Financial Stability Report

November 2009

Contents

This report is published pursuant to Section 165A of the Reserve Bank Act 1989.
The charts and tables in the appendix to this report use data available as at 23 October 2009.
More recent statistics may be used in the main body of the report.
This report and supporting data (with some further notes) are also available on www.rbnz.govt.nz

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1 Overview

Conditions in the world economy and financial system have improved over the past six months with a general lift in confidence and a return of risk appetite. Substantial fiscal and monetary policy stimulus is providing some support for demand across the major regions, while measures targeted directly at the financial sector have helped to stabilise financial markets. The outlook for the New Zealand economy has been buoyed by the improved global outlook.

In New Zealand and abroad, better market conditions have enabled financial institutions to put their operations on a sounder footing by raising additional term funding and capital. The ability of the banks to issue term debt has been assisted by widespread government guarantees. However, issuance of non-guaranteed debt has also started to emerge as risk aversion continues to abate.

Despite increasing evidence of a global recovery, economic conditions remain fragile and the possibility of setbacks remains. A sharp rise in global equity prices since March has helped to improve sentiment, but may be outpacing the underlying improvement in the world economy. A key issue is whether economic recovery can be sustained once the effects of monetary and fiscal stimulus start to wane around the world. Even if recovery continues, loan losses will continue to mount and are likely to lead to further restructuring of some global institutions.

Impaired assets in the New Zealand and Australian banking systems have been rising over the past year, but remain relatively contained when compared with those of banks in many other countries. The major Australasian banks have had little difficulty raising additional capital. However, further loan losses are likely in New Zealand due to continuing rises in unemployment and weakness in some sectors, such as property, construction and parts of agriculture.

Credit growth in New Zealand has been flat during 2009, with household borrowing increasing only modestly and credit to many parts of the business sector contracting. This partly reflects weak economic activity and asset markets. However, banks' lending standards, especially for business borrowers, have tightened over the past 18 months. The supply of credit to some sectors, such as property development, has been further curtailed by ongoing difficulties in the non-bank sector. The improvement in financial market conditions over recent months should increase the capacity of the banking sector to extend credit as the economic recovery progresses. However, whether the supply of credit is sufficient to support the recovery will also depend crucially on the banks' willingness to lend to new borrowers.

While banks have tightened their lending standards for residential borrowers during the financial crisis, there have been signs of an easing in recent months, with some banks prepared to offer housing loans at relatively high loan-to-value ratios. The housing market is currently strengthening, but we believe house price growth will slow after the current recovery phase. We would encourage the banks to avoid any return to riskier mortgage lending practices.

The financial crisis has demonstrated that New Zealand banks, and leveraged firms and households, are vulnerable to stress emanating from global financial markets. The lesson here is that a more cautious approach to credit expansion is warranted during the next economic upswing. Increased caution should be exercised by bank boards and management, with reinforcement from external monitors such as rating agencies and institutional investors. The Reserve Bank also has a regulatory role to play, for example through the recently introduced prudential liquidity policy for banks. The policy, which comes into force in April 2010, will require banks to raise a certain proportion of their funds in the form of deposits or longer-term wholesale borrowing.

The policy should, over time, help to reduce the country's exposure to disruptions in global funding markets, as well as act as a stabilising influence during credit-based asset cycles.

Fundamentally, reducing New Zealand's financing risks also requires lifting national savings in the medium term, so that the country's net external liabilities stabilise or decline relative to national income. Some rebalancing appears to have occurred over the past year with the current account deficit beginning to narrow. However, the recent significant rise in the New Zealand dollar, largely on the back of increased global risk appetite and a falling US dollar, could hinder further improvements in the external balance. There is scope for policy changes in other areas (such as the tax system) to assist further rebalancing.

Globally, the extraordinary support measures that have been introduced in response to the financial crisis will need to be gradually unwound. In New Zealand, we have provided additional liquidity support to the banking sector but have announced plans to gradually reduce the scale of that support. The Crown's retail deposit guarantee scheme has been extended, but the entry criteria have been tightened and the guarantee fee substantially raised. This will hopefully give viable non-bank deposit takers an opportunity to complete restructuring, but some firms are likely to cease operations in coming months.

At the same time, regulatory lessons about the causes of the crisis need to be incorporated into policy. After losses that would have seemed impossible two years ago, governments in many major economies have injected substantial capital into many of the largest global financial institutions. These actions are effectively underpinning sentiment at present, and will continue to do so even if they are unwound, since the market is likely to believe that further support will be forthcoming if required.

It has always been recognised that explicit or implicit government support can create an incentive for banks to be managed in a riskier way. The accentuation of this 'moral hazard' risk in the post-crisis environment, together with some apparent regulatory shortcomings, point to a clear need to strengthen the international regulatory framework. The Reserve Bank will be closely watching global policy developments with a view to adopting international policy changes where these are appropriate to New Zealand circumstances.

Box A

Objectives of the *Financial Stability Report* and Reserve Bank policy actions

Following amendments to the Reserve Bank Act in 2008, the Bank is required to publish a *Financial Stability Report* every six months. These documents must report on the soundness and efficiency of the financial system and other matters associated with the Reserve Bank's statutory prudential purposes. They must also contain information necessary to allow an assessment of these activities.

Chapters 2–4 of this *Report* continue to highlight significant challenges to New Zealand's financial system, although the situation has improved substantially over the past six months. Relative to financial systems in other economies, the New Zealand system appears to continue to be able to intermediate credit fairly efficiently. For example, credit growth in New Zealand is still positive, and net interest margins have not expanded significantly (see chapter 4). While non-performing loans within the banking system are growing quite quickly, this is largely as expected, and far better than the position in many other economies.

New Zealand banks remain reliant on international wholesale funding markets. The Reserve Bank is working to reduce the vulnerability of the banking system to a sudden deterioration in those markets through a revised prudential liquidity policy (chapter 6). When those markets did deteriorate last year, the ability of the banks to raise funding was enhanced through expanded liquidity support operations put in place by the Reserve Bank (including arrangements to accept residential mortgage backed securities (RMBS) as collateral). These facilities are now under regular review with a view to discontinuing some as financial market conditions normalise (see box C).

The Reserve Bank has provided advice on the continuation of the Crown's retail guarantee scheme (chapter 4), which is likely to be most relevant for non-bank deposit takers. The tightening of eligibility for the scheme is designed to be compatible with the Reserve Bank's new prudential regime for non-bank deposit takers. The Reserve Bank is also continuing to monitor international initiatives aimed at modernising financial regulation in light of the current financial crisis (chapter 6).

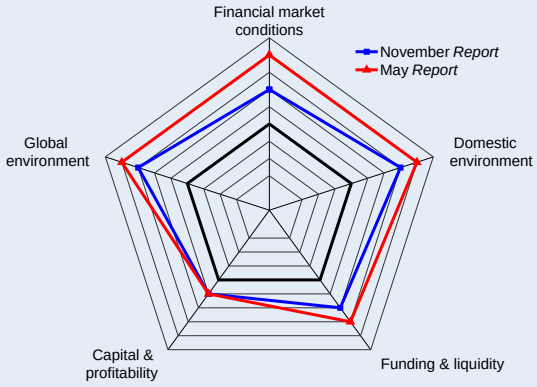
Box B

A graphical summary of financial stability in New Zealand

The improving financial stability outlook is summarised in the diagram below, which we are introducing in this issue. Our financial stability 'cobweb' is intended to summarise current risks to New Zealand's financial system (the three upper segments of the diagram) and the capital and liquidity buffers that are available to absorb those risks (the lower segments). Our view on each segment is informed by statistical analysis of relevant data, but we overlay the statistical results with judgement if required to reach a diagram consistent with our view.[1] The centre is the least risky area, and the further from the centre an individual segment marker is, the greater the perceived risk (or the smaller the perceived buffer). The thick black band represents a 'normal' level of risk.

Figure B1

Financial stability cobweb



Source: RBNZ.

Note: Black band represents normal level of risk. Movements away from the centre of the diagram represent an increase in financial stability risks.

[1] Full details of the calculation methodology are available in Bedford, P and C Bloor (2009), "A cobweb model of financial stability in New Zealand", Reserve Bank of New Zealand *Discussion Paper*, 2009/11.

Current financial stability risks remain elevated, but have subsided somewhat since the May *Report*. The global economy remains relatively weak, but there has been a broad-based improvement in a number of forward indicators over the past six months (see chapter 2). Financial markets remain volatile in New Zealand and abroad. While there has been a material improvement in financial market conditions, measures of risk appetite and market volatility remain relatively elevated.

The domestic environment segment mainly seeks to measure the credit risk associated with New Zealand households and firms, as well as New Zealand's overall current account imbalance. While the outlook for the New Zealand economy has improved over the past six months, large structural imbalances still remain, generating an ongoing vulnerability for the New Zealand financial system (see chapter 3).

New Zealand's financial institutions have remained relatively strong in the face of significant shocks. Nevertheless, while New Zealand banks have healthy capital buffers, profits are expected to be weak in coming quarters, reducing the headroom before further loan losses would start to erode capital. Finally, the banks have started to improve liquidity buffers and lengthen the tenor of funding (see chapter 4), but this will be a long process.

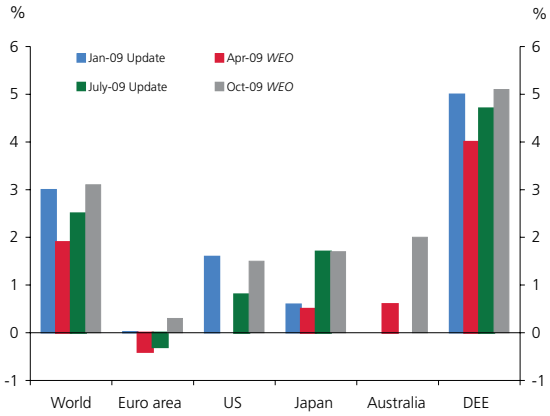
2 The international environment

The outlook for the world economy has brightened over the past six months, alongside a significant improvement in financial market functioning and sentiment. However, loan impairments are expected to worsen, and this will place further strain on already stressed financial institutions. Weakness in financial institutions has led to impaired credit markets in a number of key global economies, despite substantial government support. Moreover, the scale of support provided to institutions, financial markets and economies is straining fiscal balance sheets and raising the threat of future inflationary pressure. Thus there is a difficult balancing act in ending support programmes – ending too soon may lead to further market volatility and impairment, but leaving programmes in place for too long would make returning the economy to a sustainable path more challenging.

The economic outlook has improved…

In the early months of 2009 most developed economies experienced a sharp decline in economic activity as a pervasive feedback loop formed between impaired credit markets and the real economy in the wake of the collapse of Lehman Brothers in September 2008. Since the May *Report* the global economy has largely stabilised and it is widely believed that most advanced economies lifted from recession in the third quarter of 2009. Improvements in the outlook have seen further upward revisions made to IMF and *Consensus* forecasts of regional and global growth for both 2009 and 2010 (figure 2.1).

Figure 2.1
Evolution of IMF growth forecasts for 2010
(percent change in real GDP)



Source: IMF *World Economic Outlook* (*WEO*).
Note: No specific forecasts are available for Australia for *WEO* Updates. DEE refers to Developing and Emerging Economies.

…but risks remain.

Despite these encouraging signs, the global recovery remains tentative. International trade volumes, which fell sharply late last year, have recovered some lost ground but are unlikely to provide an enduring engine of recovery for most countries over the coming quarters. The recovery to date has been largely driven by a turn in the inventory cycle, as firms rebuild stock levels run down during the depths of the recession, and by significant fiscal policy support. Extensive fiscal stimulus programmes have been implemented, including tax cuts, infrastructure spending, and in some cases grants to directly bolster consumption in particular sectors of the economy – for example, 'car scrappage' schemes in Germany and the US.

Despite this policy support, underlying domestic demand remains weak. Retail sales remain soft, and savings rates have increased as households seek to reduce debt and rebuild lost wealth. Continuing high rates of unemployment in many countries will constrain income growth and act to keep domestic demand depressed. While many advanced

economies have some additional fiscal measures planned for 2010, some of which may impart further substantial stimulus, there is concern over the outlook for domestic demand once government stimulus starts to dissipate.

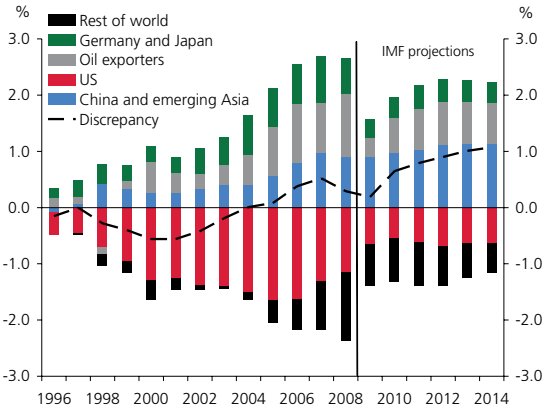
Continued fiscal support appears necessary in the short term. However, the level of fiscal stimulus delivered thus far has required significant increases in public debt levels, making sustainability an issue. The IMF projects that average public debt in the advanced G20 economies will increase to about 110 percent of GDP by 2014, compared to about 75 percent of GDP in the five years before the crisis. High levels of public debt could place upward pressure on long-term interest rates and inhibit recovery in private sector investment. To mitigate these risks, governments will need to establish medium-term strategies to consolidate public debt.

Global imbalances remain an issue.

It is generally recognised that the 'global imbalances' seen before the crisis, with large deficits in many mature economies counterbalancing surpluses in many emerging economies, need to be reduced to ensure a sustainable expansion. The IMF projects global imbalances will decline through 2009-2010, due largely to adjustments in the surplus oil exporting economies (driven by reduced oil receipts) and a significant reduction in the US current account deficit (figure 2.2). US consumers have increased savings rates and reduced consumption as net worth has declined (figure 2.3), and the trade balance has improved as import volumes have fallen faster than exports. Current account balances in surplus economies have also reduced as export demand has fallen more sharply than imports, partly due to fiscal stimulus that has kept consumption and investment growth rates high in some countries.

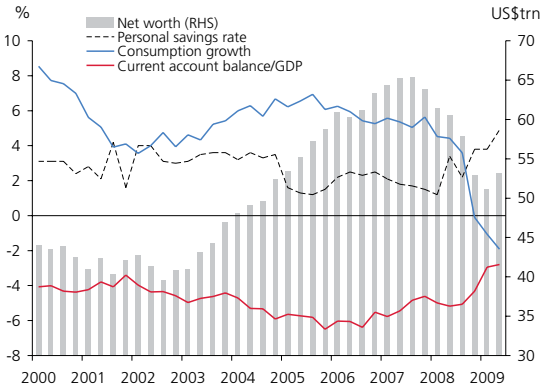
However, the likely extent of rebalancing in both surplus and deficit countries over the next few years remains unclear. While it is likely that savings rates in advanced economies will be higher than in recent history, the improvement could be hindered by returning confidence and the recent rebound in net worth in many countries. China's current account surplus could also begin growing again, as external demand from other countries improves and fiscal stimulus runs off. The IMF projects imbalances in surplus countries to increase again from 2010, and settle around levels near those seen immediately before the recession, suggesting that further policy changes to support rebalancing (as recently agreed at the G20) may be required.[1]

Figure 2.2
Global imbalances
(current account balances, percent of world GDP)



Source: IMF *WEO*.
Note: 'Rest of world' category differs from that presented in the IMF *WEO*. Discrepancy represents inconsistency between aggregate surpluses and deficits.

Figure 2.3
Consumption and savings in the US



Source: Datastream, RBNZ calculations.

[1] **In contrast, deficits in deficit countries are not projected to increase significantly, implying a growing discrepancy in the global current account projections shown in figure 4.2. See IMF *WEO*, October 2009, Box 1.5.**

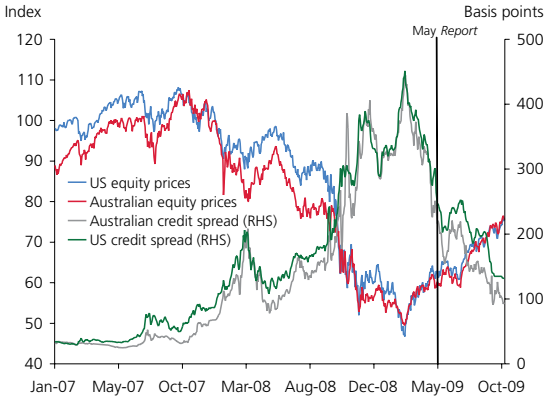
Equity markets have rallied…

The improved economic outlook, along with generally better than expected earnings reports from listed companies, has seen the mild improvement in equity prices that began in March evolve into a prolonged rally (figure 2.4). The S&P 500 index has recovered by about 60 percent from its March lows. This is a historically strong recovery, with equity prices rising more rapidly than after previous periods of serious economic downturn. This has been driven by a strong rebound in investor confidence, following the unprecedented level of fiscal and monetary policy support.

There may also have been some non-fundamental 'momentum' factors in the recent rally. While prices are well below 2007 peaks, price-earnings ratios are still high by historical standards. There has been some question over the sustainability of earnings results as sizeable fiscal stimulus rolls off, particularly as sales levels have continued to disappoint. However, in the more recent round of earnings reports, firms have generally been more upbeat about their outlook for 2010. If firms can sustain their profit results and economic fundamentals continue to improve, equity markets may be able to sustain current levels.

Figure 2.4

International equity prices and credit spreads



Source: Bloomberg.

Note: North American CDX and Australian iTraxx credit spreads; US S&P 500 and Australian ASX 200 equity price indices. Equity price indices have been rebased to January 2008.

…while conditions in bank funding markets have improved further.

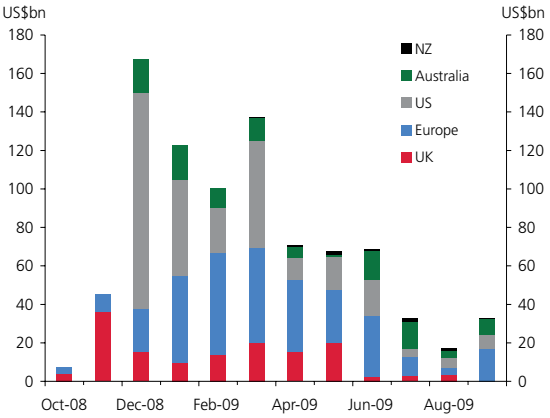
As market sentiment has lifted, conditions in key bank funding markets have continued to improve over the past six months. Interbank funding costs have fallen to levels prevailing before the collapse of Lehman Brothers in September 2008. This improvement has been aided in large part by government policy. Many central banks have committed to hold policy rates at historically low levels for an extended period, and have engaged in quantitative easing programmes to reduce longer-term borrowing costs. Financial institutions have also been supported by other policies including government guarantees of term debt, short-term liquidity facilities and asset purchase programmes.

Since December, banks in the US, Europe and Australasia have issued more that US$800 billion in government guaranteed debt. In recent months, confidence in bank debt has increased and it has become possible for many institutions to issue term debt at reasonable spreads without a government guarantee. As a result, there has been a marked reduction in new guaranteed bond issuance (figure 2.5).

Figure 2.5

Government guaranteed debt issuance by banks

(by country of issuer)



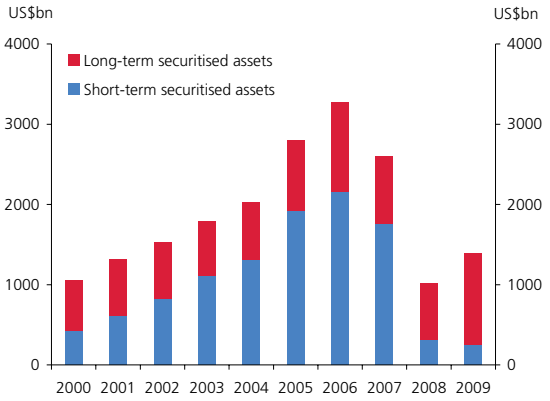
Source: Bloomberg, RBNZ calculations.

However, despite these improvements, some segments of the credit markets remain impaired. Securitisation market volumes are very low (figure 2.6) despite heavy policy support, including government purchases of asset-backed securities. This dysfunction is limiting banks' access

to a valuable funding source, especially in the US. The US commercial paper market also remains somewhat subdued. Maturities have continued to exceed new issuance and the stock of outstanding commercial paper has continued to decline over much of the past six months, particularly as Federal Reserve holdings (under special crisis facilities) have reduced. However, issuance has shown some tentative signs of improvement over recent weeks and the stock of outstanding paper may have stabilised (figure 2.7).

Figure 2.6

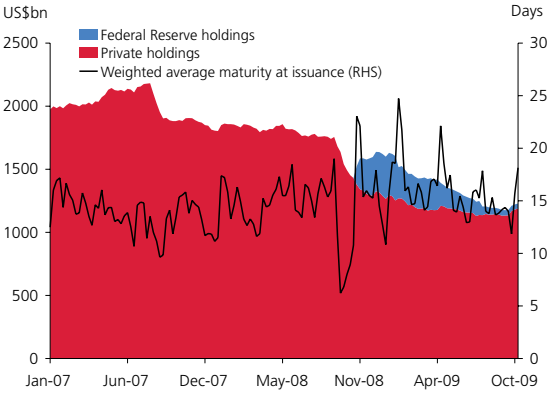
US private-label securitisation issuance by type



Source: IMF *Global Financial Stability Report* (*GFSR*).
Note: Data for 2009 is to end-June and annualised. Short-term securitised assets are asset-backed commercial paper, and period-end outstandings.

Figure 2.7

US commercial paper outstanding and average maturity at issuance



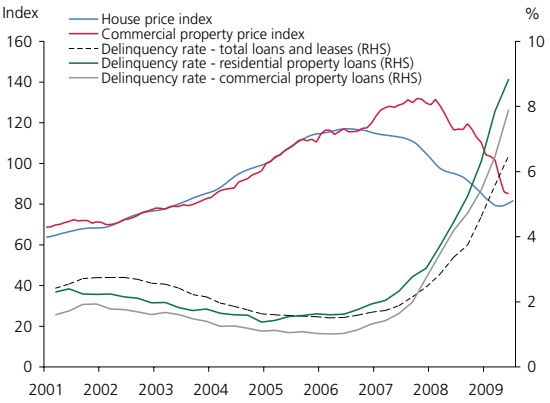
Source: US Federal Reserve, RBNZ calculations.
Note: Weekly data, not seasonally adjusted. Weighted average maturity is estimated from daily issuance data, assuming the typical maturity of longer-dated commercial paper is 90 days.

Banks remain under strain.

Bank balance sheets in many advanced economies remain under pressure from impairments to loans and related securities. Loan delinquencies and impaired assets are rising dramatically, alongside increasing unemployment, and lower profits and household incomes. This impaired asset cycle will continue into 2010. While the residential housing market appears to be stabilising in Europe and the US, commercial property prices are expected to fall further and add to bank stress as commercial property owners run through cash reserves and become unable to service their loans (figure 2.8). Although banks, particularly in the US, have successfully issued a significant amount of new capital, more may be needed globally to offset further write-downs of impaired assets.

Figure 2.8

US property prices and loan delinquency rates



Source: Datastream, Moody's/REAL.
Note: Loans are classified as delinquent when they are 30+ days past-due or not accruing interest.

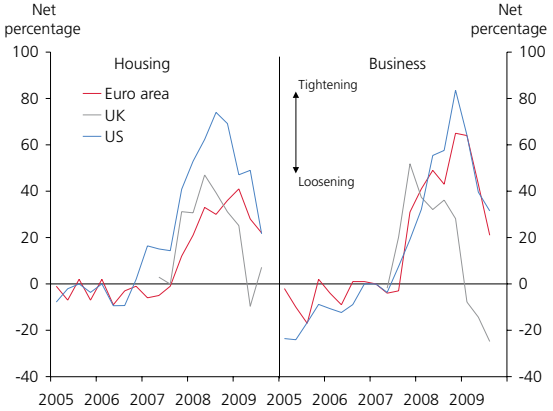
Government efforts to remove illiquid assets from bank balance sheets are progressing, but fairly slowly. Furthermore, banks may now be more content to hold these assets rather than recognise losses, given their recent ability to raise capital.

In light of continuing balance sheet stresses, the credit channel to the real economy in these countries still remains impaired. While the recessionary environment has also led to reduced credit demand from households and businesses, recent IMF analysis indicates that credit capacity (supply) may have fallen even further. Despite renewed access to

funding markets, banks continue to hoard liquidity to bolster balance sheets. Banks have generally continued to tighten lending standards, albeit by less than previously (figure 2.9). Credit growth continues to moderate or decline across the main advanced economies (figure 2.10). Australasian credit growth has also fallen, but in aggregate terms remains positive, reflecting the relative health of the Australasian economy and financial system.

Figure 2.9

Survey measures of lending standards

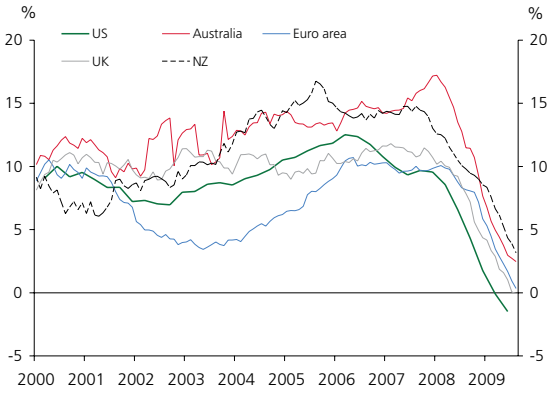


Source: Bank of England, ECB, US Federal Reserve.
Note: Net percentage is the percentage of respondents reporting a tightening of credit conditions over the past three months minus the percentage of respondents reporting a loosening of credit conditions.

Figure 2.10

Credit growth in selected advanced economies

(annual percent change)



Source: Bank of England, ECB, Reserve Bank of Australia, RBNZ, US Federal Reserve.
Note: Non-financial private sector credit growth.

The restricted access to credit could act to curtail aggregate demand, and poses a real risk to sustainable recovery in advanced economies, particularly if access to bank credit by the business sector remains constrained. While higher quality corporate borrowers have been able to directly access funding markets and raise additional capital through equity markets as market conditions have improved, smaller and riskier businesses are often dependent on funding from banks and other intermediaries.

Authorities consider exit strategies.

Recently improved wholesale credit market conditions have reduced demand for short-term liquidity facilities and motivated recent action by major central banks to revise the terms of these facilities. The Federal Reserve has revised the term, size and frequency of its Term Auction Facility, among other changes. In a coordinated announcement, the ECB, the Bank of England and the Swiss National Bank have moved to limit their US dollar repurchase facilities. However, central bank and government authorities maintain that, given the continuing dysfunction in specific areas of the financial system, it is not yet appropriate to exit entirely from wider credit market support policies.

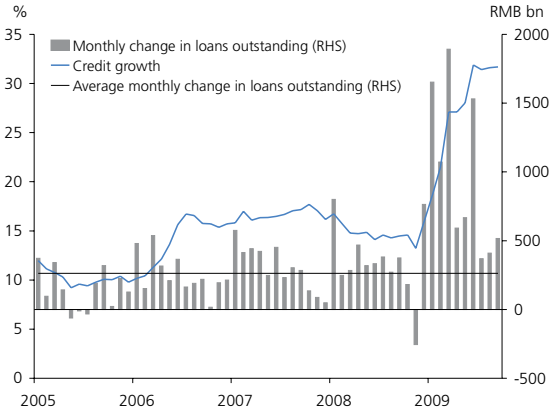
As the recovery continues, authorities will face the delicate task of exiting from other market support programmes, as well as reducing the level of fiscal stimulus. The timing and manner of exit from these policies will be critical. A premature exit from credit market support could risk these markets falling back into an impaired state, and undermine economic recovery. A late exit could fuel asset price inflation due to loose monetary conditions. Unnecessary delays in exiting from fiscal stimulus could also delay structural rebalancing and further fuel fears over the sustainability of public debt. Exit from some credit market policies is also likely to require coordination across countries to minimise impacts on cross-border capital flows. However, some divergence in views is already developing about the timing of exits as economies recover at different paces.

Growth in China has reaccelerated.

Growth in China reaccelerated in the past six months, fuelled by high credit growth and substantial fiscal stimulus. Measures to support lending have seen very fast credit growth of more than 30 percent over the past year (figure 2.11). Additional liquidity has also been injected into the Chinese economy through a loosening of policies governing foreign capital inflows into China, with a greater amount of these flows being left unsterilised.

Chinese equity prices and property values appear to have been driven higher as some of the additional liquidity provided by the government has been channelled into asset markets, rather than financing business investment. There is some risk that this credit-fuelled rise in asset prices will reverse and create a future drag on Chinese growth. This would tend to lead to renewed risk aversion in financial markets and weaker Chinese import demand, representing a downside risk for the global economy.

Figure 2.11
Lending growth in China



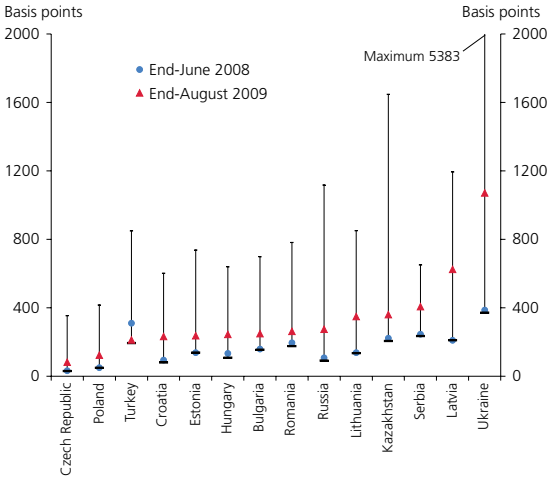
Source: Peoples' Bank of China, RBNZ calculations.

The outlook for emerging economies has generally improved.

Other Asian economies, particularly manufactured goods producers, experienced very sharp declines in external demand as the global recession unfolded. Activity in the emerging Asian economies has rebounded in recent months, although this has been driven in large part by a turn in the inventory cycle. A sustainable recovery in these economies will largely depend upon a wider global recovery renewing external demand for their manufactured goods.

Capital inflows into Asian economies, while curtailed during the crisis, have recovered. Risk of a 'sudden stop' in capital inflows has also lessened recently in emerging Europe. Perceived default risks have eased, though they still remain elevated (figure 2.12). Parent bank funding has remained relatively resilient in that region, and several countries have sought financial support from the IMF. However, bank lending into emerging Europe is still declining and the region remains vulnerable to any further weakness in cross-border lending.

Figure 2.12
Emerging Europe sovereign CDS spreads
(range between June 30 2008 and 31 August 2009)



Source: IMF *GFSR*.
Note: Ends of vertical lines represent the minimum and maximum values for the period.

The Australian economy has proved resilient…

The health of Australia's economy and financial system is of prime importance to New Zealand's macro-financial landscape, given Australia's role as a major trading partner and Australian ownership of a large part of New Zealand's banking system. Although slowed by global conditions, the Australian economy outperformed its peers throughout the global downturn and avoided recession.

A key contribution to Australia's robust performance has been strong external sector activity as commodity prices and demand from China have recovered. The recovery in commodity markets (if sustained) is likely to underpin Australian economic activity in coming years, with substantial capital investment in the extraction industries. Strong

commodity export performance could keep the Australian dollar strong and reduce growth in other Australian industries. Overall, this would tend to make Australia a growing market for New Zealand exports.

Australian businesses have experienced a substantial fall in profits over the past 12 months, the largest annual fall since 1991. As discussed in the Reserve Bank of Australia's *Financial Stability Review*, in this environment businesses have moved to reduce debt. In the first half of 2009, the net repayment of debt by Australian businesses was equivalent to 1 percent of GDP; this contrasts with net new debt finance of 14 percent of GDP in the first half of 2007. Instead of borrowing (in net terms), firms issued new equity equivalent to about 6 percent of GDP in the first half of 2009 – double the average rate of issuance of the past 15 years.

Domestic demand growth has been fairly weak as households have responded to reduced net worth by increasing savings rates and reducing the rate at which they accumulate debt. However, in recent months consumer confidence has rebounded and retail spending has improved, while house prices have reversed much of their earlier decline. This rebound may slow as the effects of recent fiscal stimulus (much of which has been targeted at the household sector) dissipate.

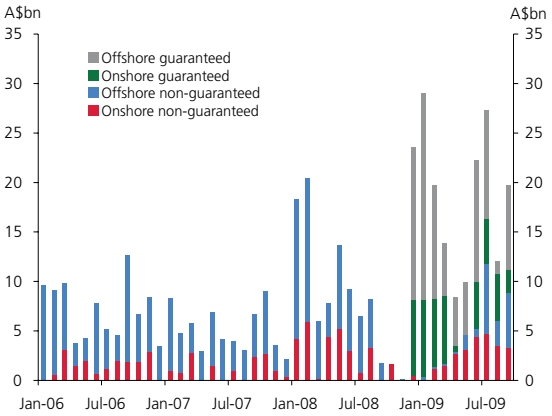
…as has its financial system.

The Australian financial system has remained profitable despite financial market disruptions over the past year. Significant capital raisings have also allowed Australian banks to lift their (already strong) capital levels.

Funding pressures have continued to abate over the past 12 months as banks have regained access to funding markets. Interest rate spreads on domestic term debt have narrowed to such a degree that the major Australian banks can now issue term debt without the Australian government guarantee at a slightly lower overall cost than guaranteed debt. These banks have also significantly increased the amount of non-guaranteed debt being issued offshore. About half of the total issuance over recent months has been without the government guarantee, compared to only 12 percent in the March quarter (figure 2.13). However, it remains cheaper for lower rated banks to issue with the guarantee.

Figure 2.13

Australian banks' monthly bond issuance



Source: Reserve Bank of Australia.

The Australian banking system remains well placed to absorb credit losses. However, banks have seen a further deterioration in asset quality over the past six months. Non-performing loans have risen from 0.7 percent of total banking sector assets in June 2008 to 1.5 percent in June 2009. The deterioration in asset quality is expected to continue into 2010 as improvements in unemployment and profitability are likely to lag the wider recovery.

3 New Zealand's economy and financial markets

The New Zealand economy appears to have turned the corner after a prolonged recession that saw GDP contract by around 3 percent from its peak at the end of 2007. This recovery is being driven by improved global economic conditions including a more positive outlook for dairy prices in particular. Activity in the housing market has also increased, which has seen house prices regain much of the ground lost during the recession. However, house prices still appear high relative to incomes, which may limit scope for a sustained rise. The strength of the NZD is making life difficult for many exporters, and across the business sector more generally some firms need to restructure and reduce debt. Improved financial market conditions should improve the capacity of New Zealand's financial system to make funding available to creditworthy borrowers as the recovery progresses. New Zealand's large net external liability position and ongoing current account deficits mean that the economy remains vulnerable to future disruptions to the availability of foreign capital, although recent policy changes should help reduce this risk.

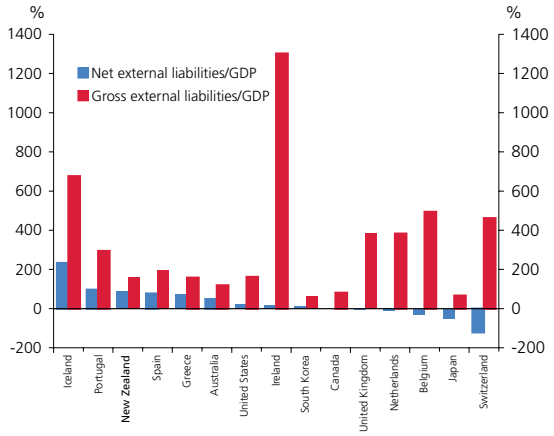
The New Zealand economy is heavily indebted.

New Zealand's net external liabilities are large relative to the size of the economy, reflecting persistent current account deficits over an extended period. A high proportion of these external liabilities are held by the banking system, which has funded much of its domestic lending by borrowing from overseas. New Zealand's net foreign liabilities exceeded 95 percent of GDP in the first half of 2009, one of the highest ratios in the OECD (figure 3.1). In contrast, as discussed below, New Zealand's gross liability position is not large, as there are few New Zealand entities that have borrowed to purchase overseas assets.

At a basic level, the current account deficit represents the shortfall in the country's national saving (relative to its investment activity) which must be made up by drawing on foreign savings. Over the past decade, large and persistent dissaving by the household sector has led to very low rates of national savings, notwithstanding significant positive contributions to saving by both the government and business sectors. Over the past year household savings rates have risen, while the government has dissaved through stimulatory fiscal policy.

Figure 3.1

Net and gross foreign liabilities



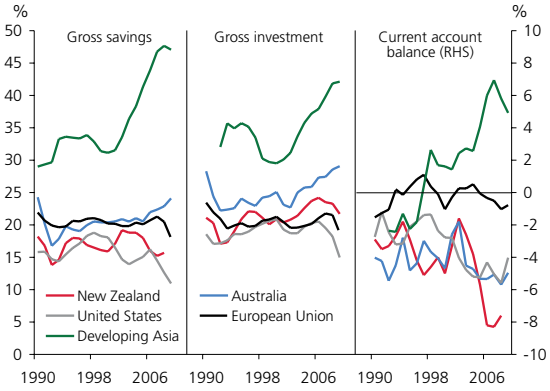
Source: IMF, RBNZ calculations.
Note: Latest available annual data.

Over recent years, large current account deficits have occurred in New Zealand in the broader context of growing global imbalances (see chapter 2 and figure 3.2).

Figure 3.2

Saving and investment ratios in selected regions

(percent of GDP)



Source: Statistics New Zealand, Australian Bureau of Statistics, IMF *WEO*, RBNZ calculations.

Note: Current account balance has been constructed as the difference between gross savings and investment in the National Accounts, and differs from the more common balance of payments definition.

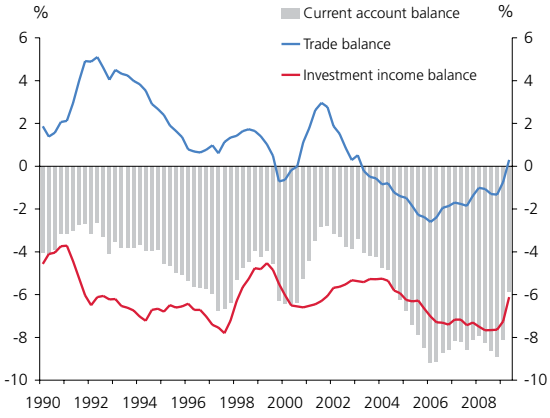
The current account deficit has recently been falling…

During late 2008 and early 2009 the New Zealand economy showed early signs of rebalancing, with the current account deficit narrowing from 8.9 percent of GDP in the year to June 2008 to 5.9 percent of GDP in the year to June 2009 (figure 3.3). However, this narrowing appears to have largely reflected a range of cyclical and one-off factors. Sharp declines in domestic investment have contributed to large falls in import values. While export values also fell in response to weak global demand, they did not fall at the same rate. As a consequence, the annual trade balance moved into positive territory in the June quarter of 2009 for the first time since 2003. The investment income deficit has also narrowed due to falling domestic profits associated with the weak economy, and low global interest rates.[1]

Figure 3.3

Trade balance, investment income balance, and current account balance

(annual totals, percent of GDP)



Source: Statistics New Zealand.

… but it is not clear that this will be sustained.

The scope for sustained rebalancing is being curtailed by the recent strength of the NZD. The exchange rate fell sharply over the year to March 2009, which helped cushion the export sector from the effects of the global recession and deter import demand. As discussed below, the exchange rate has risen sharply since March, which is likely to limit further current account improvement over the medium term.

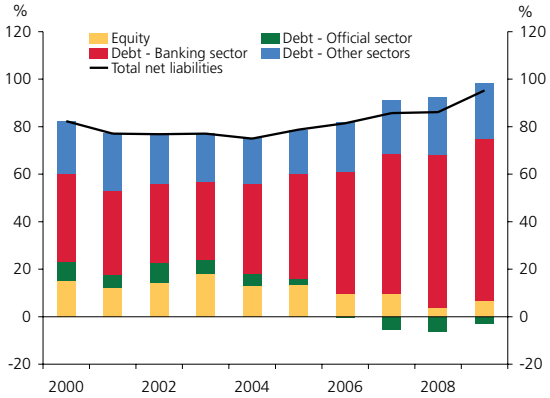
Low levels of gross foreign liabilities mitigate rollover risk…

While New Zealand's net liability to GDP ratio is relatively high, some compositional factors mitigate the associated risks.[2] The gross assets and liabilities (figure 3.1) that comprise the net position are much lower than in many other countries (reducing the risk that our net liability position will rise as a result of a sizable portfolio of overseas assets becoming impaired). Much of the debt is raised directly in NZD while a high proportion of the debt that is raised in foreign currencies is hedged back into NZD. This prevents indebtedness rising significantly when the NZD weakens. Thus a weakening in the NZD (and the prospect of a future recovery) tends to attract international investors to NZD investments. Finally, a substantial amount of debt funding is provided by the foreign owners of New Zealand businesses, who have strong incentives not to suddenly withdraw funding.

[1] The investment income deficit was also reduced in the June 2009 quarter due to the recent court ruling against a major bank (which has the effect of reducing recorded net profit outflows).

[2] For more discussion see Bedford, P (2008), "The global financial crisis and its transmission to New Zealand – an external balance sheet analysis", Reserve Bank of New Zealand *Bulletin*, Vol 71, 4.

Figure 3.4
Composition of New Zealand's net international liabilities
(June years, percent of GDP)



Source: Statistics New Zealand.

. . . but work still needs to be done to reduce New Zealand's external vulnerability.

As the period between late 2008 and March 2009 illustrated, New Zealand remains vulnerable to any shift in the willingness or capacity of foreign investors to continue to provide funds to New Zealand banks or businesses. Over the longer term, New Zealand needs to contain its net indebtedness (its net liabilities relative to the size of the economy). To achieve this, New Zealand's current account deficit would have to fall as a share of GDP to around the rate of nominal GDP growth – about 5 percent on average. Given historic rates of return on New Zealand's international assets and liabilities, this would require an average trade surplus of 2 to 3 percent of GDP. To actually reduce indebtedness relative to income would require larger trade surpluses for a prolonged period. Policy developments in some areas (for example the tax system) may facilitate debt reductions by encouraging New Zealand households and firms to save, in some cases by removing existing distortions.[3]

Reducing New Zealand's vulnerability to changes in funding market conditions also involves managing the existing liabilities prudently. For the banks this means relying less on short-term wholesale debt markets and developing more stable funding programmes that use a larger share of longer-term debt (see chapter 4). Such efforts, which are being encouraged by the Reserve Bank's prudential liquidity policy, will tend to raise banks' funding costs somewhat, and may see bank debt reduced as a share of net national liabilities by encouraging larger firms to issue debt and equity themselves.

History suggests that benign current account corrections are possible.

While current account imbalances and national indebtedness are sometimes forcibly resolved via sudden outflows of foreign capital and a currency crisis, there have been instances of smooth adjustments with relatively minor output losses. IMF research suggests that benign current account adjustments generally occur with the help of exchange rate depreciation. This finding is consistent with the Reserve Bank's view that the current level of the NZD is unlikely to be sustainable. It would be more conducive to orderly adjustment if the currency fell gradually, rather than remaining high for a period and then falling sharply.

Wholesale interest rates have started to rise.

Wholesale interest rates in New Zealand have generally moved higher since the May *Report*. Longer-term interest rates have increased in line with offshore developments, as a broad-based improvement in risk appetite and an improved outlook for the global economy has put upward pressure on international interest rates.

This improved global outlook, along with signs of recovery in the domestic economy, has seen markets bring forward the timing and magnitude of expected increases in the OCR, and placed further upward pressure on domestic interest rates. Overall, wholesale swap rates have risen between 40 and 80 basis points since the previous *Report* (figure 3.5). However, bank bill yields have remained largely unchanged over the period, as the spread that banks pay for funding has fallen towards normal levels. This normalisation has led the Reserve Bank to scale back the special liquidity support facilities available to the banking system (see box C).

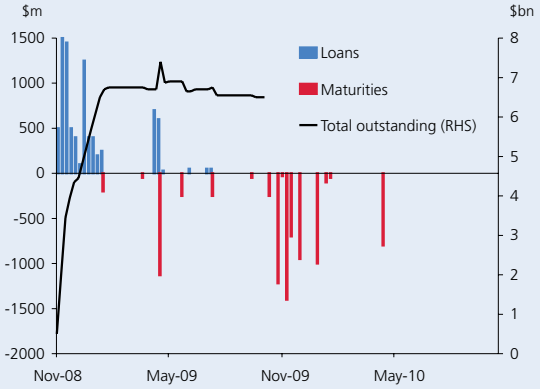
[3] These issues were discussed in the Reserve Bank's 2007 submission to the Select Committee on Monetary Policy, available on our website. More recently, a working group based at Victoria University has commenced a detailed examination of the tax system.

Box C

Reserve Bank liquidity facilities

The Reserve Bank has implemented a number of changes to its liquidity operations since 2007. The major changes to these operations include an expansion of the range of securities eligible to be used in liquidity facilities, notably to encompass AAA-rated residential mortgage backed securities (RMBS), as well as extending the term of lending through these facilities. The object of these facilities was to ensure that New Zealand's financial institutions had sufficient access to liquidity during a period of stress in offshore funding markets. Generally, the demand for these facilities has waxed and waned in line with the degree of disruption in offshore funding markets. For example, appetite for liquidity through the Term Auction Facility (TAF) was strong over the end of 2008 and beginning of 2009 (figure C1). This strong demand followed severe disruption to offshore funding markets after the failure of Lehman Brothers, with total TAF lending reaching $6.95 billion by February. Subsequent demand for TAF credit has been very limited as conditions in funding markets have improved.

Figure C1
Demand in weekly TAF auctions and total credit outstanding



Source: RBNZ.

Given the low usage of these temporary crisis facilities and the broad based improvement in financial markets, the Reserve Bank recently announced the withdrawal of some facilities, to take effect from the beginning of November. The measures include:

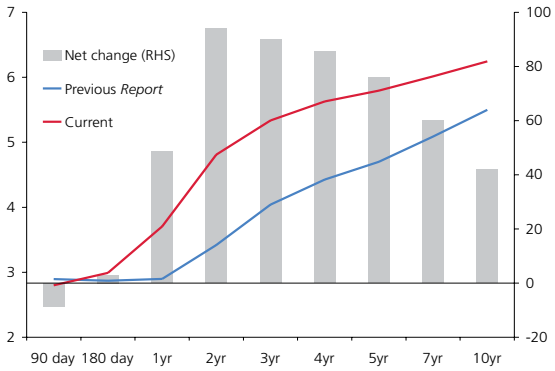
- The removal of the TAF, where banks have been able to borrow funds for 3, 6 and 12 months using eligible collateral (such as RMBS, registered bank bills, and New Zealand government securities).
- A change to the regular Tuesday Open Market Operation (OMO) to allow all eligible securities (including corporate securities and RMBS) to be acceptable collateral for repurchase transactions of maturity up to three months. Currently, only approved corporate and asset-backed securities are acceptable as collateral in this OMO for terms of up to two months. The regular weekly OMO will continue until the end of March 2010 when it will be reviewed with a view to discontinuing it if market conditions allow.
- A shortening of the maximum term over which funds may be borrowed from the Bank in the Overnight/Term Reverse Repo Facility (ORRF/TRRF) from one month to an overnight basis only. All currently approved eligible collateral (including corporate securities and RMBS) will remain acceptable in the ORRF.
- The withdrawal of the regular weekly Reserve Bank bill tender. We will continue to offer Reserve Bank bills as required in the daily OMO.

The exact state of our post-crisis liquidity facilities is yet to be decided, but we expect these facilities to fulfil a number of key objectives:

- Encourage an appropriate degree of self-reliance in the banks' management of liquidity and promoting use of market sources of liquidity wherever possible. To that end we would expect our facilities to be aligned with the objectives of the new bank prudential liquidity policy, which sets out minimum standards for the management of liquidity.
- Support key domestic debt markets where a solid case exists by helping to foster liquidity and/or the development of those markets.
- Reduce the Reserve Bank's exposure to financial risk, by removing higher risk assets from eligibility as collateral, and reducing the maturity of the Bank's operations.
- Retain future crisis capability.

Figure 3.5

Wholesale interest rate curve



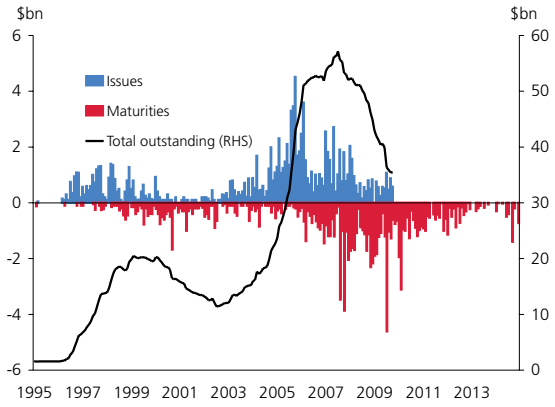
Source: Bloomberg.

Foreign demand for New Zealand government debt has remained strong.

Demand for New Zealand government debt has remained robust over the past few months. Offshore demand has remained particularly strong, with the proportion of government bonds held by offshore investors remaining high, despite increased government bond issuance. In contrast, demand for other New Zealand dollar denominated bonds, particularly in the Eurokiwi and Uridashi market, has remained subdued. The pace of issuance of Uridashi bonds slowed at the end of 2008 and this has continued during 2009 (figure 3.6). Maturities have generally outweighed any new issuance, with the volume of Uridashi and Eurokiwi bonds outstanding continuing to decline over the past few months.

Figure 3.6

Issuance and maturities of Eurokiwi/Uridashi bonds



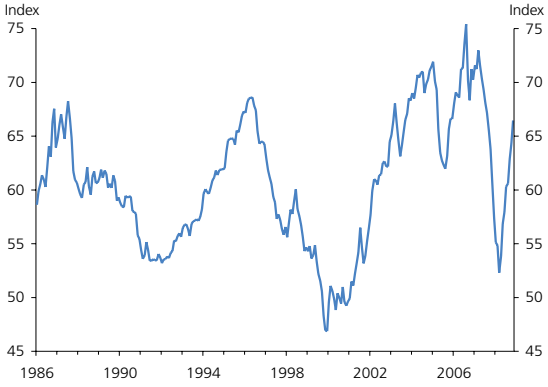
Source: Reuters, Bloomberg, RBNZ calculations.

The NZD has risen strongly since March.

The NZD has appreciated against most major currencies since the last *Report*. In part, the rise in the NZD has reflected an improving outlook for the New Zealand economy. However, increased global risk appetite and the associated decline in the USD have been major drivers of currency movements in recent months. Investors have moved away from safe-haven assets into higher yielding investments as risk appetite has improved and these flows have placed upward pressure on the NZD. The NZD has steadily risen since mid-March in line with the recovery in global equity markets, with the Trade Weighted Index (TWI) rising about 15 percent since the previous *Report*. The NZD has recently been at or below historical averages against the euro, Australian dollar and yen, but at a high level relative to history against the USD and British pound (figure 3.8).

Figure 3.7

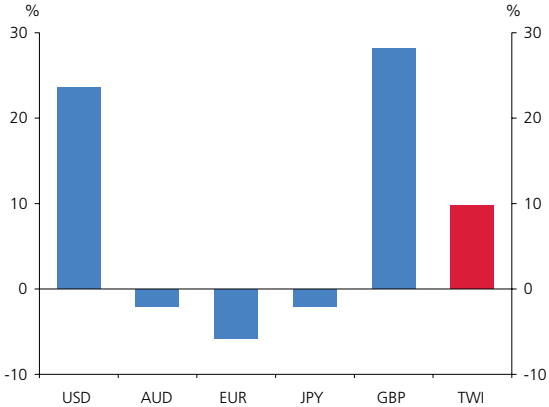
New Zealand dollar TWI



Source: RBNZ.

Figure 3.8

New Zealand dollar against key currencies *(deviation from average)*

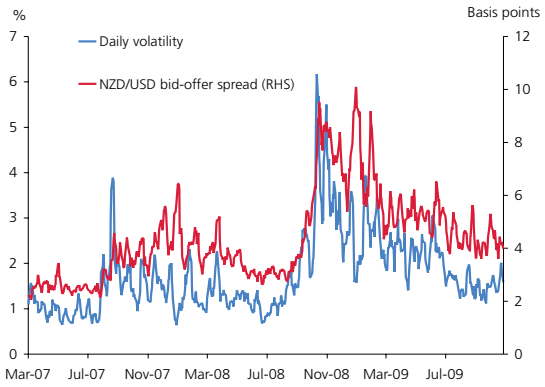


Source: RBNZ.

Note: Exchange rates are the average for the month of October compared to the 1987-2009 average.

Liquidity conditions in the NZD market have continued to improve in recent months. However, markets remain less liquid than before the financial crisis, while NZD volatility also remains elevated (figure 3.9).

Figure 3.9
NZD/USD bid offer spreads and volatility



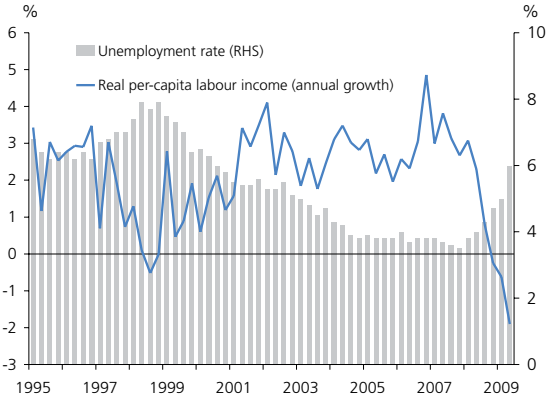
Source: Reuters, Bloomberg.

Household balance sheets and income have come under pressure…

Household balance sheets have been under pressure over the past two years. After peaking in late 2007, house prices fell about 11 percent by March 2009. The value of household financial assets also fell sharply as equity markets plunged, although some of this lost ground has been recovered since March given the sharp rebound in equities.

Incomes have also been under some pressure over this period with unemployment having steadily increased over the past 24 months to reach 6 percent in the June quarter – a nine year high. At the same time the share of part-time employment in total employment has been rising, with an increasing number of workers reporting a desire to work more hours. With wage growth weak, real per-capita labour incomes have fallen by 2 percent over the past year – the largest such fall since 1992 (figure 3.10). Such a fall is likely to be stretching household finances, increasing the risk of credit default for some households.

Figure 3.10
Real per-capita labour income and unemployment

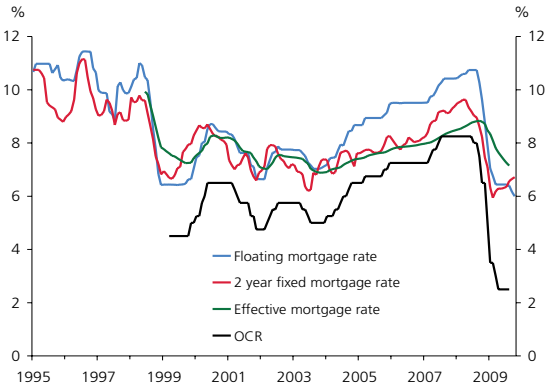


Source: Statistics New Zealand, RBNZ calculations.

…but substantial mortgage rate declines have provided significant offset.

For borrowers, substantial declines in mortgage interest rates have significantly offset weak labour incomes. While fixed mortgage rates have edged a little higher over recent months, floating mortgage rates have continued to decline. Reflecting this shift in relative interest rates, an increasing number of borrowers have shifted to shorter-term borrowing. In addition, fixed-term mortgages are continuing to roll off from higher rates, resulting in a further decline in the average rate paid by borrowers (figure 3.11).

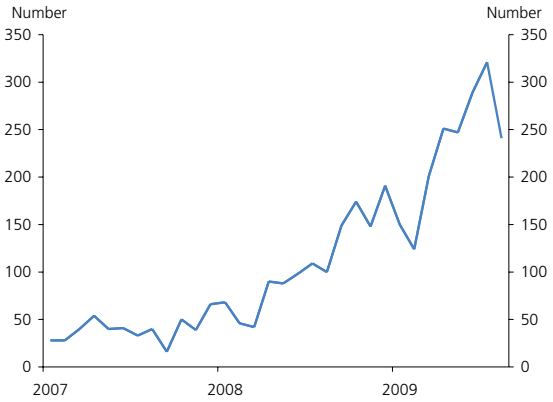
Figure 3.11
Mortgage rates



Source: Reuters, RBNZ.

Nevertheless, some households have become financially distressed, with problem loans within the sector continuing to rise (chapter 4). Although data on mortgagee sales must be treated as indicative,[4] the rise in problem loans coincides with an apparent rise in the number of mortgagee sales over recent months (figure 3.12).

Figure 3.12
Monthly mortgagee sales

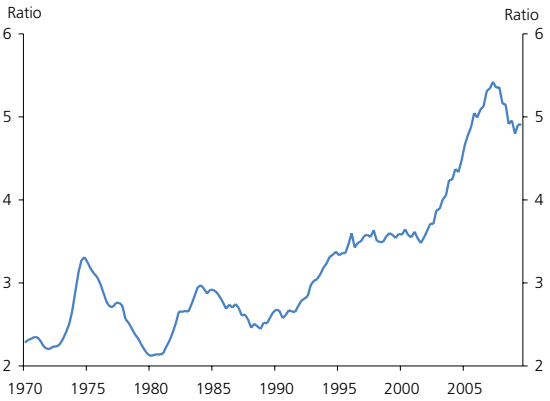


Source: Terralink.

House prices remain high relative to history...

More recently, the housing market has strengthened, with house prices appearing to rise in response to a shortage of listings in the market. Tight supply has been exacerbated by recent strength in net migration as well as very low rates of residential building activity. As a result house prices have stopped falling, but seem unlikely to resume the rate of increase seen during the period from 2001 to 2007. House prices still look relatively high compared to history, and are still higher as a share of income than at any time before 2005 (figure 3.13). To date, despite the pick up in housing market activity, household credit growth has continued at low and steady rates, although some banks appear to have eased lending criteria in this area of late. Slow credit growth may reflect some highly indebted sellers repaying mortgages, as well as households accelerating principal repayments now interest rates are low.

Fig 3.13
Median house price to household disposable income ratio



Source: Quotable Value Ltd, Statistics New Zealand, RBNZ calculations.
Note: House prices are Quotable Value's median measure from 1983 onwards, and Quotable Value's house price index previously. Household disposable income backdated with RBNZ estimates.

...and some borrowers may struggle once interest rates increase.

Current low levels of interest rates make mortgages look relatively affordable compared to recent history, particularly if the loan is financed using a floating mortgage. However, floating mortgage rates will eventually increase as the economy starts to recover, possibly placing stress on some first-time home owners who have entered the market at very low interest rates. Longer-term fixed mortgage rates (which are significantly higher) are likely to be a better guide to medium-term mortgage affordability (figure 3.14).

Overall, the housing market recovery is likely to be limited, and subject to downside risks as interest rates start to rise from very low levels. Continued weakness in the labour market, along with falling agricultural incomes, could also weigh on the housing market. Finally, as box D discusses, the performance of regional housing markets may be dispersed relative to the national average.

[4] Financial institutions handle distressed sales in a variety of ways and avoid using formal mortgagee sales where possible, so the number of forced sales will be higher than shown. Anecdotal reports indicate formal mortgagee sales frequently involve investment properties.

Box D

Regional housing markets

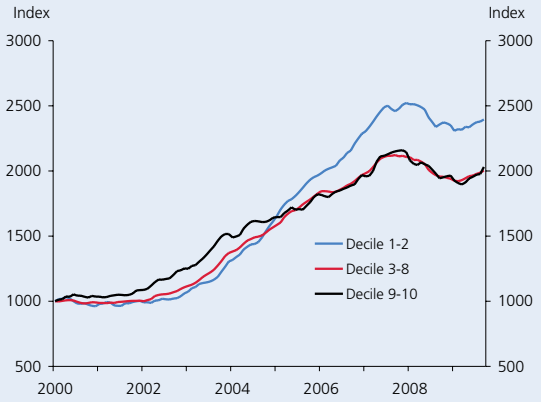
Housing market outturns can vary considerably across different sections of the market and across different regions. The Reserve Bank has recently developed a stratified measure of house prices.[5] This measure assigns 1852 REINZ administrative areas to 10 deciles based on the average price of houses within that area. This technique has primarily been developed to remove compositional changes from aggregate house price movements. However, the decile level data also shows significant divergences across different segments of the market. Between 2000 and 2008 house prices increased by much more in the bottom 20 percent of the market than in other market segments (figure D1).

For the most part, the bottom two deciles pick up house prices within rural areas. Figure D2 provides further insight into the composition of house price movements, by calculating house price movements across five broad regional groupings: main centres, outskirts of main centres, provincial cities, rural areas and holiday destinations. Despite entering the housing boom somewhat later than the main centres, house prices eventually increased by much more in provincial cities and rural areas than they did in and around the main centres.

Figure D1

House price movements across housing deciles

(January 2000 = 1000)



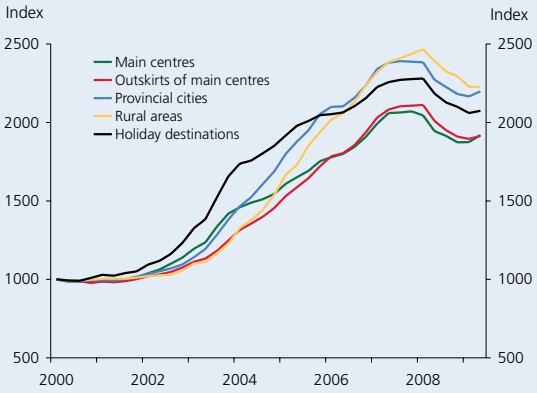
Source: REINZ, RBNZ calculations.

Note: Decile one represents the 10 percent of suburbs with the lowest average housing value, while decile ten represents the highest value suburbs.

Figure D2

House prices across regional groupings

(March 2000 = 1000)



Source: Quotable Value Ltd, RBNZ calculations.

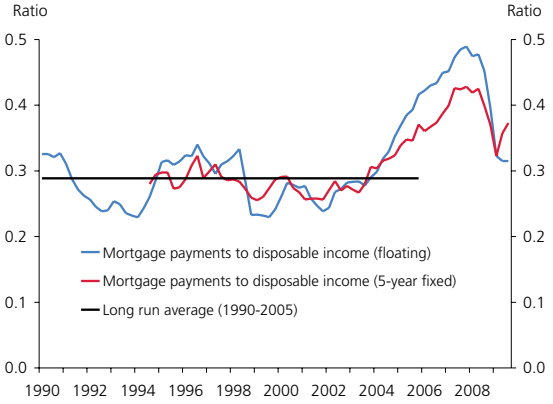
So far, all segments of the market have shown similar declines since the peak in house prices. However, relatively low population growth in many provincial cities and rural areas suggests a greater risk of housing oversupply within some of these areas, which could lead to significant house price corrections. The population of rural areas grew by only 2 percent between 2001 and 2008, while smaller centres showed similarly low growth of 4 percent over the period. In contrast, population grew by 14 percent in the main centres over this period.

In part, strong increases in house prices in rural and provincial areas over the latter stages of the house price boom reflected improved fortunes within the agricultural sector at that time. However, agricultural earnings have weakened in the past two years, which may be another downside risk for these housing markets.

[5] **McDonald, C and M Smith (2009), "Developing stratified housing price measures for New Zealand", Reserve Bank of New Zealand *Discussion Paper*, 2009/07.**

Fig 3.14

Mortgage payments as a share of disposable income



Source: Quotable Value Ltd, Statistics New Zealand, RBNZ calculations.

Note: Analysis is for an average-income buyer purchasing a median priced house with an 80 percent LVR 25-year mortgage at the floating or 5-year fixed mortgage rate. September 2009 data are estimates.

Business conditions have now stabilised…

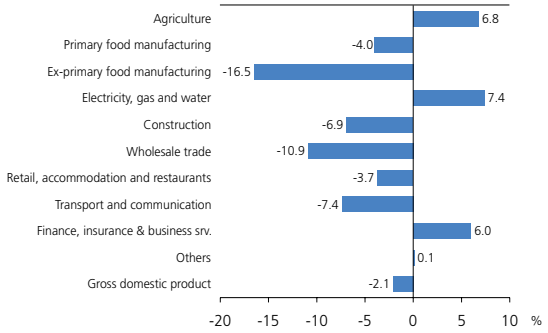
Business conditions have stabilised in recent months, but still remain relatively weak. Over the past year the output of most industries within the business sector has contracted (figure 3.15). The manufacturing sector has been hit particularly hard, while construction and wholesale trade have also seen large falls in activity.

Forward indicators suggest that a trough in the economy has been reached, with most sectors of the economy expected to post positive growth over the second half of 2009. Indicators such as the ANZ Performance of Manufacturing Index are consistent with a near-term stabilisation in manufacturing activity. At an aggregate level, business surveys reveal a sharp improvement in confidence, and suggest the economy returned to growth in the second half of this year. However, the strong appreciation in the NZD may act to dampen confidence over the months ahead, particularly for export-oriented industries such as manufacturing.

Figure 3.15

Components of production GDP

(growth in year to June 2009)

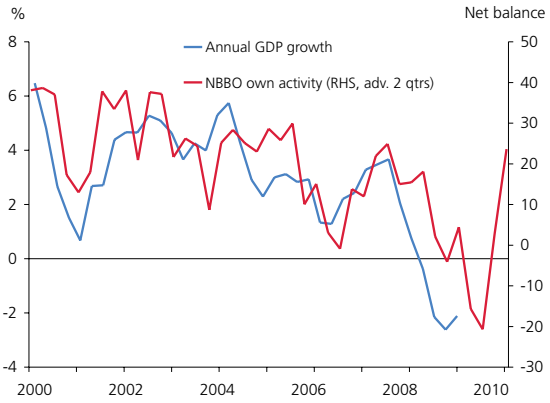


Source: Statistics New Zealand, RBNZ calculations.

Note: 'Others' includes fishing, forestry and mining, government administration and defence, personal and community services, and unallocated and balancing items.

Figure 3.16

GDP and NBBO own activity indicator



Source: Statistics New Zealand, National Bank *Business Outlook*.

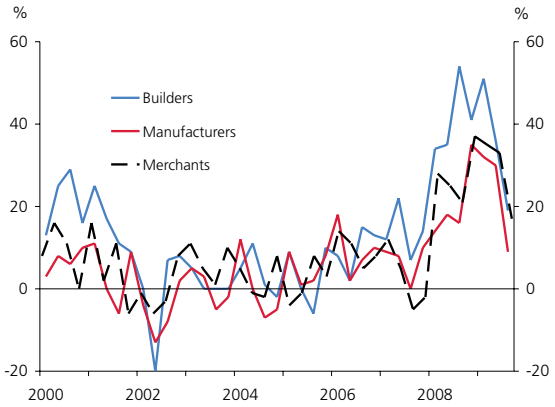
… but conditions still remain weak.

Despite a general stabilisation, conditions in many parts of the business sector remain difficult. Indicators of profitability and financial stress in the business sector have improved from the extreme levels recorded over the past six months, but remain very weak (figure 3.17). Reflecting the low rate of profitability within the business sector, business tax collection has fallen dramatically over the past year (figure 3.18). In addition, anecdotal reports suggest that late payments of tax have been rising.

Inevitably the number of business failures has risen in response to these developments. However, many businesses that are under stress appear to have taken useful restructuring steps, such as cutting costs and raising capital to reduce gearing after weak trading periods.

Figure 3.17

Businesses reporting overdue debtors



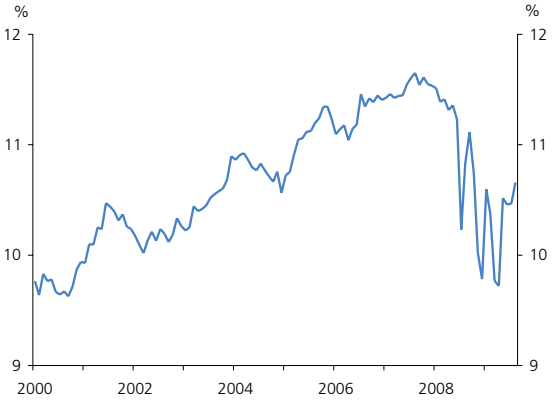
Source: NZIER *QSBO*.

Note: Net percentage of survey respondents reporting higher incidence of overdue debts from customers over the past three months.

Figure 3.18

Annual business-related taxes

(percent of GDP)



Source: Treasury, RBNZ calculations.

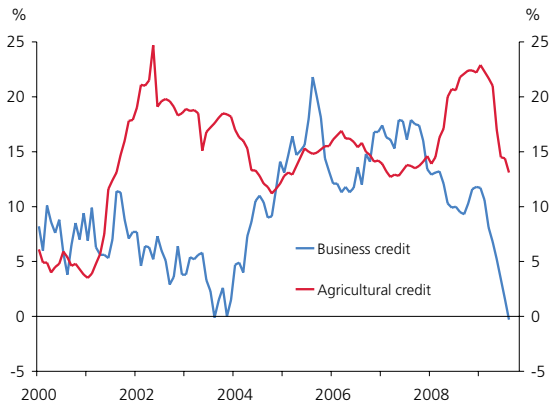
Note: Series is total receipts across a number of different taxes related to business.

Credit conditions for business have tightened.

Financial institution lending to the business sector has contracted (figure 3.19). While credit to agriculture has held up, much of this is believed to be temporary cash flow support for some farmers, rather than credit for expansion (see below). In part, weak business credit reflects low levels of desired investment. In addition, a number of large corporates have accessed debt and equity markets directly, reducing their need for intermediated credit. Nevertheless, it appears there has been some tightening in credit conditions, with some firms finding it increasingly difficult to secure funding.

Figure 3.19

Annual business and agricultural credit growth



Source: RBNZ Standard Statistical Return (SSR).

The durability of an economic recovery – particularly one that involves a lift in business investment – will hinge partly on the extent to which creditworthy businesses are able to access credit for expansion over the months ahead.

Rising commercial vacancy rates have resulted in falling rents.

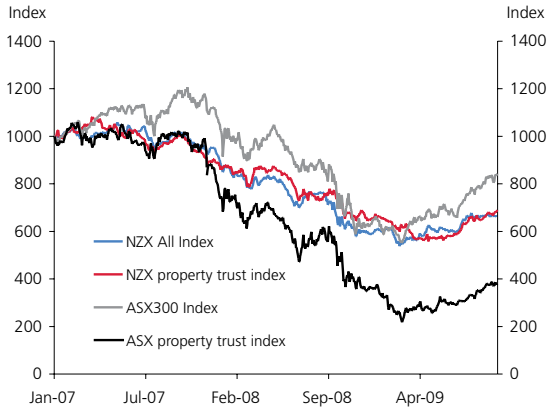
Continued weakness in the domestic economy and employment are affecting the commercial property market. Vacancy rates have been rising, although in most cases these remain well below levels seen in the early 1990s, reflecting the fact that the market is not oversupplied to the degree seen after the commercial property boom of the late 1980s. However, market contacts report reductions in rents and increasing use of incentives to retain tenants. A number of new office developments have been completed, or are due to be completed in the coming months, which will put continued pressure on vacancy rates and rental yields.

Commercial property valuations have fallen in line with these developments. Share prices of listed property trusts have fallen about 30 percent since the start of 2007, even after the recent recovery (figure 3.20). The difficult property market, coupled with weak mezzanine finance providers, has caused a significant increase in non-performing property lending (see chapter 4).

Figure 3.20

Equity prices of listed property trusts

(January 2007 = 1000)



Source: Datastream.

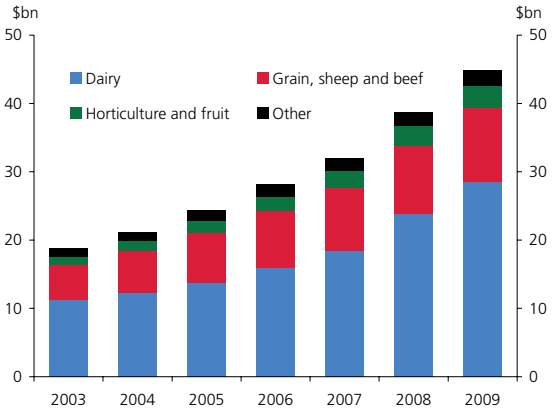
Dairy sector debt has increased strongly over recent years . . .

Debt levels within the agricultural sector have increased strongly over recent years, with a doubling of debt levels since 2004. Very strong rates of debt accumulation within the dairy sector have been a major driver of recent agricultural credit growth, with lending to the dairy sector now accounting for almost two-thirds of total agricultural lending outstanding (figure 3.21).

Figure 3.21

Agricultural sector credit

(June years)



Source: RBNZ.

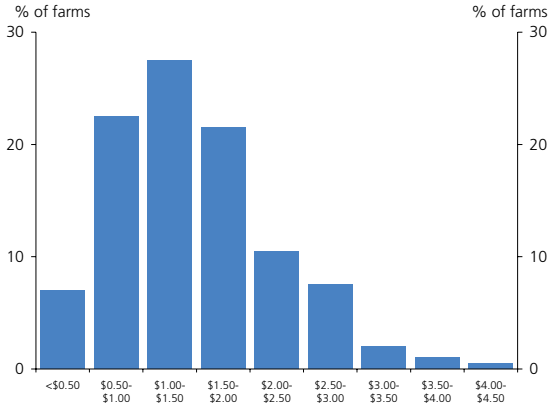
. . . and this debt is concentrated in a relatively small number of hands.

As noted in previous *Reports*, the distribution of this debt is heavily skewed, with many farms holding relatively small amounts of debt, while a smaller proportion are very heavily indebted (figure 3.22). Many of these highly indebted farms were purchased in recent years, perhaps in the expectation that recent high dairy prices would persist for some time.

Figure 3.22

Distribution of dairy sector interest servicing

(interest servicing costs per kilogram of milksolids produced)



Source: Ministry of Agriculture and Forestry (MAF).

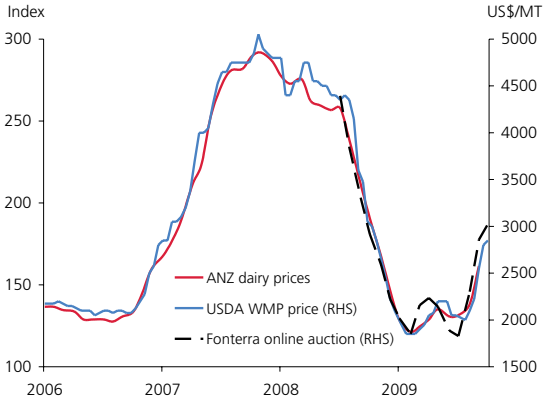
Note: Distribution is formed from a sample of 200 dairy farms monitored by MAF. It is likely that large corporate farms (which in many cases have been more highly geared than smaller operations) are underrepresented in this sample.

Dairy commodity prices have recovered over recent months...

The onset of the global financial crisis and recession saw sharp drops in world commodity prices, with dairy prices hit particularly hard. The recent strength in the NZD has lowered local currency commodity prices further. But more recently there has been some recovery in wholesale dairy prices (figure 3.23). In particular, the price of milk powder sold through Fonterra's online auction almost doubled between July and November. This, along with more general strength in wholesale markets, saw Fonterra revise its forecast payout for the 2009/2010 season to $5.10 per kilogram of milk solids in September, and positive news since may prompt a further upward revision.

Figure 3.23

ANZ dairy commodity prices and Fonterra online auction prices



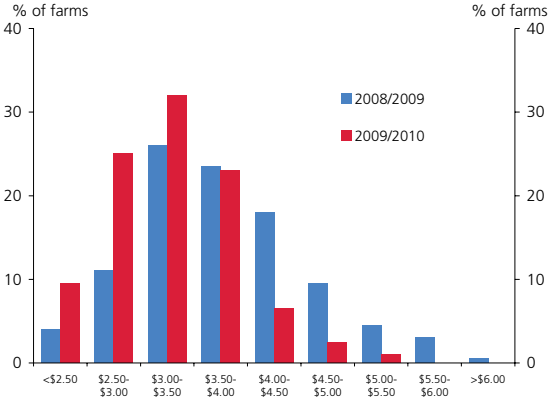
Source: ANZ, USDA, globalDairyTrade.
Note: MT denotes metric tonne. WMP denotes whole milk powder.

The $5.10 forecast is higher than MAF's estimate for the median farm breakeven payout of $4.91 per kilogram of milk solids for the 2009/2010 season, meaning that a majority of dairy farms are likely to experience positive cash flows over the season. However, there is a wide distribution of farm working expenses across the industry, with more intensive farms in less traditional dairying areas having significantly higher cost structures than more established farms (figure 3.24). Many of these higher cost farms may experience negative cash flows for a second year running, especially those farms with high rates of gearing.

Figure 3.24

Distribution of farm working expenses across farms

(dollars per kilogram of milk solids)



Source: MAF.
Note: Distribution is formed from a sample of 200 dairy farms monitored by MAF. Farm working expenses exclude interest servicing costs and drawings, which combined are expected to average $1.79 per kilogram of milk solids in the 2009/2010 season.

…but some farms with higher costs or gearing are experiencing difficulty.

A number of farms are now experiencing significant financial distress, and are working hard to cut costs and reduce debt levels (figure 3.24). Banks are continuing to work with borrowers where possible. However, some farms are holding too much debt, and will be forced to sell some or all of their operations.

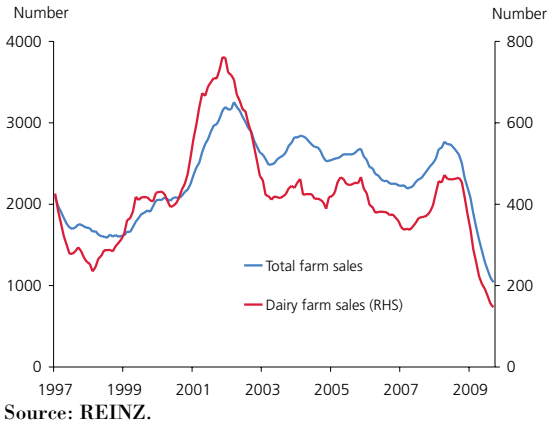
Reduced spending by farmers is likely to have downstream effects on rural servicing industries, and the rural economy more generally. Additionally, tight cash flows will limit the ability of some farms to participate in Fonterra's offer to sell additional shares to members. Fonterra has reduced debt and lengthened the maturity profile of its remaining debt over the last financial year, but is likely to need additional capital to pursue future growth opportunities. The proposal to eliminate the right of members to redeem Fonterra shares, making Fonterra's existing capital secure and establishing direct trading of shares amongst members, is a useful first step.

Sales of dairy farms are currently very slow, with only 147 sales recorded in the last 12 months, compared to an average annual rate of 430 sales between 1997 and 2008 (figure 3.25). Those farms that are selling are being sold at significantly lower prices than at the peak in 2008. Anecdotal reports suggest some farmers and investors are looking to purchase farms once prices appear to have settled, but it remains to be seen how far prices have to fall to stabilise the market.

Figure 3.25

Farm sales

(annual totals)



Source: REINZ.

Other sections of the primary sector have experienced difficulty.

There have also been some signs of distress within other parts of the primary sector. Beef and lamb prices are coming under pressure, with a rising exchange rate reducing farmgate returns. Some sections of the viticulture industry have been hurt by falling returns associated with a significant increase in global supply that has driven prices lower.

Overall, rural land prices rose beyond sustainable levels until around the middle of 2008, with buyers and lenders taking an overly exuberant view of the prospects for the sector. This has created a difficult situation for some of those buyers, and will lead to losses for the lenders in some cases (see chapter 4). The recent lift in some commodity prices and the willingness of lenders to work with troubled operators should help keep the problems contained.

4 New Zealand's financial institutions

New Zealand banks have experienced a broad-based rise in non-performing loans over the past year as the recession has stretched borrowers' capacity to service debt. A further increase in impairments is likely over the coming year and banks will need to ensure that they provision adequately to meet these losses. The decline in asset quality, limited balance sheet growth, and upward pressure on the cost of funds have seen a decline in the profitability of the large Australian-owned banks. A further softening in profits is likely over the year ahead, given recent weak economic activity. However, banks hold significant capital to offset further unexpected credit losses, and the medium-term outlook for profits is more positive.

Over the past two years of global turmoil, banks have faced significant pressures on both the cost and availability of funding. However, funding market conditions have steadily improved since March and banks made very little use of the Reserve Bank's crisis liquidity facilities, such as the Term Auction Facility, over this period. Banks have successfully issued significant amounts of term debt in the offshore wholesale market in recent months. They have also continued to raise additional retail funding, with competition for deposit funds very intense.

The non-bank lending sector faces an environment of funding pressures, declining asset quality and profitability, and an erosion of capital buffers. These difficulties, combined with strengthened regulations, will require some institutions to raise new capital. Strains are particularly evident in the deposit-taking finance company sector. Further rationalisation of the finance company sector could be precipitated by some firms having difficulty qualifying for the recent extension to the Crown's deposit guarantee scheme.

4.1 Banking sector

Bank asset quality is weakening.

Problem loans for the New Zealand banking system have continued to increase since the last *Report*. The ratio of non-performing loans to total lending for all registered banks has increased by about 0.5 percentage points over the first half of the year, to 1.5 percent.[1] The increase in problem loans has to date mainly affected the four major banks (figure 4.1, overleaf), which provide just over 90 percent of all bank lending. It is important to note, however, that the level of problem loans remains much lower than in the 1990s recession (see figure A21 in the appendix).

The deterioration in asset quality reflects the weak economy over the past year, and is particularly evident in the corporate book (figure 4.2).[2] Lending to households (mortgages and consumer lending) also shows increased non-performance.

The 'corporate' classification includes lending to large businesses, mortgages on commercial property, most lending to small and medium enterprises (SME), and lending to the agricultural sector. Discussions with banks suggest the latter three categories have all contributed significantly to the rise in corporate non-performing loans. The commercial property and property development sectors continue to face

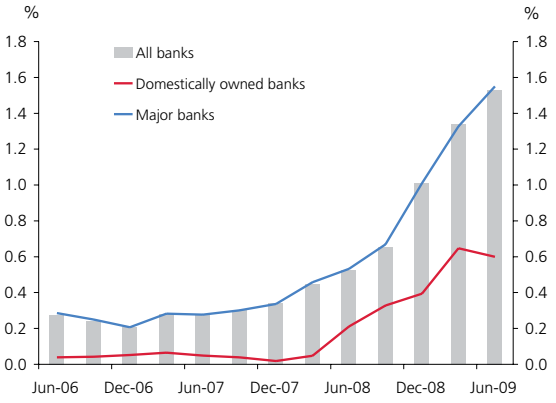
[1] Non-performing loans refer to banking system assets that are either impaired or at least 90 days past due.

[2] Corporate lending accounts for around 42 percent of major bank lending, compared to 53 percent for residential mortgage lending and just 5 percent for the 'other retail' category, which is mainly consumer lending.

Figure 4.1

New Zealand bank non-performing loans by type of institution

(percent of lending)



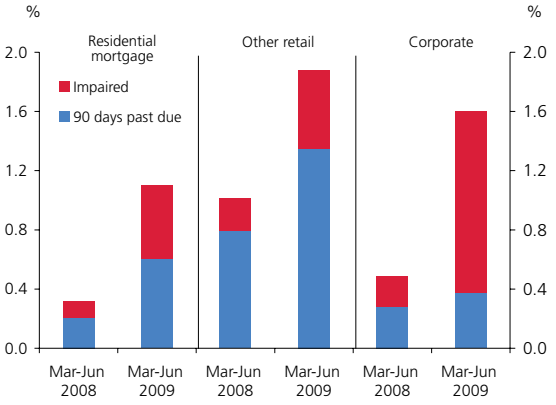
Source: General Disclosure Statements (GDS), RBNZ calculations.

Note: Domestically owned banks include Kiwibank Ltd, the Southland Building Society (SBS) and TSB Bank Ltd.

Figure 4.2

Major bank non-performing loans by type of lending

(percent of sector lending)



Source: GDS, RBNZ calculations.

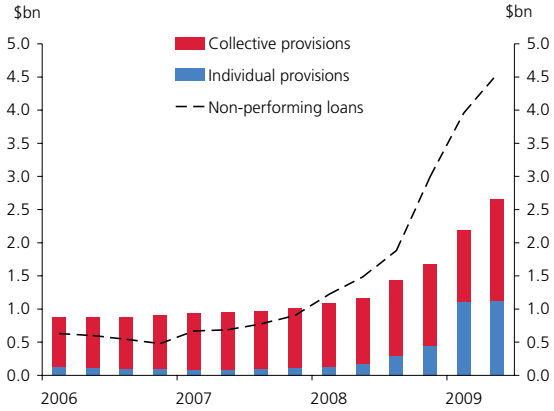
Note: Major banking lending comprises branches of the Australian parent banks and their locally incorporated subsidiaries. Data are for either the March or June quarter depending on the reporting cycle of each individual bank.

a difficult environment given the widespread withdrawal of troubled non-bank financiers from this sector and an increase in borrower defaults. The agriculture sector is facing some difficulties (see chapter 3) which are materially affecting bank asset quality. Non-performing agricultural loans are expected to continue to grow over the next year.

In response to actual and future credit losses, banks increased their provisioning by nearly $1 billion in the first half of this year alone, and by about $1.5 billion in the year to June 2009. This increase in both individual and collective provisions has lagged the increase in problem loans over this period (figure 4.3).[3] To some extent this probably reflects the fact that some non-performing loans will ultimately be repaid, while others may be wholly or largely recovered through selling collateral. Accounting rules may also constrain provisioning to some degree. But with asset quality expected to deteriorate further, banks will need to ensure their level of provisioning is adequate to meet anticipated credit losses.

Figure 4.3

New Zealand bank provisioning



Source: GDS, RBNZ calculations.

Our discussions with banks suggest problem loan levels are unlikely to peak until around mid-to-late 2010, with improvement in asset quality significantly lagging the expected economic recovery. However, this outlook depends on the nature of the economic recovery, which may be unevenly spread across sectors. For example, higher than expected unemployment outturns, coupled with a renewed fall in house prices, would negatively impact the creditworthiness of households. Similarly, any significant reversal in the recent positive news attached to the rural sector could weigh on asset quality.

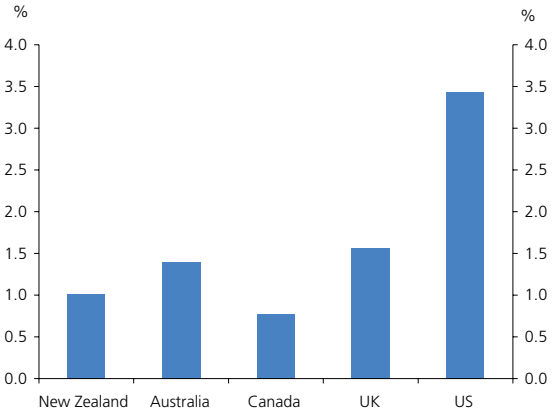
[3] An individual provision relates to an individually identified loan that is unlikely to be repaid in full, whereas a collective provision is held against losses on a portfolio or group of loans with similar characteristics and against a general deterioration in the loan book.

The current decline in asset quality for New Zealand banks has not been as substantial as in the US and other countries, reflecting New Zealand's relatively mild decline in economic activity and the New Zealand banks' minimal direct exposure to assets associated with the sub-prime crisis (figure 4.4).

Figure 4.4[4]

Asset quality – cross-country comparison

(non-performing loans to gross loans)



Source: IMF and RBNZ.
Note: Data for New Zealand, Australia, UK and Canada are as at end-2008; US is end-March 2009.

Weak asset quality will be a temporary drag on profits.

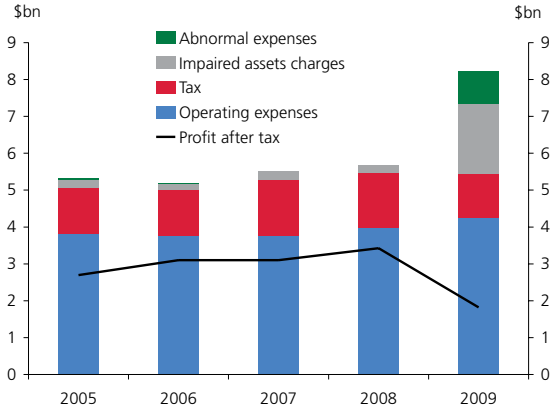
The decline in asset quality to date has weighed on the banking sector's profitability. Pre-tax profits for the banking sector as a whole were about $3 billion in the year ended June 2009, down nearly 40 percent from a year earlier. The decline in profit growth has been driven by the major banks. The domestically owned banks, by contrast, have collectively increased their profits, aided by an expansion of lending and a lower level of problem loans relative to this lending (figure 4.1).

Banking system profitability has also been affected by abnormal expenses, including the need to provision for additional tax payments associated with recent court cases between the major banks and the IRD (figure 4.5).

Figure 4.5

New Zealand banks' expenses and profits

(12-month running totals, June years)



Source: GDS, RBNZ calculations.
Note: Abnormal expenses for 2009 include the BNZ's provision for tax relating to a recent legal case, and ANZ's charges for compensating investors in certain ING funds.

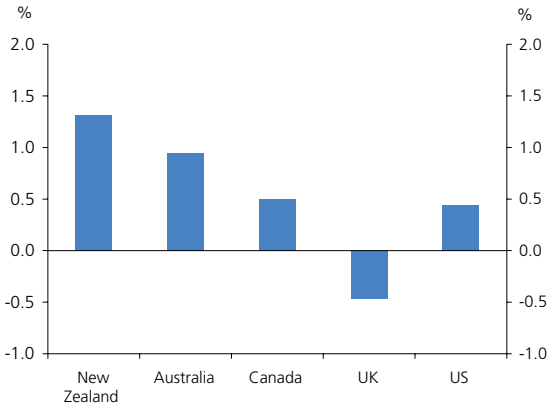
The factors discussed above will mean low profit outturns for a number of further quarters. However, once they are worked through, the New Zealand banks are expected to revert to earning solid returns on their asset bases (compared to other banking systems – see figure 4.6). This expected return should mean that additional capital will be provided (in the first instance by the existing owner of the bank) if it is needed.

[4] **This chart draws on recent (IMF coordinated) work on cross-country Financial Soundness Indicators (FSI) which is described in more detail at the IMF website. Cross-country comparison of banking data is complicated by definitional issues (including defining the scope of the national banking system) and differences in accounting treatment across countries. Additionally, New Zealand's banking statistics are currently incompatible with the FSI methodology in ways that make it difficult for us to formally join the initiative. Nevertheless it is possible to make indicative comparisons of New Zealand data (with certain adjustments) with FSI data. We plan to write a more detailed description of this work in a future publication.**

Figure 4.6

Return on assets – cross-country comparison

(net income before tax and extraordinary items to assets)



Source: IMF and RBNZ.

Note: Data for New Zealand, Australia and Canada are for final quarter of 2008; Second half of 2008 for the UK; and March quarter of 2009 for the US. As discussed above, cross country comparisons can be affected by differing definitions across countries.

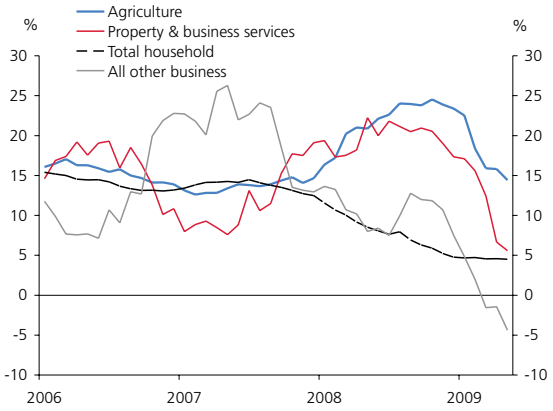
Slower lending growth is likely to continue …

Growth in total bank lending fell to just 2.5 percent in the year to August, well down from a year earlier. The fall in bank lending growth has been particularly pronounced for business lending (figure 4.7). This decline in credit growth partly reflects lower investment demand on the part of firms, as well as households paring back consumption and their demand for housing assets.

Figure 4.7

New Zealand bank lending by sector

(annual percent change)



Source: SSR.

…partly since banks have tightened loan conditions.

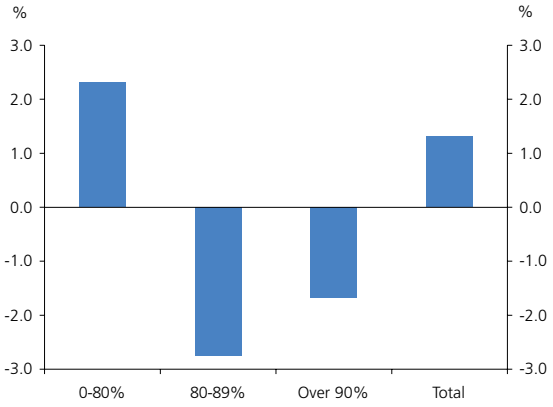
The decline in bank lending also reflects some tightening in the terms and conditions under which credit is extended by banks. The Reserve Bank is in regular contact with the banks to gauge credit conditions. A tightening in credit conditions occurred in the latter part of 2008 and early this year in the form of tighter loan covenants, higher margins and higher non-interest fees for commercial lending, and more restrictive lending criteria for mortgages. This tightening reflects current economic conditions and increased credit risk, and appears to have been milder and less disruptive than in other countries (see chapter 2). However, an excessive tightening in business credit standards could hinder the economic recovery (and could actually worsen losses for banks, by making it hard for firms and assets to be restructured and sold). The Reserve Bank will continue to monitor this risk closely. Recent improvements in financial market conditions should enhance the capacity of the banks to provide credit as the recovery gains momentum.

A combination of tight credit conditions and lower demand has seen higher loan-to-value ratio (LVR) mortgage lending from the major banks contract over the first half of this year (figure 4.8). In contrast, mortgage lending for LVRs of less than 80 percent increased 2.3 percent in the six months to June. However, over recent months, some banks appear to have eased restrictions on residential mortgage lending, with several advertising the availability of higher LVR lending. While a continued flow of credit to creditworthy borrowers will be necessary to support the economy, a resumption of an excessive amount of high LVR residential lending could expose banks and households to higher risks and contribute to an unsustainable housing market recovery.

Figure 4.8

Major bank residential mortgage lending by loan-to-value ratio

(six-monthly change, June 2009)



Source: GDS, RBNZ calculations.

Note: Major bank lending comprises branches of the Australian parent banks and their locally incorporated subsidiaries.

Bank interest margins appear to have stabilised.

As the Reserve Bank eased monetary policy over 2008 and early 2009, interest rates paid by bank borrowers fell, but not by as much as benchmark interest rates (in swap markets for example) declined. This mainly reflected the banking sector needing to pay a higher margin over those benchmark rates to obtain funding. However, for certain products, particularly floating mortgages, banks appeared to increase the margins between their costs of funds and the rates they were charging. While this probably partly reflected rising credit risks, the Reserve Bank has previously noted the risks of an over-adjustment in these margins, which could be unhelpful from a broader macroeconomic perspective, potentially reducing the supply of funds to creditworthy borrowers and inhibiting economic recovery. More recently, margins on floating-rate mortgages have declined towards normal levels.

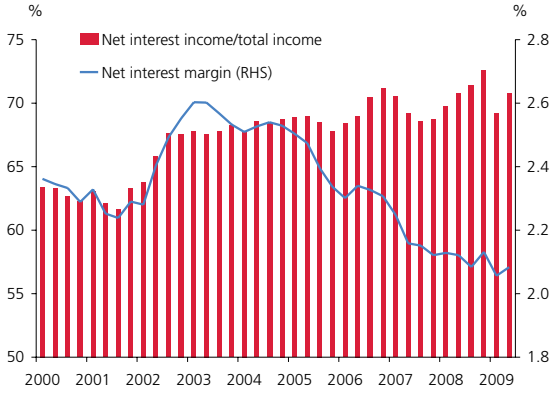
Moreover, some broader indicators suggest that overall margins are fairly steady. For example, one of the broadest measures of bank margins is the ratio of net interest income to income-earning assets. This ratio has been fairly stable in recent quarters and is currently around 2.1 percent (figure 4.9).[5]

Funding costs for banks (relative to the OCR and swap rates) remain unusually high. There has been some easing in the cost of banks' wholesale funding in line with a broad improvement in market sentiment more recently. However, competition in the retail deposit market has seen the spread between wholesale and retail deposit rates rise to record levels, placing pressure on marginal funding costs for New Zealand banks. With deposit funding making up a relatively large share of bank funding costs (table 4.1), the higher cost of retail deposits has outweighed a fall in wholesale funding costs. This suggests that the marginal funding costs for banks relative to the OCR are continuing to rise (figure 4.10, overleaf).[6]

Figure 4.9

New Zealand banks' net interest income margins

(12-month running totals)



Source: GDS, RBNZ calculations.

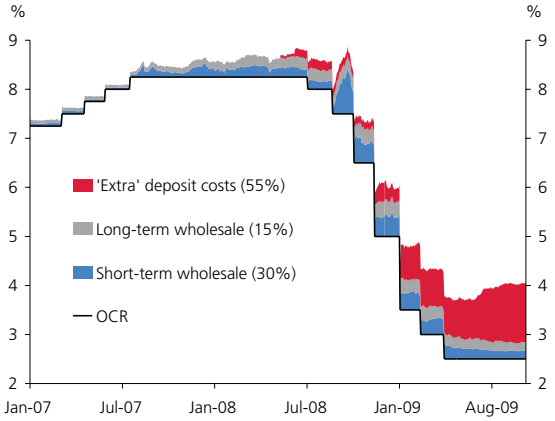
Note: Net interest margin is defined as the ratio of net interest income to average income-earning assets.

[5] It is important to note that some measures of margins (such as the RBNZ analysis of NZD funding costs and lending rates in the SSR) do not capture important details such as the costs of international borrowing and the results of hedging contracts. Not all hedging is reflected in the net interest margins published in the GDS either, but the measures in the GDS are much closer to what we are conceptually trying to measure.

[6] In their latest *Financial Stability Review*, the Reserve Bank of Australia noted a similar phenomenon with Australian banking system margins. The margins for the major banks ticked up slightly over the past year after a secular decline, while margins for smaller banks continued to decline, reflecting strong competition for retail deposits.

Figure 4.10

Indicative marginal bank funding costs relative to the OCR



Source: RBNZ estimates.

Note: Calculation assumes that banks are raising funds in approximate proportion to the existing structure of their liabilities. Weights assumed are shown in brackets. The composition of funding at any point in time will vary from these weights.

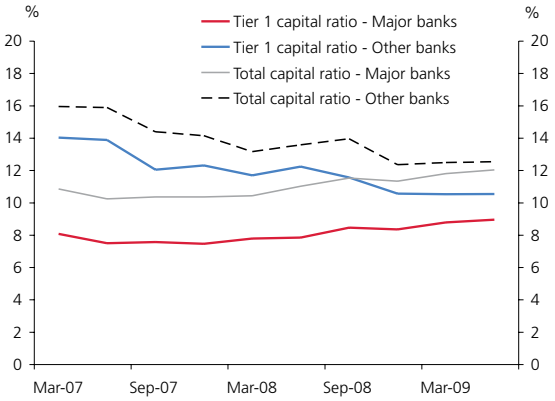
Bank capital ratios have increased…

New Zealand banks are holding enough capital to offset significant further unexpected losses. Tier one capital as a percent of risk-weighted assets (RWA) increased from 8.5 to 9 percent from the last quarter of 2008 to the second quarter of 2009, with this increase being driven by the major banks (figure 4.11). Total capital to RWA increased to 12.1 percent from 11.4 percent previously (see figure A20 in the appendix).

Figure 4.11

New Zealand banks' capital adequacy

(locally incorporated banks)



Source: GDS, RBNZ calculations.

Note: 'Other banks' comprises Rabobank New Zealand Ltd, Kiwibank Ltd, the Southland Building Society (SBS) and TSB Bank Ltd.

The Australian parent banks of the four largest New Zealand banks have also improved their capital positions, raising a significant amount of equity during 2009. The strength of the Australian parents provides further comfort that, if needed, additional capital could be made available to New Zealand's major banks.

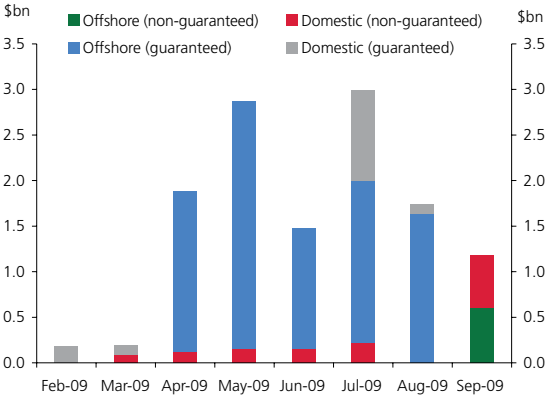
… while funding and liquidity positions have improved.

Pressures on New Zealand bank funding have continued to abate since the last *Report*, reflecting a number of factors including the easing in global funding markets, the Crown wholesale guarantee scheme, ongoing support from the parent banks of the major New Zealand banks, and robust retail funding growth (box E).

Wholesale funding, which accounts for just over half of total funding for the banking system (table 4.1), contracted slightly in the year to August 2009. Longer-term funding has been supported by a steady increase in New Zealand bank bond issuance under the government wholesale guarantee. Overall, about $10.6 billion of debt has been issued under the guarantee programme this year, the majority in the offshore wholesale market (figure 4.12). Alongside this increase in government guaranteed bond issuance, spreads on these bonds have generally contracted in secondary market trading (figure 4.13). This reflects growing investor acceptance of the government guaranteed structure and is allowing banks to complete new guaranteed issues relatively cheaply. Further to this, some non-guaranteed bonds have been issued by New Zealand banks more recently, a sign of

Figure 4.12

New Zealand banks' monthly bond issuance



Source: Treasury.

Table 4.1

Composition of New Zealand bank funding

As at August	$ billion 2008	Share of total	$ billion 2009	Share of total
Retail funding (NZD)	133	44%	141	46%
Total wholesale funding	166	56%	164	54%
Resident wholesale funding	40	13%	39	13%
Non-resident wholesale funding	127	42%	125	41%
Total resident funding	172	58%	181	59%
Total non-resident funding	127	42%	125	41%
Total funding	299	100%	305	100%

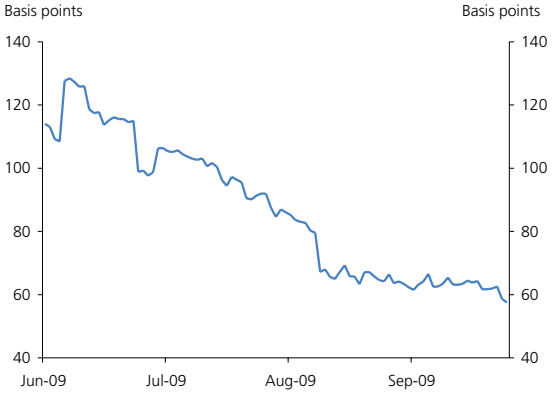
Source: SSR.

Note: Excludes domestic interbank lending, capital and reserves and non-funding liabilities. Totals may not add due to rounding.

Figure 4.13

New Zealand government guaranteed bond yield spreads

(unweighted average spread)



Source: Bloomberg, RBNZ calculations.

Note: The average spread represents issuance from a range of institutions with various maturities and currencies. The yield spread is calculated as the difference between the yield to maturity of the government guaranteed bond, less the yield to maturity of the closest maturity government bond in the currency of issuance.

the improved conditions in wholesale funding markets more generally.

The improvement in wholesale funding conditions has coincided with a lengthening in the maturity profile of offshore wholesale funding.[7] This is consistent with the Reserve Bank's recently introduced prudential liquidity policy, which will require banks to meet a minimum core-funding ratio, ensuring that a greater proportion of bank funding is met through retail deposits or term wholesale funding. The vulnerability created by a relatively high dependence of banks on short-term wholesale funding was highlighted throughout the course of the global financial crisis when wholesale funding became very difficult to obtain.

Conditions in the US commercial paper market – a source of short-term funding for banks – have improved, with evidence to suggest that New Zealand bank issuance into this market has increased over the course of the year. Banks also appear to have taken the opportunity to increase the maturity profile of this short-term funding.

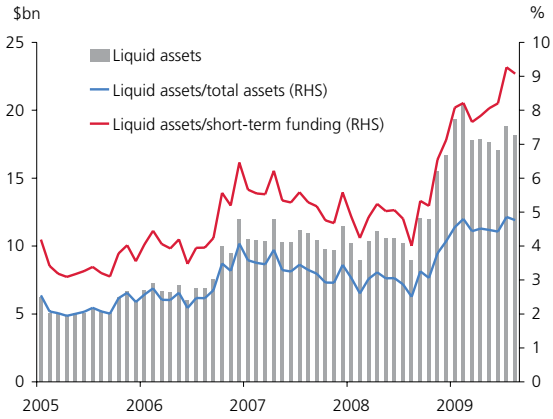
The banking system's ability to withstand shocks to cash flows – either in the form of loss of access to market sources of funding or a run on deposits – has also improved over the course of the crisis, as banks have boosted their holdings of traditional liquid assets by more than $9.2 billion over the past year (figure 4.14).[8] This has partly been achieved using Reserve Bank facilities, and banks now have larger liquidity buffers in the form of RMBS which can be used as collateral for short-term borrowing from the Reserve

[7] This is currently difficult to demonstrate using publicly available data. The RBNZ SSR collects data on time to rate reset rather than time to maturity. More data on the maturity of funding are likely to be available after the prudential liquidity policy is fully implemented.

[8] Traditional liquid assets are defined here as currency, government securities, and claims on the Reserve Bank. Other broader definitions are possible.

Figure 4.14

New Zealand banks' liquid assets



Source: SSR.

Note: Short-term funding is approximated by funding with less than 90 days to rate reset (this will overestimate funding maturing within 90 days somewhat).

Bank. The recently introduced liquidity policy requires liquid asset holdings to be higher than in recent years (with RMBS allowed to meet some of this requirement).

4.2 Non-bank sector

The outlook for the non-bank sector is mixed.

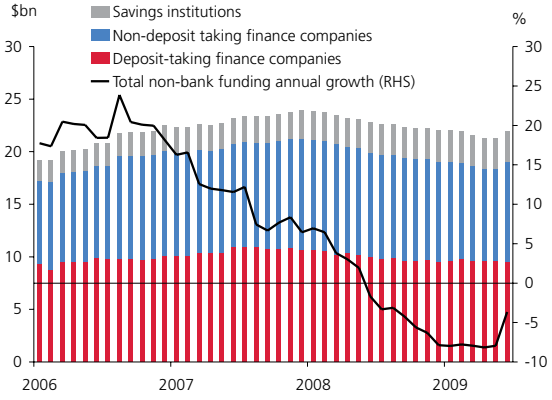
The non-bank sector continues to face ongoing challenges in an environment of funding pressures, declining asset quality and profitability, and the erosion of capital buffers. While the sector constitutes only about 5 percent of total financial system assets, it is made up of several different types of institutions whose fortunes have varied over the past two years. Strains are particularly evident in the deposit-taking finance company sector where a substantial number of companies are in moratorium or receivership. Savings institutions (which include building societies, credit unions, and the PSIS) have generally experienced less deterioration in asset quality, and are generally better capitalised as well as having a more stable customer base.

Funding to the sector overall continues to contract, declining 4 percent in the year to June (figure 4.15). Savings institutions continue to attract retail funding, successfully competing with banks in the term deposit segment, although the growth of this retail funding has eased recently as competitive pressures from other institutions intensify. Pressures in wholesale funding markets and investor concern about some institutions have seen overall funding to deposit-taking finance companies contract. Both deposit-taking and non-deposit-taking finance companies have also been hit hard by the difficulty of sourcing funding by securitising residential mortgages and consumer loans.[9] As in global markets, domestic investor demand for securitised assets has declined substantially.

As discussed in box E, these funding pressures remain for deposit-taking finance companies despite many participating in the Crown's retail deposit guarantee scheme. The scheme currently covers about $5.5 billion invested in these companies and another $2.9 billion invested with savings institutions. The scheme has recently been extended to December 2011, but the fees have been increased significantly and entry requirements tightened. Institutions participating in the extension will need to have a credit rating of BB or higher, which will be difficult for some current participants to achieve. This may result in some companies being wound down prior to the removal of the existing guarantee.

Figure 4.15

New Zealand non-bank funding by institutional sector



Source: NBFI SSR.

Note: Savings institutions exclude historical data for an institution which became a registered bank during 2009. Funding includes both NZD and foreign currency funding, and funding from securitised lending.

9 Non-deposit-taking finance companies include, for example, GE Capital and subsidiaries of motor vehicle companies that provide finance for the purchase of new motor vehicles. Since these companies fund their activities from non-public sources and/or their own shareholder capital, they are not part of the new regulatory regime for non-bank deposit takers.

Box E

Retail funding

Bank retail deposit growth held up well throughout the crisis and provided a useful offset to pressures on bank wholesale funding. In the year to August 2009, retail funding increased 6.6 percent. This is relatively fast given the slow growth in bank lending in the same period. Many loans are ultimately redeposited after transactions, so the sharp slowdown in loan growth would have been expected (all else equal) to compress retail deposit growth by more than we have seen. Bank retail funding (which is mostly from households) has benefited from an apparent lift in households' precautionary saving and a switch away from non-bank financial assets.

Non-bank financial assets held by households include shares, corporate debt, and deposits in non-bank deposit takers. During the height of the financial crisis, the corporate sector generally found it difficult to issue new equity or debt. More recently, investors have been confident enough to participate in capital raisings by a number of firms. At the margin, these investments reduce bank retail funding, while the funds raised will often be used to retire bank debt.

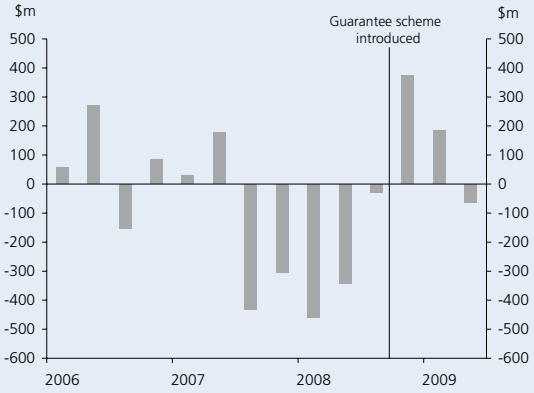
The participation of a significant number of non-bank financial institutions in the Crown's deposit guarantee scheme introduced in October 2008 provided a safe alternative to bank deposits and arrested the decline in household funding of the NBDT sector. Deposit-taking finance companies were affected heavily by negative sentiment towards the sector (figure E1) but received an immediate boost from the introduction of the scheme. However, household funding for deposit-taking finance companies has weakened again during 2009. For savings institutions (building societies and credit unions), the level of household funding has been broadly stable over this period.

From the standpoint of banks the retail deposit market has become an increasingly important source of funds. Although a significant proportion of retail deposits are on call, they are traditionally more stable than short-term wholesale funding, which became difficult to obtain around the start of 2009. The experience of disrupted wholesale markets, combined with anticipation of strengthened prudential liquidity requirements (see chapter 6), have made banks willing to pay more to attract retail deposits.

As a consequence term deposit rates have become more competitive, and retail funding with a maturity of greater than 90 days has increased significantly (figure E2). Heightened competitive pressures in the retail funding market are also evident in Australia, where the lack of alternative funding opportunities for smaller banks has also fuelled this competition. Similar pressures are also being faced by the smaller retail banks in New Zealand, prompting some to consider diversifying their funding sources, including through the issuance of offshore debt.

Figure E1

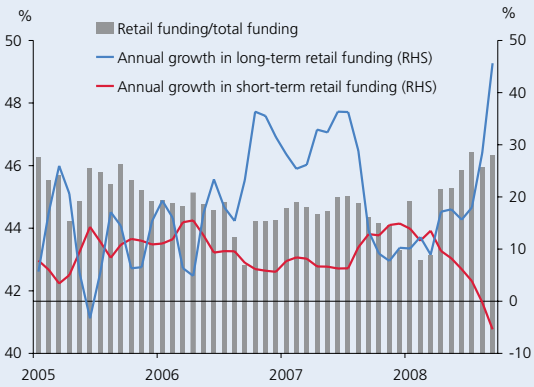
Deposit-taking finance companies' household funding growth



Source: Non-bank financial institutions (NBFI) SSR, RBNZ calculations.

Figure E2

New Zealand banks' retail funding



Source: SSR.

Note: Short-term retail funding is defined as funding maturing in less than 90 days.

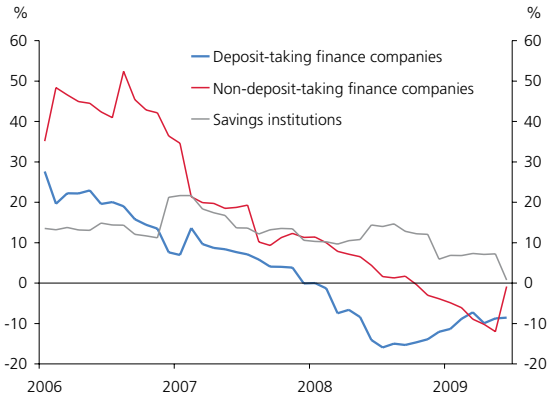
Non-bank lending continues to contract.

As a consequence of funding pressures, the ability of the sector to continue to lend has been heavily curtailed. The value of lending by the sector contracted 4 percent on an annual basis in the year to June 2009, driven by the ongoing contraction in lending from the deposit-taking finance companies which constitute just over 40 percent of the total assets of the sector (figure 4.16). The non-bank sector lends to businesses and households, but shares vary across the types of non-bank institution. Building societies and the PSIS lend primarily for housing purposes, while credit unions provide consumer finance and residential mortgages. Finance companies have a relatively high proportion of lending to business.

Figure 4.16

New Zealand non-bank lending by institutional sector

(annual percent change)



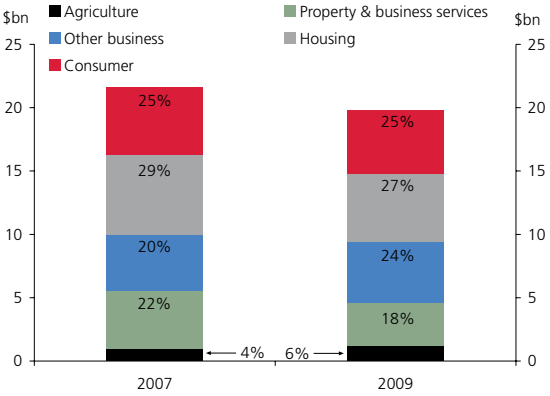
Source: NBFI SSR.

Note: Savings institutions exclude data for an institution which became a registered bank during 2009.

For the non-bank sector there has been a relative shift in lending away from both residential mortgages and the property component of business lending (figure 4.17). The decline in property lending is particularly apparent for deposit-taking finance companies. Most of the finance companies in receivership or moratorium were heavily exposed to the property development sector.

Figure 4.17

New Zealand non-bank lending to residents by sector



Source: NBFI SSR.

Note: As at June 30 in each year. Data excludes an institution which became a registered bank during 2009. Resident sector lending includes securitised assets, and excludes lending to the finance sector, local authorities and non-residents.

Finance companies are expected to reorganise…

The NBDT sector faces a period of adjustment ahead in light of current external conditions, the changes to the Crown deposit guarantee scheme, and the prudential requirements being introduced (see chapter 6). This is particularly true for many finance companies, for which fundamental business changes are likely to be required.

The difficult macroeconomic conditions, reflected most clearly in elevated impairment levels and declining asset values, have led to substantial write-downs among many property financiers. This has eroded already low capital levels, necessitating recapitalisation and/or reorganisation of some firms. Allied to this, the new eligibility threshold with risk-based fees for the Crown deposit guarantee scheme, and new minimum regulatory standards, are likely to lead to some finance companies exiting the sector.

Some restructuring has already begun, with some major finance companies announcing their intentions to recapitalise and refocus their businesses away from property development finance to the SME sector.

It is not likely that all deposit-taking finance companies will be able to successfully raise additional capital and some failures among the guaranteed finance companies are to be expected.

The same underlying economic issues are also affecting those (primarily property-lending) finance companies that entered into a creditor compromise arrangement (moratorium) before the Crown guarantee scheme was introduced. This has led to at least one company subsequently being placed into receivership with another being required by its trustee to operate under a stricter set of conditions. At the same time, this challenging environment offers opportunities for new entrants and/or new owners, since prices of firms and loan portfolios are likely to reflect the current weakness and uncertainty.

… while savings institutions are generally better positioned.

Although they face the same challenging economic environment, building societies and credit unions as a group have less pressing issues. The majority of savings institutions are better capitalised than deposit-taking finance companies, have (via mutual ownership structures) more capacity to tolerate short-term financial underperformance, and are less exposed to problem assets such as property development lending. They also benefit in many cases from relatively loyal customer bases. Nonetheless, as the domestic environment for retail deposits becomes more competitive and the regulatory environment changes, it is possible that the savings institutions segment will also experience a degree of reorganisation and change.

5 Payment systems

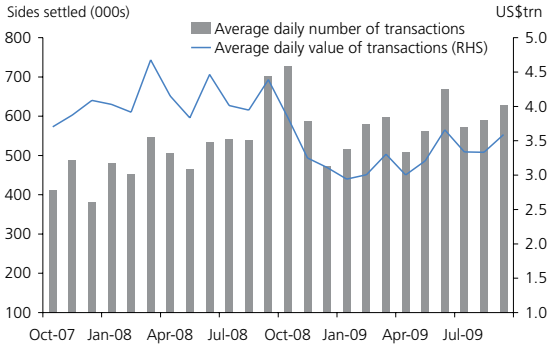
New Zealand's payment systems coped well with global financial stress late last year, and have continued to function satisfactorily. Transaction values in the key high value systems have fallen as NZD turnover has eased and financial markets have become calmer. Some operational difficulties involving the Exchange Settlement Account System appear to have been successfully resolved. The Reserve Bank continues to be concerned about large payments being made through retail payment systems that do not use real-time settlement, and is monitoring progress towards addressing this issue.

Over recent months, New Zealand's payment systems have continued to function satisfactorily. Both in New Zealand and worldwide, payment systems have generally stood up well during a period of substantial financial stress. To some degree, this reflects use of risk controls such as real-time gross settlement for high value payments that have prevented failing institutions creating problems for other institutions transacting with them.

The two major systems for high value payment are the Reserve Bank's Exchange Settlement Account System (ESAS), and the Continuous Linked Settlement (CLS) system used around the world to settle foreign exchange trades. As discussed in previous *Reports*, during the period immediately following the failure of Lehman Brothers in September 2008 these two systems performed as intended with all settlements completed largely without incident.

In the case of the CLS system, the major implication of the stresses evident in international financial markets at that time was a need to process very large values and volumes of transactions. Subsequent reductions in financial market trading in late 2008 were reflected in reduced settlement activity in the CLS system. More recently, as financial market conditions have settled down, settlement activity in the CLS system has grown again. While the total value of settlements is still lower than before the crisis, the number of transactions has resumed its previous upward trend (figure 5.1).

Figure 5.1
CLS transactions



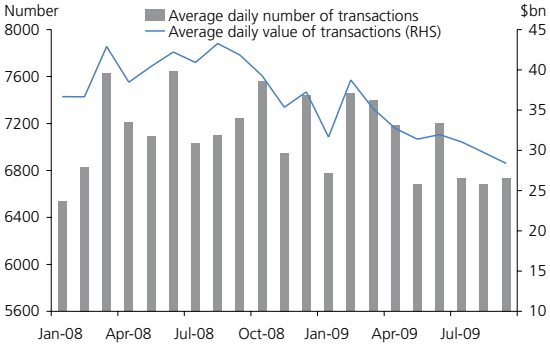
Source: CLS Bank.

Transaction numbers have partly increased because of growth in 'algorithmic' trading strategies which automatically initiate many, generally small value, foreign exchange trades with the aim of taking advantage of exchange rate movements. It is likely that some transactions related to these strategies are currently being settled outside the CLS system to economise on transaction fees.

The CLS Group (the ultimate owners of the CLS system) are working on tools to facilitate the aggregation of small transactions into fewer, higher value transactions to be settled in the CLS system. To the extent that this encourages greater use of the CLS system, foreign exchange settlement risk will be reduced, so the Reserve Bank welcomes initiatives

Figure 5.2

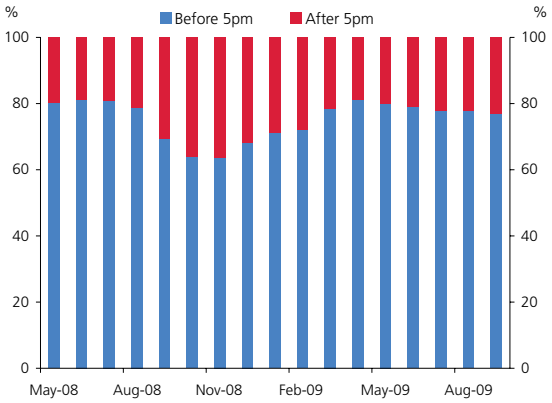
ESAS transactions



Source: RBNZ.

Figure 5.3

ESAS transactions before and after 5pm



Source: RBNZ.

along these lines.[1] Continuing growth in transaction volumes also means that capacity planning must remain an important focus to ensure that the CLS system remains able to process in a timely fashion all settlement instructions submitted to it.

Like the CLS system, ESAS has experienced falls in the value and volume of settlements. Both measures have been trending downwards since mid-2008. This may reflect a reduction in financial market activity during the period of extreme risk aversion around and after the collapse of Lehman Brothers. The more recent decline in ESAS volumes coincides with a fall in foreign exchange market activity. This fall seems to be largely a result of banks securing longer-term funding (in foreign currencies), which requires less frequent swap transactions to convert it into New Zealand dollars.

The other notable impact of uncertainties in financial markets on settlement activity in ESAS was some delays in making payments. For a time, domestic financial institutions displayed increased nervousness about the financial condition of their overseas counterparties and delayed making payments on behalf of those institutions until receipt of the necessary funds was confirmed. The May *Report* noted that these delays had reduced despite continuing uncertainty about the solvency of overseas financial institutions. As this uncertainty has further dissipated, there has been a move back to a more typical pattern of daily payment flows. About 80 percent of the total value of settlements in ESAS is once again occurring before 5pm (figure 5.3).[2]

Earlier this year, the operators of ESAS/Austraclear (the Reserve Bank's Financial Services Group) had to institute special procedures to manage operational problems affecting the availability of the system.[3] The overall availability of the system remained high and there was no significant disruption to payments, but the problems (and the risk they might intensify) were of concern.

The Financial Services Group has worked closely with its technology support provider to identify the causes of the problems and to implement longer-term solutions. Since these solutions were applied, the system has exhibited improved availability. During the six months to September 2009, the system was fully available to users 99.89 percent of the time, compared with 99.69 percent of the time in the previous six months. Availability has remained less than 100 percent because of problems that some users have had connecting to the system via the internet and because of some issues with the core system unrelated to the earlier problems. None of these incidents materially affected settlement activity.

[1] **Foreign exchange settlement risk is the risk that one party to a foreign exchange trade pays out the currency it sold but does not receive the currency it bought.**

[2] **After 5pm, settlements should be limited to CLS system-related transactions (in the evening) and the settlement of bilateral inter-bank positions resulting from retail payments.**

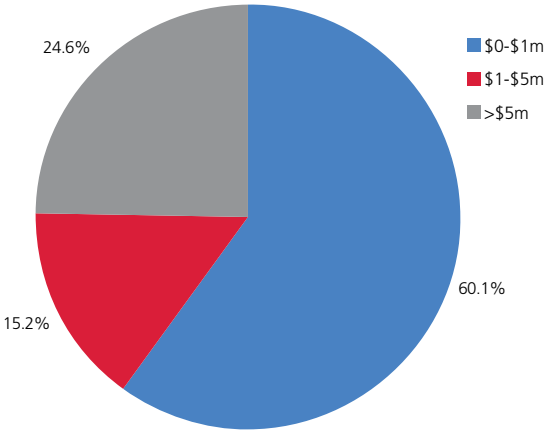
[3] **Austraclear is the securities settlement system operated by the Reserve Bank. Austraclear and ESAS are closely linked technically and problems with the computer hardware or communications networks will typically affect both systems.**

The other key payment systems are those that process retail payments (Interchange and Settlement Limited, or ISL, and the two systems for card transactions at the point of sale). These systems have continued to exhibit a high degree of operational robustness.

One concern that the Reserve Bank does have about the operation of the retail payment systems is the ongoing flow of high value transactions (transactions with a value of more than $1 million) through the ISL switch and the effect this has on the level of risk in the system. The Bank is continuing to monitor the effect of these transactions as work progresses on the development of 'settlement before interchange' arrangements.[4] The industry believes these arrangements will address risks associated with high value payments, but as described in the May *Report*, the Reserve Bank considers other changes may also be necessary.

High value transactions remain a substantial share of ISL turnover by value (figure 5.4), and are significantly increasing the net bilateral exposures between banks. For example the Reserve Bank has estimated that removing all transactions with a value of more than $10 million could reduce the largest net exposure on any day by about 60 percent.

Figure 5.4
Share of total value of retail transactions
(by size of transactions, during September 2009)



Source: New Zealand Bankers Association.

[4] Settlement before interchange involves the inter-participant settlement of amounts owing from one participant to another due to retail payments initiated by customers before details of those payments are exchanged.

6 Recent developments in financial sector regulation

Global initiatives to strengthen financial regulation, led by the Group of Twenty (G20), have provided some context and future direction for Reserve Bank regulatory actions. At the same time, the Reserve Bank has continued to develop the new prudential regime for non-bank deposit takers in the past six months, with new requirements on capital adequacy, related party lending, and credit ratings recently approved by Cabinet. The new prudential liquidity regime for registered banks has also now been finalised. Legislative changes concerning anti-money laundering and insurance will be important areas of policy development in the forthcoming period.

6.1 Global initiatives in financial regulation

Much work is under way...

The global financial crisis has prompted multilateral discussions aimed at strengthening and improving regulation of financial markets and institutions. Political leadership has come through a series of G20 meetings, and at a more technical level, multilateral analysis of what needs to change is being prepared by the Financial Stability Board, the IMF, the Basel Committee on Banking Supervision, and other bodies. Detailed reviews have also taken place in individual countries (for example the Turner Review in the UK and the US Treasury analysis available at financialstability.gov), and some central banks have produced detailed analysis (see for example the Bank of England *Financial Stability Report*, June 2009).

In many cases, the Reserve Bank plans to watch this global debate and then adapt new international standards as they become clearer, where they seem appropriate to the New Zealand financial system. Some work the Reserve Bank was already pursuing (such as the prudential liquidity policy discussed below) is clearly consistent with the global direction of change.

...with capital and liquidity key areas of concern revealed by the crisis.

Detailed work is under way globally on many issues, including rating agency regulation, accounting standards, and executive compensation. However, probably the most central issues surround requirements on capital (funds contributed by shareholders) and liquidity (buffers against reliance on short term borrowing). After the Pittsburgh G20 summit in September, it was pledged that new rules in this area would be publicised by the end of 2009, with implementation details worked out during 2010.

The crisis has demonstrated that markets can misprice risk for prolonged periods and store up trouble for participating financial institutions. For example, subprime mortgage-backed securities traded near par value for years before traders began to recognise that once refinancing was no longer available many of the underlying mortgages might not be repaid. When the value of these and other structured debt securities declined, the consequences for many global banks were serious, and the resulting recession was severe. Thus there are issues around both the behaviour of individual institutions (micro-prudential) and around how their collective behaviour has influenced business cycles (macro-prudential).

In the current crisis, governments tended to support large banks that looked like they would otherwise collapse.

Even if the explicit guarantees provided in late 2008 (like wholesale guarantee schemes) are rolled back, market participants will recognise that an implicit guarantee is likely to remain. People rely on banks to safeguard their savings, and by recirculating these savings as loans to households and firms, the banks perform an important service. A major bank failure means uncertainty for borrowers and depositors, and potential losses for depositors – so it is unsurprising that banking crises are generally coincident with serious recessions, and these are much worse in cases where the government does not support the financial system.

If an institution is seen as unlikely to be allowed to fail, this is likely to reduce the interest rates it needs to pay on borrowings, and erode the extent to which market participants monitor the safety of the institution (for example, its capital and liquidity buffers). This will create an incentive for the institution to economise on capital and liquidity, and hold less than desirable.[1]

For these reasons, banks have for some time been subject to capital and liquidity requirements by regulators and it is likely that these regulations will be strengthened after the crisis experience of the last couple of years.

Capital and liquidity rules are under active review.

Standards and principles on liquidity are currently being worked on globally, and the Reserve Bank will monitor their compatibility with the requirements we are currently introducing (see section 6.4). In capital regulation, a set of international standards is already used (or is being adopted) in most major financial systems (the Basel II framework). Minimum capital ratios in this framework are likely to rise and the standards defining what can be included in bank capital are likely to become more stringent.

Capital requirements in the Basel framework are expressed as a ratio to the risk-weighted assets of a financial institution. Risk weighting recognises that certain sorts of assets or loans (such as small mortgages against a valuable house) are safer than others (such as property development loans). Concerns about some aspects of that framework have led to calls for a simple 'leverage ratio' that would specify the minimum ratio of capital to actual assets, without any use of risk-weighting. The Reserve Bank believes that properly applied risk-weighting gives a better guide to required capital. Risk-weighting rules need refining and tougher application in some countries, but after such improvements, rules around leverage ratios may become unnecessary.

Crisis management needs more planning...

Some commentators have suggested capital requirements should be strengthened more for relatively large or systemically important institutions, since it would be harder for a regulator to allow such institutions to fail. This sort of rule would create an incentive to simplify the operating structures of complex institutions so that it would be possible to wind down parts of the business in a crisis while selling others as going concerns. Other commentators have recommended that banks maintain regularly updated 'living wills' that would essentially provide instructions for successfully dismantling the bank in a crisis. A clear plan for winding down an institution in a crisis makes wind-down a more credible option, and encourages investors to monitor the institution and exert market discipline on it, reducing the need for additional capital regulation. In some cases, restructuring institutions in advance to make wind-down more feasible might involve divesting certain activities, to make some of the largest and most complex institutions simpler and smaller. Predefined rules about allocating losses to creditors could also make wind-down or restructuring more feasible. The Reserve Bank has considered these ideas in the past, and some countries (particularly the US) have the ability to provisionally allocate losses to unsecured creditors when resolving a failed financial institution.

...especially for cross-border banks.

Additional layers of complexity have been revealed in the management of troubled institutions that do significant amounts of business in multiple countries. Where government support to such a global institution is required, multiple governments may need to become involved and may have conflicting objectives (such as protecting customers in their

[1] Annex 1 in the discussion paper accompanying the Turner Review describes this in more detail. The analysis shows how capital can appear expensive to a bank, but is not likely to be as costly as some simple estimates suggest, since the cost of equity capital and debt will both fall as the level of equity capital rises.

own countries). A recent report by an international working group suggests that an immediate focus should be on strengthening resilience within national boundaries, as it is likely that most cross-border financial institution failures will be managed separately in each 'host' country.[2] However the report does not rule out the possibility of effective regional agreements on protocols for jointly resolving a troubled institution, and encourages information sharing between regulators. This is consistent with the work programme in place between the Reserve Bank and the relevant Australian authorities, under the Trans-Tasman Council on Banking Supervision.

Procyclicality may have been excessive...

Finally, there have been a range of proposals which are designed to reduce the likelihood of the banking system intensifying booms and busts. The concern is that banks may increase leverage in good times (reducing bank capital ratios, or not provisioning for losses adequately) and then be forced to painfully reduce leverage when the crisis hits. These proposals include time-varying capital ratios, and so called 'dynamic' provisioning.

These may be desirable policies at the level of individual institutions, but are also intended to reduce the cyclicality of the overall financial system. In the New Zealand context, with a large proportion of imported capital, the Reserve Bank believes the fluctuating attitude of international lenders has contributed to excessive exchange rate cyclicality. Consequently, we have considered some of these countercyclical tools in the past, and are following international developments in this area with interest.[3]

...but there are a number of ways to address this.

Before creating countercyclical tools, it seems desirable to remove any inherently procyclical rules. Poorly designed risk models that are excessively focused on recent events may make bank lending procyclical (for example, through giving loans made during upswings safe ratings because defaults are rare in a rising market, thus reducing capital requirements). The Reserve Bank has worked with banks to produce 'through the cycle' approaches to risk modelling that do not have this property.[4]

It is also worth noting that regulations can (by acting as an 'automatic stabiliser') reduce cyclicality even without being explicitly used in a countercyclical way. For example, the Reserve Bank's new liquidity rules restrict the proportion of loans that can be funded through short-term wholesale borrowing. Since retail deposits in the banking sector are generally relatively stable, this will force future rapid increases in demand for loans to be funded mostly through long-term (rather than short-term) wholesale debt, raising funding costs and likely moderating credit growth. In the downturn, this pre-existing long-term funding helps maintain investor confidence, and reduces the extent to which the bank will need to access (potentially troubled) wholesale funding markets, reducing any funding squeeze.

In summary, much important international work on global financial regulation is ongoing in response to the crisis. It will be important to maintain the momentum on this work even as the financial system continues to stabilise, to make the system more resilient during future credit cycles.

6.2 Non-bank deposit taker (NBDT) prudential regime

In September 2008, the Reserve Bank Amendment Act conferred new responsibilities on the Reserve Bank as the prudential regulator of NBDTs. The key elements of the new regime (contained within Part 5D of the Act) focus on capital adequacy, liquidity, related party lending, governance, risk management, and credit rating requirements.

The May *Report* provided further detail on the Reserve Bank's proposed timetable for introducing the new prudential requirements. Since then, the Reserve Bank has undertaken extensive consultation and policy development work to deliver the new framework in line with those plans.

[2] "Report and recommendations of the Cross-border Bank Resolution Group", Basel Committee on Banking Supervision, September 2009.

[3] These issues were discussed in the Reserve Bank's 2007 submission to the Select Committee on Monetary Policy, available on our website. A forthcoming Reserve Bank of New Zealand *Bulletin* article will consider countercyclical policy in more detail.

[4] See Hoskin, K and S Irvine (2009), "Quality of bank capital in New Zealand", Reserve Bank of New Zealand *Bulletin*, Vol 72, No.3.

The first element of the new framework to become active was the requirement for all NBDTs to have and comply with a risk management programme from 1 September 2009. These requirements, which were set out in sections 157M to 157O of the Act, outline how an institution will identify and manage its key risks, such as credit and liquidity risk. The associated risk management plan is to be submitted to, and approved by, the deposit taker's trustee. In July 2009, the Reserve Bank published a set of risk management guidelines on the interpretation of the risk categories referred to in the Act.

Significant work has also been undertaken developing new requirements on capital adequacy, related party lending, and credit ratings. The Reserve Bank published its initial views on the framework in a consultation document on 19 December 2008. While there was broad support for the overall direction of the framework, a number of amendments have been made to the minimum capital requirements in response to issues raised during consultation to better align the regime with the specific risks faced by the NBDT sector. In particular, a number of risk weights for credit exposures have been recalibrated with provision for increased granularity in risk weights for sub-classes within asset categories such as residential mortgage loans, 'other lending', and 'other assets'. In setting these risk weights the Bank has used its own risk models for housing loans and has also adapted elements of the advanced bank models.

Under the new capital adequacy requirements, all NBDTs with a credit rating will be required to comply with an 8 percent tier 1 capital ratio.[5] While this represents a higher minimum requirement than currently applies to registered banks, it should be noted that it is consistent with the levels of tier 1 capital currently held by registered banks, and with international moves towards greater emphasis on higher quality and increased capital. Furthermore, NBDTs generally have more concentrated risk profiles than the banks. Broadly speaking, the Reserve Bank sees these two regimes as competitively neutral across the wider financial sector.

The proposed regulations in these areas were approved by Cabinet in September 2009. Under the capital and related party framework, NBDTs have a transition period to make any adjustments to their operations in order to comply with the new requirements before they become binding on 1 September 2010. A technical paper describing the risk weighting in the new NBDT capital regime was published by the Reserve Bank in November 2009.

The other element of the NBDT regime will be new liquidity requirements. While any requirements may be expected to draw on the prudential liquidity regime that has been established for banks, the detail of the framework will be tailored to the risk profile of the NBDT sector. The Reserve Bank expects to begin consultation with industry during the fourth quarter of 2009.

6.3 Basel II update

Since 2008, the four major banks in New Zealand have all been accredited to operate as 'internal models' (IM) banks for the purposes of assessing credit and operational risks under the Basel II framework.[6] In accrediting the banks, the Reserve Bank applied a number of transitional overlays which were intended to remain in place until the banks had strengthened their capital modelling.

The first overlay is a general provision under the Basel II framework for a transitional capital floor for IM banks. This is to allow time to ensure sound implementation of banks' models. Consistent with international practice the Reserve Bank has required that each IM bank's capital is maintained at a level at least 90 percent of what it would be under the previous Basel I regime for the foreseeable future.

Under Pillar 2, the Reserve Bank can also impose additional regulatory requirements if it is not satisfied that a bank's capital determined under Pillar 1 is adequate. In response to concerns about the quality of banks' existing models for housing loans, the Reserve Bank has required each bank to hold 15 percent additional capital against their housing portfolios. In applying this overlay, the Reserve Bank indicated to banks that it would remove the requirement for each bank as and when it had satisfied the Reserve Bank

[5] **Any entity not holding a credit rating will be required to hold additional capital equivalent to a minimum ratio of 10 percent for tier 1 capital.**

[6] **For a detailed discussion of the Reserve Bank's capital philosophy, and capital outcomes, under Basel II see Hoskin, K and S Irvine (2009), "Quality of bank capital in New Zealand", Reserve Bank of New Zealand *Bulletin*, Vol 72, No.3.**

that it had sufficiently strengthened its internal modelling. Progress in this area by the banks has so far been mixed, but the Reserve Bank expects one or two of the banks to have the overlay removed shortly.

The other main Pillar 2 requirement that applies to banks in New Zealand is the requirement to have an Internal Capital Adequacy Assessment Process (ICAAP). An ICAAP is designed to ensure that banks hold sufficient capital to cover all risks. As part of this, banks are expected to determine and disclose the appropriate level of capital for 'other material risks' (ie those risks that are not captured by the Pillar 1 regulatory capital requirement). While banks do generally hold capital for other material risks, it is not part of their regulatory capital requirement at this point. The 'disclosure only' requirement recognises the early stages of development of banks' ICAAP processes. The Reserve Bank continues to monitor progress in this area, and has yet to determine when IM banks will need to hold ICAAP related capital as a regulatory requirement.

In addition to concerns with the banks' modelling of housing loans, the Reserve Bank also has concerns regarding the treatment of rural exposures under the banks' models. The Reserve Bank is concerned that the current treatment is 'procyclical': the models tend to see farm lending as unrealistically safe during upswings, but during rural downturns like the current one they produce much higher risk weights that could overly constrain lending. The Reserve Bank has proposed changes that should produce assessments of rural lending that are more 'through the cycle' in nature. The Reserve Bank has consulted industry on these changes and expects to implement the revised requirements in mid-2010, to allow for a reasonable transition period.

6.4 Liquidity policy

The Reserve Bank published its final liquidity policy for registered banks on 22 October 2009.[7] The policy includes both quantitative and qualitative requirements, and has been implemented through changes to banks' conditions of registration. The quantitative requirements feature one-week and one-month liquidity mismatch ratios, and a minimum core-funding ratio (CFR).

The quantitative requirements become binding on 1 April 2010. The CFR will be introduced through a staged process, with the minimum requirement set at 65 percent during the first stage of implementation. The exact timing of the second (70 percent) and third (75 percent) stages is still to be determined. However, the Reserve Bank anticipates that the full implementation will be complete by mid-2012.

The new requirements initially apply to the subsidiaries of large Australian banks and locally owned banks in New Zealand. The Reserve Bank is now assessing the appropriate policy for dealing with all other registered banks, including branches of foreign banks. It expects to finalise arrangements for these institutions by the end of the year.

6.5 Anti-money laundering

In our last *Report* the Reserve Bank noted that this year New Zealand was being evaluated for compliance with the Financial Action Task Force's (FATF) anti-money laundering and countering the financing of terrorism (AML) recommendations. That evaluation was concluded recently with New Zealand's mutual evaluation report being adopted at the plenary meeting of FATF in October.[8]

Also since our last *Report*, new AML legislation has been enacted.[9] This legislation has the aim of improving New Zealand's compliance with the FATF's AML recommendations, but as it was enacted several months after the evaluation team's visit to New Zealand it could not be taken into account for the purposes of the evaluation.

The new AML legislation aims to expand and improve systems for the detection and deterrence of money laundering and the financing of terrorism. It also aims to provide a risk based approach in the way it requires businesses to assess and respond to AML risks.

The new legislation establishes the Reserve Bank as the AML supervisor for banks, life insurers and non-bank deposit takers, which aligns with the Reserve Bank's prudential supervision or regulation of those sectors. Similarly, the

[7] See http://www.rbnz.govt.nz/finstab/banking/

[8] New Zealand's mutual evaluation report will be available at: www.fatf-gafi.org/

Department of Internal Affairs will supervise non-deposit-taking lenders, money changers and casinos, and the Securities Commission will supervise issuers of securities, trustee companies, futures dealers, collective investment schemes, brokers and financial advisers. These businesses are referred to as 'reporting entities'.

The key features for reporting entities include requirements to:

- Carry out due diligence on their customers to ensure customer identities are correct.
- Have systems to assess the money laundering and terrorist financing risks they face in their business activities.
- Establish programmes and procedures to comply with AML requirements.
- Provide reports on suspicious transactions to the Police.

The legislation also establishes a coordination committee led by the Ministry of Justice and which includes supervisors and other agencies involved in the AML regulatory system. This committee is to facilitate consistency and cooperation in the development of AML polices and guidance.

Some regulations are required to be made before the new AML regime can be brought fully into effect. The regulations will provide additional detail that supplements the statutory requirements. Codes of practice and guidelines may also be developed by supervisors to assist reporting entities to comply with their obligations.

6.6 Insurance bill

The Bank is preparing to assume the role of prudential regulator and supervisor of insurers. The Insurance (Prudential Supervision) Bill has recently been introduced to Parliament. Subject to parliamentary timetables, enactment of this legislation is anticipated to be late in the third quarter of 2010. Further analysis of the New Zealand insurance sector and the Reserve Bank's planned regulatory approach will be provided in the May 2010 *Report*.

[9] **This is the Anti-Money Laundering and Countering Financing of Terrorism Act 2009 and is available at: http://www.legislation.govt.nz/**

Graphical appendix[1]

International

Figure A1a

Real GDP growth

(annual percent change)

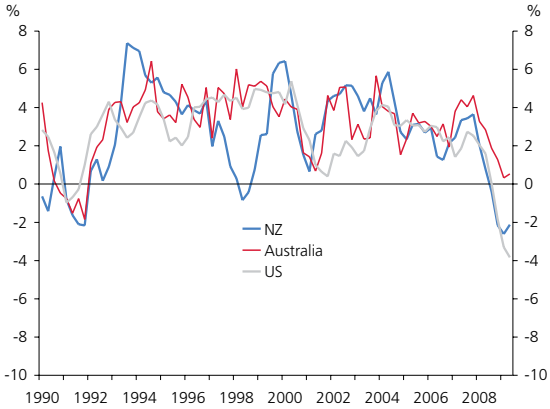


Figure A1b

Real GDP growth

(annual percent change)

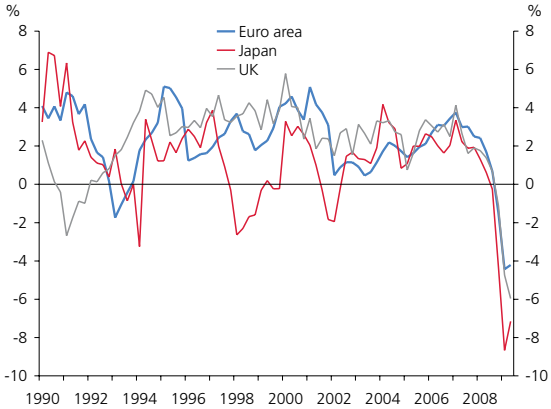


Figure A2a

Current account balance

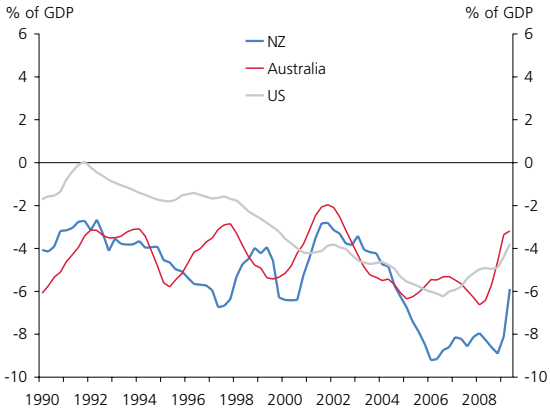


Figure A2b

Current account balance

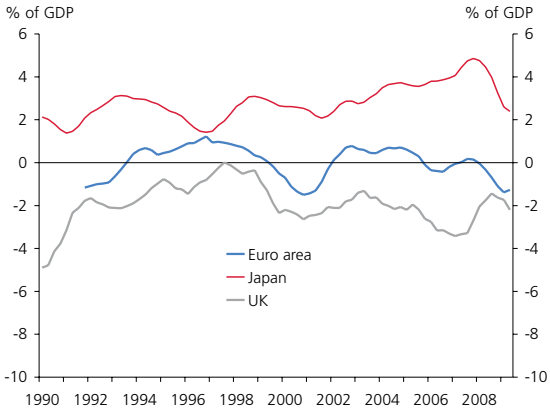


Figure A3

Trade-weighted exchange rate indices

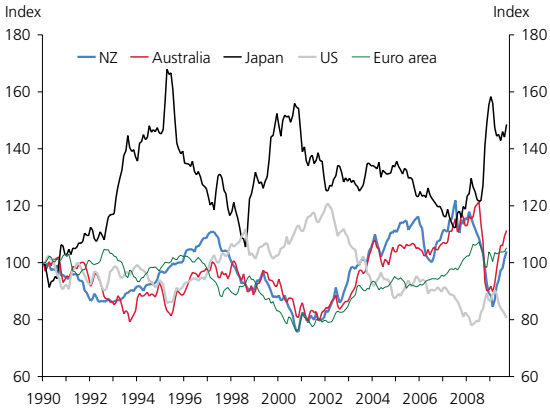
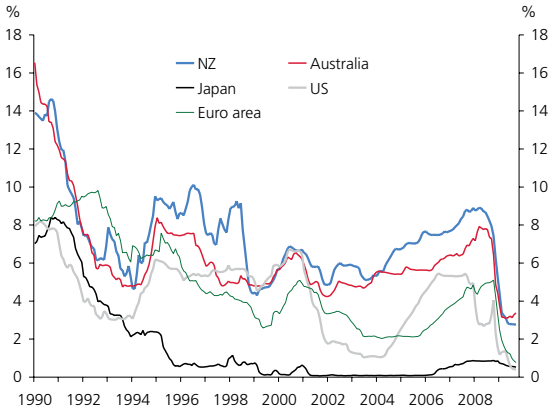


Figure A4

Short-term interest rates



[1] The data contained in this appendix were finalised on 23 October 2009. Definitions and sources are listed on pages 56-57.

Asset prices

Figure A5

Equity market indices

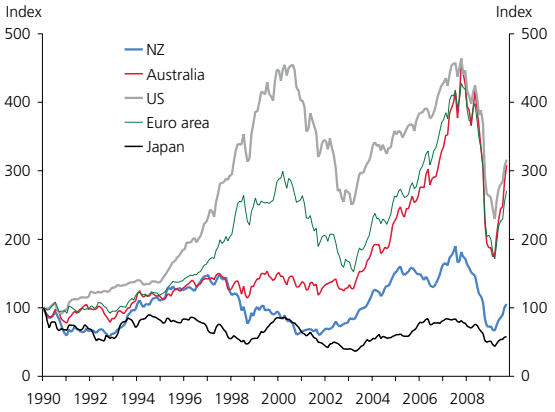
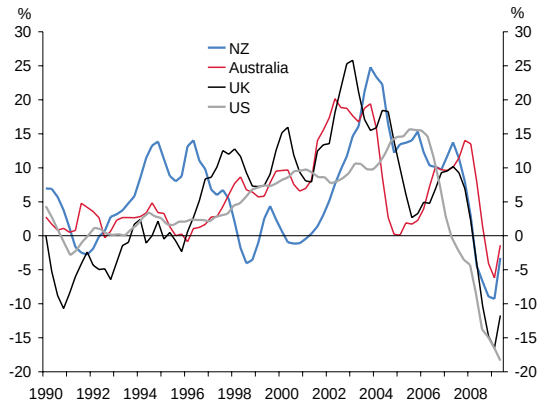


Figure A6

House price inflation

(annual percent change)



New Zealand

Figure A7

Household debt and servicing costs

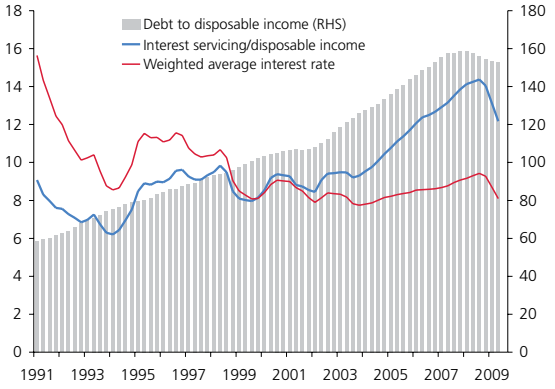


Figure A8

Household assets and liabilities

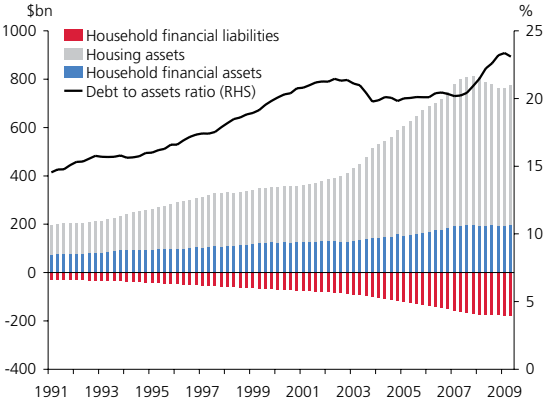


Figure A9

Property price inflation

(annual percent change)

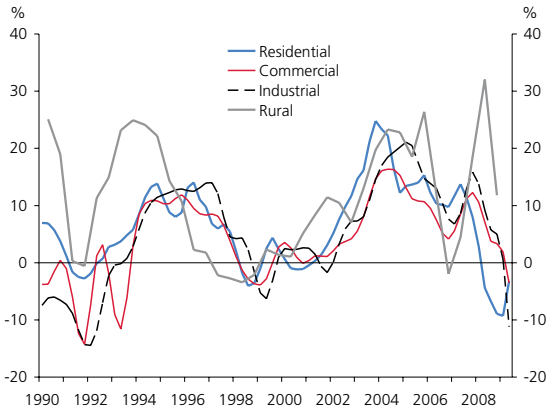


Figure A10

Government debt

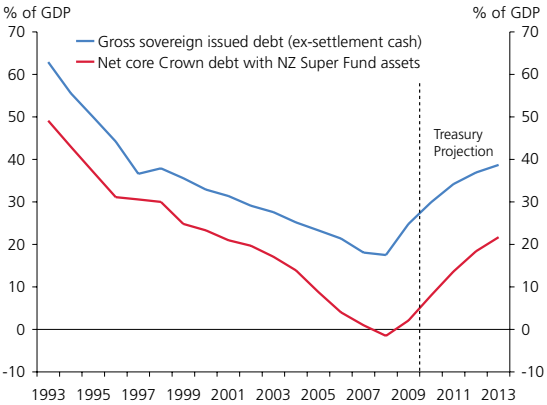


Figure A11

Government bonds on issue and turnover

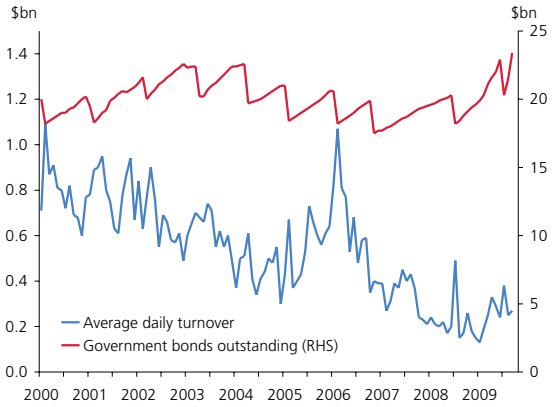


Figure A12

Ten-year government bond spreads

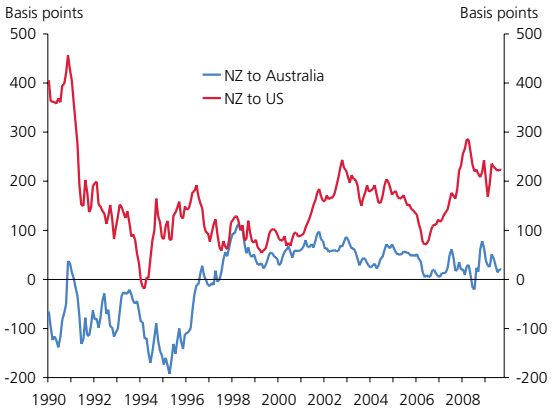


Figure A13

Yields on New Zealand government securities

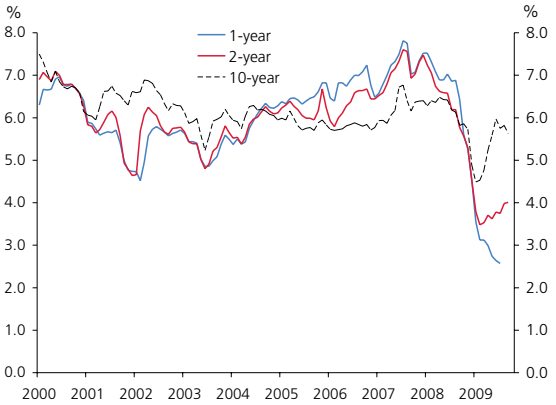


Figure A14

Non-resident holdings of New Zealand government securities

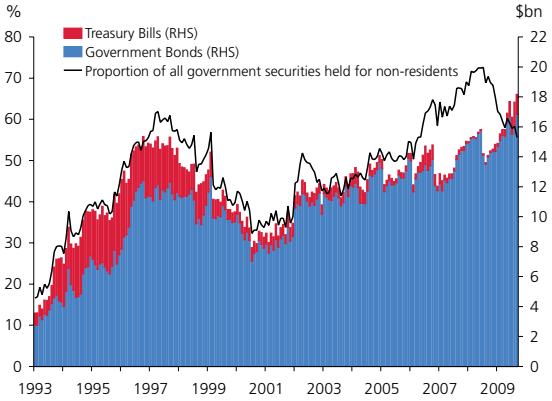


Figure A15

NZD/USD turnover in domestic markets

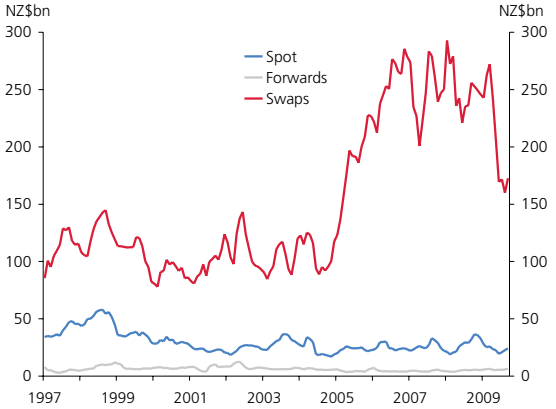


Figure A16

NZD/USD and implied volatility

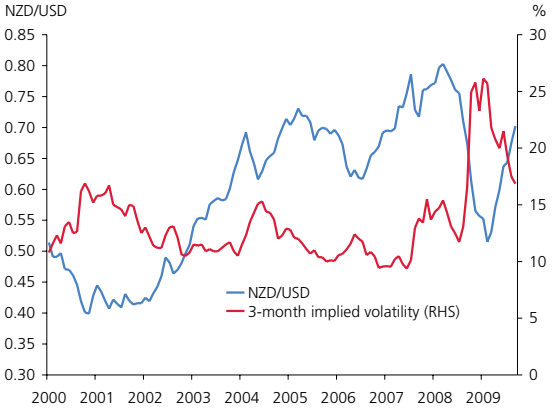


Figure A17

OCR, estimated business lending rate and effective mortgage rate

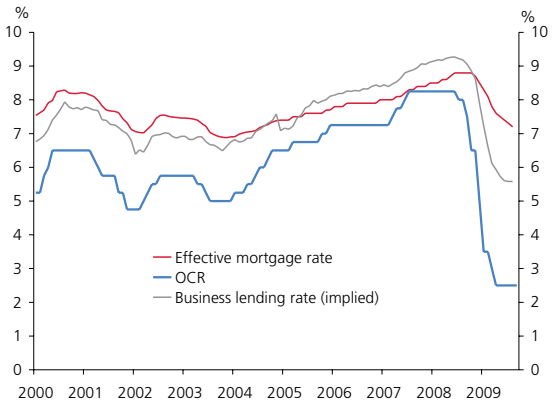


Figure A18

Equity market capitalisation

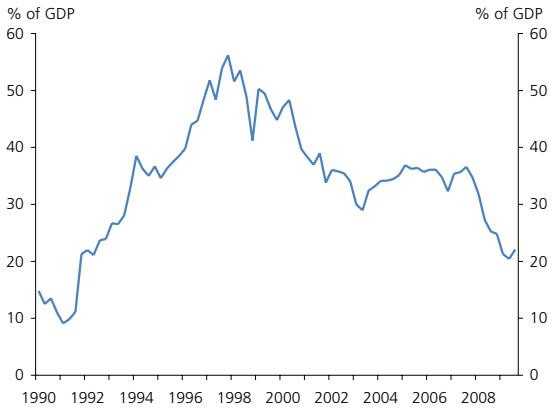
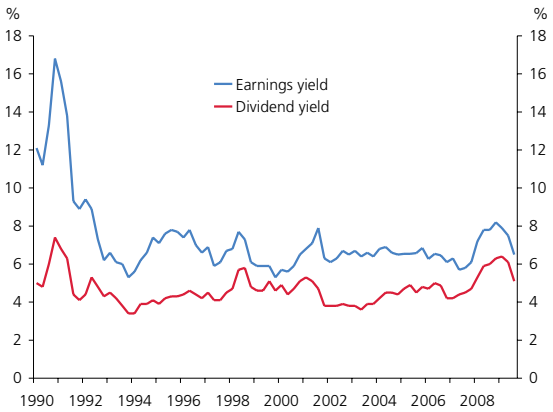


Figure A19

Earnings and dividend yields



Banking sector indicators

Figure A20

System-wide capital adequacy ratios

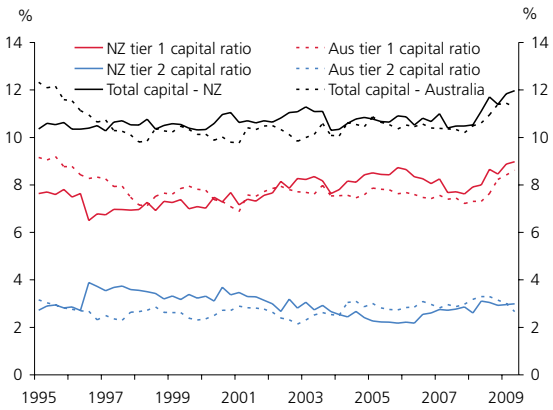


Figure A21

Asset quality

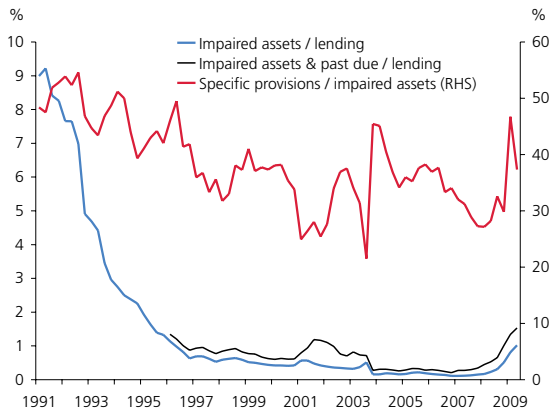


Figure A22

Return on assets

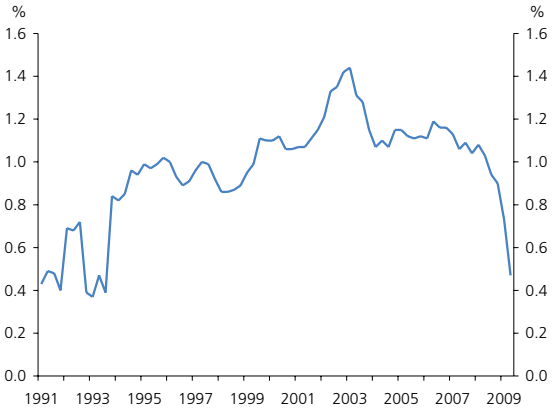


Figure A23

Operating costs to income

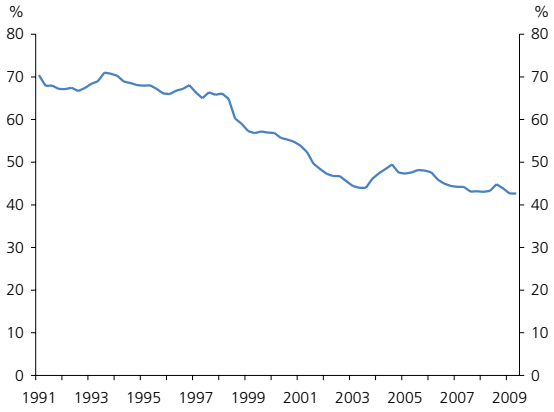


Figure A24

Interest margin

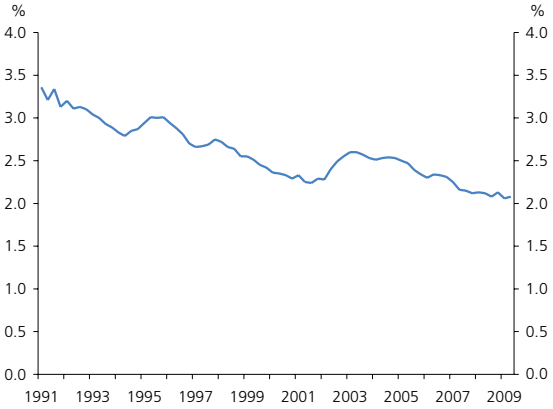


Figure A25

Registered bank offshore funding

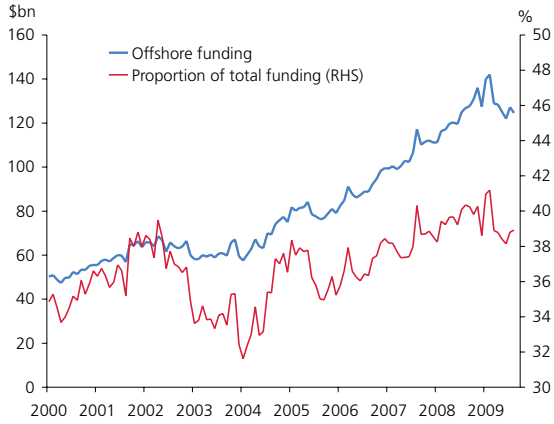


Figure A26

Bank asset composition

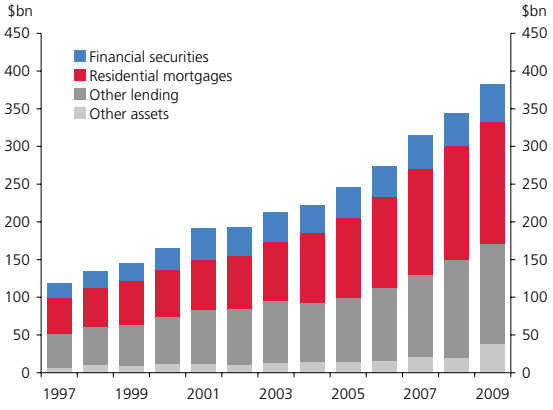


Figure A27

Bank funding composition

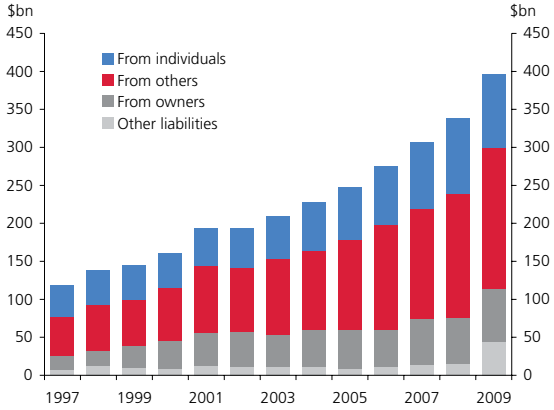


Figure A28

Bank asset growth

(annual percent change)

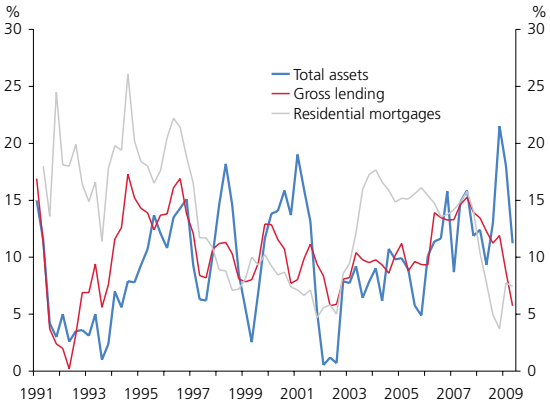
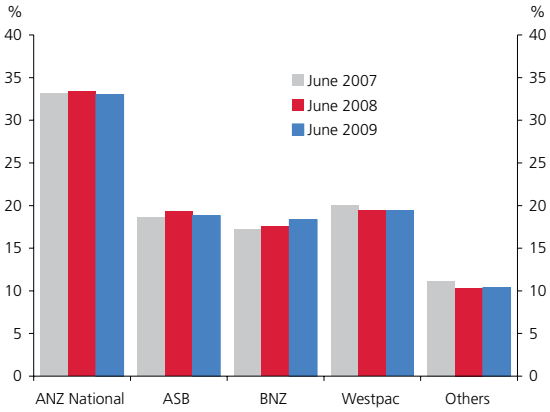


Figure A29

Bank market share



Non-bank lending institutions

Figure A30

NBLI asset composition

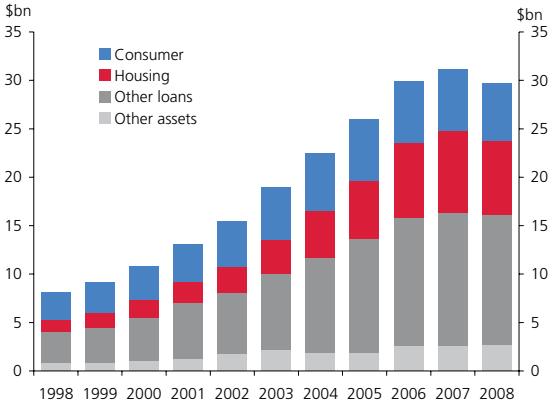
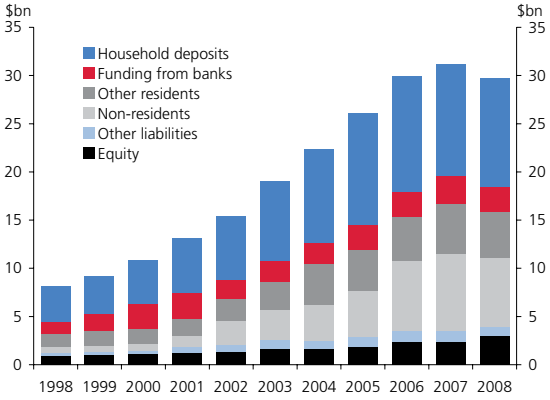


Figure A31

NBLI funding composition



New Zealand financial system assets and liabilities

Table A1

Financial system liabilities

As at 31 December $bn	1990	1995	2000	2005	2006	2007	2008	2009*
Banks								
Households	24	32	41	61	70	79	90	91
Other residents	29	35	55	90	86	96	111	108
Non-residents	11	22	56	79	100	111	128	122
Other liabilities	14	14	28	24	35	43	71	62
Total	78	103	180	254	294	329	400	382
Other non-bank lending institutions								
Households	2	3	5	12	12	12	9	9
Other residents	3	2	3	7	7	8	7	7
Other funding and liabilities	1	1	2	8	11	12	11	10
Total	6	6	10	26	30	31	27	26
Funds under management								
Household assets	25	41	56	57	64	65	55	56
Other sector assets	2	1	5	6	7	8	7	7
Total	27	42	61	63	71	72	62	63
Total financial system liabilities	111	151	250	343	395	433	489	472

Table A2

Financial system assets

As at 31 December $bn	1990	1995	2000	2005	2006	2007	2008	2009*
Banks								
Households	20	42	66	119	135	153	162	166
Other residents	36	45	72	101	113	127	148	145
General government	8	6	7	6	3	4	5	10
Non-residents	2	2	17	12	14	15	16	12
Other assets	12	8	18	15	29	30	68	51
Total	78	103	180	254	294	329	400	382
Other non-bank lending institutions								
Households	2	3	5	12	14	15	12	11
Other residents	3	2	4	12	13	14	13	13
Other assets	1	1	1	2	3	3	3	3
Total	6	6	10	26	30	31	27	26
Funds under management								
Domestic fixed interest	na	na	27	26	27	28	28	28
Domestic equities	na	na	7	8	10	9	6	6
Domestic other	na	na	4	4	4	4	4	3
Overseas investments	na	na	22	26	30	31	24	26
Total	27	42	60	63	71	72	62	63
Total financial system assets	111	151	250	343	395	433	489	472

*** As at June 2009.**

Source: RBNZ surveys and registered banks' GDS.
Note: General insurance assets and liabilities are not included. Totals and sub-totals may not add due to rounding.

Table A3

New Zealand registered banks

Registered bank's name	Market share[1]	Current credit ratings[2]			Ultimate parent	Country of parent
		S&P	Moody's	Fitch		
Australia and New Zealand Banking Group Limited (B)	1.1	AA	Aa1	AA-	Australia and New Zealand Banking Group Limited	Australia
ANZ National Bank Limited	31.9	AA	Aa2	AA-	Australia and New Zealand Banking Group Limited	Australia
Commonwealth Bank of Australia (B)	1.8	AA	Aa1	AA	Commonwealth Bank of Australia	Australia
ASB Bank Limited	17.1	AA	Aa2	-	Commonwealth Bank of Australia	Australia
Bank of New Zealand	18.4	AA	Aa2	-	National Australia Bank	Australia
Bank of Baroda (New Zealand) Limited[3]	-	-	-	BBB	Bank of Baroda	India
Citibank N A (B)	0.8	A+	A1	A+	Citigroup Inc.	USA
Deutsche Bank Aktiengesellschaft (B)	1.0	A+	Aa1	AA-	Deutsche Bank Aktiengesellschaft	Germany
JPMorgan Chase Bank, N.A. (B)	0.0	AA-	Aa1	AA-	JPMorgan Chase & Co	USA
Kiwibank Limited	2.7	AA-	-	-	New Zealand Post Limited	New Zealand
Kookmin Bank (B)	0.1	A	A2	-	Kookmin Bank	South Korea
Rabobank Nederland (B)	0.6	AAA	Aaa	AA+	Rabobank Nederland	Netherlands
Rabobank New Zealand Limited	1.7	AAA	-	-	Rabobank Nederland	Netherlands
Southland Building Society	0.7	-	-	BBB	Southland Building Society	New Zealand
The Bank of Tokyo-Mitsubishi, Ltd (B)	0.3	A+	Aa2	-	Mitsubishi UFJ Financial Group Inc.	Japan
The Hongkong and Shanghai Banking Corporation Limited (B)	1.4	AA	Aa1	AA	HSBC Holdings PLC	UK
TSB Bank Limited	1.0	BBB+	-	-	TSB Community Trust	New Zealand
Westpac Banking Corporation (B)	5.1	AA	Aa1	AA-	Westpac Banking Corporation	Australia
Westpac New Zealand Limited	14.3	AA	Aa2	AA-	Westpac Banking Corporation	Australia

1 Registered banks' assets as a proportion of the total assets of the banking system, as at 30 June 2009.

2 Current credit rating at data cut off.

3 Bank of Baroda (New Zealand) Limited was registered on 1 September 2009, ABN AMRO Bank NV gave up its registration on 29 May 2009.

Table A4

Selected non-bank lending institutions' (NBLI) assets and liabilities

	Non-deposit-taking finance companies			Deposit-taking finance companies			Savings institutions			Total NBLIs		
	$m	$m	Growth[1]	$m	$m	Growth[1]	$m	$m	Growth[1]	$m	$m	Growth[1]
	Jun-08	Jun-09	% pa	Jun-08	Jun-09	% pa	Jun-08	Jun-09	% pa	Jun-08	Jun-09	% pa
NZD funding												
NZ resident households	-	-	..	7,432	7,326	-1%	2,632	2,656	1%	10,064	9,982	-1%
Other funding[2]	3,233	3,821	18%	1,875	1,653	-12%	219	196	-10%	5,327	5,670	6%
Non-residents	6,452	5,462	-15%	308	273	-11%	59	73	24%	6,819	5,808	-15%
Total NZD funding	9,685	9,283	-4%	9,615	9,252	-4%	2,910	2,925	1%	22,210	21,460	-3%
Foreign currency funding	250	249	0%	367	278	-24%	-	-	..	617	527	-15%
Other liabilities	721	315	-56%	275	218	-21%	44	43	-3%	1,040	576	-45%
Capital and reserves	500	921	84%	1,095	759	-31%	335	333	-1%	1,930	2,013	4%
Total liabilities	11,156	10,768	-3%	11,352	10,508	-7%	3,289	3,301	0%	25,797	24,577	-5%
NZD lending to residents												
Farm lending	113	123	9%	898	996	11%	112	97	-13%	1,123	1,216	8%
Business lending	2,676	2,852	7%	5,169	4,848	-6%	557	506	-9%	8,402	8,206	-2%
Housing lending	3,540	2,624	-26%	1,135	1,051	-7%	1,683	1,702	1%	6,358	5,377	-15%
Consumer lending	3,197	3,029	-5%	1,811	1,562	-14%	377	385	2%	5,385	4,976	-8%
Total NZD loans by sector	9,526	8,628	-9%	9,013	8,457	-6%	2,729	2,690	-1%	21,268	19,775	-7%
Foreign currency loans	7	152	2071%	605	553	-9%	-	-	..	612	705	15%
All other loans and assets[3]	1,623	1,988	22%	1,734	1,498	-14%	560	611	9%	3,917	4,097	5%
Total assets	11,156	10,768	-3%	11,352	10,508	-7%	3,289	3,301	0%	25,797	24,577	-5%
Memo item: Lending to non-residents	-	190	..	889	738	-17%	-	-	..	889	928	4%

Source: RBNZ - NBLI SSR. Includes NBLIs with total assets (including securitised lending) exceeding $100m at relevant dates. A large NBLI first registered as a bank late in 2008 has not been included at June 2008. Totals may not add due to rounding.

Notes:

1. Percentage growth calculations are affected by entry of new respondents to the NBLI survey and recategorisation of assets and liabilities among NBLI groups.
2. Counterpart funding to securitised loans is included here.
3. Includes, inter alia, claims on banks and NZD non-resident lending.

Savings institutions include building societies and credit unions with assets exceeding $100m at relevant dates, and PSIS Limited.

Asset values for firms in receivership may not be updated to fully reflect market conditions (e.g. recovery estimates will largely not be reflected in recorded value).

In this sense, given recent events, the survey is currently likely to understate the rate at which the non-bank deposit-taking finance company sector is shrinking.

Notes to the graphical appendix

The appendix contains a suite of charts that appear regularly in the *Financial Stability Report*. The charts provide an overview of developments in a set of key economic and financial indicators. Definitions and sources (in italics) are noted below. The data for the charts in this *Report*, including those in the graphical appendix, are available on the Reserve Bank website.

1	Real GDP growth	Annual percentage change in real GDP. *Datastream*.
2	Current account balance	Current account balance as a percentage of GDP, four-quarter total. *Datastream*.
3	Trade-weighted exchange rate indices	Trade-weighted indices, January 1990 = 100. *Bank of England*.
4	Short-term interest rates	Yields on 90-day bank bills. *Reuters*.
5	Equity market indices	Morgan Stanley Capital Indices, January 1990 = 100. *Datastream*.
6	House price inflation	Annual percentage change in national house price indices. *Datastream*, *Quotable Value Ltd.*
7	Household debt and servicing costs	Household debt excludes student loans. Household disposable income is gross before deduction of interest paid and consumption of fixed capital, and is interpolated from March-year data from *Statistics New Zealand*, with *RBNZ* forecasts. The weighted average interest rate is obtained from *SSR* data for residential mortgages and RBNZ calculations for consumer interest rates.
8	Household assets and liabilities	Housing assets are the aggregate private sector residential dwelling value. Data is from *Quotable Value Ltd* from 1995, with *RBNZ* estimates based on the House Price Index for prior years. Household financial assets are as published annually by *RBNZ*, with aggregate quarterly figures interpolated prior to 1995, based on component estimates from then. Household liabilities are from *RBNZ* series as for figure A7.
9	Property price inflation	Annual percentage change in property price indices. Commercial and industrial property prices are interpolated from semi-annual figures. *Quotable Value Ltd.*
10	Government debt	Net core Crown debt is debt attributable to core Crown activities and excludes Crown entities and state-owned enterprises. Forecasts from Budget Fiscal and Economic Update (BEFU). *The Treasury*.
11	Government bonds on issue and turnover	Total government securities on issue and New Zealand government bond turnover survey. *RBNZ.*
12	Ten-year government bond spreads	Yield on 10-year benchmark New Zealand government bonds, less yield on US and Australian equivalents. *RBNZ*.
13	Yields on New Zealand government securities	*Reuters*, *RBNZ*.
14	Non-resident holdings of New Zealand government securities	*RBNZ*.
15	NZD/USD turnover in domestic markets	*RBNZ survey.* Three-month moving average of monthly totals.
16	NZD/USD and implied volatility	Standard deviation used to price three-month NZD/USD options. *Bloomberg*.

17	OCR, estimated business lending rate, and effective mortgage rate	*RBNZ.* The effective residential mortgage interest rate is item E5.10 from the registered bank aggregate SSR. The estimated business lending rate is determined residually using information from the SSR for total registered bank NZD lending rates, effective residential mortgage rates, and estimates of consumer and interbank rates. It does not include the effects of hedging activity such as interest rate swaps.
18	Equity market capitalisation	Total market capitalisation of the 50 largest companies listed on New Zealand Stock Exchange, as a percentage of annual nominal GDP. *Datastream*. Latest GDP value is estimated.
19	Earnings and dividend yields	Earnings and dividend yield figures are those of companies covered by First New Zealand Capital and Credit Suisse and includes almost all of the firms in the NZX50 index. The figures are expressed as a percentage of the total market capitalisation of these companies. *First New Zealand Capital*.
20	System-wide capital adequacy ratios	Capital as a percentage of risk-weighted assets for all locally incorporated banks. *Registered banks' general disclosure statements* (*GDS), Reserve Bank of Australia.*
21	Asset quality	Impaired assets plus past due as a percentage of total lending; specific provisions as a percentage of impaired assets; for all registered banks. *GDS.*
22	Return on assets	Net profits after tax and extraordinary items, as a percentage of average total assets, four-quarter average, for all registered banks. *GDS*.
23	Operating costs to income	Operating expenses as a percentage of total income, four-quarter average, for all registered banks. *GDS*.
24	Interest margin	Net interest income as a percentage of average interest-earning assets, four-quarter average, for all registered banks. *GDS*.
25	Registered bank offshore funding	*RBNZ*.
26	Bank asset composition	As at 30 June. *GDS*.
27	Bank funding composition	As at 31 March or 30 June. *GDS*.
28	Bank asset growth	Year-on-year change in total assets of all registered banks. Gross lending before provisions. *GDS*.
29	Bank market share	Bank assets as a percentage of total assets of registered banks. *GDS*.
30	NBLI asset composition	Data are series-break adjusted by retaining the same non-bank lending institutions (NBLI) in the data-set. Levels therefore differ from tables A1 and A2 from 1998 to 2001, and for 2008. *RBNZ Annual Statistical Return* and *NBFI SSR* as at 31 December.
31	NBLI funding composition	Data are series-break adjusted by retaining the same NBLIs in the data-set. Levels therefore differ from tables A1 and A2 from 1998 to 2001, and for 2008. *RBNZ Annual Statistical Return* and *NBFI SSR* as at 31 December.