RESERVE BANK
OF NEW ZEALAND
TE PŪTEA MATUA

Financial Stability Report

May 2013

Contents

This report is published pursuant to section 165A of the Reserve Bank of New Zealand Act 1989.
The charts and tables in the appendix to this report use data available as at 19 April 2013.
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

ISSN 1176-7863 (print)
ISSN 1177-9160 (online)

Objectives of the *Financial Stability Report*

The Reserve Bank of New Zealand Act 1989 requires the Reserve Bank to produce a *Financial Stability Report* twice a year. This document must report on the soundness and efficiency of the financial system and the measures undertaken by the Reserve Bank to achieve its statutory prudential purposes set out in the Act. The *Report* must also contain the information necessary to allow an assessment of those activities.

1 Overview

Developments in private sector credit and the residential property market over the past year point to increasing risks to financial stability in New Zealand. House prices are rising rapidly in Auckland and Canterbury, household credit growth has increased and there are signs that the rebuilding in household savings is beginning to stall. Household debt is rising from a level that is high relative to disposable income and house prices already appear overvalued on a number of measures, increasing the risks to both borrowers and the financial system that could arise from adverse economic conditions. Borrowing in the agricultural sector has also increased in the context of already high debt levels that are heavily concentrated within the dairy sector. Recent drought conditions could expose financial vulnerabilities among these indebted farmers.

Low interest rates and a significant improvement in global financial market sentiment over the past six months have supported the recovery in domestic credit growth. Policy actions in advanced economies have reduced the near-term risks of a break-up of the euro area, and a very sharp fiscal contraction in the US. More generally, exceptionally low interest rates and unconventional monetary policy in the major advanced economies have supported a rally in the prices of riskier assets. The improvement in sentiment has reduced funding costs for New Zealand banks, which, together with strong bank competition for mortgage customers, has led to a decline in mortgage interest rates over the past year. These lower rates are contributing to the current strength of the housing market.

Despite the recent improvement in financial market sentiment, there remains a significant risk of renewed turbulence in offshore funding markets. Although New Zealand's financial system has reduced its overall reliance on these markets in recent years, external debt levels remain high, with most of the debt intermediated through the banking sector. Credit growth is rising and could soon outpace growth in domestic deposits, implying greater reliance on offshore debt to fund further increases in lending. New Zealand's elevated exchange rate is also continuing to hinder a rebalancing of domestic activity towards the tradables sector, which would assist in reducing external vulnerabilities.

Banks have used a recovery in profitability over the past three years to strengthen their capital levels, which are now well in excess of the new Basel III minimum capital requirements. Despite the higher capital buffers, rising house prices are creating risks for the New Zealand financial system, by increasing both the probability and potential impact on bank balance sheets of a significant house price adjustment. The greater willingness of banks to approve high loan-to-value ratio (LVR) mortgages has further increased the potential adverse impact of a fall in house prices.

As discussed in a new chapter outlining the Reserve Bank's risk assessment (chapter 2), the recent growth in house prices is problematic from a financial stability perspective. New Zealand has been fortunate to avoid the sort of sharp and costly correction in house prices that has been seen in many other countries in recent years. A sharp fall in house prices would likely be accompanied by increased bad debt on bank balance sheets and a tightening in the supply of credit. Household balance sheets would weaken, households would reduce consumption, and investment in housing would decline. If the correction in house prices was triggered by an external event such as a large financial and economic shock in a major trading partner, reduced export demand would add to the upward pressure on unemployment.

Partly in light of the risks relating to the housing sector, the Reserve Bank has been reviewing whether bank capital requirements for housing loans properly reflect risk in the sector. Following stage one of this review, the Reserve Bank is increasing the amount of regulatory capital required for high-LVR housing loans. This will strengthen the capacity of the banking system to weather a housing downturn, and should also lead the banks to review the riskiness of the loans they are currently writing. The Reserve Bank has also recently concluded a public consultation on a framework and set of instruments for macro-prudential policy (box A). A Memorandum of Understanding is expected to be signed with the Minister of Finance shortly, to agree on the main elements of the framework. The new framework provides the ability to temporarily tighten prudential settings if house prices and household borrowing continue to be of concern.

The Reserve Bank is also strengthening regulation of the financial system in a number of other areas, drawing on insights gained from the financial crisis. Banks are making good progress on the pre-positioning of their core systems for Open Bank Resolution, which will provide the Government with a new option to deal with the failure of a bank. The Reserve Bank is also consulting on a proposal to enhance its powers for the oversight of financial market infrastructures, and is continuing to work towards the implementation of a new prudential regime for the insurance sector.

Graeme Wheeler

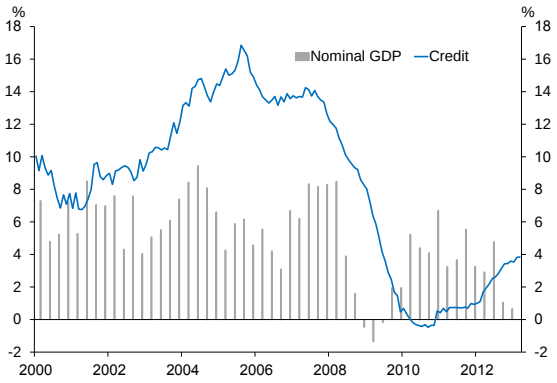
Governor

2 Systemic risk assessment

The credit cycle appears to be turning upwards…

There is evidence that the New Zealand credit cycle has passed its low point, underpinned by low interest rates and buoyant international financial markets. Private sector credit is now increasing faster than the rate of income growth (figure 2.1), after declining as a ratio to income over the past four years. Partly reflecting the improvement in capital and funding buffers in recent years, banks have been well placed to facilitate the increase in credit demand and are competing aggressively for new mortgage lending. This recovery in credit growth is increasing risks to the financial system given the already elevated indebtedness of the New Zealand economy, and the still fragile global environment.

Figure 2.1
Credit and nominal GDP growth
(annual percent change)



Source: Statistics New Zealand, RBNZ *Standard Statistical Return* (SSR).

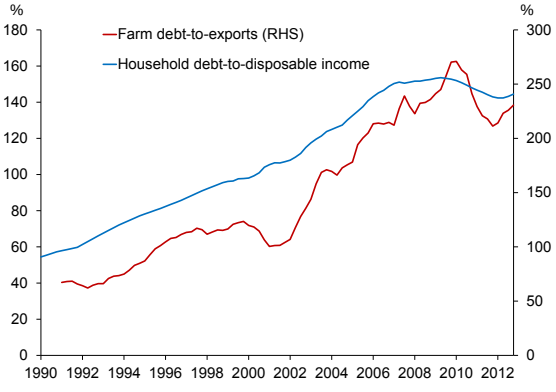
…on the back of increasing momentum in the housing market.

Much of the recent increase in credit growth has been driven by increasing momentum in the housing market, particularly in the Auckland and Christchurch markets where housing supply is tight. With subdued domestic inflation keeping the Official Cash Rate low, reduced bank funding costs and increased competition among banks has led to a decline in mortgage interest rates over the past year. Low mortgage rates appear to be increasing the prices that prospective buyers are willing to pay and, together with tight housing supply, seem likely to lead to further price increases. This would add to the risk of an eventual sharp contraction in prices, particularly as house prices are already overvalued on a number of metrics (box C).

Rising house prices and household borrowing pose a risk to the financial system…

While credit is growing more slowly than in most of the decade before the financial crisis, that growth is stretching household debt-to-income ratios, which are already elevated (figure 2.2). Rising house prices, combined with a greater willingness on the part of banks to lend against low deposits, suggests that many new borrowers will be acquiring homes with higher debt levels relative to both income and assets. Low mortgage rates are helping to keep household debt burdens manageable in the short term, but the increase in underlying indebtedness leaves households vulnerable to a reduction in incomes or a rise in interest rates (chapter 4).

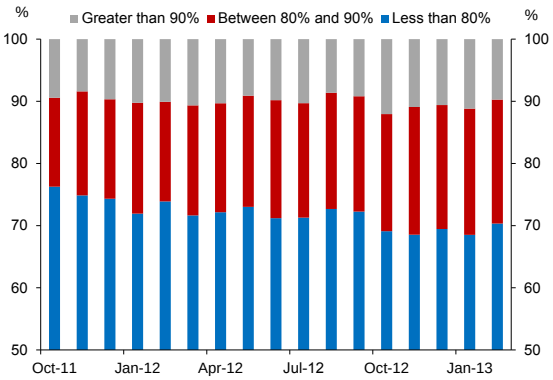
Figure 2.2
Sectoral debt-to-income ratios



Source: Statistics New Zealand, RBNZ.

Given that interest rates are at historical lows and will likely rise in the future, lenders should ensure borrowers will be able to service loans even if interest rates rise substantially. Rapid increases in house prices should also make banks more careful about high loan-to-value ratio (LVR) lending. The rising share of high-LVR lending throughout 2012 (figure 2.3) is likely to be contributing to house price inflation in some parts of the housing market, and would increase losses to the banking system and the wider economy in the event of a significant reversal in house prices.

Figure 2.3
Residential mortgage lending by LVR
(new origination flows)



Source: Based on private reporting by eight registered banks.
Note: Data do not include lending related to the Welcome Home Loans scheme. Data not standardised and definitions may vary across banks.

…and imply growing reliance on offshore markets to fund credit growth.

Rising credit growth is likely to see banks undertake increased issuance of offshore debt as the growth in credit begins to outstrip growth in domestic deposits (chapter 5). While offshore debt markets are currently being supported by extremely low global interest rates and liquidity provided by major central banks, they are susceptible to a number of downside risks. A disruption to global funding markets could drive up funding costs for New Zealand banks, which would flow through to higher mortgage rates (chapter 3). In the case of a severe disruption, it could be difficult for New Zealand banks to roll over existing wholesale funding.

With the global search for yield helping to boost a number of property markets in other advanced economies, the Reserve Bank is not unique in having concerns about rising house prices and household borrowing. Relatedly, policymakers in some economies have recently used macro-prudential tools (box B).

Debt levels remain elevated in the agricultural sector.

Farm and commercial property prices fell more than residential property prices after the global financial crisis, and are not exhibiting the same upward momentum currently seen in the residential market. For the agriculture sector, the drought is likely to be reducing buyer demand at present. However, farm and commercial property markets are being stimulated by current low mortgage rates, and like residential property, could also respond excessively to that stimulus. As noted in previous *Reports*, parts of the agriculture sector in particular remain quite leveraged, and progress in reducing debt loads in recent years has been fairly limited (figure 2.2). For these reasons, the Reserve Bank will also be carefully monitoring developments in these markets for signs that systemic risks are increasing.

The Reserve Bank is currently reviewing baseline requirements around housing lending.

The Reserve Bank is reviewing whether capital requirements for housing lending are sufficient, with stage one of the review concluding that regulatory capital held against high-LVR lending will increase. Stronger prudential settings around housing will give the banking system greater capacity to absorb losses in the event of a property market slowdown. As well as reviewing baseline prudential settings (chapter 7), the Reserve Bank will soon be able to use the macro-prudential framework to tighten prudential settings during periods of rising systemic risk (box A). Such tightenings would provide further resilience to the banks at times when risks are increasing significantly, as well as providing incentives for banks to lend more carefully during those periods.

Box A
The Reserve Bank's proposed macro-prudential framework

In April, the Reserve Bank concluded a public consultation on a framework and set of instruments for macro-prudential policy purposes.[1] This box summarises the proposed framework, including some issues raised from the consultation.

The global financial crisis (GFC) highlighted the significant economic costs that can arise through instability in the financial system. As many countries have experienced in recent years, boom-bust cycles in credit and asset prices can be extremely destabilising for banking systems and can create large economic costs. They can also pose a significant fiscal risk for the government balance sheet. In addition to strengthening regulatory standards for bank capital and liquidity, many countries are developing macro-prudential policy frameworks to reduce the risks to the financial system from these cycles. Macro-prudential policy involves the temporary use of various prudential instruments in the face of rapid credit growth and/or other risk factors such as rapid growth in asset prices, rising leverage or abundant liquidity. Such conditions were prevalent in the lead up to the GFC.

The Reserve Bank's proposed macro-prudential policy framework aims to promote financial system stability by:

- building additional resilience in the financial system during periods of rapid credit growth and rising leverage or abundant liquidity; and
- dampening excessive growth in credit and asset prices.

The Reserve Bank has consulted on four tools it has identified as being helpful in addressing one or both of the above objectives: adjustments to the core funding ratio; a counter-cyclical capital buffer; sectoral capital requirements; and loan-to-value ratio (LVR) restrictions for residential mortgages. The two latter tools are targeted measures intended to help address credit imbalances in specific sectors of the economy.

As noted in the consultation paper, macro-prudential instruments would be used to help manage extremes in credit and asset price cycles, although the tools would need to be deployed early enough to ensure they would meet the intended objectives. By their nature, macro-prudential tools are likely to entail a range of costs that would need to be carefully weighed against the benefits of using them. Potential efficiency costs include the risk of disintermediation – where credit growth is displaced to non-bank lenders not subject to the policy requirement.

Most submissions to the consultation supported the proposed objectives for macro-prudential policy, although some questioned why it might be needed given existing prudential regulation. The main rationale is that existing 'micro-prudential' regulation may not be sufficient to contain a build-up in financial system risk during extremes in the credit cycle, particularly if there are substantial increases in asset prices or increases in household or business sector leverage. Some submitters also asked whether macro-prudential tools could more actively assist monetary policy goals, exchange rate management, or housing affordability. As noted in its consultation paper, the Reserve Bank believes such tools will generally support monetary policy but are unlikely to be as powerful as the Official Cash Rate. The tools do not appear well suited for directly pursuing other economic policy goals and, under its Act, the Reserve Bank's reason for using such tools must be for financial stability purposes.

Much of the focus in the submissions was on the use of LVR restrictions. Key concerns were around the potential adverse effects such restrictions could have on first-home buyers, small businesses, and the Canterbury rebuild. Some submitters suggested that LVR restrictions could best be applied with exemptions for some borrowers or targeted at particular regions where high-LVR lending was more prevalent.

[1] "Consultation Paper: Macro-prudential policy instruments and framework for New Zealand", available at: http://www.rbnz.govt.nz/finstab/macro-prudential/5166933.pdf

The Reserve Bank's aim would be to apply the restrictions at times when high-LVR lending was judged to be posing a significant risk to financial system stability. Setting exemptions would not necessarily be appropriate and could significantly dilute the effectiveness of the instrument. Although LVR restrictions overseas have sometimes exempted first-home buyers, this would only be possible if first-home buyers were not driving the risky borrowing. Targeting LVR restrictions to particular regions may be feasible but would entail significant practical difficulties and could create other distortions. A variant of the LVR restriction proposed in the consultation would set a limit on the share of high-LVR lending that could be undertaken, providing banks with scope to continue to provide some high-LVR loans to creditworthy borrowers.

Many submitters noted the risk that macro-prudential tools such as LVR restrictions would displace lending away from banks towards other lenders not subject to the policy requirement. The Reserve Bank believes that the risks of disintermediation would be mitigated partly by its intention to use LVRs and other tools in a temporary fashion. It is also worth noting that disintermediation does not necessarily reduce the effectiveness of macro-prudential policy in meeting the objective of increasing financial system resilience. However, it might become necessary to extend the framework to non-bank lenders and this is an issue that the Reserve Bank intends to consider further.

Comments about effectiveness focused more on the objective of dampening the credit cycle than on the objective of increasing financial system resilience. Some submitters thought that LVR restrictions would be more effective at dampening the credit cycle than instruments such as the counter-cyclical capital buffer or sectoral capital requirements. It was suggested that, faced with an additional capital requirement, banks might simply opt to run down existing capital buffers if these already exceeded the new requirement. This would result in little impact on funding costs or interest rates for new lending. Moreover, submitters noted that the impact of additional capital or core funding requirements on lending rates would likely depend on a combination of factors, including: banks' internal policies and models, the state of equity and debt markets, competitive conditions in lending markets, and general economic conditions. These points are largely in line with the Reserve Bank's views. The full range of such factors will need to be assessed when choosing whether and when to deploy macro-prudential instruments.

Most submissions also sought further clarity on the indicators and judgements underlying the Reserve Bank's future macro-prudential policy decisions. The Reserve Bank intends to publish such guidance in its regular *Financial Stability Reports*.

The Reserve Bank is continuing to review the submissions and will publish a full summary. The next steps in the establishment of the macro-prudential policy framework are expected to include a Memorandum of Understanding between the Reserve Bank and the Minister of Finance. This will set out the objectives of the policy, the Reserve Bank's powers to use macro-prudential policy, an agreed set of policy instruments and governance and accountability arrangements. Following this, it is expected that the technical implementation details for each of the instruments will be incorporated into the *Banking Supervision Handbook* over time. This design process will draw on further consultation with the banks.

3 The international environment and financial markets

There has been a material improvement in financial market sentiment over the past six months. Policy actions in advanced economies have significantly reduced the near-term risks of either a break-up of the euro area, or a sharp fiscal contraction in the US. However, much remains to be done to address the overhang of debt in both the private and government sectors of a number of advanced economies. Despite some progress, many bank balance sheets need to be further strengthened, particularly in Europe.

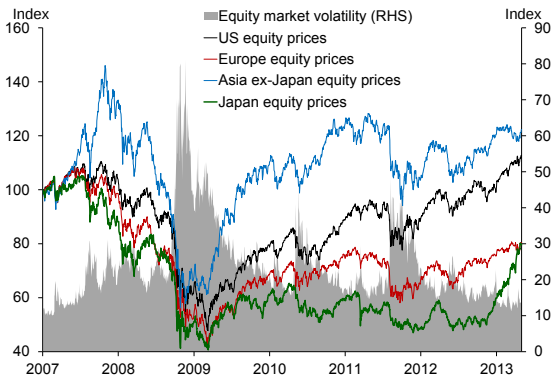
Exceptionally low interest rates and unconventional monetary policies in major advanced economies have contributed to improved confidence in financial markets. This confidence has been reflected in lower spreads on risky assets, rising equity prices and capital inflows into countries that have not needed the same degree of monetary policy stimulus. In this environment, New Zealand has experienced upward pressure on the exchange rate, and a reduction in bank funding costs which has supported the recent recovery in domestic credit growth. There is a risk that buoyant global risk appetite continues to add to pressures on the domestic financial cycle.

There are two key risks stemming from the international environment that could result in a period of financial stress for New Zealand. The first is further disruptions to offshore funding markets, leading to an increase in funding costs for New Zealand banks. Lack of progress in achieving fiscal consolidation or renewed economic weakness in Europe are potential triggers. The second risk is a disorderly adjustment to the credit and property booms that are being experienced in emerging markets, especially in China. This would predominantly influence New Zealand through trade channels and lower commodity prices.

Financial market sentiment has improved.

Over the past six months moves by policymakers in Europe and the US have helped to alleviate two of the most significant near-term risks to global financial stability: a breakup of the euro area, and a sharp contraction of fiscal policy in the US as a result of the 'fiscal cliff'. As a result, there has been a material improvement in financial market sentiment reflected in rising equity prices and reduced risk aversion (figure 3.1).

Figure 3.1
Global equity markets and volatility



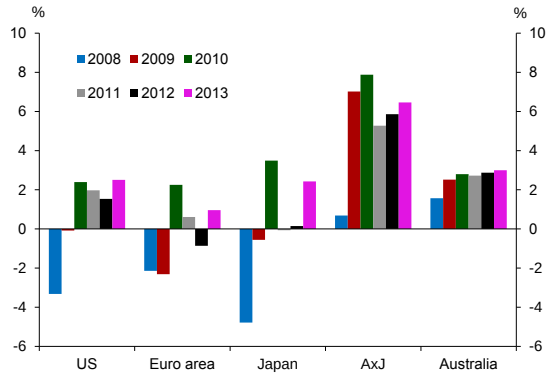
Source: Bloomberg.
Note: S&P 500, Stoxx 600, MSCI Asia ex-Japan and Nikkei 225 indices have been rebased to equal 100 in January 2007. Equity market volatility is the VIX index.

Despite the improvement in market sentiment and continued monetary easing, advanced economy growth has remained tepid. Growth appears to be stabilising after slowing during 2012 (figure 3.2). Market sentiment in Europe has been tested in the past few months by an

inconclusive election result in Italy and the recent bailout of Cyprus. There remains a significant risk of renewed market turbulence in the near term, stemming from further adverse developments in Europe or another impasse in fiscal negotiations in the US.

More fundamentally, debt levels are elevated at both the government and private sector levels in a number of advanced economies, which is constraining the outlook for economic growth. The consequent pressure on asset quality is compressing profitability and capital positions of banks in the major advanced economies, and further strengthening of some bank balance sheets is required, particularly in Europe. Until these medium-term vulnerabilities are addressed in a sustainable manner there are likely to be periodic bouts of financial market turbulence and instability.

Figure 3.2
World GDP growth
(annual percent change)



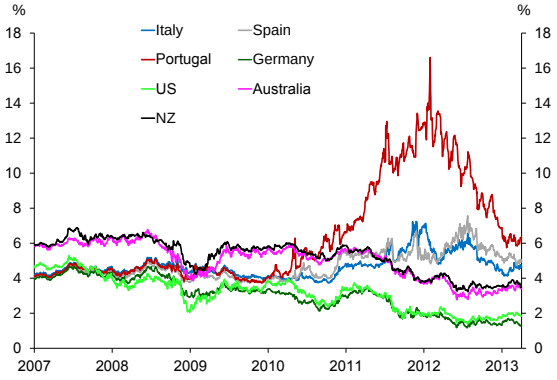
Source: RBNZ.
Note: Data for 2013 are RBNZ forecasts. Data are for December quarters. AxJ stands for Asia ex-Japan.

Risks of a euro area break-up have diminished…

For now, markets appear to be reassured that European policymakers have the will and the capacity to address the fiscal and private sector debt sustainability problems that have threatened financial stability in the region. A continued commitment from the European Central Bank (ECB) to do "whatever it takes to preserve the euro" and the introduction of a bond buying plan (the Outright Monetary Transactions programme) have reduced the risk of a break-up of the common currency. More recently, a successful restructuring of Greece's public debt and the subsequent release of bailout money in January also reinforced the improvement in sentiment.

As a result of this improvement in market sentiment, a number of European sovereigns have regained access to debt markets and experienced a material fall in their bond yields (figure 3.3). Banks' access to funding has improved, with even lower-tier banks in peripheral countries regaining some market access. Stronger banks in the euro area have recently been able to repay some of the funding received through the ECB's Long-term Refinancing Operations.

Figure 3.3
10-year government bond yields



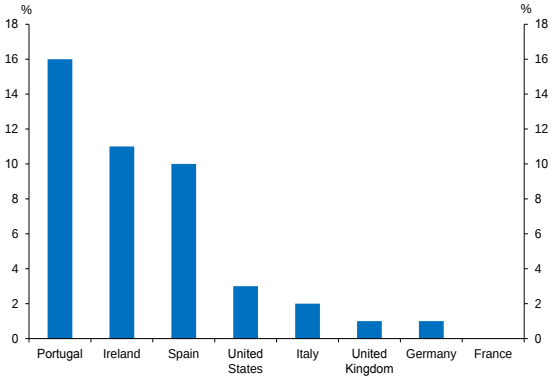
Source: Bloomberg.

…but significant financial stability risks remain.

While policy moves have reduced near-term risks, a number of European economies still face significant challenges to reduce both private and public debt to sustainable levels. Corporate leverage increased markedly during the pre-crisis period and many corporates, particularly in the periphery of Europe, are struggling with a combination of high leverage and weak cashflow (figure 3.4).

In Europe, weak corporate balance sheets have contributed to a significant deterioration in bank asset quality, and bank profitability remains poor. Poor asset quality is particularly pronounced in the periphery, with non-performing loans reaching high levels. Steps have been taken to bolster Tier 1 capital ratios and to improve funding positions, but European banks continue to maintain relatively high levels of leverage and remain reliant on wholesale funding sources (figure 3.5). The

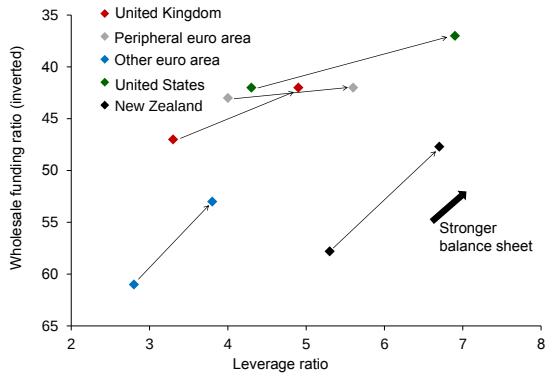
Figure 3.4
Share of corporate debt with high leverage and low interest coverage in 2011



Source: IMF *Global Financial Stability Report* (GFSR).
Note: High leverage is defined as leverage greater than 30 percent. Low interest coverage is below 2, and is defined as earnings before interest, taxes, depreciation, and amortisation, divided by interest expense.

task of raising equity levels has been made difficult by depressed equity valuations for a number of banks, due to a combination of weak profitability and market scepticism over the reporting of loan losses.

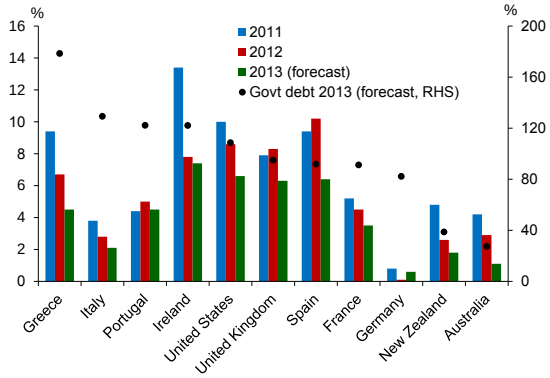
Figure 3.5
Bank leverage and wholesale funding ratios
(change from 2008Q4 to 2012Q3)



Source: IMF GFSR.
Note: Leverage ratio is core Tier 1 capital as a percentage of adjusted tangible assets. Wholesale funding ratio is a percentage of total funding.

Some progress has been made on fiscal consolidation, with most European economies having reduced cyclically adjusted fiscal deficits in 2012 (figure 3.6). However, this fiscal consolidation has contributed to economic weakness in Europe. With significantly more consolidation required to achieve fiscal sustainability in some countries, there is a risk that fiscal and economic reform lose public support and momentum wanes, or that fiscal consolidation leads to further recession. The inconclusive election result in Italy is symptomatic of the former risk, and highlights the potential for further setbacks in Europe.

Figure 3.6
Structural fiscal deficit and government debt in selected economies
(percent of GDP)



Source: IMF *Fiscal Monitor*.
Note: Structural fiscal deficit is the cyclically adjusted deficit as a share of potential GDP. Government debt is gross government debt.

US fiscal cliff averted.

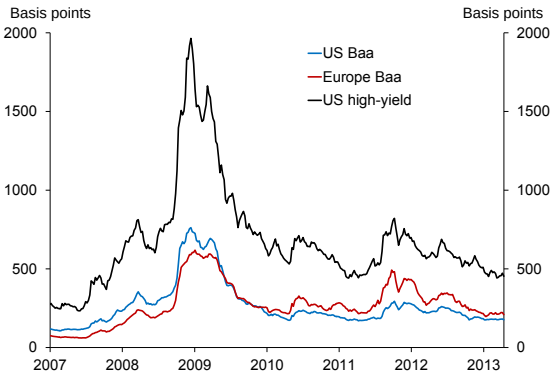
US political leaders reached an agreement in early January which averted the immediate 'fiscal cliff' crisis. However, a number of key decisions have been postponed. Automatic spending cuts that are due to take effect in coming months may weigh on growth in the near term, and the debt ceiling will become binding around mid-year. Failure to reach timely agreement would risk a further bout of market turbulence and loss of confidence.

A balance needs to be struck between fiscal support for the ongoing US recovery, and fiscal consolidation to avoid medium-term financial stability risks. US government debt levels have increased dramatically since the start of the global financial crisis and fiscal deficits remain very large. At this stage, markets appear fairly unconcerned about the level of debt, with long-term interest rates at record lows.

Low interest rates are encouraging yield-seeking behaviour.

Continued record low policy interest rates and further rounds of unconventional policy easing in advanced economies, most recently on a large scale in Japan, have been a key factor driving the recent improvement in market sentiment. These policies support economic recovery and have helped to contain episodes of financial stress. However, a prolonged period of very low interest rates may contribute to medium-term financial stability risks. Low interest rates have encouraged investors to switch into riskier assets to maintain returns, and there has been strong price growth in certain markets. This is particularly apparent in fixed income markets, with spreads on some higher risk bonds falling to near pre-crisis levels (figure 3.7). There is a risk that those price rises may reverse as exceptional monetary policy support is removed, posing risks to the stability of banks and other financial institutions. Low interest rates have also helped to support some distressed property markets, including in the US where there has been signs of a sustained recovery.

Figure 3.7
Corporate credit spreads
(spread to government bonds)

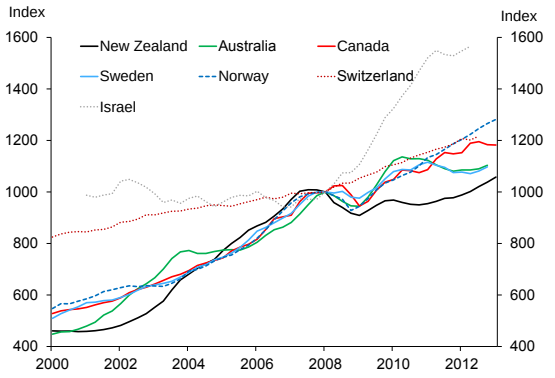


Source: Barclays Capital.

Some property markets starting to overheat…

In some economies, low interest rates are fuelling resurgence in housing market activity, and upward pressure on house prices (figure 3.8). For many countries this housing market strength has been occurring concurrently with exchange rate strength and weak domestic inflation, limiting the ability of policymakers to respond directly with conventional monetary policy tools. Partly reflecting this, a number of countries are responding with macro-prudential tools to address the financial stability risks associated with rising housing markets (see box B).

Figure 3.8
House prices in selected advanced economies
(2008Q1 = 1000)



Source: Haver, Teranet, Israeli Central Bureau of Statistics, Property IQ.

…and capital inflows are creating pressures for some advanced economies.

Rising risk appetite and yield-seeking behaviour are also leading to exchange rate pressures for some countries (figure 3.9). In New Zealand, the Trade Weighted Index (TWI) has reached post-float highs reflecting relatively strong economic prospects compared to trading partners. While domestic interest rates are at very low levels, rates in major advanced economies are lower still. This has contributed to upward pressure on the TWI, particularly after recent policy stimulus by the Bank of Japan. Many other advanced economies with relatively robust economic growth have also experienced upward pressure on their exchange rates, with the consequent weakness in the tradable sectors of these economies limiting inflation pressure and lowering the outlook for

Box B
Recent macro-prudential actions in advanced economies

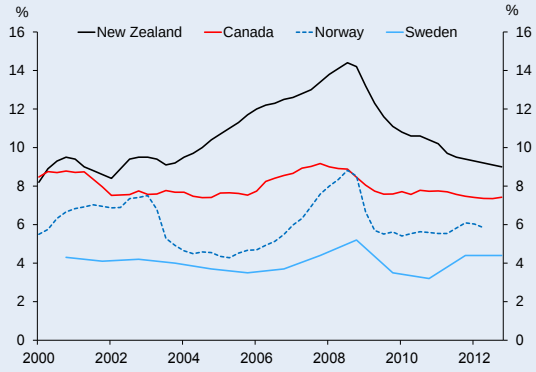
Authorities in countries including Canada, Israel, Norway, Sweden, and Switzerland have applied macro-prudential tools in recent years to counter risks associated with increasing house prices and household debt. House prices in these economies have continued to grow at relatively elevated rates after the global financial crisis (figure 3.8), supported by relatively strong economic growth. Housing activity has also been underpinned by the low global interest rate environment and cuts in policy interest rates, both of which contributed to low mortgage interest rates and a decline in household interest-servicing ratios (figure B1(a)).

Buoyant housing market conditions in recent years came on top of a rapid pre-crisis run-up in house prices and household debt relative to income in Canada, Norway and Sweden (figure B1(b)). Public comments by the various authorities suggest concern about these pre-existing vulnerabilities, which helps to explain why macro-prudential measures were imposed even though credit growth had slowed (figure B1(c)) and credit-to-GDP was less elevated relative to trend (figure B1(d)). In contrast, house prices and household debt were relatively stable in the years before the crisis in Switzerland and Israel, but increased rapidly in recent years.

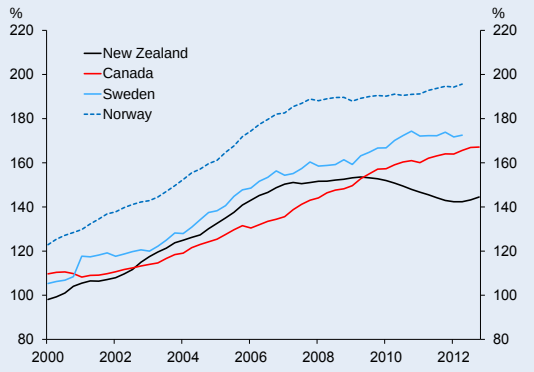
The details of the policy response varied significantly across economies. Norway, Sweden, Israel and Canada all imposed some form of loan-to-value ratio

Figure B1
Debt indicators for selected advanced economies

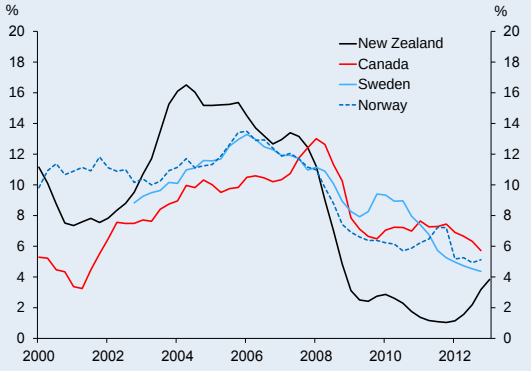
(a) Household interest servicing
(percent of disposable income)



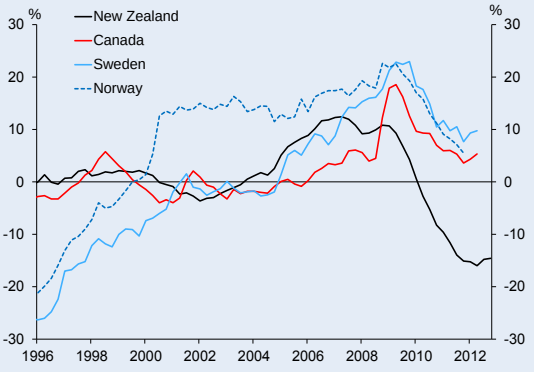
(b) Household debt
(percent of disposable income)



(c) Household credit growth
(annual percent change)



(d) Credit-to-GDP gap
(percentage point deviation from trend)

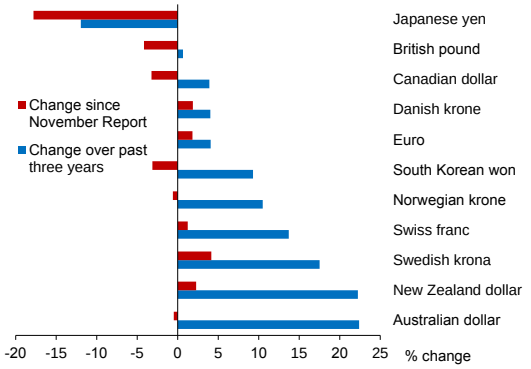


Source: Haver, RBNZ, Bank of Canada, Riksbank, and Norges Bank.

(LVR) restrictions, but with different features to suit the circumstances of their respective economies. For example, maximum LVR ratios of 85 percent were introduced in Norway and Sweden while in Israel, where high-LVR lending is less prevalent, LVR ratios were capped at 75 percent for first-time buyers and 50 percent for investors. In Canada, the Government plays a dominant role in insuring mortgages and the policy response involved a tightening of the conditions required to qualify for this insurance. This included a reduction in the allowable LVR to 80 percent for mortgage refinancing or for investment properties, and a reduction in the maximum allowable mortgage term to 25 years. Switzerland has taken a different approach with the recent announcement of a macro-prudential capital buffer applying to banks' housing exposures. While the tools have only recently been implemented, authorities in Sweden and Canada have cited the macro-prudential restrictions as one of the factors behind more recent slowdowns in household credit and house prices.

interest rates. Easy global financial conditions have also directly added downward pressure to long-term interest rates in many economies. Over the past six months, New Zealand government bond yields and long-term swap rates remained near historical lows.

Figure 3.9
Movements in selected currencies against the USD



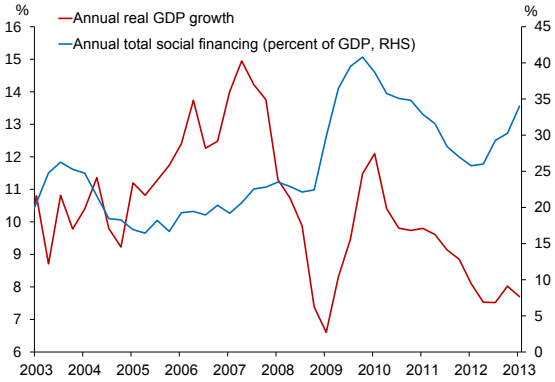
Source: Bloomberg.

Risks are building in some emerging markets…

Partly as a consequence of low global interest rates, many emerging economies are experiencing strong capital inflows. In some countries with managed exchange rates, the resulting strength in domestic credit growth and asset prices is creating stability risks, with credit-to-GDP ratios increasing significantly in a number of countries.

In China, GDP growth slowed over early 2012 and has remained relatively soft in 2013. In contrast, credit (total social financing) continues to grow quickly (figure 3.10). The authorities are starting to put into place policies to moderate property market pressures and credit growth in the regulated sector, but there has been strong growth in credit from informal and offshore channels. A disorderly adjustment to the property investment boom remains a possibility.

Figure 3.10
China total social financing and GDP growth



Source: Haver.
Note: Total social financing is a measure of the flow of financing provided by the financial sector to the non-financial economy, including many non-bank channels.

…which could spill over into Australia.

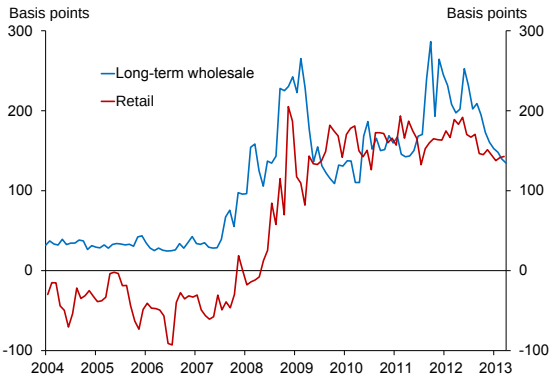
The extent to which Australia is affected by any emerging market slowdown is crucial for New Zealand, given Australia's relatively large share in New Zealand trade. For a number of years Australia has experienced rapid growth in investment for mining projects but weak retail spending and a slowing (though relatively robust) housing market. Mining investment is expected to slow substantially over the coming years, which will remove a significant source of demand growth from the economy. There are some signs of a rotation of demand

occurring, with house prices increasing modestly and some improvement in consumer sentiment. Nevertheless, Australia remains vulnerable to any significant slowing in Chinese demand for minerals.

Funding costs have declined for New Zealand banks.

Easing global financial market conditions have led to improved availability and a significant decline in the cost of wholesale funding for New Zealand banks over the past 12 months (figure 3.11). As wholesale funding costs have declined to near post-crisis lows, and retail funding growth has remained robust, banks have reduced the spreads offered on retail deposits over the past year, leading to a substantial decline in overall funding costs. As discussed above, there remains a significant risk of an increase in financial instability in advanced economies, which would transmit to New Zealand initially via its impact on the international wholesale debt markets in which New Zealand banks obtain funding.

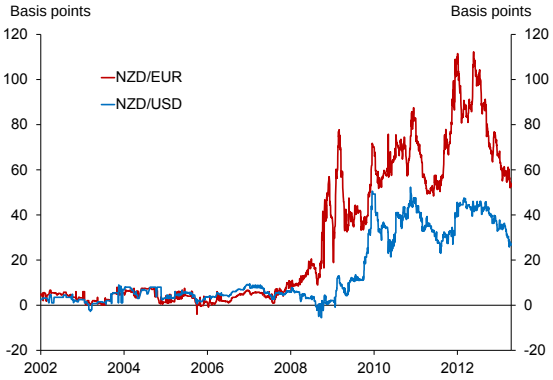
Figure 3.11
Bank funding costs
(spread to overnight indexed swap)



Source: Bloomberg, RBNZ *Standard Statistical Return,* RBNZ calculations.

In recent years, the cost of hedging the exchange rate risk associated with foreign funding has risen materially, and now represents a large proportion of the overall cost of securing offshore funding. The cost of hedging is predominantly the basis swap spread (figure 3.12), which is determined by the relative balance of supply and demand for term New Zealand dollar funding. The demand side of this market is driven by New Zealand banks' need to hedge their foreign currency funding flows. That demand has been relatively light in recent years as strong inflows of retail deposits have limited the extent to which banks have required wholesale funding. The supply side of the market is driven by the hedging needs of offshore issuers of New Zealand dollar bonds in the Kauri (New Zealand), Uridashi (Japan) or Eurokiwi (Europe) markets. Stronger demand for New Zealand dollar investments by foreigners will tend to increase issuance in these markets and lower the hedging cost for New Zealand banks.

Figure 3.12
Hedging cost for 5-year debt
(basis swap spreads)



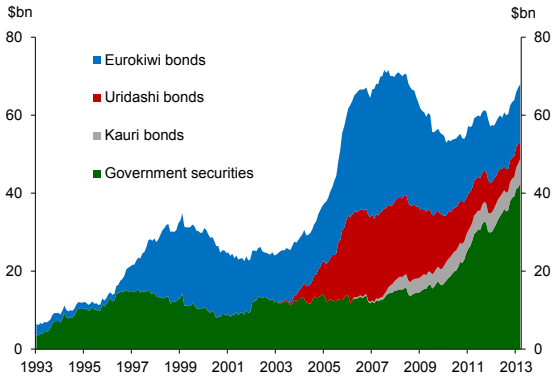
Source: Bloomberg.

The combination of elevated basis swap spreads and relatively high wholesale interest rates in New Zealand provides an incentive for increased issuance of New Zealand dollar bonds by offshore issuers. Activity in the Kauri market in particular has picked up in recent months (figure 3.13), and this has exerted some downward pressure on hedging costs. Kauri issuance is likely to remain strong in the near term, although this could be offset by rising issuance of foreign currency funding by New Zealand banks (chapter 5). The overall outlook for the basis swap spread is uncertain.

Increased demand for Kauri issuance has been part of a general increase in demand for New Zealand dollar securities. This has also affected the New Zealand Government securities market, with the New Zealand Government facing relatively low borrowing costs by historical standards and strong international investor demand. The proportion of non-resident holdings of government debt has been steadily increasing over the

past few months, indicating that international investors are confident of New Zealand's prospects, and consistent with moves on the part of global investors to diversify their holdings to include Australasian debt.

Figure 3.13
Non-resident holdings of selected New Zealand dollar fixed income securities



Source: RBNZ.

4 Financial risks to the New Zealand economy

The New Zealand economy has continued to grow over the second half of 2012, partly reflecting increasing momentum from the Canterbury rebuild. Stronger demand for housing has resulted in rapid increases in house prices in parts of the country and rising household credit growth. While household borrowing has been subdued compared to history, the acceleration of credit growth and house prices is cause for concern given the existing high level of household indebtedness and house prices that are overvalued on a number of metrics. Borrowing has also increased in the agricultural sector in the context of elevated debt levels, and recent drought conditions could place some indebted farms under pressure.

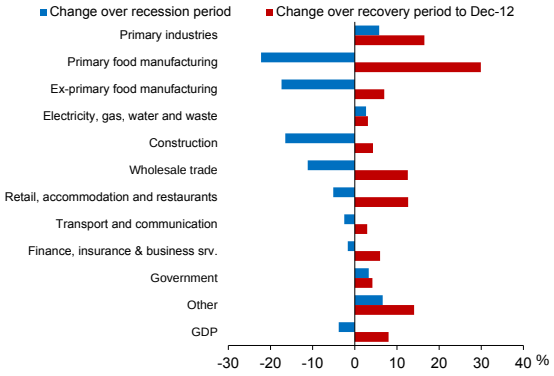
The relative strength of the New Zealand economy, in a period where the global outlook is quite uncertain, has pushed the New Zealand dollar (NZD) to new highs that will be problematic for some firms that compete in international markets. The subdued global outlook and high NZD have contributed to weak domestic inflation pressure, which has kept the Official Cash Rate at low levels despite the momentum building in property markets and the construction sector. Reduced bank funding costs over the past year have added downward pressure to lending rates.

The New Zealand economy has a substantial net international liability position, which is predominately intermediated through the banking system. Rising credit growth is likely to cause this liability position to rise relative to income, after declining since the global financial crisis. This would increase the vulnerability of the economy to a disruption in global financial markets.

Canterbury rebuild will boost growth.

The New Zealand economy has continued to grow over the past six months. The Canterbury rebuild is starting to provide a significant stimulus for the construction sector and industries that are linked to construction. The rebuild will accelerate in coming years, helping to further boost those sectors. There are also signs of growth outside the construction sector, with recent growth in consumer demand and housing market activity helping to boost a number of related industries (figure 4.1). However, some sectors of the New Zealand economy continue to face difficult trading conditions. This includes the manufacturing and tourism sectors where the high NZD has reduced revenue, placing financial pressure on firms which have not received an offset from higher international commodity prices.

Figure 4.1
Sectoral composition of GDP

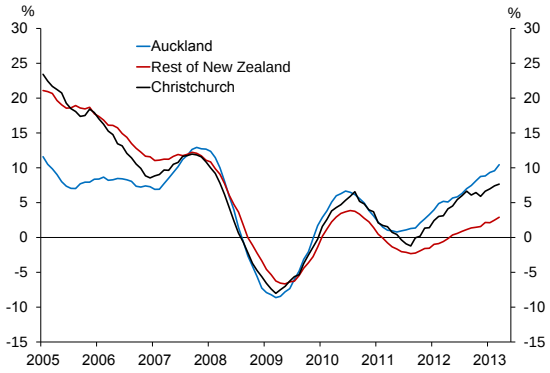


Source: Statistics New Zealand.
Note: The recession period is from the cyclical peak in GDP in 2007Q4 to the trough in 2009Q2. The recovery period is from the trough to the latest data available in 2012Q4. 'Other' includes local government, personal and community services, and unallocated and balancing items.

The housing market has continued to build momentum…

Nationally, house price inflation has increased to around 9 percent per annum and average prices are now around 5 percent above the 2007 peak. Housing market turnover has grown steadily over the past 12 months, although it remains substantially lower than during the preivous housing boom due to the relatively small volume of listings. Partly reflecting differences in the extent of housing supply constraints, there is significant dispersion in price movements across regions (figure 4.2). Prices are well above 2007 levels in Auckland and Christchurch, while prices in some smaller towns remain lower than in 2007, and are only just resuming growth. Historically low mortgage rates and easing bank lending standards appear to be increasing the prices buyers are willing to pay, adding to the momentum in the housing market. With supply remaining tight in Auckland and Christchurch, these conditions are expected to lead to further price increases in the near term.

Figure 4.2
Regional house price inflation
(annual average percent change)



Source: REINZ.

…increasing the risk of a sharp correction in house prices.

In the medium to long-run, rising house prices in a region should encourage an increase in the supply of housing, helping to abate price pressures. There are some signs that supply is picking up. Consent issuance for Canterbury is continuing to grow at a rapid rate relative to other main centres, implying strong construction growth in the near term. New building supply is also expected outside Christchurch, with consent issuance and building activity starting to expand. The recent announcement of various government and local council initiatives to boost the supply of housing should help in this regard.

However, new supply will take some time to come online and tight supply is likely to exacerbate price pressures in the next few years, particularly if capacity constraints in the construction sector delay the supply response. In an environment of low mortgage rates, there is a danger that house price increases are exacerbated as households develop an expectation that rapid house price growth will persist. If excessive house price inflation stimulates too much construction, prices will eventually have to fall further so that additional houses can be absorbed.

There are some signs of a stalling in household rebalancing…

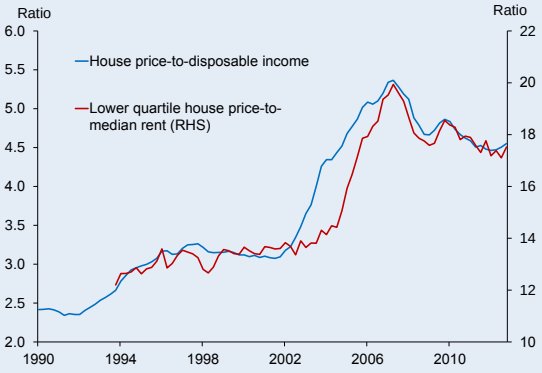
Household sector credit trended upwards relative to income in the two decades before 2007. After the global financial crisis and the associated slowdown in housing market activity, there has been a modest decline in household debt relative to income and some rebuilding of household savings. The recent increases in household borrowing, while remaining much more muted than prior to the crisis, have led the household debt-to-income ratio to stabilise at elevated levels by historical standards and relative to many comparable countries. Signs that the more cautious approach to borrowing observed in recent years is beginning to stall are of concern, given the existing levels of debt and the longer-term downside risks to the housing market discussed in box C.

Box C

Longer-term downside risks to the housing market

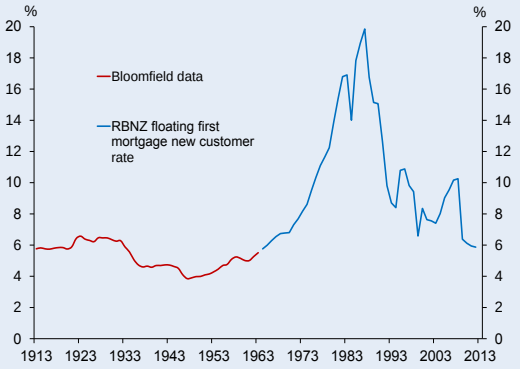
Previous *Reports* have highlighted several sources of downside risk to house prices, and have noted that house prices appear high relative to fundamentals. In particular, even after moderating in recent years, house prices are currently significantly higher relative to incomes and rents than 20 years ago (figure C1). While house prices have risen relative to income, debt servicing costs for a typical first-home buyer have been more stable, since interest rates have trended down and are currently at historically low levels (figure C2).

Figure C1
House prices relative to measures of fundamentals



Source: Property IQ, RBNZ, Statistics New Zealand, Department of Building and Housing.

Figure C2
Mortgage interest rates



Source: RBNZ, Bloomfield, G T (1984) *New Zealand: A handbook of historical statistics*, G K Hall & Co, Boston.

Conceptually, the response of house prices to lower interest rates depends on the ease of adjusting property supply relative to population. In a very geographically constrained city where new housing cannot be easily built, and with very low labour mobility, house prices may rise substantially relative to income as longer-term interest rates fall. On the other hand, in a town with a lot of room to grow, rising house prices would tend to stimulate construction. This construction would tend to stabilise house prices relative to income and put downward pressure on rents. Where construction sector productivity is rising over time, house prices may even trend down relative to incomes, as Robert Shiller has documented with US data.[1]

For a relatively land-abundant country like New Zealand, these factors suggest that house price increases following a rise in housing demand will begin to correct over time. In the long run the capacity to construct additional housing will tend to pull house prices back towards incomes. This force will be weaker in areas where the shortages are hardest to mitigate, such as central Auckland. However, as prices in those areas rise some households will move further out within the same city, or perhaps even to a different part of New Zealand.

Scaling up the supply of housing takes time. As an example, some recent research based on a model of house prices in New Zealand regions suggests that after a 5 percent regional population inflow (to Manukau city), there is upward pressure on prices and construction.[2] Over a five year time frame, prices rise substantially (about 12 percent) as a result of the population inflow. However, over a longer time frame the increased construction means that much of the price rise is eventually reversed.

While it is possible to build additional houses to cope with rising populations, housing is immobile once it is in place. This means that population outflows from a town or area could cause house prices to fall below

[1] Shiller, R (2006) *Irrational Exuberance*, Princeton University Press, Princeton.

[2] Grimes, A and S Hyland, with A Coleman, J Kerr and A Collier (2013) "A New Zealand Regional Housing Model," *Motu Working Paper* 13-02.

construction costs (and decline relative to incomes). There have been dramatic long-term examples of this in the US, such as cities that relied on the automobile manufacturing industry. In some New Zealand towns, population declines kept house prices low in the last decade while prices in parts of the main centres have risen substantially.

As discussed above, there is reason to expect ongoing momentum in house prices in the near term. However, additional construction will eventually stabilise the supply/demand conditions in housing markets, so that house prices are likely to ultimately drift down relative to incomes. This adjustment could happen gradually, through income growth in excess of house price inflation over an extended period. However, a number of factors could cause a faster decline that could destabilise the financial system:

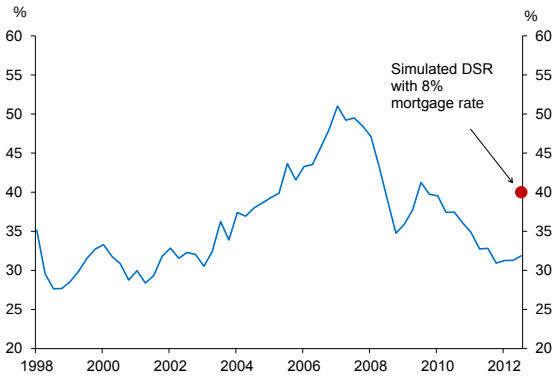
- Interest rates – if mortgage rates rise faster than currently expected, current house prices will be less affordable for buyers.
- Migration and labour market surprises – a downturn in the New Zealand economy that reduced inward migration and increased outward migration to Australia would put downward pressure on prices, particularly in areas facing the largest population and employment declines.
- Changing investor base – population ageing will reduce household formation and cause some older homeowners to downsize and/or sell rental properties to fund retirement.
- Construction technology and regulation – as noted by the Productivity Commission, a range of factors appear to have pushed the costs of building new homes in New Zealand above those in Australia. If developers begin to build larger-scale developments and capture productivity improvements from doing so, and regulatory adjustments make it cheaper to find suitable development land, this will tend to put downward pressure on existing house prices.

Reflecting these risks, a large component of the *Financial Stability Report* is dedicated to examining the vulnerability of household balance sheets to a substantial fall in house prices. Stress tests of the banking system are also periodically undertaken to gauge the consequences of a substantial decline in house prices for bank balance sheets (see the November 2012 *Report* for an example).

…with household balance sheets vulnerable to a correction in house prices.

Rising house prices have kept aggregate debt levels fairly low relative to household sector assets. However, recent increases in prices have led typical first-home buyers to take on higher debt levels relative to both income and assets. With banks increasing their willingness to lend against small deposits, this has been reflected in a rise in the share of high loan-to-value ratio (LVR) lending over the past year (chapter 5). Low mortgage interest rates are helping to contain debt servicing ratios (DSR) for these high-LVR borrowers (figure 4.3). However, if mortgage rates rise more than borrowers and the banks are expecting, and income growth remains slow, there is a risk that some borrowers will face difficulties servicing

Figure 4.3
DSR for a representative first-home buyer
(percent of disposable income)

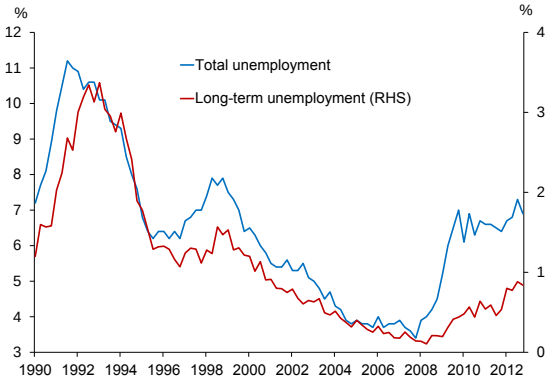


Source: QV, Statistics New Zealand, RBNZ calculations.
Note: The DSR is for a household with average disposable income. It is assumed that the borrower purchases an average value house with a 20 percent deposit, and borrows at the 2-year mortgage rate.

their mortgages. This could substantially increase losses to the banking system in a scenario of declining house prices.

The international experience of the past several years highlights that stress in the financial system can have significant costs for the real economy as credit supply tightens and indebted borrowers attempt to reduce debt levels. These costs were evident in the US and parts of Europe and were accompanied by substantial increases in unemployment and reduced labour market mobility as house prices declined. While unemployment has increased significantly since the financial crisis in New Zealand, it remains much lower than the historical experience during the early 1990s or the recent experience in the US and Europe. Long-term unemployment, which is more of a problem for mortgage borrowers than short periods of unemployment, has remained contained (figure 4.4). However, rising unemployment would be expected to accompany a sharp correction in house prices.

Figure 4.4
Total and long-term unemployment rate

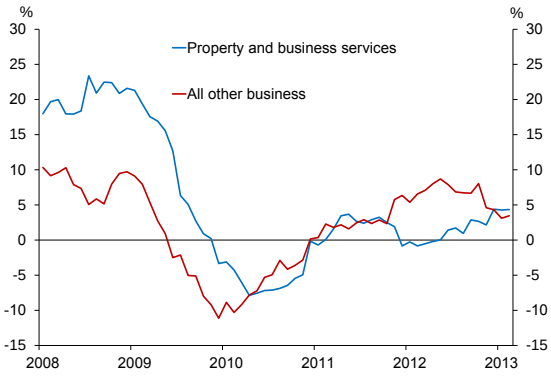


Source: Statistics New Zealand.

Business credit has been increasing at moderate rates.

Business credit has recorded low positive growth rates over the past two years, following a reduction in the stock of outstanding credit in the aftermath of the global financial crisis (GFC). Lending growth to the property and business services sector has increased to around 5 percent per annum over the past six months, but remains well below pre-crisis growth rates. The remaining components of business lending grew at a relatively strong rate of around 7 percent per annum through 2012, although growth has eased in recent months (figure 4.5). There is the potential for business credit growth to pick up further if increased confidence leads to a rise in capital spending, which has remained subdued over the past few years.

Figure 4.5
Property and non-property business lending
(annual percent change)

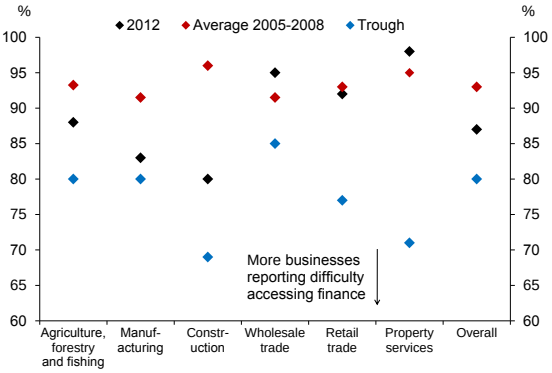


Source: RBNZ *Standard Statistical Return*.

Banks are competing for business lending…

The recovery in business borrowing partly reflects improved access to finance. Although credit criteria still appear to be tighter than prior to the crisis, businesses report that access to finance has improved (figure 4.6).The recently improved access to finance is likely to reflect an easing in bank lending conditions for business borrowers (chapter 5). In contrast, the non-bank lending sector has continued to pull back from business lending, which could

Figure 4.6
Businesses reporting access to finance on acceptable terms



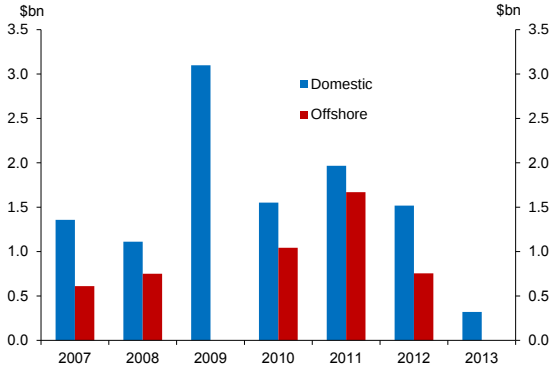
Source: Statistics New Zealand.
Note: Percentage of firms that requested debt finance reporting that finance was available to them on acceptable terms. 2012 data collected for the last financial year to August 2012. 'Trough' is either 2009 or 2010, depending on which year had the lowest proportion of firms reporting access to finance on acceptable terms.

explain why construction firms are continuing to report difficulties obtaining finance. The decline of the non-bank lending sector could hold back development opportunities through the lack of mezzanine finance, although there have recently been some signs of non-deposit taking mezzanine financiers becoming more active.

…reducing the incentive for larger firms to issue corporate bonds.

Larger businesses have the option to borrow directly from financial markets, although the corporate bond market is small compared to the amount of credit intermediated through the banking system. Issuance since 2012 in the corporate bond market has been low (figure 4.7), even though spreads in this market have declined. After a period of retrenchment through the crisis, bank competition for corporate lending has increased, which may have reduced market issuance by corporates.

Figure 4.7
Non-financial corporate bond issuance



Source: ANZ.
Note: 2013 covers issuance until April.

Commercial property prices are picking up.

Demand for commercial property declined rapidly in the aftermath of the GFC, leading to a sharp decline in listed property share prices (figure 4.8). Since then, low interest rates have eased distress for indebted landlords and prices have gradually recovered over the past two years. Although rising prices have compressed rental yields for the sector, the scope for landlords to increase rents has been limited due to sluggish demand from businesses. More recently, there have been signs that vacancy rates are trending down from elevated levels in Auckland and Christchurch, partly reflecting weak commercial property construction in recent years and destruction of CBD property in Christchurch.

Figure 4.8
Share prices of listed property trusts

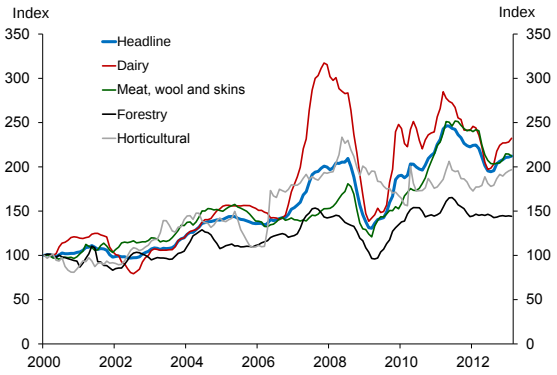
Source: Bloomberg.

Following the Canterbury earthquakes, commercial property owners around the country have been under pressure to strengthen buildings to meet current earthquake standards. Buildings that have been assessed to be high risk are likely to be difficult to lease, and landlords face a period of vacancy while strengthening work is completed. Strengthening work may not be economical for some older buildings, which could result in financial losses for some property owners.

The drought will reduce rural incomes over the next year.

Agricultural export earnings were broadly unchanged over the past six months, as the appreciating NZD offset the rise in global commodity prices (figure 4.9). Production was solid up until recently, but the outlook is deteriorating due to drought conditions in the North Island and areas of the South Island. In the dairy sector, buyers have been looking to secure milk supply before the season's end which has helped to drive up dairy prices at recent Fonterra auctions. Reflecting higher dairy prices, Fonterra's payout forecast for the upcoming season has been revised up to $6.12. Dairy farm revenue will be supported by the higher payout, partly offsetting the late season decline in production.

Figure 4.9
Export commodity prices
(SDR terms, January 2000 = 100)



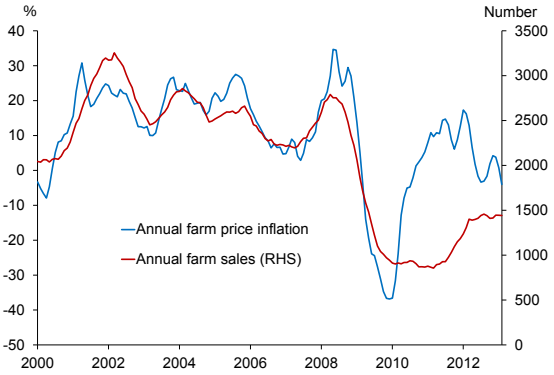
Source: ANZ
Note: SDRs (Special Drawing Rights) are claims on IMF member countries whose value is calculated as a weighted average of the USD, euro, UK pound and yen.

The drought will result in lower incomes and higher costs for most farmers. In addition to the impact on late season production noted above, the drought will increase farm working expenses as farmers use higher cost supplemental feeds. Production in the upcoming season could also be affected by a reduction in stock quality and as farmers cull stock levels. There is likely to be some increase in working capital borrowing from banks, in addition to recourse to government support programmes. Non-performing loans could rise amongst farmers who were already stretched before the drought.

Farm debt remains elevated.

As highlighted in previous *Reports*, agricultural debt levels remain elevated and indebted farmers are vulnerable to a fall in incomes or decline in land prices. Following a period of flat borrowing, agricultural debt has increased 5 percent over the past year. Rising credit growth has resulted in an increase in the agricultural debt-to-exports ratio, unwinding some of the correction since the crisis (see figure 2.2). The expected increase in working capital borrowing in the upcoming season will add to the sector's high debt burden. However, the recent moderation in sales and prices in the farm market (figure 4.10) suggests that borrowing for farm purchases is unlikely to gather momentum.

Figure 4.10
Prices and turnover in the farm market



Source: REINZ.

The establishment of the Fonterra shareholders' fund reduces redemption risk.

The establishment of the Fonterra shareholders' fund in late 2012 appears to be positive for the financial stability of the dairy sector. Previously, only trading between farmers (or via Fonterra itself) was permitted, limiting sales in times of distress as most other buyers were in a similar situation. The fund allows farmers to buy or sell shares with other farmers or outside investors, enabling the transfer of equity to a diversified class of investors. The broader investor base should help stabilise the share price during periods where the sector comes under stress. Despite drought conditions, the share price has recently increased (figure 4.11).

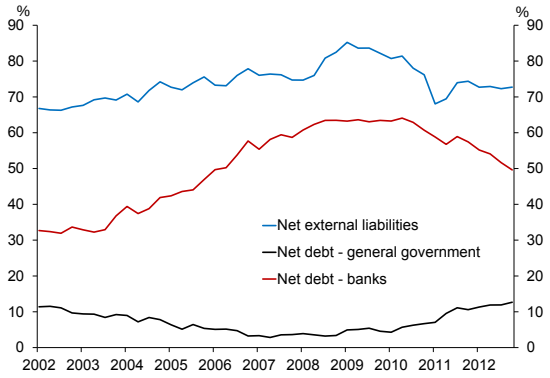
Figure 4.11
Unit share prices in Fonterra shareholders' fund

Source: Bloomberg.

External liabilities are likely to rise in coming years…

New Zealand's net external liabilities as a share of GDP have been high on a cross country comparison since the 1980s (see previous *Reports*). Most of the current international exposures are intermediated through the banking system, which borrowed heavily from international markets to fund credit expansion prior to the GFC. The banks have since substantially reduced offshore borrowing, due to lower credit growth and strong inflows of retail deposits (figure 4.12). If credit growth continues to gain momentum, the banks will likely have to increase offshore borrowing (see chapter 5). This would be consistent with projections in the *Monetary Policy Statement* of a further widening in the current account deficit over the next three years.

Figure 4.12
Net external liabilities
(percent of annual GDP)



Source: Statistics New Zealand.

…although the forecast reduction in the fiscal deficit will help limit the increase.

Compared to the situation in many advanced economies, the stock of government debt relative to GDP for New Zealand is low (chapter 3). Since the last *Report*, the government accounts have improved, as strong growth in the latter half of 2012 increased tax receipts. The Government has indicated that it remains committed to returning the operating deficit to surplus by 2014/15. A reduction in the operating deficit will help to limit upward pressure on external debt over the next few years.

5 New Zealand's financial institutions

The New Zealand financial system has continued to perform well. The recovery in profitability over the past three years has been used to strengthen capital buffers, partly in anticipation of higher regulatory requirements associated with Basel III. New minimum capital requirements under the Basel III regime came into effect at the start of this year. Banks have also increased their liquidity buffers, further improving the ability of the banking system to cope with stress.

Bank lending growth has increased over the past year, supported by an easing in credit standards and particularly strong competition for new lending in the residential mortgage market. If this competitive environment is sustained, profit margins could compress alongside a deterioration in underlying asset quality. The ongoing recovery in credit growth is also likely to result in increased reliance on offshore funding markets.

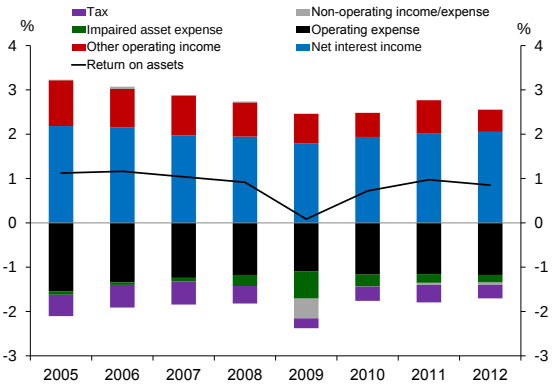
The insurance sector continues to process claims related to the Canterbury earthquakes, with claims paid to date of $13.4 billion. Estimated total claims costs are well in excess of $30 billion.

5.1 Banking sector

Banks are earning solid profits.

The New Zealand banking system has maintained the increase in profitability that occurred after 2009, aided by the ongoing recovery in the broader economy and an associated decline in impaired asset expenses (figure 5.1). The banking system is now earning a return on assets approaching pre-crisis levels of 1 percent per annum. In contrast to the experience since the global financial crisis (GFC), the dollar value of profits has been boosted by the rise in lending growth over the past year.

Figure 5.1
Bank profitability
(percent of assets, December years)

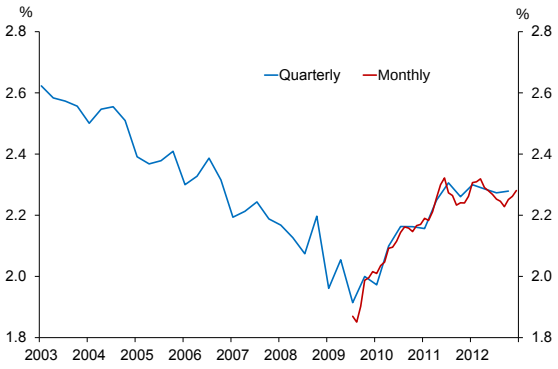


Source: Registered Bank *General Disclosure Statements* (GDS).
Note: Return on assets is after tax.

Net interest margins have stabilised.

The recovery in profitability since 2009 has also been driven by an increase in net interest margins (figure 5.2). Margins fell as the GFC began, because it took time to re-price competitive fixed rate mortgages (issued before the crisis) to reflect increases in the funding costs faced by banks. More recently, the average net interest margin of New Zealand's retail banks has stabilised. With the recent increase in price competition, easing funding costs have been accompanied by a corresponding decline in the gross yield on interest-earning assets. There has been a particularly notable increase in competition on fixed mortgage rate products, which have become more popular over the past year (see below). Looking ahead, if this competitive environment is sustained, and total bank funding costs stop declining (or increase), average margins could decline.

Figure 5.2
Retail banks' net interest margin

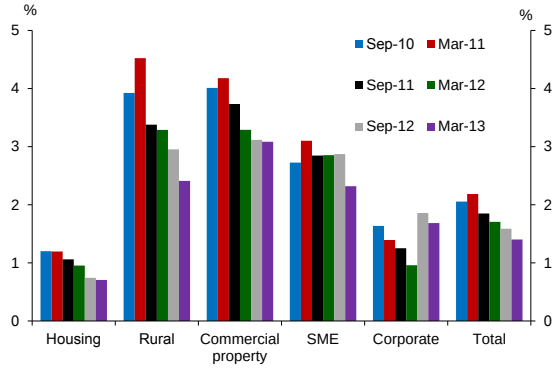


Source: GDS, RBNZ *Net Interest Margin Survey*.
Note: Net interest margins are defined as net interest income divided by average interest earning assets. Series are annualised and monthly data are a three month moving average.

Asset quality continues to improve.

System-wide non-performing loans have fallen to 1.4 percent of total lending from a peak of 2.1 percent in early 2011. The improvement in asset quality has been particularly pronounced in the rural and commercial property sectors (figure 5.3), although the level of non-performing loans in these sectors, and in the small-and-medium enterprise (SME) sector, remains elevated. Since the last *Report* there has been an improvement in corporate asset quality following an earlier spike in non-performing loans related to a few large exposures. Housing lending, which makes up a large share of the banking system's total credit exposures, has the lowest share of impaired and 90-day past due assets as a proportion of sectoral lending.

Figure 5.3
Sectoral non-performing loans
(percent of sectoral lending)



Source: Based on private reporting data from eight registered banks.
Note: Includes impaired and 90-day past due assets. Data are not standardised and definitions may vary across banks.

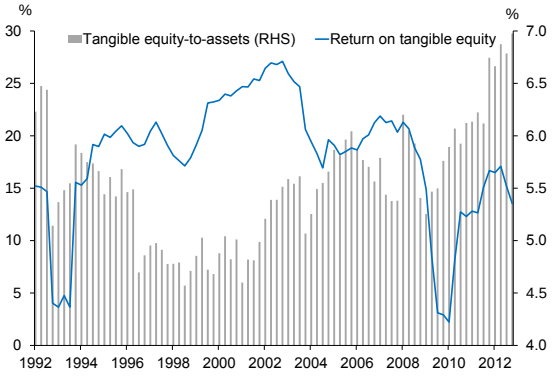
Asset quality is expected to continue to gradually recover on the back of improving economic growth, as the banking system works through legacy issues associated with the 2008 and 2009 recession. Watchlist loans – an indicator of banks' expectations of future deterioration in asset quality – have declined over the past six months, although rural watchlist loans could start to increase again due to the impact of recent drought conditions on the sector. Moreover, loan losses among high loan-to-value ratio (LVR) household borrowers could rise if house prices correct or mortgage rates increase.

Solid profits have continued to support an increase in capital buffers.

The improvement in underlying profitability in recent years has enabled the banking system, via retained earnings, to increase the level of capital available to absorb future losses (figure 5.4). Locally incorporated banks – those banks that are required to hold capital in New Zealand – now hold a higher level of equity than they did prior to the crisis. Locally incorporated banks together account for about 90 percent of total banking system assets.[1]

This increase in the overall level of capital is partly a result of higher formal regulatory capital requirements.

Figure 5.4
Equity-to-assets and return on equity
(locally incorporated major banks)



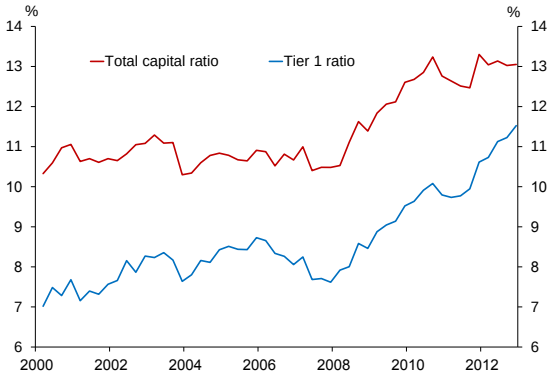
Source: GDS.
Note: Tangible equity is shareholders' funds and retained earnings less intangible assets. Return on tangible equity is after tax.

[1] With the registration of Heartland Bank Limited in December 2012, there are now 12 locally incorporated banks operating in New Zealand, and 10 banks operating as branches of foreign-owned entities (see appendix 4).

New minimum capital requirements came into effect at the start of the year as part of the Basel III package to improve the soundness and resilience of the banking system. Locally incorporated banks are now required to hold a higher minimum level of Tier 1 capital to risk-weighted assets (increased from 4 to 6 percent). Banks must also hold a majority of this higher Tier 1 capital as common equity (4.5 percent of risk-weighted assets). From 1 January 2014, locally incorporated banks will also be required to hold an additional 2.5 percent of common equity above the minimum requirements in the form of a conservation buffer.[2]

The current Tier 1 capital ratios of locally incorporated banks indicate that they are well placed to meet the new regulatory requirements of 8.5 percent including the capital conservation buffer (figure 5.5). Private prudential information provided to the Reserve Bank indicates that this conclusion will not change when banks begin reporting on the basis of the new Basel III requirements in their March disclosure statements. This level of capital should provide banks with scope to absorb a significant decline in asset quality without threatening the solvency of the banking system. However, additional macro-prudential requirements, including the Basel III counter-cyclical capital buffer, may be imposed during periods of rising systemic risk to help build greater cyclical resilience and to assist in dampening the credit cycle.

Figure 5.5
Bank regulatory capital ratios
(locally incorporated banks, percent of risk-weighted assets)

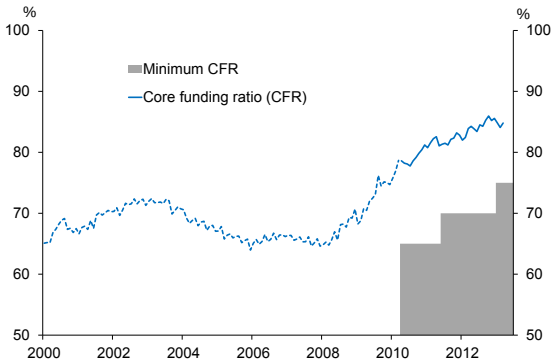


Source: GDS.

Banks have also improved the stability of their funding base.

Banks fund loans and other assets through a combination of equity, retail deposits and wholesale market funding (both short and long term). Since the crisis, the New Zealand banking system has reduced its reliance on short-term wholesale funding, which is more subject to flight in times of stress. As a result, the banking system's level of stable or core funding has increased, and now sits well above the formal regulatory requirements the Reserve Bank first imposed in April 2010 (figure 5.6). The regulatory minimum for core funding – which includes equity, retail deposits and long-term wholesale funding – was increased to 75 percent of lending at the start of this year.

Figure 5.6
Core funding ratio
(percent of loans and advances)



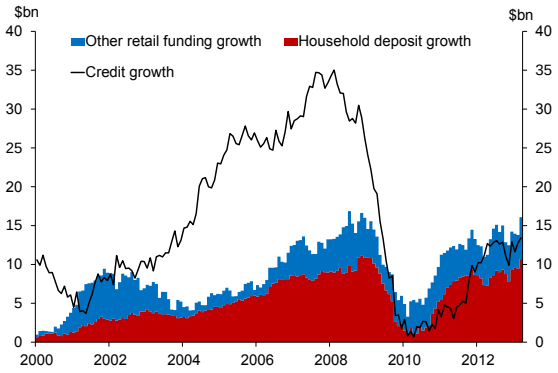
Source: RBNZ *Standard Statistical Return* (SSR), RBNZ liquidity statistics.
Note: The dotted section of the core funding ratio is an approximation based on SSR data.

The improvement in the core funding ratio (CFR) has been achieved in an environment of relatively subdued credit growth and strong growth in retail deposits (figure 5.7). Strong growth in retail funding has been driven by a number of factors, including: higher precautionary savings by households and a lack of attractive investment alternatives; an increase in business deposits reflecting subdued business investment; and insurance-related

[2] The conservation buffer ensures banks maintain a buffer of high-quality loss absorbing capacity over and above minimum ratio requirements. When banks' capital ratios fall into the buffer zone they will face restrictions on dividend payments.

flows stemming from the Canterbury earthquakes. Robust growth in retail deposits and the recent decline in offshore funding costs have both contributed to a fall in retail funding costs over the past year. Banks have also taken advantage of more benign conditions in global funding markets to issue long-term debt.

Figure 5.7
Retail funding and credit growth
(annual growth, dollar amount)



Source: RBNZ SSR.

Retail funding growth is likely to slow…

If banks accommodate further increases in credit demand, while maintaining their current voluntary funding buffer of around 10 percentage points above the minimum CFR, this would require a higher level of either retail or long-term wholesale funding (or a combination of both). There is a risk that growth in household and business deposits begins to slow over the period ahead. The improvement in the household savings rate in recent years, which helped fuel deposits, may not be sustained in an environment of rising house prices and household borrowing. Deposit growth from the business sector could also slow as business investment spending increases. Insurance related deposits are likely to diminish as the Canterbury rebuild gathers momentum and the proceeds are spent. Retail savings may also be attracted away from the banking system by the Government's partial share float of State-owned assets and the relatively strong recent performance of equities and other financial assets.

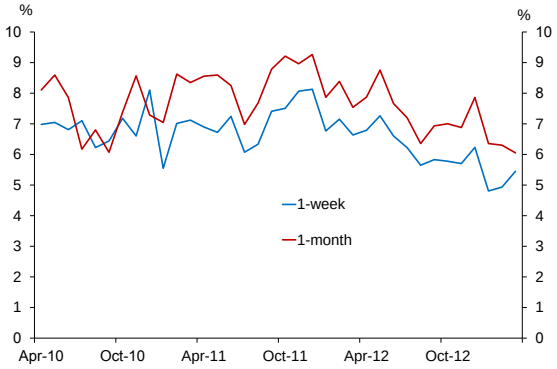
…suggesting banks may have to increase offshore borrowing to fund higher credit growth.

A slowdown in retail funding growth would imply a greater reliance on long-term wholesale funding to meet the current CFR. Under current market conditions, an increase in offshore borrowing may not present a particular problem for the banking system. However, if global funding markets are again disrupted, New Zealand bank access to offshore funding could be jeopardised and/or wholesale funding costs could increase significantly (see chapter 3). Deposit rates are also likely to increase in this scenario if banks actively compete for retail funding to help meet their core funding requirements. New Zealand banks would likely have to re-tighten credit criteria and pass on higher costs to retail lending rates.

Banks' holdings of liquid assets have increased in recent years.

In addition to improving the level of core funding, New Zealand banks have increased their holdings of liquid assets since the GFC. The Reserve Bank's prudential liquidity policy requires locally incorporated banks to hold liquidity buffers that satisfy one-week and one-month mismatch ratios. These are ratios of a bank's available liquid assets to the projected net cash outflows in a scenario where the bank had difficulty obtaining additional temporary funding. Liquid assets can include currency, government securities, claims on the Reserve Bank and a range of non-government securities rated BBB- and higher. All banks subject to the liquidity policy hold liquidity buffers above the minimum requirement of a zero mismatch ratio (figure 5.8).

Figure 5.8
Mismatch ratios
(share of funding)

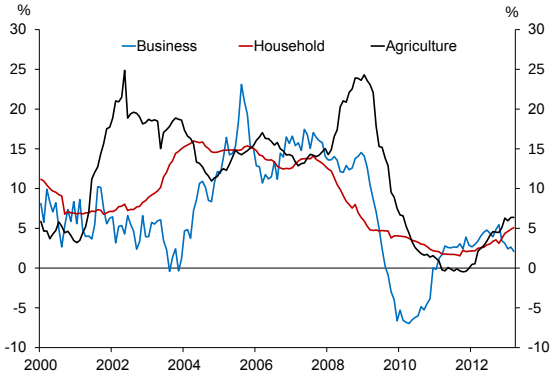


Source: RBNZ liquidity statistics.

Bank credit growth has picked up over the past six months…

Bank lending growth has increased over the past six months, although it is still well below the rates of growth seen during the middle of the last decade. The banking system is the primary conduit for intermediating credit to households, business and the rural sector. As discussed in chapter 4, the increase in bank lending to these sectors (figure 5.9) reflects the general increase in economic activity, as well as the effect of low and declining lending rates on property markets. While most of the recent increase in lending has been directed towards the rural and household sectors, banks are also beginning to increase lending in areas such as asset and lease financing – markets the banks have been relatively absent from for a number of years.

Figure 5.9
Bank lending
(annual percent change)

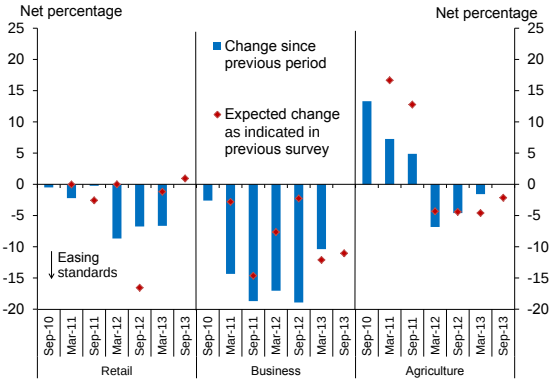


Source: RBNZ SSR.

…supported by an easing in lending standards.

Results from the Reserve Bank's March *Credit Conditions Survey* suggest that lending standards have continued to ease over the past six months (figure 5.10). This easing of lending standards comes after the 2009/2010 period where banks tightened credit criteria in response to higher funding costs and declining asset quality. The more recent improvement in the balance sheet position of the banking system, including the level of profitability and funding buffers discussed above, has encouraged banks to compete more vigorously for new business. This has led to continued easing in lending standards across most sectors, with the exception of the SME sub-sector where lending standards were unchanged. Easing lending standards, alongside reduced bank funding costs and low interest rates, have helped to support the recent rise in credit demand.

Figure 5.10
Change in banks' lending standards



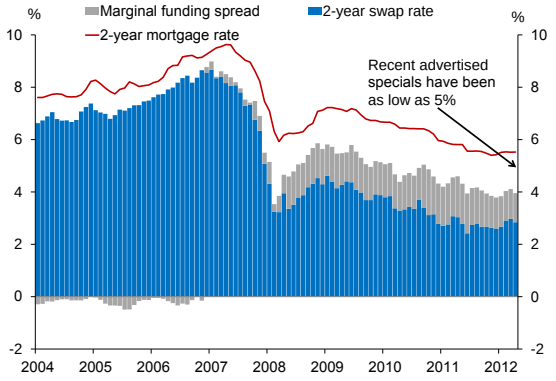
Source: RBNZ *Credit Conditions Survey*.
Note: Net percentage is the percentage of respondents reporting a tightening of lending standards minus the percentage of respondents reporting an easing. Individual responses are weighted by market share.

Price competition on fixed rate mortgages has been particularly intense.

Lending standards include both the margin between lending rates and the cost of funds (price-based) and the minimum requirements for a borrower to obtain a loan (non-price based). According to *Survey* respondents, most of the recent easing in lending standards has been attributable to price-based competition on lending rates. Increased competition has been particularly evident in the

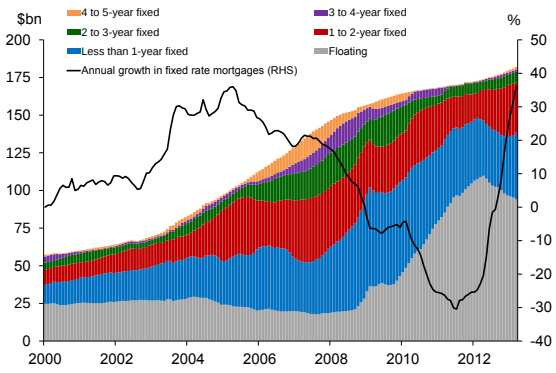
residential mortgage lending sector. While the standard 2-year mortgage rate has compressed broadly in line with reduced funding costs, this disguises a significant narrowing in mortgage margins due to the increased prevalence of special rates offered at well below these standard rates (figure 5.11). Moreover, there are signs that borrowers are more readily able to negotiate discounts to these advertised rates, and some banks are offering cash specials and other enticements in an effort to increase market share. The increased competition on fixed mortgage rates has prompted growing borrower appetite for fixed rate mortgages (figure 5.12).

Figure 5.11
2-year mortgage rate and total funding costs



Source: RBNZ SSR.
Note: Marginal funding spread is an estimate of marginal bank funding costs minus swap rates.

Figure 5.12
Composition of bank mortgage lending
(by dollar value)



Source: RBNZ SSR.

The share of high loan-to-value ratio lending has increased.

The demand for high-LVR mortgages – particularly in the Auckland market – has increased in an environment of robust house price growth (chapter 4). After significantly tightening the maximum LVR at which they would lend in the wake of the GFC, banks have become more willing to engage in this lending as competition for new borrowers has increased. LVR data published by banks in their quarterly disclosure statements show that high-LVR lending (i.e. greater than 80 percent) has increased as a share of banks' total housing lending and currently stands at around 20 percent. More timely data provided to the Reserve Bank also show that an increasing share of new lending – around 30 percent – is in the high-LVR category (see figure 2.2).

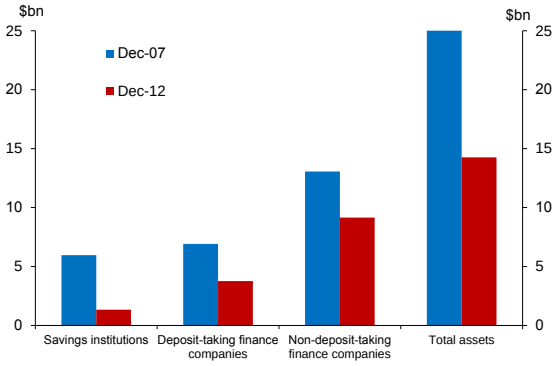
While banks have been writing more high-LVR loans, mortgage brokers report that very high-LVR lending (above 90 percent) is mainly directed to high income borrowers and credit criteria are more restrictive in terms of other conditions, such as allowable debt-servicing ratios. This is consistent with reports from banks in the *Survey* that non-price lending standards have generally remained unchanged over the past six months, in spite of greater price-based competition.

As competition in the high-LVR segment of the mortgage market has increased, some banks appear to have relaxed their criteria for charging low equity premiums for higher-LVR loans (typically a one-off up-front fee or an additional margin added to the interest rate). Low-equity premiums do not provide any direct form of insurance for banks against the additional risk of high-LVR lending as they do not set aside an explicit reserve to accumulate the revenue from such premiums. However, as a source of revenue, low equity fees can indirectly add to capital buffers via retained earnings. Banks generally have to manage the additional risk of high-LVR lending by holding more capital relative to low-LVR lending and by ensuring appropriate credit risk criteria and procedures for individual high-LVR borrowers are followed. A recent Reserve Bank review concluded that the amount of regulatory capital held for high-LVR lending should be increased and this will shortly occur (see chapter 7).

5.2 Other providers of intermediated credit

The non-bank lending sector has continued to reduce in size. The sector, which is made up by savings institutions (credit unions and building societies), deposit-taking finance companies and non-deposit taking finance companies, now accounts for just over $14 billion in assets – substantially smaller than it was five years ago (figure 5.13).[3] This number excludes nearly $2 billion in deposit-taking finance company assets that are still either in moratorium or receivership.

Figure 5.13
Non-bank lending institutions' assets



Source: RBNZ SSR.
Note: Assets include securitised household and business loans. Data for deposit-taking finance companies exclude those assets that are either in moratorium or receivership.

In December 2012 Heartland Building Society became a registered bank, reducing the size of the non-bank deposit-taking (NBDT) sector by one third. Further consolidation of this sub-sector looks possible, once the Non-bank Deposit Takers Bill is passed in Parliament and NBDTs are subject to a new licensing regime (see chapter 7). The NBDT sector is now dominated by one institution – UDC Finance, owned by ANZ – which accounts for just over 40 percent of the assets of the NBDT sector.

The non-deposit taking finance company sector has also reduced in size, but did not suffer the same degree of stress as its deposit-taking counterpart. The sector has reduced its exposure to housing, with a number of 'low-doc' mortgage lenders that were active in the mid-2000s now no longer operating in New Zealand. The sector has experienced a recent recovery in some areas of lending, including fleet/vehicle financing, and business equipment/machinery.

In addition, there have been some signs of mezzanine or second-tier financiers in property development (both residential and commercial property) filling the gap left by failed deposit-taking finance companies. With an equity or wholesale funding model, these new mezzanine companies pose very little risk from a financial stability standpoint. At the margin these firms could help to alleviate supply-side constraints in the housing market, although the impact from these new companies is likely to be small at this point.

5.3 Insurance

Licensing and managing the effects of the Canterbury earthquakes continue to be two areas attracting significant industry (and Reserve Bank) attention.

Insurer licensing has continued.

The Insurance (Prudential Supervision) Act 2010 (the Act) requires all insurers to have a full licence by 9 September 2013, or to have completed their exit from the New Zealand insurance market. Exit can be by way of transfer to another licensed insurer, or by completed run-off. For exit by run-off the Reserve Bank is requiring actuarial certification that there are no insurance liabilities with at least 99.5 percent probability. Changes in the insurance industry that have occurred during licensing will be commented upon in future *Reports*.

Early or late receipt of a full licence is not an indicator of quality or financial strength. Every insurer intending to proceed to a full licence has a target date based on their financial year end, but allowing for any relevant restructuring that is under way or changes that are required to simplify or comply with requirements. There is very limited scope for changes to the licensing target date.

The prudential regime sets minimum standards to promote a sound and efficient insurance sector. Requirements under the Act and related regulations have come into effect on various dates during the past two

[3] Savings institutions and deposit-taking finance companies together comprise the non-bank deposit-taking (NBDT) sector that is regulated by the Reserve Bank. Non-bank non-deposit taking finance companies are not subject to Reserve Bank regulation.

years. Most of the remaining requirements will apply from the date of issuance of a full licence. It is not the intention of the regime to have zero risk of insurer failure. In the unlikely event an insurer fails and liabilities are unable to be met in full, then policyholders and other creditors should not expect recourse to either the taxpayer or the Reserve Bank.

Financial strength ratings now required.

Most licensed insurers are now required to have a financial strength rating from an approved rating agency which they must disclose at each policy inception and renewal. Insurers that are exempted from having a financial strength rating must instead disclose the exemption.

Table 5.1 shows that all the large insurers (with New Zealand annual gross premiums of $100 million or more) have strong financial strength ratings. These large insurers represent over 80 percent of the market – excluding the Accident Compensation Corporation (ACC) and the Earthquake Commission (EQC), which are both outside the licensed insurer regime.

Canterbury earthquake claims have progressed.

As at 31 March 2013, EQC has paid $4.5 billion in Canterbury earthquake claims and private insurers have paid $8.9 billion. The total claims payments to date of $13.4 billion are more than one third of the ultimate total insurance claims costs, estimated to be well in excess of $30 billion. Uncertainty remains high with limited progress on some significant issues (refer November 2012 *Report* for examples). The recent Treasury estimate of $40 billion rebuild costs includes some costs that are not included in insurance claims – for example, planned public and private expenditure on improvements and new property developments.

In recent months there have been some court cases related to insurance claims arising from the Canterbury earthquakes. A few of the cases have implications for many claims, and thus the judgements help to clarify insurer liability and reduce uncertainty in the estimated claims costs. Recent completed cases include a declaratory judgement that Christchurch City Council cannot require strengthening of earthquake-prone buildings to above the 33 percent level prescribed in building code regulations, and a judgement that the residential red zone does not of itself constitute a constructive total loss for insurance purposes.

Property insurers are beginning to roll out policy renewals with tighter terms and conditions for the coverage of private dwellings. Details vary by insurer, but generally insurers are changing from open-ended replacement cover to cover that will be capped or based on sum

Table 5.1
Credit ratings of large insurers
(as at 1 April)

S&P rating **AM Best rating**	**AAA** **A++**	**AA+, AA, AA-** **A+**	**A+, A, A-** **A, A-**
		AIA Allianz AMP/AXA IAG Onepath Sovereign Westpac Life	AA Insurance ACE AIG AMI Asteron FMG Lumley QBE Southern Cross Tower Tower Medical Vero

Source: S&P, AM Best.
Note: For convenience an abbreviated name (based on the trading name or major brand) of each insurer or insurance group is given in the table above instead of the legal names. Fitch is also an approved rating agency, but is currently not used by any of the large insurers.

insured. Some insurers are also increasing excesses and limiting cover (e.g. fences, pools) in respect of the natural disasters that EQC insures. Even after these changes, the insurance cover available for natural disasters in New Zealand remains quite comprehensive in comparison with other countries subject to similar catastrophe risks.

6 Payment and settlement systems

New Zealand's financial market infrastructures have continued to operate effectively over the past six months.

In response to the major disruption to retail payments in April 2012, Payments NZ Limited (PNZ) has taken steps to better manage, if not avoid, similar incidents in the future. There has also been progress towards ensuring that there is fair and open access to the retail payment system with the adoption by PNZ of new access rules.

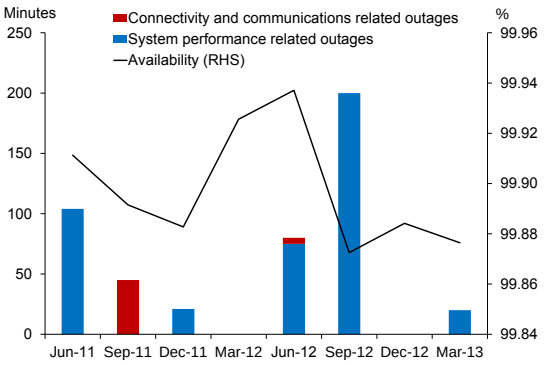
More work is required to establish robust arrangements that will enable interbank transactions to continue to be settled in the event that the Reserve Bank operated Exchange Settlement Account System (ESAS) is unavailable. The Reserve Bank is continuing to monitor risks to the retail payments system, including concerns about the timing and size of the settlement of retail transactions.

Payment and settlement systems have continued to operate satisfactorily.

New Zealand payment and settlement systems have performed satisfactorily and exhibited a high degree of availability over the last six months (figure 6.1). The Settlement Before Interchange (SBI) arrangements for retail payments,[1] which became fully operational on 24 February 2012, have operated effectively over the last six months with an average of about $4 billion of payments now being processed daily.

At the heart of SBI processing, the Exchange Settlement Account System (ESAS) is used by SBI participant banks to settle payments between themselves. Owned by the Reserve Bank, ESAS also remained highly reliable throughout the period. The only incident in recent months involved a brief period during which one bank was unable to complete its NZD pay-in obligations, impacting the operations of the CLS system and resulting in a 25-minute delay in the pay-out of Asia-Pacific currencies.[2] The Reserve Bank has acknowledged to CLS that the incident was due to a specific technical problem and steps have since been taken to address the issue.

Figure 6.1
ESAS/NZClear[3] availability and outages



Source: RBNZ.
Note: Availability is for the 12 months to the current period.

Industry has taken positive steps to strengthen SBI arrangements.

The Reserve Bank recognises ongoing efforts by the industry to better manage operational risks to the retail payment system. Since the completion of a comprehensive review of the significant disruption to SBI processing that occurred in April 2012, PNZ and SBI participant banks

[1] Retail payments are payments made by individuals and businesses and are typically of smaller value than interbank (wholesale) payments.

[2] CLS provides payment versus payment settlement of foreign exchange transactions. The system is owned by CLS Bank International.

[3] ESAS and NZClear availability are reported together because of the close links between the two systems and because this is the way the Reserve Bank reports. See table 6.1 for a description of NZClear.

Table 6.1

New Zealand payment and settlement systems

System	Description	Owner/operator
High value		
Exchange Settlement Account System (ESAS)*	Provides real time gross settlement of interbank transactions across the exchange settlement accounts held with the Reserve Bank.	Reserve Bank of New Zealand.
CLS*	Provides payment versus payment settlement of foreign exchange transactions.	CLS Bank International.
Retail (Systems that primarily process payments made by individuals and small businesses)		
Settlement Before Interchange (SBI)	Arrangements for the progressive exchange during the day of retail payment instructions (cheques, direct debits and credits, automatic payments, ATM settlement transactions, internet banking and telephone banking). Payments are exchanged using SWIFT and settlement of net interbank positions occurs in ESAS.	Arrangements are governed by rules administered by Payments NZ Limited, a company owned by eight registered banks.
Paymark Limited	Provides a network for the interchange of point of sale debit, credit, charge and proprietary card transactions.	Paymark Limited, a company owned by the four major registered banks.
EFTPOS NZ Limited	Provides a network for the interchange of point of sale card transactions.	EFTPOS NZ Limited, a company owned by ANZ National Bank.
Securities settlement		
NZClear*	Allows members to settle fixed interest and equity transactions and make cash transfers. Interbank payments occur directly in ESAS.	Reserve Bank of New Zealand.
NZCDC Settlement System*	Used to clear and settle trades on NZX markets. The system includes a central counterparty and securities depository.	New Zealand Clearing and Depository Corporation Limited (a wholly owned subsidiary of NZX Limited).
Critical Service Providers		
SWIFT	Provides secure global financial messaging services.	Society for Worldwide Financial Telecommunication, a co-operative owned by more than 8300 financial institutions.

* Denotes systems declared to be designated settlement systems under the Reserve Bank of New Zealand Act 1989.

implemented a number of measures to avoid or mitigate the impact of similar incidents in the future.

PNZ has adopted an industry-wide incident management plan and amended its rules to strengthen the resilience of SBI participants' connectivity to SWIFT. In addition, PNZ has entered into a memorandum of understanding with SWIFT and the Reserve Bank (in its role as operator of ESAS) that sets out the respective responsibilities of all three parties. These measures are a positive step towards improving the overall resilience of the retail payment system.

The Reserve Bank will continue to reinforce the importance of ESAS contingency arrangements.

Notwithstanding the satisfactory performance of the payment and settlement systems, the Reserve Bank will keep a close watch on areas where vulnerability exists. One such area, as described in the last *Report*, covers the need to improve contingency arrangements should ESAS be unavailable for any reason. Given the heavy reliance of banks on ESAS for the settlement of interbank transactions, the Reserve Bank will encourage PNZ and SBI participant banks to continue working with the ESAS operator to define suitable arrangements for responding to any ESAS outage.

PNZ has taken further steps to enhance rules and standards for the retail payment industry.

The Reserve Bank welcomes the efforts of the industry to clarify and increase the transparency of its rules amid a rapidly evolving landscape. PNZ has adopted comprehensive new rules and standards for domestic EFTPOS (otherwise known as proprietary debit) transactions covering all stages of such transactions from initiation by the cardholder to interbank settlement of the transaction.[4] These rules incorporate in a single industry rule book provisions that were previously included in the various contracts entered into between payment card switches and issuing banks, merchants, and acquirers.[5]

The Reserve Bank also commends the progress towards ensuring that there is fair and open access to the retail payment system with the adoption by PNZ of new access rules. The rules provide a set of clear and risk-based criteria for participation in the various retail payment systems. The Reserve Bank is pleased to note changes in the way access decisions are now to be made. Previously, applications from potential participants required approval by all board directors of PNZ, including those representing the eight shareholder banks. Recently the PNZ board has agreed that the ultimate decision-making authority on participation should be delegated entirely to independent directors.

PNZ has also been working with smaller financial institutions to ensure that those institutions that currently access the retail payment system via an agency agreement with a major bank are fully informed about business and strategic options for direct participation.

The Reserve Bank will take particular interest in any issues that could prevent prospective entrants from taking advantage of possible efficiencies or reduce dependency on another institution that direct participation may allow. The Reserve Bank is therefore keen to see the industry address any such issue appropriately.

The Reserve Bank continues to monitor risks to retail payments…

The Reserve Bank will continue to encourage the industry to address three related issues.

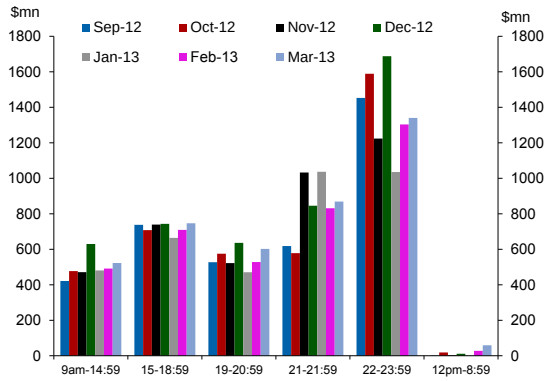
Firstly, as explained in a previous *Report*, having too many transactions settled late in the day increases operational risk to the New Zealand payment system. As shown in figure 6.2, the period between 9 pm and midnight is when much of the value is settled. This means that in the event of payment disruption during the day, there will be more transactions that may not be settled on the right day. Notwithstanding the fact that customer behaviour partly determines the timing of flows, the Reserve Bank will continue to encourage the industry to work towards smoothing the flow of transactions to the extent that SBI participant banks can influence such an outcome.

Secondly, settlement risk for bank customers arises when there is a lag between the time a bank customer gives a payment instruction and when banks exchange

[4] Debit cards are linked to a transaction account rather than to a line of credit.

[5] The acquirer is the bank (or other financial institution) that arranges payment to the merchant.

Figure 6.2
SBI activity by time of day
(average daily value)



Source: RBNZ.

and settle those transactions. The Reserve Bank is keen to see this lag reduced in the future.

Finally, the practice of high value transactions being settled via the retail payment system exacerbates the aforementioned operational and settlement risks to the system. The Reserve Bank will continue to urge SBI participant banks to settle these transactions directly in ESAS.

…as well as developments in OTC derivatives clearing.

The Reserve Bank is also interested in new arrangements for the clearing of over-the-counter (OTC) derivatives contracts. Following a G20 commitment last year, jurisdictions with the largest OTC derivatives markets (the European Union, US, and Japan) have mandated clearing of many derivatives contracts through central counterparties (CCPs) beginning in 2013.

The Reserve Bank sees the adoption of centralised clearing as a positive move towards managing risks from derivatives contracts. New Zealand banks have now firmed up, or are in the process of firming up, arrangements with broker agents through which they will participate indirectly in international CCPs. The Reserve Bank will monitor and assess the financial stability implications of such arrangements, particularly where risks might arise from the concentration of clearing services being delivered by a small number of broker agents.

7 Recent developments in financial sector regulation

Conservative capital requirements are a major feature of the New Zealand banking regulation and supervision framework. Following the implementation of most aspects of the Basel III capital adequacy requirements in January 2013, the Reserve Bank commenced a staged review of the capital requirements for housing loans. As a result of the first stage of the review, bank capital requirements for internal models banks will increase to reflect the additional systemic risk in high loan-to-value ratio lending.

In April 2013, the Reserve Bank completed a consultation on a new macro-prudential policy framework. A summary of submissions is being prepared and will be published shortly, together with an overview of the revised policy framework.

Banks are making good progress on pre-positioning their core systems for Open Bank Resolution (OBR). The OBR policy supports the objective of reducing the damage to the financial system and wider economy arising from a bank failure. The pre-positioning by banks is a vital element of OBR.

The Reserve Bank is currently consulting on enhanced powers for the oversight of payment systems and other financial market infrastructures. Other aspects of the Reserve Bank's regulatory work programme include the Non-bank Deposit Takers Bill and the Insurance (Prudential Supervision) Amendment Bill, which are under consideration in Parliament.

The Reserve Bank's approach to regulating and supervising the financial system is anchored on three pillars: self discipline, market discipline and regulatory discipline. Self discipline emphasises the internal risk management and governance systems of financial institutions; market discipline refers to the requirement on banks to make comprehensive disclosure of their financial performance and compliance with prudential measures; and regulatory discipline consists of regulatory and supervisory requirements. The Reserve Bank's regulatory and supervisory role concerns the stability and efficiency of the financial system in general. It is not the intention to have a zero failure regime, or to completely eliminate risks faced by depositors and policyholders.

7.1 Basel III and housing review

The Reserve Bank's implementation of Basel III capital adequacy requirements for locally incorporated banks commenced on 1 January 2013. As discussed in previous *Reports*, the new requirements include a strengthening of the definition of regulatory capital, an increase in minimum capital requirements, and the introduction of new buffers to assist banks in withstanding economic and financial stress. Most of the new minimum requirements are now in place, although some transitional measures apply. The new capital conservation buffer will apply from 1 January 2014, and from this date the counter-cyclical capital buffer will also become available as part of the Reserve Bank's macro-prudential toolkit. Bank disclosure statements for

the quarter ending 31 March 2013 will incorporate Basel III information.[1]

Review of bank capital adequacy requirements for housing loans

Earlier this year the Reserve Bank began a staged review of bank capital adequacy requirements for housing loans.[2] The objective of the review is to ensure that the banks' capital requirements for housing loans properly reflect risk in the sector. The current requirements date back to the first quarter of 2008 when the Reserve Bank's implementation of the Basel II capital adequacy regime took effect.

The first stage of the review focused on the systemic risk of 'internal models' banks' high loan-to-value ratio (LVR) loans. Internal models banks are those banks permitted by the Reserve Bank to use their own models as a basis for calculation of their minimum capital requirements, and currently comprise the subsidiaries of the four major Australian banks.

In the Reserve Bank's view, housing loan losses in the New Zealand market are more correlated (i.e., prone to occur at the same point in the economic cycle) than was being assumed within the Basel II modelling frameworks used by internal models banks. When Basel II was initially implemented in New Zealand, this concern was compensated for by requiring the banks' models to be more conservative in other areas. However, as the banks' models and estimates have evolved it is unclear whether the estimates remain sufficiently conservative. Now that the Basel II framework is embedded it is better to adjust the correlation factor directly rather than via calibration of other parameters.

As a result of the first stage of the review, bank capital requirements for internal models banks will increase to reflect the additional systemic risk in high-LVR lending, with effect from 30 September 2013. This additional capital amounts to an average increase in capital for housing loans for the internal models banks of about 12 percent. This would result in a fall in the regulatory Tier 1 capital ratio for these banks of about 40 basis points on average, although over the medium term banks are likely to raise additional capital to maintain their existing capital ratios. There may also be a small short-term increase in mortgage rates for some borrowers if banks aim to maintain their existing return on equity.

The second stage of the review is now in progress. This stage will include consideration of the overall calibration of banks' housing models and the relativities between standardised and internal models banks.

7.2 Macro-prudential policy

In April 2013, the Reserve Bank completed a consultation on its proposed macro-prudential policy instruments and framework (refer to box A in chapter 2 for details). A summary of submissions is being prepared and will be published shortly, together with an overview of the revised policy framework.

Macro-prudential requirements will be implemented via banks' conditions of registration, under section 74 of the Reserve Bank Act. While the Act provides for a minimum notice period of seven days, the minimum notice periods for macro-prudential tools will differ according to the instrument. The Reserve Bank expects to draft associated changes to the *Banking Supervision Handbook* and will consult on these as required.

Another important step will be the collection of new data to support the Reserve Bank's macro-prudential risk assessment and policy compliance functions. The Reserve Bank is currently discussing data requirements with the banks and expects to implement a new data collection on high-LVR housing lending (both stocks and new lending) in the second half of the year. This will also provide information on the characteristics of banks' new high-LVR lending, such as the proportion of first-home buyers, investors and other types of borrowers. The collection of more targeted data does not necessarily imply that LVR restrictions would be targeted to particular borrower segments; the primary purpose is to improve the Reserve Bank's understanding of the occurrence of

[1] Further information about Basel III implementation in New Zealand is on the Reserve Bank's website: http://www.rbnz.govt.nz/finstab/banking/4572979.html

[2] Further information about the review of bank capital adequacy requirements for housing loans is on the Reserve Bank's website: http://www.rbnz.govt.nz/finstab/banking/5190364.html

high-LVR lending. Once a standardised data collection is in place, the Reserve Bank expects to publish aggregate data, which will enable lenders to benchmark their own portfolio against industry norms.

7.3 Open Bank Resolution

Banks are working on the pre-positioning for the Open Bank Resolution (OBR) policy, which would enable a failed bank to reopen the next business day after a failure event. The OBR policy is one component of the New Zealand resolution framework. New Zealand authorities have a range of powers and tools to deal with bank distress and failure. The Government will likely consider private sector solutions, such as a merger or acquisition by a third party, before making a decision on how to resolve a troubled bank. Any failure resolution measure should avoid or reduce the taxpayer's exposure to loss and promote a cost-effective resolution of the bank's financial distress while minimising moral hazard.

The Reserve Bank recently consulted on the Open Bank Resolution Pre-positioning Requirements Policy (BS17). This consultation closed on 30 April (and followed earlier consultations on OBR in March 2011 and November 2012). The BS17 policy will be incorporated as a new chapter in the *Banking Supervision Handbook* after drawing on insights from the consultation process.

The handbook document sets out the various elements required for a bank to be pre-positioned for OBR. Pre-positioning means having the information technology, payments, and process functionality in place ahead of a crisis – such that, should a bank enter into statutory management, access channels can be closed, a portion of creditor funds can be frozen, and access channels can be reopened for business by 9 am the next business day. A new condition of registration requiring compliance with the OBR policy will be imposed on locally incorporated registered banks with retail deposits of over $1 billion. The intention is for the pre-positioning requirements to be in place by 30 June 2013.

The Financial Stability Board issued a paper in October 2011 setting out the core elements of an effective resolution regime.[3] The paper presents the objectives and essential features that resolution regimes should have to improve the ability of authorities to resolve failures with minimal disruption and without resorting to bailouts or exposing taxpayers to losses. The Reserve Bank published a *Bulletin* article in March 2013 comparing the OBR policy with these key attributes.[4] The article looks at the practical intent of the key attributes of effective resolution regimes and how the OBR model achieves the same outcomes.

7.4 Statutory payment oversight powers

In late March, the Reserve Bank issued a consultation document on strengthening the legislative framework for the oversight of payment systems and other financial market infrastructures. This followed a review of its existing statutory oversight powers in this area. The main proposals include the establishment of a recognition regime for systemically important systems, and explicit powers for the Reserve Bank to oversee such systems effectively. The proposals will bring the regulatory payment oversight framework into better alignment with the Reserve Bank's overall prudential supervisory approach and more into line with the approach of many other central banks around the world.

7.5 Insurance

All provisionally licensed insurers are required to be fully licensed, or in run-off, by 9 September 2013. The Reserve Bank has been processing full licence applications from around 100 insurers (see chapter 5).

Persons carrying on insurance business in New Zealand are required to be licensed by the Reserve Bank and comply with prudential requirements. There are very limited exceptions, such as 'discretionary insurers', who write insurance-like contracts under which the insurer is not obligated to pay benefits. Discretionary insurance is a

[3] http://www.financialstabilityboard.org/publications/r_111104cc.pdf "Key Attributes of Effective Resolution Regimes for Financial Institutions", October 2011

[4] See Hoskin, K and N Javier (2013) "Open Bank Resolution—The New Zealand response to a global challenge", Reserve Bank of New Zealand *Bulletin*, 76(1), pp.12-18.

recognised way of sharing risks (often among co-operative groups or mutual associations), but does not offer the policyholder protections contained in the Insurance (Prudential Supervision) Act.

The Insurance (Prudential Supervision) Amendment Bill (the Bill) contains a number of amendments that are of a minor and technical nature, including:

- that the Reserve Bank publish and maintain an official register of licensed insurers;
- that in appropriate cases, that an overseas insurer may submit half-yearly insurer and group regulatory financial reports rather than half-yearly financial reports prepared according to New Zealand Generally Accepted Accounting Principles;
- that the term of a provisional licence issued to an insurer in an insolvency proceeding may extend beyond 9 September 2013.

The intention is that the Bill is passed by 9 September 2013 to align with the date for full licensing.

The Reserve Bank recently consulted on *The Quality of Capital and the Treatment of Financial Reinsurance* in its insurance solvency standards. The consultation was triggered by a potential gap in the existing solvency standards that may mean that an insurer's solvency position does not accurately reflect the economic substance of its financial reinsurance arrangements. The Reserve Bank's initial policy work suggested that these arrangements have the potential to overstate the amount of risk transfer that takes place under such arrangements and to allow funding with debt-like attributes to count as capital. Two main options were put forward, and stakeholders' views were sought. The Reserve Bank is now assessing the submissions and will develop a policy towards financial reinsurance, which will take into consideration submitters' views.

7.6 Updates on other policies

Covered bonds

The Reserve Bank of New Zealand (Covered Bonds) Amendment Bill received its second reading in February 2013. As discussed in previous *Reports*, the Bill provides for the registration of banks' covered bond programmes. To be registered, covered bond programmes must meet certain requirements. Registered covered bond programmes will receive the benefit of certain statutory provisions, which provide certainty to investors that they may enforce their security interest in the unlikely event that an issuing bank defaults.

Non-bank deposit takers

The Reserve Bank has a statutory obligation to review the operation of the prudential regime for non-bank deposit takers (NBDTs) by 9 September 2013. The outcome of this review will be a report to the Minister of Finance that will be tabled in Parliament, and which may recommend legislative changes. The review will consider the operation of the entire prudential regime for NBDTs, but is likely to have a particular focus on the definition of an NBDT and the role of trustees as frontline supervisors. Terms of reference for the review have been finalised and a consultation paper on the review was released on 4 April 2013. The paper seeks views on the operation of the NBDT regime to date, and a number of possible changes to the regime that the Reserve Bank identified. The deadline for submissions on the consultation paper is 17 May 2013.

Meanwhile, the Non-bank Deposit Takers Bill is still in the parliamentary process. It is anticipated that it will be passed within the next few months. The new law has a 12 month transition period by the end of which all existing NBDTs must be licensed. The Reserve Bank has been consulting with industry bodies on the implementation of the new licensing regime. New regulations are also expected to be introduced declaring certain building society shares to be debt securities, and prescribing matters for evaluating the suitability of NBDT directors and senior officers.

Anti-money laundering (AML)

The Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (the Act) comes into full effect on 30 June 2013. New Zealand is a member of both the Financial Action Task Force and the Asia-Pacific Group on Money Laundering. These bodies assess how effectively New Zealand has detected and deterred money laundering

and the financing of terrorism. In the lead-up to 30 June, the Reserve Bank continues to engage with the financial institutions it will supervise, to gauge their progress towards implementation of the Act's requirements. The Reserve Bank also continues to develop and refine its approach to AML supervision, including the detailed processes for on-site inspection visits and desk-based reviews.

The Reserve Bank continues to work closely with the other AML supervisors – Financial Markets Authority and Department of Internal Affairs – to draft guidance to assist the regulated sector to comply with the new obligations. During December 2012 three guidelines were published. The beneficial ownership guideline provides information to assist in the identification and verification of a customer's beneficial ownership. The guideline also provides information to help reporting entities understand the distinction between a beneficial owner and a person acting on behalf of a customer. The territoriality guideline provides information relating to the jurisdictional scope of the Act. The audits guideline provides an overview of matters to consider when arranging an audit, as required under section 59(2) of the Act. Fact sheets that relate to the beneficial ownership guideline have recently been published.

Appendices

Appendix 1
Reserve Bank enforcement

The Reserve Bank has responsibility for enforcing the regulatory obligations of entities in a number of areas, comprising banking, insurance, payments and settlements, non-bank deposit taking and anti-money laundering and countering the financing of terrorism. It monitors entities' compliance with the obligations it oversees.

In the event of identified non-compliance, the Reserve Bank has the discretion to take enforcement action and to decide what enforcement action to take. Table 1 lists the enforcement options in respect of non-compliance that are available to the Reserve Bank in each of the areas it oversees. During the past 12 months, the Reserve Bank has undertaken the following public enforcement actions:

- March 2013 – the Reserve Bank initiated a prosecution of Broadlands Finance Limited. The company is charged with failing to have at least two independent directors, as required by section 157L of the Reserve Bank of New Zealand Act 1989 (the Act).
- December 2012 – the Reserve Bank prosecuted Avanti Finance Limited for its failure to have at least two independent directors, as required by section 157L of the Act. The company was convicted and fined $15,000.
- September 2012 – an industry notice was issued in respect of Rabobank New Zealand Limited's failure to maintain a current rating of its creditworthiness, as required under section 80 of the Act.
- The Reserve Bank has issued four public notices regarding unauthorised use of the word 'bank' (or any derivation or translation thereof) in breach of section 64 of the Act, in relation to:
  - 'Sovereign Global Bank of Aotearoa'
  - 'City Commercial Bank'
  - Century Finance Limited, trading as 'Century Bancorp'
  - 'Elite Bank Group'

Table1

Reserve Bank enforcement options

	Grant a conditional waiver	Issue a private warning	Issue a public notice	Accept an enforceable undertaking	Impose or vary conditions of registration/licence/designation	Remove directors, senior officers	Issue directions	Recommend statutory management	Apply to the High Court to appoint a liquidator	Commence civil proceedings	Commence criminal proceedings	Revoke registration/licence/ designation
Registered banks	✔	✔	✔	X	✔	✔	✔	✔	X	X	✔	✔
Licensed NBDTs	✔	✔	✔	X	✔	✔	✔	X	X	X	✔	✔
Licensed insurers	✔	✔	✔	X	✔	✔	✔	✔	✔	✔	✔	✔
Payments systems	✔	✔	✔	X	X	X	X	X	X	X	✔	X
Designated settlement systems	✔	✔	✔	X	✔	X	X	X	X	X	✔	✔
AML CFT reporting entities	✔	✔	✔	✔	X	X	X	X	X	✔	✔	X
Entities holding out as bank/NBDT/insurer	✔	✔	✔	X	X	X	X	X	X	X	✔	X

✔ = The Bank has this power in respect of non-compliance under either current enacted legislation or pending legislation.
x = The Bank does not have this power in respect of non-compliance under either current enacted legislation or pending legislation.

Appendix 2
Graphical appendix[1]

Figure 1
Nominal exchange rates

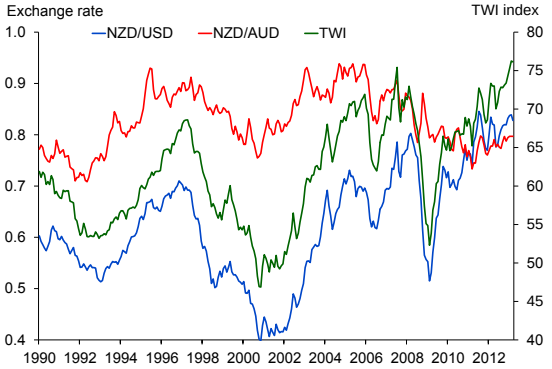


Figure 2
House price inflation
(annual percent change)

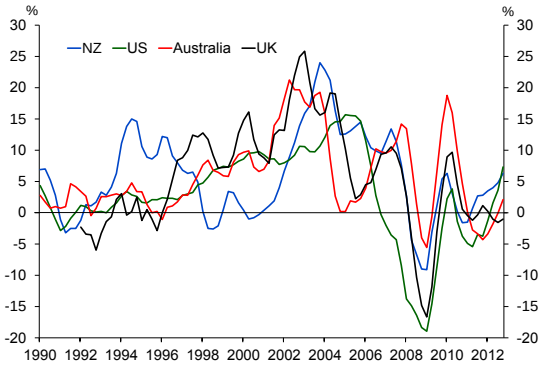


Figure 3a
Current account balance

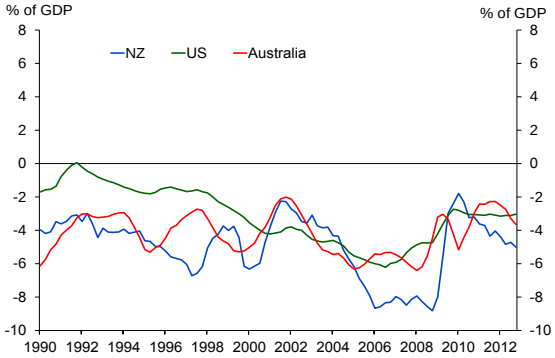


Figure 3b
Current account balance

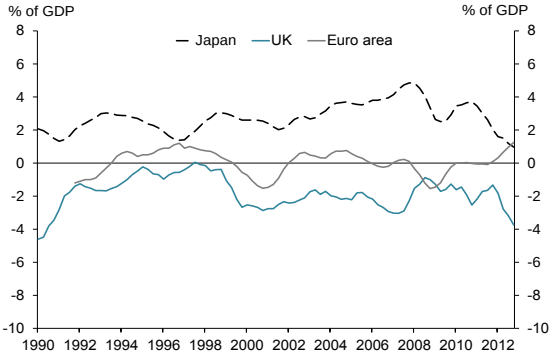


Figure 4a
Short-term interest rates

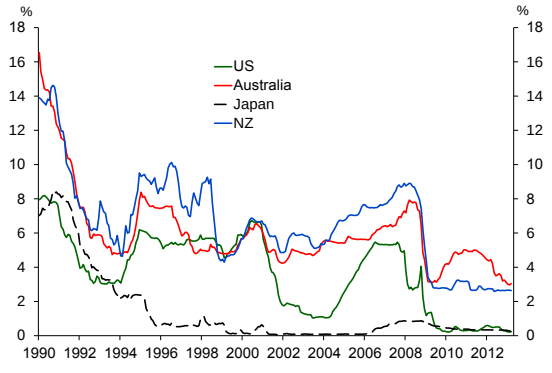
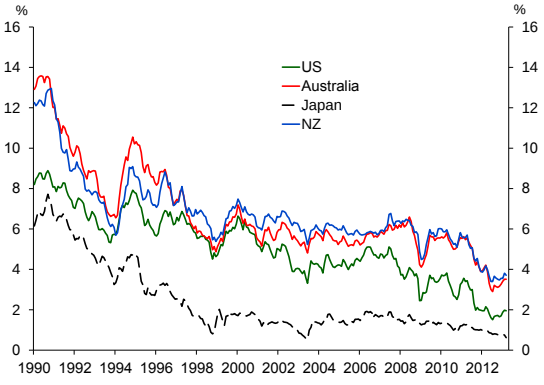


Figure 4b
Long-term interest rates



[1] The data contained in this appendix were finalised on 19 April 2013. Definitions and sources are listed on pages 49-50.

Figure 5
Household debt and servicing costs

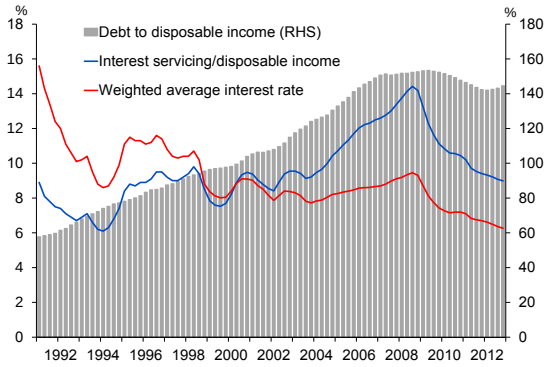


Figure 6
Household assets and liabilities

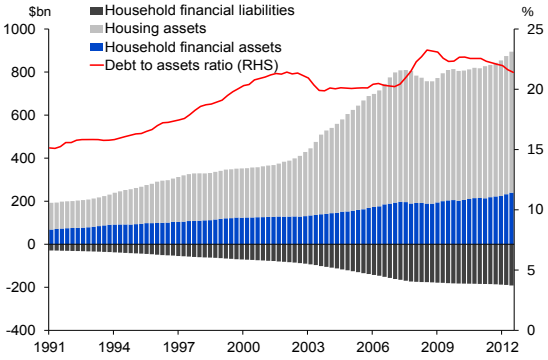


Figure 7
New Zealand house price-to-income

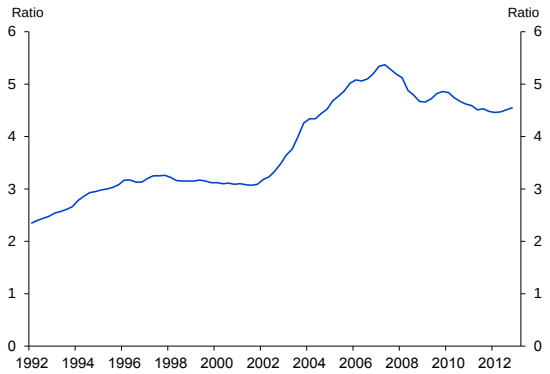


Figure 8
Government debt

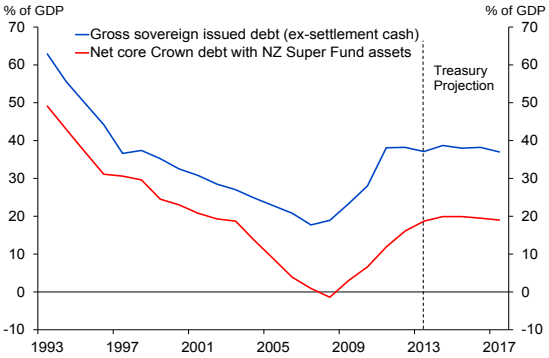


Figure 9
Government bonds on issue and turnover

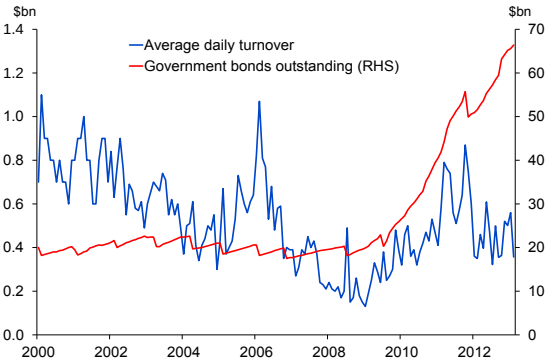


Figure 10
Non-resident holdings of New Zealand government securities

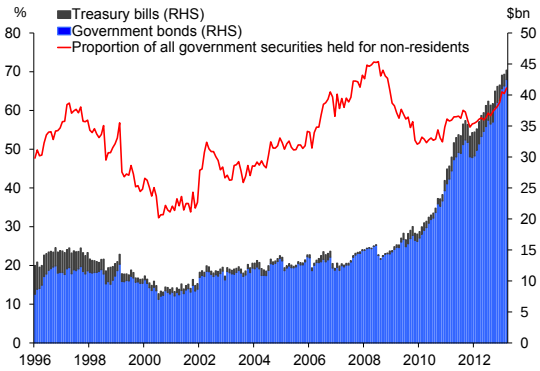


Figure 11

NZD/USD turnover in domestic markets

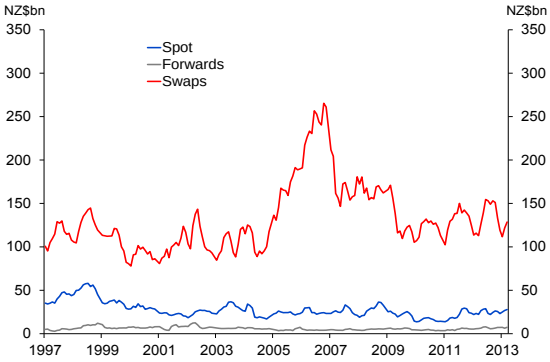


Figure 12

OCR, estimated business lending rate and effective mortgage rate

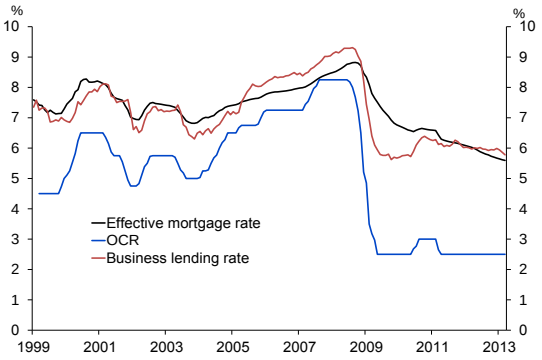


Figure 13

Equity market capitalisation

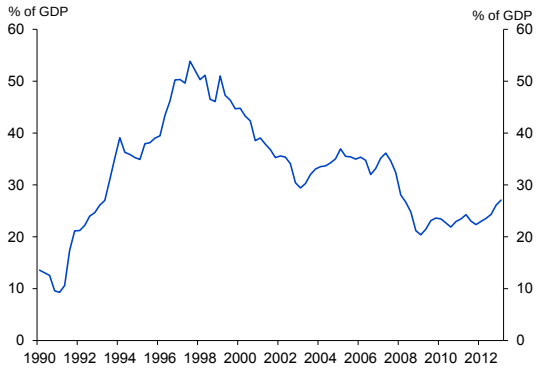


Figure 14

Banking system-wide capital ratios

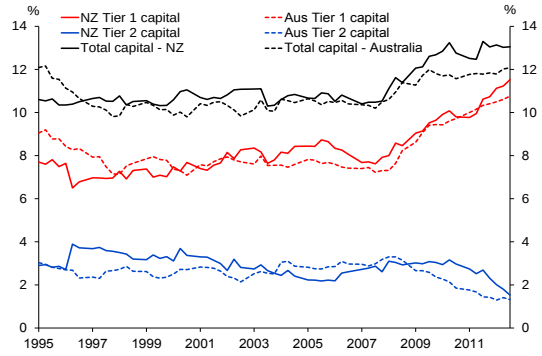


Figure 15

Bank asset quality

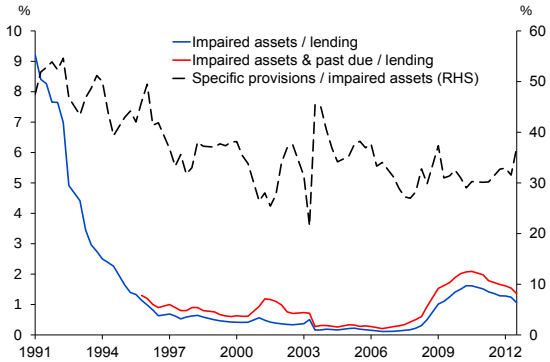


Figure 16

Bank return on assets

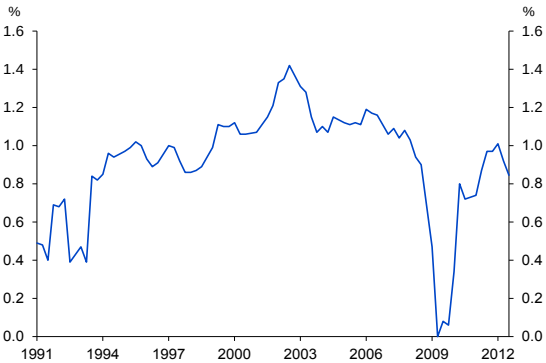


Figure 17

Bank operating costs to income

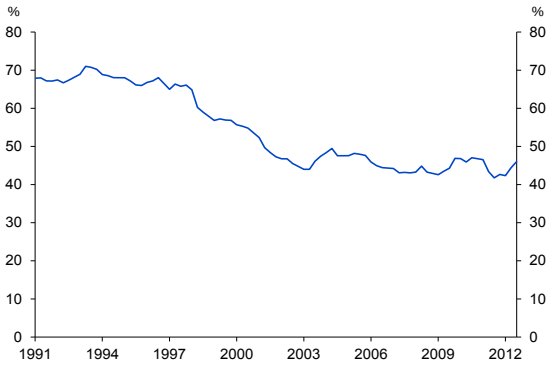


Figure 18

Bank net interest margin

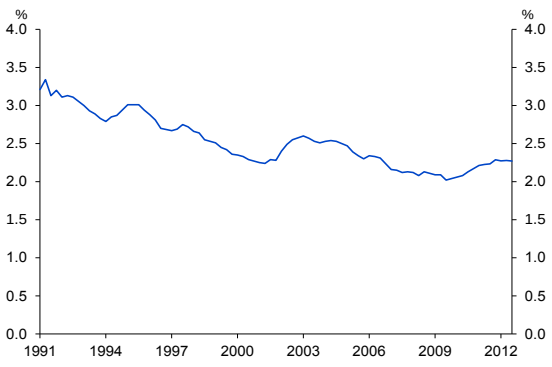


Figure 19

Bank offshore funding

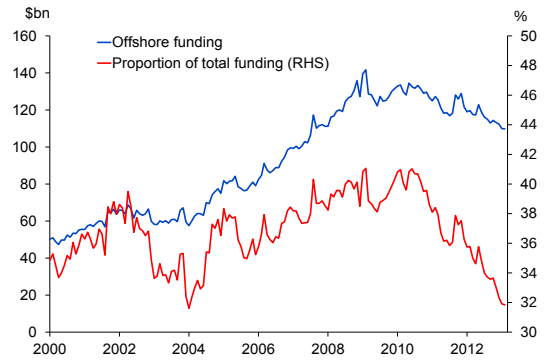
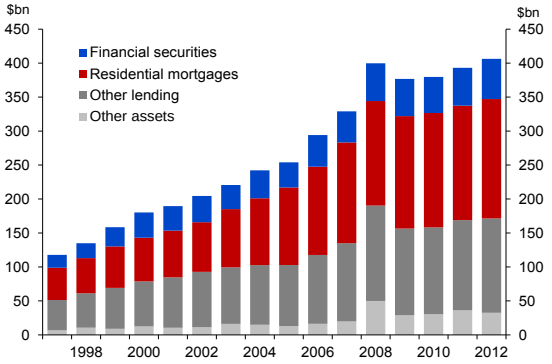


Figure 20

Bank asset composition



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	**Nominal exchange rates**	*Reuters*.
2	**House price inflation**	Annual percentage change in national house price indices. *Haver Analytics, Property IQ*.
3	**Current account balance**	Current account balance as a percentage of GDP, four-quarter total. *Haver Analytics.*
4	**Interest rates**	Yields on 90-day bank bills and 10-year government bonds. *Reuters*.
5	**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 published RBNZ mortgage data (SSR, part E5.10) for residential mortgages and RBNZ calculations for consumer interest rates.
6	**Household assets and liabilities**	Housing assets are the aggregate private sector residential dwelling value. Data is from Property IQ 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. From 1995, quarterly figures are survey-based with minor estimation. Household liabilities are from RBNZ series as for figure A7.
7	**New Zealand house price-to-income**	Ratio of house prices to household disposable income. *Property IQ* and *Statistics New Zealand*.
8	**Government debt**	Net core Crown Debt is debt attributable to core Crown activities and excludes Crown entities and state-owned enterprises. Forecasts are from 2013 onwards and are taken from the Budget Economic and Fiscal Update. *The Treasury.*
9	**Government bonds on issue and turnover**	Total government securities on issue and New Zealand government bond turnover survey. *NZ Debt Management Office, RBNZ.*
10	**Non-resident holdings of New Zealand government securities**	*RBNZ*.
11	**NZD/USD turnover in domestic markets**	Plotted as three-month moving average. *RBNZ survey.*

12	**OCR, estimated business lending rate, and effective mortgage rate**	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. *RBNZ*.
13	**Equity market capitalisation**	Total market capitalisation of the 50 largest companies listed on New Zealand Stock Exchange, as a percentage of annual nominal GDP. Latest GDP value is estimated. *Datastream; Statistics New Zealand.*
14	**Banking system-wide capital ratios**	Capital as a percentage of risk-weighted assets for all locally incorporated banks. *Registered banks' general disclosure statements (GDS), Reserve Bank of Australia.*
15	**Bank 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*.
16	**Bank 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*.
17	**Bank operating costs to income**	Operating expenses as a percentage of total income, four-quarter average, for all registered banks. *GDS*.
18	**Bank net interest margin**	Net interest income as a percentage of average interest-earning assets, four-quarter average, for all registered banks. *GDS*.
19	**Bank offshore funding**	*RBNZ*.
20	**Bank asset composition**	As at 31 December 2012. *GDS*.

Appendix 3

New Zealand financial system liabilities and assets

Financial system liabilities

As at 31 December $bn	2000	2005	2007	2008	2009	2010	2011	2012
Banks								
Households	41	61	79	90	92	97	106	115
Other residents	55	84	98	114	103	104	108	120
Non-residents	56	79	111	127	132	127	122	112
Other liabilities and equity	26	28	43	72	53	53	60	59
Total	178	253	332	403	380	382	395	407
Non-bank lending institutions								
Households	5	12	12	9	9	7	5	3
Other residents	4	7	8	7	6	7	7	5
Other liabilities and equity	2	8	12	11	9	7	5	5
Total	10	26	31	27	24	21	17	14
Funds under management								
Household assets	56	56	64	54	61	64	66	74
Other sector assets	5	7	9	8	8	8	8	9
Total	61	63	72	62	68	72	74	83
Total financial system liabilities	249	342	435	492	472	474	486	504

Financial system assets

As at 31 December $bn	2000	2005	2007	2008	2009	2010	2011	2012
Banks								
Households	66	119	152	162	169	173	177	185
Other residents	71	102	128	150	137	137	142	149
General government	7	6	4	5	13	17	19	19
Non-residents	17	12	15	16	16	13	10	12
Other assets	17	14	33	70	44	41	47	41
Total	178	253	332	403	380	382	395	407
Non-bank lending institutions								
Households	5	12	14	12	10	9	7	6
Other residents	4	11	13	12	11	9	7	6
Other assets	1	3	4	4	3	3	3	2
Total	10	26	31	27	24	21	17	14
Funds under management								
Domestic fixed interest	27	25	27	28	27	28	30	32
Domestic equities	7	8	9	6	7	8	8	10
Domestic other	5	4	5	4	4	4	4	4
Overseas investments	21	26	31	24	30	32	32	37
Total	61	63	72	62	68	72	74	83
Total financial system assets	249	342	435	492	472	474	486	504

Source: RBNZ surveys and registered banks' GDS.
Note: General insurance companies not surveyed. Property syndication included in 'domestic other' funds under management. Minor values for RMBS not included. Totals and sub-totals may not add due to rounding.

Appendix 4
New Zealand registered banks

Registered bank's name	Market share[1]	Credit ratings			Ultimate parent	Country of parent
		S&P	Moody's	Fitch		
Australia and New Zealand Banking Group Limited (B)[2]	2.4	AA-	Aa2	AA-	Australia and New Zealand Banking Group Limited	Australia
ANZ Bank Limited	30.0	AA-	Aa3	AA-	Australia and New Zealand Banking Group Limited	Australia
Commonwealth Bank of Australia (B)	1.3	AA-	Aa2	AA-	Commonwealth Bank of Australia	Australia
ASB Bank Limited	16.1	AA-	Aa3	AA-	Commonwealth Bank of Australia	Australia
Bank of New Zealand	18.2	AA-	Aa3	-	National Australia Bank	Australia
Bank of Baroda (New Zealand) Limited	0.0	-	-	BBB-	Bank of Baroda	India
Bank of India (New Zealand) Limited	0.0	BBB-	-	-	Bank of India	India
Citibank N A (B)	0.5	A	A3	A	Citigroup Inc.	USA
Deutsche Bank Aktiengesellschaft (B)	0.7	A+	A2	A+	Deutsche Bank Aktiengesellschaft	Germany
Heartland Bank Limited	0.6	BBB-	-	-	Heartland New Zealand Limited	New Zealand
JPMorgan Chase Bank, N.A. (B)	0.2	A+	Aa3	A+	JPMorgan Chase & Co	USA
Kiwibank Limited	3.7	A+	Aa3	AA+	New Zealand Post Limited	New Zealand
Kookmin Bank (B)	0.1	A	A1	-	Kookmin Bank	South Korea
Rabobank Nederland (B)	0.6	AA-	Aa2	AA	Rabobank Nederland	Netherlands
Rabobank New Zealand Limited	2.2	AA-	-	-	Rabobank Nederland	Netherlands
Southland Building Society	0.7	-	-	BBB	Southland Building Society	New Zealand
The Bank of Tokyo-Mitsubishi, Limited (B)	0.7	A+	Aa3	A-	Mitsubishi UFJ Financial Group Inc.	Japan
The Co-operative Bank Limited	0.4	BBB-	-	-		
The Hongkong and Shanghai Banking Corporation Limited (B)	1.2	AA-	Aa2	AA-	HSBC Holdings PLC	UK
TSB Bank Limited	1.3	BBB+	-	-	TSB Community Trust	New Zealand
Westpac Banking Corporation (B)	2	AA-	Aa2	AA-	Westpac Banking Corporation	Australia
Westpac New Zealand Limited	17.2	AA-	Aa3	AA-	Westpac Banking Corporation	Australia

[1] Registered banks' assets as a proportion of the total assets of the banking system, as at 31 December 2012.
[2] Banks marked (B) operate in New Zealand as branches of overseas incorporated banks. All other banks are incorporated in New Zealand.