Senate Economics Committee
Department of the Senate
PO Box 6100
Parliament House
Canberra ACT 2600
Australia

Dear Committee Members

Submission on: Competition within the Australian banking sector

Thank you for the opportunity to give evidence and comment on competition within the Australian banking sector.

As you would be well aware, the Australian constitution makes the Commonwealth government responsible for making laws relating to banking, but not for the non-banking financial sector. Some economists may consider this to have been an unfortunate oversight. But I do not.

From a customer's perspective, banks and non-bank financial institutions may appear to perform similar functions. Both of these financial institutions hold deposits and lend money. Yet they perform very different functions within the economy.

If we were to compare the services that banks and non-banks provide to those of ticket sellers for a football grand final, banks would issue new tickets while non-banks would be scalpers, trading in existing tickets. When a match was fully booked, banks should not issue any additional tickets. However, non-banks may continue to trade in existing tickets because their trade does not affect the total number of bookings.

This analogy illustrates that the Commonwealth Government, if it is to act responsibly, must manage banks and need not be concerned about the activities of the non-bank financial sector. The non-bank financial sector consists of financial intermediaries, trading in existing money. The credit provided by the non-bank financial institutions is irrelevant to the stability of the economy.

In the following submission, I provide evidence of the significance of bank credit to the economy and propose that banks be managed in a manner that ensures that they contribute to the:

(a) the stability of the currency of Australia;
(b) the maintenance of full employment in Australia; and
(c) the economic prosperity and welfare of the people of Australia.

These are the duties of the Reserve Bank of Australia, which I fully support.

Given a sound banking system, both the bank and non-bank financial systems would prosper and provide financial services that contribute further to the attainment of these objectives.

In Appendix 2 of this submission, I provide a brief explanation of my background in the management of banking. While it is not been extensive, the IMF has commended the banking guideline that I developed for its effectiveness. While it is no longer applied in its original form, the underlying principles continue to be applied and the country concerned continues to have a stable monetary

system without any problems related to bank competition.

Yours faithfully

Leigh Harkness

Submission on Competition within the Australian banking sector

By Leigh Harkness

This submission to the Senate Economics Committee considers the different functions of bank and non-bank financial institutions and explains how this relates to the manner in which these institutions should be managed and compete with each other.

It recommends that the growth of bank credit should be managed in a manner that ensures that national savings are fostered and that bank credit does not deplete saving to the point that it yields foreign debt. It finds that lending by non-bank financial institutions is already constrained by the availability of money to lend and so does not need any further constraint.

Also, it recommends that incentives be built into the guidelines relating to the growth of bank credit to discourage inflation and encourage full employment.

1. Introduction – money

There are two basic types of financial institutions in Australia:

- Those that are strictly financial intermediaries, taking the savings of Australians and lending them to those that wish to borrow money; and
- Those that have the ability to lend by creating additional money.

The money we earn enables us to buy the equivalent of what we have produced. If the only money we spent was what we earned, then a country could never buy more than it produced. Those financial institutions with a capacity to create additional money have the ability to finance the country to buy more than it has produced.

Financial institutions that create additional money must be distinguished from those that do not, and regulated accordingly. Those that do not create additional money should be allowed to lend without constraint as their lending is constrained to the money saved with them.

2. Current level of competition between bank and non-bank providers

Competition between the bank and non-bank sectors of the finance industry has been undermined because bank lending has been excessively deregulated while the non-bank financial sector has been

excessively constrained.

Both of these financial institutions hold deposits and lend money. Yet they perform very different functions within the economy.

When banks lend they do not take money out of one borrower's account and place it in another customer's account: they create additional deposits. When non-bank financial institutions lend, they transfer money from savers to borrowers. These differences are explained in more detail in Appendix 1.

The repayment of an existing bank loan reduces the amount of money in the economy. When banks lend money up to the value of the loans repaid, the total amount of money in the economy is not increased.

Current Australian monetary policy treats lending by banks and non-bank financial institutions as equivalent and uses interest rates to regulate both. That form of control is inadequate for banks and inappropriate for non-bank financial institutions.

During the late 1980's, high interest rates reduced new bank lending. They also reduced the repayment of existing loans as existing loans. Existing borrowers had to pay more in interest, leaving them with less money to repay the principal of their loans. In 1988-89, high interest rates reduce loan repayment by more than they reduce new lending commitments. This caused the amount of money in the economy to rise. Therefore, interest rate policy increased the rate of inflation and the following financial crisis undermined the banking system and caused an economic recession.

Both banks and non-bank financial institutions need to be regulated on a prudential basis to protect depositors. The prudential regulation of banks should be more stringent than for non-bank financial institutions as banks deposits are money and if confidence in money were to fail, the whole economy suffers. However, a failure of a non-bank financial institution, while damaging, does not threaten the whole economy as it does not alter the amount of money in the economy.

Interest rates are not necessary to regulate the quantity of money that non-bank financial institutions may lend. They must have surplus money balances before they can lend them. As explained in Appendix 1, money must have been saved with them before they can lend it. Non-bank financial institution transfer existing entitlements from savers to borrowers.

As explained in Appendix 1, when banks lend money, they create additional money. In the current monetary environment, bank lending generates current account deficits which must be funded either from foreign equity or foreign debt. This continues despite the regulations that stipulate their capital requirements and the quality of their debt.

These current account deficits could be funded by a decline in foreign reserves, if the Australian economy had a fixed exchange rate system or another form of the floating exchange rate system that allowed foreign reserves to be accumulated. However, with the current rules relating to the floating exchange rate system, the economy does not generate additional foreign reserves nor deplete foreign reserves. Therefore, current account deficit is funded by raising foreign debt or selling off the farm.

The growth of bank credit and the accumulated current account deficit for Australia are compared in Figure 1. Also, shown is the accumulated fiscal deficit which some economists claim as the cause of

the current account deficit.

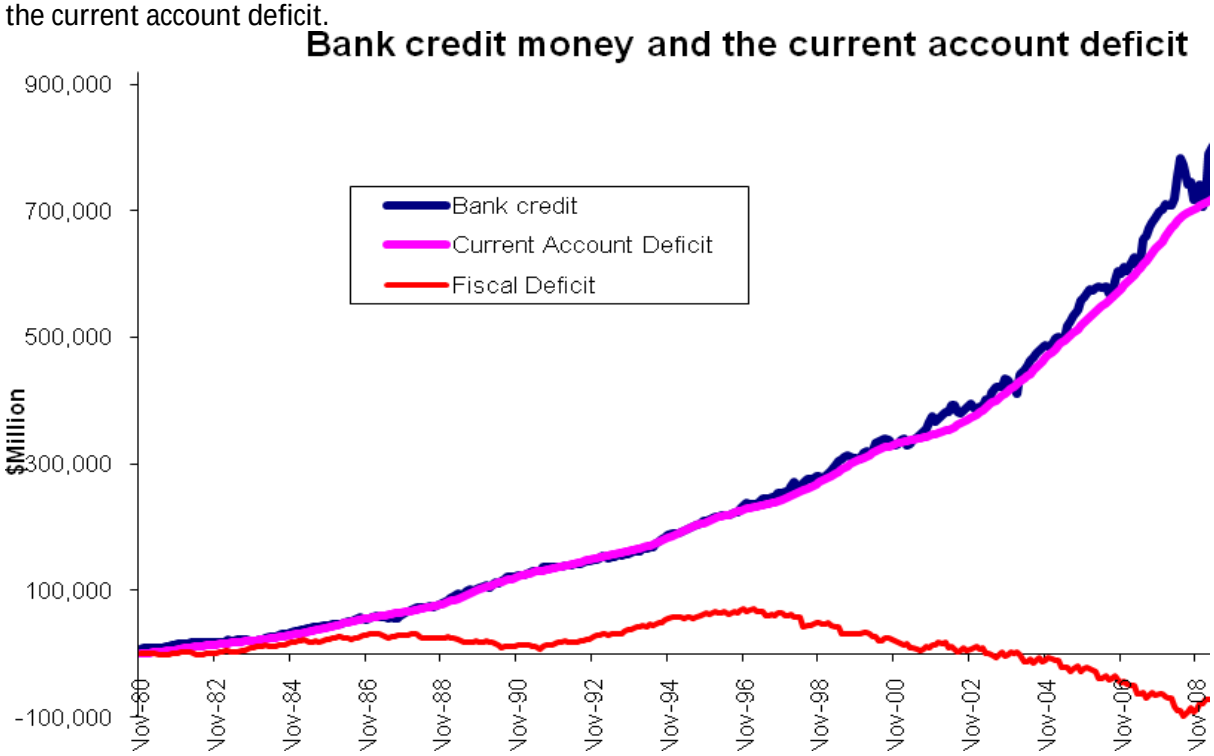

Figure 1 Bank credit, the fiscal deficit and the current account deficit for Australia

The growth in bank credit in Australia is calculated from the available Reserve Bank statistics. Since 2002, changes to the statistical series have meant that money from a number of sources have been put in an "other" category. As a result, the statistics on bank credit are not as reliable as they were before 2002. Some economists may consider that this data has been manipulated to come out with outcome presented in Figure I. The data used to prepare Figure 1 is available at: http://www.buoyanteconomies.com/UnendowedMoney.xls .

The Reserve Bank of New Zealand publishes a statistical series called M3R, which presents the money created by bank credit in New Zealand. When this is compared to the New Zealand current account deficit, it shows a similar result as evident in Figure 2. The data used to prepare Figure 2 is available at: http://www.buoyanteconomies.com/NZM3RMoney.xls .

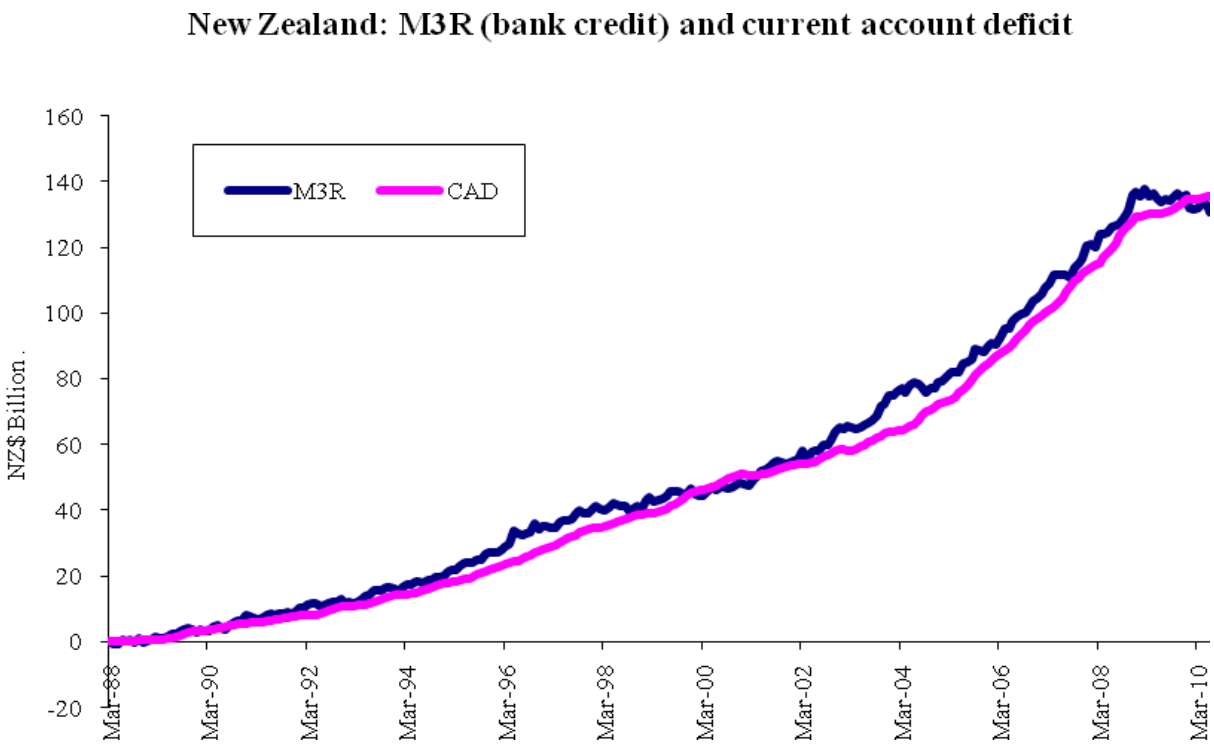

Figure 2. New Zealand bank credit and the current account deficit

Similar relationships are available for the United States of America (at http://www.buoyanteconomies.com/USACAD.htm) and for the Philippines (at http://www.buoyanteconomies.com/PhilippinesCAD.htm). These relationships are not fabricated. Nor are they a coincidence.

The point to note with these associations is that the current account deficit is approximately equal to the growth of bank credit. Unless there has been no growth in the credit from non-bank financial institutions, there is no evidence to suggest non-bank financial institutions have any effect upon the current account deficit. Therefore, from the perspective of managing excess demand in Australia, non-bank financial institutions do not need to be regulated in the same way that banks are.

Nor does credit from non-bank financial institutions have any effect on inflation. Only the growth of bank credit causes inflation. It is when the rate of growth in bank credit exceeds the rate of economic growth, that bank credit causes inflation.

Bank credit is not the only factor that determines the rate of inflation. Some price variations can be attributed to the price of imported products. However, prices in the services sector are largely determined by domestic factors. Therefore, when we compare the rate of inflation for services with the inflation explained by the growth of bank credit, we find that the growth in bank credit can explain it all[1]. This is clearly evident in Australia as shown in Figure 3.

1 The formula used to calculate inflation is $Pt/Po = \sqrt{((Mt/Mo)/(Yt/Yo))}$

where *Pt* is the price in time t, *Mt* is the
amount of bank credit outstanding at time t, and *Yt* is the real level of national income at time t.

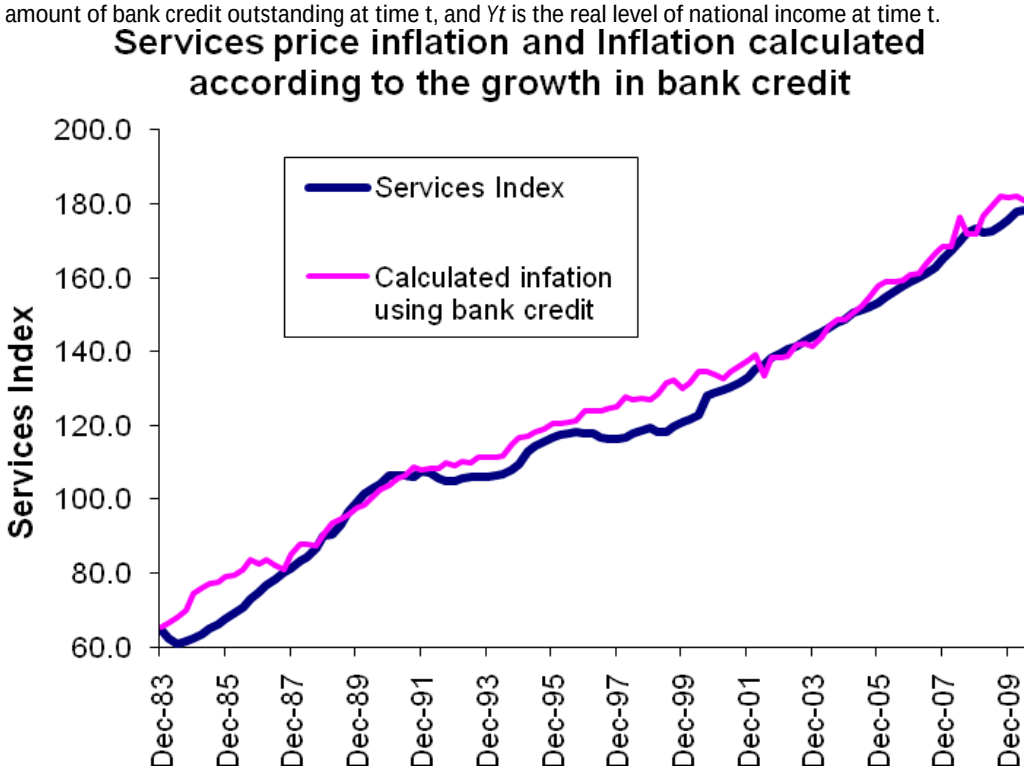

Figure 3: Australian Services price index and inflation calculated from the growth of bank credit

A similar relationship between the growth of bank credit, national income and inflation exists in the USA as shown in Figure 4. The data for Figure 3 is available at the same location as for Figures 1 and the data for Figure 4 is available at: http://www.buoyanteconomies.com/USACAD.xls .

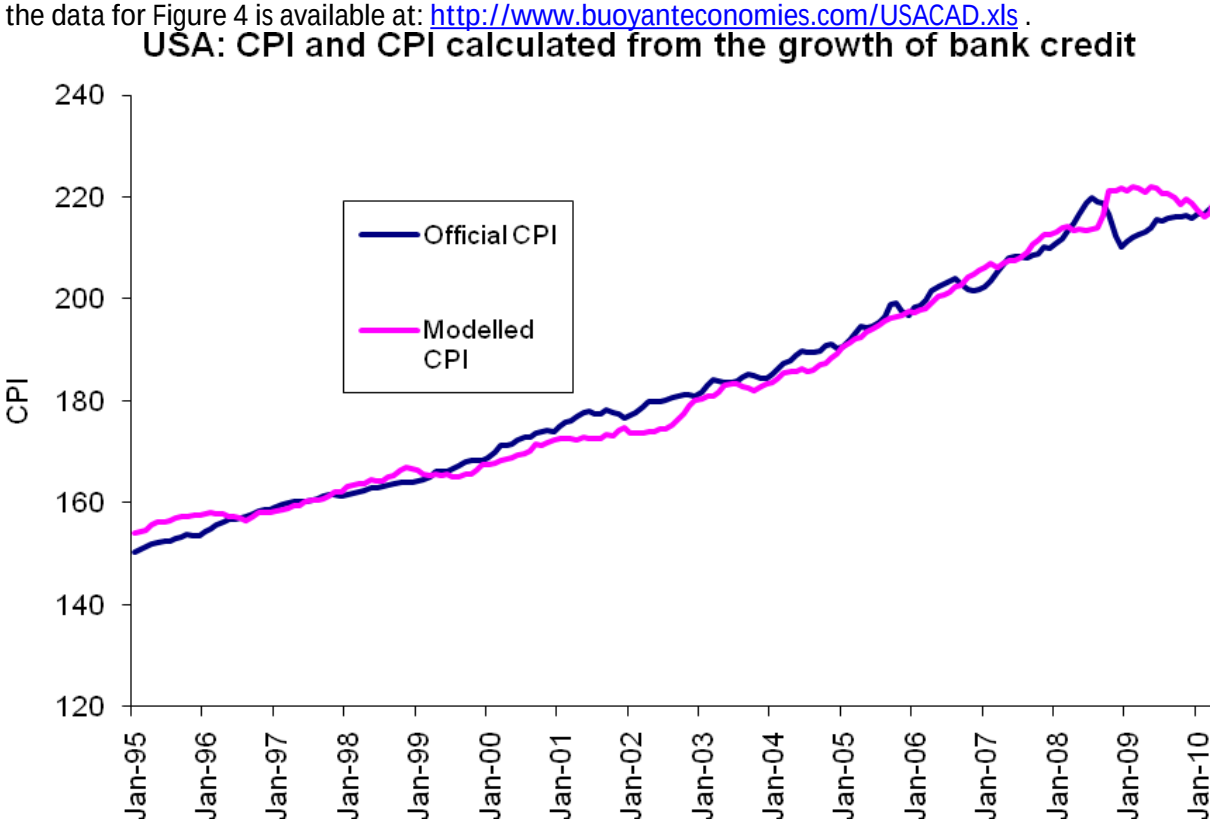

Figure 4: USA CPI and inflation calculated using the growth of bank credit

These relationships reveal that the inflation is related to the growth of bank credit. The growth of credit from non-bank financial institutions does not contribute to inflation. Therefore, credit from non-bank financial institutions does not need to be managed to prevent inflation.

Non-bank financial institutions in Australia should be flourishing. Their lending does not have the negative consequences associated with bank credit. Yet non-bank financial institutions have been displaced by Australia's four large banks. This is an unfortunate outcome as the product produced by these banks is currently contributing to the economy's current account deficit, rising foreign debt and higher rates of inflation.

That is not to say that bank credit should be stopped and role of banks diminished. Banks continue to play an important role in the economy and if the monetary system were modified to accommodate a more sustainable monetary system, their role could be increased significantly.

3. Products available and fees and charges payable on those products

As explained in section 2, the products that banks and non-bank financial institutions provide have similar characteristics to consumers, but they are very different from the perspective of monetary management.

If there were a healthy non-bank financial sector, this inquiry may not have been necessary. Competition between institutions would have driven an efficient competitive market for finance.

However, to achieve a healthy non-bank financial sector, it is necessary for bank credit to be managed in a manner that allows it to contribute towards a sustainable economy. That does not mean that bank lending should cease. It will mean that banking becomes more competitive, not only in providing finance but also in trading international currency.

In a healthy financial environment, we would expect to find that non-bank financial institutions would deal in the sectors in which they were more competitive and banks would deal in the sectors in which they were more competitive. For example, we may see non-bank financial institutions deal in mortgages and banks deal in shorter term commercial credit. Fees and charges in these sectors would not need to be regulated if the market were sufficiently competitive.

4. How competition impacts on unfair terms

A lack of competition can lead to unfair terms that may be included in financial contracts. But possibly the most unreasonable aspect of competition in banking sector is that if banks do operate on lower fees and therefore have lower incomes, they also have a lower share price. Such banks become takeover targets for other banks that are know that by raising fees, they can reduce competition and so raise their own profitability as well as the profits of the acquired bank.

While banks compete at both the retail and the capital level, there is little hope for any bank that chooses to maintain low fees and charges. It is this dual form of competition that leads to the monopolistic behaviour of banks in which no bank can afford to undercut its neighbour.

5. Likely drivers of change and innovation

The likely drivers of future change and innovation in the banking and non-banking sectors are changes to the regulatory framework to acknowledge the different functions that banks and non-bank financial institutions perform in the financial market.

That is likely to see non-bank financial institutions perform on a much larger scale, particularly in retail finance. They are likely to seek to attract deposits from the household sector and provide finance for mortgages. Also, they may engage in channelling the long term funds available from the superannuation industry into the secure mortgage side of the finance industry.

That is not to say that the role of banks will decline. They have the potential to play a more significant role in the overall management of the economy. Appropriate incentives in the market could see them acting in the market to influence the exchange rate to ensure full employment and to manage the rate of monetary growth with a view to minimise inflation. They could be setting the interest rates in the market to manage credit growth and attract foreign capital, if required. If banks could profit from achieving such objectives, there would not be the same resentment towards the level of profit that banks expect to earn.

One approach to achieving such an outcome is to require banks to link their lending to savings such that they could lend, say, $10 provided that they retained the equivalent of one US dollar in savings in the form of additional net foreign reserves. Under such guidelines, bank lending would not exceed national savings.

To provide incentives to ensure full employment, the amount that banks may lend relative to each US$1 of savings could be reduced by $1 for every one per cent that the level of unemployment exceeded the full employment. Similarly, to ensure low inflation, the amount banks may lend may be reduced by a further $1 for every one per cent that inflation exceeded the target rate of inflation. Hence, if unemployment were 2 per cent above target and inflation 1 per cent above target, banks would be able to lend $7 for every one dollar US of additional savings that they held. To increase their lending and maximise profits in such an environment, banks would drive the exchange rate to a level that would ensure full employment and do so at a rate that would ensure low levels of inflation.

Also, banks may use interest rates to attract, or discourage, foreign capital inflows. If banks held inadequate foreign reserves to facilitate the demand for loans, they might raise interest rates above world market interest rates to attract foreign capital and thereby raise their savings. Once lending requirements were satisfied, banks would reduce interest rates to encourage new loans. The lower interest rates would discourage foreign capital investment, also.

When banks no longer required foreign capital and could rely solely only on domestic savings to meet their savings requirement, the economy would generate a current account surpluses. This form of monetary management stabilises interest rates as well as exchange rates. It would also ensure full employment, low inflation and reduce foreign debt.

6. Impact of the large banks being considered 'too big to fail'

No bank should be allowed to fail. Money held as bank deposits should be protected. But it is not necessary to protect shareholders to provide depositors with protection.

Bank deposits are money and regardless of the competence of the bankers, depositors in banks should be certain of their security, regardless of the size of the bank. Bank depositors are not investors in a bank.

Even so, a bank in financial difficulties may pay excessively high interest rates to attract deposits. The public, through the government, should not be relied upon to bail out such opportunists.

Therefore, to avoid such an outcome, the Reserve Bank could provide lender of the last resort facilities at appropriate market interest rates and any bank offering interest rates at or above the rate offered by the Reserve Bank should be required to establish a new type of account that can be identified separately and deposits placed in that form of account attracting the higher interest rates would not receive a government guarantee.

Such an arrangement would provide security for bank deposits while allowing competition. In all likelihood, banks would offer lower interest rates than non-bank financial institutions because bank deposits do not leave the banking system. As explained in Appendix 1, if bank customers transfer their deposit from banks to non-bank financial institutions, those deposits are not lost to the banking system. Banks just transfers the deposit from the account of the customers withdrawing their deposit to the account of the non-financial institution in which they deposit their funds. If the funds were on-lent to borrowers, then those funds are transferred into the bank account of the borrowers. The deposits do not leave the banking system.

Therefore, banks as a group do not need to attract deposits from non-bank financial institutions. Consequently, banks may prefer that non-bank financial institutions take the role of being the main retail deposit taking institutions. Such an approach may reduce their costs without reducing their income.

7. Impact of regulation on hindering competition

Section 2 of this submission discusses some of the regulations that have restricted or hindering competition within the bank and non-bank financial sectors. The terms of reference also make reference to regulation imposed during the global financial crisis.

At this point, it is worth considering some of the attributes of the Australian financial system that are similar to that of the United States of America which triggered the global financial crisis.

Countries with floating exchange rates, such as Australia and the USA that quarantine foreign money from entering the economy, rely on the growth of bank credit to generate monetary growth to facilitate economic growth. As can be derived from the formula in the footnote in section 2, the growth in the money supply is greater than the nominal growth of national income. Therefore, the rate of growth in bank credit or bank debt is faster than national income and our capacity to repay that debt. Such a situation is unsustainable. Eventually, the growth of bank credit must exceed the capacity to repay that debt, leading to a recession and financial crisis.

To maintain the rate of growth of bank credit in the US, banks started lending to people who were not capable of repaying their loan. When that reality became evident, the whole monetary system collapsed.

Australia has started on a similar path with the government's 'first home buyers' scheme. That scheme was developed to stimulate the economy and avoid the anticipated recession following the introduction of the GST. Such schemes should be avoided.

Even so, the Australian economy will eventually face a similar crisis to the US crisis when the capacity of the economy to increase borrowing is exhausted.

The rate of growth of the economy is slower than the rate of monetary growth possibly because people and business require additional money balances to repay their debts. These debts comprise not only the domestic bank debt but the foreign debt generated by the growth of bank credit being derived from the current account deficits presented in Figure 1.

Adopting a system of bank regulation similar to that described in section 4 would reduce the level of foreign debt and allow more money to be spent on goods and services. That would raise incomes and improve the capacity of the economy to repay its debts.

That change in regulation would stimulate competition in the finance sector. It would provide a legitimate economic and commercial role for lending by the non-bank sector and a more responsible role for bank credit.

8. Opportunities for, and obstacles to, the creation of new financial services

As mentioned at the start of this submission, the monetary system currently treats banks and non-bank financial institutions as providing similar services. As discussed in section 2, the monetary system can be more competently managed if the roles of the bank and non-bank financial sectors are taken into account and they are regulated accordingly.

Such an approach to the financial system would bring about a significant rise in new financial services, particularly in the non-banking sector. Existing banks are likely to expand their non-bank services. For example, they are likely to re-introduce savings banks (which are non-bank financial institutions).

Also, new non-bank financial institutions can be expected to enter the financial market, secure in the knowledge that the finance industry is more equitable now that banks no longer have an unbridled capacity to create more money.

9. Assessment of claims by banks of cost of capitals

A more competitive environment, in which banks are regulated in a manner consistent with the function they perform, may see the cost of borrowing rise for banks. Not only would banks have capital requirements to meet their prudential responsibilities, they would also be required to hold savings in the form of foreign reserves.

Banks also have a privileged position in that they have a monopoly on money. Some money may be held as cash balances but about 95 per cent of the money in the economy is held as deposits in a

bank. Even non-bank financial institutions must hold their deposits in a bank. The banks have exclusive power to determine the interest that they pay on these deposits or liabilities of the bank. Hence, banks control their own funding costs.

If interest rates were too low, some depositors may move their deposits offshore. However, that exposes them to an exchange rate risk. Therefore, most holders of bank deposits would choose to hold those deposits in domestic currency with a bank.

As banks largely control the rate of interest that they pay on their deposits, the cost of their capital, which is substantially smaller than their deposit liabilities, is largely irrelevant. The cost of capital is essentially the profit they pay to their shareholders. The rising value of bank shares reflects the adequacy of bank profits.

10. Other policies, practices and strategies that may enhance competition

Competition between banks could be enhanced if banks could choose to have their interbank settlements made using the funds in their foreign reserve accounts. That would encourage banks to compete with each other for deposits as settling those transfers would enhance their foreign reserve accounts, enabling them to increase their lending and profits.

Also, to enhance competition, the opportunity should exist for banking co-operatives (similar to credit unions but with the powers and responsibilities of a bank) to be formed and have access to the inter-bank settlement system. The current approach where banks can be taken over by other banks prepared to raise bank charges has created a high cost banking system. An opportunity for depositors to own a bank along the same lines as a credit union would give depositors the option of developing their own low cost banking system if it were necessary.

Money is an essential system for measuring and recording the entitlements and obligations of people and businesses in the economy. The economy should not held to ransom, compelled to pay high fees for an essential economic service.

The Commonwealth Government has exclusive power to regulate banking and if it is to act competently and responsibly, it must exercise those powers for the benefit of the people of the Commonwealth of Australia.

11. Comparisons with relevant international jurisdictions

Australia's current monetary system is similar to that of the United States and Europe. Australia could do well to avoid such systems. Many of these countries have experienced low economic growth, high rates of unemployment, high rates of inflation, and rising levels of foreign debt.

My own experience as an economist started in the micro economy of Tonga. Such small economies cannot afford the luxury of a monetary system that drives them into debt. I learned how to manage such an economy. The monetary system of that economy continues to hold high levels of foreign reserves, currently equivalent to more than six months imports.

Countries like China that do not have the floating exchange rate system are able to generate savings in the form of foreign reserves. Exporters are not even aware that they are contributing to the nation's savings when they spend their foreign income of domestic products rather than imports.

Provided bank credit in China does not exceed the rise in savings from their growing foreign income, China will continue to have a stable monetary system that generates economic growth.

Australia needs to emulate the desirable attributes of the Chinese monetary system, which is very similar to that in Australia, before financial deregulation. The monetary system is the software that drives the hardware of the Australian economy and the integrity of that system must be assured if the economy is function well and prosper.

Appendix 1

A comparison of bank credit and non-bank credit

The following accounts have been prepared to explain the difference between bank credit and non-bank lending.

Consider the bank balance sheet shown in Table 1. The bank has deposits of $110 billon and outstanding loans of $105 billion. The deposits with the bank are money.

Table 1: Initial bank balance sheet

Assets	$B	Liabilities	$B
Loans	105	Deposits	110
Other bank assets	25	Capital	20
Balance	130	Balance	130

If this bank were to lend an additional $10 billion, other things remaining equal, then the balance sheet of the bank would be as shown in Table 2.

Table 2: Bank balance sheet after $10B loan

Assets	$B	Liabilities	$B
Loans	105	Deposits	110
New loans	10	New deposits	10
Other bank assets	25	Capital	20
Balance	140	Balance	140

In the process of lending money, the bank has increased its loans outstanding by the amount of the new loans and has created additional deposits. These deposits are additional money.

Let us assume that instead of the bank lending the money, savers with deposits in the bank chose to transfer their deposits to a credit union and then the credit union lent that money.

Let us assume that Table 3 represents the initial balance sheet of the credit union before the transfer of the additional deposits from the bank.

Table 3: Initial credit union balance sheet

Assets	$B	Liabilities	$B
Loans	80	Deposits	85
Bank deposits	10		
Other credit union assets	10	Capital	15
Balance	100	Balance	100

Table 4 separately identified the deposits of the savers and the credit union in the bank's balance sheet.

Table 4: Initial bank balance sheet with credit union deposits

Assets	$B	Liabilities	$B
Loans	105	Deposits	90
		Saver's deposits	10
		Credit union deposits	10
Other bank assets	25	Capital	20
Balance	130	Balance	130

In Table 5, we show the balance sheet of the credit union after the savers have transferred their deposit from the bank to the building society. Note that the new deposits are shown as a credit union liability. Also, on the assets side, the credit unions deposits with the bank have increased from $10 billion to $20 billion. Consequently, total assets and liabilities have increased.

Table 5: Credit union balance sheet with additional deposits

Assets	$B	Liabilities	$B
Loans	80	Deposits	85
Bank deposits	20	New deposits	10
Other credit union assets	10	Capital	15
Balance	110	Balance	110

However, deposits in credit unions are not money. Also, despite the transfer of the savers deposits from the bank to the credit union, the bank's deposits have not changed. As shown in Table 6, the bank deposits that previously belonged to the savers have been transferred to the credit union.

Table 6: Bank balance sheet with additional credit union deposits

Assets	$B	Liabilities	$B
Loans	105	Deposits	90
		Saver's deposits	0
		Credit union deposits	20
Other bank assets	25	Capital	20
Balance	130	Balance	130

We now assume that the credit union lends the $10 billion to the borrowers. The credit union loans do not affect the liabilities of the credit union, whereas the bank loans did affect bank liabilities. For the credit union loan, the credit union transfers its deposits of $10 billion in the bank to the accounts of the borrowers. Therefore, its own bank deposits decline by $10 billion while its loans outstanding increased by $10 billion, as shown in Table 7.

Table 7: Credit union balance sheet following the new loans

Assets	$B	Liabilities	$B
Loans	80	Deposits	85
New loans	10	New deposits	10
Bank deposits	10		
Other credit union assets	10	Capital	15
Balance	110	Balance	110

Total bank liabilities do not change. The credit union's deposits with the bank have been reduced $10 billion while the deposits of other bank customers, who have received the proceeds of the loan from the credit union, have increased as shown in Table 8.

Table 8: Bank balance sheet following the new credit union loans

Assets	$B	Liabilities	$B
Loans	105	Deposits	100
		Saver's deposits	0
		Credit union deposits	10
Other bank assets	25	Capital	20
Balance	130	Balance	130

Both these transactions have a similar effect: the borrower has money to spend. Yet the effect on the economy is quite different. In the case of the bank loan, the amount of bank deposits was increased. In the second example, the amount of credit union deposits was increased.

The effect of the increases in these deposits on the whole economy is very different. With the bank loan, there was no saving: no-one reduced their entitlements to provide entitlements to the borrowers. However, in the case of the credit union loans, there were savers who transferred their money or entitlements to the credit union who in turn made them available to the borrowers.

Some people may doubt that there is any difference. However, when one considers the evidence, presented in Figures 1 and 2, it is evident that the nature of bank lending and non-bank lending are very different.

Appendix 2

Relevant background to the Author

In August 1980, I joined the Ministry of Finance of the Kingdom of Tonga as the economist. In March 1981, the Secretary for Finance requested that I investigate the cause of the Kingdoms falling foreign reserves. Eventually I traced the cause to a rise in bank credit. I found that when bank credit increased, foreign reserves declined and when bank credit declined, foreign reserves increased.

In December 1981, in response to this finding, the Secretary of Finance wrote to the Bank of Tonga advising it that if foreign reserves were greater than the equivalent of 6 months imports, there would be no constrain on the amount of bank credit. If foreign reserves were to fall below that level, the Bank was to start restraining its lending. If foreign reserves were to fall to 3 months imports, it would be able to maintain the current level of lending: lend only what was repaid. If foreign reserves were to fall to 2 months imports, the bank was to cease all new lending.

On 3 March 1982, Hurricane Isaac devastated most of Tonga's export industries. The Australian High Commissioner approached me offering Australian balance of payments support. I advised the High Commissioner that it would not be necessary; and it was not. The Bank of Tonga was aware of the limits to its lending and allocated the available funds to the most urgent needs.

Tonga joined the IMF in 1985. In its first Article IV consultation report, the IMF commended the Government on the success of its banking policy in preventing large balance of payments problems.

I returned to Australia and joined the Australian Treasury in July 1984. Australia had problems with its external balance, also. I chose to investigate whether the cause of the current account deficit in Australia was similar to that which I found in Tonga.

I found an even stronger relationship between the growth of bank credit and the current account deficit in Australia than I had in Tonga.

In 1990, I returned to the Ministry of Finance in Tonga. By that time, Tonga had established a central bank. Although the policies that I had applied were no longer binding, the central bank continued to monitor the level of foreign reserves relative to the level of imports, and manage bank credit accordingly. The foreign reserves held by the National Reserve Bank of Tonga is currently equivalent to more than six months imports. (See http://www.reservebank.to/)

Since identifying the relationship between bank credit and the current account deficit in Australia, I have investigated and found similar relationships in New Zealand, the Philippines and the United States of America.

There are a number of books and papers written about the effect of money on the balance of payments. One of the most quoted is a book edited by J. A. Frenkel and H. G. Johnson in 1976 entitled *'The monetary approach to the balance of payments'.* Also, the IMF economist, J. J. Polak, wrote a number of papers on money and balance of payments.