

Financial Stability Report

May 2014

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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 purpose set out in that Act. The *Report* must also contain the information necessary to allow an assessment of those activities.

In May 2013 a Memorandum of Understanding (MOU) was entered into by the Governor of the Reserve Bank and the Minister of Finance regarding macro-prudential policy and its operating guidelines. The MOU specifies that the Reserve Bank's *Financial Stability Report* must report the reasons for, and impact of, any use by the Reserve Bank of macro-prudential policy instruments. The *Report* will also provide an assessment of the appropriateness and effectiveness of macro-prudential policy decisions.

1 Overview

The New Zealand financial system remains sound, and well placed to support expansion in the economy. The banking system is well capitalised, funding and liquidity buffers are comfortably above required minimums, and non-performing loans continue to decline. Regulatory changes in recent years have helped to improve prudential standards for both banks and non-bank deposit-takers (NBDTs).

However, several risks to the financial system require continued focus. Debt in the household sector remains high relative to income, and house prices are overvalued on several measures. As a result, financial stability could deteriorate if there is a sharp correction in house prices, particularly if accompanied by a reduction in debt repayment capacity. The Reserve Bank introduced a speed limit on high loan-to-value ratio (LVR) lending in October 2013 to help reduce this risk.

Debt is also elevated in the dairy sector, although incomes are currently strong due to high export prices. A reduction in farm incomes, and associated fall in land prices, could place pressure on some highly leveraged borrowers. One risk to farm incomes is a disruption to China's economic growth, which could result from vulnerabilities in the financial system. A disruption to the Chinese economy could also affect international capital markets, and impair funding conditions for New Zealand banks.

New Zealand's large net external liability position, predominantly in the form of offshore debt held by the banking system, poses a further risk. Strong domestic deposit growth in recent years has resulted in a decline in the banking system's reliance on offshore funding, and there has also been a lengthening in the maturity of offshore funding following the introduction of the minimum

core funding ratio. However, banks remain vulnerable to a deterioration in international debt market conditions. This vulnerability would increase if the rise in private sector saving in recent years was to reverse.

Given the risks facing the financial system, current prudential policy settings remain appropriate. The restriction of high-LVR mortgages appears to be having the desired effect of bringing activity in the housing market back towards a more sustainable level, with both house price inflation and credit growth moderating in recent months. These effects of the LVR policy are expected to be reinforced by the increase in interest rates projected in the March 2014 *Monetary Policy Statement*. The Reserve Bank expects the speed limit to remain in place until the housing market comes into better balance, with a more sustainable rate of house price inflation.

The Reserve Bank maintains a conservative yet non-intrusive financial oversight regime. Over the coming year, the Reserve Bank will undertake a stocktake of its bank and NBDT regulations, with the aim of improving the efficiency, consistency and clarity of these regulations. A further strategic initiative is the development of a comprehensive stress testing framework for the banking system. Following the completion of the licensing of the insurance sector, the focus of the Reserve Bank has switched to ongoing supervision.



Graeme Wheeler
Governor

2 Systemic risk and policy assessment

New Zealand's financial system is sound and well placed to support growth in the economy. Risks to the financial system, from both international and domestic sources, have eased since the last *Report*. Several issues remain in focus, including: the high levels of debt in the household and agricultural sectors, New Zealand's exposure to offshore financial markets, and risks to financial stability in China.

The Reserve Bank's assessment is that current prudential policy settings, in combination with the outlook for monetary policy tightening, are appropriate. The speed limit on high-LVR lending has stemmed risks that were previously growing in the housing market. Macro-prudential policy settings are subject to continuous monitoring and review.

Macro-financial conditions and summary of key risks

By a range of measures, the financial system is now stronger than at any time during the last major economic and credit cycle of 1999-2007. That period saw rapid growth in credit and asset prices, especially in the housing and agricultural sectors, funded by a significant increase in short-term offshore borrowing by the banking system. Vulnerabilities associated with banks' funding and liquidity were brought into focus with the onset of the Global Financial Crisis (GFC) in 2007. The Reserve Bank has strengthened the prudential framework for both banks and non-bank deposit-taking institutions in recent years, by boosting capital, funding and liquidity buffers, and improving other prudential standards.

The banking system, which accounts for the majority of lending and deposit-taking activity in New Zealand, is currently well capitalised and comfortably meeting the higher Basel III capital requirements (table 2.1). Problem loans have fallen markedly from their peak in 2009 and profitability, as measured by the system's return on assets, has returned to pre-crisis levels. Banks are comfortably exceeding regulatory requirements for core funding, primarily reflecting strong growth in retail deposits. After worsening substantially in the midst of the

GFC, the cost and access to offshore funding has been improving since late 2011, partly reflecting the stimulatory monetary policy being pursued in advanced economies.

Private sector credit grew at around 4.5 percent over the past year, mainly driven by lending to the household sector (figure 2.1). This was well below the rate of economic expansion, which has gained considerable momentum due to the accelerating Canterbury rebuild, rising immigration, and strong growth in farm incomes. Following a long period of exceptionally low interest rates, the Reserve Bank increased the Official Cash Rate (OCR) in March and April 2014 in response to forecast inflation pressures, and projected further OCR increases in coming years. With the marked increase in resilience in recent years, the financial system is well placed to support increased economic growth.

Despite the improvements in the resilience of financial institutions, some significant vulnerabilities remain that could test financial stability in the future. On the asset side of the balance sheet, credit extended to both the household and dairy sectors is high relative to incomes. On the liability side, the banking system remains reliant on access to offshore funding, and this vulnerability could worsen if credit demand strengthens. Finally, a significant disruption to the Chinese economy could affect

Table 2.1
Indicators of the resilience of the banking sector

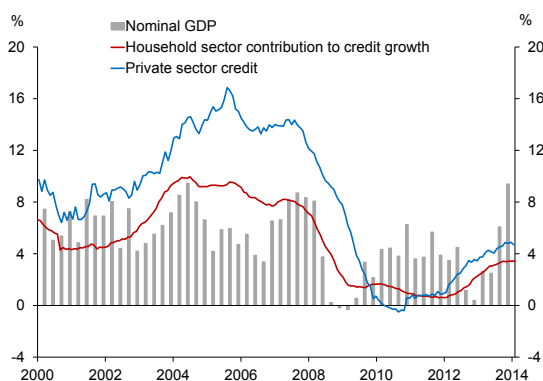
	1999	2007	Latest
Tier 1 capital ratio (% of risk weighted assets)	7.2	7.8	11.4
Assets/common equity (multiple)	20	18	12
Return on assets (%)	1.1	1.0	1.0
Core funding ratio (% of loans and advances)	67	65	85
Offshore funding < 3m (% of offshore funding)	50	47	27
Liquid assets (% of total assets)	4.3	3.3	5.5

Source: Statistics New Zealand, registered bank *Disclosure Statements*, RBNZ liquidity statistics.

Note: Reflecting data availability, the figure for the percentage of offshore funding is for 2001 rather than 1999.

the New Zealand financial system through a range of channels. These vulnerabilities are summarised below, and in more detail in this *Report*.

Figure 2.1
Growth in credit and nominal GDP
(annual percent change)



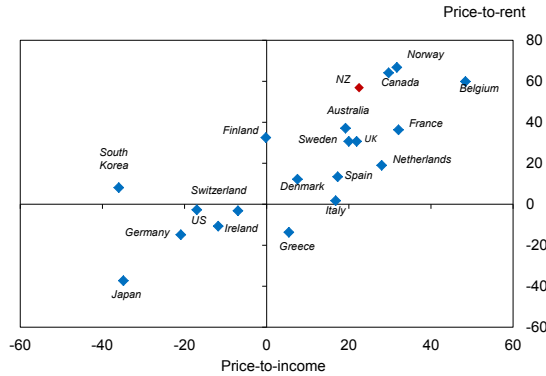
Source: Statistics New Zealand, RBNZ *Standard Statistical Return* (SSR).

Housing imbalances and household debt

In early 2013, the risks to the financial system that could follow from a downward correction in house prices were becoming increasingly apparent. House prices were rising rapidly, particularly in Auckland and Canterbury, while new housing lending undertaken at high-LVRs had risen to nearly a third of all new housing loan commitments. The rise in house prices reflected limited housing supply and strong demand, with housing demand supported by low mortgage interest rates, easy credit terms and rising net immigration.

Recent increases in house prices came after a strong increase in the decade prior to 2007, and only a modest correction in the aftermath of the GFC. House prices are well above their long-term average relative to fundamental metrics such as rents and incomes, and stand out as particularly stretched among OECD economies (figure 2.2). The OECD and IMF both believe that house prices are significantly overvalued. With the impact of a potential correction in house prices likely to be amplified by high levels of household debt, the Reserve Bank introduced a temporary speed limit on high-LVR lending in October 2013.

Figure 2.2
House prices to income and rents
(percentage deviation from long run average,
2012)



Source: OECD.

After the announcement of the speed limit, the Reserve Bank noted its expectation that such a limit would help dampen house price inflation and credit demand. The early evidence suggests that the LVR speed limit is having the expected effect of moderating housing imbalances (box A). The outlook for rising interest rates is expected to support the LVR speed limit in moderating housing demand. Over the longer term, increasing housing supply is expected to eventually bring about a better balance in the housing market.

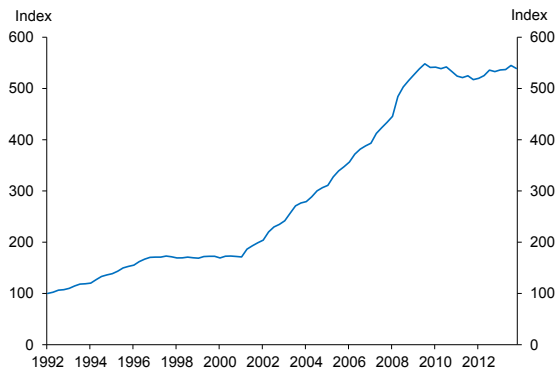
Although the LVR speed limit is helping to contain the risk of a sharp housing correction, house prices remain at elevated levels and have continued to grow faster than household incomes. Housing demand will likely continue to outstrip supply in the near term, particularly with strong net immigration adding to population growth.

Debt levels in the agricultural sector

Debt levels in the agricultural sector remain high relative to incomes (figure 2.3), reflecting very strong credit growth in the decade prior to the GFC. Much of this debt is concentrated among a minority of leveraged farms in the dairy sector, with around half of dairy sector debt estimated to be held by only 10 percent of dairy farmers. These leveraged farms tend to have lower profitability due to the higher interest payments required to service debt

obligations, and are particularly exposed to a sharp fall in farm incomes and land prices.¹

Figure 2.3
Agricultural debt-to-agricultural GDP
(March 1992 = 100)



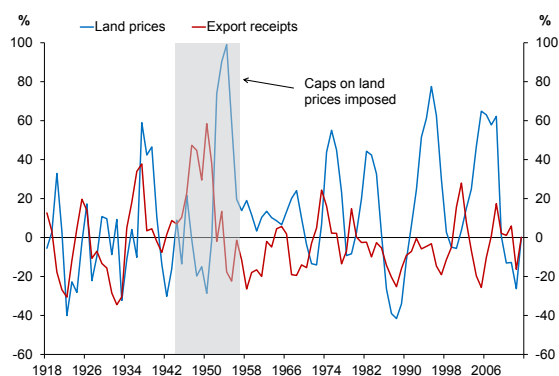
Source: Statistics New Zealand, RBNZ SSR.

Note: Nominal agricultural GDP is calculated as real agricultural GDP inflated by agricultural export prices.

Given the existing indebtedness of the sector, a significant increase in credit growth and farm prices would pose a significant risk to financial stability. New Zealand's export prices tend to be cyclical and highly volatile (figure 2.4). World dairy prices have already declined by over 20 percent in recent months, as global and domestic supply have increased. There are also several potential global shocks, including a disruption in the Chinese economy, which could trigger a more significant decline in commodity prices and a consequent drop in collateral values, specifically land prices.

¹ See box B of the November 2012 *Report* for the Reserve Bank's most recent analysis of the distribution of debt in the dairy sector.

Figure 2.4
Long-term series for export receipts and land prices
(4-year percentage changes)



Source: See data sheet for more details.

Growth in agricultural debt has slowed significantly from the peak in 2009, and has remained moderate since the last *Report*. Activity in the farm market and farm investment intentions have recently picked up alongside strong farm incomes. This could result in increased credit growth in the near term. However, there is currently little evidence of an excessive increase in debt appetite that would fuel a renewed cycle of rising land prices and growth in rural debt (chapter 4).

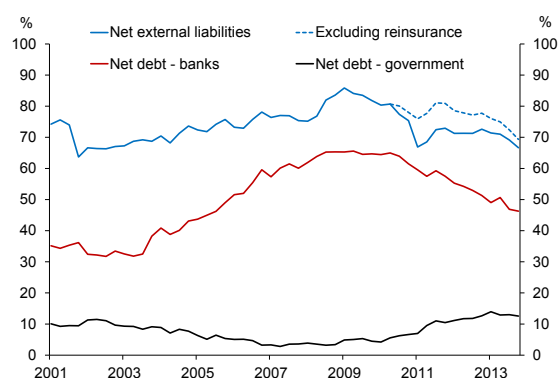
Exposure to offshore funding markets

New Zealand's net external debt remains high by international standards. High external debt reflects a prolonged period of current account deficits in the decades prior to the GFC, resulting from a short-fall of national savings relative to investment. Most of the current stock of debt has been intermediated via the banking system. Since the GFC, the private sector savings rate has increased and investment has declined, allowing the banking system to significantly reduce its external debt (figure 2.5). However, rising government debt has limited the overall improvement in net external liabilities.

The Reserve Bank expects private sector investment to increase in coming years, primarily due to the ongoing Canterbury rebuild and increased construction activity at the national level. If stronger investment is accompanied by a decline in private sector saving, the

current account deficit could increase markedly, implying an increased reliance on offshore credit markets. This risk will be mitigated to the extent that the savings rate of the private sector is maintained, and the public sector deficit continues to moderate.

Figure 2.5
Net external liabilities
(percent of annual nominal GDP)



Source: Statistics New Zealand.

Although the cost and access to offshore funding have been improving recently, several domestic and external factors could trigger reduced access to offshore funding markets. Given New Zealand's reliance on these markets, this could result in a material tightening in domestic credit supply. As noted above, the banking sector's ability to weather a temporary loss of access to wholesale funding has improved since the GFC, alongside the marked increase in the core funding ratio. Most external funding is also hedged into New Zealand dollars, eliminating exposure to currency movements.

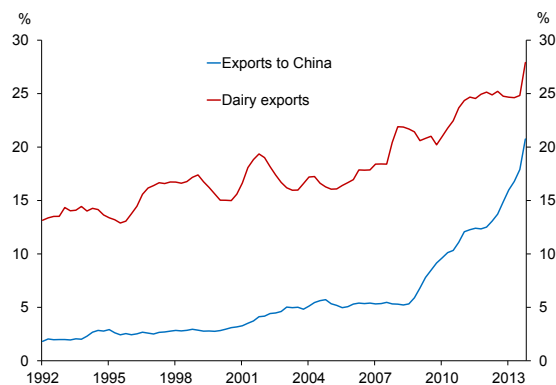
Financial vulnerabilities in China

There is a risk of a disorderly correction to the lending and property boom in China, resulting in a sharp slowing in Chinese growth. The unregulated shadow banking sector has played a strong role in the recent credit boom, with the share of credit growth financed by the sector rising from 11 percent in 2006 to 32 percent in 2013. Much of this credit has been lent to the increasingly indebted local government sector, to fund property development and infrastructure investments. Moreover,

the flow of funding to the shadow banking sector may not adequately reflect the risks involved: some shadow banking products are distributed by banks, potentially creating a perception that they are implicitly guaranteed.

A sharp slowing in the Chinese economy would have significant implications for the New Zealand financial system (box B, chapter 3). Fallout within the financial sector in China could affect global funding markets, potentially increasing funding costs for the New Zealand banks, and result in a marked slowdown in global growth. New Zealand's export receipts – especially from dairy exports – have become increasingly reliant on Chinese economic growth (figure 2.6). As a result, incomes in the indebted agricultural sector could fall sharply, notwithstanding the expected buffering effect of a floating New Zealand dollar. Furthermore, a slowing in China could have significant ramifications for the Australian economy, which could reduce the demand for New Zealand exports in Australia.

Figure 2.6
Concentration of New Zealand exports
(percent of total exports)



Source: Statistics New Zealand.

Policy assessment

As noted above, the Reserve Bank's assessment is that the financial system is currently resilient, but that a number of material risks to financial stability remain. It is important that financial system resilience does not deteriorate in response to cyclical economic momentum, growth in asset prices and loose global financial conditions. Prudential regulations, including both baseline prudential

settings and macro-prudential policies, have a key role to play in ensuring that the resilience of the financial system is maintained.

A number of aspects of the baseline prudential framework will help maintain resilience. The minimum core funding ratio will prevent a material increase in reliance on short-term wholesale funding. Increased regulatory minimum capital ratios ensure that capital buffers will be retained. The Reserve Bank's approach to internal ratings based models, currently used by the four largest banks, is designed to prevent risk weights being overly responsive to cyclical economic conditions. Further, the development of an improved stress testing framework (chapter 6), and a more active supervisory engagement with banks, will improve the overall monitoring of financial system resilience.

The speed limit on high-LVR lending is helping to moderate imbalances in the housing market and, as a result, should reduce the probability of a sharp correction in house prices. The stock of high-LVR lending, as a proportion of total mortgage lending, is expected to decline while the limit is in place. Alongside the increase in capital held against high-LVR lending announced in May 2013, this is expected to bolster the resilience of the banking system to any housing downturn.

It is the Reserve Bank's intention to remove LVR restrictions when there is a better balance of supply and demand in the housing market. The timing of removal will depend on a range of criteria. A key condition for removal is a sustained moderation in house price inflation. In particular, house prices should be rising more closely in line with growth in household incomes. It will also be important that household credit continues to grow in line with household incomes.

The impact of the LVR restriction, by itself, may not be great enough to meet the conditions for removal. However, the effects of the LVR policy are expected to be reinforced by rising interest rates and, over the longer term, by improvements in the supply of housing. Before removing the LVRs, the Reserve Bank will want to be confident that the housing market is responding to interest rate increases, and that immigration pressures

are not causing a resurgence of house price pressures. It will take some time to gain this assurance. At this stage the Reserve Bank considers that the earliest date for beginning to remove LVRs is likely to be late in the year.

The Reserve Bank continues to monitor any signs of unintended consequences of the LVR speed limit, and take appropriate measures in response. The recent staged review of housing capital requirements will ensure that there is a level playing field across the banking system with respect to the speed limit. An exemption to the speed limit for housing construction loans was also announced in December 2013. The exemption mitigates the risk that the speed limit could materially reduce new construction, an outcome that would work against the

objective of moderating imbalances in the housing market.

The Reserve Bank is also monitoring market developments for signs of regulatory leakage that would undermine the effectiveness of the LVR speed limit. To date, there have been few signs of an increase in household lending designed to circumvent the restrictions. The temporary nature of the restrictions, combined with the allowance for some high-LVR lending within the speed limit, significantly reduces the incentives for non-banks to increase their high-LVR mortgage lending. Importantly, banks are required to adhere to the spirit of the policy in their lending behaviour, making it clear that a bank that actively attempts to circumvent the speed limit is in violation of the policy.

Box A

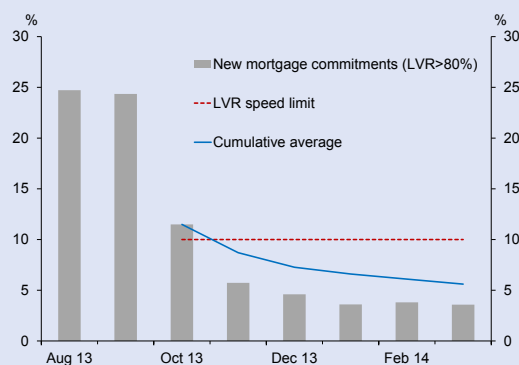
LVR effectiveness monitoring

In October 2013, the Reserve Bank introduced a speed limit on high-LVR residential mortgage lending by registered banks. The Reserve Bank's initial estimates were that LVR restrictions would lower house sales by 3-8 percent, house price inflation by 1-4 percentage points, and housing credit growth by 1-3 percentage points, over the first year that the restrictions are in place.² In addition, the September 2013 *Monetary Policy Statement* estimated that the speed limit would reduce inflationary pressures by the equivalent of a 30 basis point increase in the OCR.³ The Reserve Bank currently judges that LVR restrictions are meeting their objective of mitigating the risks associated with excessive growth in housing-related credit and house prices, with clear evidence of a particularly strong restraining impact on housing market activity in the first six months of implementation.

Since October, banks have rapidly reduced the share of high-LVR lending to well below the speed limit requirement of 10 percent (figure A1). All banks met the first deadline for speed limit compliance at the end of March 2014, with a system-wide share of high-LVR lending of 5.6 percent over the first six months of implementation. The LVR restrictions exempt certain categories of lending, including Welcome Home loans, refinancing and construction. Uptake of these exemptions was limited over the first compliance period, with total exemptions accounting for just 1 percent of total lending in the six months ended 31 March 2014. This uptake is lower than the 5 percent share of lending initially assumed by the RBNZ, primarily due to a lower than expected use of the refinancing exemption.

Data since October confirm that house sales have dropped sharply since the introduction of LVR restrictions, following a run-up in the months prior to the restrictions coming into effect (figure A2). National

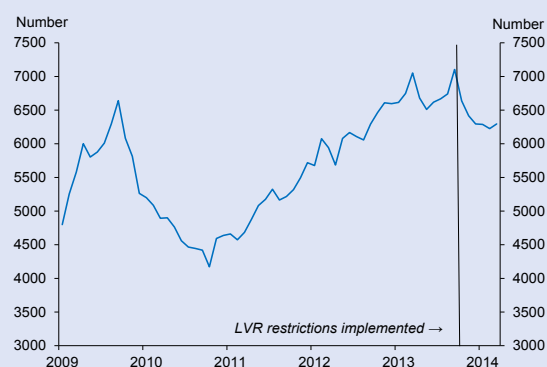
Figure A1
High-LVR mortgage lending
(percent of new commitments)



Source: RBNZ New Residential Mortgage Commitments Survey.

house sales dropped 11 percent between October 2013 and March 2014, with the drop in sales volumes evenly spread across regions. This impact is greater than the initial expectation of a 3-8 percent drop (over the year to October 2014). By comparison, Reserve Bank modelling estimates suggest that, in a counterfactual scenario where the LVR restrictions were not imposed, house sales would likely have increased further in the months since October.⁴

Figure A2
House sales



Source: REINZ.

² See Bloor, C and C McDonald (2013) 'Estimating the impacts of restrictions on high-LVR lending', Reserve Bank of New Zealand *Analytical Note* 13/05, October.

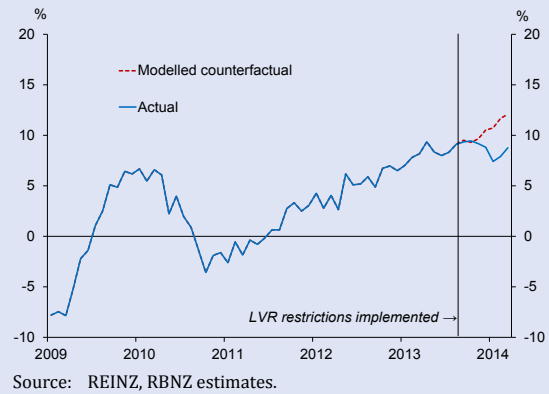
³ See box A, 'Restrictions on high loan-to-value mortgage lending', Reserve Bank of New Zealand *Monetary Policy Statement*, September 2013.

⁴ See forthcoming Reserve Bank of New Zealand *Analytical Note* (scheduled for release in May 2014) for detailed discussion.

The drop in sales appears to have been more pronounced in certain segments of the housing market. Across different price brackets, the reduction in house sales has been concentrated in lower value house sales. House sales dropped 23 percent between September 2013 and March 2014 in the under-\$400,000 value bracket, compared to an 11 percent drop in aggregate. Looking at buyer categories, the share of first home buyers has declined slightly since the introduction of LVRs. According to data produced by CoreLogic, the first home buyer share of home sales declined to 17 percent in February, from an average of around 20 percent over the past two years.

House price inflation also appears to have moderated since the implementation of LVR restrictions. Measuring this has been complicated by the decline in lower value sales, which has created a significant upward bias in simple measures of house price inflation, such as median house prices. The QV quarterly house price index comprehensively adjusts for the composition of house sales, and shows annual growth slowed by 1 percentage point to 9 percent in the final quarter of 2013. Growth in the more timely REINZ stratified price index also slowed in the final quarter of 2013. Despite some adjustments for the composition of sales, this measure appears to have been subject to a degree of upward bias. Annual growth in this index has generally slowed further more recently, notwithstanding a rebound in the most recent March data. The Reserve Bank estimates that, in the absence of LVR restrictions, annual house price inflation could have been around 2.5 percentage points higher in the year to March 2014 (figure A3).

Figure A3
House price growth, including counterfactual without the LVR speed limit
(annual 3-month moving average)



There are also signs that housing credit growth is beginning to moderate in line with reduced property market activity and prices. This slowing is most clearly evident in data from the early stages in the mortgage origination process. Annual growth in seasonally adjusted mortgage approvals and major banks' new mortgage commitments dropped 22 and 17 percentage points respectively between September 2013 and March 2014. With a typical lag of up to three months between initial mortgage approval and final drawdown, and around one month for commitments, these data point to the likelihood of moderation in final housing credit growth in coming months. Housing credit growth was losing momentum at the end of the March quarter, with an annualised decline of 1 percent between December 2013 and March 2014.

There have been few signs to date of home-lending migrating beyond the regulatory perimeter of LVR restrictions. Specifically, there is little evidence of either avoidance activity by the registered banks or a shift to non-bank financial intermediaries and other sources of finance. The Reserve Bank will continue to monitor closely for any signs of regulatory leakage from the speed limit.

3 The international environment and financial markets

The global financial system is going through a period of adjustment. Growth is firming in advanced economies, although the recovery remains fragile. In the US, monetary stimulus is beginning to be withdrawn alongside improving growth prospects. The recent Chinese credit boom is showing signs of slowing, and some other emerging economies are now facing tougher financing conditions. The Australian economy is rebalancing away from strong resource investment to other activities.

A number of risks to global financial stability could negatively impact the New Zealand financial system. A material slowing in growth in emerging economies, particularly China, could result in a sharp fall in New Zealand's export commodity prices, and could result in reduced access to funding for New Zealand banks. Other risks that could disrupt funding markets include a sharp rise in long-term interest rates and international portfolio readjustments associated with the tightening of US monetary policy, and renewed financial stress in Europe.

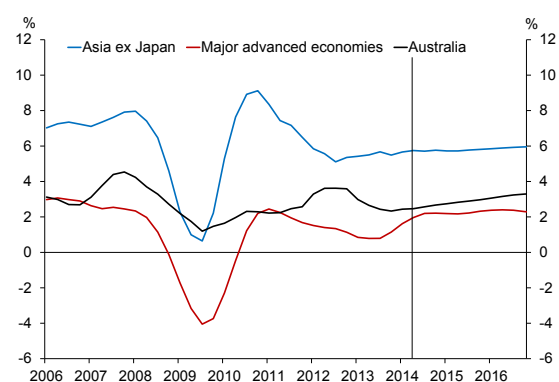
Advanced economies are experiencing firmer growth and easy liquidity...

In advanced economies, sentiment in financial markets continues to improve, as ongoing monetary stimulus has loosened liquidity and increased risk appetite. Improving conditions in financial markets have been associated with a recovery in growth in advanced economies since mid-2013, albeit from low levels (figure 3.1). In the US, growth prospects have reached the point where the Federal Reserve has started to scale back the flow of monetary stimulus.

Nevertheless, the recovery in advanced economies remains fragile, with limited scope for a significant easing in monetary or fiscal policies in response to adverse financial or economic developments. Peripheral European economies continue to struggle with a combination of weak growth, elevated debt levels, and fragile banking systems. Japan has significantly expanded its unconventional monetary policy stimulus, in the context of elevated government debt levels. There is more

evidence of a self-sustaining recovery in the US, where private sector debt levels have moderated in recent years.

Figure 3.1
GDP forecasts for key trading partners
(annual average percent change)

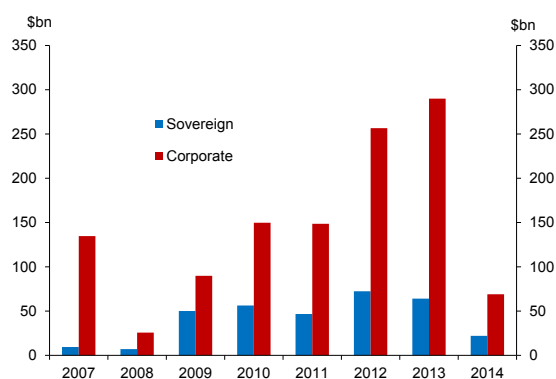


Source: RBNZ.
Note: Forecasts are taken from the March *Monetary Policy Statement*.

...while emerging markets are facing more challenging conditions.

Emerging markets experienced strong capital inflows in recent years, aided by the search for yield associated with exceptional monetary stimulus in advanced economies. Strong capital flows lowered risk premiums and the cost of funding, supporting a rise in bond issuance by domestic corporates (figure 3.2). Many emerging markets have also had strong growth in credit and asset prices in recent years, resulting in elevated indebtedness in some countries (figure 3.3). In the second half of 2013, capital inflows reversed to outflows for many emerging markets, as global investors responded to the outlook for weaker growth, and the prospect of reduced monetary stimulus in some advanced economies.

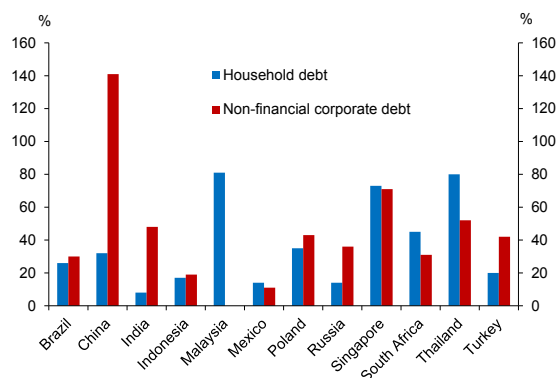
Figure 3.2
Net new USD issuance



Source: Bond Radar, Morgan Stanley.
Note: The 2014 data are through March 24, 2014.

Since the last *Report*, some emerging markets have continued to face significant funding pressures. However, these pressures have tended to be more related to the idiosyncratic factors of specific economies, such as political unrest or large fiscal deficits. As was the case in mid-2013, countries with high current account deficits and high inflation have experienced stronger capital outflows, including Brazil, Turkey, India, Indonesia and South Africa. With the exception of India and Indonesia, New Zealand's emerging market trading partners in the Asia Pacific region have current account surpluses, and have consequently been less affected by the reduction in global appetite for emerging market debt.

Figure 3.3
Household and non-financial corporate debt in selected emerging market economies (percent of GDP)



Source: IMF April 2014 *Global Financial Stability Report*.
Note: Data are for end-2013, or latest available.

A widespread capital outflow could be disruptive.

A more widespread capital outflow could increase financial stress in some emerging markets. Risks are particularly elevated where domestic credit has increased sharply in recent years, or currency depreciation poses a funding risk due to a reliance on externally denominated credit. However, emerging markets, including New Zealand's major trading partners in the Asia Pacific region, have generally strengthened their resilience since the Asian Financial Crisis in the late 1990s. This strengthening has resulted from an increase in the proportion of debt that is denominated in local currency, and a significant rise in foreign currency reserves.

Stresses in emerging market economies could affect New Zealand through a number of channels. The primary channel is likely to be through trade linkages, as emerging economies now account for a significant portion of New Zealand and global trade. Renewed stresses in emerging markets could also disrupt advanced economy financial markets, particularly as many emerging markets have become significant creditors to these markets. Such a disruption could increase the cost of funding for New Zealand banks, or result in a sharp fall in the exchange rate. However, with most borrowing in New Zealand hedged into NZD, a downward adjustment in the currency,

by itself, would most likely have limited implications for financial stability.

There is a risk of a disruptive slowdown in China.

China has experienced a credit, property and investment boom in the years following the GFC. Concerns have centred on the role of the shadow banking sector in funding this boom, signs of a significant increase in risk-taking, and associated risks to the banking system. Since the last *Report*, there have been signs of stress within the shadow banking sector. Box B discusses the risks associated with China's credit boom and financial liberalisation, and the potential implications for the New Zealand financial system.

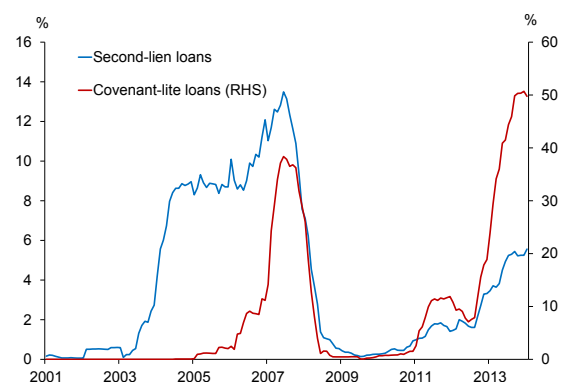
Monetary settings are supporting buoyant financial conditions in the US.

The prolonged period of accommodative policies and low interest rates has led to a search for yield and increased risk-taking in US financial markets. Consequently, lower rated US corporates have been able to issue an increasing amount of debt (figure 3.4) at historically favourable yields. Corporates have taken advantage of low interest rates to increase maturities and debt levels. Corporate leverage (the ratio of debt to total assets) is significantly higher than at the start of the decade (figure 3.5). While corporate defaults are currently low, rising leverage increases the vulnerability of the sector to increases in interest rates or weakening income growth.

The Federal Reserve has started to taper its US bond buying programme, setting the stage for a normalisation of monetary policy settings. The gradual removal of extraordinary stimulus measures in the US could pose risks to domestic and global markets. For example, the initial announcement of a tapering in asset purchases led to a sharp increase in longer-term yields, an increase in bond market volatility and, as noted above, played a role in capital outflows from some emerging market economies. Since then, improved communication of the expected path of monetary policy has helped

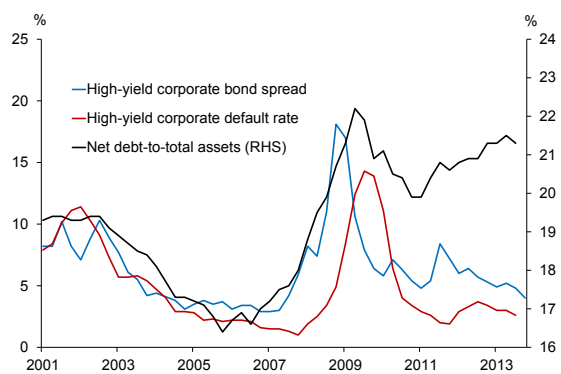
reduce longer-term yields and volatility. The speed and management of monetary policy tightening needs to balance the risk of increasing leverage within the financial system with the risk of arresting the economic recovery.

Figure 3.4
US high yield bond issuance
(12-month issuance as percent of market size)



Source: Bank of America Merrill Lynch, IMF staff estimates.

Figure 3.5
Leverage and credit spreads for US non-financial corporations



Source: Bank of America Merrill Lynch, Federal Reserve, IMF staff estimates.

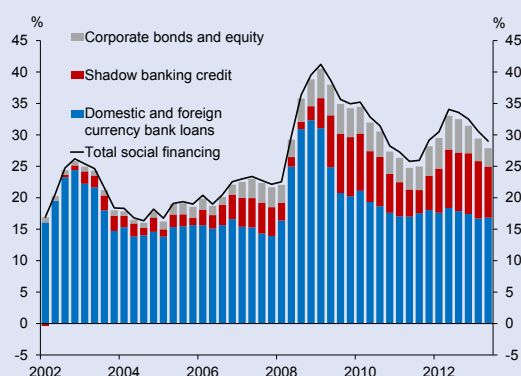
Box B

Financial risks in China and implications for New Zealand

China's strong economic growth in recent years has made it increasingly important to the global economy, and to New Zealand as a trading partner. However, China's growth has recently been associated with the build-up of fragilities in the financial sector. The potential for financial instability has been brought into focus in 2014 as a result of two corporate bond defaults and losses on several trust investment products. This box discusses three main sources of financial risk in China and identifies the channels by which a financial crisis and a resulting sharp slowing in GDP growth in China could affect New Zealand.

China has experienced a rapid expansion of credit since 2008, which has helped to sustain strong growth in investment over the same period.¹ A growing proportion of credit has been intermediated outside the formal banking sector (figure B1). This so-called 'shadow' banking sector includes informal lending

Figure B1
Sources of financing in China
(flow of financing as a percent of GDP)



Source: Haver Analytics.

Note: Total social financing includes foreign and domestic bank loans, trust loans, entrusted loans, private loans, corporate bonds, equity issuance, and bankers' acceptances.

¹ A large proportion of the increase in credit is associated with the 2008-09 stimulus package which aimed to offset the large impact of the GFC on the Chinese economy. Stimulus was largely in the form of debt-funded infrastructure investment undertaken by local governments, and directed lending by banks to state-owned enterprises to support production.

between businesses, off-balance sheet activities of banks, lending by trust companies and non-bank financial institutions, and funding of local governments through special purpose investment vehicles.

Both the banking and shadow financing sectors in China face significant risks associated with funding industries that have significant overcapacity. In addition, the risk on these investments is potentially under-priced, as one way the shadow banking sector funds these projects is through wealth management products distributed through banks. Savers may believe the banks implicitly guarantee these products. If left unsupported, shadow banking products have higher risk than traditional bank products, as the sector is less regulated and supervised than the banking sector. Weaker leverage and liquidity requirements create an incentive for riskier transactions to take place in the shadow banking sector.

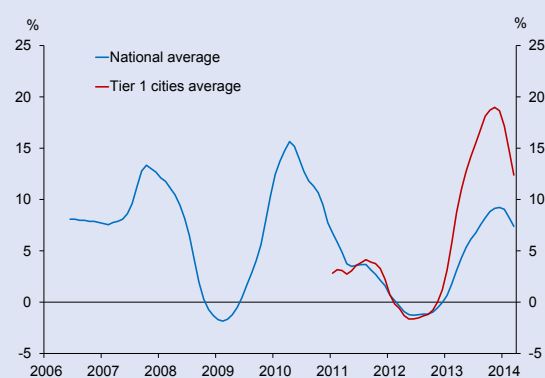
A second source of risk in the Chinese financial system is associated with local government financing. Local governments have funded long-term investments with short-term debt raised via corporate entities known as local government financing vehicles (LGFVs).² These funding vehicles therefore face significant funding and liquidity risks. LGFVs have become increasingly reliant on shadow financing to roll over funding. A recent audit of local government finances undertaken by China's National Audit Office estimated local government debt to be 33 percent of GDP as at June 2013 – over half of which is set to mature by the end of 2015.

A third significant risk to the Chinese financial system is the potential for a sharp decline in property prices. Property prices in China have experienced several periods of rapid growth in recent years (figure B2). This growth has been underpinned by strong housing demand in large cities due to urbanisation, as well as increased speculative investment. Low returns on bank deposits encourage savers in China to invest in property. Local governments also rely on property markets and land sales as sources of revenue and as

² Local governments are largely prohibited from directly raising finance from bank loans or bond issuance. To raise funds they establish special purpose investment vehicles to indirectly access funding for infrastructure investment.

collateral for raising funds via LGFVs. A sharp fall in property prices would reduce household wealth, increase balance sheet stress for local governments and property developers, and potentially trigger more widespread asset losses in the financial system.

Figure B2
Property price inflation in China
(annual percent change)



Source: Haver Analytics, RBNZ calculations.
 Note: National average is a simple average of 70 cities. Tier 1 cities comprise Beijing, Shanghai, Guangzhou, and Shenzhen.

There are two main channels by which financial instability in China could impact on New Zealand: the trade channel (where China has become increasingly important), and the capital channel through the impact on offshore funding conditions.

In November 2013 China overtook Australia to become New Zealand's most significant export partner. China has been urbanising rapidly in recent years, and urban households tend to have higher incomes and more westernised diets. As a result, Chinese consumers have greatly increased their consumption of meat and dairy products, and New Zealand's agricultural exports to China have benefited accordingly. A contraction in Chinese demand associated with a financial crisis could have a major impact on New Zealand agricultural exports. While New Zealand could maintain export volumes by diverting products to other markets, a drop in Chinese demand for soft commodities would put significant downward pressure on New Zealand's export prices globally. The New Zealand dollar would be likely to decline if soft commodity prices fall, cushioning the

impact on prices in New Zealand dollar terms.

New Zealand exports could also be affected indirectly through other trading partners. If investment and production fall in China, reduced demand for capital goods and hard commodities would reduce export demand for Asian trading partners and Australia. Australia's terms of trade and exchange rate could decline sharply, impacting employment and incomes. These detrimental effects could further reduce demand for New Zealand's exports.

Turning to the capital channel, the degree of direct contagion from Chinese to global financial markets is highly uncertain. Nonetheless, serious financial disruption would likely undermine investor sentiment towards the Asian region, leading to capital outflows and posing significant challenges for policymakers in the region – particularly in those countries with high levels of foreign currency debt. Similarly, capital could withdraw from New Zealand and Australia as investors re-evaluate assumptions of strong Chinese growth underpinning growth in both countries over the longer term. Chinese outward investment has increased rapidly in recent years, although remaining small compared to global flows of foreign investment. In the event of financial crisis, Chinese investors may choose to repatriate funds invested abroad in an attempt to consolidate balance sheets.

The Chinese Government has recognised the financial risks. The Third Plenum in November 2013 proposed plans for liberalising interest rates, reforming local government finances, and improving transparency and regulation in the shadow banking sector. They also proposed to introduce a depositor protection scheme in 2014. While positive, implementation of the reforms will introduce their own risks of financial disruption in the near term. For example, interest rates may rise as a result of interest rate liberalisation, increasing the debt-servicing burden, and reducing investment demand for property. Depositor protection for some saving products could reduce investor interest in un-guaranteed sectors.

The Chinese Government is well placed to act in the event of financial distress to support financial

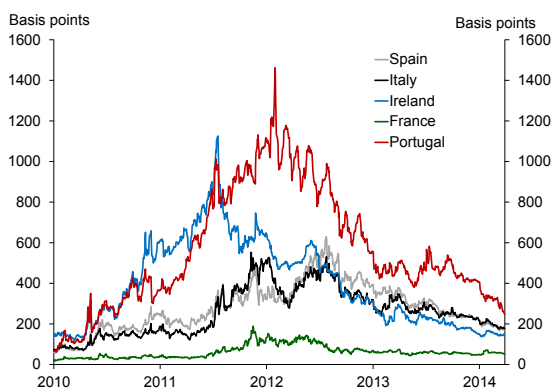
stability. The central government holds extensive assets and foreign reserves. External debts are minimal and central government debt is low. This suggests that the Chinese Government has the capacity to intervene to stabilise financial markets, and provide direct support

to the banking system if necessary. Therefore, while the substantial financial stability risks in China must be monitored because of their potential impact on New Zealand, the Chinese authorities have some capacity to manage those risks.

Conditions in Europe remain fragile.

Conditions in Europe have continued to improve since the last *Report*. The improvement has been particularly notable for stressed peripheral countries, as reflected in a marked decline in government bond yields relative to Germany (figure 3.6). Market conditions for European banks have also improved, with an increase in aggregate price-to-book ratios and further narrowing in credit default swap spreads. Markets appear to have moved away from the view that the euro area is imminently heading for a crisis, and instead focused on idiosyncratic risks in individual countries and institutions. This is in part due to policy changes at the national and supranational level, including steps towards a European banking union, and higher capital ratios.

Figure 3.6
European 10-year sovereign bond spreads
(basis points)



Source: Reuters.

Note: Spreads are to German 10-year government bonds.

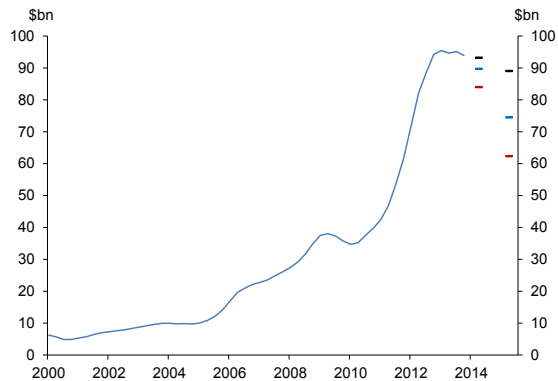
Some stressed banks in the euro area remain burdened by their large stock of non-performing loans, partly related to a household and corporate debt overhang in peripheral economies. Asset losses have impaired the

capacity of the banking sector to supply credit, potentially reducing the prospect of a sustained growth recovery in Europe. Policymakers are working to avoid this by assessing bank balance sheets (with an Asset Quality Review, followed by stress tests) and ensuring banks are recapitalised where necessary. Inflation has also fallen to low levels. This has increased the risk of deflation, which would worsen the burden associated with elevated debt.

Australia is transitioning away from mining-led growth.

Between 2000 and 2010, strong Chinese demand for iron ore and coal, and demand for LNG from other parts of Asia, significantly increased Australia's terms of trade. Resource investment had also been a large driver of GDP growth over those years as resources were drawn into mining investment projects from other activities. More recently, resource investment is estimated to have peaked (figure 3.7), and the terms of trade have declined. As a result, an increase in domestic demand is required to sustain economic growth.

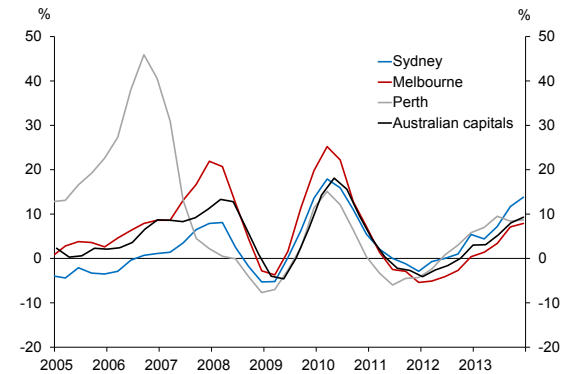
Figure 3.7
Investment pipeline for the Australian resource sector
(Australian dollars, annual total)



Source: Haver.
Note: Black, red and blue lines indicate scenarios for the 2013/14 and 2014/15 years. Blue applies the average realisation ratio (of intentions to actual capex) from the past five years, while black and red apply the highest and lowest ratios observed over this period.

Low interest rates are encouraging rising housing market activity and house price inflation. Annual growth in house prices has increased to 9.3 percent, with the biggest increases in Melbourne, Sydney and Perth (figure 3.8). Rising house prices should encourage increased construction, alleviating some of the housing shortages that have resulted from previous underbuilding relative to population growth. However, there are risks to financial stability associated with rising house prices. House prices are rising from levels that appear elevated relative to incomes and rents, and in the context of a large amount of debt secured against housing. There are also signs of a rise in riskier mortgage lending practices, including interest-only loans.

Figure 3.8
Australian house price inflation
(annual percent change)



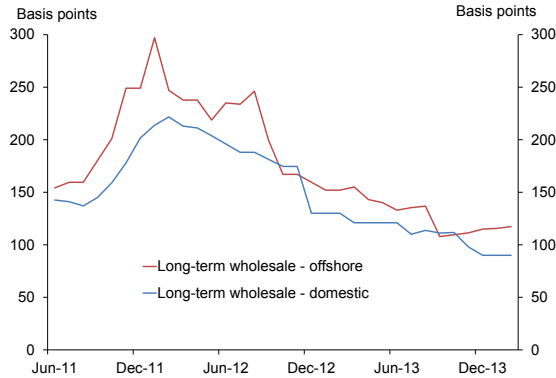
Source: Australian Bureau of Statistics.
Note: Australian capitals is a weighted average of Australian state capitals.

A slowing in economic growth or increase in financial stress in Australia would have implications for New Zealand. Weaker Australian growth would directly reduce the demand for New Zealand exports. Increased stress for the parent banks in Australia could have financial repercussions for the New Zealand subsidiaries, including reduced access to offshore funding markets. However, Australian banks hold strong capital buffers compared to their international peers. The subsidiaries are also financially ring-fenced from the parents, and do not rely heavily on the parents for funding.

Banks are experiencing favourable conditions in offshore markets...

Bank funding costs have been on a downward trend since late 2011, and are now at post-GFC lows. As noted in chapter 5, banks have experienced strong inflows of retail deposits, resulting in a reduction in retail funding spreads. As growth in deposits has been sufficient to fund credit growth, banks have had limited need to access wholesale funding markets. When banks have accessed wholesale funding markets, conditions have been favourable (figure 3.9). Declines in offshore funding costs partly reflect the improving sentiment and easy liquidity in global markets more generally.

Figure 3.9
Long-term wholesale funding costs
(3-month average, spread to swap rate)

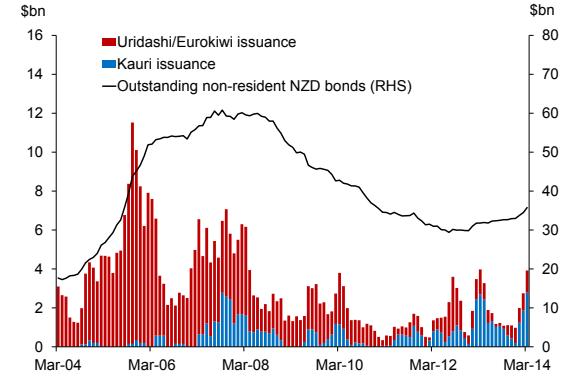


Source: RBNZ liquidity survey.
Note: Long-term wholesale includes the average landed cost of new debt issues of between four and seven years.

...and hedging costs are easing.

Since the GFC, bank hedging costs (the cost of swapping foreign currency funding to NZD) have been elevated, and have accounted for a significant proportion of offshore bank funding costs. High hedging costs reflect weak issuance of NZD debt by non-residents in the Kauri, Eurokiwi and Uridashi markets. This has limited the supply of NZD bonds that could be swapped with the domestic banks' foreign currency debt. More recently, issuance of NZD securities by non-residents has increased (figure 3.10). In particular, Kauri issuance has been relatively strong, with annual issuance more than doubling in 2013 to \$4.8 billion.

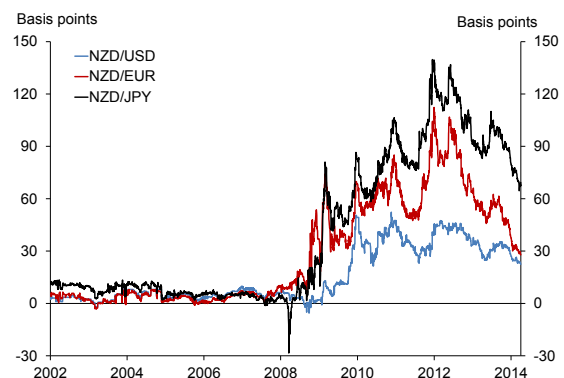
Figure 3.10
Non-resident NZD bonds
(3-monthly total)



Source: RBNZ liquidity survey, Reuters.

The stream of Kauri issuance has meant that hedging costs (the basis swap spread) have declined, helping to lower bank funding costs (figure 3.11). Further issuance of NZD securities by non-residents could be incentivised by the outlook for interest rates to rise to levels that are significantly higher than most other advanced economies, and a still-elevated basis swap spread. However, demand for basis swaps could rise if domestic banks increase their issuance of offshore funding.

Figure 3.11
Hedging cost for 5-year debt
(basis swap spreads)



Source: Bloomberg.

4 Financial risks to the New Zealand economy

House prices rose rapidly between 2012 and late 2013. With debt levels already high in the household sector, and house prices overvalued on several measures, there was an increasing risk of a disruptive correction in the housing market. The Reserve Bank responded to this risk by introducing restrictions on banks' high-LVR housing lending. There are signs that this policy, alongside rising interest rates, is starting to moderate imbalances in the housing market.

Debt levels are also elevated in the rural sector, exposing the sector to a fall in incomes or decline in farm prices. Much of this debt is concentrated among leveraged farms in the dairy sector. At present, elevated export prices are driving strong growth in farm incomes. The vulnerability of the farm sector could increase if this prompts a significant increase in rural property prices and rural debt.

New Zealand has a longstanding vulnerability associated with a high level of net external debt. Offshore borrowing is expected to increase in coming years, to fund an increase in residential and business investment. If the rise in investment demand is accompanied by a decline in the private savings rate, or an increased fiscal deficit, the exposure of the financial system to global funding markets could increase significantly.

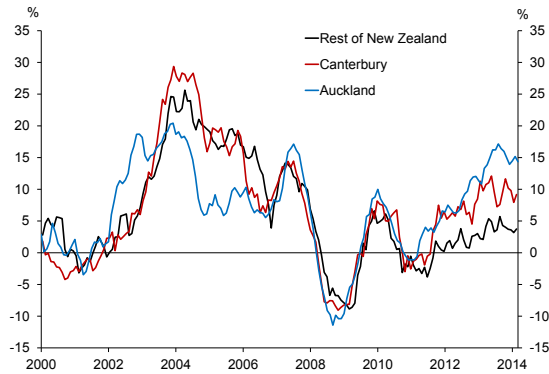
The financial system is vulnerable to a sharp correction in house prices...

Over the past two years, rising imbalances in the housing market have increased the risk that an economic downturn could trigger a sharp decline in house prices. This scenario, which played out in many other advanced economies in the wake of the GFC, would undermine the financial position of New Zealand households. Economic activity could slow sharply as households reduce consumption, investment in housing declines, and banks tighten lending standards. The high level of household debt, combined with the rise in high-LVR lending between 2012 and late 2013, is likely to have increased the number of households that might experience financial distress.

...reflecting rising housing imbalances...

The rise in house price inflation in recent years has been concentrated in Auckland and Canterbury, and reflects a low level of supply relative to demand. New house building in Auckland has been muted for a number of years at the same time as population has been growing, while the housing stock in Canterbury has been negatively impacted by the earthquakes. At the national level, housing demand had been supported by a period of historically low interest rates, an easing in credit conditions between 2012 and late 2013 and, more recently, an increase in net inward migration. Rising house prices over the past few years have further increased measures of house price overvaluation.

Figure 4.1
House price growth by region
(annual 3-month moving average)



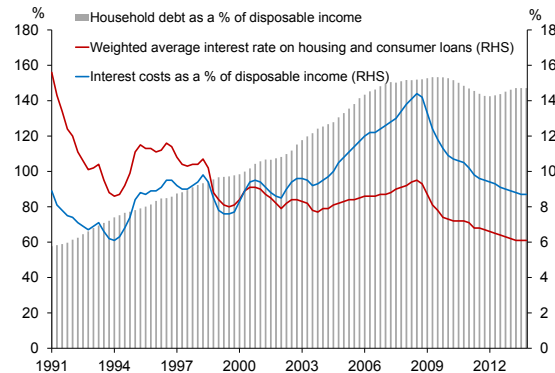
Source: REINZ.

...and elevated household debt.

Household borrowing increased sharply in the decade prior to 2007, reflecting strong activity in the housing market and rising house prices. The ratio of household debt-to-disposable income peaked in 2009 at 153 percent, and corrected somewhat in the immediate post-GFC period (figure 4.2). Historically low interest rates have enabled the household sector as a whole to comfortably meet its debt obligations, and it appears that many households have taken advantage of low interest rates to increase voluntary principal repayments.

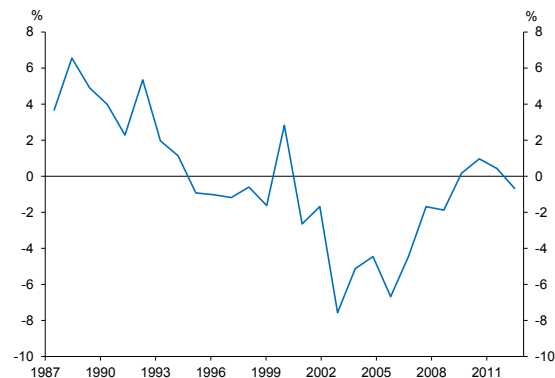
Between 2012 and early 2013, household indebtedness increased back towards its 2009 peak, and the household savings rate declined (figure 4.3). Although the household debt-to-income ratio has been flat at 147 percent over the past three quarters, there is a risk of a further reversal in savings and debt repayment. For example, recent increases in household net worth (see below) and rising household confidence could underpin consumption growth, while voluntary principal repayments could decline alongside rising interest rates.

Figure 4.2
Household debt and interest servicing costs



Source: RBNZ Household Asset and Liabilities (HHAL).

Figure 4.3
Household saving rate
(percent of household disposable income, March years)



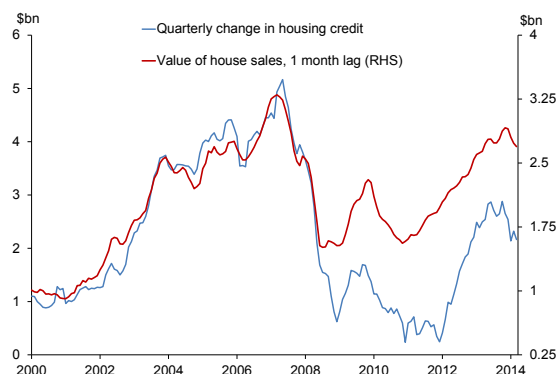
Source: Statistics New Zealand.

The speed limit on high-LVR lending is moderating housing imbalances.

As discussed in chapter 2, the Reserve Bank has introduced a speed limit on high-LVR lending, with the objective of reducing the risk of overvalued house prices correcting sharply. Since the introduction of the policy in October, housing market activity has slowed, while housing-related credit growth has started to decline (figure 4.4). Rising longer-term mortgage rates throughout 2013 may have also played a part in dampening housing demand, helping to offset the stimulatory impact of strong net migration. Over the longer term, housing imbalances

are expected to fall as increased residential building activity results in an improvement in housing supply.

Figure 4.4
Housing credit and house sales



Source: REINZ, RBNZ Standard Statistical Return (SSR).

Household net worth has increased.

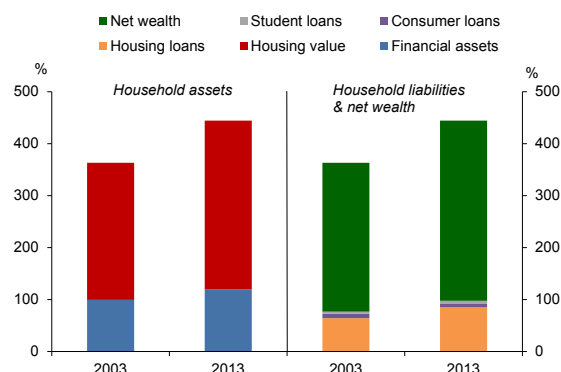
The aggregate household balance sheet has grown strongly over the past decade. After taking into account total liabilities, the household net asset position has increased to 350 percent of GDP. Housing wealth accounts for the majority of household assets, and drove most of the increase in household wealth over the past decade (figure 4.5).¹ Household net worth has increased by 11 percent over the past year, due to a rise in house prices and an increase in the value of financial assets.

Liquid financial assets, such as retail deposits, act as a buffer for households in a scenario where a significant decline in house prices reduces net wealth. The value of household financial assets has continued to increase at strong rates since the last Report, attributable to continued growth in retail deposits and managed funds (figure 4.6). Retail deposits, held primarily in the banking system, now account for half of the household sector's total financial assets, up from 44 percent in 2007. Rising deposits have been supported by an improvement in the

¹ The Reserve Bank's household balance sheet is known to underreport financial assets such as equity in unincorporated businesses and shares in unlisted companies. Adjusting for this measurement issue would result in a lower share of housing in total assets. See Briggs, P (2012) 'Financial accounts and flow of funds', Reserve Bank of New Zealand *Bulletin*, 75(4), pp. 26-35, December.

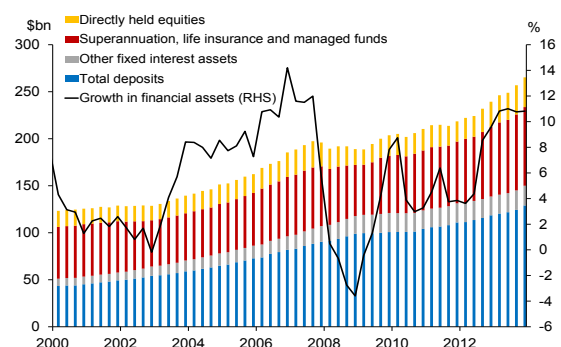
household saving rate and transitory insurance-related payouts from the Canterbury earthquakes.

Figure 4.5
Balance sheet of the household sector (percent of GDP, as at December)



Source: RBNZ HHAL.

Figure 4.6
Household financial assets



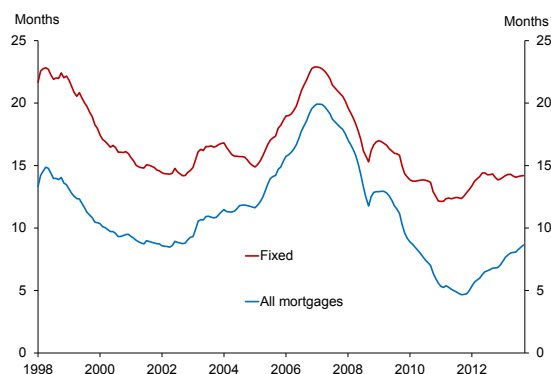
Source: RBNZ HHAL.

Debt servicing costs are expected to rise...

In March, the Reserve Bank began tightening monetary policy in response to rising inflation pressures, and projected further increases in coming years. Longer-term interest rates rose throughout 2013 in anticipation of rising short-term interest rates, and in response to higher global long-term interest rates. Projected increases in short-term interest rates are expected to dampen household demand for credit, and reinforce the impact of the speed limit on high-LVR lending in reducing the financial stability risks associated with the housing market.

The aggregate debt servicing costs of the household sector will rise as the tightening cycle unfolds. Some insulation will be provided by the maturity profile of the total mortgage book. The average time to re-price for the mortgage book has increased to close to nine months, from four and half months at the start of 2012 (figure 4.7). However, a large proportion of fixed mortgages are for a term of one year or less, and longer term mortgage rates are significantly higher than for mortgages at terms of less than one year. As a result, the tightening of monetary policy is expected to have a stronger and more immediate effect on household interest payments than during the previous tightening cycle between 2003 and 2007.

Figure 4.7
Weighted average time to re-price mortgage book



Source: RBNZ SSR.

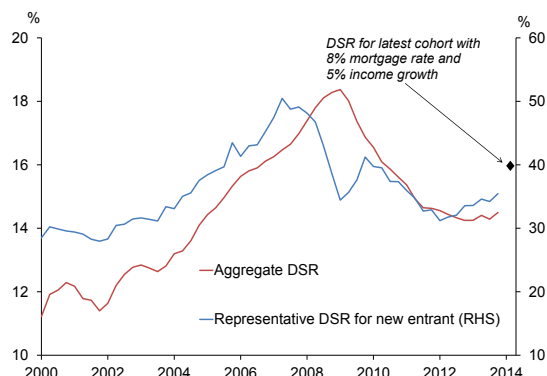
Rising interest rates are likely to be accompanied by faster growth in household incomes, helping to offset the impact of rising interest rates on debt servicing costs. As noted above, there appear to be a large number of existing borrowers who have increased their voluntary principal repayments since the GFC. These households also have the option of scaling back the level of voluntary principal repayments as interest rates rise.

...particularly for indebted borrowers.

The vulnerability of the household sector is influenced by the distribution of debt across different types of borrowers. As shown in figure 4.8, the debt servicing ratio (DSR) for a representative high-LVR borrower,

earning the average household income, is expected to increase to nearly 40 percent as mortgage rates increase. Research presented in previous *Reports* found that the vulnerability of high-LVR borrowers was partly mitigated because of above average incomes and relatively low debt-to-income ratios.² However, the recent period of exceptionally low interest rates is likely to have resulted in borrowers, including the recent cohort of high-LVR borrowers, being able to borrow at more elevated debt-to-income ratios. The Reserve Bank is beginning to gather more data about the debt servicing characteristics of high-LVR borrowers, as part of the *New Residential Mortgage Lending Survey*.

Figure 4.8
Household debt servicing ratios
(principal and interest payments as share of disposable income)



Source: RBNZ HHAL, Property IQ, RBNZ calculations.

Note: The representative new entrant is assumed to earn the average household income, and have a mortgage with an 80 percent LVR that is financed at the 2-year mortgage rate. Principal repayments for the aggregate DSR are imputed.

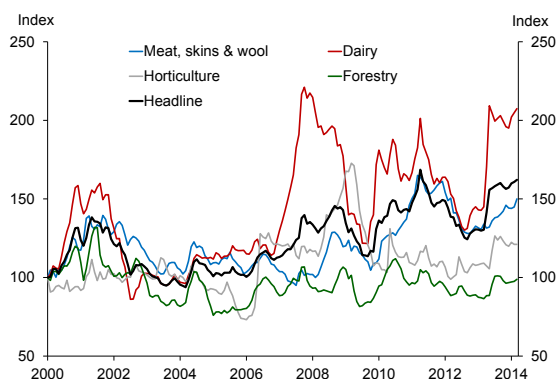
The financial position of the farm sector has improved.

Robust global demand, elevated commodity prices and favourable climatic conditions have contributed to an improvement in farm sector balance sheets over the past year. World prices for New Zealand's primary exports are high, reflecting strong global demand, particularly from China, and supply constraints facing some global

² See box C, 'Financial vulnerability of owner-occupied mortgage debt', in the November 2011 *FSR*.

agricultural producers. New Zealand dollar commodity prices have also increased, notwithstanding the elevated value of the NZD (figure 4.9).

Figure 4.9
Export commodity prices
(NZD, rebased January 2000=100)



Source: ANZ.

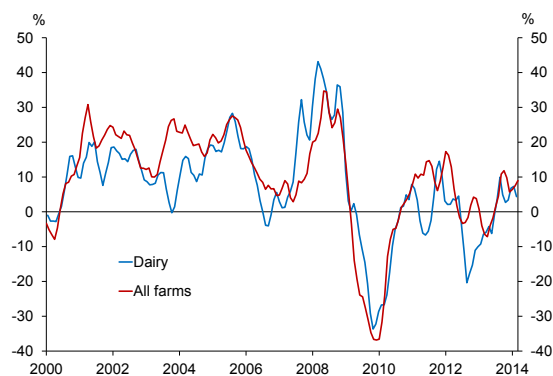
In the dairy sector, Fonterra has increased its forecast farmgate milk payout for the current 2013/14 season by 35 cents to \$8.65 per kilogram of milk solids (kgMS). Including the already announced dividend of 10 cents per share, the total forecast cash payout is at a record level of \$8.75 per kgMS. Over the course of 2014 world dairy prices are expected to ease somewhat as global production responds to high prices. World dairy prices have already fallen 20 percent at GlobalDairyTrade auctions in recent months.

Recovery from drought in the first half of 2013 has enabled much of the agricultural sector to increase production and take full advantage of current elevated commodity prices. Confidence is strong across the agricultural sector. Sentiment is highest in the horticulture sector, due to increases in horticultural export prices and the recovery from the effects of the PSA outbreak on kiwifruit growers in 2011.³

Activity in the farm market is increasing...

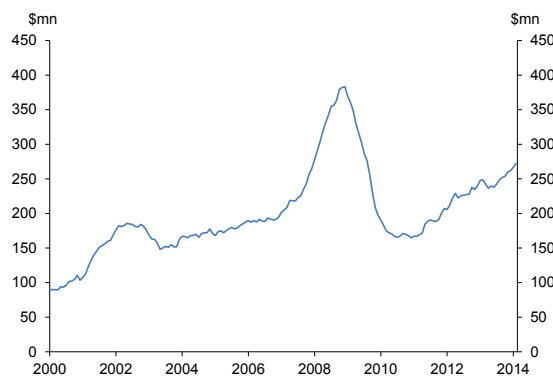
Sales volumes have increased for most rural property types over the past year, reflecting strong commodity prices and improved confidence. Stronger sales activity has translated into higher prices for rural property (figure 4.10). With dairy prices at very elevated levels, there has been strong buyer interest in existing dairy farms, land suitable for future conversions, and dairy support blocs. Increased confidence has also flowed through to a steady increase in farm building consents (figure 4.11).

Figure 4.10
Farm land price inflation
(annual 3-month moving average)



Source: REINZ.

Figure 4.11
Farm building consents
(annual total)



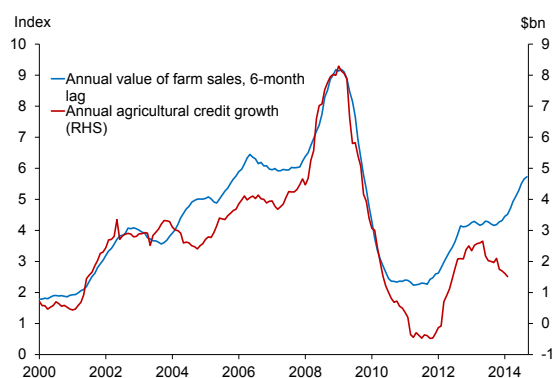
Source: Statistics New Zealand.

³ See Rabobank's recent *Rural Confidence Survey*; March 24, 2014.

...suggesting credit growth could rise...

Agricultural credit growth has been declining in annual terms since early 2013. Recovery from drought has reduced working capital requirements, and many farmers appear to be using higher incomes to repay debt. However, credit growth is likely to pick up in the near-term. Farm buyers (e.g. new entrants, or younger farmers expanding their operations) typically have higher LVRs than those selling farms (e.g. older or established farmers selling up). Rising farm land prices worsen this wedge, implying that the recent rise in the number of property transactions will increase credit growth (figure 4.12). In the dairy sector, contacts from recent business visits noted that the number of dairy conversions was expected to pick up over the next few years. These conversions will also underpin credit growth, and could place further upward pressure on rural land prices.

Figure 4.12
Value of farm sales and credit growth



Source: REINZ, RBNZ SSR.

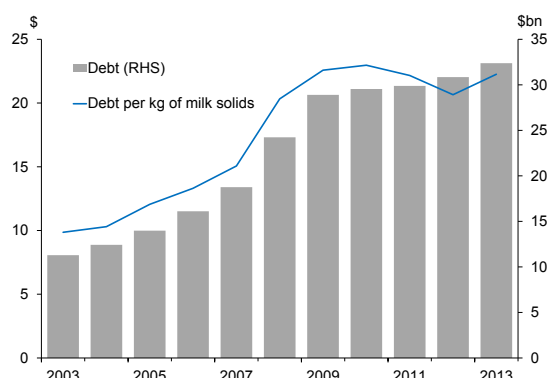
...potentially increasing vulnerability.

Debt levels in the farm sector have increased far more rapidly than farm incomes over the past decade, with debt growing by 290 percent between 2000 and 2010. The level of rural indebtedness subsequently stabilised in the post-GFC period, as farmers became more cautious in an uncertain global environment, banks tightened credit conditions, and credit growth slowed markedly. Between September 2010 and April 2011, the stock of outstanding farm debt fell by around \$1.2 billion. In subsequent years,

the level of debt across the sector has increased 10 percent, as credit conditions have eased and confidence has returned to the sector.

Of the \$52 billion in total agricultural debt, around 65 percent is in the dairy sector, reflecting a large number of capital-intensive dairy conversions and rapid price inflation for dairy-related land in the period up to 2009. Measured against milk production, dairy indebtedness has declined since 2010 – excluding early 2013 when the drought disrupted production (figure 4.13). Within the dairy sector, the distribution of debt is heavily skewed towards a small number of highly indebted farms. Of the \$32 billion in dairy debt, for example, around half is held by just 10 percent of dairy farmers.

Figure 4.13
Dairy debt
(June years)



Source: Fonterra, RBNZ Annual Agricultural Survey.

High debt levels increase the sensitivity of rural borrowers to a substantial decline in farm commodity prices, declining land prices or worsening climatic conditions. With dairy production techniques becoming more intensive, the implied 'breakeven' milk payout for individual farm profitability has increased over time. A significant decline in the milk payout would place some highly indebted farmers under financial strain, and illiquidity in the farm resale market could reinforce falls in the value of farm land. The decline in dairy auction prices this year suggests the 2014/15 milk payout will be materially lower than for the current season. In addition, with close to 70 percent of dairy debt on floating rate mortgages, rising

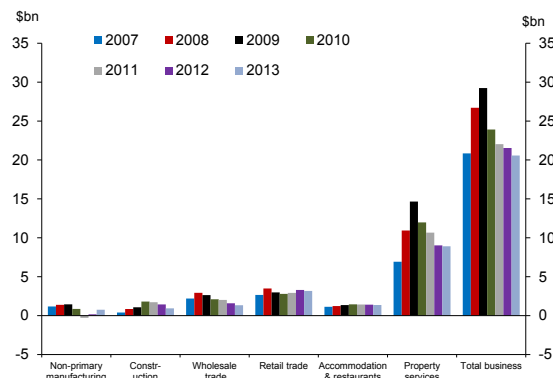
interest rates could increase any stresses should incomes fall.

With export prices currently high, there is a risk farmers undertake borrowing decisions assuming that prices remain elevated, and that these expectations are capitalised into higher farm land prices. Although activity in the farm market and investment intentions have recently picked up, there is currently little evidence of an excessive increase in debt appetite. In the March 2014 *Credit Conditions Survey*, banks reported that the demand for agricultural credit had increased significantly less than expected six months ago. This is consistent with the anecdote that many farmers are taking advantage of high current incomes to repay debt.

Business sector balance sheets have strengthened.

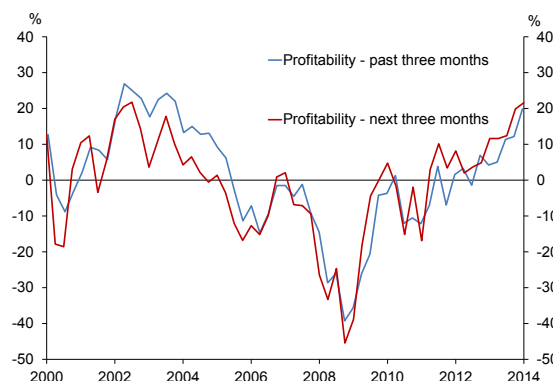
The financial position of the business sector has improved over the past few years. In the period following the GFC, businesses reduced debt levels in an environment of subdued aggregate demand and weak investment. Debt outstanding in the sector fell by 12 percent, or \$9.8 billion, between late 2008 and 2010. The business sector has also increased its funding of the banking system. As a result, the net debt position with banks has declined significantly in a number of sectors, most notably in the property services sector (figure 4.14). More recently, as the broader recovery in economic activity has unfolded, confidence across the sector has increased, profitability has improved (figure 4.15), and business investment has picked up.

Figure 4.14
Business net debt position with banks by sector



Source: RBNZ SSR.
Note: Net debt is total NZD claims (lending) less NZD funding (deposits).

Figure 4.15
Business profits
(net percent, demeaned)

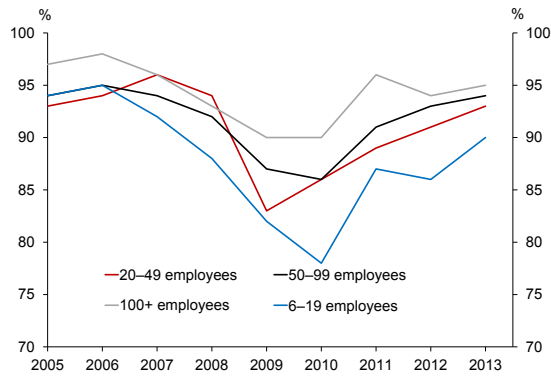


Source: NZIER Quarterly Survey of Business Opinion.

Business credit growth picking up.

The increase in business investment, initially funded largely by firms' internal resources, has led to strengthening credit demand over the course of 2013. In the year to March 2014, total business credit grew 3.2 percent. Improved access to funding has accommodated the increase in business credit demand (figure 4.16). There was a particularly large easing in lending standards for smaller firms in 2013. In a similar vein, banks also report an ongoing easing in the terms and conditions of their business lending in the latest *Credit Conditions Survey*.

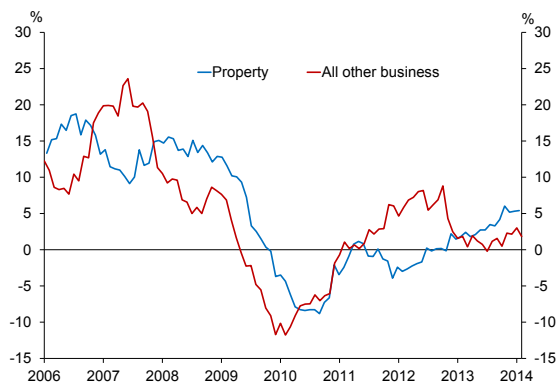
Figure 4.16
Availability of debt finance on acceptable terms
(August years, percent of total businesses)



Source: Statistics New Zealand *Business Operations Survey*.

Since the start of 2013, most of the increase in business credit has been driven by property-related business lending (figure 4.17). This growth has been driven by a number of factors, including the recovery in the commercial property sector. Non-property business investment increased in late 2013, and this trend is expected to continue over the next year. Depending on the availability of internal funding in the sector, higher investment could translate into a pick-up in non-property lending.

Figure 4.17
Property and non-property business lending
(annual percent change)



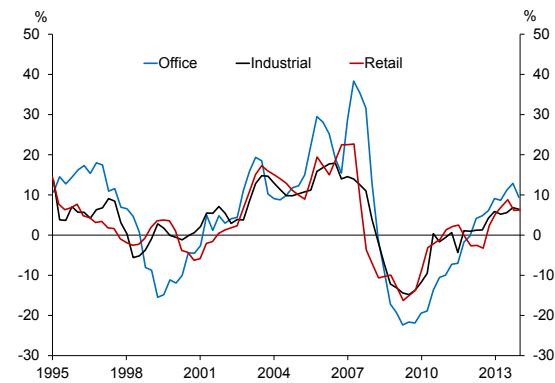
Source: RBNZ SSR.

Note: 'Property' includes building and construction lending, and property and business service lending from the SSR.

Activity in the commercial property sector continues to increase.

Increased economic activity in 2013 has led to growing demand for industrial, office, and retail space. This is reducing vacancy rates, bidding up the price of existing commercial space, and prompting construction of new commercial property space. Property price inflation in the office, retail, and industrial sectors has recovered significantly from the trough in early 2009 (figure 4.18). However, demand for low quality commercial property has been relatively weak, partly due to the need to earthquake strengthen some buildings. In the March 2014 *Credit Conditions Survey*, banks report a continued easing in lending standards for commercial property, accommodating the recent increase in credit demand. Banks report a particularly strong increase in the demand for property development financing.

Figure 4.18
Estimated market values of commercial property by sector
(annual percent change)



Source: Jones Lang LaSalle.

Note: Prices are an imputed capital return series.

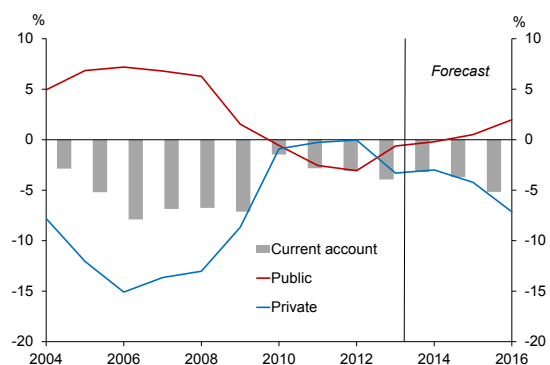
Saving-investment imbalance set to widen.

New Zealand has a longstanding vulnerability associated with a high level of net external liabilities, reflecting a persistent gap between national saving and desired investment. Offshore borrowing by the New Zealand banking system has historically acted as the main conduit for foreign savings to meet this shortfall. A

reliance on offshore funding exposes banks to funding-liquidity risks associated with sentiment in global financial markets.

Over the past few years, the private sector's contribution to the current account deficit (CAD) has been modest, owing to an increase in private sector saving and subdued business investment. However, the CAD is expected to deteriorate (figure 4.19), as the terms of trade moderate, and imports grow due to the Canterbury rebuild and broader increase in economic activity. As noted above, the household saving rate fell in 2013 and there is a risk that the saving rate falls further. Should this occur, or if private sector investment increases more than expected, then the deterioration in the CAD will be greater than forecast. In this scenario, banks would likely be increasing their reliance on offshore markets. Any subsequent disruption in global funding markets or marked change in investor sentiment towards New Zealand could result in financial system stress. While liquidity support from the Reserve Bank would assist the banking system, there would likely be a substantial tightening in credit conditions and sharp fall in the exchange rate.

Figure 4.19
Sectoral contribution to the current account deficit
(percent of GDP, March years)



Source: Statistics New Zealand.

Ongoing fiscal consolidation and the Government's affirmation to return to surplus by 2014/15, has reduced public sector borrowing requirements. This should help to offset the impact of the expected excess of private sector investment relative to savings on the external accounts. A lower level of public debt also allows greater flexibility for government to respond to any financial crises in the future.

5 Financial institutions and infrastructure

The banking system remains sound. Falling non-performing loans continue to support the profitability of the banking sector. Banks are comfortably meeting their regulatory capital requirements, including the conservation buffer requirement which came into effect at the start of the year. Restrictions on high-LVR residential mortgage lending are reducing the system's vulnerability to a sharp fall in house prices. Bank lending is growing at a modest pace. Credit growth has been funded through strong retail deposit growth over recent times, but is now starting to exceed retail deposit growth. If this trend continues, banks will become more reliant on wholesale funding markets.

Lending by non-banks has picked up slightly in recent months. Non-bank lenders' share of total lending is small, and the minor increase in their lending appears to be due to improving economic conditions, rather than a response to the LVR speed limit. The general insurance sector continues to manage significant claims arising from the Canterbury earthquakes.

Payment and settlement systems have continued to operate satisfactorily, with key systems processing payments effectively, and exhibiting a high degree of availability.

5.1 Banking sector

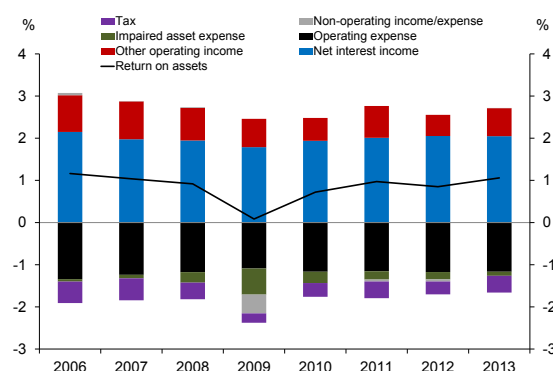
The banking sector remains profitable...

Banking sector profits have remained strong since the last *Report*, buoyed by the improving macroeconomic environment. Banking sector profitability helps to support financial system stability, as long as profits are derived from managed growth and cost containment, and do not reflect inappropriate risk taking. As discussed in box C, the Reserve Bank also monitors bank profitability from the perspective of financial system efficiency, due to the mandate to promote the soundness and efficiency of the financial system.

Return on assets, at 1.1 percent, has returned to pre-GFC levels. This improvement reflects a reduction in provisioning for losses on non-performing loans, as well as increases in net interest and other operating income (figure 5.1). In dollar terms, profit growth has been more limited due to slower balance sheet growth in the

post-GFC environment. With capital ratios increasing significantly in recent years, return on equity is well below pre-GFC levels.

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

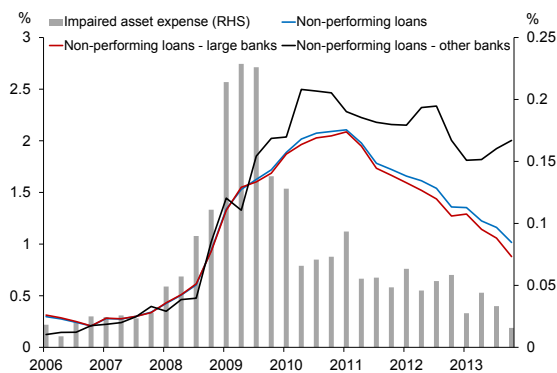


Source: Registered banks' *Disclosure Statements*.
Note: Return on assets is after tax.

Non-performing loans have been falling in most sectors...

Banks' impaired asset expense has declined significantly since its 2009 peak (figure 5.2). As the impaired asset expense is only slightly above its June 2006 low, there appears to be limited scope for a further sustained reduction that would boost profit growth. The improvement in the impaired asset expense has come about through an ongoing improvement in non-performing loans which, as a percentage of lending, has exhibited a downward trend since 2011. The system-wide non-performing loan ratio is currently around 1 percent, down from over 2 percent in 2010. The non-performing loan ratio is higher and more volatile for the smaller banks, which reflects the impact of a few large exposures on the smaller banks, and large banks' relatively high exposure to lower-risk housing lending.

Figure 5.2
Bank non-performing loans and impaired asset expense
(percent of total lending)

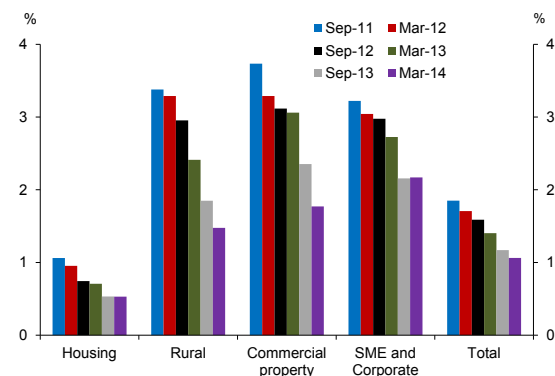


Source: Registered banks' *Disclosure Statements*.
Note: Includes impaired and 90 days past due assets. 'Large banks' refers to the four largest banks by total assets.

The improvement in non-performing loans is evident across most of the sectors to which the banks lend, as improving economic conditions have reduced the legacy of non-performing loans that arose in the wake of the GFC (figure 5.3). The rural and commercial property sectors have experienced the most marked declines in non-performing loans as a share of sectoral lending over the past two years. In the rural sector, watchlist loans –

which indicate banks' expectations of future deterioration in asset quality – have fallen, and this, supported by elevated rural incomes, may see the rural non-performing loan ratio reduce further. In the commercial property sector, non-performing loans have declined alongside improving conditions in the commercial property market, particularly in Auckland. However, banks' watchlist ratios for commercial property have steadied in recent months, suggesting that this downward trend in non-performing loans may not continue.

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



Source: Based on private reporting data from 18 registered banks.
Note: Includes impaired and 90-days past due assets. Data are not standardised and definitions may vary across banks.

The housing sector, which accounts for the largest share of the banking system's credit exposures, continues to have the lowest share of non-performing loans. Non-performing loans to the corporate and SME sector have also declined over the past two years. Non-performing loans in the corporate sector tend to be quite volatile, as a few large corporate loans becoming non-performing can have a significant impact.

...and stable net interest margins.

Banks' net interest margins – net interest income divided by average interest earning assets – have tracked within a reasonably narrow band since the Official Cash Rate was reduced to 2.50 percent in 2011 (figure 5.4). Over this period, the use of floating rate lending products has been prevalent, increasing the ability of banks to pass

Box C

Measuring financial system efficiency

A well functioning financial system is integral to fostering and maintaining economic growth. An efficient financial system is one that enables economic resources to be allocated to their best use across time and space without imposing unnecessary costs (or 'rents') on households and businesses. An efficient financial system enables savers and borrowers to share risks in a way that enhances, rather than hinders, economic performance. In contrast, an inefficient financial system can hamper economic prosperity by imposing unnecessary costs on households and businesses, distorting decision-making processes, and misallocating resources throughout the economy over time.

The importance of financial system efficiency to the New Zealand economy is reflected in the Reserve Bank's mandate to promote the maintenance of a sound

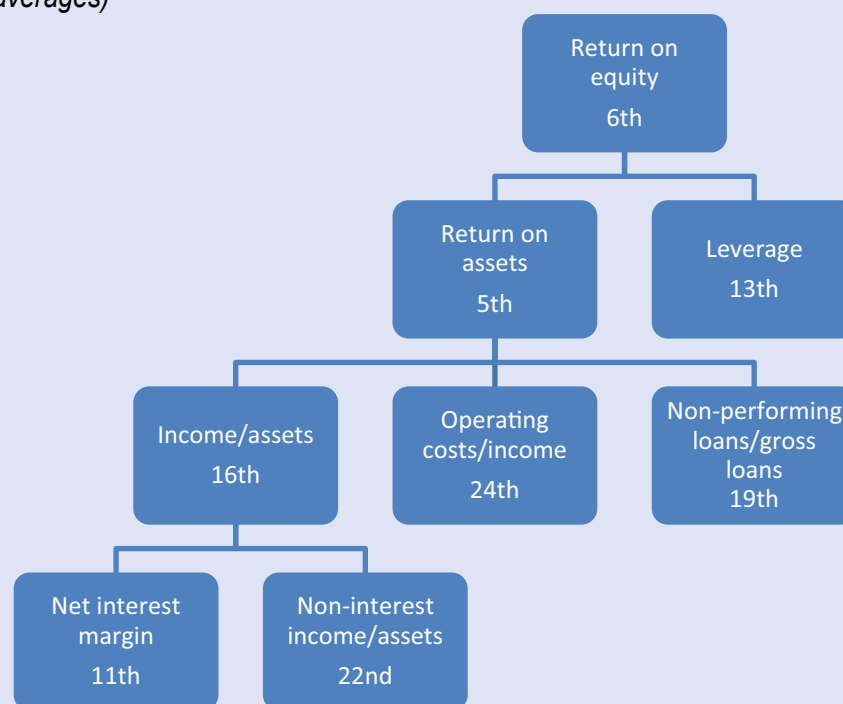
and efficient financial system. Although the *Financial Stability Report* tends to focus primarily on financial system soundness and stability, it also reports on the efficiency of the financial system. In addition, the Reserve Bank also regularly considers the efficiency consequences of prudential policy. For example, when considering the Reserve Bank's proposed macro-prudential framework in the *May 2013 Report*, the resource allocation consequences and potential for disintermediation were discussed.

Several methods exist to assess efficiency. None is entirely satisfactory due to methodological and data collection issues, and therefore it is desirable to consider information from a range of sources. This box assesses efficiency in the 2009-12 period by comparing banking sector accounting ratios across countries.¹

Bank financial ratios in the post-2008 period have been heavily affected by economic disruption,

Figure C1

Decomposition of return on equity: New Zealand banks' ranking relative to 24 OECD countries (2009-12 averages)



Source: IMF, RBNZ calculations.

¹ New Zealand's banking system comprises the majority of the financial system. It is therefore appropriate in the New Zealand context to focus primarily on measuring banking system efficiency.

banking stress, and regulatory changes. Cross-country comparisons therefore must be interpreted with caution. Furthermore, cross-country differences in capital structure, business mix, and accounting and tax practices pose further problems for interpretation. It is, however, possible to use accounting relationships to decompose profitability measures into their component parts such as leverage, interest margins and operating expenses. Such an analysis can provide insight into the drivers of profitability, and may suggest where inefficiencies exist.

Figure C1 compares the return on equity (ROE) of the New Zealand banking sector with 24 other OECD countries. The data suggest that the New Zealand banking system is highly profitable in an international sense, placing 6th out of the 25 countries in terms of ROE. The common inference is that high profitability may indicate a lack of competition and be representative of an inefficient market. However, this simple interpretation fails to consider the underlying factors which lead to the relatively high profits in the New Zealand banking sector, and as such may be misleading.

The breakdown in figure C1 provides some detail as to where these high profits may accrue. At the first level, the data imply the relatively high ROE is not a function of the banks holding relatively low levels of capital (high leverage), but is instead owing to a relatively high return on assets. Finer disaggregation reveals that this is primarily due to lower costs-to-income and loan-loss provisions (for which we use non-performing loans-to-gross loans as a proxy).

The heavy focus on traditional (lower cost) deposit and lending activities, with a lesser focus on

insurance and investment banking (higher cost) activity compared to international counterparts can partly explain the New Zealand banking system's relatively low operating costs-to-income. Nevertheless, compared to other countries with similar banking systems, New Zealand banks' aggregate cost-to-income ratio is still relatively low which indicates a high degree of technical efficiency.² Low levels of non-performing loans, which are highly correlated with loan-loss provisions, reflect both a relatively mild crisis in New Zealand and effective credit risk assessment and management processes.

Finally, New Zealand's aggregate net interest margin, which is slightly above the OECD average, may be relatively high given the less complex nature of the New Zealand banking system. However, analysis of mortgage, deposit, and credit card interest margins suggests that New Zealand banks' interest spreads are similar to other OECD countries, so the cost of financial intermediation on these product lines does not appear to be particularly high in New Zealand.

The overall conclusion of this comparative analysis is that the New Zealand banking system is relatively efficient in an operational sense, and this would reflect observational evidence that it has been relatively quick to embrace new technology. It has also not been as badly affected as some other countries by the impact of the GFC on non-performing loans. These appear to be the major drivers of the high relative profitability in the New Zealand banking system.

The Reserve Bank will continue to develop the framework for assessing and reporting on the efficiency of the New Zealand financial system.

² Technical efficiency refers to the provision of financial services at the lowest cost, while allocative efficiency refers to the economy's resources being directed to their best possible use.

on fluctuations in funding spreads to existing borrowers. This has helped to support the stability of net interest margins.

The outlook for bank profitability is likely to be influenced by how borrowers respond to the outlook for higher domestic interest rates. The prospect of higher interest rates has been encouraging borrowers to turn to fixed rate mortgages, which now represent 64 percent of outstanding housing loans. Fixed mortgage rates tend to have lower margins than floating rate mortgages, so this trend is likely to reduce banks' net interest margins.

Figure 5.4
Net interest margin



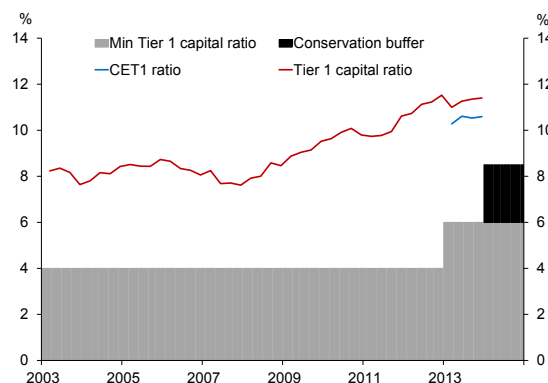
Source: RBNZ *Net Interest Margin Survey*, registered banks' *Disclosure Statements*.
Note: Series are annualised and monthly data are a three month moving average.

Capital buffers have increased.

Banks are increasing their capital ratios and exceeding higher Reserve Bank regulatory requirements (figure 5.5). Accordingly, the banking system is well capitalised. The system-wide Tier 1 capital ratio is 11.4 percent of risk-weighted assets (RWA), compared to the minimum regulatory requirement of 6 percent. Since the beginning of 2013, most locally incorporated banks have also been required to hold a capital conservation buffer of 2.5 percent of common equity. Banks can operate within this buffer, but incur restrictions on their profit distributions if they do so. All locally incorporated banks are reporting conservation buffers in excess of 2.5 percent. The Reserve Bank also now has the ability to temporarily apply an additional counter-cyclical capital buffer during periods

of excessive credit growth.

Figure 5.5
Regulatory capital ratios
(locally incorporated banks, percent of RWA)



Source: Registered banks' *Disclosure Statements*.

On 1 January 2014, the phase-out began of capital instruments that do not comply with the Basel III requirements.³ Only 80 percent of non-compliant instruments may now be included in regulatory capital, amortising to zero percent in 2018. Some banks may start to issue Basel III-compliant instruments to replace maturing non-compliant instruments, as the Australian parent banks have started to do.

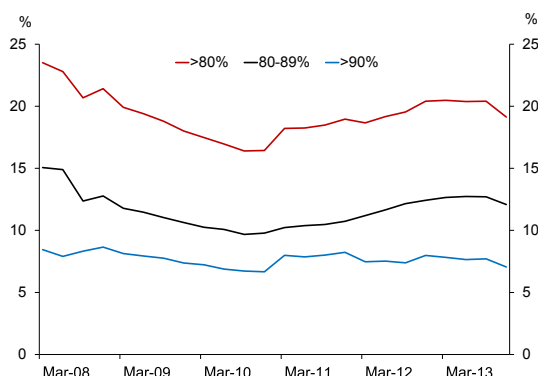
Recent policy changes have improved resilience to a sharp fall in house prices.

As discussed in chapter 6, the Reserve Bank has recently completed a staged review of bank capital adequacy requirements for housing loans. As a result of the first stage of the review, capital requirements for high-LVR lending were increased for the four largest banks that use internal models. The policy change applied from 30 September 2013 and has resulted in an increase in the average risk weight on high LVR loans. As a result, internal models banks have to hold more capital against high-LVR loans. The resilience of the financial system to a sharp fall in house prices has been further bolstered by the speed limit on high-LVR residential mortgage lending,

³ The Basel III requirements mean that the terms and conditions of non-common equity regulatory capital instruments must contain a provision that requires the instrument to be written off or convert to ordinary shares upon the occurrence of a trigger event.

which has seen the share of high-LVR lending on banks' mortgage books start to fall (figure 5.6). Further declines in the stock of high-LVR lending are likely while the policy is in place.

Figure 5.6
Large banks' high-LVR residential mortgages
(percent of total residential mortgages)

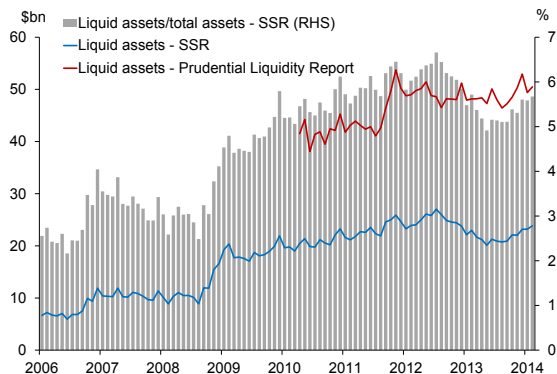


Source: Registered banks' *Disclosure Statements*.
Note: 'Large banks' refers to the four largest banks by total assets.

Banks' liquid asset positions continue to improve...

Since the crisis, banks have significantly increased their holdings of liquid assets (figure 5.7). These are assets that could be used at short notice to raise cash if a bank has difficulty obtaining additional funding, and

Figure 5.7
Banks' liquid asset holdings



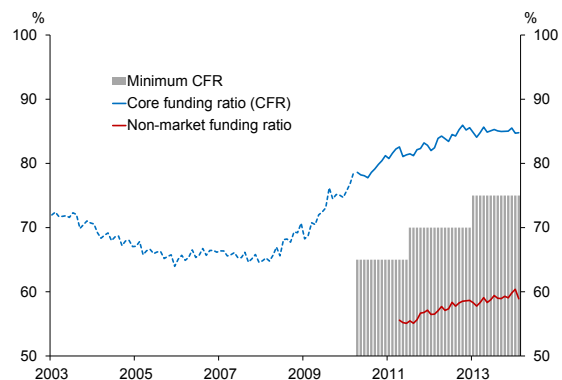
Source: RBNZ *Standard Statistical Return (SSR)*, registered banks' liquidity reporting.
Note: The SSR definition of liquid assets comprises currency, government securities and claims on the Reserve Bank. The Reserve Bank's prudential liquidity policy also includes a broad range of non-government securities rated BBB- and higher as liquid assets.

include currency, government securities, claims on the Reserve Bank, and a range of non-government securities rated BBB- or higher. Increasing their holdings of these assets makes banks more resilient to funding market disruptions. All banks subject to the Reserve Bank's liquidity policy are comfortably meeting the requirement to hold liquidity buffers that satisfy one-week and one-month mismatch ratios.

...as have their funding positions.

Bank funding conditions have continued to improve since the last *Report*, reflecting strong deposit growth, and favourable global funding conditions. There has been a material improvement in bank funding positions over the past few years, and banks are maintaining good levels of core funding – customer deposits, longer term wholesale borrowing, and bank capital. The system-wide core funding ratio is currently well in excess of the regulatory requirement of 75 percent of loans and advances (figure 5.8).

Figure 5.8
Banking system core and non-market funding
(percent of loans and advances)



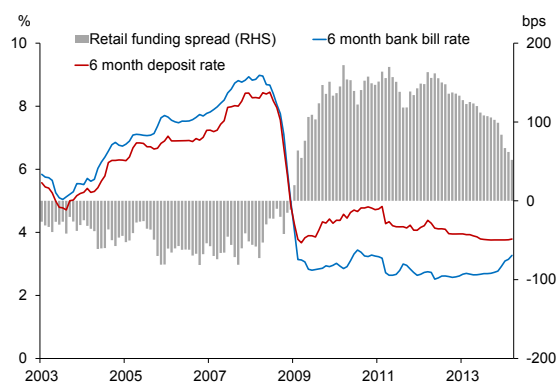
Source: RBNZ SSR, registered banks' liquidity reporting.
Note: The dotted section of the CFR is an approximation based on SSR data. The non-market funding ratio shows the contribution of non-market funding to core funding.

Credit growth been funded through strong retail deposit growth...

Retail deposits remain a significant source of banks' core funding, and have been growing at an annual rate of around 10 percent. This growth in deposits has

allowed banks to pare back their wholesale debt funding. Strong retail funding growth has also allowed banks to reduce retail funding spreads throughout 2013 (figure 5.9). These spreads fell more sharply between November 2013 and March 2014, although many banks have since increased their deposit rates. Falling retail funding spreads have been a key driver of a fall in overall marginal funding costs although, as discussed in chapter 3, wholesale funding costs are also declining.

Figure 5.9
Retail funding spreads

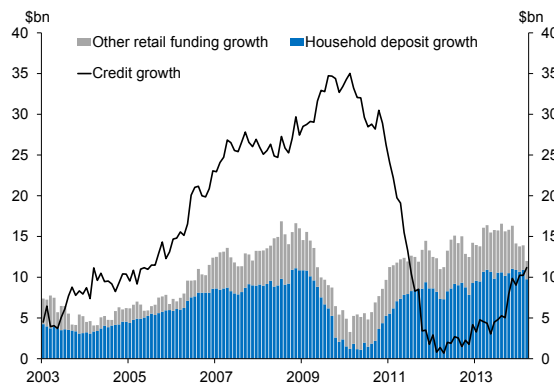


Source: RBNZ Retail Interest Survey, Reuters.
Note: The six-month deposit rate is the interest rate paid for a new six month term deposit of \$10,000, weighted by each surveyed institution's total NZ dollar funding.

...but is now starting to exceed deposit growth.

Although retail deposit growth has been strong since 2011, credit growth is now starting to outstrip the growth in retail funding (figure 5.10). A substantial acceleration in retail funding growth is unlikely. Increasing returns on alternative asset classes, and rising household confidence, could divert funds to assets other than bank deposits, or result in a reduction in household saving rates. Moreover, the temporary boost to deposit growth provided by payouts related to the Canterbury earthquakes will now be reversing. As a result, banks will likely need to make greater use of offshore debt markets to fund future increases in credit growth.

Figure 5.10
Retail funding and credit growth
(annual growth, dollar amount)



Source: RBNZ SSR.

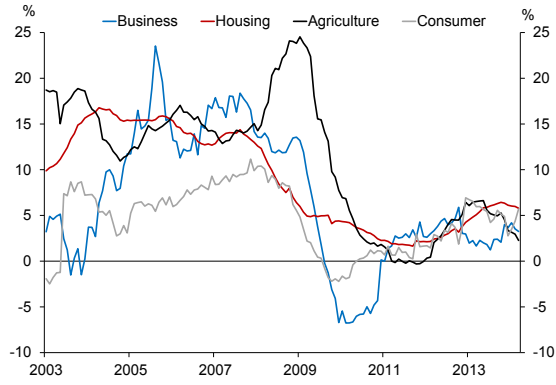
Credit is growing slower than incomes.

Private sector credit grew at 4.5 percent over the past year, below the current rate of annual nominal GDP growth. The rise in credit growth was primarily driven by the increase in house prices and housing market turnover between 2012 and late 2013, resulting in housing credit growth increasing to a peak of around 6.5 percent. More recently, annual growth in housing credit has moderated (figure 5.11), partly reflecting the impact of the restrictions on high-LVR residential mortgage lending.

Since the start of 2011, the annual growth rate of consumer credit has gradually increased to 5.7 percent. This growth has occurred alongside increased consumer confidence and spending intentions, and is likely to pick up further in coming months alongside stronger income and employment growth. The rate of consumer credit growth has remained stable, or declined, since the introduction of the speed limit on banks' high-LVR lending in October.

Agricultural credit growth has been falling since the start of 2013. Strong farm incomes are encouraging many dairy farmers to increase their debt repayments, although increased farm investment and farm market activity could result in agricultural credit growth increasing in the near term. Business credit growth picked up towards the end of 2013, reflecting an increase in activity in the commercial property market.

Figure 5.11
Banking system lending by sector
(annual percentage change)

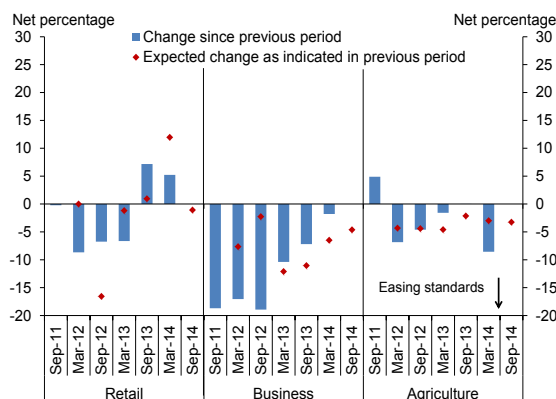


Source: RBNZ SSR.

Retail lending standards have tightened.

The last *Report* noted that access to high-LVR housing credit tightened following the announcement of LVR restrictions. Results from the Reserve Bank's March 2014 *Credit Conditions Survey* indicate that there was a further tightening in retail lending standards following the actual introduction of the restrictions in October 2013 (figure 5.12). This tightening was not as large as expected by banks at the time of the last *Survey*. Banks attributed this to better general economic conditions countering the effect of LVR restrictions. While non-price terms have

Figure 5.12
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.

tightened since the last *Report*, price-based lending standards – reflecting the margin between effective lending rates and the cost of funds – have eased. An example of this easing is that banks have generally now removed the differential headline interest rate for high-LVR loans that was introduced after October.

In contrast to retail lending standards, agricultural and business lending standards have loosened recently. The easing of agricultural lending standards has mostly been seen in price-based conditions, and banks expect this to continue due to high commodity prices and tight competition within the sector. In the business sector, the easing of credit conditions is mainly in corporate and commercial property lending standards.

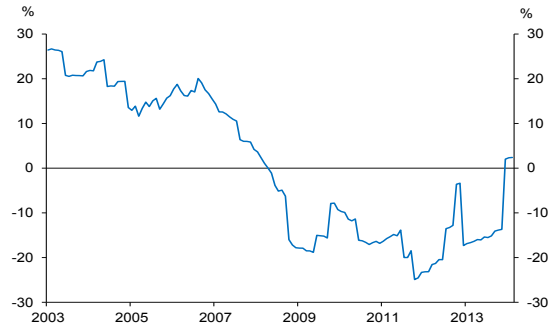
5.2 Other credit providers

Non-bank lending is muted...

Non-bank lending institutions (NBLIs) currently account for 3 percent of intermediated credit in New Zealand, down from 9 percent in 2007. The sector includes deposit-taking institutions, such as deposit-taking finance companies, building societies and credit unions, that are prudentially regulated by the Reserve Bank. This sub-sector continues to undergo consolidation and rationalisation. The NBLI sector also includes non-deposit taking finance companies, which are funded by equity, bank loans, and wholesale funding, and are not prudentially regulated.

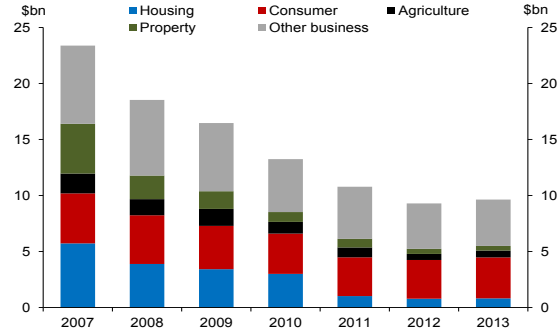
NBLIs' relative contribution to credit growth varied markedly over the last cycle. NBLI lending increased strongly in the pre-crisis period, with this lending playing an important role in financing property development. The sector subsequently experienced significant stress when a slow-down in economic activity revealed weakness in business practices. In the ensuing period, receiverships, liquidations, mergers, and the transition of some larger institutions to the banking sector, led to a significant reduction in the size of the NBLI sector. Annual growth in NBLI lending has been negative for several years (figure 5.13).

Figure 5.13
NBLI credit
(annual percent change)



Source: RBNZ SSR.
Note: Growth rate is not break adjusted for entities exiting and entering the sector. Due to a lack of data in earlier years, UDC is excluded from the chart.

Figure 5.14
NBLI exposures
(December years)



Source: RBNZ SSR, NBDT prudential reporting.
Note: Data exclude those deposit-taking finance companies that are in moratorium or receivership. Definitions may vary across institutions.

...but could pick up as economic momentum returns.

The composition of the lending undertaken by the NBLI sector has changed markedly since the GFC. Property-related exposures have declined, and business and consumer lending now account for the bulk of NBLI lending (figure 5.14). Lending to businesses has been growing recently, reflecting a pick-up in cyclical demand for the types of credit provided by the NBLI sector, including fleet/vehicle financing, and equipment/machinery financing. Consumer lending has also grown recently as consumer confidence has picked up. Overall, annual growth in total NBLI lending has increased to around 3 percent, and NBLIs' contribution to aggregate credit growth is now non-negative for the first time since late 2009.

As noted in the last *Report*, the Reserve Bank is continuing to monitor for signs of regulatory leakage to the non-bank sector resulting from the restrictions on high-LVR lending.⁴ To date, there has been little evidence of a material migration in housing lending from banks to NBLIs, with the contribution of NBLIs to total housing lending remaining flat over 2013.

⁴ See box C in the November 2013 *Report* for a discussion of regulatory leakage from the LVR restrictions framework.

5.3 Insurance sector

Each of the three main insurance sectors faces unique issues.

The general insurance sector is managing the substantial claims liability created by the 2010/11 Canterbury earthquakes. The earthquakes have resulted in increased property insurance premiums throughout the country, and changes to the type of cover for domestic dwellings from total replacement to sum insured. Due to the scale and complexity of the Canterbury earthquake claims, these are taking considerable time to be resolved, and the industry needs to show continued urgency.

The life insurance sector has been managing the impact of historically low interest rates over the past few years. This has been difficult for insurers with significant long-term guarantees. Improved affordability through rising incomes, together with anticipated higher investment returns, suggests a generally improved longer term outlook for life insurers.

The health insurance sector has been experiencing a decline in the number of lives covered for many years. This is partly explained by ongoing premium increases due to claims inflation being generally in excess of growth in incomes. In part this is a result of technological progress in treatment options. Affordability is a key problem for the sector that needs to be addressed by health insurers in the long-term.

The regulated sector is now licensed and supervised...

As noted in the last *Report*, the three year transition to prudential supervision of insurers has been completed, with 98 insurers licensed to undertake insurance business in New Zealand as at 31 March 2014. As discussed in chapter 6, the focus of the Reserve Bank has switched to ongoing supervision.

... with some realignment of the sector continuing.

The regulated sector continues to change following the end of the licensing transition. In the six month period to 31 March 2014 the Reserve Bank cancelled the licence of one insurer which had no outstanding insurance obligations, approved one transfer of insurance policies, and reconfirmed the licences of three insurers that had changes of ownership. Five insurers are currently in run-off and have ceased issuing new policies, but remain subject to Reserve Bank supervision.

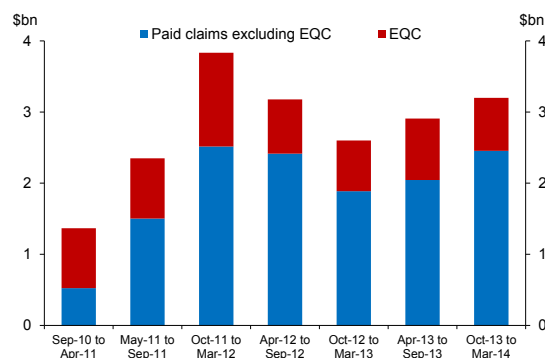
The IAG group has announced its intent to purchase the Australasian insurance underwriting businesses of Wesfarmers, including Lumley General Insurance (N.Z.) Limited, subject to regulatory approvals. This is significant for the New Zealand insurance market because IAG group is already the largest general insurance group in New Zealand through its ownership of IAG New Zealand Limited and AMI Insurance Limited. The inclusion of Lumley would increase the group's market share of general insurance to about 50 percent, and around two thirds for home and contents insurance. The Commerce Commission considered competition issues and cleared the purchase on 7 May 2014. The Reserve Bank must now consider whether Lumley continues to meet existing licence criteria, and will also review licence conditions. At the time of printing, the Australian approvals that the purchase also requires were not completed.

The Canterbury earthquake claims remain a major risk...

As at 31 March 2014 total claim payments for the Canterbury earthquakes were \$19.4 billion, well

over half of the estimated total. EQC has paid \$6.1 billion and private insurers have paid \$13.3 billion (figure 5.15). Some insurers have paid over 80 percent of their estimated claims costs, and the proportion paid is typically higher for business insurance than for residential. The greater proportion paid for business claims is explained in part by sum insured cover providing greater certainty of claim amounts where it is clear there is a total loss, and also by not having the complications that arise for home and contents claims through the interactions with EQC cover and EQC claims.

Figure 5.15
Canterbury earthquakes paid claims



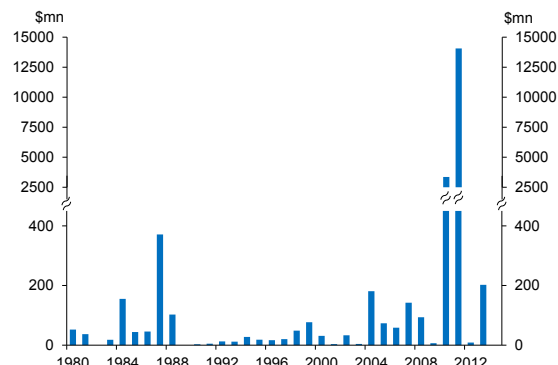
Source: EQC, RBNZ.

In the past few financial years, some general insurers have recorded losses due to the Canterbury earthquakes, mainly due to claims costs that are not covered by reinsurance. These losses have been funded by existing capital or new capital injected by their parent.

The Reserve Bank estimates the ultimate insurance claims cost is in a range of \$31-38 billion. The final cost remains uncertain, and will be affected by inflation during the rebuild and settlement decisions between policyholders and insurers.

While very small compared with the Canterbury earthquake claims, several significant weather and geological events were costly during 2013 (figure 5.16). The general insurance industry body, the Insurance Council of New Zealand, reported that in 2013 their members recorded the second highest inflation-adjusted weather claims costs, outside of the Canterbury earthquakes. These costs were generally higher than the catastrophe allowances built into premium rates, and hence have had a negative impact on profits. However, they pose no threat to solvency for any licensed insurer.

Figure 5.16
Natural disaster events annual claims costs
(inflation adjusted)



Source: Insurance Council of New Zealand (ICNZ).

Box D

Financial stability of New Zealand insurers

Banks and insurers are two of the major institutions within the financial system, having the important functions of enabling economic agents to spread consumption and investment over time, but without being exposed to unexpected risks. However, each institution carries out its functions differently, and thus how the Reserve Bank supervises each sector, and the regulatory tools it applies, will need to reflect those differences. This box explains the rationale for supervising insurers, and highlights some of the differences with banks.

Why supervise insurers?

The purposes of the Insurance (Prudential Supervision) Act 2010 (IPSA) are to: promote the maintenance of a sound and efficient insurance sector, and promote public confidence in the insurance sector. These statements provide the objectives for the prudential supervision of insurers in New Zealand, but do not explain why these are desired outcomes. The main reasons for supervision of insurers include:

- The insurance sector is an important contributor to the economy, providing risk management for individuals and businesses, and thereby

facilitating economic growth;

- Significant information asymmetries exist between insurers and policyholders – policyholders rely on insurers’ skill and expertise to assess the probability and cost of an event. Prudential supervision requires that insurers manage their businesses soundly and maintain minimum prudential standards.
- Insurance often involves policy holders entering into long term contractual commitments for life, health, or savings policies. These contracts may be difficult to change, with the existing provider or by switching to another insurance provider. Policy holders therefore need to have a very high degree of confidence that the chosen insurer will meet their obligations over many years and even decades into the future.

Are New Zealand insurers ‘systemically important’?

The *Financial Stability Board* considers systemic risk to be where there is risk of an impairment of all or parts of the financial system, with serious negative consequences for the real economy. Table D1 summarises, in the New Zealand context, the criteria for considering systemic financial risk of banks and insurers as set out by the Financial Stability Board and

the International Association of Insurance Supervisors.⁵ These criteria are the size the sector in the economy, how inter-connected institutions are with other institutions, how easy it would be to substitute the services of an institution were it to fail, and how quickly a failure is transmitted to other institutions and the wider economy.

An assessment of these criteria shows that New Zealand insurers are less likely to create a systemic risk in comparison with banks, but individual insurance company failure may still occur.

The Canterbury earthquakes of 2010/11 are a good example of the impact of insurance failure on financial stability. The cost of the earthquakes was substantial – they ranked in the top 10 worldwide disasters of all time for insured losses. And because the Canterbury region was not considered a traditional earthquake zone the effect on insurers was difficult to anticipate. Nonetheless, only one major insurer failed: AMI Insurance Ltd. The Government had sufficient time to assume the Canterbury earthquake claims liabilities of AMI through the establishment of a new government agency, Southern Response, and also assumed a substantial proportion of the overall Canterbury losses through the Earthquake Commission. Local insurers have been able to meet their significant claims liabilities through their arrangements with major global reinsurers, and from additional capital provided by foreign parents. Consequently the transmission of the Canterbury earthquake costs to other financial institutions was contained, although there were wider impacts for the economy from subsequent increases in the cost of property insurance.

The GFC is another example of a systemically important event where very few insurers globally became distressed. Nonetheless the failure of global insurance giant AIG was judged systemically important and it received US Government support. AIG became distressed due to the exposures in the US sub-prime

and derivative markets. New Zealand insurers have less complex business activities, and the Reserve Bank's prudential requirements constrain the nature of their investments.

A risk based approach to supervision

Differences in the risks facing insurers and banks mean that the Reserve Bank will approach insurance supervision differently to banking supervision. It will use a risk based approach focusing most attention on those activities and events that have the highest probability and potential cost of failure. It will use the same 'three pillars' described in section 6.4 of self-discipline, market discipline, and regulatory discipline.

⁵ Financial Stability Board, International Monetary Fund and Bank for International Settlements (2009) 'Guidance to Assess the Systemic Importance of Financial Institutions, Markets and Instruments: Initial Considerations', <http://www.bis.org/publ/othp07.htm>.

Table D1

Comparison between banks and insurers of systemic risk criteria

Criterion	Banks	Insurers
Size	<p>Very large relative to the economy</p> <p>Liabilities of NZ registered banks are about 140% of gross domestic product (GDP). The four biggest banks represent a high proportion of the total; each has liabilities in excess of 25% of GDP.</p>	<p>Small relative to the economy</p> <p>Liabilities of private NZ licensed insurers are about 5% of GDP, and under 1% for any individual insurer.⁶ Liabilities are currently higher than usual due to Canterbury earthquake claims.</p>
Inter-connected	<p>Highly inter-connected</p> <p>Failure of a bank could cause other (unrelated) banks to fail. This is due to inter-bank lending, payment system linkages, and potential loss of confidence issues.</p>	<p>Less inter-connected</p> <p>Failure of an insurer has been less likely to cause other financial institutions to fail. Inter-insurer balances are very limited except for reinsurance and related insurers. Banks' exposures to insurers have not tended to be large compared to their overall loan portfolios. Reinsurance is usually placed with large global reinsurers.</p>
Substitutability	<p>Poor substitutability</p> <p>The banking infrastructure is highly dependent on a small number of banks and payment systems.</p>	<p>Reasonably good substitutability</p> <p>There are a large number of licensed NZ insurers and relatively few niches that depend on a small number of insurers.</p>
Speed of loss transmission	<p>Failure crystallises rapidly</p> <p>Due to the fundamental liquidity mismatch in banking, and the reliance upon confidence in banks, bank failures can rapidly crystallise.</p>	<p>Failure generally occurs slowly</p> <p>Other than catastrophic events, insurer failures generally occur slowly. Normal business activity may continue while resolution processes are implemented.</p>
Systemic	<p>Systemic</p> <p>Failure of a bank can cause significant losses in the wider economy. This is because of contagion effects and the economy's reliance on credit and banking services.</p>	<p>Rarely systemic</p> <p>Failure of an insurer is less likely to cause significant losses in the wider economy except in extreme circumstances, such as after a major natural catastrophe or severe pandemic.</p>

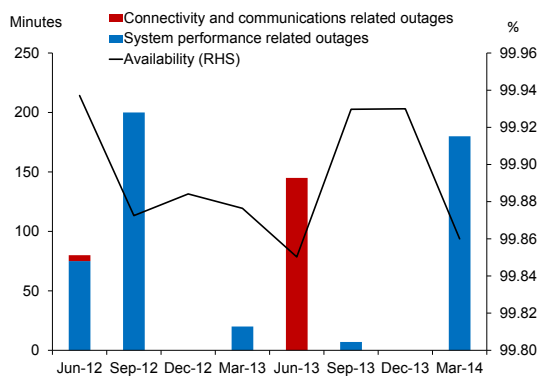
⁶ Three large insurers are excluded from the Reserve Bank's supervision: ACC, EQC and Southern Response. All are well supported by the New Zealand Government and do not compete with private insurers.

5.4 Financial markets infrastructure

Payment and settlement systems have operated satisfactorily.

New Zealand's key systems have continued to operate effectively over the past six months. The Reserve Bank's Exchange Settlement Account System (or ESAS), which enables real-time gross settlement of interbank transactions, remained highly reliable. A small number of incidents had minimal impact on the operation of the system (figure 5.17). One incident in February prevented users from logging in to ESAS for approximately three hours, but users who were already in the system were able to process transactions as normal. The delay impacted only a small number of transactions and no payment deadlines needed to be extended.

Figure 5.17
ESAS/NZClear availability and outages



Source: RBNZ.

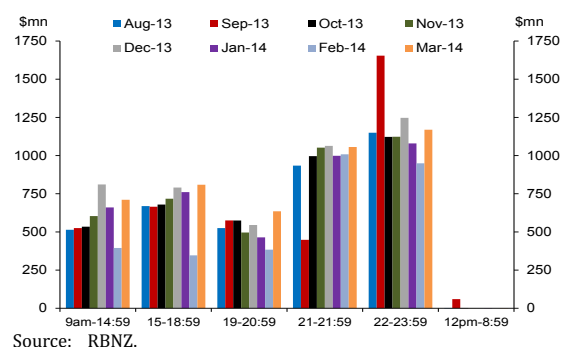
Note: Availability is for the 12 months to the current period.

The Reserve Bank has appointed Ernst and Young to assist in a strategic review of its operation of ESAS and NZClear systems (the latter system allows members to settle fixed interest and equity transactions and to make cash transfers). The review anticipates substantial upgrades to the systems that will be required in the next two to four years. Through Ernst and Young, the Reserve Bank will consult stakeholders including ESAS account holders, NZClear members and industry bodies. The scope of the review will include an assessment of market requirements, the range of services the Reserve Bank will need to provide in the future, and the best way to deliver these services.

Initiatives are underway to improve resilience...

As noted in previous Reports, the Reserve Bank has a long-standing concern about the settlement risk for bank customers and the operational risk in the retail payment system. Customer settlement risk refers to the risk of a payment not getting settled due to the failure of one of the banks involved in the transaction. These risks arise from the time taken to settle transactions after the payment instruction is issued by the customer, the value of unsettled transactions at any point in time, and the tendency for a large proportion of retail payments to be settled late in the banking day. As shown in figure 5.18, settlement of much of the value of daily transactions continues to occur between 9pm and midnight.

Figure 5.18
SBI activity by time of day
(average daily value)



Source: RBNZ.

The Reserve Bank will continue to closely engage with Payments NZ (PNZ), which is leading an industry initiative to address these concerns. At the same time, the Reserve Bank is conducting a round of bilateral discussions with settlement banks to better understand individual banks' payment processing and discuss potential solutions that have been identified.

PNZ and the Reserve Bank are also collaborating to develop an integrated and consistent business continuity framework covering PNZ's High Value Clearing System (HVCS) and the Settlement Before Interchange (SBI) arrangements for retail payments. Both HVCS and SBI rely on ESAS and SWIFT (the latter system provides

secure global financial messaging services). With several systems and service providers involved, it is important to clarify who does what when there is a problem affecting the systems.

...and to introduce retail payments innovation.

PNZ has launched new rules and standards for mobile payments. These rules and standards are intended to ensure the integrity, efficiency, and security

of mobile payments. At the same time, the three mobile network operators (Vodafone, 2 Degrees, and Telecom) and Paymark have formed a joint venture called Trusted Service Manager (TSM) NZ Limited which will deliver Near Field Communications (NFC)-based services enabling payments to be made with supported mobile phones.⁷ This paves the way for the eventual launch of a new payment option for bank customers.

⁷ Near field communication (NFC) is a set of standards for smart phones and similar devices to establish radio communication with each other by touching them together or bringing them into close proximity, usually no more than a few centimetres.

6 Key developments in financial sector regulation

This chapter outlines two new strategic initiatives in the Reserve Bank's regulation of the financial sector, and reviews two other key strands of work. There are several other important regulatory developments under way, and these are briefly summarised in Appendix 1.

Since the GFC, there has been increasing emphasis internationally on stress testing of financial systems. A major strategic initiative for the Reserve Bank is to develop a comprehensive stress testing framework for the New Zealand banking system. Section 6.1 describes the motivation for the strategic priority and the initial workplan.

Another major strategic initiative for the Reserve Bank is a stocktake of regulations applying to registered banks and non-bank deposit-takers (NBDTs). Section 6.2 briefly introduces this project, which is also at the early planning stage.

The Reserve Bank has recently completed a staged review of bank capital requirements for residential mortgage loans (section 6.3). The revised capital framework increases the consistency and clarity of regulatory requirements for housing loans, and results in an enhanced level playing field across the banking system – particularly with respect to the speed limit on high-LVR lending.

Following completion of the three year transition to prudential supervision of insurers, the Reserve Bank's focus is now on the ongoing approach to insurance supervision. Section 6.4 describes the key high-level features of the supervisory framework.

6.1 Development of a stress testing framework

Since the GFC, there has been increasing emphasis internationally on stress testing of financial systems. Stress tests take many different forms, but are fundamentally designed to evaluate the resilience of individual institutions, or a financial system as a whole, to a particular stress scenario. These stress scenarios may, for example, involve a material economic slowdown, or a major financial market event such as a disruption in important bank funding markets.

During the GFC, stress tests were often used to evaluate the health of financial institutions and to quantify the amount of extra capital that was required. More recently, stress tests have tended to focus on the ability of financial institutions to withstand a material weakening

in the economic environment. Many central banks, for example the Bank of England and the US Federal Reserve, have set up data collections to develop stress testing models.

A major strategic initiative for the Reserve Bank in 2014 is to develop a comprehensive stress testing framework for the New Zealand banking system. There are several motivating factors for enhancing the stress testing framework. First, stress tests are a tool to assess the impact of emerging risks on the financial system. Second, regular stress tests will develop capability within the banking industry to identify and respond to these emerging risks at an institutional level. Third, stress tests provide a perspective on the adequacy of capital buffers and should feed into the capital planning processes at banks. In coming years, regular stress tests are expected

to form a key component of the Reserve Bank's prudential and financial stability framework.

Registered banks are already required to conduct internal (or bottom-up) stress tests as part of their Internal Capital Adequacy Assessment Process (ICAAP). The New Zealand subsidiaries of the major Australian banks have also participated in stress tests co-ordinated by the Australian Prudential Regulatory Authority (APRA) in 2009 and 2011/12.¹ These tests required banks to model the credit and capital impact of a scenario featuring a severe economic downturn. The Reserve Bank expects greater involvement by local subsidiaries in future stress testing exercises run by APRA. This will include accountability for the results by the New Zealand board, and the results informing the capital planning process.

To enhance the stress testing framework, the Reserve Bank is currently working with the domestically owned banks to complete a regulator initiated stress test of credit portfolios. As well as providing an indication of the resilience of these institutions in an economic downturn, the exercise is designed to strengthen the stress testing capability of these institutions. As capability grows, the Reserve Bank expects stress testing to extend beyond credit portfolios, and to become entrenched as a regular part of risk management processes.

6.2 Regulatory stocktake

As discussed in chapter 2, the Reserve Bank has strengthened the prudential framework for both banks and NBDTs since the GFC. These changes have increased the resilience of the financial system by boosting capital, funding and liquidity buffers, and improving other prudential standards. For banks, significant new policies have included minimum liquidity requirements, the open bank resolution framework, and corporate governance requirements, while minimum capital requirements have been lifted by the Basel III reforms. For NBDTs, the key elements of a complete new regime, including capital adequacy and other prudential requirements, came into effect in 2010.

The Reserve Bank recognises that it is good practice for any regulator to carry out periodic reviews of the impact and efficiency of the regulatory regime as a whole, particularly following a period where the regulatory framework has undergone major change. Adjustments may be needed, for instance, to reflect differences in the observed versus intended effects of regulations, changes in the domestic and international financial sector environment, and the cumulative impact of regulations that have been developed over time.

In this vein, the Reserve Bank has recently decided to undertake a stocktake of its regulations for registered banks and NBDTs over the next year. The stocktake will cover all of the prudential requirements for the two sectors, and also the registration and disclosure requirements for registered banks. The stocktake will look for ways in which the existing requirements can achieve their intended effects more efficiently, can be applied more consistently, or can be made clearer. The review will include a public consultation on options, identified in the review, for improving the regulatory framework.

The Reserve Bank previously carried out a major review of its registered bank disclosure regime, over 2009-11. The Reserve Bank will consider whether to include some aspects of the new insurance regime within the regulatory stocktake. In a separate area, the Reserve Bank is continuing with its review of the statutory powers for its oversight of payment systems (see Appendix 1).

6.3 Housing Review

The Reserve Bank recently completed a staged review of bank capital adequacy requirements for residential mortgage loans, also called the housing review. The outcome of stage one, as reported in the May 2013 *Report*, was an increase in capital held against high-LVR mortgages for internal models banks (currently comprising

¹ The most recent tests were discussed in the November 2012 *Report*.

the four large, Australian owned banks).² This *Report* focuses on stage two of the review.

Consultation paper

The Reserve Bank released a consultation paper on stage two in September 2013.³ The main issue identified was the inconsistency in the calculation of the LVR for mortgage lending between standardised and internal models banks. Standardised banks, unlike internal models banks, had to include unsecured lending in the loan amount. As a result, the LVR calculated by standardised banks would have been higher for the same hypothetical mortgage customer who also had a credit card or personal loan.

Although this discrepancy might, in some instances, have led to standardised banks holding more capital for the same loan, in practice the capital impact was not significant. The definitional inconsistency had more material implications for the macro-prudential speed limit on high-LVR lending, as lending to the same mortgage customer could have been restricted for standardised banks, but not for internal models banks.⁴ This could have put standardised banks at a competitive disadvantage while the speed limit is in place.

The consultation paper proposed to align the two definitions and, in particular, that the more appropriate definition of the LVR was to include unsecured lending in the loan amount. This reflected the reality that, in the event of the customer becoming overdue on unsecured lending, banks can, in principle, exercise the security over the residential property. In addition, the proposed LVR definition would have reduced the scope for internal

models banks to avoid the speed limit by issuing an unsecured loan to a new mortgage customer.

The consultation paper also included a number of other proposals, including clarifying the boundary between business and residential mortgage lending. In particular, where a loan is repaid predominantly from the income a property generates, or the customer owns more than four rental properties, the proposal was that the loan should not be classified as a residential mortgage. Further proposals included a common requirement for all banks to have a residential mortgage valuation policy that meets certain minimum standards, and increased clarity on the process for model change submissions and the recording of accredited models by internal models banks.

Submission feedback and policy outcome

In response to the 11 submissions the Reserve Bank received, a number of changes were made to the initial policy proposals.⁵ Several submissions objected to the proposal to include unsecured lending in the definition of the LVR. Submitters noted that this would mean including lending that was already treated as unsecured for capital purposes, and that in practice banks would not enforce a mortgage over an overdue credit card or personal loan balance. Internal models banks also highlighted substantial monetary costs due to changes to IT systems required to comply with the proposed definition.

Since the overriding objective was to establish a common definition, the Reserve Bank decided that standardised banks would instead adopt the less stringent definition under which internal models banks already operated. Any LVR policy avoidance concerns have been addressed by additional monitoring and reporting requirements, as proposed by some submissions. The Reserve Bank also made some technical amendments to clarify the proposed changes to the valuation policy for residential property, and to the proposed boundary between business and residential mortgage lending.

² In line with Basel II guidelines, there are two approaches available to banks in New Zealand for calculating their capital adequacy requirement. Under the standardised approach exposures receive a predetermined risk weight based on their asset class. The internal models approach, also called the internal ratings based approach, allows banks to use their own risk models to estimate key parameters needed in the capital adequacy calculation. Banks have to be accredited by the Reserve Bank to use the internal models approach.

³ See http://rbnz.govt.nz/regulation_and_supervision/banks/policy/5672891.pdf

⁴ See http://rbnz.govt.nz/financial_stability/macro-prudential_policy/5393159.html for more details on the speed limit.

⁵ See http://rbnz.govt.nz/regulation_and_supervision/banks/policy/5570960.pdf

Impact of regulatory changes

The second stage of the housing review has increased the clarity, consistency and efficiency of the Reserve Bank's regulatory requirements for housing loans. The alignment of the definition of LVR between standardised and internal models improves the level playing field across the banking system, particularly with respect to the speed limit on high-LVR lending. A number of other changes contribute to the improved clarity of the framework, including a clearer definition of the boundary between residential and business loans, a common policy on residential property valuations and clearer processes for internal models changes. The changes may produce some one-off compliance costs for some banks, such as IT systems changes.

6.4 Insurance

Following completion of the three year transition to licensing of insurers, the focus of the Reserve Bank has switched to ongoing supervision. The supervisory approach will be risk-based, with the intensity of supervision taking into consideration both risks and impacts of a potential failure. Insurers are expected to fully comply with all their requirements, and to make prompt disclosure to the Reserve Bank of any breaches.

As part of the ongoing supervision, periodic thematic reviews on material prudential issues are planned. The Reserve Bank recently announced that it is commencing a thematic review of risk governance in the insurance sector. There will be opportunities for the industry to provide feedback on the results of these reviews, as well as for other areas. For example, there will be feedback on solvency returns and financial condition reports later in 2014.

Development of a regular data collection and reporting system for the insurance sector is under way. This is a core project for the Reserve Bank, as a well-designed data collection will assist the monitoring and supervision of the sector. Once completed, financial and statistical information on the insurance sector will be published on the Reserve Bank's website. Industry

consultation on proposed data returns will occur this year with intended implementation in 2015.

Three pillars of insurer prudential supervision

The Reserve Bank's prudential supervision of insurers, in common with its prudential supervision of banks, relies upon the three pillars approach – a combination of self-discipline, market discipline and regulatory discipline.⁶

The regulatory framework places primary responsibility and accountability for an insurance business with the insurer's board and senior management (the first pillar – self-discipline). Boards are required to ensure that: the insurer has appropriate risk management programmes (approved by the Reserve Bank); that fit and proper tests are set and applied for directors and specified senior management; and to certify that all regulatory requirements are met. There are also important accountability disciplines built into the framework for insurance firms' appointed actuaries and auditors⁷

Several aspects of the regulatory framework enhance the second pillar of market discipline. Firstly, except where exempted, insurers must hold, and disclose, a current financial strength rating, by a rating agency approved by the Reserve Bank.⁸ Secondly, most insurers are required to file annual financial statements, including an audit report.⁹ Thirdly, a solvency margin as measured by the applicable solvency standards must be disclosed and updated twice a year. Finally, the *Financial Stability Report* provides an assessment of the soundness and efficiency of the sector, and complements the insurance register and other reporting by the Reserve Bank. Together these measures provide a minimum level of

⁶ Fiennes, T and O'Connor-Close, C (2012) 'The evolution of prudential supervision in New Zealand', Reserve Bank of New Zealand *Bulletin*, 75(1), March.

⁷ Brady, P (2014), 'The Reserve Bank's approach to supervising insurers, and the role of directors', available at http://www.rbnz.govt.nz/research_and_publications/speeches/2014/5633005.html

⁸ Ratings must be disclosed on the insurers' website and a register of ratings is also published on the Reserve Bank's website: http://www.rbnz.govt.nz/regulation_and_supervision/insurers/rating/index.html

⁹ These can be viewed at <http://www.business.govt.nz/companies> (or <http://www.business.govt.nz/companies/app/ui/pages/companies/otherSearch> for insurers that are not companies).

information for policyholders and market commentators, partly addressing information asymmetries between insurers and policyholders.

Regulation provides the third pillar. The Reserve Bank sets minimum requirements for capital, solvency and for insurers' fit and proper policies. There is extensive guidance for insurers on the regulatory framework, ranging from published guidelines to industry updates

and informal discussions. Where considered necessary, a range of regulatory powers could be used. These powers include, for example, increasing solvency requirements to address significant risks that are not well covered by the solvency standards, amending licence conditions or requiring additional reporting. Some activity by insurers (such as transfers of insurance policies) is subject to Reserve Bank approval.

Appendices

Appendix 1 Summary of regulatory policies

Macro-prudential policy

A 'speed limit' on high-LVR residential mortgage lending is now in place. The Reserve Bank is monitoring the impact of the restrictions on bank lending and the housing market.

Non-bank deposit-takers (NBDTs)

The Non-bank Deposit Takers Act 2013 came into force on 1 May this year. Existing NBDTs will have until 1 May 2015 to obtain a licence under this Act.

The Reserve Bank is recommending that regulations be made excluding certain entities from the definition of NBDT (thereby removing the need for these entities to be licensed).

A review of the prudential regime for NBDTs was completed in 2013. The formal Government response to the review is likely to be released later this year.

Payments and settlement systems

The Reserve Bank has concluded its consultation on the proposal to strengthen oversight of financial market infrastructures and published a summary of submissions and its responses on 1 October 2013. The Reserve Bank is currently considering next steps with this work.

Solvency – financial reinsurance

The Reserve Bank has consulted industry twice on the appropriate treatment of financial reinsurance for solvency purposes, and is close to finalising the policy position. Following that, a final consultation on an exposure draft of the solvency requirements will be issued.

Review of bank capital adequacy requirements for housing loans

The Reserve Bank has finalised the policy position on bank capital adequacy requirements for housing loans and is currently consulting on an exposure draft of the

detailed requirements.

Thematic review of rural and residential credit origination practices

During 2013-14 the Reserve Bank conducted a thematic review of the rural and residential credit origination practices, and associated risk management governance, of the major lenders in those two sectors. The Reserve Bank is in the process of providing feedback to the entities involved.

Anti-Money Laundering (AML)

Since the Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (the AML/CFT Act) came into full force on 30 June 2013, the main focus of the Reserve Bank's AML work has been on the supervision of reporting entities, in particular the supervision of registered banks. This work has almost exclusively taken the form of on-site inspections to monitor the reporting entities' compliance with the AML/CFT Act and related regulations. The Reserve Bank is on target to conduct on-site inspections of the majority of registered banks by the end of June 2014, which marks the end of the first year of AML supervision under the AML/CFT Act.

After June 2014 the scope of the Reserve Bank's AML supervisory activities will be widened to include a number of non-bank deposit-takers and life insurers.

Baseline analysis work will commence after 30 August 2014, when reporting entities' annual reports are due. The analysis of the annual reports will assist the Reserve Bank to assess and rate the risks of money laundering (and terrorist financing) associated with each of its reporting entities.

Covered Bonds

The Reserve Bank of New Zealand (Covered Bonds) Amendment Act 2013 (the CB Act) became

effective on 10 December 2013. The CB Act amended the Reserve Bank of New Zealand Act 1989 to require (among other things) the registration of covered bond programmes. The Reserve Bank is responsible for the registration process and for maintaining the register of covered bond programmes. Registered banks may issue covered bonds only under a covered bond programme that has been registered with the Reserve Bank. There is a nine month transitional period during which registered banks may register existing covered bond programmes.

Appendix 2

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. The Reserve Bank 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. During the past 12 months, the Reserve Bank has undertaken the following public enforcement actions:

- December 2013 – an industry notice was issued in respect of Trustees Executors Limited and its failure to report material non-compliance on the part of Broadlands Finance Limited, as required by section 1572F of the Reserve Bank of New Zealand Act 1989 (the Act). The Reserve Bank's action arose out of the matter following.

- August 2013 – the Reserve Bank prosecuted Broadlands 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 \$12,000. The company was appealed but this was dismissed by the High Court in late November 2013.
- May 2013 – an industry notice was issued in respect of Asset Finance Limited and its failure to comply with the requirements concerning related party exposures, in breach of section 157Y of the Act.

Appendix 3

New Zealand financial system assets and liabilities

Financial system liabilities

As at 31 December, \$bn	2000	2005	2007	2008	2009	2010	2011	2012	2013
Banks									
Households	41	61	79	90	92	97	106	115	126
Other residents	55	84	98	114	103	104	108	120	125
Non-residents	56	79	111	127	132	127	122	112	108
Other liabilities and equity	26	28	43	72	53	53	60	59	55
Total	178	253	332	403	380	382	395	407	414
Non-bank lending institutions									
Households	5	12	12	9	9	7	5	3	3
Other residents	4	7	8	7	6	7	7	5	5
Other liabilities and equity	2	8	12	11	9	7	5	5	5
Total	10	26	31	27	24	21	17	14	14
Funds under management									
Household assets	56	56	64	54	61	64	66	74	84
Other sector assets	5	7	9	8	8	8	8	9	9
Total	61	63	72	62	68	72	74	83	93
Total financial system liabilities	249	342	435	492	472	474	486	503	520

Financial system assets

As at 31 December, \$bn	2000	2005	2007	2008	2009	2010	2011	2012	2013
Banks									
Households	67	120	153	163	169	174	177	185	196
Other residents	70	101	127	149	136	137	141	148	150
General government	7	6	4	6	14	17	20	20	18
Non-residents	16	12	15	16	16	13	10	12	14
Other assets	17	14	33	70	44	41	47	41	35
Total	178	253	332	403	380	382	395	407	414
Non-bank lending institutions									
Households	5	12	14	12	10	9	7	6	6
Other residents	4	11	13	12	11	9	7	6	6
Other assets	1	3	4	4	3	3	3	2	3
Total	10	26	31	27	24	21	17	14	14
Funds under management									
Domestic fixed interest	27	25	27	28	27	28	30	32	33
Domestic equities	7	8	9	6	7	8	8	10	12
Domestic other	5	4	5	4	4	4	4	4	4
Overseas investments	21	26	31	24	30	32	32	36	43
Total	61	63	72	62	68	72	74	83	93
Total financial system assets	249	342	435	492	472	474	486	503	520

Source: RBNZ surveys.

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	29.5	AA-	Aa3	AA-	Australia and New Zealand Banking Group Limited	Australia
Commonwealth Bank of Australia (B)	1.2	AA-	Aa2	AA-	Commonwealth Bank of Australia	Australia
ASB Bank Limited	16.4	AA-	Aa3	AA-	Commonwealth Bank of Australia	Australia
Bank of New Zealand	18.1	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	A2	A	Citigroup Inc.	USA
Deutsche Bank Aktiengesellschaft (B)	0.6	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	3.9	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	2.4	AA-	-	-	Rabobank Nederland	Netherlands
Southland Building Society	0.7	-	-	BBB		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	1.4	BBB+	-	-	TSB Community Trust	New Zealand
Westpac Banking Corporation (B)	1.3	AA-	Aa2	AA-	Westpac Banking Corporation	Australia
Westpac New Zealand Limited	17.5	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 2013.

² Banks marked (B) operate in New Zealand as branches of overseas incorporated banks. All other banks are incorporated in New Zealand.