976, six times in 1977, three times in each of 1978 and 1979, and once in 1981. It ranged from a low of 3.5 per cent to a high of 10.0 per cent. Lending guidelines were in force for most of the period, with explicit guidelines announced by the authorities of 10 and 12 per cent increases over 1980-81 and 1981-82 respectively. The trading bank LGS ratio was increased from 18 to 23 per cent between February 1976 and March 1977 as an explicit monetary control device. (Davis, 1985: 42)

This is not to say that open market operations fell into the background: on the contrary, they too were pursued with great vigour. The main difference now was that there were fewer scruples about high interest rates. There were still some difficulties: new debt issues continued to interfere, and the captive market for government bonds arising from the liquidity regulations on banks, money market dealers, etc., made demand for them less interest-elastic than it would otherwise have been. (ibid: 42) Active management of bank interest rate maxima did recede: having been lifted to 10 per cent for trading bank fixed deposits and 9 per cent for savings bank deposits in 1975, deposit rates were not adjusted again until restrictions were lifted entirely in 1981, though overdraft rate maxima remained regulated and sometimes adjusted until 1984. (Foster, 1986: 160-61)

One new 'market-based' instrument emerged in 1976: the introduction of Australian Savings Bonds. These were heavily marketed to households as a high-yielding but relatively liquid store of wealth (being redeemable at a month's notice). The point was to increase the proportion of government debt held by the non-banks, and they were relatively successful on this front, although its ease of redemption meant holdings would fluctuate quickly if their interest rates got out of line with the rest of the market. In fact this disintermediation of government borrowing worked too successfully at first, with some non-bank financial institutions needing public support. (Davis and Lewis, 1978: 39) These bonds show the continuing importance of the use of relative interest rates to deal with the multiple tiers of liquidity in the financial system. Thus elements of the 'Radcliffe approach' of the 1960s (discussed in Section 2 above) continued to operate into the 1980s – the Australian Savings Bonds made up more than 15 per cent of total government securities in Australia by 1984. (Foster, 1996: 96)

Table 1 shows the M3 growth projections and actual M3 growth over the targeting period, alongside the Budget Papers' forecast of growth in real output and growth in the price level, given the rate of monetary expansion. It can be seen that the projections were reached in the first two years as the authorities attempted to slow monetary growth, but the 1978/79 attempt at further restriction was unsuccessful. In 1979/80 even the more modest attempt to repeat the achieved rate of two years before failed, and despite diminished expectations, in future years M3 growth continued to exceed the projections, except in 1983/84 when it scraped in. In the first half of 1984/85, M3 grew much faster than the projection and targeting was suspended, never to return.

In its own terms, then, monetary targeting was not a success. Even the early years' apparent success was marred by large fluctuations within the year. (Davis and Lewis, 1978: 29) The forecasts of real and money-income growth with which the M3 forecasts were associated fared even worse in several years. Neither were the targets a success in monetarist terms – even if generous excuses are made for 'long and variable lags', after several years of monetary restraint, inflation was back above 10 per cent in the early 1980s. Early statements about the projections often gave the impression that monetary growth determined the growth of nominal income, and the wage-determination process would determine how much of that would be taken up by real growth and how much inflation.<sup>13</sup> But the income-velocity of money was very unstable, as shown in the last column of Table 1 – the relationship between M3 and money-income was variable.

I have already noted that by the time of the Campbell Inquiry into the financial system, and especially within its 1981 report, the justification for the monetary projections had become pragmatic. It had more to do with their benefits for the organisation and discipline of policy than with monetarist propositions about firm causation from money supply to money-income. The Treasury's review of the

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<sup>13</sup> Guttman (2005: 90-94) shows that at the outset of targeting the Treasury and Reserve Bank appeared to hold inconsistent views on the processes by which a retardation of the rate of monetary growth would affect the growth of real income and prices.

monetary projections in the 1979 Budget Papers stressed their conditional nature, and both why they might be difficult to reach and why policymakers might legitimately revise their views in the course of the year:

1. the composition of M3 growth was not neutral, e.g., growth coming from sales of government securities between banks and non-banks had different implications than growth from central bank purchases of foreign currency;
2. unpredicted external influences on cost growth, e.g. from shifts in tradeables prices, might mean that meeting the projections would be possible only with less-than-desired real output growth;
3. smooth growth in the money supply might require extreme instrument settings that are undesirable in themselves; and
4. tight control of a given monetary variable can induce portfolio shifts into substitutes for little functional difference. (Guttman, 2005: 109-10)

All these arguments further confirm that monetarism had not at all displaced an older, eclectic neoclassical-Keynesianism among policymakers. Further, the justification for continuing with the projections, despite these concerns, rested entirely on their role in “demonstrating that the aims of monetary policy fit within a coherent overall policy” and “providing a ‘peg’ of stability [to] exert a direct influence upon public expectations, which in present-day conditions are central to the inflationary process.” (Quoted in Guttman, 2005: 110-11) In other words, the projections were not of much use in themselves, but partly for public consumption and partly to focus the organisation of policy instruments coherently. The real effect of monetarism in Australia was thus to allow the old instruments to be used in a stronger, more coherent fashion for the purpose of old-fashioned financial restraint, working through bank balance sheets and interest rates.

Considered in these terms, monetary targeting was a qualified success. Although M3 growth generally exceeded the projections, it was certainly slower and more stable than it had been previously in the 1970s. This had more to do with the flexibility of the exchange rate and tighter fiscal policy than with monetary policy as such. But even in terms of monetary policy, targeting facilitated a tightening that might have been difficult without it. Far from being a ‘hands-off’, neutral policy, by the standards of the previous decades, monetary policy was simply tight over the targeting period. As shown in Figure 9, after 1976 real interest rates rose higher than they had been since the beginning of the decade, and in the 1980s headed to record post-war highs. As discussed above, the first few years of targeting were also associated with active use of the Statutory Reserve Deposit system, though after 1979 the authorities focused on interest rates and open market operations. Monetary targeting finally killed ‘cheap money’, and it would not be revived.

Although policy in Australia did not at this point reach the intensity of the ‘Volcker shock’ in the United States, the role of monetary targets played an analogous role. Charles Schultze, at the time Chair of President Carter’s Council of Economic Advisers, would later explain:

In theory the Fed could have kept on raising the bejesus out of the interest rates, but that’s what it couldn’t do politically. The beautiful thing about this new policy was that as interest rates kept going up, the Fed could say, ‘Hey, ain’t nobody here but us chickens. We’re not raising interest rates, we’re only targeting the money supply.’ This way they could raise the rates and nobody could blame them. (Quoted in Greider, 1987)

#### **4. Towards deregulation**

There was a tension within the conservative politics of the 1970s and 1980s between a commitment to ‘rolling back the state’ and a commitment to strong monetary policy. Friedman’s monetarism was presented as a withdrawal of the state from discretionary macroeconomic policy, and thus as consistent with a broader message of deregulation. But as I have argued in the previous section, the implementation of actually-existing monetarism involved a strengthening of the central bank and its ability or willingness to use its capacity for restraint. Furthermore, deregulation of the financial system turned out to be in conflict with monetary targeting, in Australia as elsewhere – because it destabilised demand for and supply of the various monetary aggregates as processes of dis- and re-intermediation took place.

I argued above that the relationship between policy, private financial institutions and markets is a complicated one that is not well understood by considering the financial sector as a zero-sum game between ‘state’ and ‘market’. The state is essential to the reproduction of money within capitalism, and it is not surprising that it could not easily ‘withdraw’. In Section 2 I emphasised the extent to which the structure of the financial system can be changed by private financial innovation, which is both reactive to policy and relatively independent from it. I also showed that the apparent move towards more market-oriented policy in the 1960s did not weaken the power of the central bank, but on the contrary, was driven by a vision of *more* effective policy. After all, policymakers did not want control for the sake of it, but wanted greater control over particular intermediate targets, and welcomed and facilitated the maturation of extra-bank financial markets on the grounds that these would eventually make possible more predictable, frictionless transmission channels. A dichotomy within the private sector between institution and market is equally misleading: even open market operations depended for their success on the relative predictability of balance sheet management of institutions, and the trading banks in particular. The open market operations of the 1960s and after depended on the banking conventions and regulations established in the ‘dirigiste’ 1950s. The financial system deregulation of the first half of the 1980s can be understood within this framework: it may have been in contradiction with monetary targeting, but on the whole it did not conflict with the capacity of the central bank to influence the cost of finance and thereby macroeconomic conditions.

The variety of institutions and the depth of the markets that developed between the mid-1960s and the end of the 1970s (a second wave of a process that had really begun in the 1950s) emerged within the regulatory framework that would be ‘deregulated’ in the 1980s. The particular forms of institution and market were, therefore, partly creatures of that regulatory framework. I showed in Section 2 how the money market corporations in particular grew in the interstices of the regulated system and developed a host of instruments to bridge gaps in the spectrum of liquidity and credit – a kind of deregulation before deregulation. But a key fact about the financial ecology of Australia in the 1970s was that many of its niches existed because its dinosaurs, the trading banks, were hampered by interest rate and liquidity controls from competing at full strength in important parts of the market.

It was, of course, the early 1980s that are cast as the watershed in monetary policy, because of the floating of the dollar and lifting of certain capital controls – the first change of which met Friedman’s requirement for floating rates, while the second (still with Friedmanite approval) undermined the stability of national money supply. The deregulation of the early 1980s was primarily about removing the restrictions on trading and savings banks: deposit rate maxima were removed in December 1980; the minimum terms on certificates of deposits and various fixed deposits were reduced over the next two years; bank lending guidelines were abandoned in June 1982; the same year, the asset class restrictions on savings banks were greatly reduced, and they were permitted to accept business deposits. In August 1984, the Hawke Labor Government removed all remaining restrictions on bank deposits, and savings banks were allowed to offer chequing facilities, ending the monopoly of the

trading banks over the payments system. Finally, in 1985 the trading bank LGS ratio was replaced with a Prime Assets Ratio relating to a broader group of assets, and the government opened the possibility for foreign banks to operate in Australia. (Schedvin, 1992: 548-49; Guttman, 2005: 189-90)

From the end of 1980, then, trading banks deposits were fully competitive with the non-bank substitute instruments that had emerged because banks could not match their interest rates. The ensuing reintermediation through the trading banks could not but disrupt money targeting, because M3 included their fixed deposits and certificates of deposit. While financial innovation had previously been associated with increases in monetary velocity as the system stretched liquidity, it is unsurprising that the income velocity of M3 should *slow* in the 1980s, because of a flow back to trading bank deposits as a store of wealth. (See Figure 1.) This was perfectly clear to the monetary authorities: a Reserve Bank report of 1982 concluded that M3 would “not be a very useful guide to policy” in the transition period during deregulation, while a broader aggregate would be more difficult for policy to control over the short run. (Guttman, 2005: 168-69) Guttman (ibid: 171-73) concludes that the M3 target survived as long as it did after that only because the Labor Government did not want to risk further spooking the financial markets at a time when capital was already flowing out of the country.

Deregulation of bank interest rates had a further major consequence on the path of transmission for monetary policy, unintended but not unwelcome. I noted in Section 3 above that policymakers placed great importance on the boundary between bank and non-bank balance sheets: government securities held by the former rather than the latter were supposed to have a multiplied effect on the money supply because they were almost as liquid as cash reserves given central bank support for their price/yield. The more yields were allowed to vary, however, the less liquid they became, because banks could take heavy capital losses if forced to dispose of them in a hurry. Consequently, bank position-making strategies changed. Once restrictions were lifted from their deposit rates and from the terms for which they could issue certificates of deposit, they very quickly began to manage their liquidity on the *liability* rather than the asset side of their balance sheets. That is, instead of selling securities when they needed to boost cash reserves, they could raise deposit interest rates to attract deposits away from the non-bank institutions, and issue more short-term instruments into the money market. After 1981, the trading banks ran their reserve holdings of cash and government securities right down to the LGS convention minimum, close to which it remained until the convention was lifted. (Davis, 1985: 43-45)<sup>14</sup>

The liquidity of government securities thus declined and the elasticity of demand for them increased, as deregulation reduced their captive market, so they became just another security with no particular claim to form part of the monetary base. On the one hand this simplified open market operations and the relationship between budget deficits and monetary conditions. On the other hand, the banking system turn to liability management also involved a readier recourse to foreign sources of funds. So long as currency management continued, any pressure on the liquidity of the banking system as a whole could be relieved by such an inflow of funds. Following the float in December 1983, however, such borrowing no longer affected the reserve base of the banking system *as a whole*: “Since currency demand of the nonfinancial sector is relatively interest inelastic, and non-bank intermediaries hold most of their liquid reserves in the form of bank deposits, there is little scope for reshuffling of the monetary base to meet short-term demand.” (Davis, 1985: 45)

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<sup>14</sup> Cf. Minsky (1986: 72-77) on an earlier analogous shift in American banking strategy.

Ultimately, the combined effect of the deregulation of interest rates and the exchange rate was to greatly increase the purchase of central bank open market operations on the reserve base of the banking system. The relationships between the base and the ultimate supply of credit and liquidity were still subject to change as a result of changes in institutional liquidity preference and innovation. But the increased dependence of banks on liability management in the short-term money market, and their tendency to set their lending rates on the basis of a mark-up over their cost of funds, made possible a new future for monetary policy, centred on control over the base short-term rate in the money market. Finally, in the mid-1980s, following deregulation, Australian monetary policy began to resemble the textbook.

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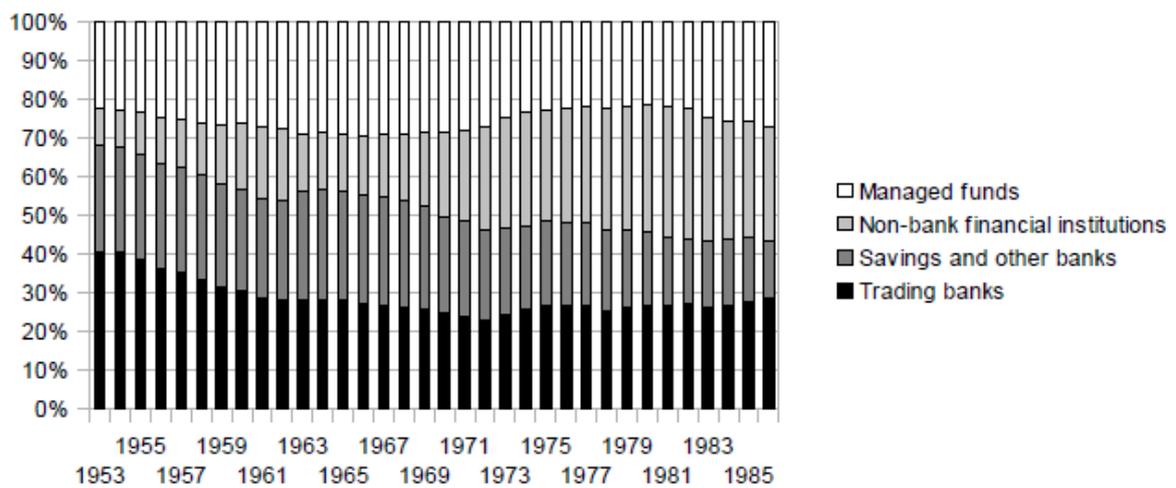
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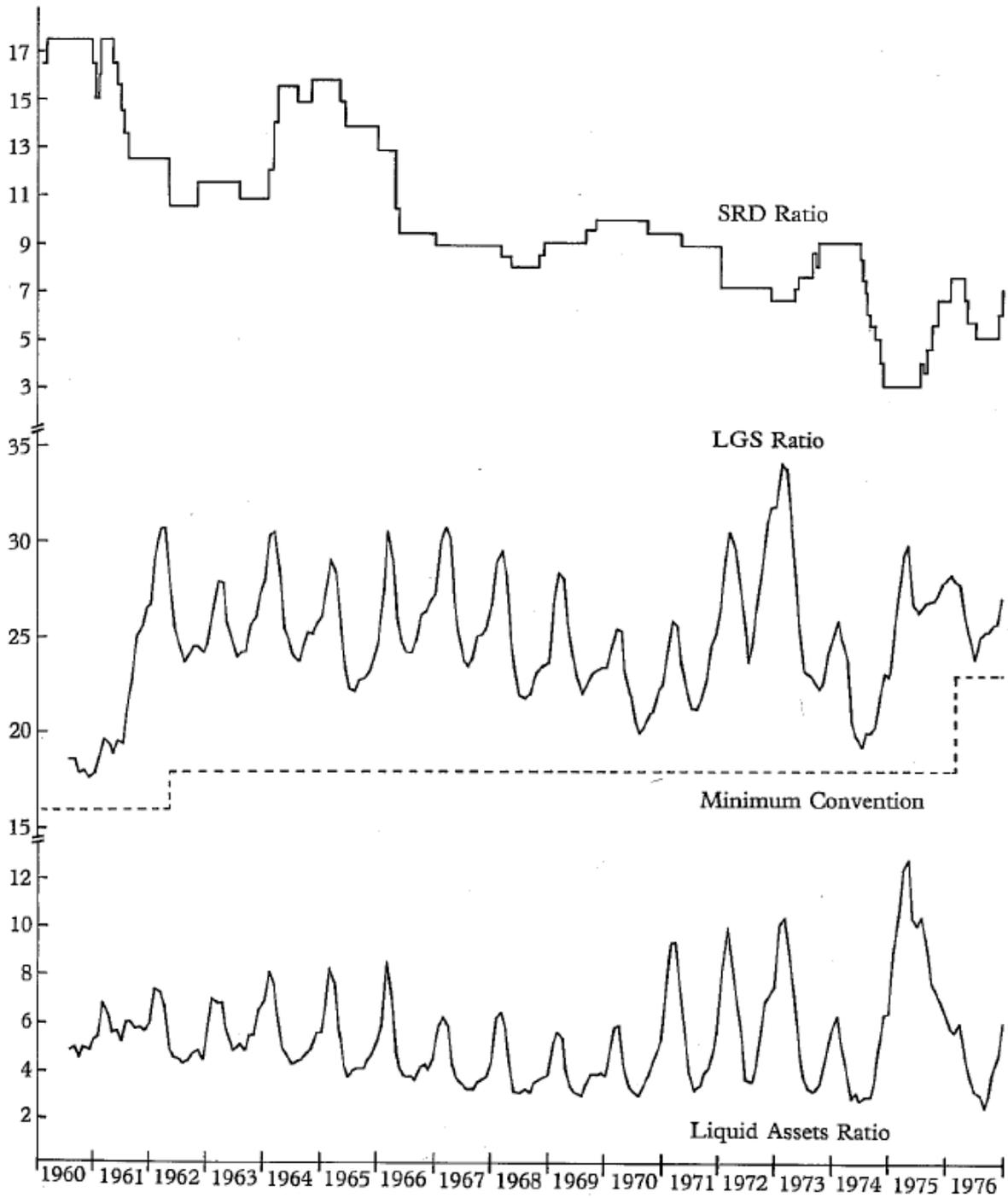
## Figures and tables

**Figure 1: Assets of financial intermediaries by type, % of total**



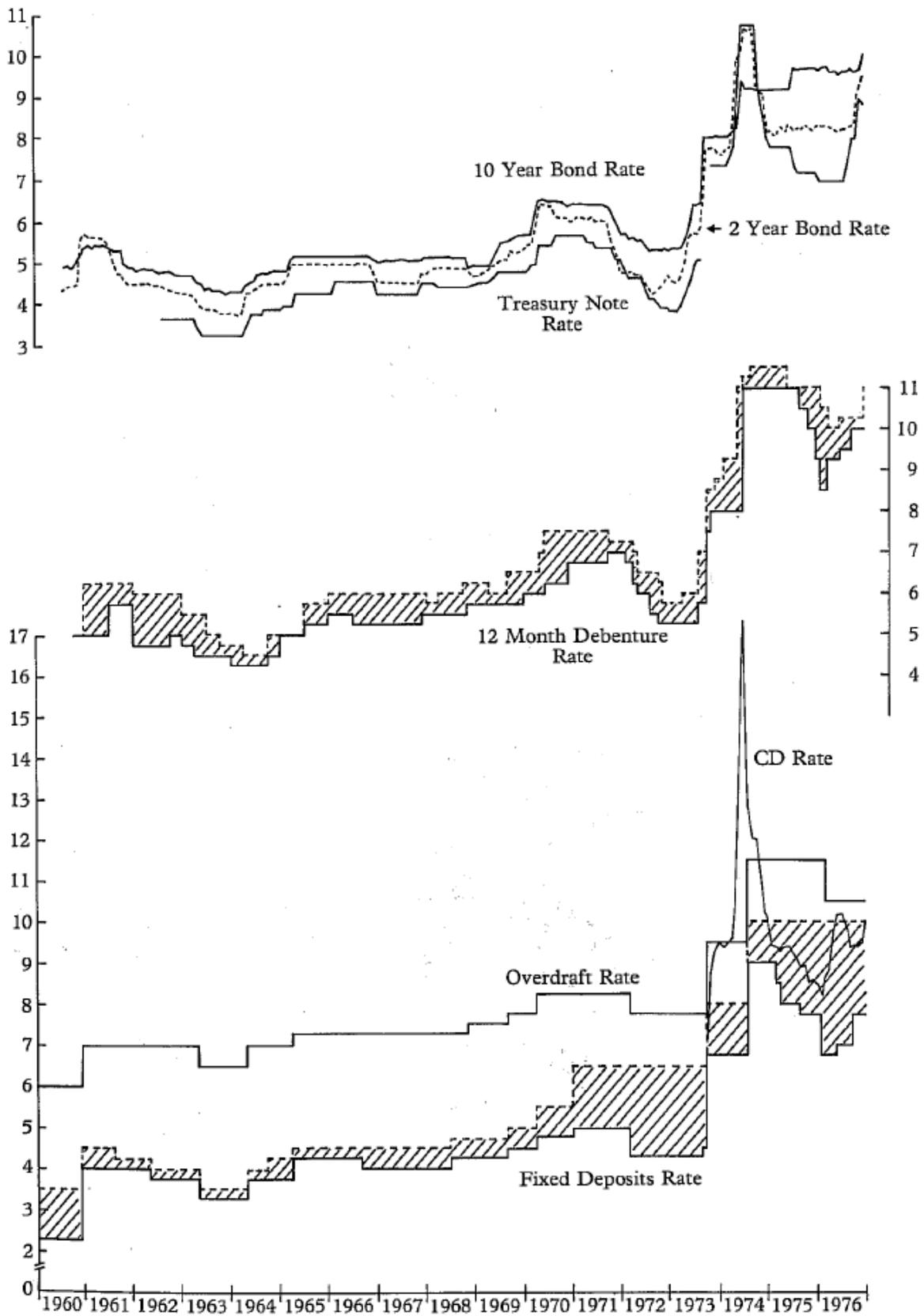
Source: Foster (1996: 124-25)

**Figure 2: Indicators of trading bank liquidity**



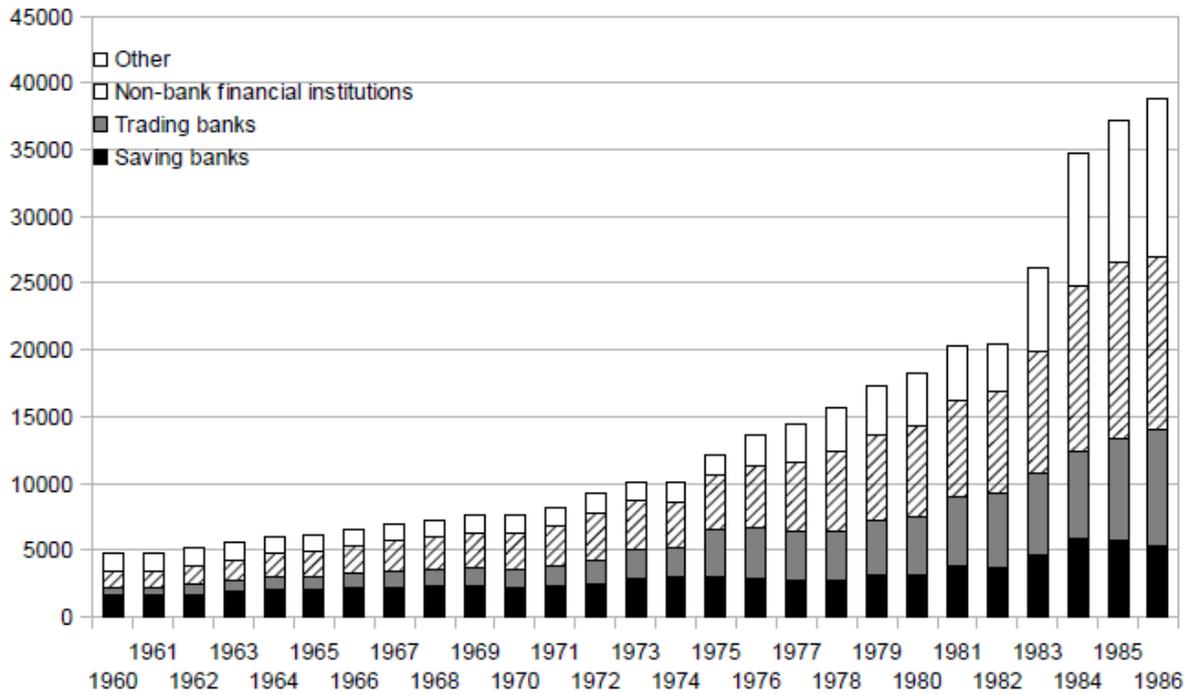
Source: Davis and Lewis (1978: 21)

**Figure 3: Selected interest rates**



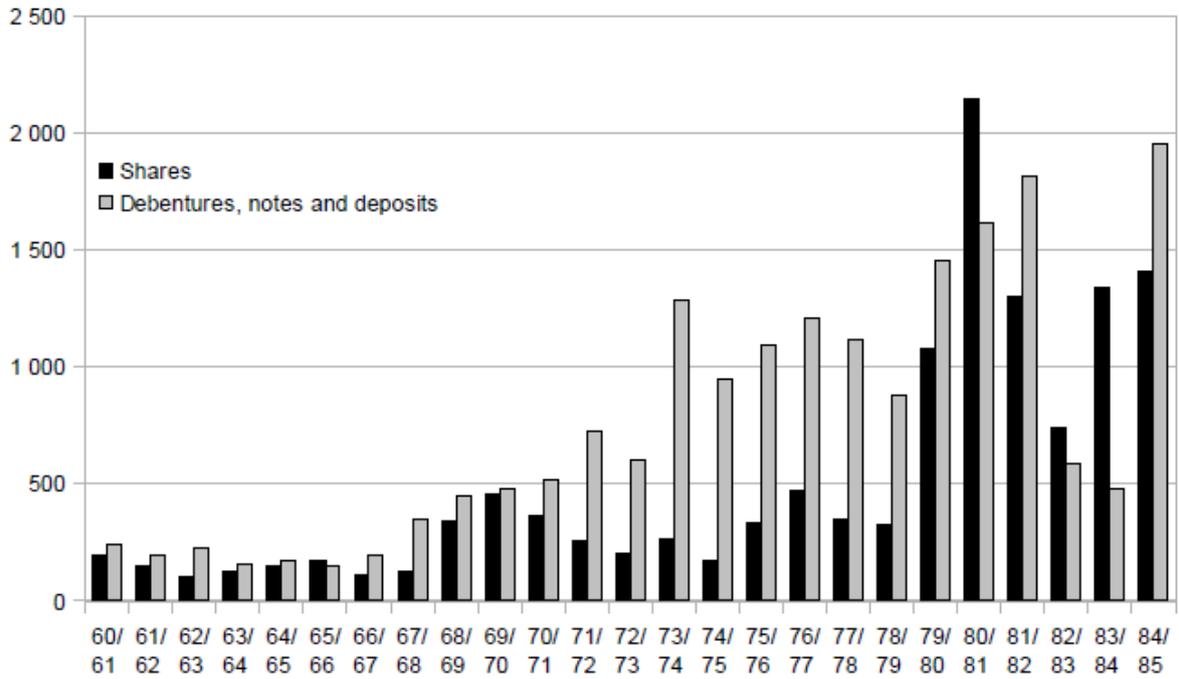
Source: Davis and Lewis (1978: 23)

**Figure 4: Holdings of government securities by institution type (\$m)**



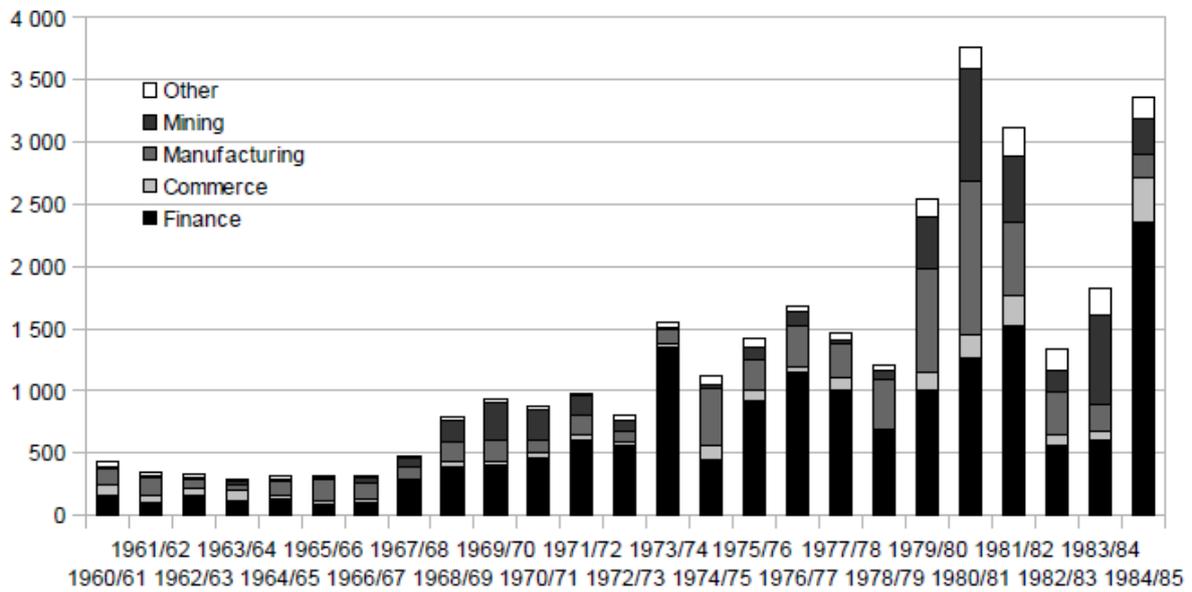
Source: Foster (1996: 100-01)

**Figure 5: New capital raisings by listed companies, by type (\$m)**



Source: Foster (1996: 159)

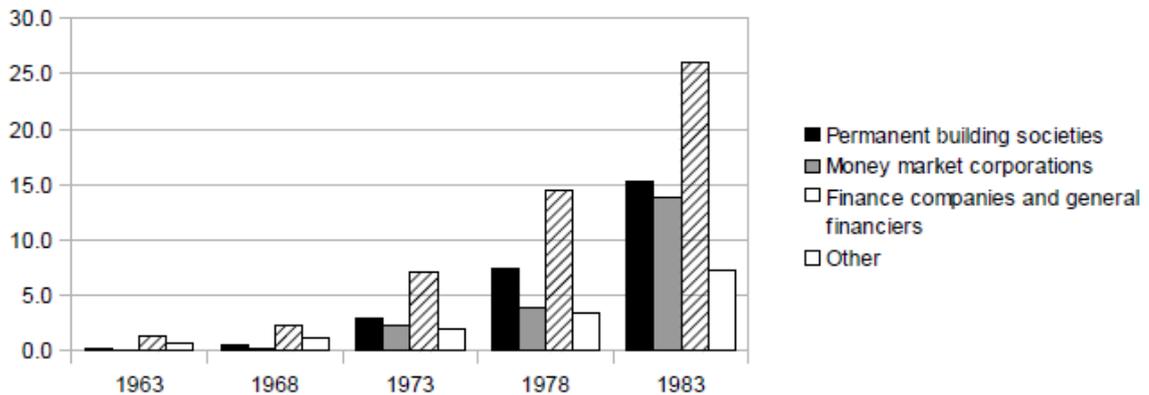
**Figure 6: New capital raisings by sector (\$m)**



Source: Foster (1996: 159)

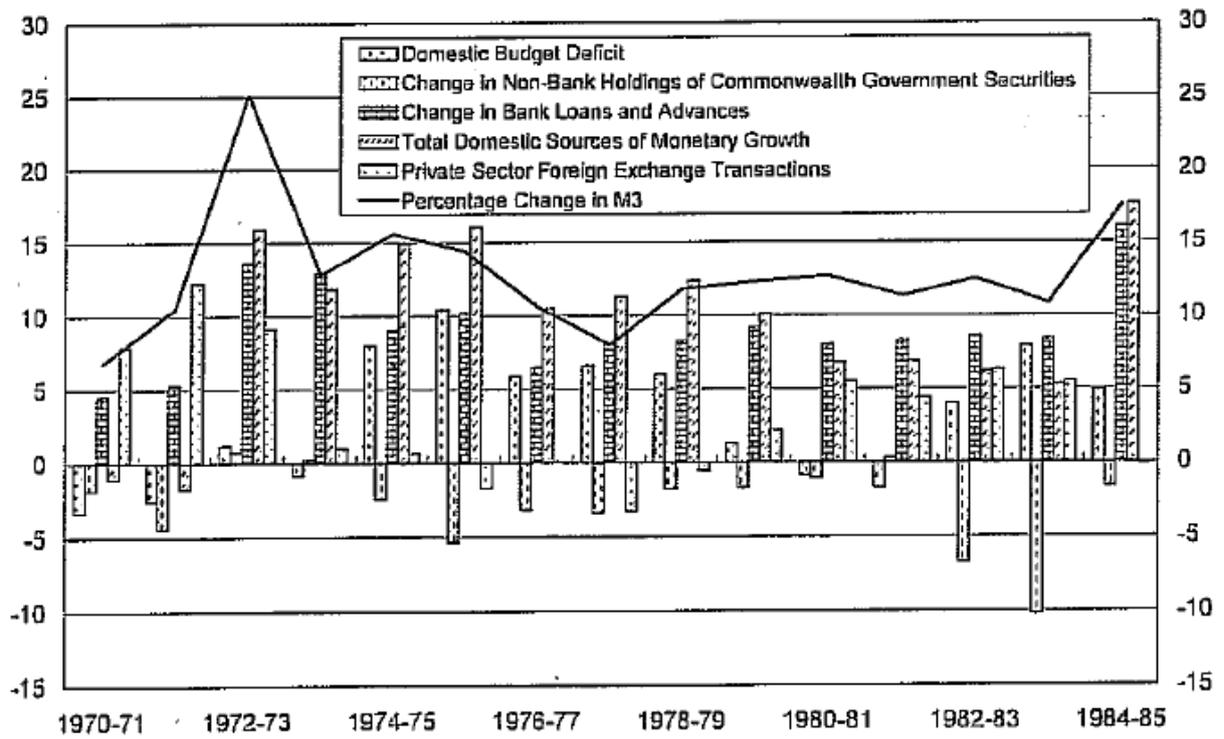
**Figure 7: Non-bank financial institutions, total assets (\$b)**

**Figure 9.7: Non-bank financial institutions, total assets: (\$b)**



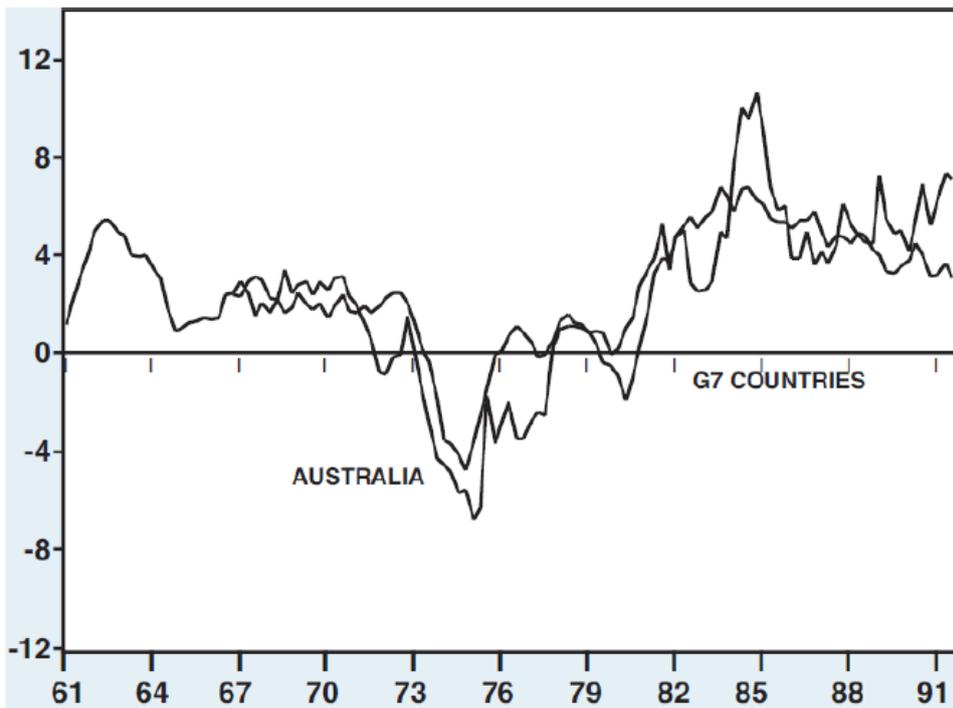
Source: Foster (1996: 120-21)

Figure 8: Contributions to M3 growth



Source: Guttman (2005: 259)

Figure 9: Long-term real interest rates



Source: Fraser (1991: 7)

**Table 1: Forecast and actual M3, real GDP, CPI and velocity growth (%)**

	<i>Forecast</i>			<i>Actual</i>				
	<i>M3</i>	<i>Real GDP</i>	<i>CPI</i>	<i>Velocity</i>	<i>M3</i>	<i>Real GDP</i>	<i>CPI</i>	<i>Velocity</i>
<i>1976/77</i>	10 – 12	4.0	12.0	-	10.6	3.2	13.8	3.0
<i>1977/78</i>	8 – 10	4.0	-	-	8.0	0.9	9.5	0.8
<i>1978/79</i>	6 – 8	4.0	6.0	-	11.8	5.6	8.2	1.5
<i>1979/80</i>	Max 10	2 – 2.5	10.0	-	12.3	2.3	10.2	0.7
<i>1980/81</i>	9 – 11	3.0	10.0 +	-	12.7	3.2	9.4	0.9
<i>1981/82</i>	10 – 11	3.5 +	10.75	-	11.3	3.2	10.4	1.4
<i>1982/83</i>	9 – 11	2.3	10.75	-	12.5	-2.5	11.5	-2.9
<i>1983/84</i>	9 – 11	3.0	7.5	-	10.8	5.5	6.9	2.0
<i>1984/85</i>	8 – 10	4.0	5.25	1.5	17.5	5.2	4.3	-5.8

Source: Guttman (2005: 252)