



Financial Stability Report

May 2015

Reserve Bank of New Zealand
Financial Stability Report

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Chapter 1

Overview



The financial system is sound and operating effectively, supporting growth in the economy. Bank capital, liquidity and funding buffers remain above required minima, while asset quality and underlying profitability are strong. Regulatory changes over recent years have helped to improve prudential standards for banks, non-bank deposit takers (NBDTs) and insurers. There has been continued progress in processing claims related to the Canterbury earthquakes, although significant uncertainties remain.

The financial system continues to face three key areas of risk. Household sector debt is high relative to incomes and house prices are overvalued on several measures, particularly in Auckland where prices have increased rapidly in recent months. The rise in Auckland house prices reflects ongoing supply constraints, increased demand driven by record net immigration, low mortgage interest rates and increased investor participation. House prices have become very elevated in Auckland, and financial stability could be tested if prices were to fall sharply, which could occur if adverse economic conditions led to a reduction in debt repayment capacity. In contrast with Auckland, house price inflation in most other parts of New Zealand has remained relatively subdued.

Following recent consultation, the Reserve Bank is establishing a new asset class for bank loans to residential property investors. These loans

will attract a higher risk weighting than for owner-occupier mortgages, requiring more capital to be held against these loans. The Bank is also proposing some changes to its policy on high loan-to-value ratio (LVR) lending to recognise the financial stability risks arising from housing market conditions in Auckland. The changes, which are proposed to be introduced from 1 October 2015, involve a new restriction on loans to property investors in the Auckland region with an LVR of greater than 70 percent (i.e. to set a speed limit on such loans at close to zero). For all residential lending outside the Auckland region, the Bank is proposing to increase the existing speed limit for loans with an LVR of greater than 80 percent from 10 to 15 percent, to recognise relatively subdued housing market conditions outside Auckland. The Bank will issue a consultation paper in late May to outline these proposals in further detail and seek feedback.

The second area of risk for the financial system relates to the dairy sector, which is experiencing a sharp fall in incomes in the current season due to lower international prices. Around 11 percent of farm debt held by farmers with both negative cash flow and elevated LVRs. Financial stress in the dairy sector could rise markedly if low global milk prices persist beyond the current season. The extent of recovery in Chinese milk demand, following a large build-up of inventories in 2013, will be an important influence on global milk prices.

The third source of risk arises from global financial conditions, which remain extremely loose, in part reflecting recent monetary easing in Europe and Japan aimed at supporting economic recovery. Low interest rates are encouraging investment in riskier assets, leading to a reduction in credit spreads, reduced market volatility and rising prices for both financial and real assets. High and rising asset prices could become a point of vulnerability when interest rates begin to return to more normal levels. There is also a risk that the current benign market conditions could unwind in a disorderly fashion, affecting the cost and availability of offshore funding for New Zealand banks.

With the financial system facing significant and increasing risks, it is critical that banks maintain their capital and liquidity buffers, and apply prudent lending standards. Banks should ensure that any new capital instruments continue to maintain loss-bearing capacity, in view of the significant risks the sector faces. The Reserve Bank plans to undertake

a review of current bank capital requirements in light of global and domestic changes affecting the banking system in recent years.

The Reserve Bank is continuing to make improvements to its financial oversight regime. Good progress has been made on the stocktake of registered bank and NBDT regulations, with public consultation on specific proposals expected to take place in the second half of 2015. The Reserve Bank also expects to consult with the banks later in the year on a best practice guide for the conduct of stress tests, following a review of the models and processes used by the major banks late last year.

Chapter 2

Systemic risk and policy assessment



The banking system continues to operate effectively, with capital, funding and liquidity buffers above regulatory minima. The financial system has vulnerabilities in three main areas. Mortgage debt levels are high, and house prices in Auckland are rising rapidly from already-elevated levels. Dairy sector debt remains high and concentrated, and dairy incomes are under pressure. Low global interest rates are contributing to benign conditions in debt markets and rising asset prices, which might not be sustainable.

In light of the increasing risks associated with the Auckland housing market, the Reserve Bank will consult on proposed changes to its loan-to-value ratio (LVR) policy, including a new restriction on loans to Auckland property investors with an LVR of greater than 70 percent. The Bank is also proposing to increase the speed limit from 10 to 15 percent for residential mortgage lending at LVRs of greater than 80 percent outside of the Auckland region, to reflect the relatively subdued housing market conditions.

The vulnerabilities facing the financial system highlight the importance of maintaining current financial system buffers and applying prudent lending standards. Banks are seeking more cost-effective ways to manage their capital, but this should not come at the cost of financial system resilience.

Risk assessment

The financial system remains sound...

The financial system remains sound and is continuing to support growth in the economy. Bank capital and liquidity buffers have increased markedly in recent years, and continue to exceed minimum regulatory requirements (table 2.1). All banks currently meet Basel III capital requirements, including the capital conservation buffer that was introduced in early 2014. Banks are exhibiting strong underlying profitability, allowing them to build capital through retained earnings. Profitability has increased over the past year, driven by improving asset quality, growth in net interest income and cost containment (see chapter 5).

Low long-term interest rates are presenting a challenge for the insurance sector, although a declining cost of reinsuring liabilities in global markets has benefited general insurers and created downward pressure on pricing. There has been continued progress in paying out claims related to the Canterbury earthquakes. As at 31 March 2015, insurers have paid \$24 billion in earthquake claims. Several insurers have significantly

increased their ultimate cost estimates, which the Reserve Bank now estimates will total \$33-38 billion. There remains a risk of negative surprises to individual insurers.

Table 2.1
Key banking system prudential indicators
(annual averages)

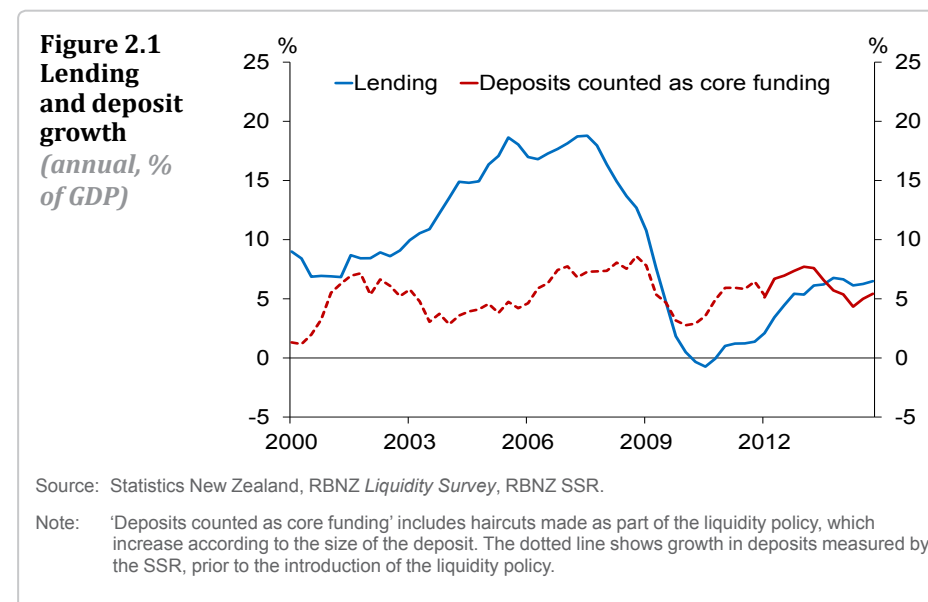
| | 2007 | 2013 | 2014 | Current regulatory minimum |
|--|------|------|------|----------------------------|
| <i>Loss-absorbing capacity</i> | | | | |
| Tier 1 capital ratio (% of risk-weighted assets) | 7.8 | 11.3 | 11.4 | 6 (8.5) |
| Total capital ratio (% of risk-weighted assets) | 10.6 | 12.5 | 12.5 | 8 (10.5) |
| Return on assets (%) | 1.08 | 0.98 | 1.13 | n.a. |
| <i>Funding and liquidity risk</i> | | | | |
| Core funding ratio (% of lending) | 65 | 85 | 85 | 75 |
| Liquid assets (1-month mismatch ratio) | n.a. | 6.4 | 6.2 | 0 |
| Non-resident funding (share of total funding) | 38.3 | 31.1 | 29.6 | n.a. |
| Rollover of offshore debt (< 3m, % of annual GDP) | 30 | 15.9 | 14.3 | n.a. |

Source: Registered banks' Disclosure Statements, RBNZ Liquidity Survey, RBNZ Standard Statistical Return (SSR).

Note: The regulatory capital ratios in brackets include the capital conservation buffer of 2.5 percent that consists of common equity Tier 1 capital. Banks may operate within the buffer but are subject to constraints on capital distributions. The core funding ratio in 2007 is an approximation based on SSR data.

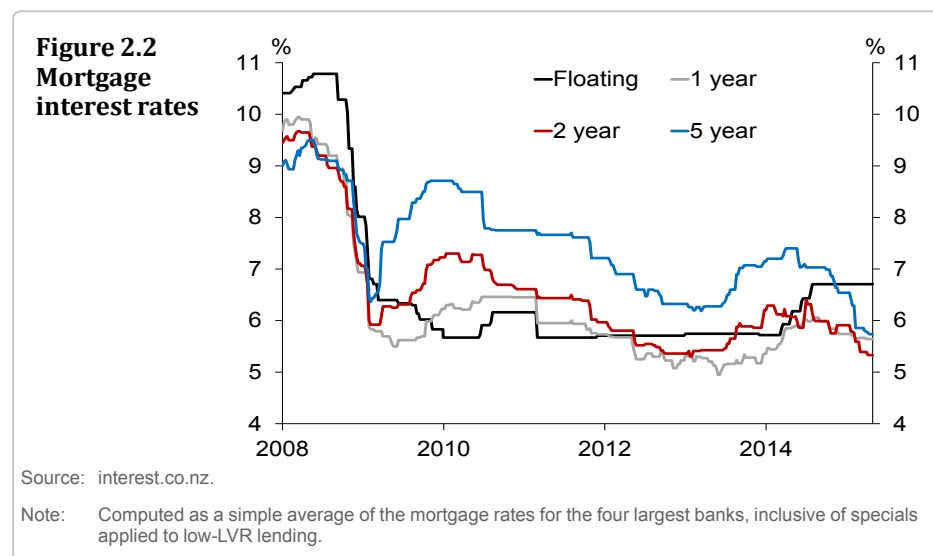
...and has improved its funding profile.

New Zealand's elevated external debt, mostly issued by the larger banks, is high by international standards. As this offshore debt needs to be rolled over, this creates an exposure to volatility in global funding markets. Banks have continued to reduce their reliance on short-term offshore funding markets, resulting in a rise in the core funding ratio and a decline in rollover requirements in recent years (table 2.1). Much of the rise in core funding has been achieved through an increase in deposit funding, which grew above or near lending growth between 2010 and 2013. Although deposit growth has remained relatively strong, it is no longer exceeding growth in bank lending (figure 2.1).



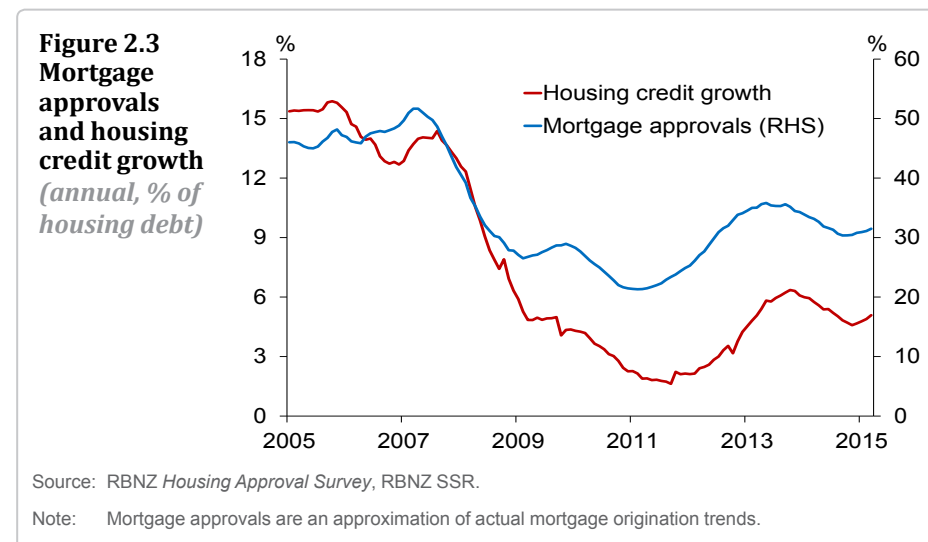
Banks are competing actively in lending markets.

Access to finance has improved significantly since 2010 for both businesses and households. Banks are becoming more willing to supply credit due to strong profitability and the ready availability of funding. Banks are currently competing actively for new mortgage lending, particularly for low-LVR mortgages. Sharp falls in long-term wholesale interest rates since November have prompted a significant re-pricing of longer-term mortgage rates (figure 2.2), resulting in five-year fixed mortgage rates being offered at historic lows.



New mortgage commitments have increased in recent months on a quarterly basis. As discussed in box D, there is a substantial divergence between new mortgage lending and growth in net housing debt (figure 2.3). This divergence is thought to largely reflect increased debt repayment rates by existing borrowers since the Global Financial Crisis (GFC). New lending is the most relevant metric for assessing the role of

credit in the housing market and the associated financial stability risks. With substantial new lending, mortgage rates at historic lows, and banks eager to attract new customers, there is a risk that the underlying asset quality of mortgage lending will decline. This could reduce the resilience of both banks and borrowers to any future housing market downturn, and hamper the ability of banks to provide credit effectively throughout the credit cycle.



Low global interest rates are supporting financial market sentiment.

Long-term interest rates have declined sharply since November 2014, significantly pushing down wholesale interest rates in New Zealand. A major contributing factor has been monetary easing in Europe and Japan. Low interest rates are supporting global financial market sentiment by encouraging investment in higher-yielding assets, as reflected in low credit risk spreads and asset market volatility. Prices for both financial assets such as equities and real assets such as property

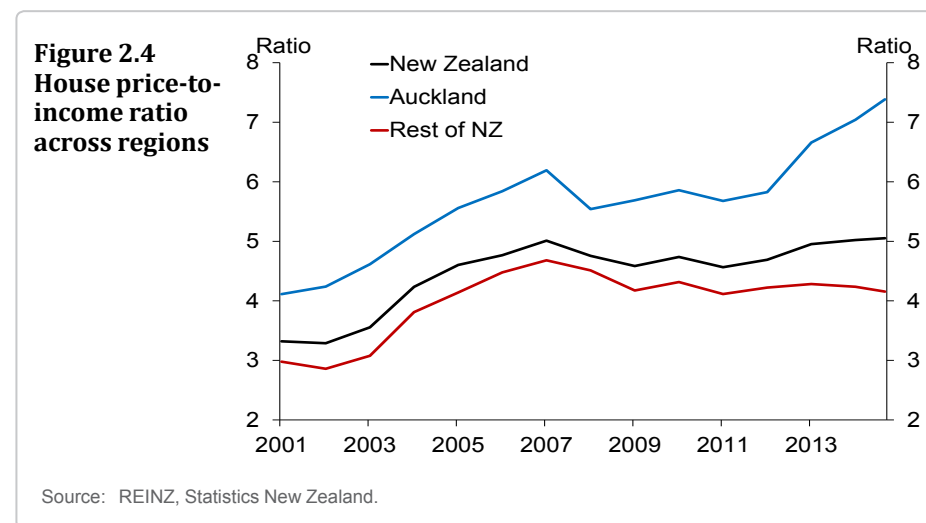
have been increasing sharply in many countries. High asset prices may not be sustained when interest rates begin to return to more normal levels, representing a potential source of vulnerability for both investors and financial systems. This risk would be more pronounced if low interest rates and the search for yield drove asset prices to levels that could not otherwise be justified by economic fundamentals.

There is also a substantial risk that the current benign conditions in financial markets unwind in a disorderly fashion, with implications for the cost and availability of offshore funding for New Zealand banks. Low interest rates in the US have been playing a role in stimulating demand for high-yielding assets, and the potential for tighter US monetary policy may prompt a destabilising outflow of capital from emerging market debt, high-yield corporate bonds and equities. Tensions in the euro area have increased again in recent months and could also disrupt financial markets significantly, although markets are better positioned to cope with instability than during the peak of the sovereign debt crises in 2010. Finally, economic growth in China is slowing alongside a moderation in the property market. While this slowdown is not causing a marked increase in financial stress at present, a sharp contraction in China could reduce world trade, disrupt global capital markets, and lead to a significant decline in export incomes in both Australia and New Zealand.

Housing market risks have increased.

House price inflation slowed across New Zealand in the first nine months of 2014, in large part due to the introduction of a speed limit on high-LVR mortgage lending in October 2013. More recently, Auckland house prices rebounded strongly over the summer of 2014-15, reflecting ongoing supply constraints, record net immigration and low and falling long-term mortgage rates. House prices in March were 16.9 percent higher in the Auckland region than a year earlier, compared with an annual increase

of 3.2 percent for the rest of the country. In contrast to the rest of New Zealand, Auckland house prices are now significantly higher relative to household incomes than at the peak of the mid-2000's boom (figure 2.4). This increases the potential for a sharp price correction in response to adverse economic or financial conditions, such as a rapid increase in unemployment, a reversal in population inflows, or a sharp rise in mortgage rates.



The LVR speed limit is adding to household and bank resilience by reducing the proportion of borrowers with small equity buffers (see the 'Policy assessment' section below). However, rising price-to-income ratios suggest that new buyers in Auckland are becoming more indebted relative to their incomes than previous buyers. Another characteristic of the Auckland market has been increased investor purchases over the past year, at the same time that rental yields have reached record lows (box A). International evidence suggests that high debt-to-income owner-occupiers and leveraged investors both have relatively high default rates during severe housing downturns. As a result, the potential for a sharp

correction in Auckland house prices to cause a significant rise in bank loan losses has increased since the last *Report*.

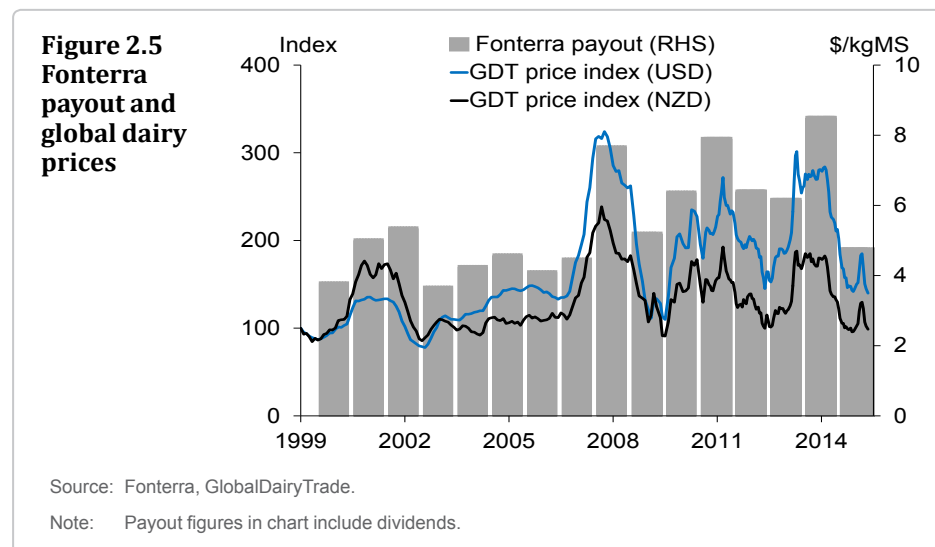
Indebted dairy farms are coming under stress...

The dairy sector is currently experiencing a difficult season. Fonterra's forecast milk payout for the 2014-15 season is \$4.50 per kilogram of milksolids (kgMS), down sharply from the \$8.40 payout in 2013-14 (figure 2.5). Despite many farms being in a position to manage down working expenses, around one-quarter of dairy farms have negative cash flow for the 2014-15 season (see box C). The sector's vulnerability to reduced incomes is increased by elevated indebtedness, despite moderate growth in borrowing since 2009. Approximately 30 percent of dairy debt is concentrated among the most indebted 10 percent of farms. Indebted farms are particularly vulnerable to a period of reduced cash flow.

...and are vulnerable to another low payout season.

Financial stress in the dairy sector could rise markedly if low global milk prices persist beyond the current season. Cash flow in the 2014-15 season will be boosted by around \$1.50 per kgMS due to deferred payments from the strong 2013-14 season, but deferred payments from the current season will be significantly lower. Financial stress would be exacerbated if low milk prices led to falling rural land prices. The ensuing reduction in equity buffers could prevent indebted farmers from drawing on credit lines and result in a rise in loan defaults in the sector. As at March 2015, aggregate rural land prices were approximately flat on an annual basis. This suggests that low interest rates and a reasonable longer-term outlook are supporting demand for farmland, despite the difficulties of the current season.

Some recovery in global milk prices is expected in the 2015-16 season, although there is considerable uncertainty over the timing and extent of the recovery. Prices rose temporarily in early 2015, partly reflecting prospects of reduced production in New Zealand, but fell again in March and April. Global dairy supply is increasing due to rising production in the US and the removal of quotas on milk production in Europe. Russian sanctions on milk imports are also adding to global supply. Recovery in Chinese milk demand, following its large build-up of inventories in 2013, will be critical to supporting demand. Assessing the balance of these global forces is difficult, but there is a significant risk that milk prices remain low for an extended period.



Policy assessment

Funding and capital buffers need to be maintained.

Banking system capital and liquidity buffers have both increased markedly since the GFC. With the financial system facing significant and increasing risks, it is critical that these buffers are maintained and prudent lending standards applied. Banks have advised that they plan to start making use of new capital instruments allowed under Basel III. Banks should ensure that new capital instruments do not lead to a reduction in loss-bearing capacity. The Reserve Bank plans to undertake a review of current capital requirements in the context of global and domestic changes that have occurred in the banking system in recent years. This follows a review of capital requirements recently undertaken in Australia as part of its Financial System Inquiry.

The moderating effect of the speed limit on house price inflation has weakened.

Table 2.2 summarises key indicators related to the LVR policy. Four particular observations can be drawn:

- (i) As the Reserve Bank expected, the LVR speed limit appears to have had its major impact on annual house price inflation during the first year of operation. Despite this, the Bank believes that the removal of the speed limit would release pent-up demand and risk a surge in house price inflation.
- (ii) The policy has had an ongoing effect on the resilience of both borrowers and lenders to a housing downturn, with the stock of

Table 2.2
LVR policy indicators

| Indicator | September 2013 | September 2014 | Latest |
|---|----------------|----------------|--------|
| House price inflation - national (annual 3-month moving average) | 9.4 | 5.0 | 7.7 |
| House price inflation - Auckland (annual 3-month moving average) | 16.4 | 8.6 | 16.9 |
| Housing credit growth (annual growth, %) | 5.8 | 4.7 | 4.8 |
| New lending with LVR > 80% (% of mortgage commitments) | 24.4 | 7.3 | 6.1 |
| Mortgage debt with LVR > 80% (% of mortgage debt) | 20.5 | 15.8 | 15.1 |

Source: Registered banks' Disclosure Statements, RBNZ New Residential Mortgage Commitments Survey, RBNZ SSR, REINZ.

high-LVR mortgages declining markedly following the imposition of the speed limit (see figure 4.4).

- (iii) Current house price inflation is well above sustainable levels in Auckland, with Auckland house price inflation running well in excess of household income growth.
- (iv) In contrast, housing market conditions have eased in Christchurch and are relatively subdued in the rest of the country. House price inflation outside Auckland is currently tracking broadly in line with household income growth (figure 2.4).

The Reserve Bank believes the imposition of the LVR speed limit has helped to reduce the risks associated with a future housing downturn. International experience suggests that high-LVR lending is correlated with a higher probability of default and greater loss given default. In

addition, with fewer stressed borrowers forced to sell, a house price correction is likely to be more moderate, in turn reducing the negative spillovers to the rest of the economy. However, in the Bank's view, the LVR speed limit is now playing a much weaker role in dampening house price growth in Auckland.

The Bank plans to create a new asset class for residential property investors...

Following feedback from a consultation on the definition of residential property investment lending earlier this year, the Reserve Bank is establishing a new residential property investor class for banks. This is expected to attract a higher risk weighting than owner-occupier mortgages. The adoption of the new residential investment class and capital treatment is consistent with the international evidence showing larger loan defaults for investor loans than for loans to owner-occupiers during periods of housing market stress. In line with the preferences of the vast majority of bank submissions, the current residential mortgage asset class will be restricted to owner-occupiers only. Any mortgage secured on a home that is not owner-occupied will be classed as a residential investment property loan and allocated to the new asset class. This permanent change to the bank capital framework is expected to take effect from 1 October 2015 for new mortgage lending.

...and is proposing to tighten the LVR policy.

The Bank believes additional temporary measures are required to help contain rising housing market imbalances in the Auckland region, which continue to pose a threat to future financial stability. The proposed measures also reflect international evidence that investor loans tend to be riskier in severe downturns for a given LVR. The Bank considers it appropriate to recognise the more subdued housing market conditions

outside Auckland. Accordingly, the Bank is proposing a package of changes to macro-prudential policy. The proposed changes include:

- restricting loans to property investors in the Auckland region with an LVR of greater than 70 percent (i.e. to set a speed limit on such loans at close to zero);
- retaining a speed limit of 10 percent on loans to owner-occupiers in the Auckland region with an LVR of greater than 80 percent; and
- increasing the speed limit for all residential lending outside of the Auckland region to 15 percent for loans with an LVR of greater than 80 percent.

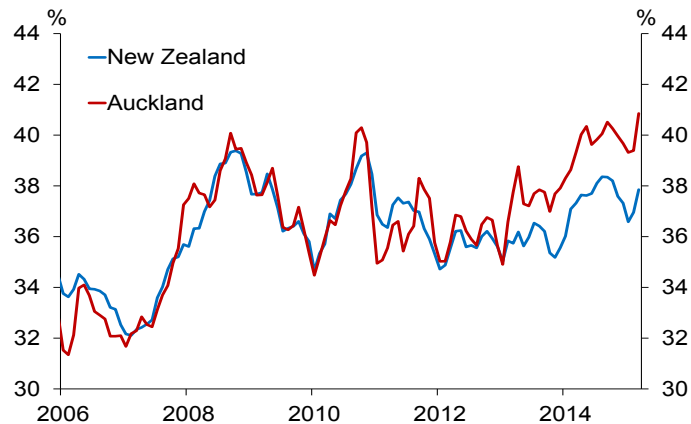
The aim of the proposed changes is to reduce the financial stability risks of a sharp housing market downturn. The changes are expected to achieve this by lowering house price inflation in Auckland and reducing the exposure of banks to riskier loans. The Reserve Bank intends to issue a consultation paper in late May to outline these proposals in further detail and to seek feedback. Subject to the outcome of the consultation, the Bank is proposing that the changes outlined above will take effect on 1 October 2015.

Box A

Investors and the New Zealand housing market¹

Housing investors have consistently accounted for over one-third of property purchase transactions over the past decade, with the share rising slightly following the introduction of loan-to-value ratio (LVR) restrictions in October 2013 (figure A1).² Sales to investors in the Auckland market have picked up in line with the rise in sales activity since November, and this is likely to be contributing to recent strength in Auckland house prices. Investors are also a key source of new mortgage credit demand, with property investors accounting for approximately one-third of new mortgage lending over the six months ended March 2015.

Figure A1
Investor house sales share by region



Source: CoreLogic NZ.

Note: Investor house sales refers to purchases made by buyers owning multiple properties.

Although New Zealand has not experienced a financial crisis associated with the housing market, a range of international evidence suggests that defaults on investor lending tend to be significantly higher than for owner-occupiers during severe downturns. For example, Irish investor mortgage default rates were around 20 percent higher than total mortgage default rates in the two years following the GFC. Default probabilities were estimated to have been significantly higher than owner-occupiers at any given LVR.³ Evidence from the UK and the US also finds that default rates were relatively high among investors in severe downturns.⁴ The Reserve Bank's proposal to apply higher risk weights to investor lending, and introduce a differential LVR threshold for investors relative to owner-occupiers in Auckland, is consistent with this evidence.

A key driver of the higher default propensity of residential property investors is higher debt-to-income ratios (income gearing) relative to owner-occupiers. For example, an investor who has borrowed to buy four houses will end up with much larger negative equity relative to their labour income, if house prices fall, than an owner-occupier with just one house and a similar LVR. Higher income gearing reduces the incentive for the investor to continue servicing the outstanding loans, resulting in a greater tendency for investors to default when they have negative equity.

Another possible reason for the higher risks associated with investor lending is that investor house purchases have, in some countries, tended to be concentrated in areas with high expected capital growth. These expectations are often based on recent house price appreciation.

1 The Reserve Bank plans to release more detailed material on investor lending in New Zealand in coming months.

2 For the purpose of this box, investors are defined as those purchasing to let the property rather than for owner-occupation.

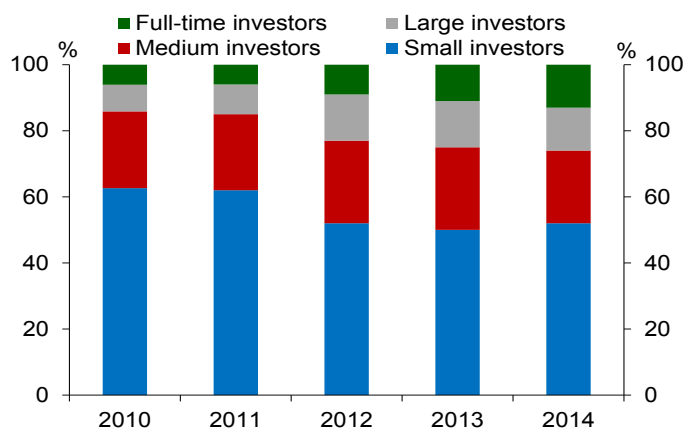
3 See Lydon, R and Y McCarthy (2011) 'What lies beneath? Understanding recent trends in Irish mortgage arrears' Central Bank of Ireland *Research Technical Paper*, 14/RT/11; and Kelly, R and K McQuinn (2014) 'On the hook for impaired bank lending: Do sovereign-bank linkages affect the net cost of a fiscal stimulus?', *International Journal of Central Banking*, 10(3), September.

4 See Haughwout, A *et al.* (2011) 'Real estate investors, the leverage cycle, and the housing market crisis', Federal Reserve Bank of New York *Staff Report* 514; and Wilcox, S (2013) 'Rebalancing the housing and mortgage markets – critical issues', Intermediary Mortgage Lenders Association.

Evidence from the US suggests that increases in house prices prior to the GFC were particularly pronounced in regions where the investor share of house purchases increased.⁵ In turn, areas with rapid house price inflation experienced relatively large house price falls in the aftermath of the crisis.

In New Zealand, a significant proportion of property investors have large portfolios, implying a large degree of gearing relative to their underlying labour income. For example, the 2014 ANZ *Residential Property Investment Survey* shows that 26 percent of surveyed investors held seven or more investment properties (figure A2).⁶ Around half of investor commitments are at LVRs of more than 70 percent. Preliminary Reserve Bank survey data suggests that investors tend to make greater use of interest-only loans, which may partly reflect investors' ability to offset

Figure A2
Distribution of investors by number of investment properties



Source: ANZ *Residential Property Investment Survey*.

Note: Small, medium, large, and full-time investors are defined as those holding 1-3, 4-6, 7-10, and 11 or more properties, respectively.

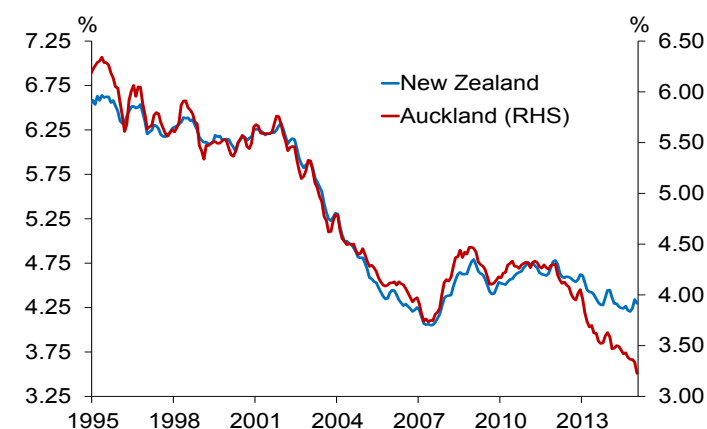
5 See Haughwout *et al.* (2011).

6 Similarly, data from CoreLogic shows that multiple property owners (MPO) with five or more properties accounted for 36 percent of overall MPO purchases in recent months.

mortgage expenses against personal income for tax purposes. As a result, investor loans are likely to retain a higher level of gearing over the long term than their owner-occupier counterparts.

The risks associated with investor lending are likely to be greatest in the Auckland region. Rapid house price appreciation in Auckland has compressed rental yields, and this is likely increasing income gearing among Auckland investors. Auckland rental yields are at record lows, while national yields are close to their 10-year average (figure A3). Relatively strong capital gain expectations among Auckland investors may explain why they are willing to accept such low rental yields. According to the 2014 ANZ *Residential Property Investment Survey*, investors in Auckland expected house price inflation to average 12 percent per annum in the region over the coming five years, compared to 8 percent nationwide. CoreLogic data also show that investors in the Auckland region are more likely to use mortgage finance than investors outside the Auckland region.

Figure A3
Gross rental yields by region (3-month moving average)



Source: Department of Building and Housing, REINZ, RBNZ calculations.

Note: Rental yields are calculated using Department of Building and Housing average rents and REINZ house prices.

Chapter 3

The international environment and financial markets



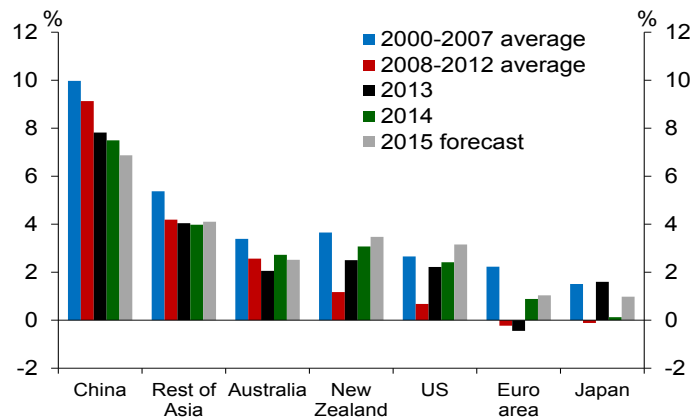
Global interest rates have declined sharply since the last *Report*. Both the European Central Bank (ECB) and the Bank of Japan (BoJ) have expanded their quantitative easing programmes in response to low growth and deflationary risks, resulting in an increasing divergence from US monetary conditions. Low global interest rates continue to encourage investment in higher-yielding assets, although asset market volatility and credit spreads ticked up in late 2014 alongside falling commodity prices.

In this environment, offshore funding costs for New Zealand banks have remained favourable and long-term interest rates have declined. There is an elevated risk that current benign conditions will unwind, resulting in a sharp increase in the domestic cost of credit. Key threats to global markets include disruptions associated with US monetary policy normalisation, renewed tensions in the euro area, or a more rapid economic slowdown in emerging markets.

Growth prospects are diverging...

Economic developments among the world's major economies have been mixed (figure 3.1). In the US, the economic recovery remains intact, despite several indicators of economic activity slowing in 2015. A strengthening US labour market, rising consumer spending, lower oil prices, and accommodative monetary policy are all supporting economic activity. In contrast, Europe continues to experience difficult economic conditions, with unemployment across the euro area above 11 percent and several countries experiencing deflation. After contributing strongly to global activity in recent years, China's growth rate is slowing, although growth among New Zealand's other trading partners in Asia is more stable.

Figure 3.1
GDP growth
(annual average)



Source: Haver Analytics, RBNZ.

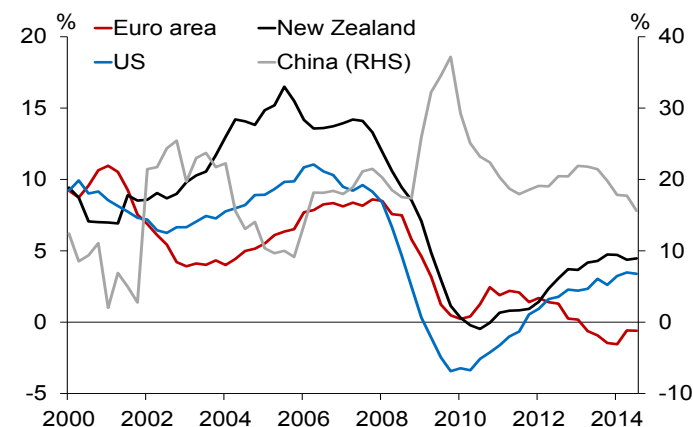
...with risks around weak growth in Europe...

Some of the preconditions for recovery in Europe are being established, with a substantial fall in the euro boosting competitiveness, and the fall in oil prices acting to increase household purchasing power. The ECB has greatly increased its quantitative easing programme in 2015, and this is leading to rising asset prices and improved business confidence. However, any recovery is likely to be slow and uneven across European countries. Growth in lending across the euro area has remained very weak (figure 3.2), partly reflecting low bank profitability and still elevated non-performing loans in peripheral European economies.

Many of these peripheral European countries are experiencing persistently weak growth, with high levels of indebtedness constraining consumer spending and business investment. Stimulatory monetary policy has helped reduce the spread between German government bond yields and yields in most peripheral economies since November, which should help lower interest costs for domestic borrowers. The one

exception has been Greece, with increasing speculation that Greece might leave the euro. While the euro area is better positioned to cope with such an event than during the height of the sovereign debt crises in 2010, there remains the potential for further market disruptions in an environment of persistently weak growth.

Figure 3.2
Private sector credit growth in selected economies (annual %)

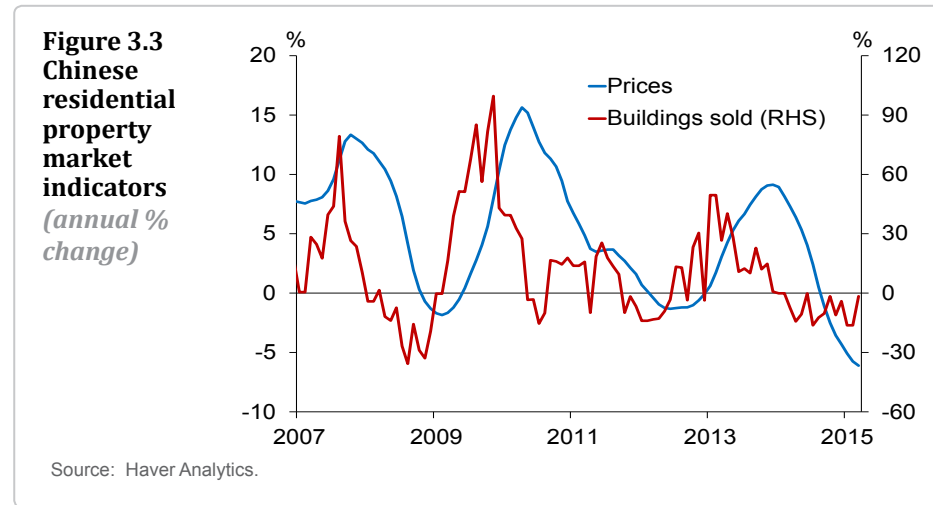


Source: Bank for International Settlements (BIS), RBNZ Standard Statistical Return (SSR).

...and slowing growth in China.

In recent years, China's growth has been driven by very high rates of investment and property development, associated with a rapid expansion in credit and property prices. Property market sales and prices have since started to fall moderately in small and medium-sized cities (figure 3.3). Lower construction volumes are also feeding through into declining output in the heavy industrial sector. Property price inflation has been showing signs of stabilisation in recent months, partly due to a loosening in domestic monetary policy. Long-term financial market structural reforms, including policies aimed at countering risks from lending outside

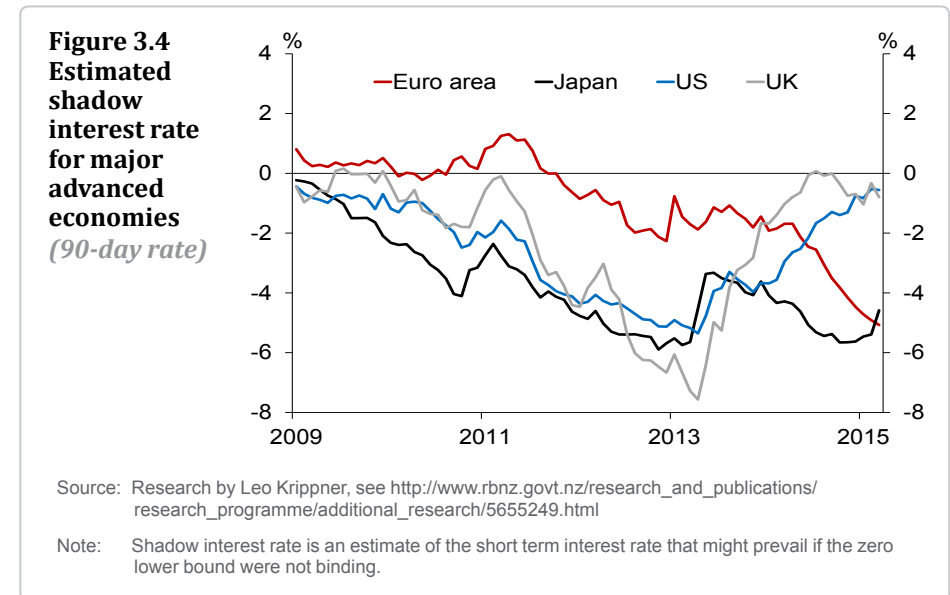
the regulated banking sector, have been designed to help support long-term financial stability.



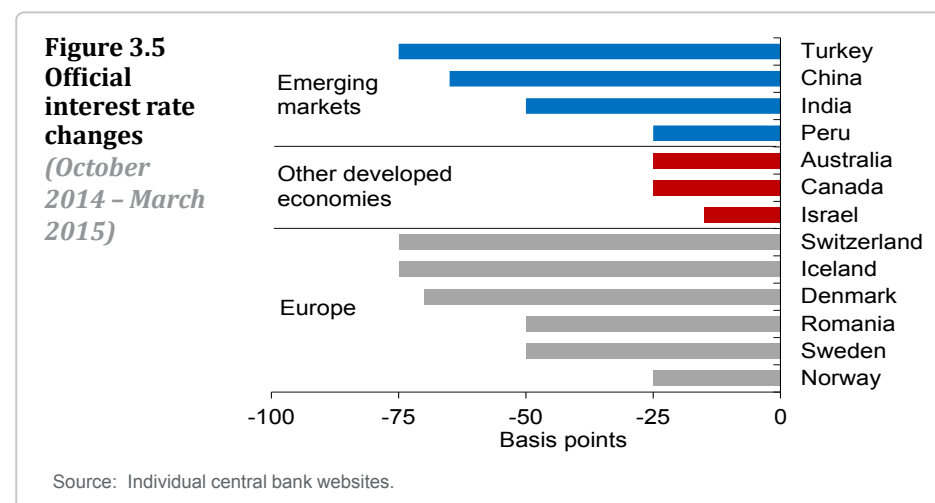
A rapid unwinding of property imbalances could result in a sharp slowdown in Chinese economic growth and increasing loan losses. The large number of loans made outside the regulated banking sector in recent years could be especially vulnerable to such a downturn. There are also new concerns around rapidly rising equity prices, with the Shanghai stock exchange composite index more than doubling in the 12 months to the end of April. China is the world's largest commodity consumer, the number one or two trading partner for 50 countries, and one of New Zealand's largest trade partners. China's slowing growth rate directly affects New Zealand via lower export volumes and agricultural commodity prices, and indirectly via lower export-led growth in Australia and weaker global growth. Any associated disturbance to global financial markets could also compromise the cost and availability of offshore funding for New Zealand banks.

Global monetary policy is accommodative.

The ECB and BoJ have both significantly increased their quantitative easing programmes in 2015, in response to falling inflation and weak growth. Although US monetary policy is also highly stimulatory, improving growth prospects have seen the Federal Reserve gradually withdraw its quantitative easing programme. Market expectations of an increase in the policy rate, for the first time in over six years, have also increased. Figure 3.4 shows an indicator, developed by the Reserve Bank, of the policy rate for the world's major economies that would result if the zero lower bound on interest rates were not binding. The recent quantitative easing undertaken in Japan and the euro area is estimated to be equivalent to a large cut in policy interest rates, to significantly negative levels. In contrast, the implied policy interest rate for the US has gradually increased since early 2013.



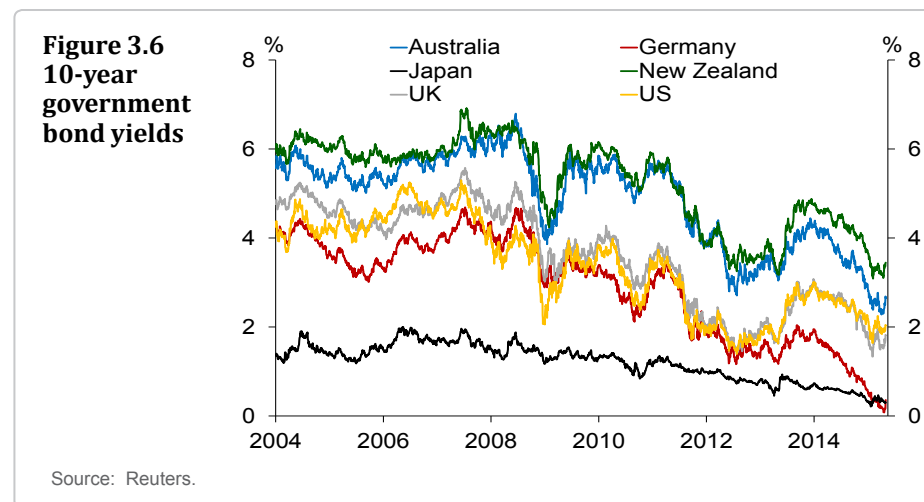
Central banks in many other countries have also eased monetary policy over the past six months (figure 3.5). Several European countries outside the euro area reduced policy rates to help counter the appreciation of their respective currencies, partly driven by the ECB's quantitative easing programme. The most pronounced examples are Sweden and Switzerland, which have implemented negative policy rates. A number of commodity-exporting countries, including Canada, Norway and Australia, also reduced interest rates, in part reflecting lower commodity prices. The People's Bank of China has responded to slowing growth by providing liquidity to the banking system, reducing reserve requirements, and through two interest rate reductions in November 2014 and February 2015.



Global bond yields are at historic lows....

Extraordinary monetary policy easing, falling global inflation and concerns about the global growth outlook have pushed long-term bond yields in many countries to historic lows (figure 3.6). Falling yields have

been particularly evident in Europe, where almost one-third of sovereign bonds now carry a negative yield. This partly reflects the influence of increasingly stimulatory monetary policy in lowering yields at shorter maturities. Despite the rise in US short-term interest rates, US bond yields also reached historic lows at many longer-term maturities in late 2014.

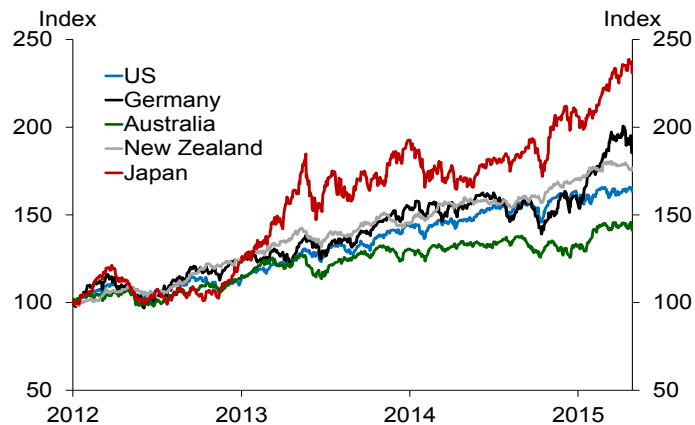


...encouraging investment in higher-yielding assets.

Low and falling global bond yields are encouraging investment in higher-yielding assets. Equity markets have been particularly buoyant (figure 3.7). Low global interest rates have also been associated with compressed credit spreads on higher-risk assets (figure 3.8) and low asset market volatility (see figure 3.9). These risk measures remain low, but have increased towards their long-run averages, partly reflecting sharp declines in commodity prices in late 2014. This environment is boosting demand for physical assets such as residential and commercial property. As discussed in chapter 4, low interest rates are a key factor

supporting demand for these assets in New Zealand. Higher asset prices could become a point of vulnerability in the future if they fall sharply as interest rates return to more normal levels.

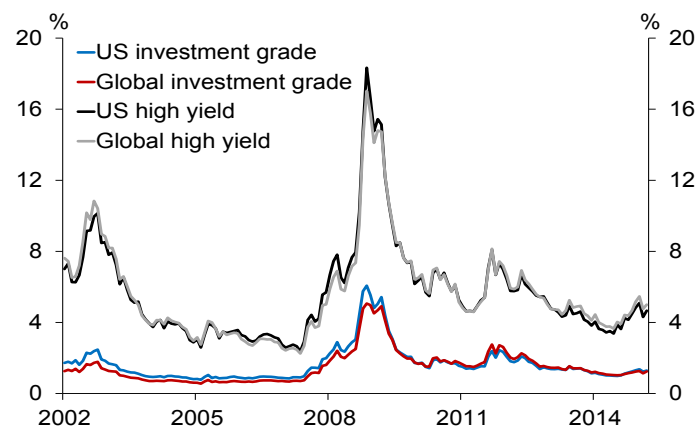
Figure 3.7
Benchmark
stock price
indices
(1 January
2012=100)



Source: Reuters.

Note: Indices shown are USA S&P500, Japan Nikkei 225, Germany DAX, Australia S&P-ASX200, and New Zealand NZX50.

Figure 3.8
Corporate
bond yields
(spread to
government
bonds)



Source: Barclays Capital.

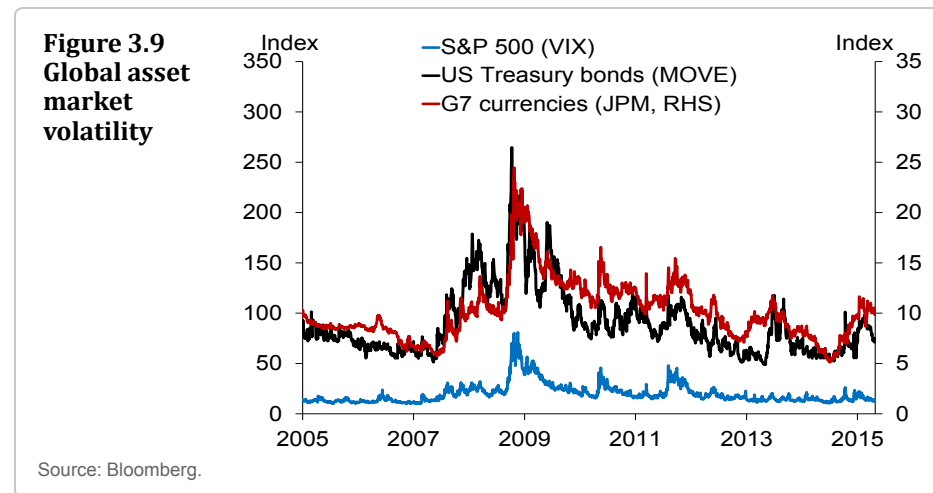
Low global interest rates have also prompted large-scale capital flows from low- to high-yield countries. This resulted in significant capital flows to emerging markets in the years following the GFC. More recently, rising interest rate differentials between the US and Europe have increased the relative attractiveness of US assets for European investors. In the month following the ECB's expanded bond purchase announcement, bond funds domiciled in the US saw inflows that were around triple that in any other month in 2014. Some emerging markets have experienced capital outflows, reflecting a slowing growth outlook and declining yield differentials to the US. For example, China saw a net \$324 billion of capital outflows in 2014 compared with an inflow of \$56 billion in the year prior.¹

There are risks around the normalisation of US monetary policy.

Market disruptions associated with the US moving to tighter monetary policy are one potential trigger for a rapid unwinding of current benign conditions. For example, a significant increase in US long-term interest rates could reduce the ability of emerging market debt issuers to raise new capital and rollover existing debt maturities. The overall rollover requirement for emerging market corporate enterprises' debt is estimated to rise significantly in coming years. An increasing reliance on offshore debt markets is of particular concern for some net-debtor emerging markets, which are more vulnerable to an abrupt pull-back in foreign capital. Non-financial corporate borrowing has also increased in some surplus economies, including China. Disruptions to emerging market capital flows could spill over to New Zealand via increased volatility in global financial markets.

¹ Kwok, D and T Wang (2015) 'Capital outflows & RMB exchange rate', UBS Global Research Macro Keys, February.

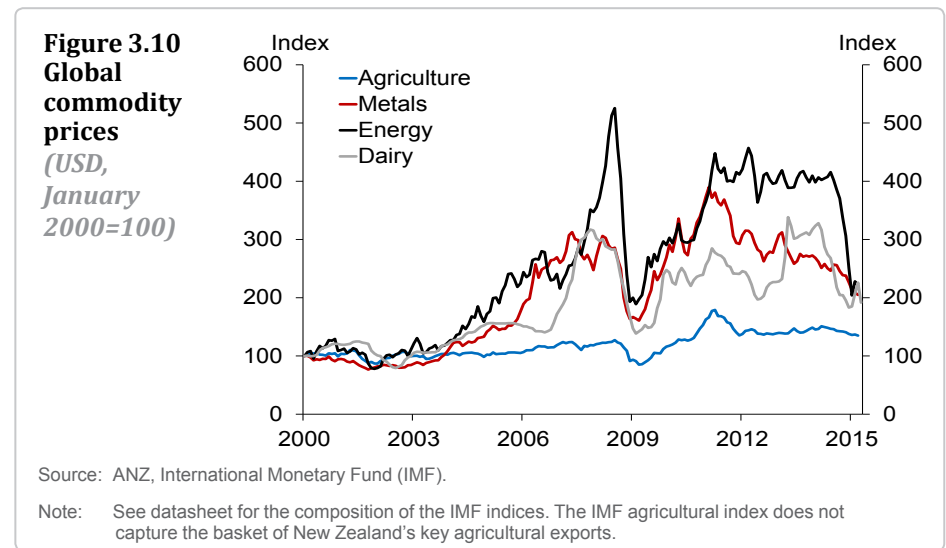
The sensitivity of markets to unanticipated disruptions, including those associated with a disorderly transition to tighter US monetary policy, could be amplified by tighter market liquidity in both foreign exchange and fixed income markets. Structural changes in markets, including changes to capital-adequacy regulation and the changing composition of market participants, have also reduced market-making capacity. An example of how tighter liquidity can lead to abrupt price movements was the removal of the Swiss franc floor in early 2015, which saw a rapid escalation in foreign exchange market volatility (figure 3.9).



Commodity prices have declined...

Many commodity prices have declined sharply since early 2014 (figure 3.10), in part due to concerns about slowing economic activity in China, the world's largest commodity consumer. For certain key commodities, including energy and industrial metals, increased global supply has also contributed to downward pressure on prices. Falling commodity prices have reduced incomes and intensified downward pressures on exchange rates for emerging market commodity exporters, including some of New

Zealand's trading partners in Asia. These trends pose additional risks for economies that rely on offshore funding.



...with implications for Australia and New Zealand.

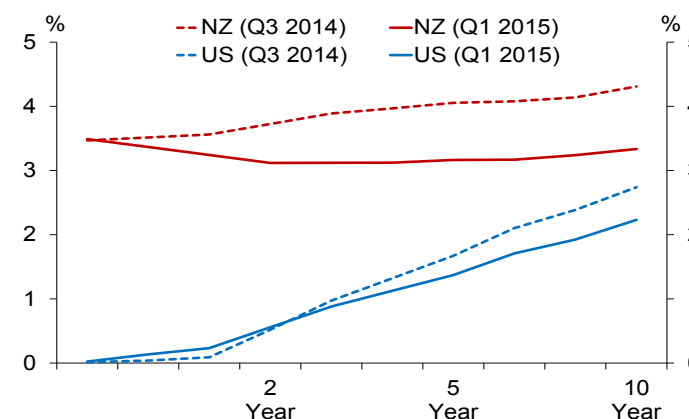
The New Zealand economy is exposed to these commodity market pressures, with prices for dairy products almost 50 percent below their early 2014 peak (see chapter 4). A sustained weakening in metals prices, particularly the price of iron ore, has also led to weaker growth momentum in Australia. The Reserve Bank of Australia has been gradually reducing interest rates since 2011, which will help with the transition from mining-led investment growth to other sources of domestic demand. As a result, New Zealand interest rates have increased relative to those in Australia.

Low interest rates have been associated with strong house price growth in several major Australian cities, alongside rapidly growing lending to investors. A sharp correction in Australian house prices associated with a reduction in debt servicing capacity has the potential to increase stress for some Australian banks. Such a scenario could also possibly have implications for the subsidiaries of the large four banks operating in New Zealand. However, the Australian Prudential Regulation Authority (APRA) has noted its intention to monitor carefully for any signs of loosening lending standards, and has issued guidelines to banks on appropriate lending behaviour. The recent Financial System Inquiry also made recommendations that are likely to result in an increase in the amount of capital held against housing loans.

Falling global interest rates have pushed NZ interest rates lower...

Falling global interest rates have increased the attractiveness of relatively high-yielding New Zealand bonds, resulting in a decline in government bond yields. The sharpest drops occurred at long-term maturities, mirroring trends seen in the US (figure 3.11). New Zealand 10-year government bond yields hit a historic low of 3.11 percent in February 2015. The relative demand for New Zealand government bonds has also increased in recent months. The spread between US and New Zealand 10-year government bonds fell to 112 basis points in March, the lowest level since the March quarter of 2007.

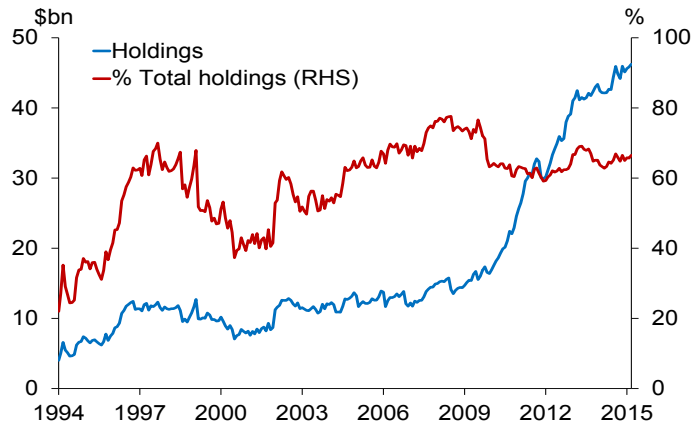
Figure 3.11
New Zealand
and US
government
bond yields



Source: Bloomberg, RBNZ calculations.

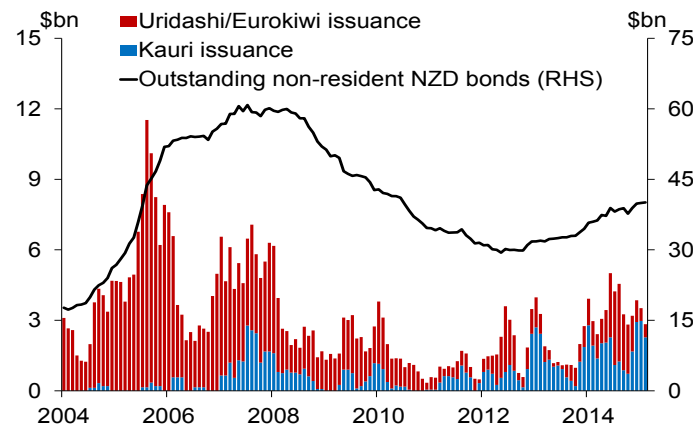
Although the share of New Zealand government debt held by offshore investors has remained broadly stable, strong international demand for this debt is reflected in a rise in offshore bond holdings over the past six months (figure 3.12). A high relative yield has also been associated with strong issuance of NZD bonds by non-residents, including a record \$2.1 billion of Kauri bond issuance in January (figure 3.13). Holdings of NZD-denominated bonds have been trending up since the start of 2012 as new issuance has outstripped maturities. The expansion in the quantitative easing programmes of the ECB and BoJ suggests that yields in key developed economies are likely to remain exceptionally low, and this could support demand for NZD assets for an extended period.

Figure 3.12
Offshore NZ
government
bond
holdings



Source: Bloomberg, RBNZ.

Figure 3.13
Non-resident
NZD bond
issuance
(3-monthly
total)

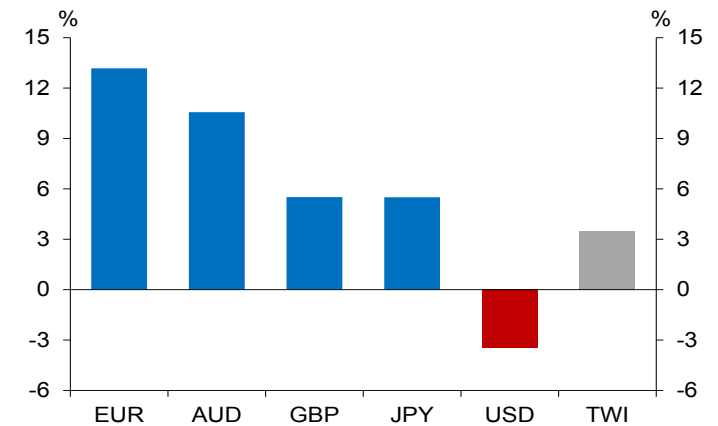


Source: Reuters.

...and supported the NZ dollar.

New Zealand's relatively strong growth and high interest rate differentials continue to support the NZD. The NZD has appreciated against a range of currencies since the last *Report*, with the exception of the USD (figure 3.14). The Trade Weighted Index (TWI) appreciated 4 percent in the six months ended March 2015, taking the index to within 5 percent of its record highs in mid-2014. The NZD/AUD reached a historic post-float high of almost 99.8 cents in March. Although there has been a helpful depreciation in the exchange rate in recent weeks, Reserve Bank analysis suggests that the real exchange rate, on a trade weighted basis, is above its sustainable level. This implies that the NZD could fall sharply if current benign conditions in global markets reverse, resulting in a reduction in appetite for NZD-denominated assets.

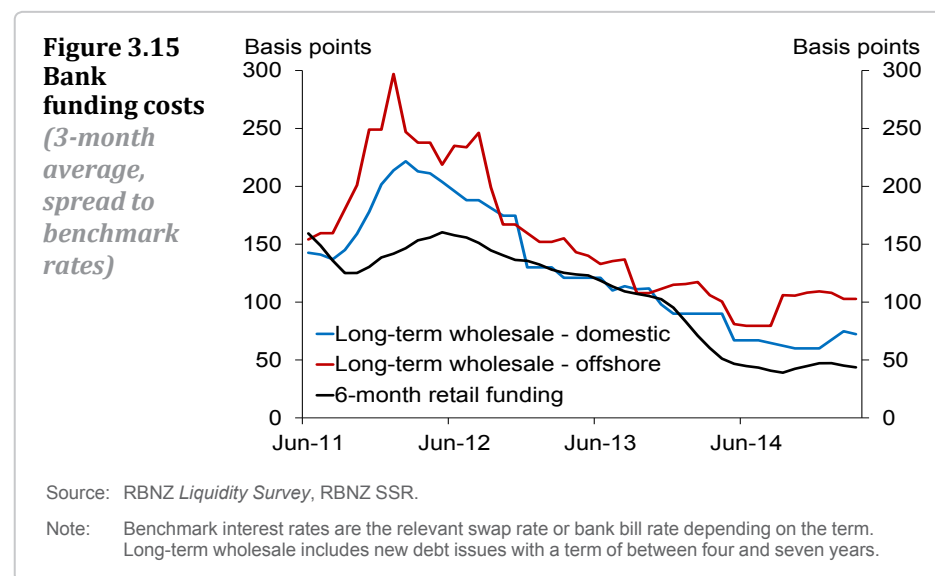
Figure 3.14
New Zealand
exchange
rate
(% change,
30 Sep 2014 –
31 Mar 2015)



Source: Bloomberg, RBNZ calculations.

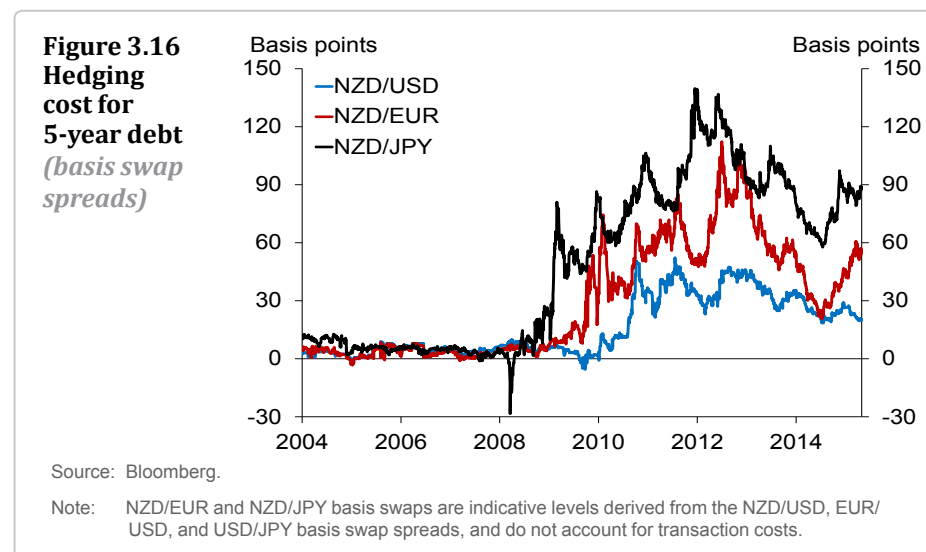
Bank wholesale funding costs remain relatively low...

Funding conditions remain favourable for New Zealand banks, with the cost of funding from a variety of stable funding sources remaining near post-crisis lows (figure 3.15). The rise in global financial market volatility in late 2014 and early 2015 played a role in a modest widening in the landed cost of long-term offshore funding, particularly at longer terms. However, banks have had little need to issue significant amounts of offshore funding due to relatively strong growth in deposits (see chapter 5). Funding spreads on deposits, and long-term wholesale funding sourced from the domestic market, have remained stable since the last Report.



...although hedging costs have increased for some currencies.

A rise in the cost of hedging some currencies into NZD may explain some of the modest increase in offshore funding costs (figure 3.16). The cost of hedging euros or yen into NZD has increased markedly, due to an increase in the cost of first swapping these currencies into USD. This development in large part reflects the increased quantitative easing programmes by the ECB and BoJ, which have increased the supply of funding in yen and euros. This has resulted in a decline in the relative supply of USD funding, increasing the cost of hedging these currencies into USD. With non-resident issuance of NZD-denominated bonds picking up in early 2015, the cost of hedging USD into NZD has declined slightly since November.



Chapter 4

Financial risks to the New Zealand economy



Financial risks have increased since the previous *Report*, in large part due to growing imbalances in the housing market. House price inflation has picked up significantly in Auckland in recent months, driven by constrained supply growth, falling mortgage interest rates and strong net immigration. Auckland house prices have become increasingly stretched relative to rents and incomes, increasing the likelihood of a disruptive correction.

Dairy incomes have declined significantly in the current season. Milk prices remain well below their peak in early 2014, and continued weakness in prices could markedly increase financial stress in the dairy sector. This vulnerability is exacerbated by high levels of dairy debt, concentrated among a small number of more vulnerable borrowers, and the potential for farm land prices to fall significantly.

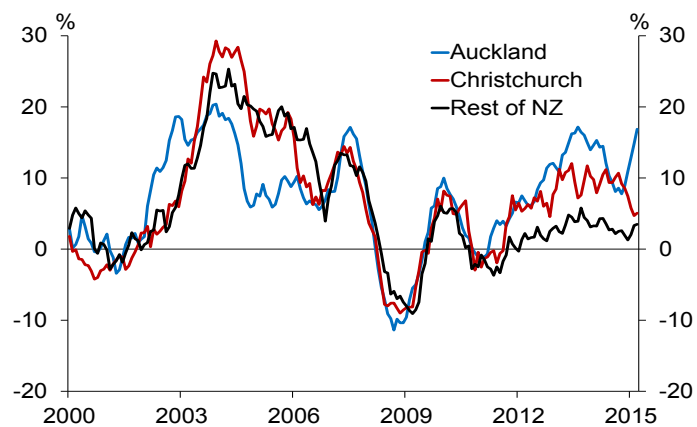
New Zealand has a high level of net external debt. Increased private sector investment and lower farm incomes could worsen the net external debt position in coming years, increasing the vulnerability of the domestic economy to disruption in global financial markets.

Households

Auckland house price inflation has rebounded strongly...

The possibility of a sharp fall in house prices remains a key threat to financial stability, in the context of elevated household debt levels and house prices that are high relative to fundamental measures such as household incomes and rents. House price inflation eased in the year following the introduction of the speed limit on high loan-to-value ratio (LVR) lending in October 2013. In the Auckland region, where prices are particularly stretched, house price inflation has since rebounded strongly (figure 4.1). In contrast, house price inflation has eased significantly in Christchurch and remains moderate in the rest of New Zealand.

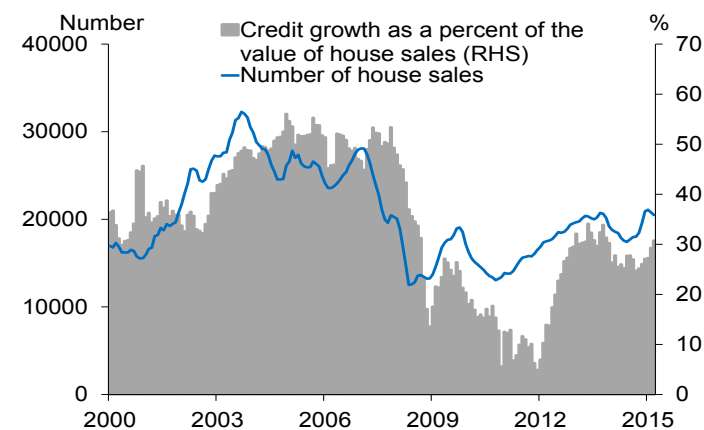
Figure 4.1
House price growth by region
(annual 3-month moving average)



Source: REINZ.

The number of house sales is now similar to prior to the introduction of the LVR speed limit, after falling 16 percent between September 2013 and June 2014 (figure 4.2). Although the volume of house sales remains well below levels seen prior to the GFC, the value of those sales is approaching record nominal levels. New loan commitments for housing have accelerated over the past year in line with the increased value of sales, but growth in the outstanding stock of housing credit has remained modest. This reflects an increase in repayments by existing mortgage holders and the reduction in the average LVR of new borrowers due to the speed limit on high-LVR lending (see box D).

Figure 4.2
House sales and housing credit
(quarterly)



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

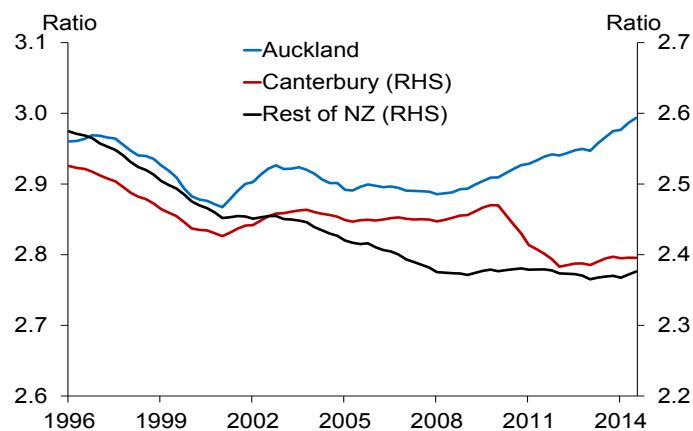
Note: Grey bars account for a one month lag between house sales and credit.

...driven by tight supply...

A significant imbalance between the demand for and supply of housing has been a key factor behind recent increases in Auckland house prices. New building has been low relative to population growth, leading to a sustained rise in the average number of people per dwelling (figure 4.3). Consent issuance has accelerated markedly in recent years, and is expected to be boosted by the Auckland Housing Accord that allows for fast-tracking of resource consents. However, there are significant factors limiting land supply that will make it difficult to achieve the scale of residential building required to meet current and expected population growth and reduce upward pressure on house prices.¹ In contrast, rental growth and house price inflation in Christchurch have been easing in recent months as new housing supply becomes available.

¹ For more detail, see Spencer, G (2015) 'Action needed to reduce housing imbalances', http://www.rbnz.govt.nz/research_and_publications/speeches/2015/action-needed-to-reduce-housing-imbalances.pdf

**Figure 4.3
Population-
to-dwelling
ratio**



Source: Statistics New Zealand, RBNZ calculations.

...combined with falling mortgage interest rates and strong net immigration.

As shown in table 4.1, the recent rebound in house price inflation has been underpinned by a sharp fall in mortgage interest rates and further increases in net permanent and long term (PLT) immigration. Longer-term mortgage rates, in particular, have fallen significantly, with the best available five-year rate down 180 basis points between September 2014 and March 2015. Annual net PLT immigration currently stands at an all-time high of more than 56,000, around half of which represents inflows into Auckland. This compares with 45,000 at the time of the November *Report*, and 15,000 just prior to the introduction of the LVR speed limit. Interest rates are expected to remain low for an extended period, and strong immigration may continue due to New Zealand's relatively favourable economic prospects. When combined with the existing shortage of supply, these conditions suggest a substantial risk that Auckland house price inflation will not abate for some time, despite house prices already being heavily stretched relative to incomes and rents.

**Table 4.1
Housing market conditions**

| | House price inflation | | Mortgage rates | | Net immigration |
|----------------|--------------------------|----------|-------------------------|--------|-----------------|
| | NZ | Auckland | 2-year | 5-year | PLT |
| Date | Annual (3-month average) | | Best available rate (%) | | Annual (000s) |
| September 2013 | 9.4 | 16.4 | 5.45 | 6.55 | 15.2 |
| September 2014 | 5.0 | 8.6 | 5.75 | 6.79 | 45.4 |
| March 2015 | 7.7 | 16.9 | 5.19 | 4.99 | 56.3 |

Source: interest.co.nz, REINZ, Statistics New Zealand.

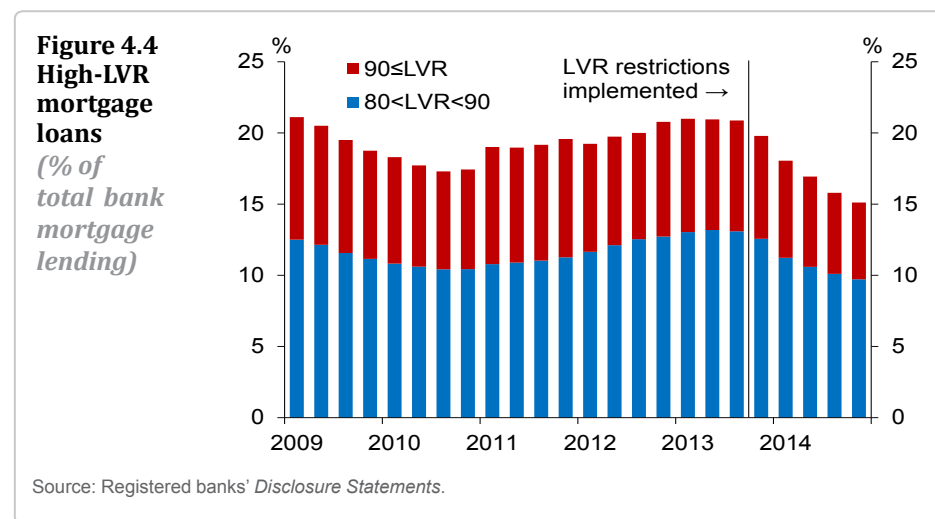
Note: September 2013 represents conditions prior to the introduction of the LVR speed limit. September 2014 represents market conditions at the time of the November 2014 *Report*. Best available rates include low-LVR specials.

The financial system is vulnerable to a sharp house price correction...

Rising imbalances in the housing market increase the risk of a subsequent sharp fall in house prices, which would lead to financial stress among some borrowers. A significant correction in house prices could be triggered by a range of factors, such as a sharp economic downturn leading to a marked deterioration in the labour market, or a sharp increase in mortgage interest rates. Any downturn could be amplified by a withdrawal of speculative interest in residential property or a reversal of immigration flows. Financial distress among households could transmit to banks through increased losses on housing loans, and lower banking sector profitability due to weaker economic growth. International experience during the GFC demonstrates how financial stress in the household sector can have major consequences for the real economy, with consumption and investment falling amid tighter credit conditions and efforts by borrowers to reduce debt.

...but the LVR speed limit is limiting the associated risks.

As noted in chapter 2, the speed limit on high-LVR lending has limited the increase in financial system risk associated with the housing market. The level of house prices remains lower than would otherwise have been the case. The share of outstanding mortgage borrowers with high LVRs has also declined considerably (figure 4.4), thereby decreasing the probability of default and expected loss given default for any given house price correction. Increased household equity buffers are also likely to limit the extent to which house prices fall during periods of market stress, by reducing the likelihood of a significant increase in forced sales for borrowers with negative equity.

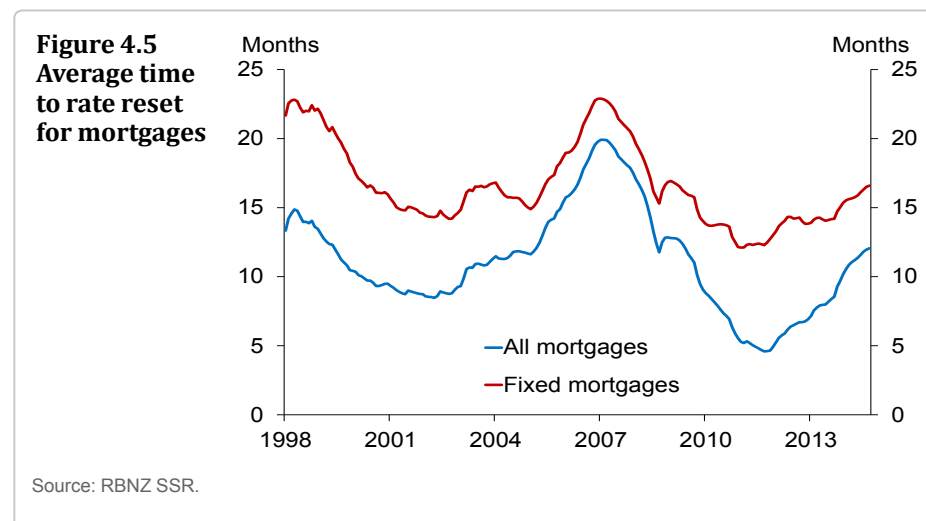


A sharp rise in mortgage rates could stress highly indebted borrowers.

As discussed in box B, the Reserve Bank has introduced significant revisions to the household balance sheet statistics since the November

Report. Household debt-to-disposable income (DTI), inclusive of debt held against rental properties, remains high (figure B1). DTI ratios are likely to be rising rapidly among new buyers in the Auckland region, given that increases in house prices are well in excess of income growth. As discussed in box A, a significant proportion of recent house purchases and associated borrowing is also accounted for by investors. This lending tends to have higher DTI ratios and typically imposes greater losses on the financial system during housing market downturns.

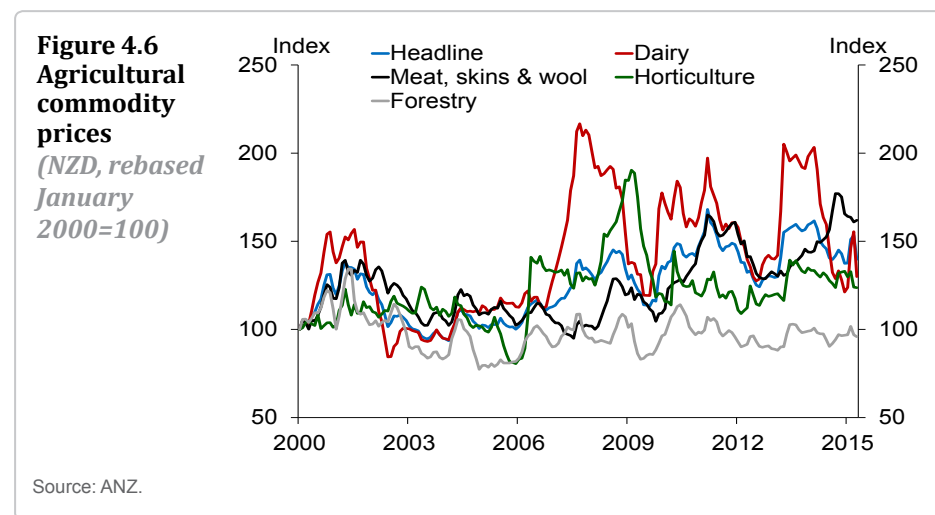
High DTI ratios reduce the financial buffer available to absorb an unexpected increase in costs. This is likely to make the household sector particularly susceptible to a decline in labour incomes, or a sharp increase in mortgage rates associated with further disruptions to global financial markets. Borrowers' DTI ratios could improve somewhat in coming years, as labour incomes increase with the ongoing economic recovery. Debt servicing ratios are also insulated in the short-term by the continuing shift to fixed-rate mortgages, although the average time to interest rate reset remains well below its peak in 2007 (figure 4.5).



Agriculture

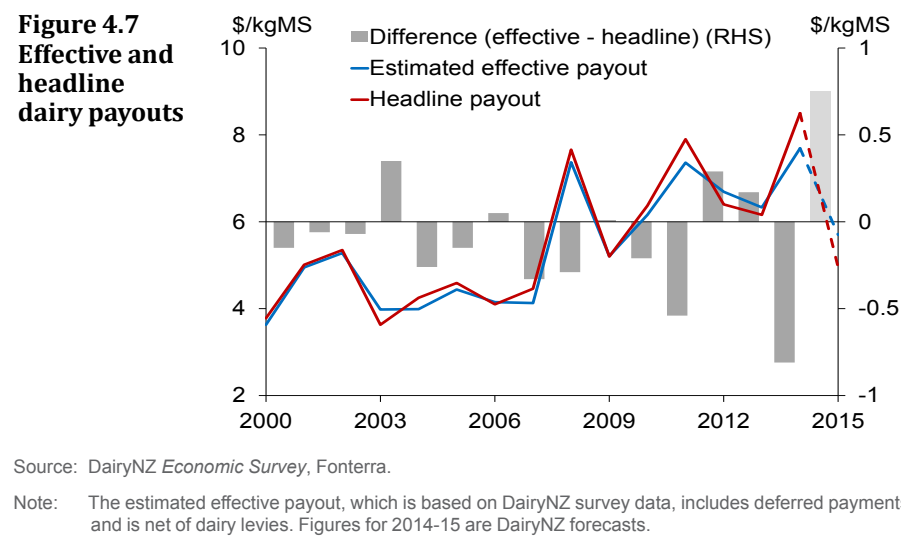
Dairy prices declined significantly over the past year.

Global dairy prices fell by over 50 percent from peak to trough last year, due to increased global supply, sanctions on Russian imports, and reduced Chinese demand following its build-up of inventories during the 2013-14 season. While dairy prices briefly recovered in early 2015, prices have since declined and are now back near their previous trough. In aggregate, New Zealand's agricultural export commodity prices are broadly unchanged since November (figure 4.6).



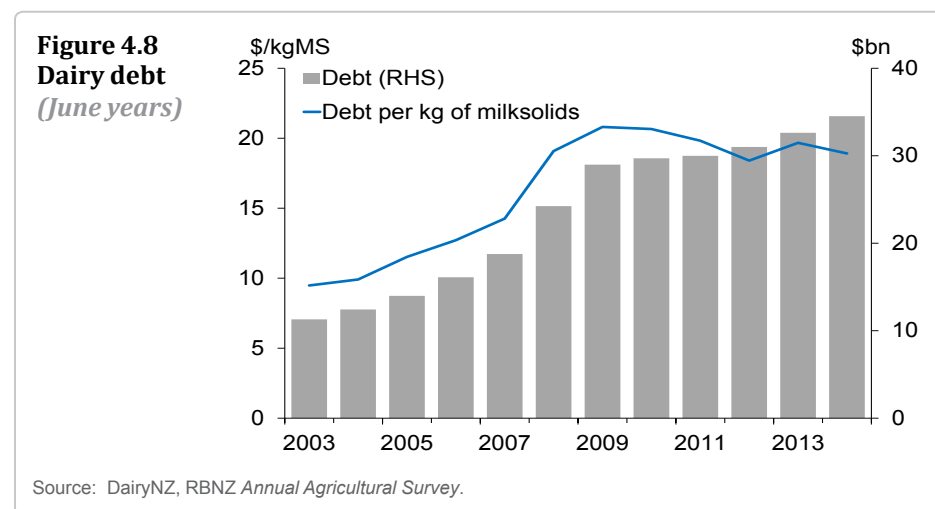
Financial pressure on dairy farmers is likely to increase...

Lower global dairy prices and continued strength in the NZD are expected to result in a sharp fall in dairy farm incomes this season. Fonterra's payout for the current 2014-15 season is forecast to be \$4.50 per kilogram of milksolids (kgMS), with an expected dividend range of 20-30 cents per share. The total forecast payout of \$4.70-\$4.80 per kgMS compares with \$8.50 in the 2013-14 season, representing the largest season-to-season fall on record. However, cash flow pressures for dairy farmers are not as large as the headline payout would suggest, due to large deferred payments from the strong 2013-14 season boosting incomes (figure 4.7).



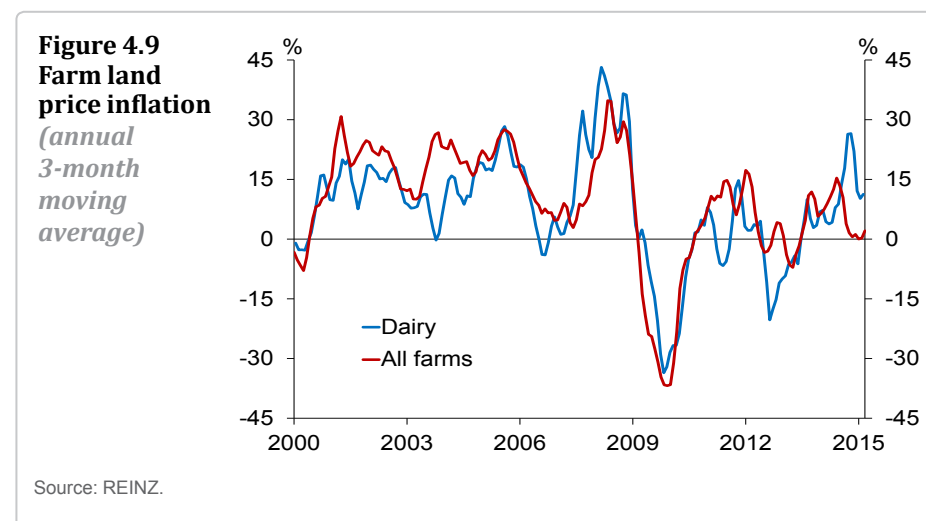
...particularly if a lower payout persists...

Between 2003 and 2009, debt in the dairy sector grew far more rapidly than income and production (figure 4.8). Dairy debt is concentrated among a small number of farms, and a large proportion of heavily indebted farms are likely to have negative cash flow in the current season. The outlook for global milk prices is highly uncertain and, as discussed in box C, financial stress in the dairy sector could rise markedly if prices remain at low levels in the 2015-16 season. Prices are likely to be supported by increased Chinese demand, as inventories revert to more normal levels. However, the recent removal of the European Union's long-standing quota on dairy production and potential increases in US dairy exports are likely to weigh on prices.



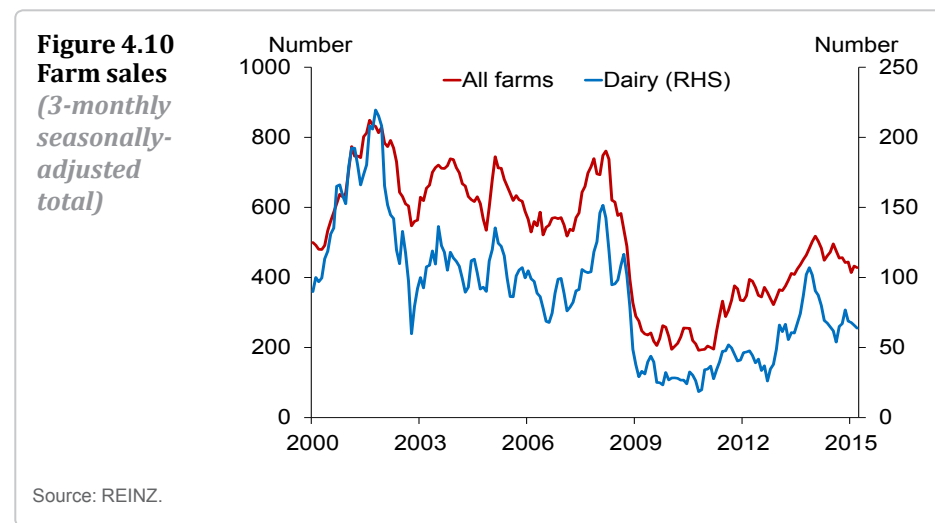
...and farm prices fall sharply.

Over the past year, aggregate rural land prices have been approximately flat, and dairy farm prices have risen by around 10 percent (figure 4.9). As noted in chapter 2, demand for farm land is being supported by low interest rates and an expectation that the long-term outlook for dairy prices will be supported by increasing Chinese demand. The risk of a sharp correction in farm prices is also mitigated by the fact that farm prices are significantly lower relative to farm incomes than prior to the GFC.

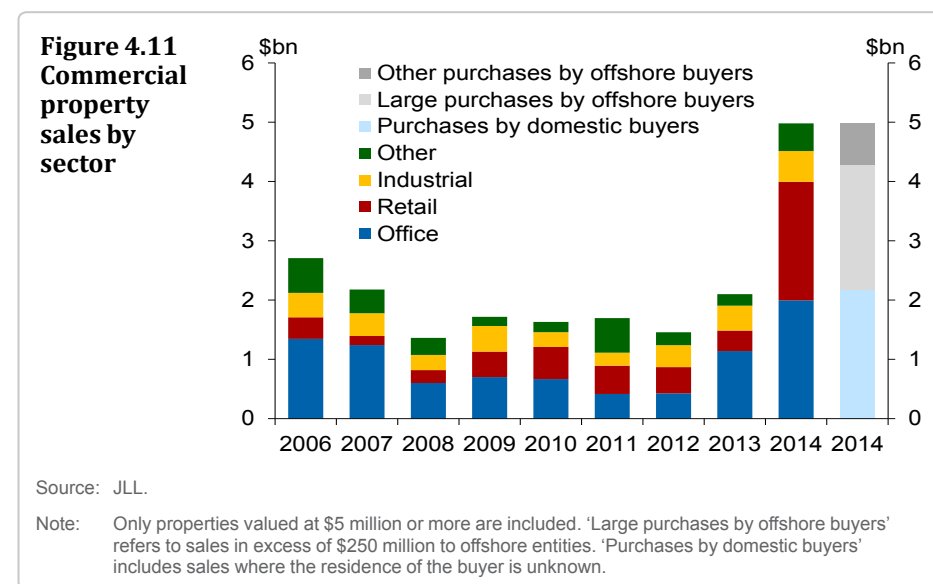


Nevertheless, declining farm incomes are typically accompanied by sharp falls in farm values, as occurred during the 2008-09 and 2011-12 seasons. In both cases, initial falls in farm values in response to lower incomes were amplified by a low level of farm sales (figure 4.10). Dairy farm sales have declined over the past season in line with continued downward revisions to the dairy payout, leading to a moderation in farm price inflation. If the lower dairy payout were to be sustained, there is a

risk that farm values could fall sharply and exacerbate the increase in financial stress associated with lower farm incomes.



offshore entities, which together accounted for over \$2 billion of the total value traded.



Commercial property

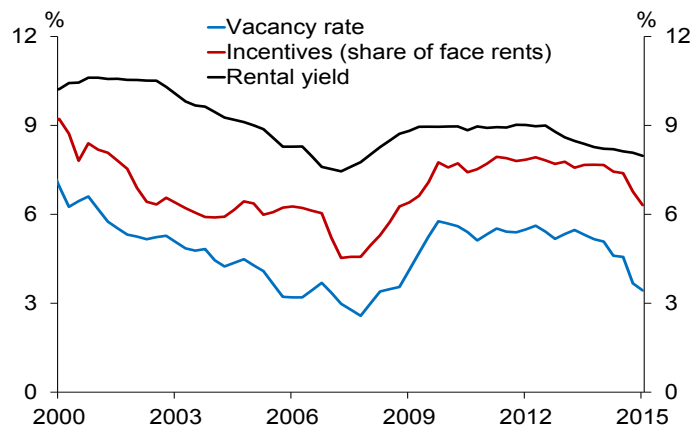
Commercial property market activity is increasing...

Activity in the commercial property market has increased considerably over the past year. Almost \$5 billion worth of property was transacted in 2014, well up from sales of \$2 billion in 2013 (figure 4.11). This increase is primarily attributable to increased purchases by offshore investors seeking the relatively high yields available in the New Zealand commercial property market, in an environment of low yields on assets globally. In particular, market activity in 2014 was largely driven by the sale of an AMP portfolio and a stake in five Westfield retail malls to

...and market conditions are tightening...

As the economy continues to grow, tenant demand for floor space is increasing and market conditions are tightening (figure 4.12). Vacancy rates across the sector as a whole have declined since the start of 2014, and have fallen below 4 percent for the first time since December 2008. Incentives offered by landlords, such as cash payments to tenants at the outset of a rental contract or a rent-free period, are now at their lowest level in over five years. Despite rising rents, rental yields have returned to near post-GFC lows, reversing substantial increases in the wake of the GFC associated with increasing risk premia and falling capital values. Falling rental yields have in large part been driven by low interest rates, which have supported a rise in prices relative to prevailing market rents.

**Figure 4.12
Commercial
property
market
conditions**

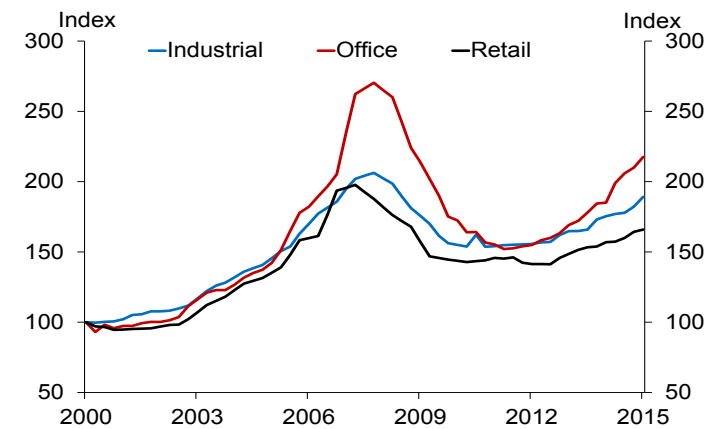


Source: JLL.

...contributing to robust price growth.

Increased offshore purchases and tighter market conditions contributed to continued robust capital growth over the past six months (figure 4.13). In aggregate, capital values grew at an annual rate of 8.8 percent in the year to March 2015. Capital growth in the office sector has continued to outstrip other sectors, at an annual growth rate of 17.5 percent. This compares to growth rates of 5.7 and 7.8 percent in the retail and industrial sectors respectively.

**Figure 4.13
Commercial
property
prices by
sector
(March 2000
=100)**



Source: JLL.

Note: Prices are an imputed capital return series.

Risks are largely contained...

There is a risk that continued offshore interest in the New Zealand market will further compress rental yields, increasing the vulnerability of the sector to a significant fall in prices. However, there are a number of factors suggesting that risks remain much lower than in the pre-GFC period. Despite strong growth over the past three years, capital values remain around 13 percent below their previous peak. Development activity is beginning to pick up across the country in response to rising rents and capital values, and this should see upward pressure on rents and prices ease as this supply comes on stream in coming years. Finally, the potential risks associated with increased development and investment activity are limited due to the relatively moderate scale of the supply pipeline and the reduction in the use of leverage by property developers since the GFC.²

² For a discussion of the changing nature of financial stability risks in the New Zealand commercial property sector see, Dunstan, A and H Skilling (2015) 'Commercial property and financial stability', Reserve Bank of New Zealand *Bulletin*, 78(2), March, http://www.rbnz.govt.nz/research_and_publications/reserve_bank_bulletin/2015/2015mar78-2.pdf

...but differ across sub-sectors.

Although risks across the commercial property sector as a whole are contained, some sub-sectors, particularly within the office market, are showing signs of increasing risk (table 4.2). In the Auckland office market, prices are back near pre-GFC levels and capital values continue to grow strongly, associated with falling vacancy rates and incentives. New supply and refurbished properties returning to the market should help to alleviate these pressures over the medium term, but capital growth is likely to remain robust in the interim. As noted above, this will likely make the market more susceptible to a significant price correction.

Table 4.2
Movements in office market conditions by region

| Indicator | Auckland | Wellington | Christchurch |
|----------------------------------|----------|------------|--------------|
| Change in last six months | | | |
| (%) | | | |
| Prices | 6.1 | -0.2 | -1.1 |
| Available stock | -1.4 | 0.0 | 10.3 |
| Rental yield | -0.2 | 0.0 | -0.1 |
| <i>(percentage points)</i> | | | |
| Incentives | -1.0 | 0.1 | 1.5 |
| Vacancy rate | -1.0 | -0.3 | -0.6 |
| Memo | | | |
| Share of stock (by value) | 65.4 | 22.7 | 11.9 |
| Peak-to-current price change | -9.6 | -24.4 | - |

Source: JLL.

Note: Prices are expressed in nominal terms. Incentives are as a share of face rents. Christchurch data are not available prior to 2014.

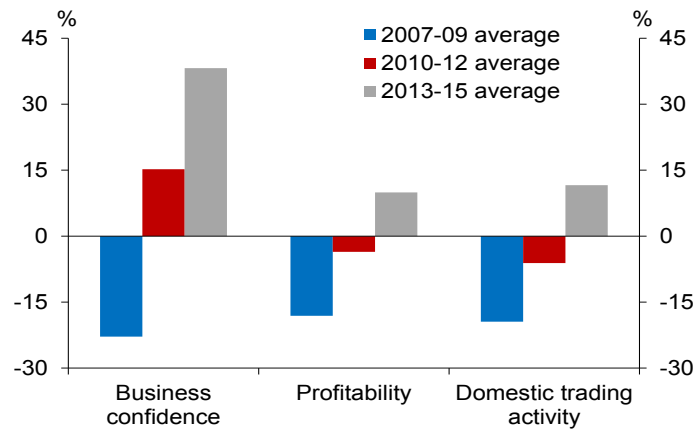
As discussed in the November *Report*, significant construction work is currently underway to rebuild the Christchurch central business district. Although this primarily represents the replacement of earthquake damaged buildings using insurance payouts, there is a risk that a lack of tenant demand could leave a significant proportion of landlords with vacant buildings, increasing financial stress and placing downward pressure on prices. This risk has been highlighted by a modest decline in capital values in Christchurch over the past six months, as landlords have offered generous incentives to attract long-term tenants.

Non-property business

Business sector outlook continues to improve...

With the economy strengthening, business activity and confidence have continued to improve since the last *Report* and are now markedly higher than during the GFC (figure 4.14). Survey measures of business profitability have also increased, supported by the sharp fall in oil prices. A significant reduction in the proportion of firms reporting problems with overdue debtors also indicates an improvement in financial conditions. However, some businesses continue to face headwinds, particularly manufacturing exporters and import-competing firms whose earnings have been hampered by the high NZD.

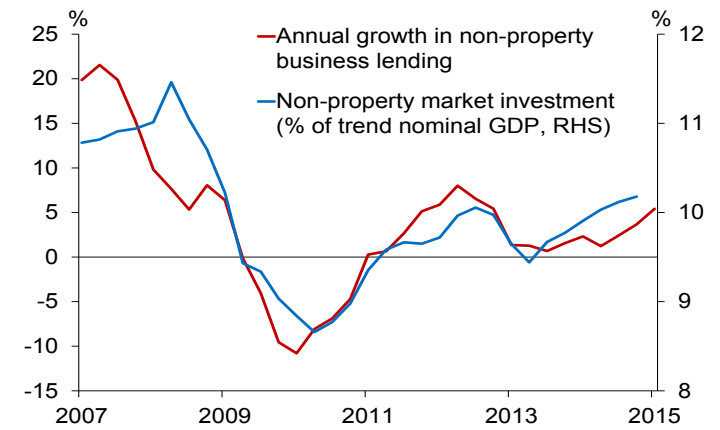
Figure 4.14
Survey
measures
of business
conditions
(net %
reporting an
improvement,
demeaned)



Source: NZIER Quarterly Survey of Business Opinion.

Note: 2013-2015 average includes data until March 2015.

Figure 4.15
Non-property
business
lending and
investment



Source: Statistics New Zealand, RBNZ SSR.

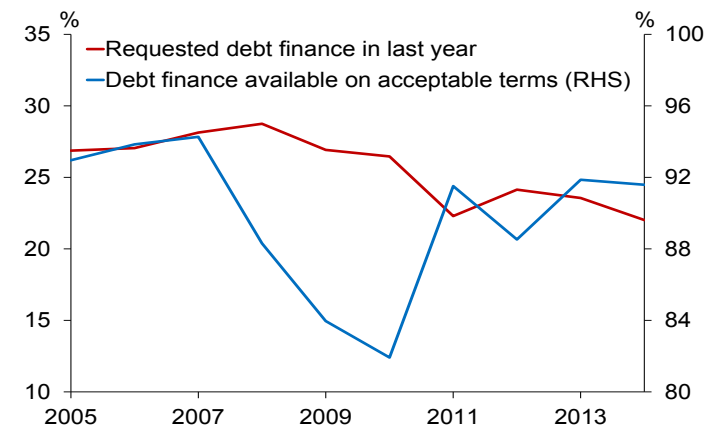
Note: 'Non-property market investment' includes transport equipment, plant and machinery (including computers) and intangible assets.

...while borrowing remains modest.

The outstanding stock of non-property business credit fell by almost 15 percent in the wake of the GFC, as falling investment activity reduced the demand for credit and credit conditions tightened. Increased business confidence and the broader recovery in economic activity have led to a moderate recovery in lending growth since 2011 (figure 4.15), bringing the outstanding stock of credit back to near pre-GFC levels.

Over the past six months, non-property market investment has picked up, resulting in a rise in credit growth. Several indicators point towards increased investment growth over the next year, which may cause credit growth to accelerate. However, businesses have exhibited caution in taking on debt since the GFC, despite the increased availability of debt finance in recent years (figure 4.16). The extent to which an increase in business investment prompts a further increase in credit growth hinges on the capacity of firms to fund such investment out of retained earnings, and the evolution of businesses' attitudes towards debt.

Figure 4.16
Indicative
supply and
demand for
debt finance
(% of non-
property
businesses)



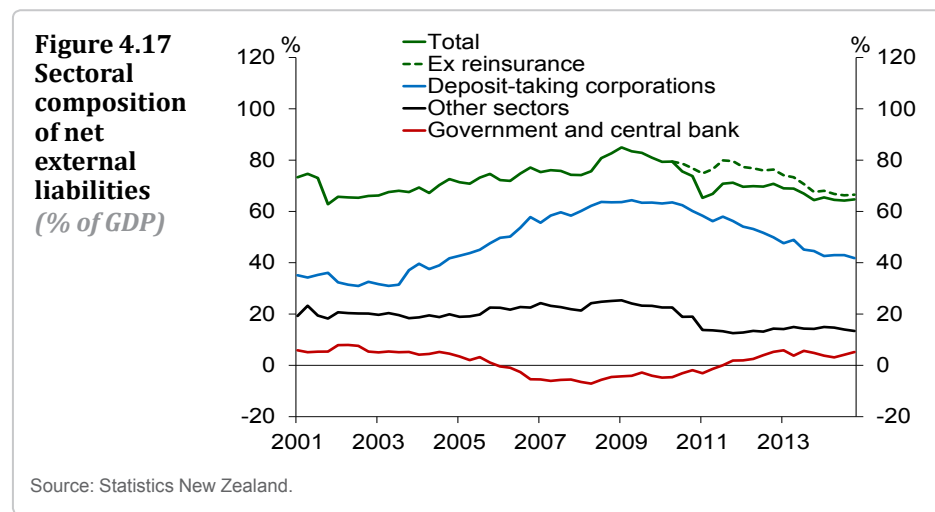
Source: Statistics New Zealand Business Operations Survey.

Note: 'Debt finance available on acceptable terms' is as a share of firms that requested debt finance in the last year.

External

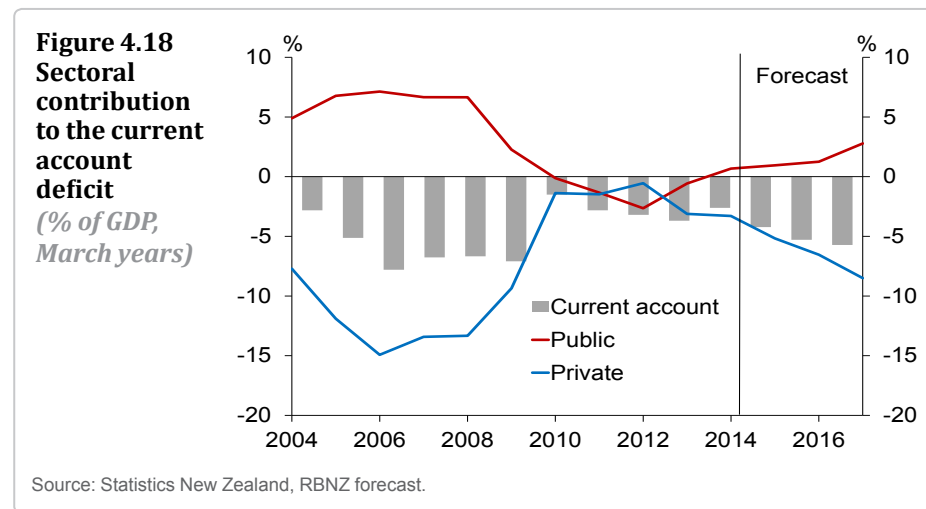
Net external debt remains high...

New Zealand's net external liabilities as a share of GDP are high on a cross-country basis (see appendix 3). Net external liabilities reached a peak of 85 percent of GDP in the first quarter of 2009 (figure 4.17), and have gradually fallen to around 67 percent (excluding reinsurance claims). This decline has primarily been driven by a reduction in net private sector debt intermediated through the banking system. The banking system's high and rising international indebtedness throughout the 2000s was a result of heavy borrowing from international markets to fund private sector credit growth. Modest credit expansion and strong retail deposit growth have since facilitated a reduction in banking system offshore borrowing which, as a share of GDP, has fallen by 22 percentage points over the last five years.



...and may rise in coming years...

Over the past year, growth in private sector credit has outpaced deposit growth (see figure 2.1), suggesting a widening gap between private sector savings and investment. A fall in export incomes due to the lower Fonterra payout, strong imports to facilitate construction activity in Christchurch, and increases in investment are expected to see this wedge rise further over the next one or two years. Although ongoing fiscal consolidation should provide some offset, projections from the March *Monetary Policy Statement* show a widening of the current account deficit from 2.6 percent last year to 5.7 percent in 2017 (figure 4.18). Under this scenario, net external liabilities would likely increase, with increased offshore borrowing by the banking sector.



...adding to offshore funding risks.

A high level of international indebtedness leaves the domestic economy vulnerable to changes in investor sentiment and offshore financial market conditions, especially if banks are reliant on these markets to fund lending growth. In the event of a severe disruption to offshore funding markets, New Zealand would experience reduced availability and higher costs of funding, leading to a tightening of domestic credit conditions and an associated weakening in economic growth.

However, several mitigating factors reduce this vulnerability. The introduction of the core funding ratio in 2010 has lengthened the average maturity of external debt, lowering the proportion of funding that needs to be 'rolled over' in periods of market stress. New Zealand's external debt is also largely hedged into NZD, so a depreciation of the currency – for example, due to foreign investment outflows during a period of financial stress – would not significantly increase the local currency value of external debt. The Reserve Bank's ability to provide liquidity to the banking system would limit the withdrawal of credit from the economy.

Box B

Changes to the New Zealand household balance sheet statistics

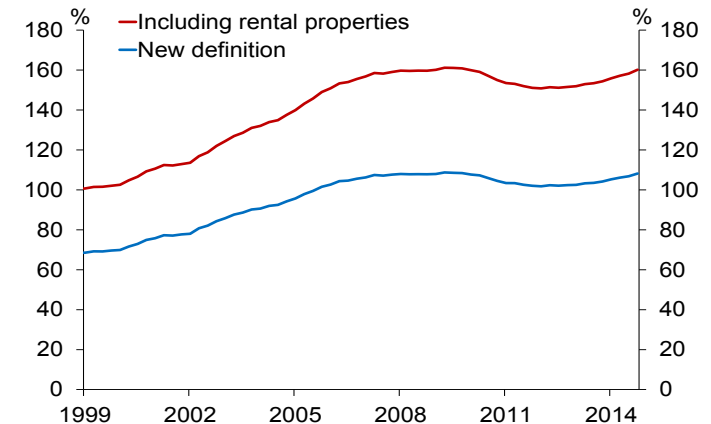
In March 2015, the Reserve Bank released a revised set of household asset and liability statistics.¹ The new balance sheet statistics help to address a number of long-standing gaps related to the financial position of the household sector. There are two major changes:

- A wider definition of household assets. The definition now includes currency holdings, equity in unincorporated (trusts, sole traders and partnerships) and unlisted incorporated businesses and some unfunded superannuation benefits.
- A narrower definition of the household sector. Residential rental property assets and liabilities no longer appear on the household sector balance sheet. Instead, only the equity that households hold in the rental property sector is included.

The changes bring the household balance sheet statistics into line with the international System of National Accounts for compiling sectoral balance sheets. For the September quarter, the improvements result in an overall increase in household assets of \$140 billion, and a decline in household liabilities (associated with housing loans of rental property owners) of \$73 billion. Household net wealth (the difference between total assets and liabilities) increases by an additional \$213 billion.

With the exclusion of the debt attached to rental properties the household debt-to-disposable income (DTI) ratio is now 108 percent, compared with 160 percent under the old methodology (figure B1). However, the methodological change does not fundamentally alter the Reserve Bank's view of the risks associated with lending to the household sector. Debt held against rental properties is clearly important from a financial stability perspective, particularly given the full recourse nature of mortgages in New Zealand. The Reserve Bank will continue to discuss the broader definition of household debt in the *Financial Stability Report*, and publish statistics that allow users to compute household debt under the previous definition.

Figure B1
Household debt as a percentage of disposable income



Source: RBNZ Household Assets and Liabilities.

¹ The data and accompanying background paper can be found here: <http://www.rbnz.govt.nz/statistics/tables/c21/>

Box C

Implications of a lower milk price for indebted dairy farms

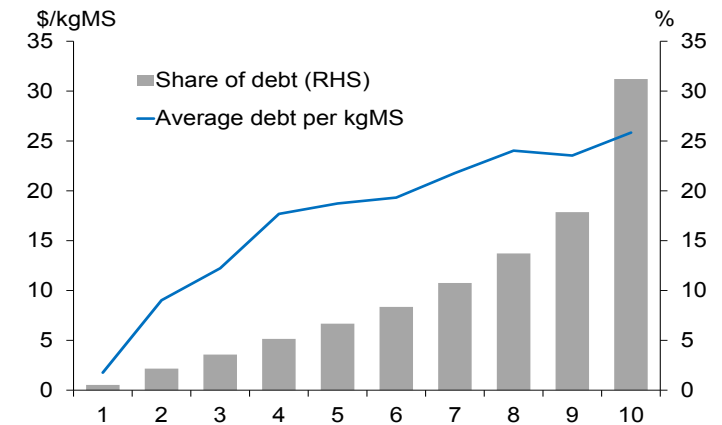
Between 2003 and 2009, dairy sector debt increased from \$11.3 billion to \$29 billion. Although this occurred alongside an increase in production levels, debt per kilogram of milksolids (kgMS) rose from \$9.50 to \$20.80 over the same period. Slower growth in dairy debt, reflecting significant reductions in farm investment and the value of farm sales, has since seen debt per kgMS fall to \$18.90 (see figure 4.8). This box uses farm-level data from DairyBase, a benchmarking tool for dairy farmers operated by DairyNZ, to provide an updated assessment of the distribution of debt within the sector. The data includes approximately 2,000 farm financial statements, spanning the three most recently completed seasons (2011-12, 2012-13, 2013-14).¹

Consistent with previous work, debt remains concentrated among a relatively small group of indebted farms (figure C1).² As at the end of the 2013-14 season, 10 percent of farms accounted for around one-third of the total sectoral debt. These farms tend to have higher levels of debt relative to output, leaving them more susceptible to worsening sectoral conditions. For example, the 10 percent of most indebted farms have average debt in excess of \$25 per kgMS, compared to less than \$10 of debt per kgMS for the least indebted 20 percent of farms. More generally, approximately 24 percent of dairy debt is owed by farmers with debt in excess of \$30 per kgMS.

¹ A detailed overview and analysis of this data will be published by the Reserve Bank, in conjunction with DairyNZ, later this year.

² Previous Reserve Bank analysis found that more than half of sectoral debt was owed by the most indebted 20 percent of farms in the 2008-09 season. See Hargreaves, D and G Williamson (2011), 'Stress testing New Zealand banks' dairy portfolios', Reserve Bank of New Zealand *Bulletin*, 74(2), June, http://www.rbnz.govt.nz/research_and_publications/reserve_bank_bulletin/2011/2011jun74_2hargreaveswilliamson.pdf

Figure C1
Distribution of debt in the dairy sector (by decile of debt, end 2013-14 season)



Source: DairyNZ.

Note: Decile 1 refers to the least indebted 10 percent of farms.

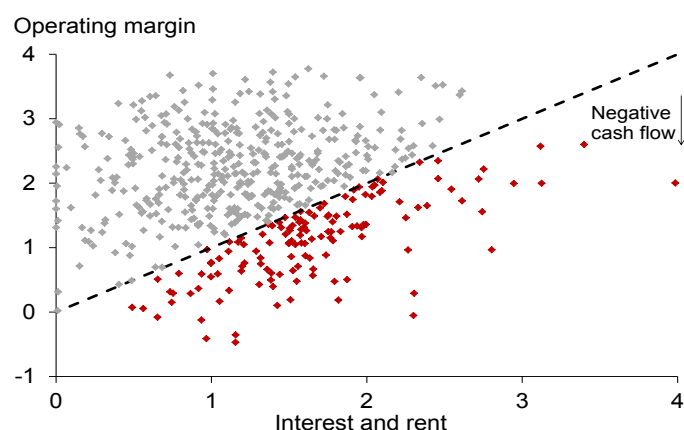
With current milk prices near five-year lows, and a weak outlook for prices well into next season, it is likely that dairy farmers will face difficult conditions for two consecutive seasons. Fonterra's payout for the 2014-15 season is forecast to be approximately \$4.75 per kgMS for a fully share-backed farmer, resulting in an effective milk income of around \$5.70 per kgMS after including deferred payments from the strong 2013-14 season (see figure 4.7). Even if milk prices were to recover somewhat in the 2015-16 season, effective dairy income could remain around current low levels, as deferred payments are expected to be considerably lower than this season.

Figure C2 shows simulated cash flows for the 2014-15 season, after adjusting the farm-level data from 2013-14 in line with DairyNZ forecasts of effective milk income and working expenses.³ As the lower payout

³ Estimated milk income is based on an average of \$5.70 per kgMS, with farm-level income altered to reflect previous differences relative to the average farm. Working expenses are estimated by taking 2013-14 values and applying a random change according to a normal distribution with mean -\$0.25 per kgMS and standard deviation \$0.10 per kgMS. All farms are assumed to make \$0.38 per kgMS from livestock income.

for 2014-15 was signalled well in advance, these forecasts allow for a fall in working expenses as farmers attempt to manage the decline in their cash flow. The dotted line shows 'break even' combinations of dairy operating margin and interest and rent costs, with farms below the line unable to service interest and rent costs out of their operating margin. Approximately 25 percent of farmers (representing around 32 percent of sectoral debt) are estimated to have negative cash flow on this basis. Unless these farmers are able to generate income outside their core dairy operation, this negative cash flow is likely to result in an increase in working capital borrowing. Farmers experiencing negative cash flow are also likely to cut back on farm development and reduce drawings.

Figure C2
Estimated farm cash flows
(dollars per kgMS, 2014-15 season)



Source: DairyNZ.

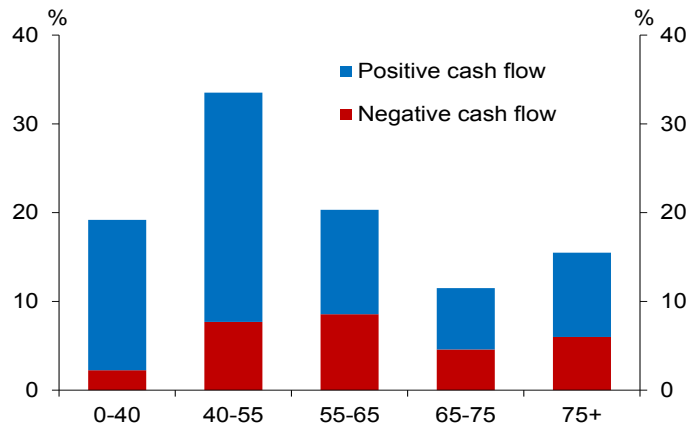
Note: Operating margin refers to milk and livestock income less working expenses. Farms below the dashed line (in red) are estimated to be facing negative cash flows in the 2014-15 season.

A key driver of weak profitability in the dairy sector is a low operating margin, primarily due to relatively high working expenses. For example, the least profitable 10 percent of farms have average working expenses around \$2 per kgMS higher than the most profitable 10 percent of farms. Farmers who have less scope to reduce working expenses, including

those reliant on imported feed, are likely to be particularly susceptible to low milk prices. High debt levels relative to output also create a further drag on cash flow in the form of higher debt servicing costs. On average, the most profitable farms have \$14.90 of debt per kgMS (with associated interest costs of \$0.70 per kgMS), compared with \$23.50 (and interest costs of \$1.50 per kgMS) for the least profitable farms.

Banks continue to have a largely positive view of the long-term outlook for the sector, and have been easing credit conditions for working capital borrowing. However, the availability of additional borrowing could be limited for some farms that already have elevated loan-to-value ratios (LVRs). As shown in figure C3, there is a significant crossover between farms estimated to have negative cash flows in the current season and farms with already elevated LVRs (above 65 percent). Around 11 percent of dairy debt is owed by such farms, while farms with relatively high LVRs account for 27 percent of sectoral debt. It is likely that the number of foreclosures among these indebted farms will eventually increase if weak cash flow persists for multiple seasons. Bank losses associated with these foreclosures would be exacerbated if land values fall alongside weaker farm incomes.

Figure C3
Estimated
distribution
of debt by LVR
and cash flow
(percent of
dairy debt,
2014-15
season)



Source: DairyNZ.

Note: Horizontal axis refers to loan-to-value ratio.

Chapter 5

Financial institutions and infrastructure



The banking system holds levels of capital, stable funding and liquid assets above regulatory requirements. It is important that these buffers are maintained in view of the significant financial system risks described in chapter 2. Banking system profitability has increased, supported by improving asset quality, cost containment, and asset growth.

Non-bank lending has grown modestly over the past year. Lending to households is a small share of the sector's overall lending, and there are no signs of a material increase due to the loan-to-value ratio (LVR) speed limit imposed on the banking system.

The insurance sector is benefiting from falling reinsurance costs, but lower global interest rates are reducing investment income. The sector is making progress on processing claims related to the Canterbury earthquakes, but the estimated final cost continues to rise.

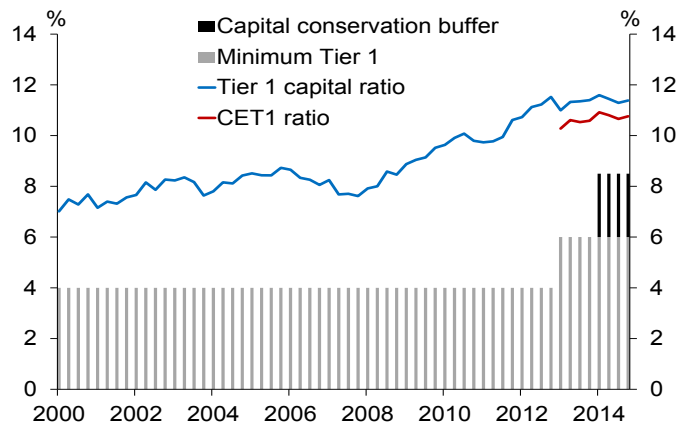
Payment systems have operated effectively over the past six months.

Banking sector

The banking sector holds capital above regulatory requirements...

Locally incorporated banks operating in New Zealand, on average, hold levels of common equity Tier 1 (CET1) capital above regulatory minima (figure 5.1). CET1 is the highest quality of loss-absorbing capital, and the system-wide ratio as at December 2014 was 10.7 percent of risk-weighted assets (RWA). This level of high-quality capital also meets the 2.5 percent capital conversation buffer introduced at the start of 2014, which provides further loss-absorbing capacity in times of stress. Banks are allowed to operate inside the buffer but, if they do so, they will be subject to restrictions on distributions to shareholders. The Reserve Bank is conducting a review of its capital settings to ensure they appropriately reflect current and expected financial conditions (see chapter 6).

Figure 5.1
Regulatory capital ratios – all locally incorporated banks (% of RWA)

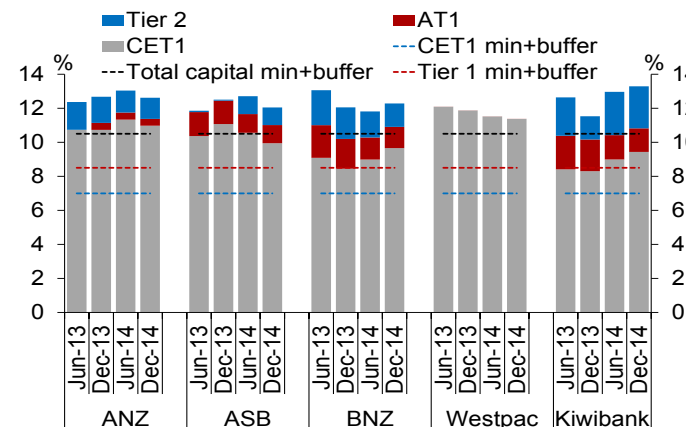


Source: Registered banks' Disclosure Statements.

...but the structure of capital is changing.

At the individual bank level, the five largest banks all comfortably meet regulatory capital requirements (figure 5.2). In addition to the highest quality CET1 capital, most of these banks also hold legacy capital instruments that will no longer qualify as regulatory capital from 2016. To replace these instruments, banks have started issuing new non-common equity Basel III-compliant instruments that include suitable conversion and write-off provisions. It will be important that banks do not materially reduce their loss-absorbing capacity, in particular their CET1 capital ratios, as part of a broader capital rebalancing strategy. In addition, investors will need to understand fully the risks associated with these potentially more complex capital instruments as they are issued to the market.

Figure 5.2
Regulatory capital ratios – large banks (% of RWA)



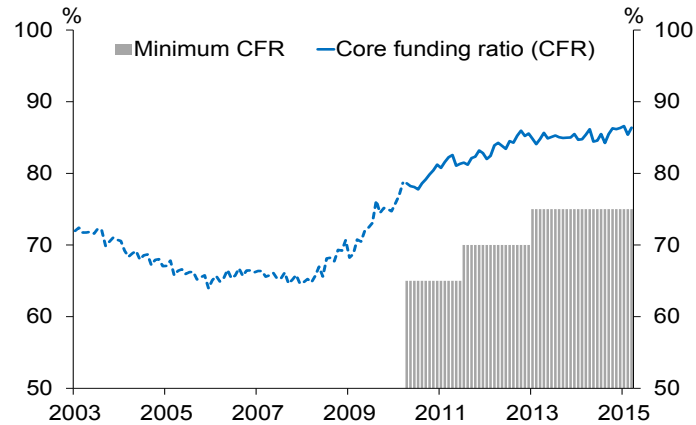
Source: Registered banks' Disclosure Statements.

Note: 'AT1' is alternative Tier 1 capital and 'buffer' refers to the 2.5 percent capital conservation buffer.

Banks meet the regulatory requirements for stable funding...

All locally incorporated banks are subject to a minimum core funding requirement of 75 percent of total loans and advances. A high level of core or stable funding reduces the amount of short-term wholesale funding that needs to be rolled over, insulating banks in the event of a disruption to funding markets. As at March 2015, the aggregate core funding ratio (CFR) stood at 86 percent (figure 5.3). The CFR can be met through bank capital, deposit funding (mainly retail deposits) and long-term wholesale market funding. Deposit, or non-market, funding currently accounts for approximately two-thirds of total core funding.

Figure 5.3
Banking system core funding
(% of loans and advances)

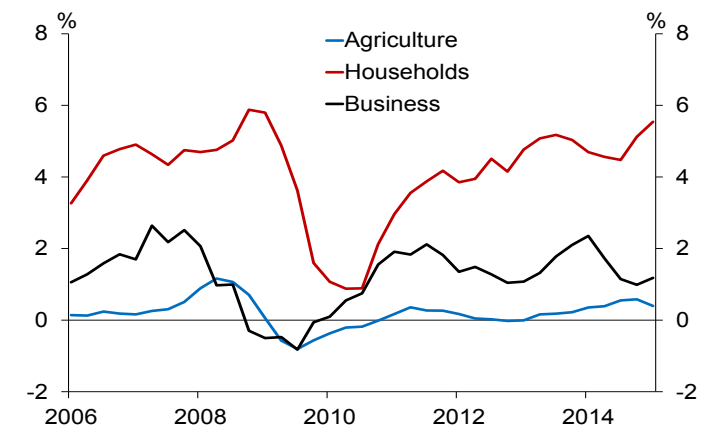


Source: RBNZ Liquidity Survey, RBNZ Standard Statistical Return (SSR).

Note: The dotted line for the CFR is an approximation based on SSR data.

Deposit funding has grown at elevated rates for a number of years, and maintained relatively strong growth rates since the November *Report* (see figure 2.1). As a result, banks have been able to accommodate domestic credit demand without a substantial increase in market funding. By sector, households are making by far the largest contribution to growth in NZD funding (figure 5.4). While household funding growth has remained strong, the rate of growth in business deposits has slowed since early 2014. Agricultural funding growth is likely to decline as cash flow pressures in the dairy sector intensify in the coming year.

Figure 5.4
Annual growth in NZD funding by sector
(% of GDP)

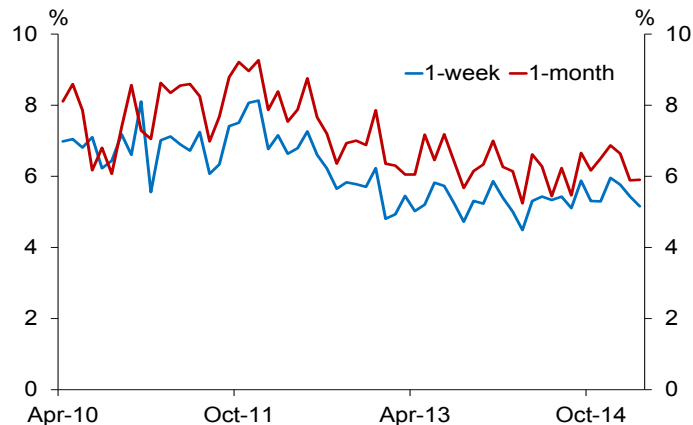


Source: RBNZ SSR.

...and exceed minimum liquid asset requirements.

Banks must also hold a sufficient amount of liquid assets to be able to address the projected ‘mismatch’ between cash inflows and outflows in the event of a period of financial stress, over one week and one month respectively. In aggregate, banks’ mismatch ratios are well above the ‘zero’ regulatory requirement (figure 5.5). The calibration of the Reserve Bank’s liquidity policy, including both mismatch ratio and core funding ratio requirements, will be reviewed in coming years given that the Basel Committee has recently finalised international standards for liquidity regulation.

**Figure 5.5
Mismatch
ratios**

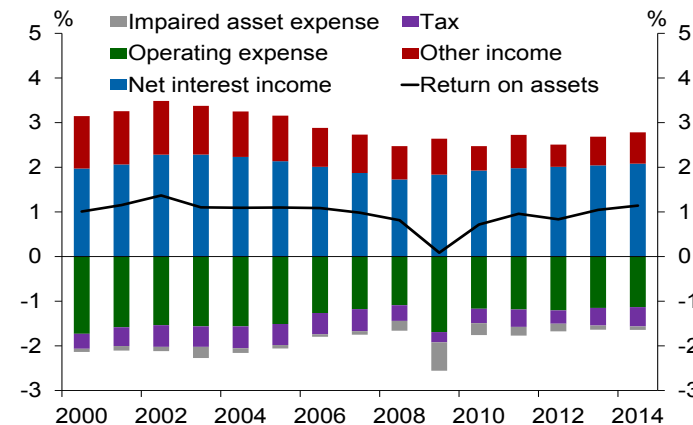


Source: RBNZ Liquidity Survey.

Profitability has increased...

In the year to December 2014, the level of after-tax profits for New Zealand banks increased 15 percent. The banking system's return on assets increased 9 percent over the year, and now sits at about the average 2000-07 level (figure 5.6). Return on equity – a key profitability measure for locally incorporated banks – increased from 13.9 to 14.1 percent. The rise in profitability over the past year has been driven by a combination of factors, including increased net interest and non-interest income, falling operating expenses as a share of income, and further declines in the impaired asset expense.

**Figure 5.6
New Zealand
bank
profitability
(% of total
assets,
December
years)**

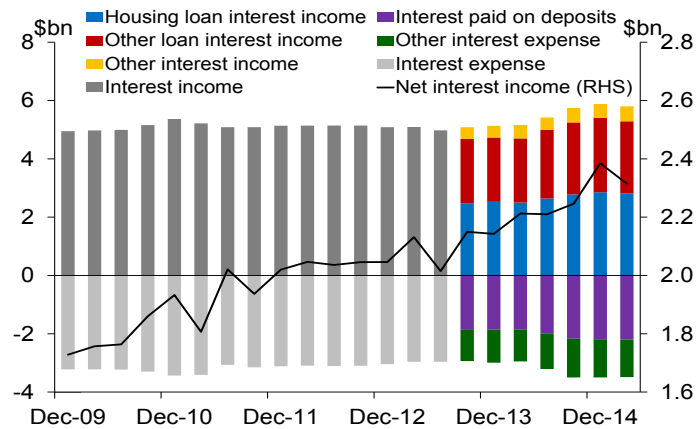


Source: Registered banks' Disclosure Statements, RBNZ Income Statement Survey.

Net interest income is an important component of profits, and rose 7 percent over the year. The new registered bank *Income Statement Survey*, first published last October, allows a breakdown of the component parts of both interest income and expense (figure 5.7).¹ Interest income makes up the majority of bank income (close to 90 percent). Interest earned on housing lending makes up half of interest income, with interest on other loans another 43 percent. Interest expenses account for just over 70 percent of bank costs, with operating costs making up the remainder. Interest paid on deposits accounts for most of the interest-related expenses.

¹ See box D of the November 2014 *Report* for an explanation of the new financial performance statistics.

Figure 5.7
Interest
income and
expense
(quarterly)



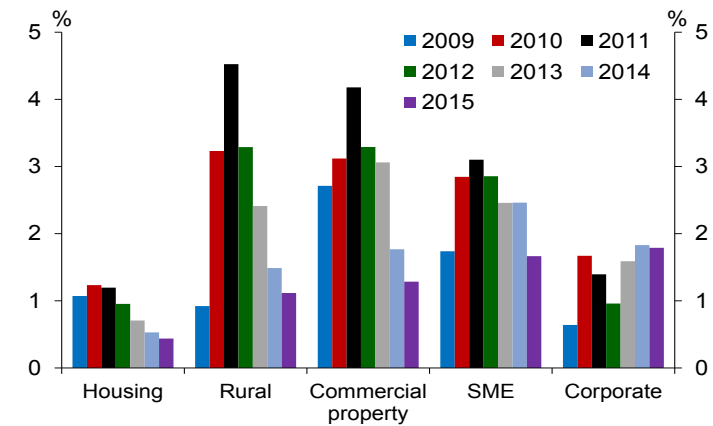
Source: Registered banks' *Disclosure Statements*, RBNZ *Income Statement Survey*.

Note: Data prior to September 2013 are from *Disclosure Statements*. 'Other interest income' includes interest income from cash and deposits, debt securities, derivatives and other interest income. 'Other interest expense' includes interest expense from derivatives, debt securities, other borrowings and other expenses.

...alongside falling non-performing loans.

Non-performing loans (NPLs) have continued to decline across most sectors over the past year (figure 5.8), helping to support bank profitability. Total NPLs as a percentage of lending fell to 0.8 percent in March 2015, from 1.4 percent a year earlier. The exception to this trend has been corporate lending, where a few large specific exposures (such as Solid Energy) have resulted in NPLs remaining broadly stable. Watchlist loans, a leading indicator of future problem loans, have continued to track down over the past six months. However, the rural watchlist loan balance has stabilised, possibly reflecting the difficult 2014-15 season for dairy farmers.

Figure 5.8
Sectoral non-
performing
loans
(% of sectoral
lending,
March years)



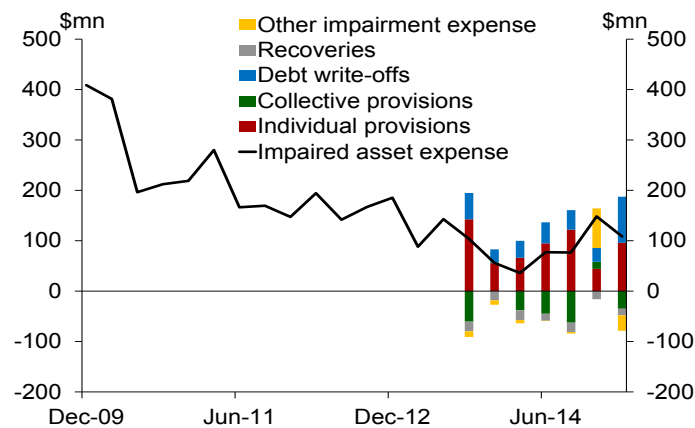
Source: Based on private reporting data from 21 registered banks.

Note: Includes impaired and 90 days past due assets. Data are not standardised and definitions may vary across banks.

The ongoing decline in NPLs has translated into a reduction in the annual amount of impaired asset charges (which directly affect measured profitability), from \$390 million in 2013 to \$337 million in 2014. On a quarterly basis, the impaired asset expense increased over 2014 (figure 5.9). This increase was driven by provisions for individual loan exposures and other impairment expenses, and primarily reflects the deterioration in loan performance for a few large specific exposures in the corporate sector.² By contrast, the banking sector has been able to write back collective provisions over the past two years.

² Individual provisions are for losses that have already been incurred on loans that are known to be impaired and are individually significant. The profile of individual provisions can be quite 'lumpy', reflecting the annual year-end balance dates of individual banks. Collective provisions are for loans assessed in pools of similar assets with similar risk characteristics.

Figure 5.9
Impaired asset expense
(quarterly)



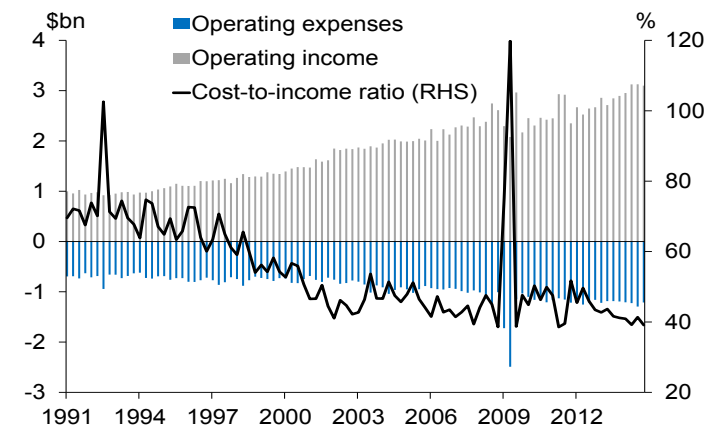
Source: Registered banks' *Disclosure Statements*, RBNZ *Income Statement Survey*.

Note: 'Other impairment expense' for the December 2014 quarter relates to a charge against a debt security issued by Solid Energy and held by one bank.

Banks are containing operating costs.

Non-interest, or operating, costs increased a modest 3.5 percent over the year, helping to support the increase in profitability. The cost-to-income ratio – a key measure of bank efficiency – tracked down over 2014 and currently stands at 39 percent (figure 5.10). The New Zealand banking system compares favourably on this measure in a cross-country context. This partly reflects the less complex business model of New Zealand banks, together with ongoing efforts to manage non-interest costs.

Figure 5.10
New Zealand bank operating income and costs



Source: Registered banks' *Disclosure Statements*, RBNZ *Income Statement Survey*.

Note: 'Operating income' is net interest income plus other income. The sharp increase in operating expenses in 2009 is due to additional payments to the IRD made by some banks related to structured financial transactions undertaken several years earlier.

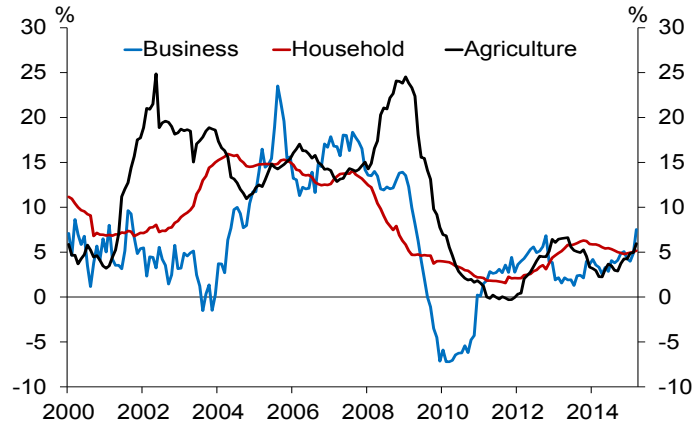
Asset growth is contributing to a rise in interest income.

Interest income increased 9 percent over 2014, tied to the growth in the stock of outstanding credit and higher interest rates. Household lending growth declined in annual terms over most of 2014, but has started to pick up in recent months in line with the rebound in the housing market (figure 5.11). The speed limit on high-LVR lending has lowered the average LVR of house buyers, so that this pick-up in mortgage lending has been more modest than it might have otherwise been. Consumer lending, a small part of overall bank lending to households, has remained robust, reflecting broader strength in the New Zealand economy.

At 5 percent, the annual growth in household lending is only slightly higher than household income growth. To some extent, this presents a misleading picture of underlying bank credit growth. As highlighted in box D, the high level of voluntary principal repayments, tied to the currently

low level of interest rates, has contributed to the modest level of net housing credit growth. Gross housing lending is estimated to have been significantly higher, and closer to the experience of the mid-2000s.

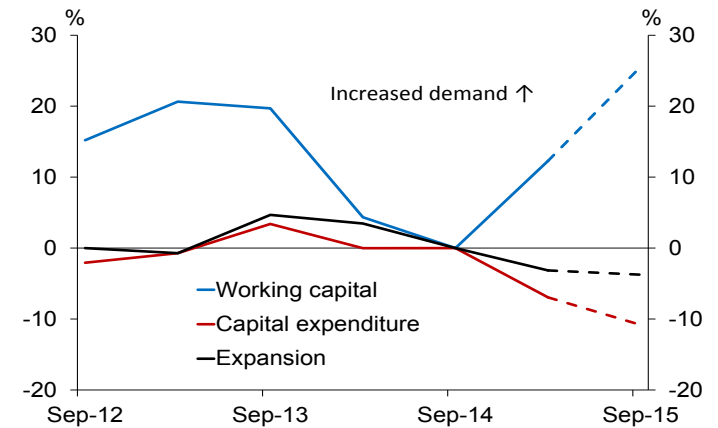
Figure 5.11
Bank lending
by sector
(annual %
change)



Source: RBNZ SSR.

Bank lending to the agricultural sector increased 6 percent in the year to March 2015. This increase largely reflects borrowing for working capital purposes, as opposed to on-farm capital investment or farm purchases, and is likely related to the sharp fall in the dairy payout for the current season (figure 5.12). Banks expect a further increase in the demand for working capital over the next six months as financial pressure mounts across the dairy sector.

Figure 5.12
Demand for
bank credit
by the rural
sector - by
purpose
(net
percentage)



Source: RBNZ Credit Conditions Survey.

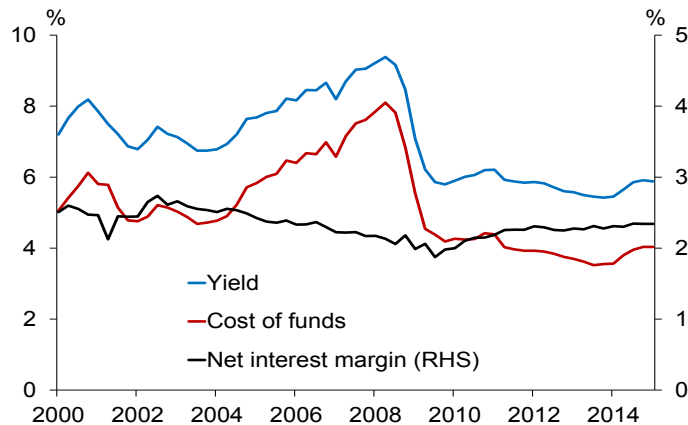
Note: Net percentage is the percentage of respondents reporting an increase in demand minus the percentage reporting a decline. Individual bank responses are weighted by market share. The dotted line is expected change six months ahead.

Borrowing by the business sector has also increased, with annual growth over the year to March increasing to 7.3 percent from 3.6 percent a year earlier. Banks report that the demand for property-related lending has increased, related to low interest rates, an appetite for higher-yielding assets, and strong development activity in both Auckland and Christchurch. Earthquake-strengthening work continues to support credit demand within the commercial property sector, while banks report strong offshore buyer interest in New Zealand commercial property (see chapter 4). Banks also report an increase in credit demand for investment and growth-related asset purchases from corporates. For small-to-medium sized enterprises (SMEs), the demand for working capital has increased. Some banks expect a softening in overall SME credit demand related to lower rural spending.

Net interest margins are broadly stable...

The aggregate net interest margin (NIM) of the banking system has remained fairly stable over the past year, ticking up modestly from 2.30 to 2.34 percent (figure 5.13). With the official cash rate (OCR) increasing 100 basis points over the early part of 2014, banks largely passed on this increased cost of funds, as seen in an increase in floating mortgage rates. By contrast, the effective rate paid by fixed-rate mortgage borrowers has remained broadly stable (figure 5.14). Deposit rates have only increased modestly over the past 12 months, and have declined in recent months, due to strong inflows of deposit funding. Overall, the modest rise in interest expense has been more than offset by the higher interest income generated by mortgage and other lending.

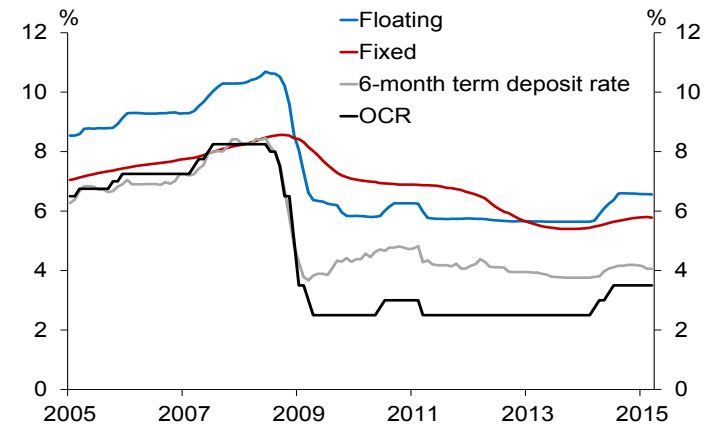
Figure 5.13
New Zealand retail banks' net interest margin



Source: Registered banks' Disclosure Statements, RBNZ Income Statement Survey.

Note: Yield is interest income relative to interest-earning assets. Cost of funds is interest expense relative to interest-earning liabilities.

Figure 5.14
Effective mortgage rates, deposit rates and OCR



Source: RBNZ.

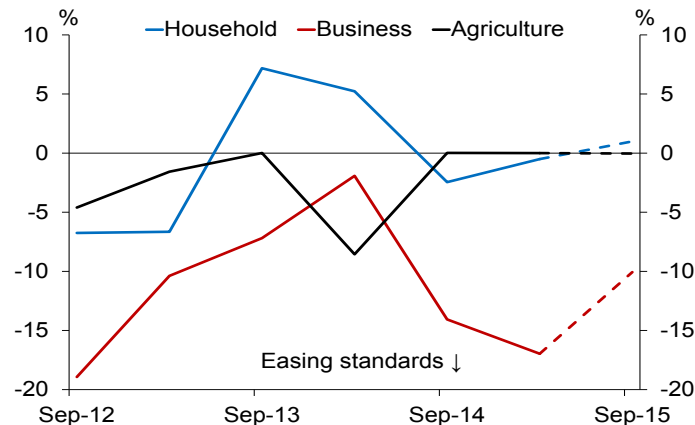
Note: 'Effective mortgage rates' are actual interest rates paid by borrowers for outstanding mortgages, and include the impact of any specials, discounts and other interest charges paid by borrowers.

...despite competition between banks.

The up-tick in NIM comes despite competition between banks for residential mortgage lending, particularly for low-LVR loans. Efforts by banks to attract customers have seen prevalent use of cash incentives for new borrowers since the last Report. Falls in global interest rates have also prompted a substantial re-pricing of long-term mortgage rates (see figure 2.2). Some banks are offering five-year fixed rates at historic lows, and a 10-year fixed rate has been offered for the first time. Current fixed mortgage rates are well below the effective mortgage rate at all terms, and the proportion of borrowers on floating mortgage rates has declined from 41 to 28 percent over the past year. These factors suggest that mortgage yields received by banks could decline in coming months, potentially generating downward pressure on net interest margins.

Banks report that lending standards for the household sector have been stable over the past six months (figure 5.15). Lending standards for rural borrowers have also remained unchanged, although some banks have noted they have begun easing conditions attached to borrowing for working capital. This will provide some relief for customers seeking to increase working capital borrowing in response to the challenging financial conditions facing the dairy sector. By contrast, lending conditions across the business sector have continued to ease. This loosening has mainly been driven by banks reducing margins above their cost of funds, although some loosening in non-price terms has been reported for the SME sector.

Figure 5.15
Change in banks' lending standards (net percentage)



Source: RBNZ Credit Conditions Survey.

Note: Net percentage is the percentage of respondents reporting a tightening of lending standards minus the percentage reporting an easing. Individual bank responses are weighted by market share. Dotted line is expected change six months ahead.

Non-bank lending institutions (NBLIs)

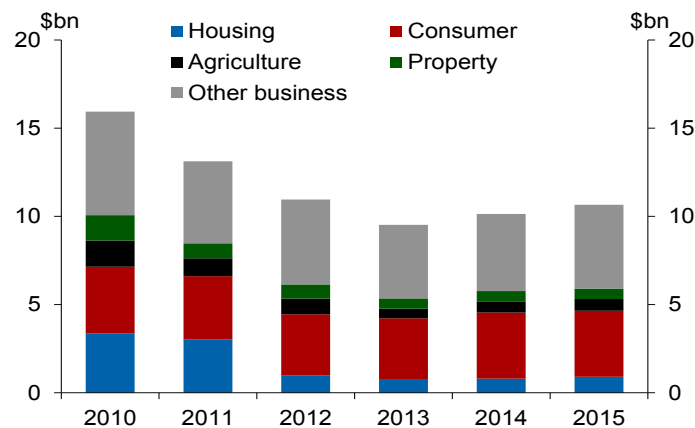
The NBLI sector is a small share of intermediated credit.

The non-bank sector comprises entities that are regulated by the Reserve Bank (deposit-taking finance companies, building societies and credit unions) and unregulated entities (such as non-deposit-taking finance companies). The NBLI sector now accounts for a small fraction of credit provided by domestic financial institutions, following a wave of finance company failures, mergers and consolidation of the sector since 2006. A number of larger institutions have left the sector in recent years and now operate as registered banks.

Over the past year, total non-bank lending has expanded by 5.1 percent, driven mainly by an increase in non-property business lending (figure 5.16). The non-bank sector was a significant source of 'mezzanine' (or second tier) funding for commercial property prior to 2006, and property development accounted for a large share of NBLIs total lending. However, property-related lending now accounts for only around 6 percent of the sector's overall lending.

NBLIs are not subject to the speed limit on high-LVR residential mortgage lending. While NBLI housing lending has grown 13.4 percent in the 12 months to March, housing lending only accounts for 8 percent of the sector's total lending. The Reserve Bank monitors the sector for any evidence of material 'regulatory leakage' from the LVR policy imposed on the banking system, with no evidence of material leakage to date.

Figure 5.16
NBLI lending
by sector
(March years)



Source: RBNZ NBDT reporting, RBNZ SSR.

Note: Excludes assets of deposit-taking finance companies in receivership or moratorium.

Insurance

Low global interest rates are having a major impact on the insurance industry in two opposing ways. Low long-term interest rates present a significant challenge to generating adequate returns on reserves. This is of particular significance to the life insurance sector which may have commitments to clients many years into the future. In contrast, the search for yield stimulated by low interest rates is benefiting the general insurance sector, which reinsures a portion of liabilities with global insurers. Global insurers are finding it relatively easy to raise capital and this is pushing down the cost of reinsurance, although rates for the Asia-Pacific region remain higher than in other major world regions.

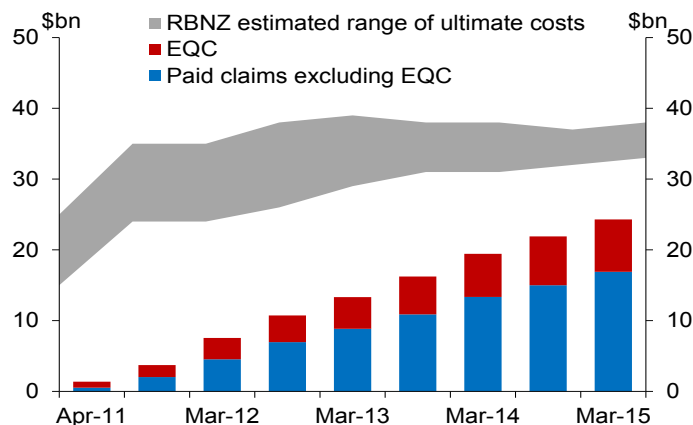
The New Zealand general insurance sector is benefiting from these global trends. The falling cost of reinsurance is putting downward pressure on domestic insurance premiums, particularly in the commercial property sector. Strong competition for personal insurance is also evident, including the influence of new entrants. However, lower reinsurance rates are not necessarily fully reflected in retail pricing, as some insurers have been exposed to losses from regional weather events in recent months. In this competitive market, it is important that insurers maintain sound underwriting standards so that premiums remain appropriately priced in relation to the risks.

Earthquake claims costs have been revised upwards.

As at 31 March 2015, insurers have paid \$24 billion in Canterbury earthquake claims (figure 5.17). Several insurers have significantly increased their estimates for their ultimate costs, which the Reserve Bank now estimates will total \$33-38 billion. Insurers have been funding increased costs through a combination of reinsurance, reductions in existing capital, and injections of new capital.

In aggregate, estimated outstanding Canterbury earthquake claims have not reduced by much in recent months, with payments roughly matching increases in estimated ultimate costs. The substantial claim amounts still outstanding suggest it will be challenging for insurers to meet their announced target for completing the settlement of all Canterbury earthquake claims within the next year or so.

Figure 5.17
Canterbury
earthquake
paid claims



Source: EQC, RBNZ.

Insurers have programmes underway to improve risk governance.

The Reserve Bank reviewed the quality of the risk governance of insurers during the second half of 2014. An overview of the findings from the survey of 17 insurers was published on the Reserve Bank website in March 2015.³ The purpose of the review was to assess the quality of leadership of risk governance by each insurer's board and whether the actions of the board and senior management promote a prudent approach to risk management. The existence of strong risk governance is important because self-discipline is one of the three pillars of the Reserve Bank's regulatory framework (the other two being regulatory discipline and market discipline). The review considered the extent to which the Reserve Bank should rely on self-discipline in relation to

³ See http://www.rbnz.govt.nz/regulation_and_supervision/insurers/regulation/Review-findings-on-the-quality-of-the-risk-governance-of-insurers.pdf

risk governance and identified areas for improvement if aspects of risk governance were lacking.

The findings of the review were that the quality of risk governance varied, but that insurers recognise its importance. Most insurers had programmes underway to improve risk governance. The Reserve Bank provided feedback to each insurer covering the strengths and weaknesses of their risk governance and this feedback was summarised in the public report under headings covering both functional and behavioural aspects. Insurers not covered by the review are encouraged to consider their own risk governance in relation to the findings.

Collection of insurance data is under way.

The development of a process to collect information on the insurance sector from licensed insurers was outlined in the November 2014 *Report*. The Reserve Bank is currently considering consultation feedback in relation to trial returns for insurance data, in preparation for implementation of regular data collection later in 2015.

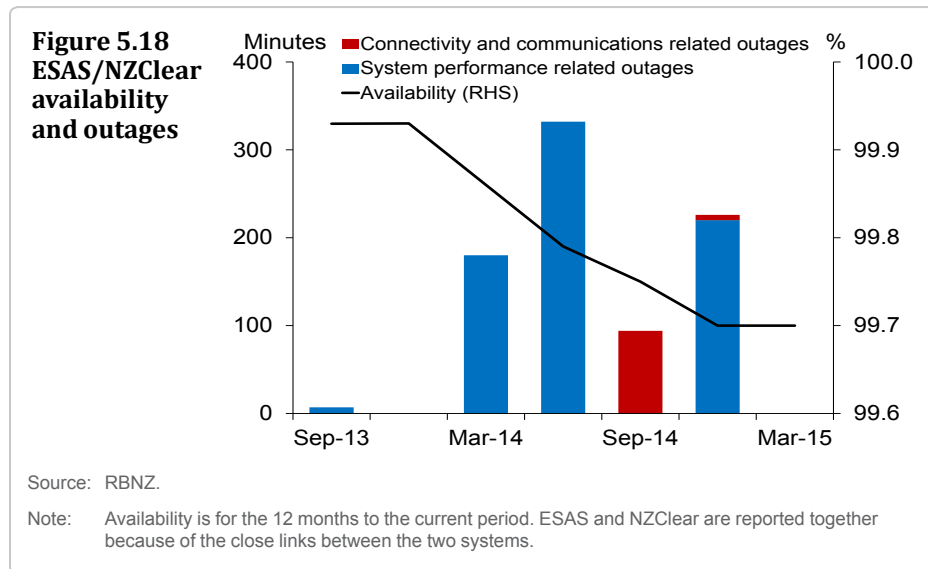
Financial market infrastructure

Payment and settlement systems have functioned satisfactorily.

The New Zealand financial market infrastructure (FMI) has continued to function satisfactorily. Over the past six months there have been a small number of incidents affecting the normal operation of the various systems, which have been effectively managed. The impact of the

various disruptions has been short-lived and generally limited to only some participants or transaction types.

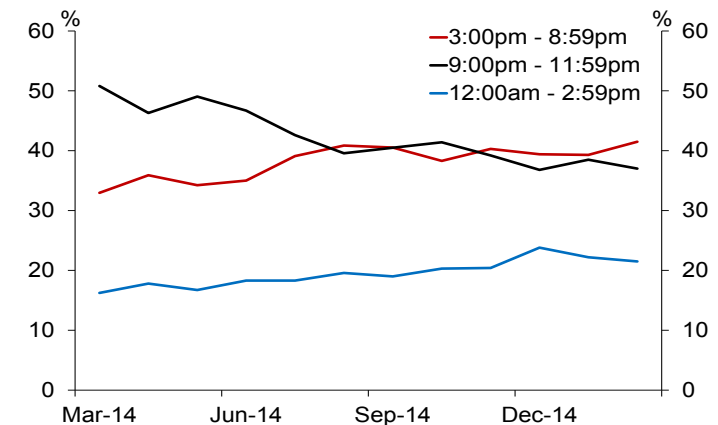
The Exchange Settlement Account System (ESAS) and the NZClear system operated by the Reserve Bank are at the heart of New Zealand's financial infrastructure. In the first four months of 2015, on average around \$30 billion of inter-bank transactions were settled each day in ESAS and around \$7.5 billion of securities trades were settled in NZClear. The operational reliability of these systems is illustrated in figure 5.18. The most significant disruption to the operation of the ESAS/NZClear system in recent months occurred on 22 December when, for approximately four hours, NZClear was unable to process some transactions. The problem did not prevent daily trades being completed and steps to prevent a reoccurrence of the problem have been implemented.



Industry continues to address concerns about risks in the retail payment system.

As discussed in the previous *Report*, the Reserve Bank expects banks to be able to exchange retail payment files at least hourly by the end of 2016. The more frequent exchange of payment files will address the Reserve Bank's long-standing concerns about the time taken to settle transactions after a payment instruction is issued by a customer, the value of unsettled transactions at any point in time, and the majority of retail payments being settled late in the banking day. The Reserve Bank continues to engage with banks to encourage ongoing improvement. As shown in figure 5.19, there has been some improvement with the timing of the settlement of transactions shifting earlier in the day.

Figure 5.19 Settlement of retail payments



Source: RBNZ.

Wider direct participation in the payment system is in prospect...

One of the aims of the Reserve Bank's oversight of FMIs is that the payment system has objective, risk-based and publicly disclosed criteria for participation that promote fair and open access. The Reserve Bank is aware that a number of financial institutions are interested in becoming direct participants in the New Zealand payment system and it will be monitoring the progress of those potential new participants towards achieving that goal. The November *Report* discussed the Reserve Bank's concern that financial institutions that currently access the retail payment system through an agency arrangement with a major bank need to modify customer account numbers if those institutions wish to become direct participants. It is pleasing that the industry appears to be making some progress on addressing this issue.

...and stakeholder representation has increased.

A number of entities with an interest in payments have taken the opportunity to become members of Payments NZ following the introduction of the new membership framework described in the previous *Report*. The new members represent a range of different interests, including companies that process transactions, and major retailers. This is a welcome development. The payment system should effectively meet the needs of all its users and the involvement of a diverse range of stakeholders will provide an opportunity for broader input into important discussions about the future development of payments in New Zealand.

Box D

Gross versus net housing lending

Each year, banks undertake a significant amount of new mortgage lending, but the total stock of mortgage loans grows by a much lower rate. Over the past year there was more than \$60 billion of new mortgage commitments, amounting to around 30 percent of existing mortgage debt. However, net housing debt grew by only around 5 percent. This gap between the value of loans being written and net credit growth relates to repayments by borrowers. There are a variety of different sorts of debt repayment,¹ such as:

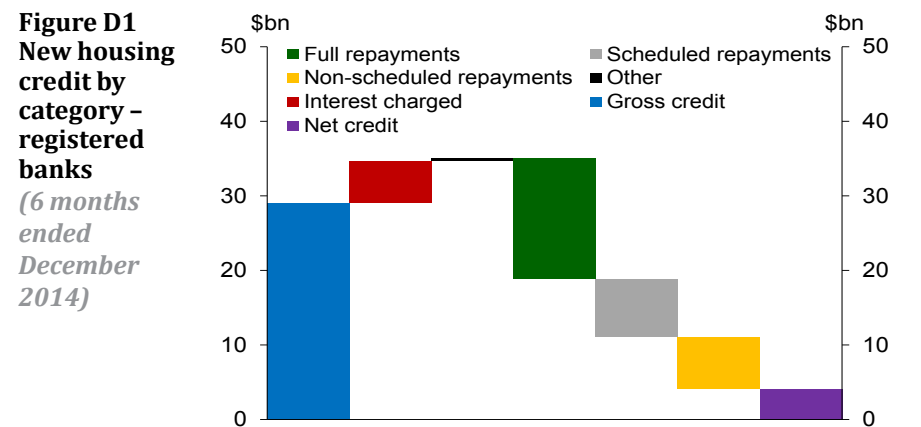
- scheduled principal repayments (a borrower repaying principal as required by the mortgage contract);
- unscheduled partial principal repayments (a borrower choosing to pay the mortgage off more quickly than required); and
- full repayments (which would typically occur because the borrower has sold the property or switched the mortgage to a different provider).

In order to understand the drivers of net credit growth, it is useful to be able to understand trends in each of these components. For example, the Reserve Bank has noted that when net credit growth fell dramatically around the GFC, gross originations fell much less. This could have been because many borrowers were accelerating principal repayments, taking

¹ There are also a variety of different categories of mortgage commitments, including (i) commitments for the purchase of a house (ii) refinancing of an existing mortgage (iii) transfer of a mortgage between banks and (iv) bridging finance. The Reserve Bank is beginning to collect information on these different categories from banks, but is still working to improve the quality of the data.

advantage of the cash flow benefits of low interest rates. Alternatively, it may have been because people selling houses after the GFC were more likely to have large mortgages. The reality was probably a combination of the two, but it was not easy to quantify at that time.

More recently the Reserve Bank has begun collecting new data that provides fresh insights into the relationship between gross and net housing lending. The survey can be used to decompose the overall change in the aggregate stock of mortgage credit into new lending and the different categories of debt repayment discussed above (figure D1). The survey suggests a significant amount of principal has been repaid over the past year, with partial repayments, less interest, amounting to 9 percent of the stock of outstanding debt. These partial repayments are similar in overall size to full principal repayments. Non-scheduled repayments account for approximately half of partial repayments,



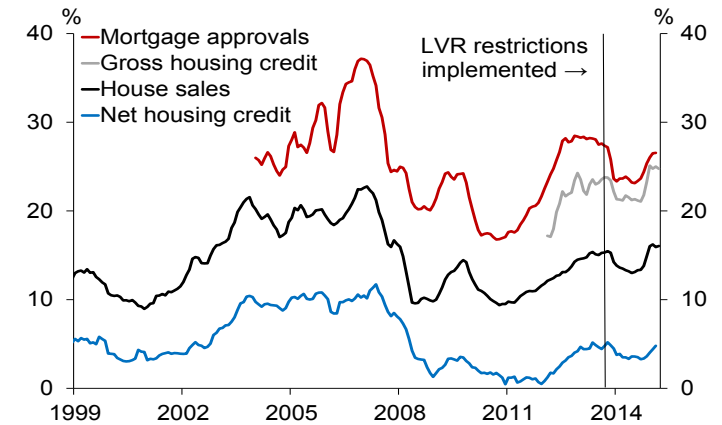
Source: RBNZ New Residential Mortgage Commitments Survey.

Note: 'Other' includes increases in balances on repayment deficiencies, together with changes in balances relating to the net write-off of loans. 'Interest charged' includes all contractual mortgage interest payments. 'Gross credit' refers to new drawdowns of mortgage commitments, and 'Net credit' refers to gross credit less borrower repayments.

suggesting a high degree of voluntary excess repayments by borrowers at present. The substantial rate of partial repayments suggests that changes in household savings behaviour and lower interest rates after the GFC are significantly reducing net household credit growth.

Gross housing credit (new commitments) increased strongly at the beginning of 2015 in line with an increasing value of house sales, after a brief drop-off in momentum post-LVR restrictions (figure D2). The longer-running Reserve Bank *Housing Approval Survey* suggests that gross mortgage originations, when scaled by GDP, are now running at around two-thirds of the pre-GFC peak. However, recent data suggest there has been a substantial increase in the rate at which approvals translate into new lending, and there is significant uncertainty about how this ratio has evolved over time. In contrast to gross lending, net housing credit growth is comparatively modest, at less than half of its pre-GFC peak. As noted above, high principal repayment rates are likely the key driver for this divergence.

Figure D2
Mortgage approvals, housing credit and house sales
(3-monthly seasonally adjusted total, % of quarterly GDP)



Source: REINZ, RBNZ *Housing Approval Survey*, RBNZ *New Residential Mortgage Commitments Survey*, RBNZ SSR.

Note: Data anomalies identified by Reserve Bank suggest that mortgage approvals data should only be taken as indicative of mortgage origination trends.

New mortgage commitments are the most relevant metric for assessing the role of credit in the housing market, and show a more consistent relationship with the underlying levels of housing market activity. Strong rates of principal repayments by existing borrowers can also disguise a build-up of risk among new borrowers. As discussed in chapter 2, debt-to-income multiples among new borrowers in the Auckland region are likely to be increasing as house prices in the region become more stretched.

Chapter 6

Key developments in financial sector regulation



The Reserve Bank is continuing its work programme on reviewing capital requirements to promote financial system stability. Following recent consultation, the Bank is establishing a new residential property investor asset class that will attract a higher risk weighting than owner-occupier mortgages.

The regulatory stocktake for banks and non-bank deposit-takers (NBDTs) is aiming to improve the efficiency and consistency of regulatory requirements. Public consultation is planned for the second half of 2015.

The Bank is also conducting a fresh consultation on its proposal to modify the statutory framework for the oversight of payment systems and other financial market infrastructure. A discussion document on stress testing methodologies used by registered banks is planned for later this year. Other regulatory developments are summarised in Appendix 1.

Proposed new asset class treatment for property investment

The Reserve Bank has consulted on the establishment of a new asset class for loans to residential property investors.¹ The purpose of the proposed policy is to enable capital requirements to cater for different risk profiles. The proposed changes would increase the amount of capital that locally incorporated banks are expected to hold for residential property investment loans.

Higher capital requirements for investor loans relative to owner-occupier loans are supported by (i) international evidence that loans to property investors tend to have a higher risk profile (see box A); (ii) international practice for Internal Ratings Based (IRB) banks as recommended by the Basel Committee; and (iii) regulatory concerns around the potential behaviour of investors during a severe housing downturn.

The consultation, which closed on 17 April 2015, proposed three alternative ways of defining property investment loans:

- all residential mortgage loans to non-owner-occupiers;

¹ The consultation document is available here: http://www.rbnz.govt.nz/regulation_and_supervision/banks/Consultation-paper-asset-class-treatment-of-loans-to-residential-property-investors_1.pdf

- all residential mortgage loans whose loan servicing costs are at all reliant on the rental income of the residential property; or
- all residential mortgage loans whose loan servicing costs are at least 50 percent dependent on the rental income of the property.

It was further proposed to group these loans in a new retail asset class for residential property investment loans. This new asset class would be subject to different capital calibrations from the retail residential mortgage asset class.

The Reserve Bank is currently assessing the consultation feedback, and will shortly release a summary of the consultation submissions and a response to the submissions. Although the details of new capital calibrations are yet to be decided, the risk weights applied to the new asset class will be higher than for owner-occupier loans. The Bank has already considered the feedback on the issue of how to define residential property investor loans. In line with the preferences of the vast majority of bank submissions, the current residential mortgage asset class will be restricted to owner-occupiers. This implies that any mortgage that has residential property collateral that is not owner-occupied will be classed as a residential investment property loan and grouped into the new asset class. The new definition is expected to take effect from 1 October 2015 for new lending.

Review of bank capital requirements

The Reserve Bank is planning to undertake a review of bank capital requirements to ensure they reflect global and domestic changes in the banking system. A number of aspects of the capital framework for banks will be given consideration. This is in part prompted by the recent Financial System Inquiry in Australia and recent consultations

by the Basel Committee for Banking Supervision (including on a revised standardised approach, permanent capital floors within the IRB framework, and the modelling approach to operational risk). It is also important, from time to time, to stand back and assess the operation of the framework in light of experience. The Reserve Bank is at a preliminary stage of deliberations on a number of matters, including risk weights for standardised banks and IRB banks, capital ratios, and disclosure requirements. If a preliminary view is reached that changes should be considered, the Reserve Bank will consult stakeholders.

Stress testing

As discussed in the November *Report*, the Reserve Bank has gathered information on the internal capital adequacy assessment process (ICAAP) undertaken by registered banks, with a particular focus on the techniques used by the major banks when producing stress test results. The Reserve Bank intends to use insights from this process to generate a discussion document on best practice stress testing methodology, which will be published later this year. After feedback from stakeholders, the Reserve Bank expects the methodology document to form the basis for further conversations with banks about their stress testing processes and potential improvements.

In 2014, the Reserve Bank conducted a stress test of the major banks which required them to produce results simultaneously. The Reserve Bank is aware that the Australian Prudential Regulation Authority (APRA) is considering providing a common scenario for the major Australian banks to use in their ICAAPs over the next year, without being prescriptive about the exact dates at which the test is run, so the analysis can be done relatively seamlessly as part of each bank's ICAAP cycle. Since this will require the Australian parents to consider the impacts of the scenario on their New Zealand subsidiaries, there should be quite

limited resource costs involved in New Zealand-specific results being produced by the subsidiaries. The Reserve Bank expects to request these results and discuss them with the major New Zealand banks when they are available.

Regulatory stocktake

In the first half of 2014 the Reserve Bank announced its intention to carry out a stocktake of the prudential requirements relating to banks and NBDTs. The primary objective of the stocktake is to improve the efficiency, clarity and consistency of prudential requirements in the banking and NBDT sectors. A second objective is to identify improvements to the Reserve Bank's current policy-making process for making and amending prudential requirements.

There have been significant changes to the regulation of New Zealand banks over the last 10 years, including the introduction of minimum liquidity and corporate governance requirements, the implementation of the Basel II and then Basel III capital adequacy frameworks, and the development of the Open Bank Resolution policy. During this time, NBDTs have also become subject to a prudential regulatory regime.

In an environment of rapid regulatory changes, it is possible for inefficiencies and inconsistencies to emerge in the overall regulatory framework. It is therefore appropriate to periodically take stock of the efficiency of the regulatory environment. The Reserve Bank is not looking to alter the fundamental shape of the prudential regime (e.g. adequate capital and liquidity, effective governance and risk management) as part of the stocktake. The intention is instead to make the regulatory requirements clearer, to remove internal inconsistencies, and to allow the main objectives of the regime to be achieved more efficiently.

The stocktake is divided into three parts:

- Part 1: Initial scoping (July-August 2014);
- Part 2: Formulation of draft proposals (September 2014-May 2015); and
- Part 3: Public consultation and conclusion (June-September 2015).

The initial scoping of the project involved discussions with a diverse range of stakeholders, including banks and NBDTs, industry bodies, and other government agencies. The project team worked to develop an inventory of issues arising out of these discussions.

As part of the process of developing the Reserve Bank's thinking on these issues, a series of workshops was set up with banking industry representatives and a panel of industry experts to obtain feedback on current regulatory settings. To date, four workshops have been held with banks, and the expert panel has met on three occasions.

The stocktake project is now part-way through the second stage. The work programme is divided into six parts, mainly relating to banks. These are discussed in turn below.²

(1) Data reporting and disclosure requirements for banks

The stocktake is looking at the Reserve Bank's public disclosure requirements to see whether the information they contain is still of material value to users, or whether some can be dispensed with

² A more detailed description of the specific issues being considered as part of the stocktake work programme is available here: http://www.rbnz.govt.nz/regulation_and_supervision/stocktake/Summary-of-Stocktake-Issues.pdf

altogether, or added to the data that banks report privately to the Reserve Bank for prudential purposes.

Banks must currently prepare disclosure statements on a quarterly basis, and the stocktake is also looking at whether this frequency of reporting remains appropriate for all banks (whether they are retail or wholesale funded, locally incorporated or branches). The consideration of this issue involves weighing up a number of factors, including the balance of the overall prudential regime, the considered views of users and the interactions with disclosure requirements under the Financial Markets Conduct Act 2013.

(2) Format and structure of the *Banking Supervision Handbook*

The stocktake has developed a number of specific proposals to improve the grouping and layout of the material in the *Handbook*, to remove duplication and unnecessary material and to make it clearer where to find the rules that are binding on banks. This was identified early on in the stocktake as an area with scope for improvement. The proposed new structure and layout will be summarised in the public discussion document, although full implementation of the changes will require substantial further work given the size and complexity of the requirements.

(3) Capital requirements

The stocktake work also overlaps with several other parallel or planned policy initiatives on capital. For example, the current consultation on the treatment of property investors also includes proposals to remove unused parts of the credit risk approach for modelling banks, namely the Foundation IRB approach and the treatment of Qualifying Revolving Retail Exposures (QRRE). Removing these would not only shorten

the capital adequacy policy documents (in their current or reorganised form), but would also give scope for improving their clarity, in line with the stocktake's objectives.

(4) The Reserve Bank's policy-making approach across regimes

The Reserve Bank also received feedback on its overall approach to policy making. There was particular interest in greater communication of the Reserve Bank's policy making process, and greater coordination within the Reserve Bank and with other regulators around the timing of consultations and the implementation of new policy. There was also some interest expressed around the design of transitional arrangements and the use of post-implementation reviews. These issues are being considered as part of the stocktake.

(5) Differential regulatory approach

Regulated entities have asked for greater clarity about the differential treatment of categories of institutions and across prudential regimes. The banking regulations, for instance, have a number of cut-off points that trigger differential regulatory treatment (such as asset size, retail deposit base). The initial aim of the stocktake work under this heading is to clarify the differences, as well as the principles, that underlie the differential treatment of institutions.

(6) Miscellaneous changes to Reserve Bank policies and regulations

The stocktake has identified a number of other miscellaneous issues for consideration. These include whether the process for assessing the suitability of bank directors and senior officers could be made to work more efficiently, various minor and technical changes relating to netting

rules, and revising the anti-money laundering matters currently discussed in the *Banking Supervision Handbook*.

A public discussion document on specific proposals arising out of the stocktake is expected to be released around the middle of this year. Once submissions on that discussion document have been considered, the Reserve Bank will announce the finalised policy proposals around September or October this year. Implementation of these policy proposals will then be undertaken from October this year onwards.

Payment systems review

In late April, the Reserve Bank released a second consultation paper on revisions to the statutory framework for the oversight of payment systems and other financial market infrastructures (FMIs). This follows an earlier consultation in which the Reserve Bank proposed to strengthen the statutory oversight framework by establishing a Recognition Regime for systemically important FMIs.

Some submitters on the earlier consultation suggested broadening the scope of the proposed framework to include 'domestically important' payment systems that might not otherwise meet the criteria for systemic importance. After a period of re-assessment, including continued engagement with a wide range of stakeholders, the Reserve Bank has concluded that such payment systems do not need to be captured by the strengthened oversight regime, due to the diversity of the retail payment systems in New Zealand and the availability of substitutes. The Reserve Bank's focus will be on FMIs that give rise to systemic risks.

Another proposal in the previous consultation was that the new Recognition Regime run parallel to the existing Designation Regime, establishing a separate oversight function, on top of the legal certainty for

netting and settlement that is provided by designation. That consultation document also discussed an alternative option of modifying the existing Designation Regime.

The Reserve Bank is now of the view that this alternative option of modifying the existing Designation Regime would be better as it would avoid the complexity of running two separate regimes. This approach would not hinder the effectiveness of the proposed oversight framework, and would be more in line with the FMI oversight regimes in many overseas jurisdictions.

Overall, the revised proposal to modify the existing Designation Regime represents a simpler statutory framework for FMI oversight that is consistent with the Reserve Bank's risk-based supervisory approach. The consultation paper recommends modifying the existing Designation Regime as follows:

- mandatory designation of FMIs that are considered to be systemically important;
- the Reserve Bank and Financial Markets Authority (FMA) to have crisis management powers for designated FMIs; and
- the Reserve Bank and FMA to have a more graduated set of business-as-usual oversight powers, including enforcement and investigation powers for designated FMIs.

The consultation will close on 3 July 2015.

Appendices



Appendix 1 Summary of regulatory initiatives

Non-bank deposit takers (NBDTs)

The Reserve Bank has completed the licensing of existing NBDTs, with all 31 current NBDTs obtaining a license before the 1 May 2015 deadline. During the licensing process, four applicants ceased to be NBDTs and withdrew their license application. As part of the license assessment process the Reserve Bank required a number of applicants to improve their risk management processes and liquidity requirements.

Insurance solvency

The Reserve Bank is working on a capital requirement for variable annuities that reflects the specific features of these products. A public consultation on the proposed requirement closed on 3 October 2014. A summary of submissions and the near-final specific capital requirements were released on 17 December 2014. Following a private consultation

on an exposure draft of the standard, a solvency standard in respect of variable annuities is expected to be released soon.

Review of the outsourcing policy

A fundamental review of the outsourcing policy that currently applies to 'large banks' (defined as those banks whose New Zealand liabilities, net of amounts due to related parties, exceed \$10 billion) is currently under way. This process follows a stocktake of major banks' outsourcing arrangements undertaken in 2014. The Reserve Bank expects to consult on possible revisions to the policy in mid-2015.

Crisis management

The Reserve Bank has identified a number of technical amendments to the Reserve Bank of New Zealand Act 1989 that will support the operation of the Open Bank Resolution policy in a crisis. Discussions are also ongoing with Treasury to identify any additional amendments that may be appropriate in respect of crisis governance matters. Any resulting changes will be included within the proposed amendment bill.

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, anti-money laundering, and countering the financing of terrorism. The Reserve Bank monitors entities' compliance with the obligations it oversees.

In responding to identified non-compliance by an entity, the Reserve Bank may consider it appropriate to take enforcement action.

During the past 12 months, the Reserve Bank has undertaken the following public enforcement action:

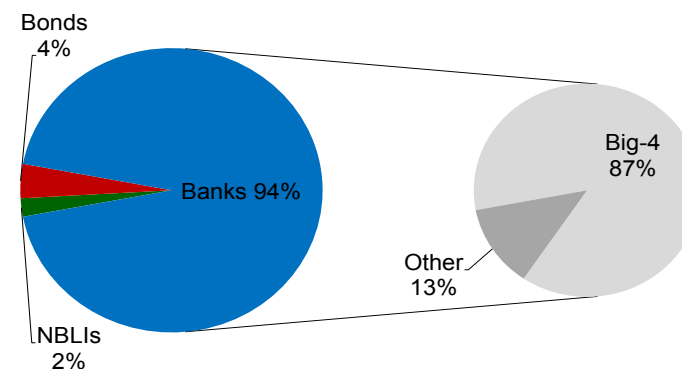
- March 2015 – a formal warning was issued to J.P.Morgan Chase Bank N.A. New Zealand branch under section 80 of the Anti-Money Laundering and Countering Financing of Terrorism Act 2009.

Appendix 3

Introduction to the New Zealand financial system

The banking system comprises the majority of lending to the private sector in New Zealand, and is therefore a key focus of the *Report* (figure A3.1). Direct capital market funding (issuance of corporate bonds) and non-bank lending institutions (NBLIs) together account for only 6 percent of total private sector credit. The New Zealand banking system is highly concentrated, with four large Australian-owned banks responsible for 87 percent of bank lending.

Figure A3.1
Sources of private sector credit
(as at December 2014)



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

Approximately 60 percent of bank lending is to the household sector (figure A3.2). Almost all of household debt is secured against housing assets, and these assets account for around half of assets owned by the household sector. Rural lending accounts for around 16 percent of total lending, with the dairy sector accounting for two-thirds of this. Lending to the business sector accounts for approximately 24 percent of total bank lending, around 45 percent of which is to the commercial property sector.

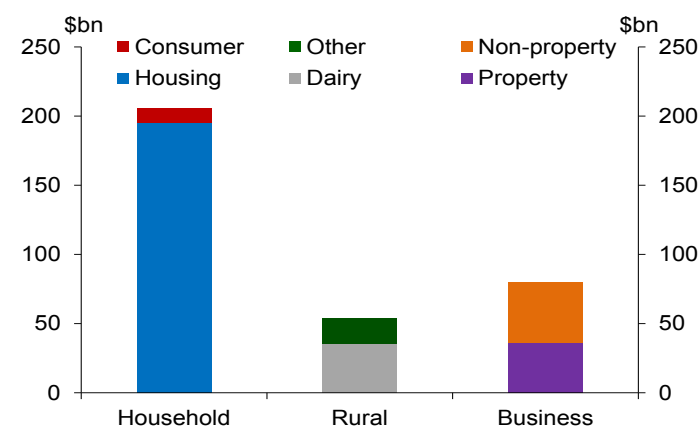
Bank lending is funded from equity, deposits, and both domestic and offshore market funding (table A3.1). Around 65 percent of bank funding is sourced from deposits, with a further 12.5 percent from domestic sources of market funding. A significant portion of bank funding is sourced from offshore markets. Offshore bank funding accounts for almost two-thirds of New Zealand's external liabilities, which are elevated relative to most other developed economies (figure A3.3). This creates a vulnerability to disruptions to global financial markets. However, almost all debt is hedged into NZD and reliance on short-term funding markets has declined markedly since the GFC.

Table A3.1
Banking system funding
(% of total funding, as at December 2014)

| | Short term | Long term | Total |
|-------------------------|------------|-----------|-------|
| Equity | - | - | 7.5 |
| Deposit funding, < \$5m | 48.7 | 2.9 | 51.6 |
| Deposit funding, > \$5m | 12.8 | 0.6 | 13.4 |
| Domestic market | 6.7 | 5.8 | 12.5 |
| Offshore market | 7.3 | 7.7 | 15.0 |

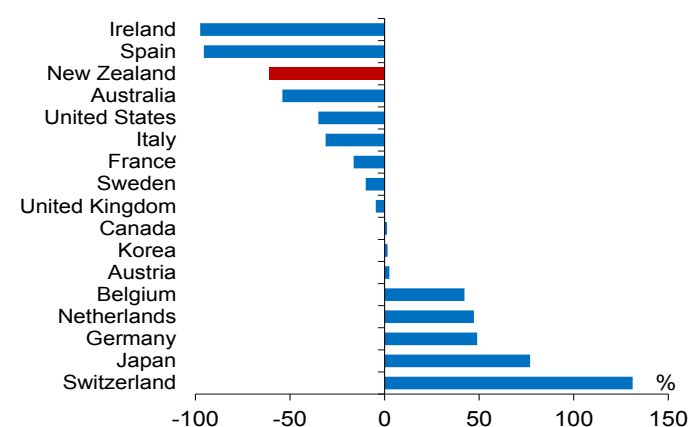
Source: Registered banks' *Disclosure Statements*, RBNZ *Liquidity Survey*.

Figure A3.2
Sectoral banking system assets
(as at December 2014)



Source: RBNZ SSR.

Figure A3.3
Net international investment position
(% of GDP, latest available)



Source: IMF, Statistics New Zealand.