

***THE FAILINGS OF
MONETARY POLICY IN AUSTRALIA***

by Leigh Harkness

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Abstract

Current account deficits in Australia have been caused when increases in the money supply have financed national expenditure in excess of national income. Deregulation of bank lending in 1982 did not constrain monetary growth. Consequently, the high current account deficits continued, increasing foreign debt and provoking the government to introduce the floating exchange rate system in 1983. Australian statistics indicate that the growth of the money supply continues to cause the current account deficit, despite the introduction of the floating exchange rate system.

Since 1982, monetary policy in Australia has relied upon interest rates to control the growth of the money supply. However, it has proved to be an ineffective policy instrument. Reserve Bank statistics reveal that raising interest rates reduces new bank lending but it reduces loan repayments to banks by an even greater amount. This causes the money supply to grow faster, thereby exacerbating the current account deficit and increasing the rate of inflation.

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1. Introduction

The Reserve Bank Act requires the Reserve Bank to ensure that monetary policy is directed to the greatest advantage of the people of Australia and that its powers are used to contribute to:

- . the stability of the currency;
- . the maintenance of full employment; and
- . the economic prosperity and welfare of the people of Australia.

Monetary policy is capable of achieving all these objectives but it has failed to do so. Such failures are not unique to Australia. They arise because the prevailing economic theory regarding the relationship between money and the economy is inadequate.

This paper is based on my experience and research. It is the first of three papers. It contends that the official definition of the money supply has been inadequate. It goes on to explain why monetary policy in Australia has been ineffective. The second paper looks at the failings of the floating exchange rate system and the third considers an alternative monetary and exchange rate system.

2. The Definition of Money

It is necessary that any authority responsible for managing monetary policy know what money is. If it did not, it may needlessly restrict activities that are irrelevant to the money supply and fail to regulate other activities which may affect the money supply. Hence monetary policy can fail if economists use an inadequate definition of money.

2.1 Broad Money

In the late 1970's and early 1980's Australian monetary policy was concerned predominantly with controlling inflation and the current account deficit. At that time, the Reserve Bank used quantitative controls to control bank lending and, thereby, money supply. However, the banks were able then to lend off their balance sheets using bank bills and so avoid these controls. The Reserve Bank did not act to prevent this avoidance as it did not consider bank bills to be part of the money supply.

The Reserve Bank was aware that its definition of money was inadequate. The current account deficit exceeded the growth of the money supply which it considered to be M1 and M2 (currency plus trading bank deposits). Savings banks deposits were considered to be "near money". These were added to M2 to form M3. However, these definitions could not explain the current account deficit. Figure 1 compares the three definitions of money to the current account deficit.

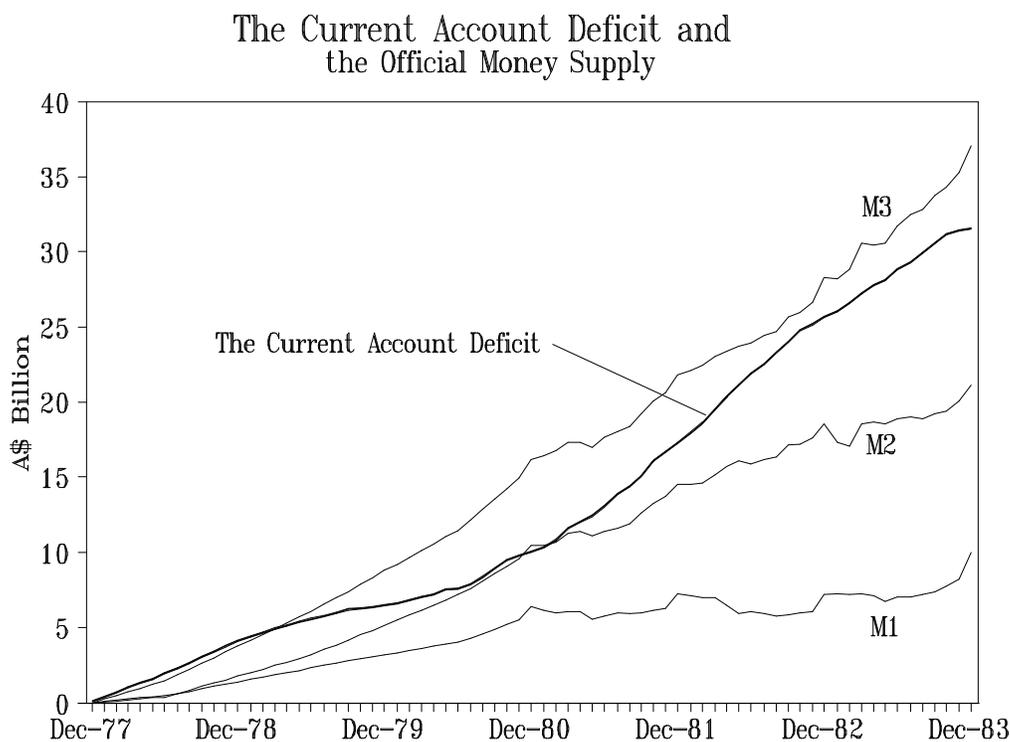


Figure 1 Source of Data: Reserve Bank of Australia Bulletin

In the early 1980's, the banks considered that building societies had an unfair advantage in the finance market. Their lending was not regulated, they offered higher interest rates on deposits and so had attracted large numbers of bank customers. Also, they had taken a large share of the home mortgage market. The banks argued that building society deposits were similar to bank deposits and that building society loans had the same effect upon the economy as bank loans. Therefore, it was unreasonable to regulate banks if they were not going to regulate building societies.

The Reserve Bank accepted their argument and subsequently adopted a new definition of money called "broad money" that included the deposits and other borrowings of non-bank financial institutions. Broad money was never considered to be a precise definition of the money supply. Precision in the definition of money was considered to be inappropriate. The attitude was that financial markets had changed and there were now a wide range of financial instruments that could take on the properties of money. Therefore, a broad definition of money was considered necessary to incorporate the activities of non-bank financial institutions.

2.2 Non-bank Financial Institutions

But trading banks and non-bank financial institutions are fundamentally different types of institutions. Bank lending is essentially a process of converting non-negotiable private liabilities or IOU's into negotiable IOU's. It converts private debt into bank debt or deposits. This process creates new money.

When non-bank financial institutions lend money, they do not create new money. They can lend only the money that has been saved with them. The following example illustrates the point. Case 1a below is assumed to be the consolidated balance sheet of a banking system, including the central bank.

Case 1a

Assets	\$B	Liabilities & Equity	\$B
Government Securities	15	Customers' Deposits	90
Foreign Reserves	15	Capital	<u>10</u>
Loans Outstanding	<u>70</u>		
Total	<u>100</u>	Total	<u>100</u>

We assume then that the banks then lend their customers a further \$10 billion, other things remaining as they were. The effect on the banks' consolidated balance sheet of these loans is shown in Case 1b.

Case 1b

Assets	\$B	Liabilities & Equity	\$B
Government Securities	15	Customers' Deposits	100
Foreign Reserves	15	Capital	<u>10</u>
Loans Outstanding	<u>80</u>		
Total	<u>110</u>	Total	<u>110</u>

The loans increase *Loans Outstanding* from \$70 billion to \$80 billion and increase *Customers' Deposits* from \$90 billion to \$100 billion. As *Customers' Deposits* are money, the loans have increased the money supply by \$10 billion. If borrowers repay loans, they reduce the money supply. In Case 1c, borrowers repay \$5 billion. The loan repayments reduce *Loans Outstanding* by \$5 billion and also reduce *Customers' Deposits* and the money supply by \$5 billion.

Case 1c

Assets	\$B	Liabilities & Equity	\$B
Government Securities	15	Customers' Deposits	95
Foreign Reserves	15	Capital	<u>10</u>
Loans Outstanding	<u>75</u>		
Total	<u>105</u>	Total	<u>105</u>

Case 2 illustrates the effect of similar loans from non-bank financial institutions. To simplify this case, "borrowings" from the public are called *Customers' Deposits*. The initial consolidated balance sheet of the non-bank financial institutions is presented in Case 2a.

Case 2a

Assets	\$B	Liabilities & Equity	\$B
Bank Deposits	20	Customers' Deposits	90
Loans Outstanding	<u>80</u>	Capital	<u>10</u>
Total	<u>100</u>	Total	<u>100</u>

When non-bank financial institution lend money, they exchange their low yielding bank deposits for higher yielding loans. So, when these non-bank financial institutions lend \$10 billion, their balance sheet changes to that shown in Case 2b.

Case 2b

Assets	\$B	Liabilities & Equity	\$B
Bank Deposits	10	Customers' Deposits	90
Loans Outstanding	<u>90</u>	Capital	<u>10</u>
Total	<u>100</u>	Total	<u>100</u>

When the non-bank financial institutions made their loans, there was no increase in their deposits. Nor would there have been any increase in bank deposits. The non-bank financial institutions had acted only as a financial intermediary, transferring funds from savers that had deposited funds with them, to borrowers to whom they had loaned those funds. Such loans do not create more money.

When borrowers repay their loans to non-bank financial institutions, they reduce their own bank deposits and increase the bank deposits of the lending institution. This is shown in Case 2c where borrowers are assumed to repay \$5 billion. The repayments reduce *Loans Outstanding* by \$5 billion and add \$5 billion to the institutions' *Bank Deposits*. But unlike the repayments to banks, they have no effect upon *Customers' Deposits* nor the money supply.

Case 2c

Assets	\$B	Liabilities & Equity	\$B
Bank Deposits	15	Customers' Deposits	90
Loans Outstanding	<u>85</u>	Capital	<u>10</u>
Total	<u>100</u>	Total	<u>100</u>

When building societies offer their depositors cheque books, and depositors use those cheque books to buy products, the depositors are not transferring their deposits in the building society. Rather, they are transferring the bank deposits of the building society. Those deposits are already included in the money supply. Deposits with non-bank financial institutions may have similar characteristics to bank deposits, but they should not be considered as part of the money supply.

2.3 A Complete Definition of Money

The money supply is best defined as currency plus the net liabilities of trading banks. Figure 2 presents an early 1980's comparison of the current account deficit, broad money, and money defined as currency plus net trading bank liabilities which I have called "complete" money. The net bank liabilities exclude the deposits of other banks and bank bills discounted by banks. The main difference between the broad money supply and the "complete" money supply is that "complete" money includes bank bills and other liabilities of the banking system and it excludes savings bank deposits and the borrowings of other non-bank financial institutions.

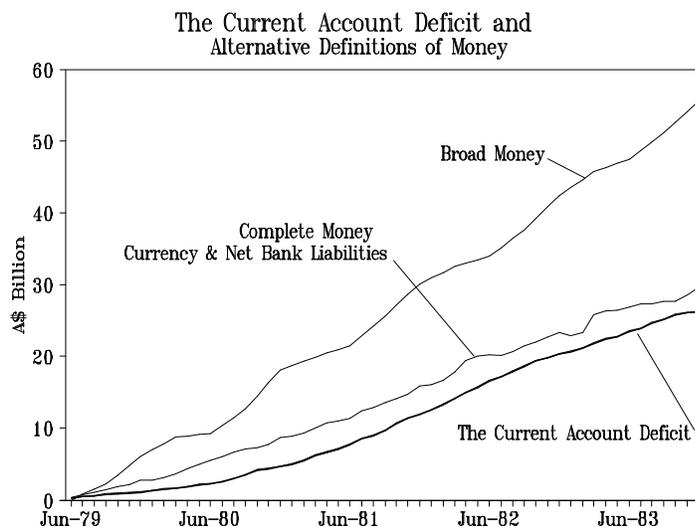


Figure 2 Source: Reserve Bank of Australia Bulletin, Australian Bureau of Statistics.

If we were back in the early 1980's and believed that there was a relationship between the money supply and the current account deficits, a simple comparison of the two definitions of money would suggest that the "complete" definition of money would be the more appropriate. But this definition includes bank bills.

Economists have considered paper such as bank notes to be money, but few have considered bank bills to have the same properties. However, they are essentially a post dated cheque endorsed or guaranteed by a bank. They are negotiable instruments with a defined value that are regularly exchanged in business as a means of settling debts. When they are discounted at a bank, they do not increase the net liabilities of banking system. To understand their effect upon national expenditure, consider the following example.

If one business were to lend another business a million dollars, the lender would have to reduce their bank balance by one million dollars to provide the borrower with the additional money. The reduction in the lender's bank balances would constrain their ability to spend by that one million. Therefore, such loans would not increase the money supply nor would they increase national expenditure above national income.

But, if the borrower were to issue the lender with a bank bill in exchange for the one million bank balance, then the borrower has the one million dollars to spend and the lender has a one million bank bill that can be discounted or deposited in a bank, or negotiated in exchange for products. In this case, the borrower's spending power has been increased while the lender's spending power has not been reduced. So, the creation of the

bank bill has increased the money supply and so enabled national expenditure to exceed national income.

Over the last 10 years, non-bank financial institutions such as building societies and savings banks have been converted into trading banks. The growth in bank deposits arising from these conversions needs to be distinguished from growth in deposits arising from bank lending. Therefore, I have established another definition of money called the "adjusted" money supply which is the "complete" money supply less the deposits at the time of formation of new trading banks that were previously building societies or savings banks.

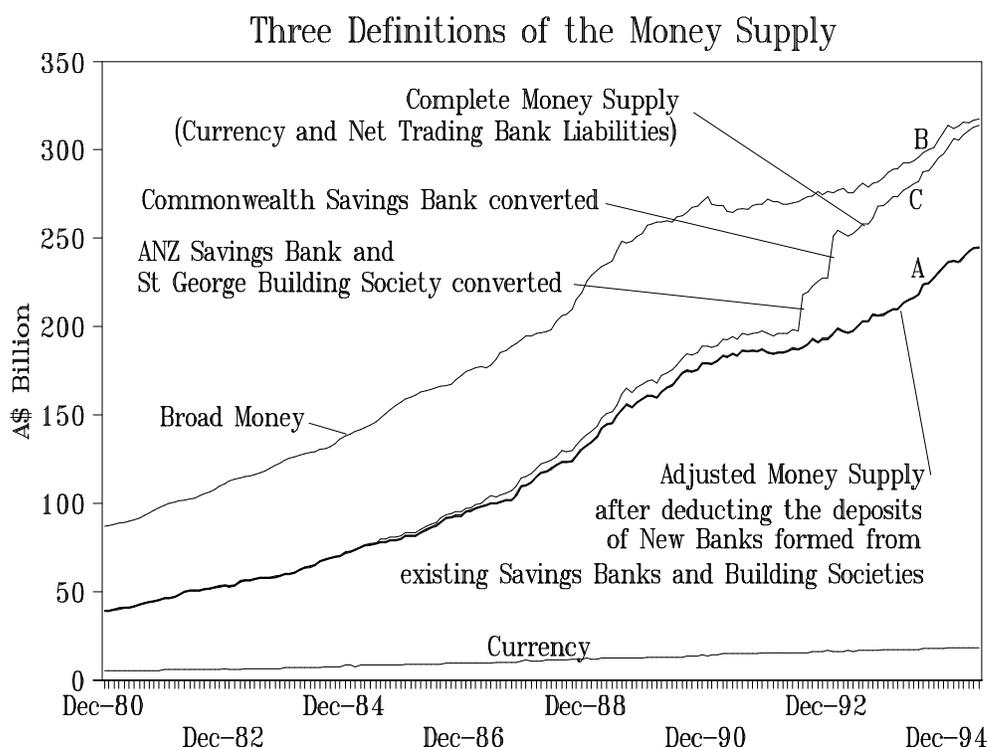


Figure 3 Source of Data: Reserve Bank of Australia Bulletin

Figure 3 plots three definitions of money supply marked B, C and A. Line B is broad money as defined by the Reserve Bank. Line C is the complete money supply comprising currency and net trading bank liabilities. Line A is the adjusted money supply. To estimate building society deposits, I have assumed that these deposits were equivalent to 85 per cent of total assets.

The increases in the complete money supply from the conversion of the St. George Building Society, the ANZ Savings Bank and the Commonwealth Savings Bank to trading banks are indicated on the graph. The amount of currency in circulation is also shown at the bottom of the graph to provide an indication of its insignificance in the total money supply.

3. Effects of Monetary Growth

To appreciate the significance of an appropriate definition of money, we will compare these definitions with monetary outcomes in the economy. The outcomes to be considered are the current account deficit, inflation and gross domestic product. In addition, inflation and the gross domestic product are to be used to estimate the money supply.

3.1 The Current Account Deficit

Money constrains national expenditure to national income. When we work, we earn money. That money enables us to buy products up to the value of what we have produced. This function of money constrains the whole nation's expenditure to its income. However, if additional money were created rather than earned, it can cause the economy to spend more than it earns and that would cause a current account deficit.

Figure 4 provides a comparison of the three definitions of money and the current account deficit. It reveals that the growth of the adjusted money supply is equivalent to the current account deficit for most of the period. However, after 1987, there is a divergence between the adjusted money supply and the current account deficit.

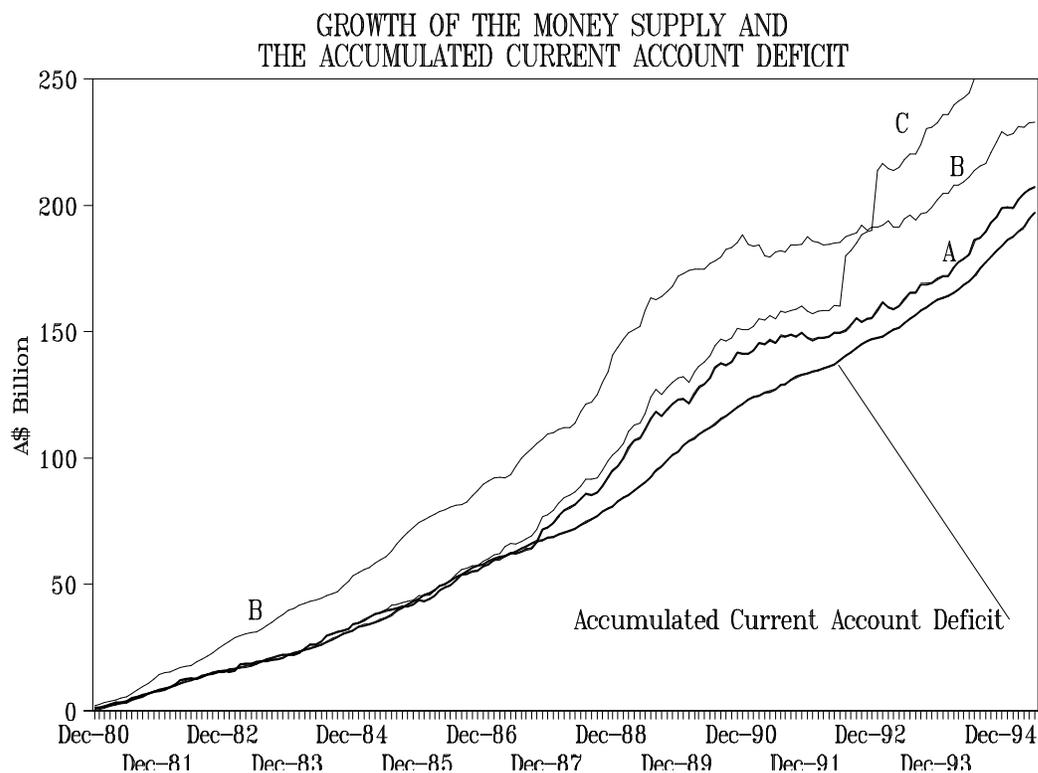


Figure 4

3.2 Exports Increase Money Supply

This divergence could be attributable to a rise in the liquidity preference following the stock market crash in October 1987. Also, it may be attributable to the Commonwealth Government's fiscal surplus. However, it also coincides with the Reserve Bank's purchase of foreign exchange to increase foreign reserves. These purchases appear to be the most likely cause of the divergence. Figure 5 compares the current account deficit to the "adjusted" money supply after those foreign reserve transactions have been deducted. It reveals that the current account deficit has been approximately equal to the growth of the second adjusted money supply (A2) for more than 14 years.

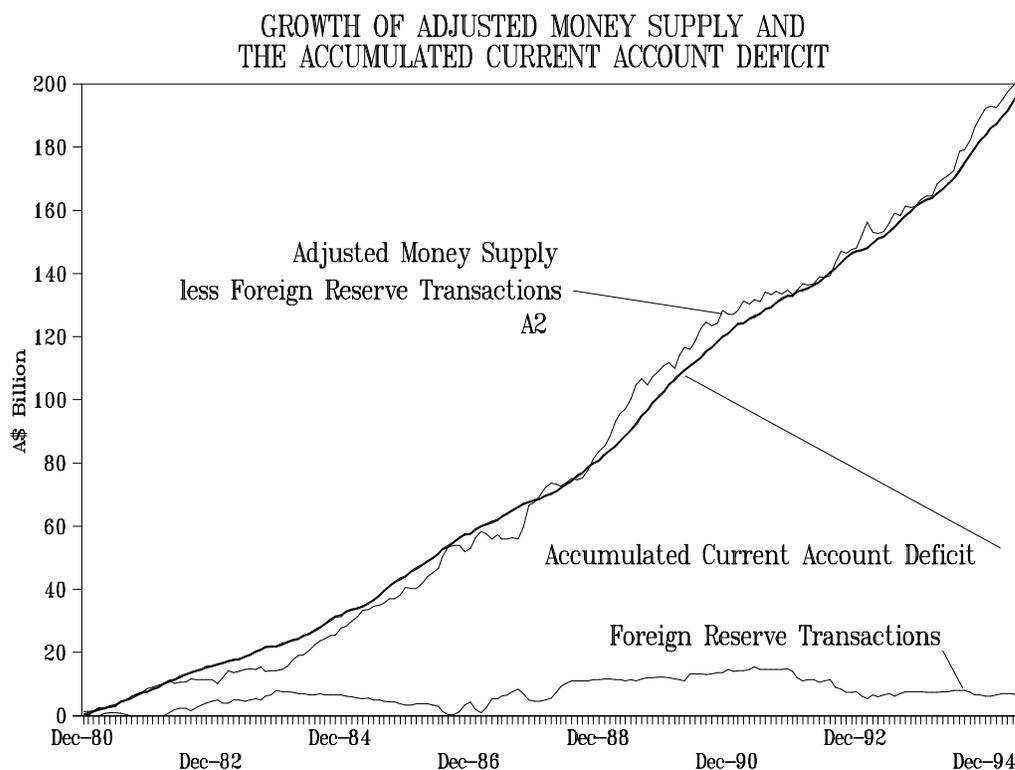


Figure 5 Source of Data: Reserve Bank of Australia Bulletin & Australian Bureau of Statistics

The foreign exchange transactions appear not to have affected the current account deficit before 1987. The Reserve Bank did adopt a purist approach to monetary policy in the early 1980's. This may have caused it to sterilise these earlier foreign reserve transactions from affecting the money supply. Following the stock market crash, it may have considered the injection of more money into the economy to be a desirable outcome and, therefore, did not sterilise the effects on the money supply of its purchases of foreign reserves.

Although the Reserve Bank's foreign reserve transactions increased the money supply after 1987, they did not increase the current account deficit. This reveals that not all sources of money cause current account deficits.

This is not a new finding. It is very similar to the arrangements under the fixed exchange rate system in which increases in exports increased the money supply. For example, consider an economy with a fixed exchange rate and a banking system with the consolidated balance sheet shown in Case 3a.

Case 3a

Assets	\$B	Liabilities & Equity	\$B
Government Securities	15	Customers' Deposits	90
Foreign Reserves	15	Capital	<u>10</u>
Loans Outstanding	<u>70</u>		
Total	<u>100</u>	Total	<u>100</u>

A \$10 billion increase in exports causes foreign reserves to rise and increase customers deposits by \$10 billion as shown in Case 3b.

Case 3b

Assets	\$B	Liabilities & Equity	\$B
Government Securities	15	Customers' Deposits	100
Foreign Reserves	25	Capital	<u>10</u>
Loans Outstanding	<u>70</u>		
Total	<u>110</u>	Total	<u>110</u>

Increases in exports caused the money supply to increase but they did not raise national expenditure above national income. Rather, the additional money entered the economy as increased export income. When the economy spent that money, it was spending money that it had already earned. Such spending does not cause national expenditure to exceed national income. Therefore, increases in the money supply generated from increased exports do not cause current account deficits.

When the Reserve Bank purchased foreign currency to raise foreign reserves in 1987 and 1988, it sold additional Australian dollars into the foreign exchange market. This money raised the income of Australian exporters. When they spent that income they were spending only what they had earned. Hence this additional money did not cause current account deficits. Therefore, we can conclude that it is not only the quantity of money that determines the effect of new money on the economy, but how that money was created; i.e., its quality.

As the lending activities of trading banks and the issue of currency can account for the current account deficit, we can conclude that changes in the deposits or borrowings of non-bank financial institutions do not have any effect on the current account deficit. Nor do the conversion of savings banks and building society deposits to trading deposits appear to have any effect upon the current account deficit. Hence, these changes to the money supply may have properties similar to the Reserve Bank's foreign reserve transactions. They increase the money supply but they do not cause national expenditure to exceed national income.

3.3 Money and Inflation

Prices reflect a relationship between the amount of money in the economy and the income or production of that economy. Prices adjust to reflect a disequilibrium between the supply of money in the economy and the need, or demand, for money in the economy. This relationship can be represented as:

$$P = \frac{L}{Y} \quad (1)$$

where P is the average level of prices;
 L is liquidity or the money supply; and
 Y is national income (at nominal prices).

The rate of adjustment, or inflation, is the change in prices between two points in time and is given by:

$$\frac{P_t}{P_0} = \frac{L_t}{L_0} \cdot \frac{Y_0}{Y_t} \quad (2)$$

where $_0$ specifies the earlier value of a variable; and
 $_t$ specifies the later value.

The nominal income variable, Y , contains inflation, such that:

$$Y = QP \quad (3)$$

where Q is the real output or the real level of national income.

Therefore, equations (1) and (2) have the dependant variable P dependant upon itself. Substituting the definition of income in equation (3) into the equation for inflation (2) removes this problem, so that:

$$\begin{aligned} \frac{P_t}{P_0} &= \frac{L_t}{L_0} \cdot \frac{Q_0}{Q_t} \cdot \frac{P_0}{P_t} \\ \left(\frac{P_t}{P_0}\right)^2 &= \frac{L_t}{L_0} \cdot \frac{Q_0}{Q_t} \\ \frac{P_t}{P_0} &= \sqrt{\left(\frac{L_t}{L_0} \cdot \frac{Q_0}{Q_t}\right)} \end{aligned} \quad (4)$$

This identity for inflation has been derived intuitively from basic principles. When we apply the three definitions of money together with real national income to this equation, we obtain the results presented in Figure 6. The result using the adjusted money supply is the line $A-A$, the complete money supply, $C-C$, and the broad money supply, $B-B$.

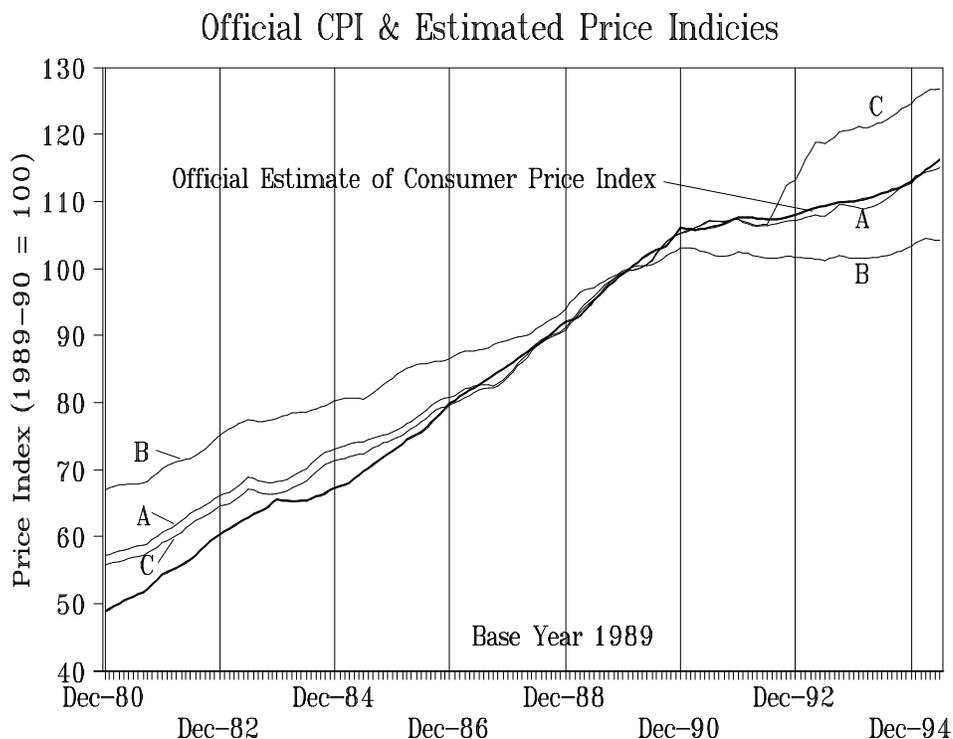


Figure 6

The broad money supply does not explain the level of inflation experienced in Australia. However, the "complete" and "adjusted" definitions of money provides a reasonable fit for the simple identity for most of the period. The complete definition is best until the conversion of the deposits of the St. George Building Society, ANZ Savings Bank and Commonwealth Savings Bank into trading bank deposits. After then the adjusted definition of money is the better definition. Overall, the adjusted money supply provides the best fits this explanation of inflation.

The difference in the first half of the 1980's between the actual rate of inflation and the estimates using the adjusted and complete definitions of money can be attributed to the devaluation of the Australian dollar.

Although the broad money supply comprises many of the same components as the adjusted money supply, the addition of the deposits of non-bank financial institutions appear not to have improved the explanation of inflation over the period. The estimate of inflation using the "complete" money supply indicates that the conversion of building societies and savings banks to trading banks has not contributed to inflation in the two years following the conversion.

Also, these results suggest that not all increases in the money supply lead to inflation. If additional money is created and used to finance expenditure in excess of income, it adds to inflation. However, if that money does not cause expenditure to exceed income, it may not contribute to inflation.

3.4 Money and National Income

Growth in the money supply increases the nominal purchasing power of the economy. This additional expenditure can increase national income, at least in nominal terms. If the additional money causes inflation, the economy will need to hold more money to facilitate the myriad of transactions that occur in the market. This reduces the rate of growth of income as well as inflationary pressures. The relation between the nominal growth in the national income and growth in the money supply can be put as:

$$Y_t = Y_0 + \frac{Y_0}{L_0} [L_t - L_0 - L_t (1 - \frac{P_0}{P_t})] \quad (5)$$

The expression Y_0/L_0 is the ratio of national income to the money supply and is assumed to be constant. The growth in the money supply is given by $L_t - L_0$. The money that is consumed or needed to compensate for inflation is given by the expression $L_t(1 - P_0/P_t)$. This identity can be simplified by expanding it as follows:

$$Y_t = Y_0 + \frac{Y_0}{L_0} (L_t - L_0 + L_t \frac{P_0}{P_t})$$

$$Y_t = Y_0 \frac{L_t}{L_0} \cdot \frac{P_0}{P_t} \quad (6)$$

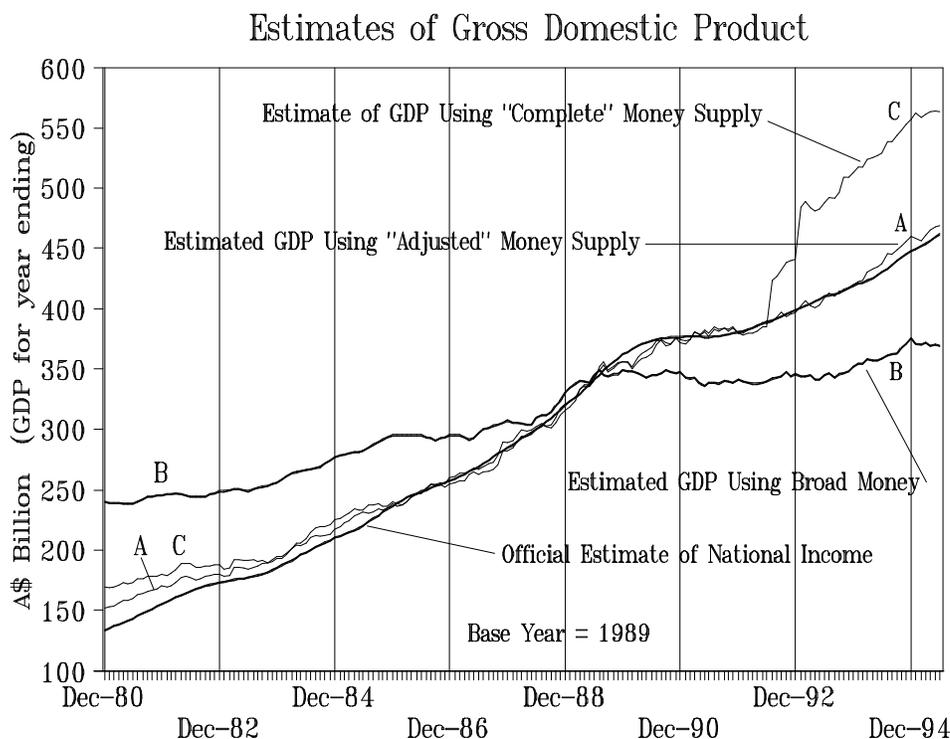
It should be noted that although this identity was derived from different principles, it is a restructured form of equation (2) used to define inflation.

Estimates of national income were derived using each definition of the money supply and the official rates of inflation. The base year used was the year 1989. The outcomes are presented in Figure 7.

The "adjusted" money again appears to be the most appropriate definition of money. It does not provide an accurate estimate for the period before 1985. This can be explained by the effect of the rapid depreciation of the Australian dollar at that time.

The broad money supply does not appear to fit into the expected relationship between money and national income nor does the "complete" money supply. However, the "adjusted" money supply does provide a good fit for most of the 14 years.

The similarity of this outcome to the outcome for the comparison for inflation may be related as equation (6) is essentially a restatement of equation (2). However, it also suggests that equations (6) and (2) are reasonable explanations of the relationship between money, prices and national income. If so, it gives further credence to the notion that the liabilities of non-bank financial institutions should not be included in definition of the money supply.

**Figure 7**

3.5 Money Supply Estimates

The identity used to estimate national income and inflation can also be used to estimate the money supply. The appropriate form is given in equation (7) which is a rearrangement of equation (6).

$$L_t = L_0 \frac{Y_t P_t}{Y_0 P_0} \quad (7)$$

Equation (7) was used to estimate the money supply using a base figure (L_0) from each of the three definitions of money together with data for the gross domestic product and the consumer price index. The results are shown in Figure 8. The base figure for each definition was the average of each money supply for the year 1989. The estimate using the broad money supply base is labelled as *Estimate B*, the complete money supply, *Estimate C* and the adjusted money supply *Estimate A*.

Figure 8 clearly reveals that of the definitions of the money supply the "adjusted" money supply most closely resembles the estimate generated by the identity. As shown in the estimates of inflation and gross domestic product, there are some differences in the earlier years. As stated earlier, these difference may be attributable to the depreciation of the

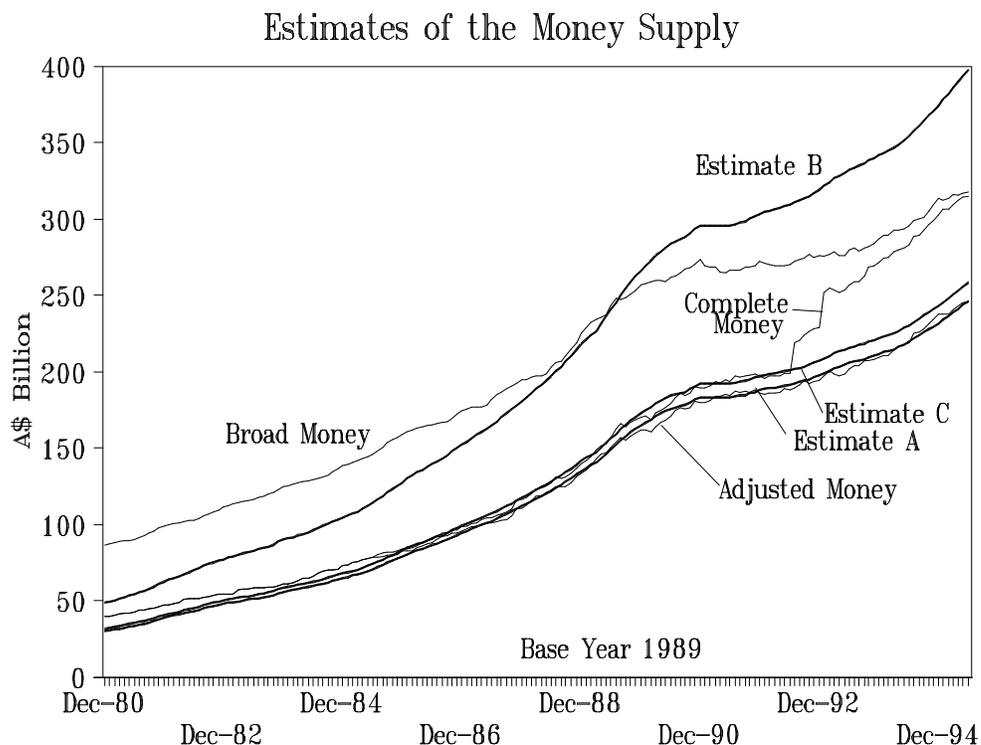


Figure 8

Australian dollar in those years. However, they could also be attributable to other factors. For example:

- . there may be lags between the growth of the money supply and its effect on the economy;
- . the base period ratio, L_0/Y_0 , may not be representative;
- . the GDP figures do not record illegal activities for which money is being used;
- . the GDP figures include estimates of non-monetary income;
- . the definition of money may need to be refined further;
- . the consumer price index may not provide the most accurate estimate of inflation;
- . there may be other factors omitted from this simple identity; and
- . the identity may be inappropriate.

Despite these possible factors, this identity does provide a good explanation of the relationship between the money supply, inflation and national income.

3.6 Conclusions from the Definition of Money

The comparison of the three definitions of money to economic activity has revealed that the inclusion of the borrowings of non-bank financial institutions in the definition of the money supply has not been justified. The data does support the notion that the money supply comprises notes and coins and net trading bank liabilities.

Increases in the lending or deposits of non-bank financial institutions do not cause current account deficits nor inflation. Hence, there is no need to regulate their growth for the purposes of monetary policy.

Current account deficits and inflation have been associated with increases in the money supply created from increased bank credit and from the issue of notes and coins. Both these sources of money have been shown to have been the most likely sources of money financing national expenditure in excess of national income. They have explained the rate of inflation and the growth of the gross domestic product.

Also, we have noted that not all growth in the money supply causes inflation or current account deficits. The conversion of non-bank deposits into bank deposits has increased the money supply. However, it has had no apparent effect on inflation or national income. It does coincide with a sudden increase in employment in 1993 and there may be some association between these two events. However, we may need to wait a few more years to see if the conversion of the deposits has any real effect upon the economy.

Economic theory has tended to treat the money supply as a single variable without considering how that money was created. However, the data suggests that the way money is created is important in determining the effect of the money supply upon the economy. Therefore, monetary policy needs to be focused on controlling those sources of money that have detrimental effects upon the economy and not in constraining all monetary growth.

4. Monetary Policy Instruments

Monetary policy has dominated economic management in Australia over the last 15 years. That policy has not been adequately focussed on the problems it was intended to address. Consequently, it has had detrimental side effects on the economy.

4.1 Quantitative Controls

The Reserve Bank's quantitative controls that existed until June 1982, were possibly the most focussed monetary policy that existed during the period under review. They were directed at the financial institutions that needed to be regulated; the trading banks. However, the policy failed because it did not regulate the growth of trading bank's other liabilities, particularly bank bills.

The Reserve Bank and the government were aware in the early 1980's that the quantitative controls were ineffective. Hence, when the Campbell Committee recommended the removal of those controls, they adopted the recommendation and removed the controls on 1 July 1982.

4.2 Indirect Controls

The removal of quantitative controls meant that the Reserve Bank had to rely solely upon indirect instruments to implement monetary policy. These instruments were:

- . open market operations, where the Reserve Bank sold and bought Treasury Notes and other government securities; and
- . interest rates.

The Reserve Bank was already using a policy of high interest rates in an attempt to control the growth of the money supply before the quantitative controls were removed. The removal of quantitative controls did not increase the Reserve Bank's ability to control the money supply.

There is reason to believe that the high interest rate policy may have exacerbated the size of current account deficits in the early 1980's. The high interest rates were attracting foreign capital which, under the fixed exchange rate system, increased the money supply. In 1982 and 1983, despite current account deficits totalling more than \$14 billion, foreign reserves increased by \$8 billion. This would suggest that foreign capital inflow was in the order of \$22 billion over those two years. That foreign investment would have added to the money supply by that amount. It would have contributed to the rise in national expenditure above national income and so added to the current account deficits during that time.

4.3 Devaluation

The failure of the Reserve Bank policies to control the current account deficit fuelled speculation of a devaluation of the Australian dollar. Despite the rise in foreign reserves over the previous year, sudden speculative outflows of capital put pressure on the new Labour government to devalue the currency. It capitulated and devalued the Australian dollar in March 1983. However, as current account deficits are caused by excessive demand financed by growth in the money supply, devaluing the currency failed to address the problem. They did not reduce the growth of the money supply and so the current account deficits continued.

4.4 Floating Exchange Rate

In December 1983, further speculation of a devaluation provoked the government to float the exchange rate. Again, this action did not address the problem. But it did solve the Reserve Banks' immediate problem of speculators speculating against it.

Many economists expected that the floating exchange rate system would vary the exchange rate to solve the current account deficit problem. The system did vary the exchange rate but, as we will see in the second paper, it was incapable of reducing the current account deficit. In addition, it opened up the economy to a range of new problems, some of which are considered in the second paper, also.

4.5 Interest Rates

Floating the exchange rate meant that foreign capital no longer increased the money supply. This was expected to make interest rates more effective as an instrument of monetary policy. However, interest rates continued to be an ineffective tool.

The theory behind this instrument is that higher interest rates should reduce lending and thereby reduce the money supply. There is plenty of evidence to support the first part of this theory. Figure 9 compares interest rates to the net lending commitments of trading bank from July 1986 to December 1989. Loan commitments are summed for six months and expressed as a percentage of average trading bank deposits.

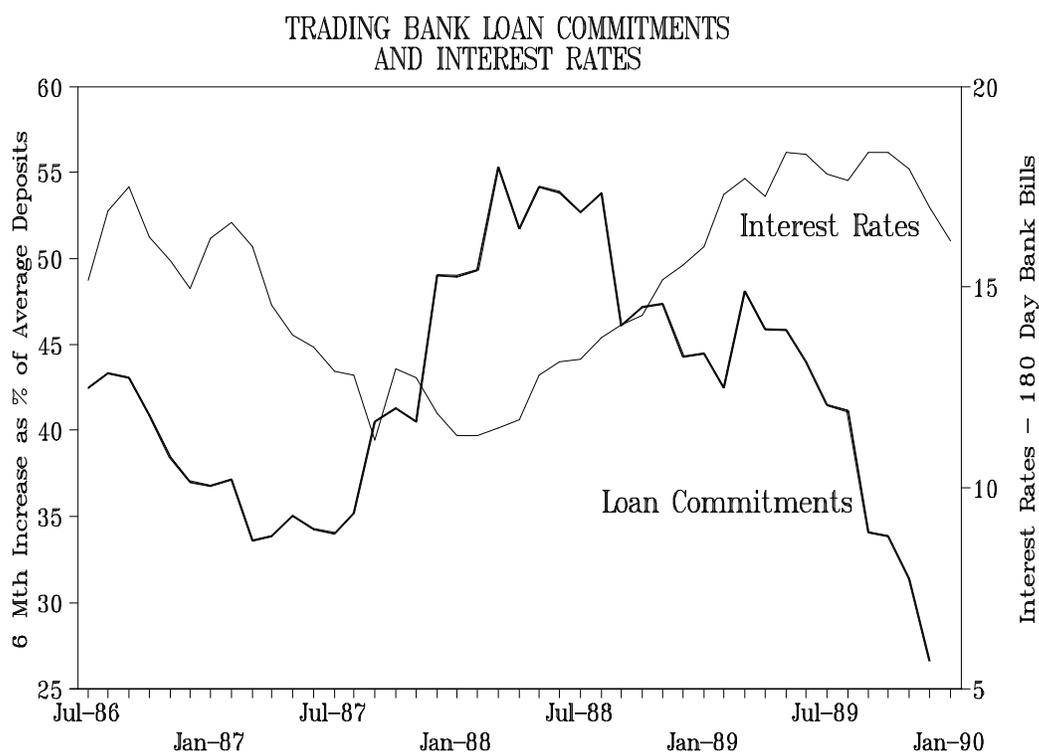


Figure 9 Source of Data: Reserve Bank of Australia Bulletin

The graph clearly shows that when interest rates fell in 1987, loan commitments increased. When interest rates increased in 1988 and 1989, loan commitments decreased. Yet, despite the clear effectiveness of interest rates in controlling lending commitments, they failed to control the growth of the money supply.

The growth in the money supply is equal to new lending less loan repayments. If new lending equals loan repayments, then there is no increase in the money supply. If new lending is less than loan repayments, the money supply decreases. If new lending exceeds loan repayments, the money supply increases.

When the Reserve Bank raised interest rates in 1988 and 1989, it reduced not only new lending, it also reduced the ability of existing borrowers to repay the principal on their existing loans as they were required to pay more in interest. The reduction in loan repayments was greater than the reduction in new lending. Therefore, the higher interest rates increased the money supply. This effect is shown in Figure 10 in which repayments have been calculated by deducting the increase in deposits from loan commitments.

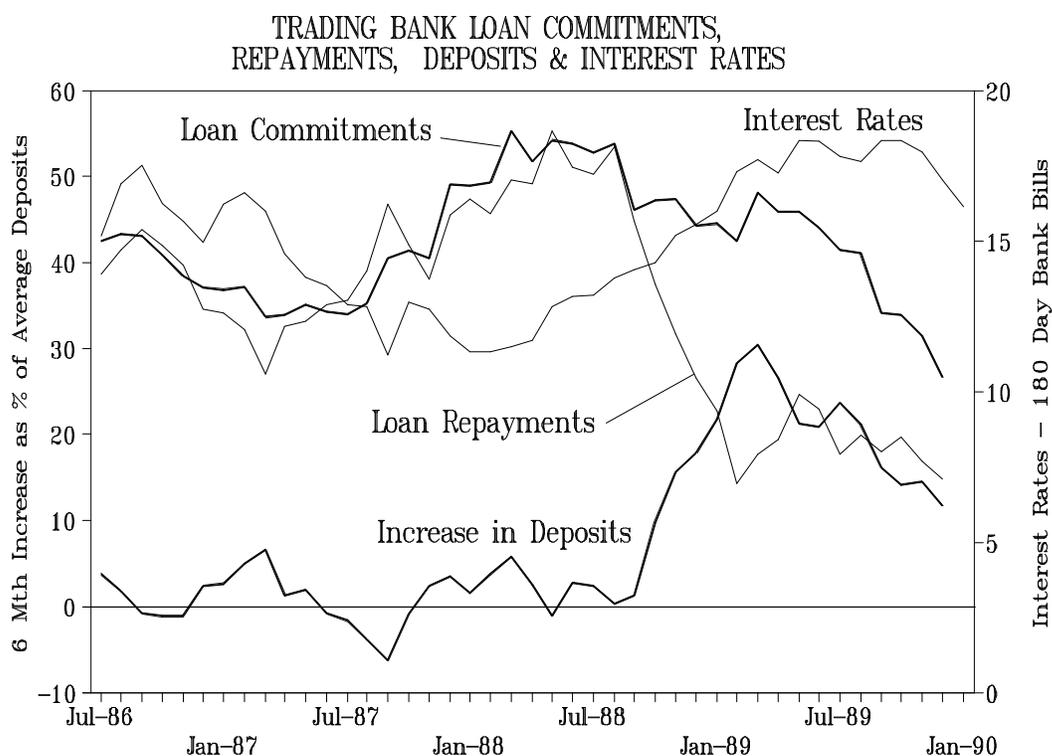


Figure 10 Source of Data: Reserve Bank of Australia Bulletin

The graph shows that in 1986 to 1988, when interest rates were falling or low, bank deposits did not grow rapidly. This was despite growing amounts of new loan commitments. Hence loan repayments were about equal to new lending over that period. When the Reserve Bank raised interest rates in 1988, loan repayments fell dramatically and increased the growth of bank deposits, or the money supply.

The Reserve Bank continued to raise interest rates in 1989. But this only exacerbated the problem. It appears that the policy makers did not understand the impact of this policy instrument. They may have considered that the economic hardship caused by the policy

indicated that it was effective. But this was not the case. The suffering was exacerbating the problem.

The high interest rates eventually did reduce the growth of the money supply in 1989. By that time, so many businesses had become insolvent that the solvency of the banks themselves was being threatened. The banks saw further lending as a threat to their existence. It was for this reason that they restrained their lending. Also, interest rates had stabilised and started to fall, so that loan repayments were able to stabilise.

However, the high interest rates had raised the money supply causing high inflation, high current account deficits and rising foreign debt. Although interest rates had increased gross lending, they had reduced new lending and investment. The use of interest rates to regulate the money supply then contributed to the worst recession in 60 years. Australia led the world into this recession. The recession was not a necessary instrument of monetary policy. It was the antithesis of sound monetary policy.

Monetary policy should contribute to full employment and the economic prosperity and welfare of the people of Australia. Instead it contributed to a reduction of more than five hundred thousand in the number of people in full time employment in Australia. It caused the failure of many businesses, from large billion dollar empires to small businessmen and farmers. It destroyed banks and finance companies. Also, many other business, banks and finance companies came close to insolvency.

4.6 Slow Growth

In late 1994, the Reserve Bank raised interest rates again as an instrument of economic policy in Australia. The stated objective of this action was to slow the rate of economic growth and thereby reduce inflationary pressures.

However, as we have seen in equation (4), inflation is caused by growth of the money supply in excess of the rate of real economic growth. Raising interest rates increases the money supply but reduces real economic growth. Hence it increases the rate of inflation. The effect of this more recent policy is evident in Figure 11. (Deposits in this graph have been adjusted to remove the effect of converting savings banks and building societies into trading banks.)

The rise in interest rates in 1994 is evident in Figure 11. Lending commitments fell at that time, together with loan repayments. As deposits increased at that time, loan repayments must have fallen by more than new lending. This increase in the money supply was followed by a rise in the current account deficit and in the rate of inflation.

When market interest rates started to fall in 1995, borrowers increased their loan repayments. But uncertainty about the future of interest rates caused new lending to grow more slowly. Hence, the rate of increase of deposits and the money supply declined in the first half of 1995. If this low level of monetary growth is maintained, we can expect a fall in both the current account deficit and the rate of inflation. The growth of national

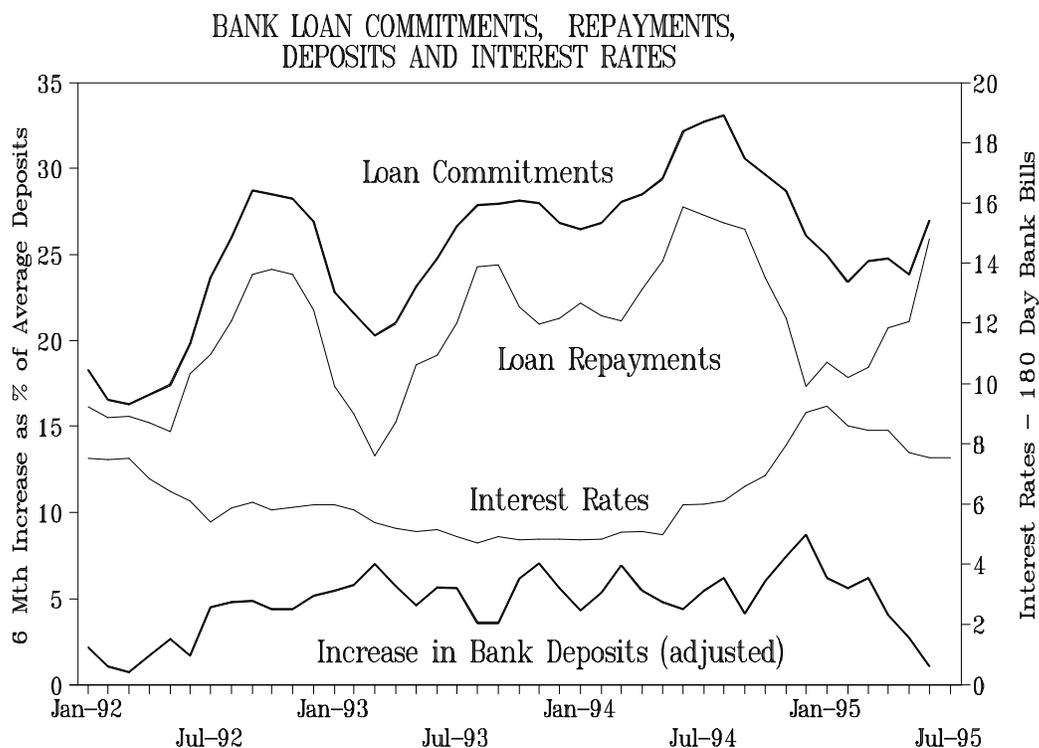


Figure 11 Source of Data: Reserve Bank of Australia Bulletin

income is likely to fall also. This, together with the reduction in investment is likely to reduce the rate of economic growth and the growth of employment. Such an outcome would be contrary to the legislated objectives of the Reserve Bank.

Therefore, the data reveals that interest rates have had a dramatic effect upon the Australia economy. However, they have not been the planned nor the desired effect. The wide use of variable interest rate loans in Australia may create a different outcome to that expected in countries that generally use fixed interest rate loans.

4.7 Theory of Interest Rates and the Growth of the Money Supply

The amount that borrowers borrow is related to their capacity to repay. The higher the interest rate, the lower is borrowers' capacity to repay, therefore, the less they can borrow. If interest rates rise, borrowers who borrowed at the lower interest rate would be less able to repay their loans at the higher interest rate. Therefore, the higher interest rates increase their borrowing above what it would have been at the lower interest rate.

These effects of rising interest rates on the money supply are illustrated in Figure 12. At interest rate $r1$ borrowers would be willing and able to borrow and repay the amount $L1$. The locus of such points where the borrowers can afford to repay the loan over a range of

interest rates is represented by the *Lending* line. If interest rates were to vary, those borrowers who borrowed when interest rate were at $r1$ would be able to repay the loans amount represented by the *Repayments* line.

Lending, Rising Interest Rates and Repayments

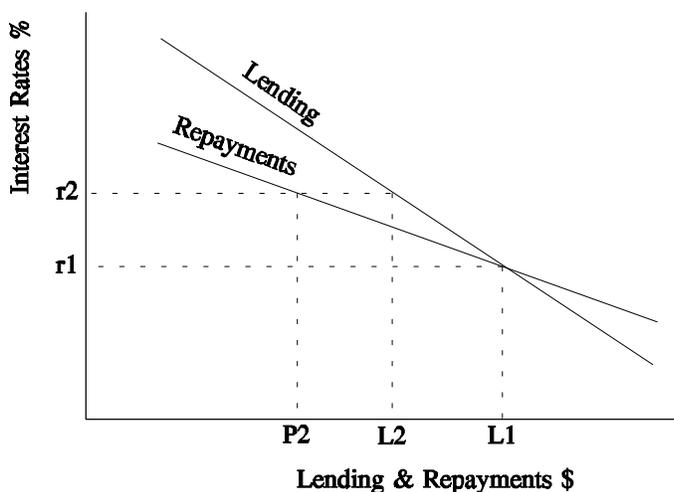


Figure 12

If interest rates were to rise to $r2$, lending would fall to $L2$. However, the borrowers that borrowed when interest rates were at $r1$ would repay the smaller amount $P2$. Therefore, while the borrowers who borrowed at interest rate $r1$ still have loans outstanding, total deposits and the money supply will rise.

Lending, Falling Interest Rates and Repayments

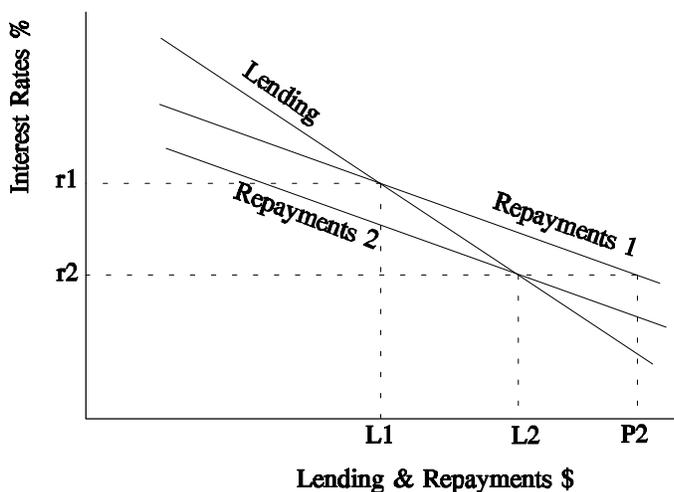


Figure 13

If interest rates fall, the borrowers who were borrowing at the higher interest rate would be capable of repaying more at the lower interest rate. This could cause loan repayments to exceed new lending and so reduce the money supply.

The effect of a fall in interest rates is presented in Figure 13. Interest rates are assumed to be initially at $r1$ with lending and repayments at $L1$. A fall in interest rates to $r2$ increases borrowing and repayments to $L2$. However, those who borrowed when interest rates were at $r1$ can now repay $P2$. Therefore, total lending and deposits will fall.

5. Conclusion

Monetary policy over the last 15 years has failed to contribute to a stable currency, the maintenance of full employment and the economic prosperity and welfare of the people of Australia. These failings have not been due to any one major mistake. They have arisen because prevailing economic theory has provided an inadequate explanation of the role of money in the economy. This has caused economists to make a series of misjudgments in their policy advice that has had detrimental effects upon the economy.

5.1 The Direct Failings

The failure to adequately define the money supply led to the removal of quantitative controls: possibly the only effective instrument that the Reserve Bank has had. While Australia used the fixed exchange rate system, the policy of high interest rates attracted foreign capital inflow that contributed to excessive demand and the current account deficit. Speculation precipitated first the devaluation of the dollar and then the floating of the dollar, neither of which controlled the growth of the money supply. Then the adoption of the floating exchange rate caused the currency to be unstable.

Interest rate policy has proved to be an ineffective mechanism for controlling the growth of the money supply nor the current account deficit. Instead, high interest rates have increased the money supply and added to the current account deficit. Also, they have destroyed many businesses. They contributed to a severe recession which caused unemployment and reduced the economic prosperity and welfare of Australians.

5.2 The Indirect Effects

The failure of monetary policy has driven the government to implement other policies in an attempt to solve, and compensate for, the problems caused by the failure of monetary policy. This has contributed indirectly to the decline in economic prosperity for many Australians.

Wages policy has been one of the major instruments of the Australian government's anti-inflation policy. However, all of the inflation in the economy can be explained by the growth in the money supply and the devaluation of the currency. Wages policy appears to have had little or no effect on inflation. Its only achievement may have been to reduce the real incomes of workers on award wages and reduce the share of national income going to wages and salaries.

Another major policy objective to control the current account deficit has been the reduction of the fiscal deficit. This has involved major changes in government policy including the reduction of spending on a wide range of government services and on public infrastructure. However, there is no evidence to support the view that the fiscal deficit causes the current account deficit. In 1989-90 when Australia had the highest fiscal surplus on record, it recorded the highest current account deficit on record. Figure 14

compares the current account deficit and the fiscal deficit. It reveals the lack of any significant relationship between these two deficits.

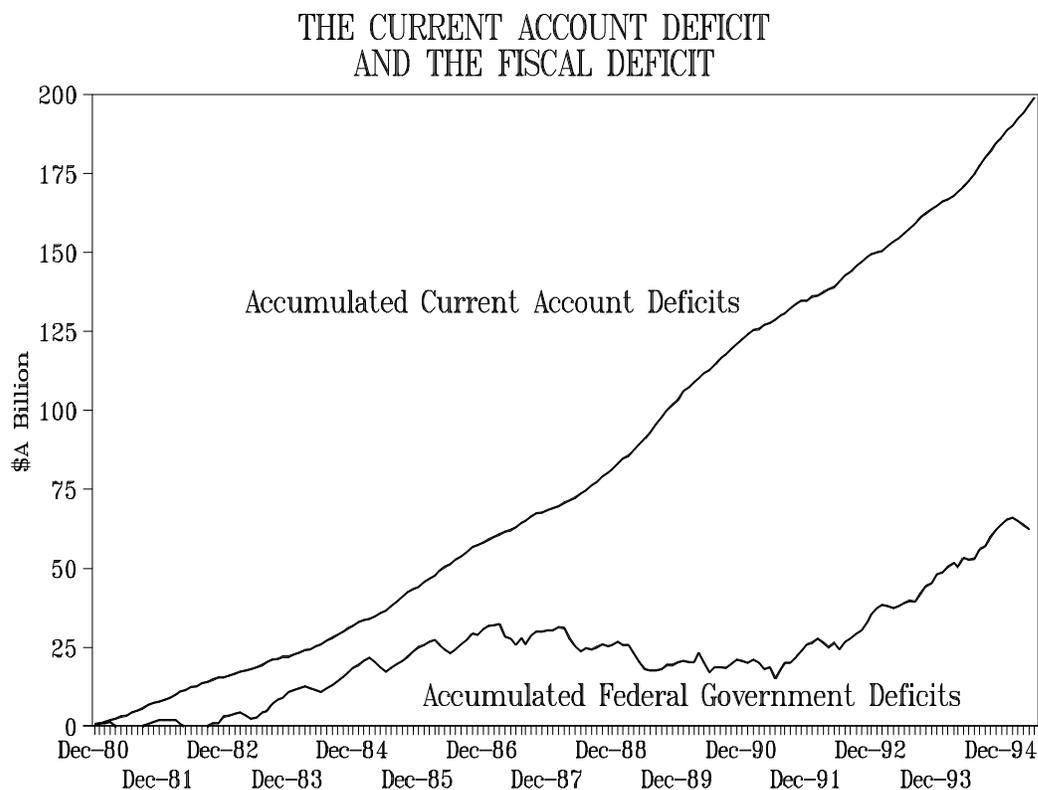


Figure 14 Source of Data: Reserve Bank of Australia Bulletin

5.3 Dilemma of Policy Objectives

Although the government wishes to control the growth of the money supply to constrain the current account deficit and inflation, the money supply must grow if it is to enable the economy to grow and provide full employment. Under the floating exchange rate system, the only major source of monetary growth is from the creation of credit. Hence, the government is faced with a dilemma under the floating exchange rate system: if it wishes to raise national income and provide employment, it must also suffer further current account deficits, rising foreign debt and inflation.

The failure of monetary policy has had wide ranging impacts on the Australian economy. Despite the Australia's vast resources and its highly educated, qualified and efficient workforce, the Australian economy has not prospered. This can be attributed largely to the failure of monetary policy which has reduced the employment, welfare and economic prosperity of the people of Australia.

The Reserve Bank must change its approach to monetary policy in Australia if it is going to achieve the objective for which it was established.

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