



Financial Stability Report

May 2018

Reserve Bank of New Zealand *Financial Stability Report*

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This report is published pursuant to section 165A of the Reserve Bank of New Zealand Act 1989, which states that a financial stability report must:

- (a) report on the soundness and efficiency of the financial system and other matters associated with the Bank's statutory prudential purposes; and
- (b) contain the information necessary to allow an assessment to be made of the activities undertaken by the Bank to achieve its statutory prudential purposes under this Act and any other enactment.

In addition, under the Memorandum of Understanding between the Minister of Finance and the Governor of the Reserve Bank of New Zealand, the Bank's *Financial Stability Report* will report on matters relating to the soundness and efficiency of the financial system including any build-up of systemic risk, and the reasons for, and impact of, any use by the Bank of macro-prudential policy instruments.

This *Report* uses data released up to 24 May 2018

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Financial Stability Report in pictures

May 2018



New Zealand's financial system is sound and efficient

The biggest risks to New Zealand's financial system have not changed materially in the past six months. The financial system is resilient, but the culture and conduct of financial firms must support public confidence.



Household debt levels are high but are rising less quickly than before



The Reserve Bank's LVR restrictions on new mortgage lending are unchanged



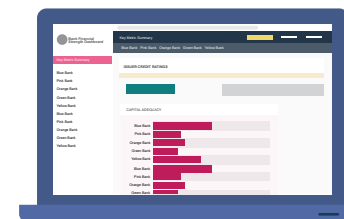
Some dairy farms need to reduce their debt levels



New Zealand banks have reduced their exposure to international risks



The conduct of financial institutions must support public confidence in the financial system



The Reserve Bank has launched the *Bank Financial Strength Dashboard*

Household debt levels are high but are rising less quickly than before

Debt levels in the household sector are high, particularly for new homeowners and for property investors. These borrowers are vulnerable to rising interest rates or a change in financial circumstances.

If borrowers default on their loans, it could cause significant loan losses for the banking system.

Over the past year credit growth has declined and house price inflation has stabilised. Continued slow growth would reduce the chance of large house price falls. Bank lending standards have tightened, with banks reducing the amount they are willing to lend relative to incomes and reducing the availability of interest-only lending.



The Reserve Bank's LVR restrictions on new mortgage lending are unchanged

Loan-to-value ratio (LVR) restrictions control the share of mortgage loans that banks can grant to customers with low deposits. Only 15 percent of new loans to **owner-occupiers** can have deposits of less than 20 percent. And, only 5 percent of loans to **property investors** can have deposits of less than 35 percent. The LVR rules reduce the likelihood that a significant share of borrowers would become financially stressed if house prices fell.

With some households still financially vulnerable, the Reserve Bank is keeping the policy unchanged for now. The rules will be eased in the future if housing market risks decline and banks maintain prudent mortgage lending standards.



Some dairy farms need to reduce their debt levels

The dairy farming sector remains highly indebted, and vulnerable to a future downturn in dairy prices. Dairy farms also face a number of longer-term challenges, including the impact of the response to environmental concerns.



Global dairy prices have been stable over the past year and most dairy farms are currently profitable. This has allowed some farms to pay back some of their debt. Farms should continue to carefully manage their borrowing and banks should continue to lend prudently. It will likely take time for the most indebted farms to manage down their debt.

The spread of the *M. bovis* disease is an emerging risk for the dairy sector. *M. bovis* has potential to negatively impact the productivity and profitability of the sector, and could lead to losses for banks.

New Zealand banks have reduced their exposure to international risks

New Zealand banks rely on funding from overseas so they can provide loans to New Zealand households and businesses. There is a risk that if global financial markets are disrupted, New Zealand banks could face higher funding costs. Those costs could then be passed on to New Zealand consumers and businesses in the form of higher interest rates on loans, or fewer loans being made available.



Banks have reduced their reliance on international funding markets over time by growing customer deposits and seeking funding at longer terms. But financial markets could become disrupted if global interest rates increase rapidly as central banks start tightening monetary policy.

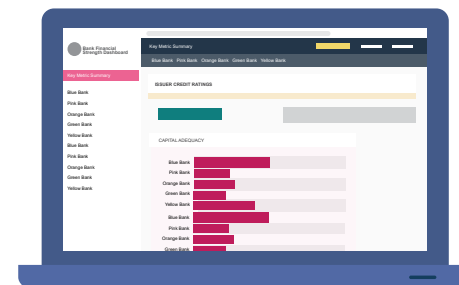
The conduct of financial institutions must support public confidence in the financial system

Public trust in banks, insurers and other financial institutions is essential to maintain stability in the New Zealand financial system. The importance of firms' culture has been illustrated by the series of ongoing inquiries into financial services conduct in Australia. The Reserve Bank, with other regulators, has asked the boards of New Zealand banks and chief executives of life insurers to show that there are no system-wide misconduct issues in the New Zealand banking and life insurance sectors.



The Reserve Bank has launched the *Bank Financial Strength Dashboard*

The Reserve Bank promotes the financial stability of the banking system by imposing minimum standards, such as how much shareholder funding banks require and how much liquidity they should have in order to meet customer demands.



Financial stability is also enhanced by bank customers monitoring the strength of their bank. The Reserve Bank has just launched the *Bank Financial Strength Dashboard* to make it easier for customers to monitor banks. The innovative design is the first of its kind, and allows financial information to be compared across banks. The *Dashboard* will improve incentives for banks to act appropriately and make it easier for banks to benchmark themselves against each other.

Financial Stability Report

May 2018

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Chapter 1

Financial stability risk and policy assessment



New Zealand's financial system remains sound and broadly efficient. The banking system continues to hold sufficient buffers of capital and liquidity. Bank profitability has increased marginally in the past six months, and lending standards remain tight. The insurance sector as a whole remains sound. However, some insurers have relatively small capital buffers, and one insurer, CBL Insurance Ltd, was placed into interim liquidation in February.

To ensure the ongoing stability of the financial system, it is important for all parties to play their part. The Australian Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry has highlighted the importance of culture to public confidence and the soundness of the financial system. The Reserve Bank, with other regulators, has requested that the boards of New Zealand banks and chief executives of life insurers demonstrate that there are no system-wide misconduct issues in the New Zealand banking and life insurance systems.

The Reserve Bank has worked to further bolster market and self-discipline of banks through the release of the *Bank Financial Strength Dashboard*, which allows easy comparison of financial information across banks (see box A). The Reserve Bank is also undertaking a thorough

review of bank capital requirements to ensure they are appropriate for New Zealand.

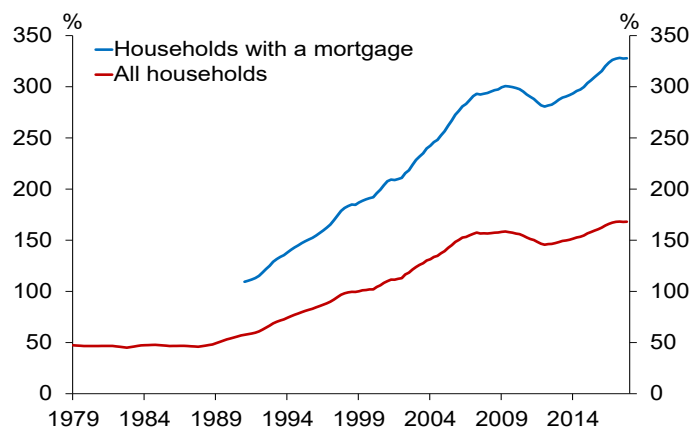
The financial sector remains exposed to three key vulnerabilities: household sector indebtedness, dairy sector indebtedness, and the banking system's exposure to international risks. These vulnerabilities have remained broadly stable in the past six months.

Key vulnerabilities

Household indebtedness remains high.

Household sector indebtedness has increased since 2011, coinciding with significant growth in house prices, and debt is now at a record high (figure 1.1). Indebtedness is particularly high for new homeowners and for property investors. These borrowers are particularly vulnerable to rising interest rates or a change in financial circumstances. A significant deterioration in households' debt servicing capacity, particularly accompanied by a fall in house prices, could cause significant loan losses for the banking system.

**Figure 1.1
Household
debt-to-
income ratio**



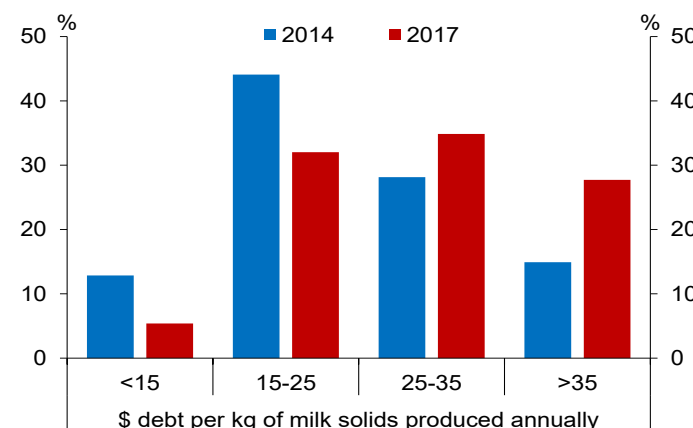
Source: Stats NZ, RBNZ Household Assets and Liabilities Survey, RBNZ estimates.

Over the past year, credit growth has declined and house price inflation has stabilised. This is in part due to banks tightening mortgage lending standards, which has led to a reduction in the share of new mortgage lending at high debt-to-income ratios and on interest-only terms. These are positive developments for reducing financial system risk.

Some dairy farms need to reduce debt levels.

The dairy farming sector remains highly indebted and vulnerable to any possible downturn in dairy prices (figure 1.2). The sector also faces a number of longer-term challenges, including the impact of tighter environmental expectations.

**Figure 1.2
Distribution
of dairy
sector debt
(June years)**



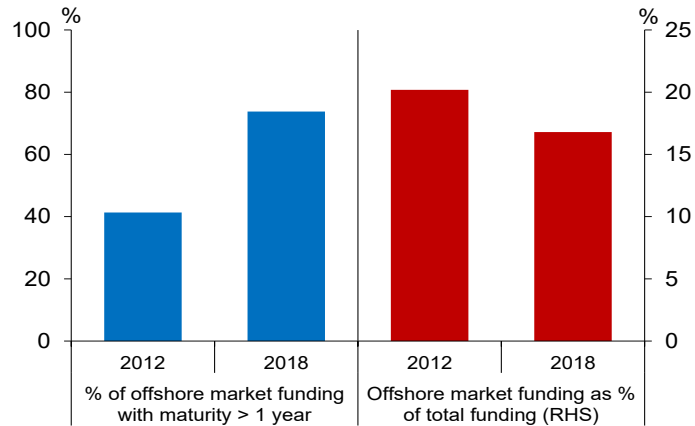
Source: DairyNZ, RBNZ estimates.

Over the past year, global dairy prices have remained broadly stable and most dairy farms are currently profitable. This has allowed some farms to begin paying down debt that accumulated between 2014 and 2016. Bank lending to the sector has remained steady since mid-2016. Farms should continue to manage their borrowing carefully, and banks should continue to lend prudently. It will likely take significant time for the most indebted farms to manage down their debt.

New Zealand banks have reduced their exposure to international risks.

The banking system is reliant on international funding markets. This exposes it to international risks that could disrupt these markets (figure 1.3). Over the past year, banks have been able to reduce their reliance on offshore funding, particularly at shorter terms, due to strong growth in customer deposits and by raising funding at longer terms.

Figure 1.3
Banking system offshore market funding
(March years)



Source: RBNZ Liquidity Survey.

However, New Zealand banks could still face liquidity problems if international developments meant banks lost access to global funding markets. The most prominent international risk is disruption from a rapid increase in global interest rates, as central banks tighten monetary policy. A rapid move in long-term interest rates, and/or risk premiums, would increase the cost of funding for New Zealand banks and increase borrowing costs.

Policy assessment

Loan-to-value ratio (LVR) restrictions have been in place since 2013. These were implemented to constrain growth in highly leveraged mortgages. The policy aims to reduce the impact that a fall in house prices would have on the household sector and the wider economy, and ultimately the loan losses faced by banks.

The LVR policy has been successful. It has reduced the concentration of lending at high LVRs, and has reduced the share of lending to investors. However, some households still have very high levels of debt, and mortgage lending standards remain relaxed on some metrics, despite the broader tightening in bank lending standards.

While house price growth has moderated, the level of house prices remains high relative to household incomes. Slowing credit growth and house price inflation have eased risks related to household debt in the past 12 months. Reflecting this, the Reserve Bank announced a small easing of the LVR policy in November 2017 to allow a higher proportion of loans to be made at high LVRs. The full effect of this easing is still working through, and no further change in policy settings is deemed appropriate for now. The policy will be eased further in the future if housing market risks decline and banks' lending standards for new mortgage loans are prudent.

Developments in financial regulation

In the past six months, the Reserve Bank has made progress on a number of regulatory policy initiatives. Most notably, the Reserve Bank and the Ministry of Business, Innovation and Employment have developed legislative amendments that will enable New Zealand banks to comply with foreign margin requirements, which will mean they can continue to hedge foreign exchange risk on their funding in foreign currencies.

Progress has also been made on a number of other initiatives, including the review of bank capital requirements, preparing for Phase 2 of the Reserve Bank Act review, the outsourcing policy, a new standard for mortgage bonds that can qualify as eligible collateral, and policy to ensure the Bank Bill Benchmark Rate remains an approved benchmark for EU-regulated banks.

Adrian Orr



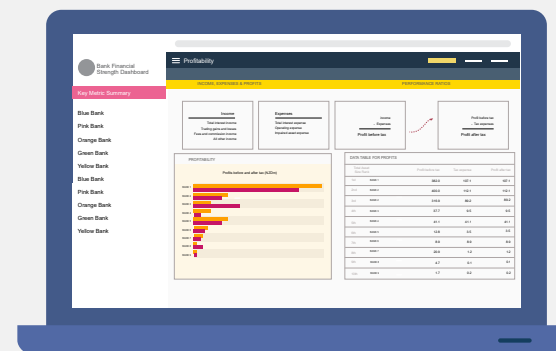
Governor

Box A

The *Bank Financial Strength Dashboard* – an interactive disclosure tool for New Zealand

On 29 May, the Reserve Bank launched the *Bank Financial Strength Dashboard* (the ‘*Dashboard*’), an innovative online tool for sharing prudential and financial information on New Zealand incorporated banks.¹ It sits alongside disclosure statements as a source of information for the public and market to better understand and compare banks’ businesses and risks. The *Dashboard* is updated quarterly and is based on information that banks already provide to the Reserve Bank, reducing the cost of the initiative for banks and the Reserve Bank.

Diagram A1
The *Bank Financial Strength Dashboard*



The *Dashboard* uses an original and world-leading design to make prudential information easily accessible and comparable for all interested parties, including professional investors, business journalists, financial analysts, rating agencies and the general public. It aims to strengthen

1 <https://bankdashboard.rbnz.govt.nz>

the market discipline and self-discipline of banks – two of the three pillars of the Reserve Bank’s regulatory and supervisory framework.² Market discipline will be enhanced by improving the ability of the public and market participants to understand and act on information about banks’ financial strength and risk profile. Self-discipline will be improved by increasing the incentives for banks to act appropriately and by making it easier for banks to benchmark themselves against peers.

The Dashboard has more than 100 metrics...

The *Dashboard* contains more than 100 individual metrics on the financial strength of banks that cover seven subject areas (table A1) and are presented in a layered format. A ‘key metrics summary’ page presents seven key metrics (one for each subject area) in a chart format and is intended to provide users with quick insights. These charts are interactive and contain simple descriptions of the metrics.

The *Dashboard* also includes a page for each bank, which shows their metrics in one place. This includes details of any recent data revisions, and supplementary commentary that is provided directly by banks. Users can also download the underlying data for each metric.

...that can be used to inform financial decisions.

The metrics included in the *Dashboard* are intended to provide relevant information to help users make financial decisions. Deciding where to invest money is an important financial decision that requires a careful assessment of the risks and returns of various options. The *Dashboard’s* user-friendly design and interactive features allow users to make

meaningful side-by-side comparisons of banks and to better understand their financial strength. However, the *Dashboard* does not present the full picture and investors should always obtain professional advice when making important financial decisions.

Feedback on the Dashboard is encouraged.

The Reserve Bank’s immediate focus is on ensuring the current version of the *Dashboard* tool runs smoothly and is well understood by users. The Reserve Bank plans to run a sustained education and awareness campaign to support the launch of the *Dashboard*. Feedback from users is encouraged. Future developments will be strongly influenced by users’ needs. A wider review of the *Dashboard* is expected in due course.

Table A1
Dashboard metrics

Subject area	Key metric	Number of components of key metrics
Credit rating	Credit rating	3
Capital adequacy	Total capital ratio	27
Asset quality	Non-performing loans ratio	44
Profitability	Return on assets	14
Balance sheet	Total assets	14
Liquidity	Core funding ratio	3
Credit concentration	Top five non-bank exposures	4

² For an overview of the three-pillar approach, see Hunt, C (2016) ‘A short history of prudential regulation and supervision at the Reserve Bank’ Reserve Bank of New Zealand *Bulletin*, 79(14).

Chapter 2

The New Zealand financial system's domestic vulnerabilities



New Zealand's financial system has two main domestic vulnerabilities: household sector indebtedness and dairy sector indebtedness. These vulnerabilities have not changed materially since the previous *Report*.

Household sector indebtedness

The high level and concentration of household sector debt in New Zealand is the largest single vulnerability of the financial system. Some households are vulnerable to developments that reduce their debt servicing capacity, such as higher interest rates or a change in financial circumstances. Households with severe debt servicing problems could default on their loans, creating losses for lenders. If debt servicing problems were widespread, weaker consumption and investment could reduce incomes and contribute to an economic downturn. This could threaten financial stability by causing households and businesses to default, and by reducing the value of assets against which banks have lent, such as houses.

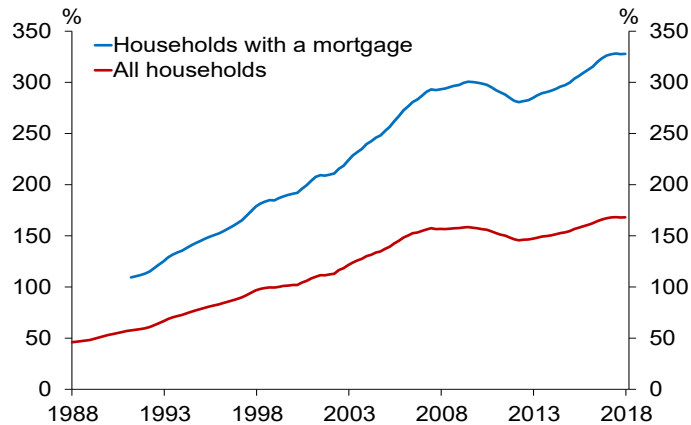
This risk has not changed materially since the last *Report*. Growth in household debt has slowed and house price inflation has stabilised, but significant vulnerabilities remain.

Household debt is high and is concentrated...

Household indebtedness has increased dramatically in the past 30 years (figure 2.1). In 1988, the average household owed around \$16,000 in debt and had an income of around \$35,000 – a debt-to-income ratio of 46 percent. By end-2017, this ratio had risen to 168 percent, following a ten-fold increase in average household debt to nearly \$160,000, while average incomes had only slightly less than tripled to \$95,000.

The distribution of household debt has also become more concentrated, as households with mortgages have become more indebted over time. Households with investment properties are particularly indebted: only 8 percent of households own investment properties, but they account for 40 percent of housing debt.

**Figure 2.1
Household
debt-to-
income ratio**

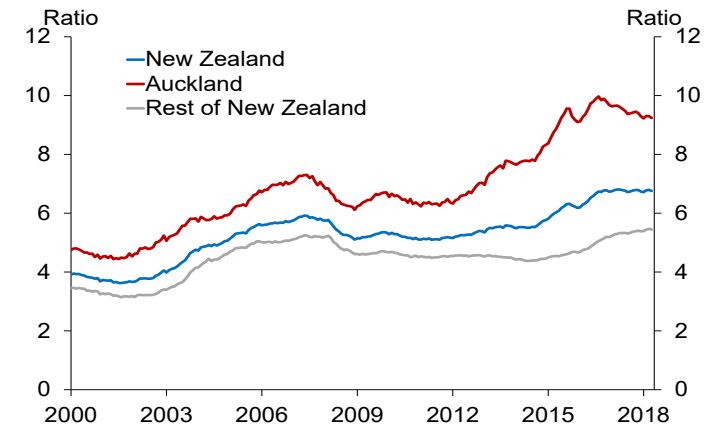


Source: Stats NZ, RBNZ Household Assets and Liabilities Survey, RBNZ estimates.

...and house prices are also high.

The rise in household debt since 2012 has coincided with a sharp rise in house prices, particularly in Auckland (figure 2.2). The simultaneous rise in household debt and house prices could partly reflect a self-reinforcing cycle, where bank lending has boosted house prices and, in turn, higher house prices have supported more bank lending, by increasing the value of homeowners' collateral. But this cycle can also operate in reverse, driving down bank lending and house prices. This negative interaction can amplify the financial stability impact of a household income shock, by lowering collateral values and reducing households' ability to service their existing debts by increasing their borrowing.

**Figure 2.2
House price-
to-income
ratio**



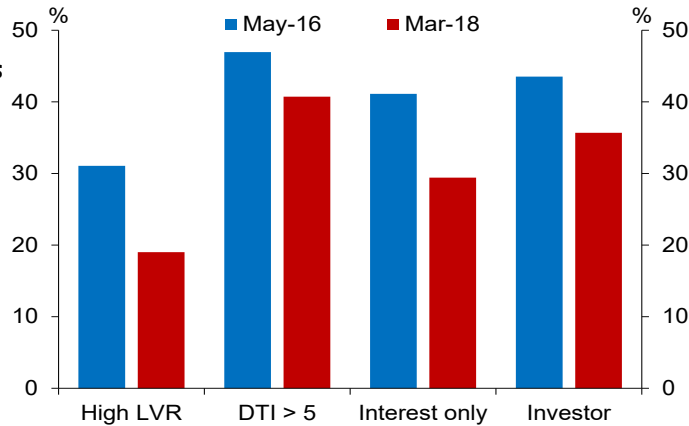
Source: Real Estate Institute of New Zealand (REINZ), Stats NZ, RBNZ calculations.

Bank lending standards have tightened in recent years...

In the past two years, concerns about vulnerabilities in the household sector have caused a tightening in bank lending standards to the sector. This is partly the result of the Reserve Bank tightening its restrictions on new mortgage lending, particularly to investors, at high loan-to-value ratios (LVRs) in October 2016.¹ It also reflects actions by banks to tighten lending standards, such as the use of higher household living cost assumptions when assessing borrowers' ability to service loans. As a result, a lower proportion of banks' new mortgage loans have high risk characteristics than in 2016 (figure 2.3).

¹ The tighter LVR restrictions on investors reflect the higher indebtedness of investors and evidence that loans to investors have incurred relatively high loss rates in past international housing crises. For more detail, see the Reserve Bank consultation paper (July 2016) on 'Adjustments to restriction on high-LVR residential mortgage lending'.

Figure 2.3
Share of new mortgage loans with high risk characteristics



Source: RBNZ LVR New Commitments Survey, RBNZ DTI New Commitments Survey, private reporting.

Notes: 'DTI > 5' shows the proportion of loans with debt-to-income ratios above five. The improvement in DTI > 5 figures partly reflects improvements in bank data provisions. 'High LVR' shows the proportion of loans to owner-occupiers with LVRs above 80 percent and loans to investors with LVRs above 65 percent.

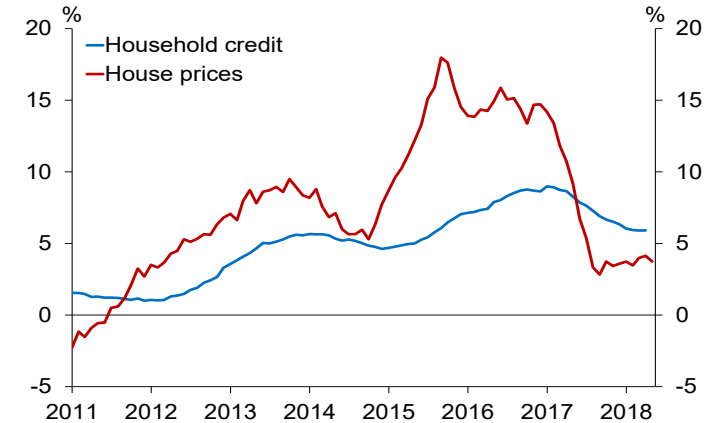
However, the share of new lending with high risk characteristics is still concerning. The proportion of new mortgage lending to borrowers with debt-to-income ratios above five is high compared to international peers, such as the UK. Households with this level of indebtedness are particularly vulnerable to even modest changes in income or interest rates.

...and the growth rates of household debt and house prices have slowed.

The tightening in lending standards has contributed to the annual growth rate of household credit slowing to 6 percent, slightly above the rate of income growth (figure 2.4). This has coincided with a slowdown in national house price growth, to 4 percent in the year to April. The decline in house price inflation partly reflects the announcement and

implementation of government policies (such as KiwiBuild, the extension of the bright-line test and plans for 'loss ring-fencing').² But low mortgage rates and high net migration continue to support house prices.

Figure 2.4
Growth in household credit and house prices (annual % change)



Source: REINZ, RBNZ Bank Balance Sheet (BBS).

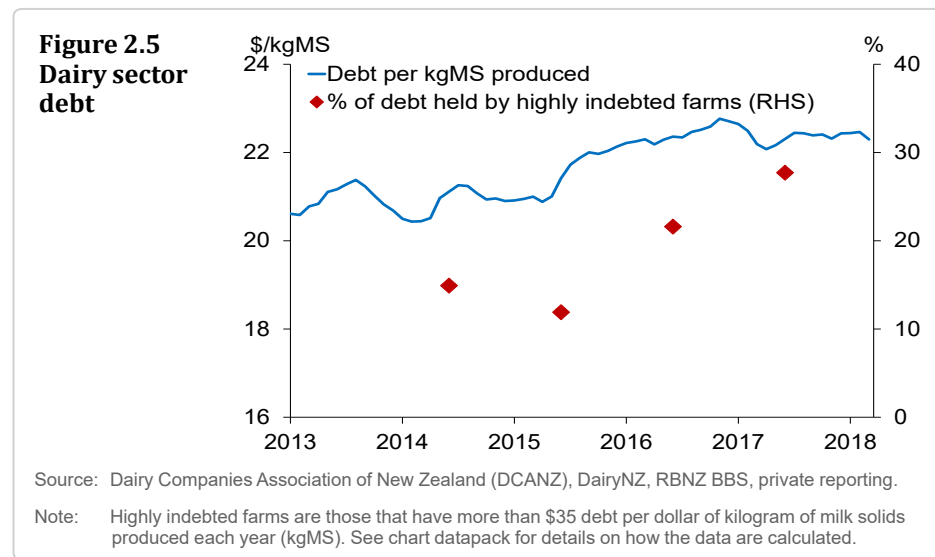
The growth rates of household debt and house prices have been fairly stable over the past six months. Combined with tighter bank lending standards, this suggests the financial system's vulnerability to household debt has not changed materially since the previous *Report*.

Ultimately, continued stabilisation, or a further reduction, in the growth rates of household debt and house prices, will be required before the risk to the financial system is normalised. Bank lending standards will have an influence over both. Currently, banks expect to keep their lending standards relatively tight for the rest of 2018.

² The KiwiBuild programme is expected to gradually increase the supply of new houses. The bright-line test taxes profits from selling residential investment properties that had been purchased less than five years previously (an extension from two years). 'Loss ring-fencing' restricts investors' ability to offset their losses on some property investments against their income. It could be phased in over a few years from the start of the 2019-20 tax year.

Dairy sector indebtedness

Dairy sector indebtedness has increased in recent years and become more concentrated, with a bigger share of debt held by the most indebted farms (figure 2.5). Around 20 percent of banks' dairy sector loans, by value, are being closely monitored by banks, due to concerns about borrowers' financial strength. Losses on dairy loans in a dairy downturn are unlikely to threaten the solvency of the banking system on their own, but they would weaken banks' resilience to other shocks.

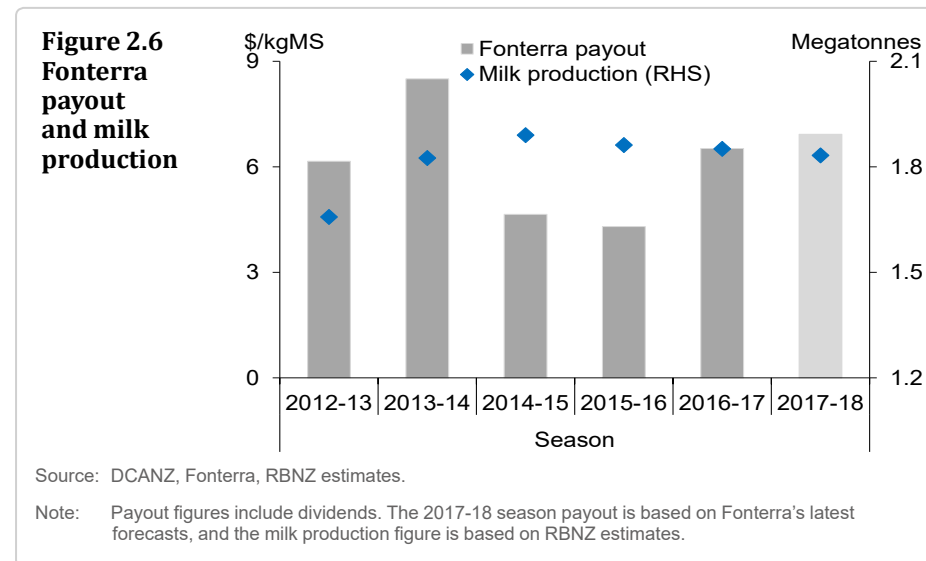


This risk has not changed materially in the past six months, due to a stabilisation in farm income and dairy debt levels. However, the spread of the *Mycoplasma bovis* (*M. bovis*) infection is an emerging risk that could reduce the productivity and profitability of the sector, and could lead to losses on bank lending to the dairy sector.

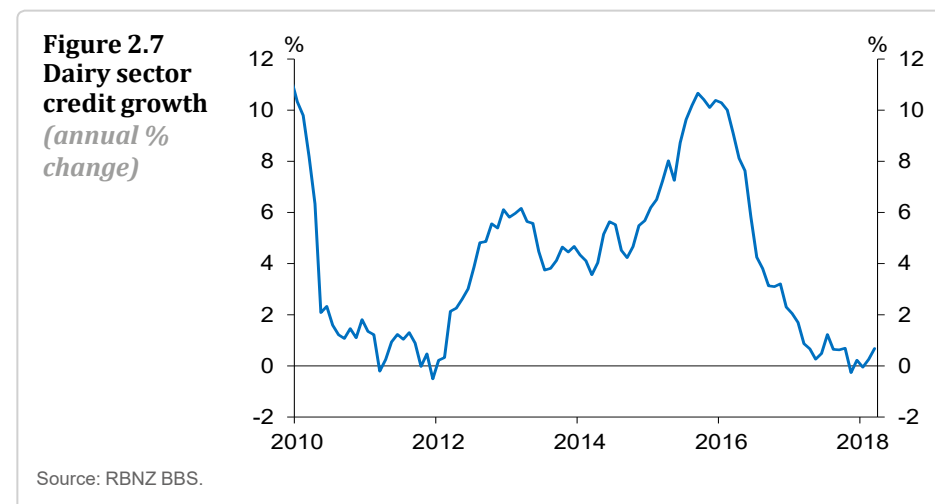
Income and debt levels are largely unchanged...

Dairy sector indebtedness increased significantly between 2014 and 2016, when weak global dairy prices reduced farm incomes and forced farms to borrow to meet operating costs. Since then, dairy prices have increased and stabilised at a higher level, near the long-run average.

The average New Zealand dairy farm's income is expected to be relatively unchanged from last season. Fonterra forecasts a slightly higher payout this season but milk production is expected to be slightly lower than last season, due to dry weather (figure 2.6). The proportion of dairy farms that are cash-flow positive this season is also expected to remain broadly unchanged, at around 90 percent. Just 40 percent of dairy farms were cash-flow positive in the 2015-16 season at the worst of the dairy price downturn.



Bank lending to the dairy farm sector has remained steady since mid-2016 (figure 2.7). The proportion of bank loans on principal and interest terms has increased from 6 percent in January 2017 to 12 percent in March 2018. And the proportion of dairy sector loans being closely monitored by banks has continued to decline in the past six months.



... but the sector remains vulnerable to shocks.

The stabilisation in dairy farm incomes and debt levels is positive and the vulnerability of the sector has not changed materially in the past six months. However, there remains a significant proportion of farms that are vulnerable to shocks that could reduce their ability to service their debts, such as a fall in dairy prices or higher borrowing costs.

These farms could also be challenged by various regulatory changes, including tighter restrictions on foreign investment in farms (which could reduce the value of dairy farms) and environmental regulations (which could increase farm operating costs). While these changes may improve

the long-run sustainability of the dairy sector, they could reduce the profitability of highly indebted farms and their equity buffers.

The spread of the *M. bovis* disease is an emerging risk to the sector. At time of writing, it is not known how widespread the disease has become and how the Government and industry will manage the response. Both factors will affect the impact of the disease on the ongoing profitability of the sector and losses to banks.

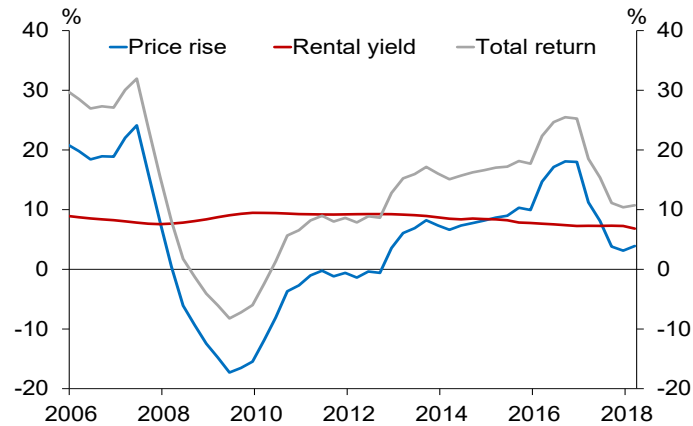
Bank lending to the sector should remain prudent.

Existing high debt levels and the future challenges for the dairy sector mean that dairy farms should manage their borrowing carefully and banks should continue to lend prudently. It will likely take time for the most indebted dairy farms to manage down their debt. It is encouraging that banks are working closely with these farms, and an increasing proportion is moving from loans with interest-only terms to repaying principal.

Commercial property prices

Loans to the commercial property sector comprise 8 percent of total bank lending. Problems in the sector would not threaten financial stability on their own, but could materially weaken bank resilience. This vulnerability has declined in the past six months, as price inflation has stabilised at a level well below its 2016 peak (figure 2.8). In addition, vacancy rates remain at low levels and a limited supply of new properties is forecast to be completed in the next few years. Furthermore, bank lending standards to the sector have tightened and credit growth has slowed.

Figure 2.8
Annual
returns on
commercial
property



Source: JLL.

However, several risks to the commercial property sector remain. In particular, commercial property prices could fall sharply if interest rates on risky assets rise materially (for example, due to monetary policy normalisation), increasing the return that investors demand on commercial property assets. And the demand for retail properties may come under pressure from growth in online shopping.

Chapter 3

The New Zealand financial system's international vulnerabilities



As a small open economy that borrows from abroad, New Zealand is reliant on the willingness of foreigners to lend to domestic residents and purchase New Zealand goods, services and assets. New Zealand is therefore exposed to risks that could disrupt international funding markets or harm the global economy.

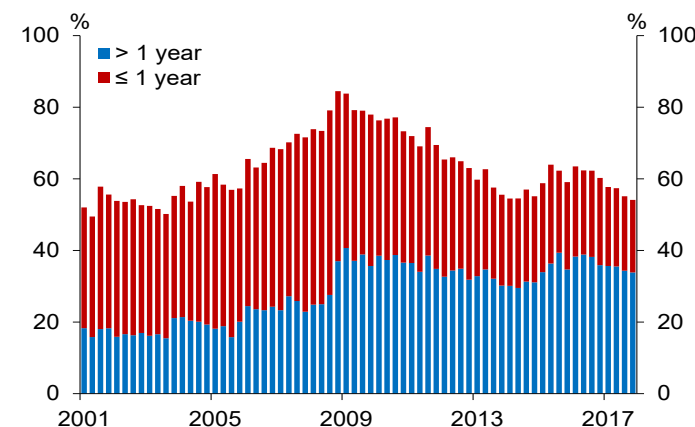
New Zealand borrows from abroad...

For more than 40 years New Zealand has had a current account deficit, meaning that residents have invested more than they have saved, by borrowing from the rest of the world. This net funding from abroad has accumulated to around 55 percent of GDP and exposes New Zealand to the risk of sudden changes in foreigners' willingness to lend to New Zealand residents.

New Zealand banks intermediate much of this offshore borrowing, sourcing around 22 percent of their funding abroad. Although most of this is in foreign currencies, almost all of it is hedged against movements in exchange rates. However, banks are still vulnerable to a sharp increase in funding costs or a reduction in the availability of funding from overseas, as happened during the global financial crisis (GFC).

While these risks remain, New Zealand has become more resilient to them in recent years. Net foreign liabilities have fallen significantly, as a share of GDP, since the GFC and banks have reduced their reliance on offshore funding, particularly shorter-term offshore funding (figure 3.1).

Figure 3.1
New Zealand banks' offshore funding, by maturity (% of GDP)

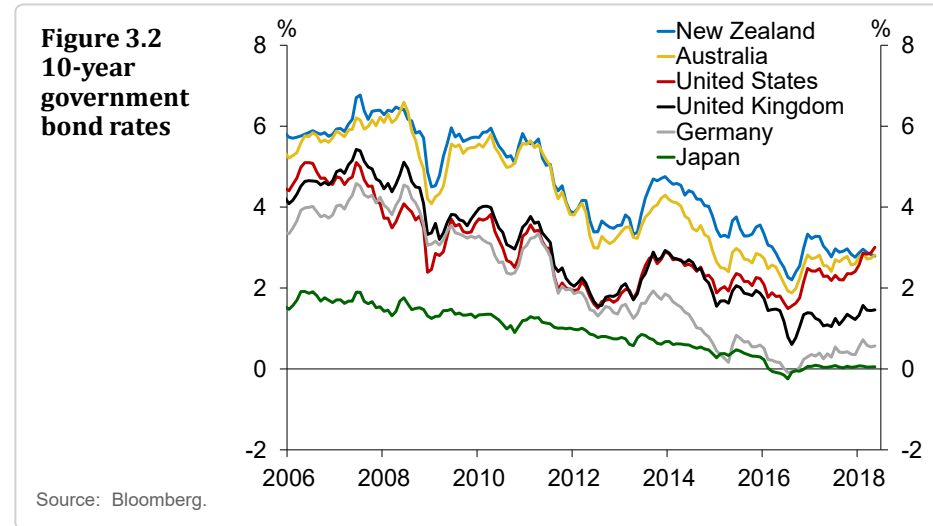


Source: Stats NZ.

...and is exposed to global developments.

Around a quarter of New Zealand's production is exported, with around 40 percent of these exports going to China and Australia. As a result, developments that negatively affect our trading partners can reduce demand for New Zealand exports and lower the income of exporting firms. A significant reduction in export demand could weaken the performance of the entire economy and the financial system.

Global developments can also affect the outlook for future economic growth, inflation and interest rates in New Zealand. Long-term interest rates, which reflect investors' expectations about the future, tend to be correlated across countries (figure 3.2), as are risk premiums that investors demand for investing in risky assets. As a result, a sudden increase in global long-term interest rates can affect New Zealand's long-term interest rates and asset prices.

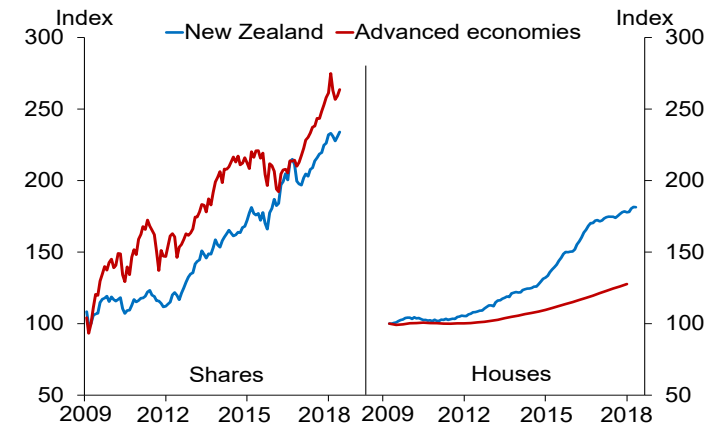


International risks

Monetary policy is tightening in some countries...

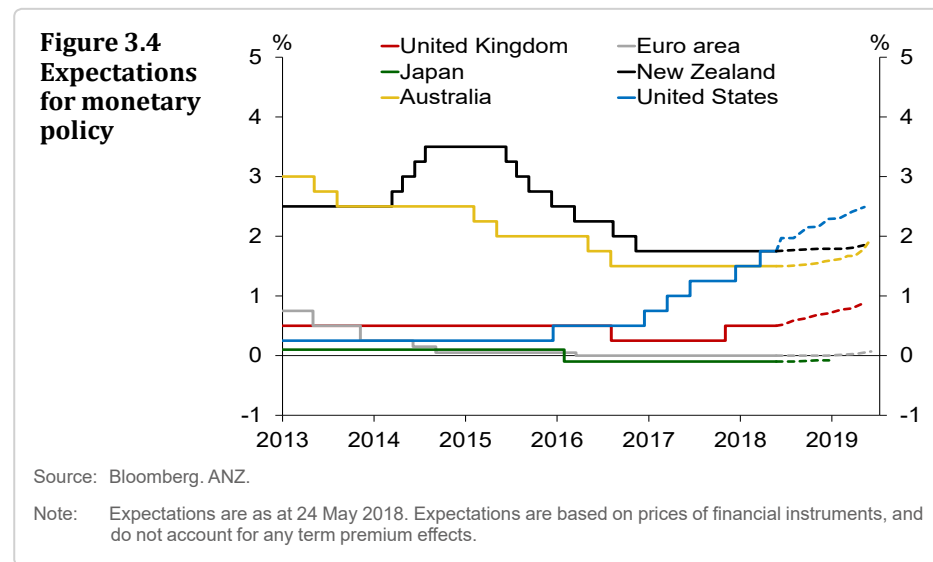
Asset prices and debt levels are elevated in many advanced economies, including New Zealand, after a decade of low interest rates (figure 3.3). Low interest rates have boosted risky asset prices, as they are central to the valuation of a broad range of assets, and have encouraged investors to take on more risk to achieve their desired investment returns.

Figure 3.3
Asset prices
(March 2009 = 100)



Note: Shares prices are represented by the NZX50 Capital Index and the MSCI World Index. House prices are represented by the REINZ house price index and the OECD nominal house price index.

Central bank policy rates remain low in many advanced economies, but some are expected to increase over the next few years. The US Federal Reserve and the Bank of England have begun to increase interest rates and are expected to tighten policy over the coming year (figure 3.4). Some policy rates are expected to rise further and faster than at the time of the previous *Report*. This reflects a more positive outlook for near-term economic growth and tighter labour markets in many countries.



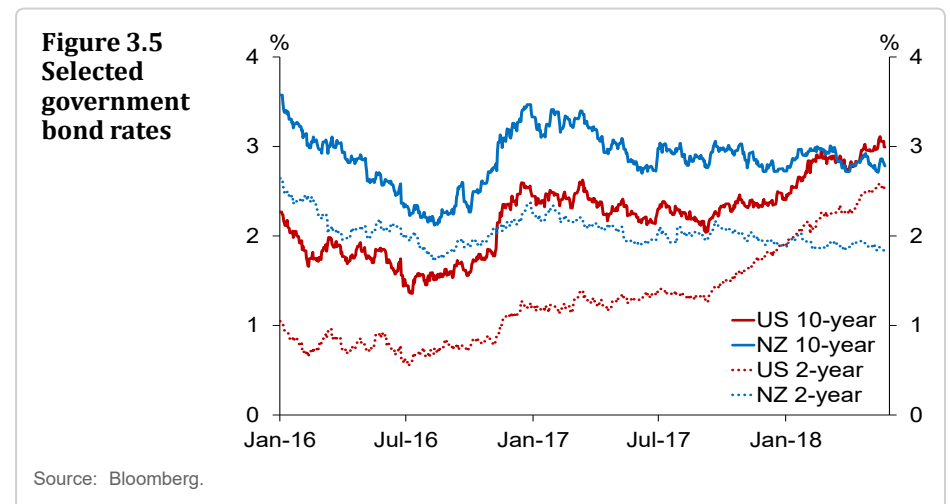
...which could cause some asset prices to decline...

As global interest rates increase, the cost of servicing debt will rise and asset prices could fall. The positive global outlook and gradual pace of monetary policy tightening should reduce the risk that asset prices will correct suddenly. But interest rates could rise faster than expected, if inflationary pressures surprise or if risk premiums increase quickly. Asset prices can react sharply to relatively minor events, as illustrated

by the sharp fall in global equity indices and increase in volatility in early February, following news of building inflationary pressures in the US.

...including in New Zealand.

Monetary policy is not expected to tighten in New Zealand for some time. This is reflected in long-term interest rates in New Zealand, which have remained stable over the past year, while US long-term rates have increased markedly (figure 3.5). The spread between US and New Zealand long-term interest rates is now around its lowest level in two decades.



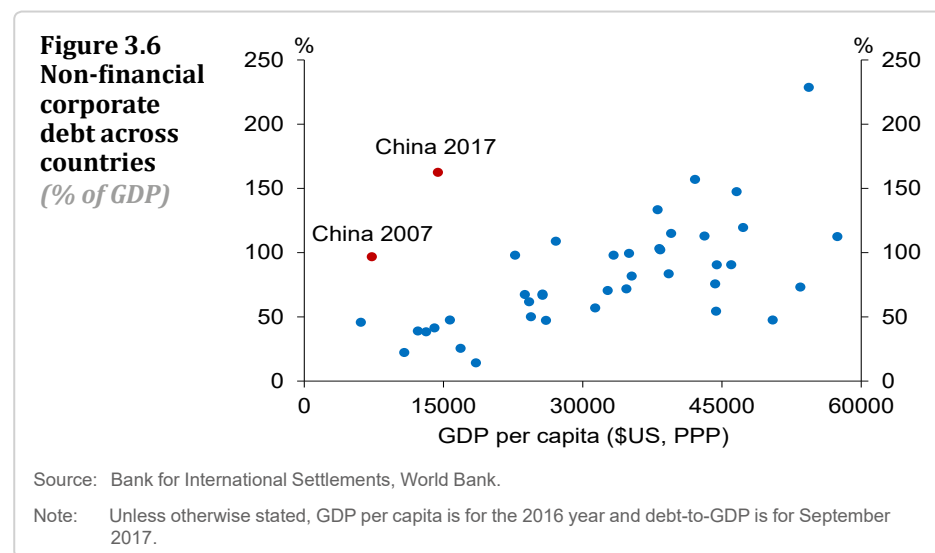
But domestic interest rates could rise if higher global growth causes inflationary pressures to rise in New Zealand or if higher global risk premiums increased New Zealand banks' funding costs. Funding costs can increase quickly, as demonstrated by the 20-30 basis points increase in short-term bank funding costs in some Australian and US markets in early 2018 (see box D of the Reserve Bank of New Zealand's May 2018 *Monetary Policy Statement*).

The impact of sharply rising interest rates on the New Zealand economy would be broad, but it would be felt most by the household and dairy sectors. These sectors carry high levels of debt and are exposed to swings in asset values (see chapter 2).

Financial vulnerabilities are elevated in China.

Financial risks in China also threaten the global economy, as China has been a major driver of global economic growth in the past decade. Any disruption in China would reduce demand for New Zealand’s exports and could lead to a broad repricing of risks in global financial markets, which could tighten financial conditions in New Zealand.

Debt in China has grown rapidly over the past decade, particularly in the corporate and local government sectors. China’s corporate sector is now highly indebted relative to countries with similar income levels (figure 3.6).



Credit growth in China has been underpinned by use of ‘shadow bank’ arrangements, which increases interconnectedness, opacity and risk in the financial system. Shadow bank arrangements effectively allow banks to channel funds from depositors to borrowers through non-bank financial institutions. These arrangements are often supported by perceived implicit guarantees from banks.

Chinese authorities have taken measures to reduce risks in the corporate sector, to limit regulatory arbitrage and to reduce the use of implicit guarantees in the financial system. There are some indications that the use of shadow bank arrangements has slowed recently, but it is too early to gauge the efficacy of the authorities’ measures. It may be a long time before financial risks are materially reduced.

Rising protectionism could reduce global economic growth.

There is evidence that trade is positive for global economic growth, and it is particularly important for the New Zealand economy. The prospects for global economic growth could be threatened by the rise of protectionist trade policies in advanced economies. This could stem from the renegotiation of free trade agreements, such as the North American Free Trade Agreement, and the arrangements between the UK and the rest of the EU. The US and China have announced trade barriers on the import of selected goods, but negotiations continue between the countries.

Risks in Australia’s household sector are elevated.

Developments in Australia can also affect the New Zealand economy and its financial system. Australia is one of New Zealand’s largest trading partners and the four largest New Zealand banks have Australian parents.

The Australian economy is growing steadily. But vulnerabilities have risen in recent years, particularly in the household sector, which carries a relatively high level of debt. House prices also appear stretched in some cities. Regulators have responded in a number of ways, including by requiring banks to conduct more rigorous loan serviceability assessments. These changes, coupled with a broader improvement in lending standards and an easing in housing market conditions, have improved the outlook for risks in the Australian household sector. But the Australian financial system remains vulnerable to developments that could weaken households' ability to service their debts.

Chapter 4

Developments in New Zealand's financial system



The Reserve Bank is responsible for promoting the maintenance of a sound and efficient financial system. To help achieve this, the Reserve Bank prudentially regulates and supervises banks and insurers, regulates non-bank deposit takers, and oversees financial market infrastructures.

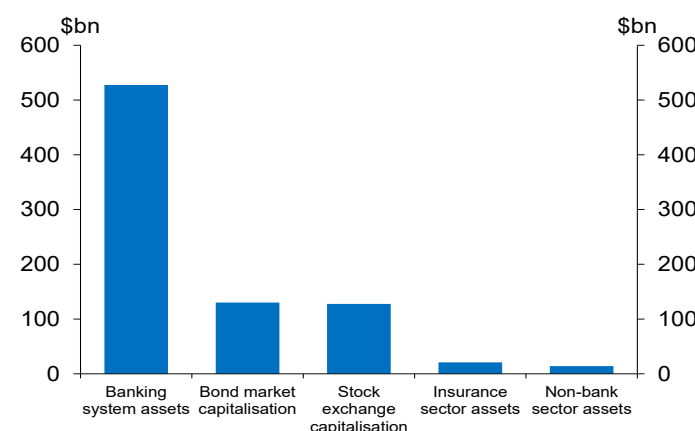
In the past six months, New Zealand's financial system has been sound and broadly efficient. However, the conduct and culture of financial institutions have increasingly been in the spotlight. This is examined in a special focus at the end of this chapter.

Banking sector

A sound and efficient banking sector is particularly important for New Zealand. Banking sector assets account for the majority of total financial system assets and are significantly larger than public capital markets in New Zealand (figure 4.1).¹

¹ For an overview of New Zealand's financial system see the Reserve Bank's [webpage](#).

Figure 4.1
Size of financial sectors in New Zealand (March 2018)



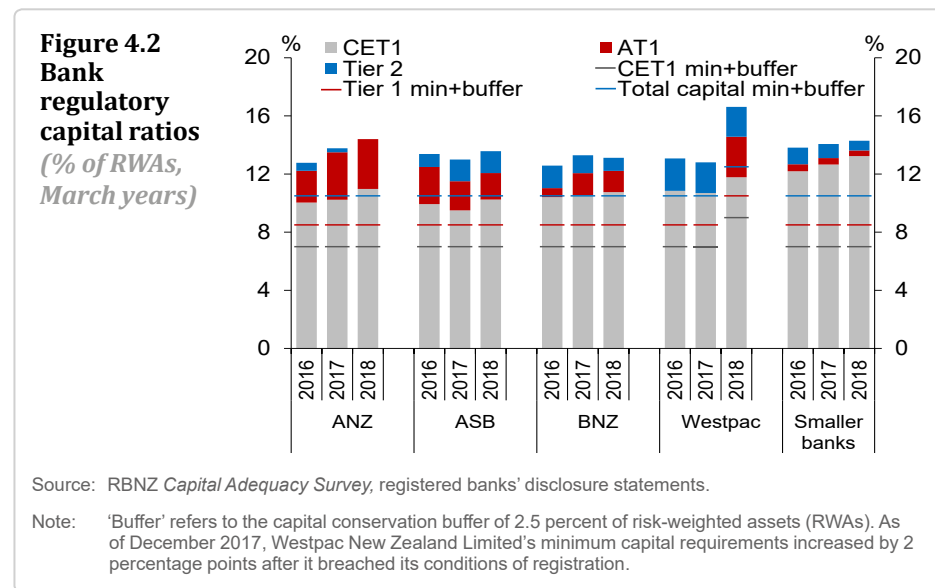
Source: RBNZ, registered banks' disclosure statements, NZX.

Note: Bond market capitalisation excludes private debt placements. Stock exchange capitalisation excludes unlisted share holdings. Insurance sector asset data are for September 2017.

The banking system has more capital...

All banks are solvent and are maintaining capital buffers in excess of the Reserve Bank's current minimum requirements. The system-wide total capital ratio increased to 14.4 percent of risk-weighted assets in March, up from 12.8 percent three years ago. Most of this growth has been achieved through higher levels of additional Tier 1 (AT1) capital. This

has been driven by large banks, which issue the majority of AT1 capital instruments (figure 4.2). Smaller banks are typically reliant on common equity Tier 1 (CET1) capital, which is the highest quality of capital. The capital ratios of individual banks, and other key metrics, can be found in the *Bank Financial Strength Dashboard*.²

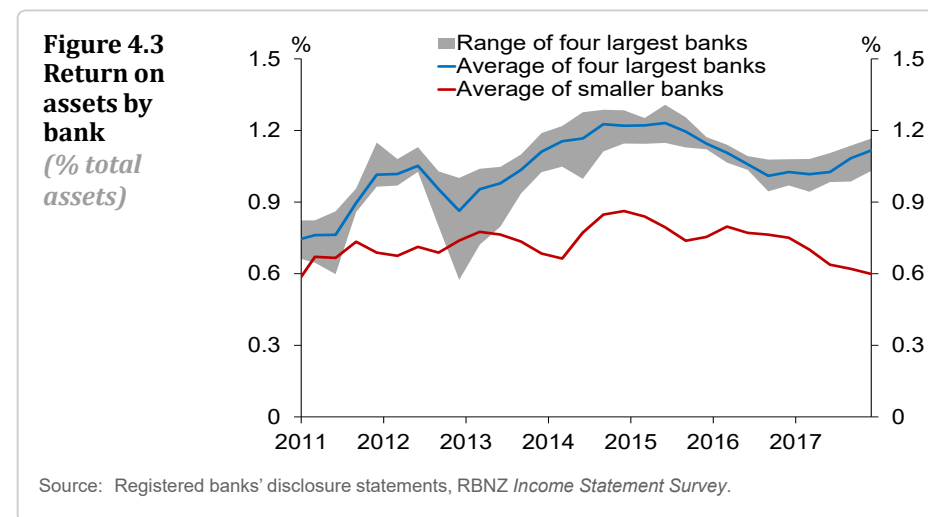


The Reserve Bank is currently reviewing its capital requirements for banks incorporated in New Zealand (see chapter 5 for more detail). In addition, the Reserve Bank conducted an exercise in 2017 to benchmark the four largest banks' models for estimating the capital requirements for their rural lending portfolios (see box C).

2 <https://bankdashboard.rbnz.govt.nz>

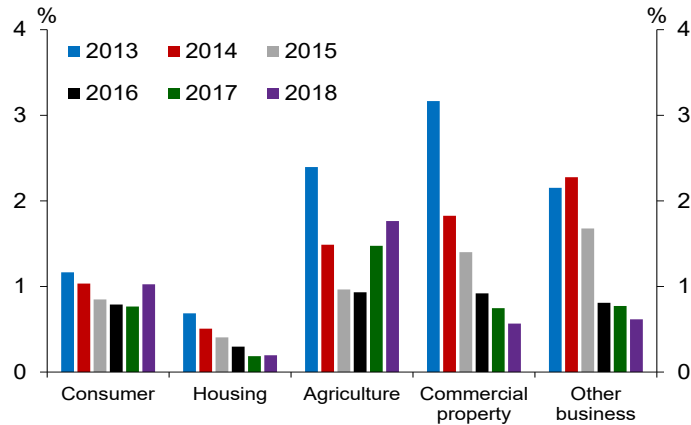
...and has been slightly more profitable.

New Zealand's banking system is among the most profitable in the OECD. The profitability of New Zealand's four largest banks increased over the past year, with their average return on assets increasing from 1 to 1.1 percent (figure 4.3). Historically, the four largest banks have been more profitable than smaller banks, on average. This reflects the significant economies of scale and funding advantages of the large banks relative to smaller banks. The divergence in profitability in 2017 partly reflects a sharp fall in Kiwibank's profits, which had previously made up a large proportion of the smaller banks' net profits.



Profitability has been supported by low levels of non-performing loans across most sectors (figure 4.4). Agriculture non-performing loans have increased in the past year, although this reflects problems with a single large exposure. Non-performing consumer loans have also picked up recently.

Figure 4.4
Sectoral non-performing loans
(% of sectoral lending, March years)



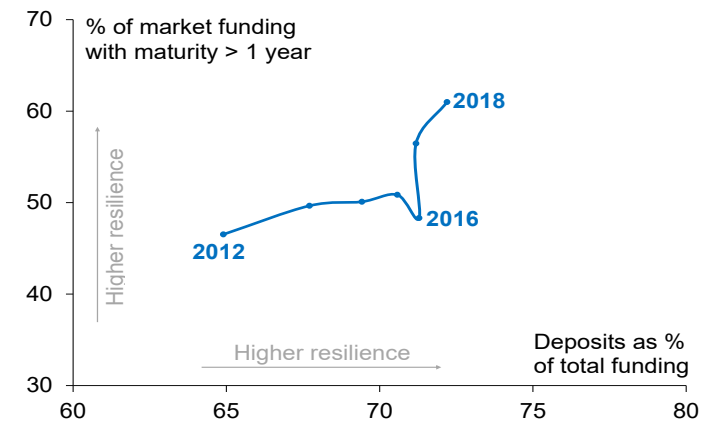
Source: RBNZ Bank Balance Sheet (BBS), private reporting.

Looking further ahead, bank profits could be challenged by the emergence of new players in the industry, in particular as open banking develops. Open banking allows customers to easily share their banking data with authorised FinTech companies, enabling these companies to offer new and potentially lower cost financial services (see box B).

Banks have reduced their liquidity risks.

New Zealand's banking system needs market funding to finance its lending. This exposes it to increased liquidity risk, as market funding can be difficult to renew during periods of financial stress. This risk is greater if banks use short-term market funding, as it increases the proportion of funding banks would need to replace during a period of stress. This risk has reduced in recent years as banks have shifted towards more stable forms of funding, such as deposits and longer-term market funding (figure 4.5).

Figure 4.5
Banking system funding profile
(March years)



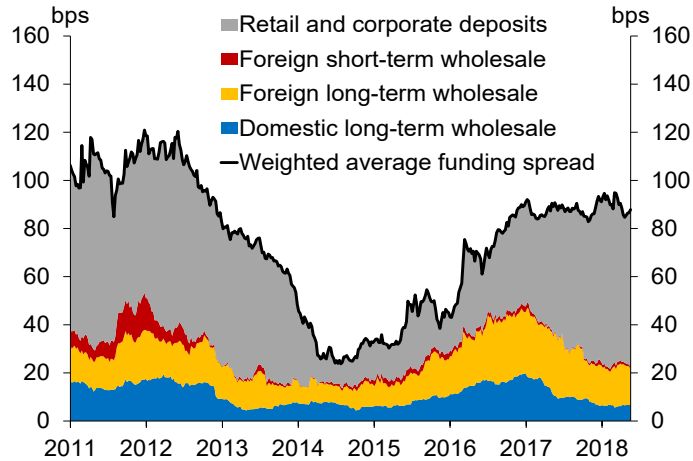
Source: RBNZ Liquidity Survey.

The reduction of banks' liquidity risk is partly due to the Reserve Bank's liquidity requirements, introduced in 2010. These include the core funding ratio requirement, which requires banks to finance at least 75 percent of their loan portfolio with stable funding sources, and the mismatch ratio requirements, which require banks to hold enough liquid assets to meet estimated net cash outflows during a one-week and one-month period of stress. All banks have met these requirements over the past six months.

Bank funding costs are broadly unchanged...

Banks' cost of raising new funding remained broadly unchanged over 2017, as slightly higher spreads on domestic deposits were offset by lower spreads on market funding (figure 4.6). Banks issued a relatively large amount of market funding in 2017, when funding conditions in offshore wholesale markets were favourable. But conditions have since tightened.

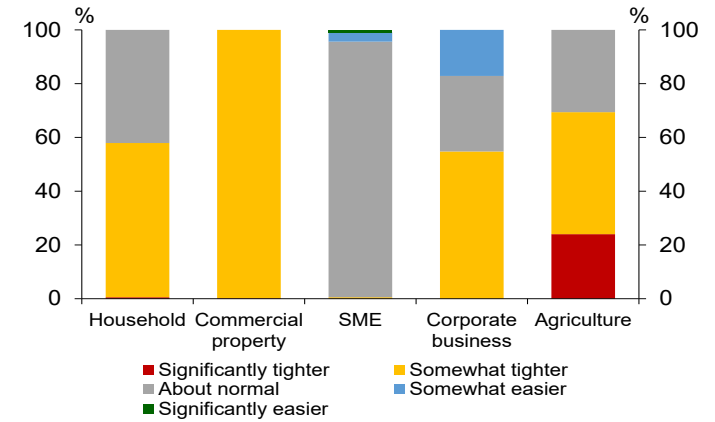
Figure 4.6
Bank marginal funding spread
(spread to 90-day bank bill rate)



Source: Bloomberg, RBNZ estimates.

Note: The shaded areas measure the contribution of each funding source to the overall marginal funding spread.

Figure 4.7
Credit conditions relative to the previous three years, by sector
(% of respondents)



Source: RBNZ Credit Conditions Survey.

Note: Individual bank responses are weighted by market share.

...and credit conditions remain relatively tight.

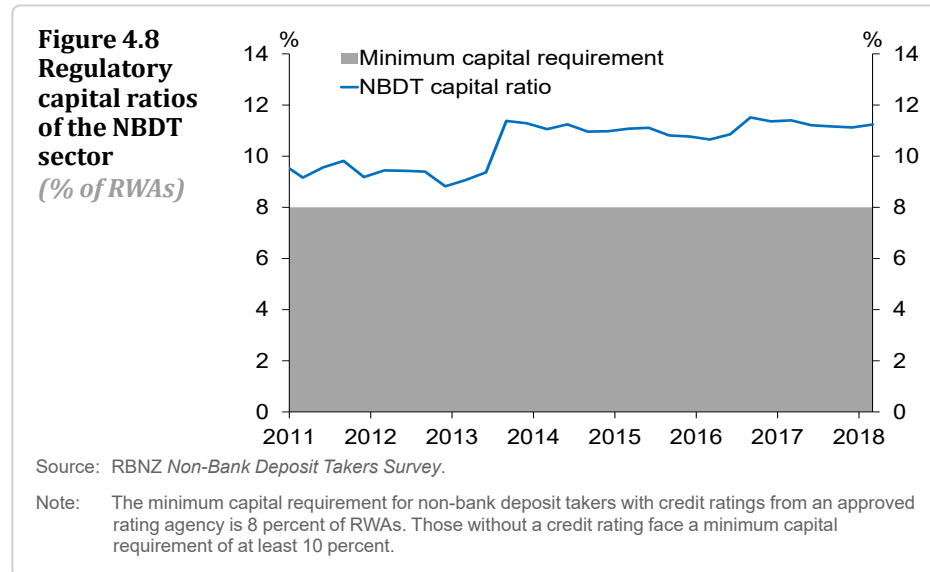
Banks report that their lending conditions remain tight across most sectors, compared to the past three years (figure 4.7). In particular, banks remain conservative when lending to the agriculture and commercial property sectors, given concerns about the vulnerabilities and risks in those sectors (see chapter 2).

Non-bank lending institution sector

The non-bank lending institution (NBLI) sector is small relative to the banking sector, with loans equivalent to just 3 percent of total financial system lending. The sector is comprised of non-bank deposit-taking institutions (NBDTs), prudentially regulated by the Reserve Bank, and non-deposit-taking finance companies.

The NBDT sector's capital ratio has been broadly flat.

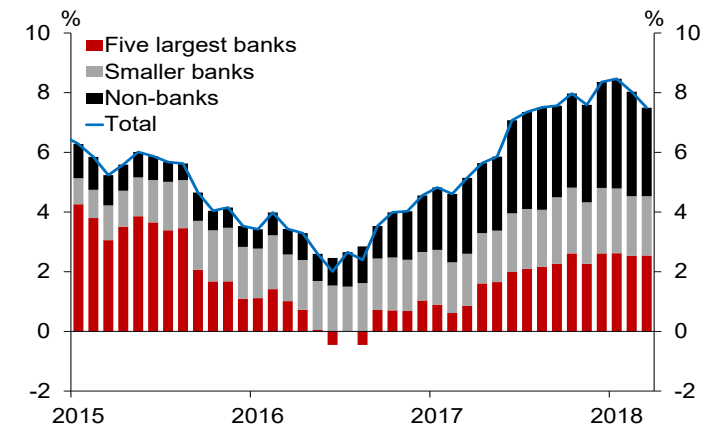
As at end-March 2018, all NBDTs maintained capital levels in excess of the Reserve Bank's minimum requirements. The system-wide total capital ratio was 11.2 percent, and has remained broadly flat in recent years (figure 4.8).



The NBLI sector is a key provider of consumer loans.

Despite its small size, the NBLI sector provides around a third of consumer lending in New Zealand, which includes credit card lending and other unsecured retail lending, such as personal loans and overdrafts. In the year to March 2018, NBLI consumer lending grew by around \$450 million, accounting for about 40 percent of total consumer lending growth over this period (figure 4.9).

Figure 4.9
Contribution to annual consumer lending growth



Source: RBNZ BBS, RBNZ Standard Statistical Return.

The NBLI sector's reliance on consumer lending makes it vulnerable to an economic downturn. The performance of consumer lending has historically been particularly sensitive to economic conditions.

Insurance sector

The insurance sector remains well capitalised...

Overall, the insurance sector remains sound, despite 2017 being one of the most costly years on record for weather-related insurance claims. Currently, all insurers (excluding CBL Insurance Ltd ('CBL')) meet minimum solvency ratio requirements. However, capital strength varies across insurers, and some insurers have relatively small buffers over the minimum capital requirements.

CBL was placed into interim liquidation on 23 February 2018. CBL is a New Zealand registered insurer that conducts just 1 percent of its business in New Zealand. Interim liquidation was requested by the Reserve Bank and followed CBL making payments of \$55 million to overseas companies in breach of directions by the Reserve Bank and in the context of significant doubts about CBL’s solvency.³ On 27 April 2018, the High Court set a two-day hearing for 5-6 June to consider full liquidation.

...and earthquake related claims continue to be settled.

Insurers (including the Earthquake Commission) continue to make progress settling claims from the Kaikoura earthquake, having paid \$1.4 billion of claims by end-March 2018. The Reserve Bank currently estimates that claims related to the earthquake will range between \$2.5 billion and \$4.5 billion, with the range reflecting uncertainty about whether damage to some large buildings in Wellington will be worse than originally assessed.

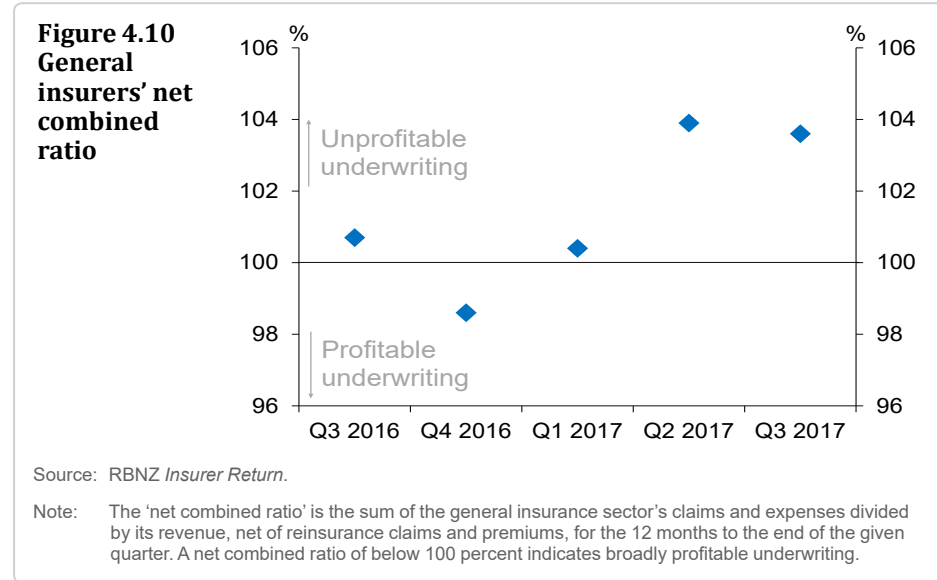
Paid Canterbury earthquake claims totalled \$34.6 billion at 31 March 2018. The Reserve Bank’s estimated range for the total cost of the claims is currently \$36 billion to \$39 billion. The uncertainty particularly relates to the cost to insurers of remediating defective repairs.

Insurers’ profit margins have been under pressure...

In 2017, general insurers’ profit margins were compressed as a result of claims associated with four major storms, more expensive car insurance claims and strong competition in the commercial property insurance

³ The basis for the application for interim liquidation is covered in the Reserve Bank’s affidavit to the High Court. A copy of the affidavit is available in the [Reserve Bank’s press release](#) of 1 March 2018.

market. This has weakened the sector’s net combined ratio, a measure of the profitability of insurers’ underwriting activities, net of reinsurance (figure 4.10). Profit margins this year are likely to be supported by higher premiums, but challenged by recent weather events.



Life insurers face challenges growing their businesses and have focused on cost reduction and capital management to improve their financial performance. This has included a shift towards using more reinsurance, partly reflecting the cost of capital compared with the cost of reinsurance.

...and there have been challenges to the efficiency of the sector.

Insurance products are widely available and provide cover for most risks. However, there are parts of the market where business models have been slow to adapt to changes in customer expectations and behaviours,

or where market share is concentrated in few players. High commission structures among life insurers, and the prospect of radical change in the sector underpinned by technological innovation, point to opportunities to improve efficiency.

Insurers will need to adapt to new technologies...

To remain sound and efficient, it is important that insurers quickly adapt to technological developments that can rapidly change the products that they insure and the methods they use to price and offer insurance products. For example, some modern cars contain expensive safety features, but some insurers have underestimated the impact they have on the cost of repairs. As more and better data become available to insurers, they will be able to assess and price risks in more sophisticated ways.

These developments could have a profound impact on the insurance sector. They could enable more granular pricing: offering lower premiums to less risky customers, but potentially increasing the number of risks that are too expensive to insure. For example, one insurer has recently announced that homes in earthquake-prone areas will face higher premiums on home insurance related to earthquake risk. Technological developments will also alter the ways in which insurance is accessed and used. Some traditional insurers are currently working with technology firms to adapt their operations and product offerings.

...and may also be affected by conduct-related reviews.

The insurance sector also faces disruption from market conduct-related reviews in New Zealand and Australia (see the special focus on the culture and conduct of financial institutions in New Zealand). For example, in March, New Zealand's Financial Markets Authority published

the findings of its review into the replacement business activity within the adviser sales channel of the life insurance market.⁴ And, in May, the FMA released a report on the payment of soft commissions, such as foreign trips and conferences, by some insurers. These soft commissions create risk of conflicted conduct by advisors and could reduce the efficiency of the sector.⁵

Financial market infrastructure

The continuous availability of payment and settlement systems is vital to the smooth and efficient functioning of the financial system. In the past six months, some outages have occurred, but their impact was limited.

Problems processing retail payments.

In early April, Westpac New Zealand Ltd experienced internal system problems that prevented it processing both inward and outward payments. It could not submit any retail payment instructions to the Settlement Before Interchange (SBI) system for processing, and it could not post incoming payments to its own customers' accounts. The SBI system itself was operating normally. The issue arose at the beginning of the processing day (9am) with the impact lasting until the end of that processing day (midnight), with the result that most of the bank's outgoing payments for that day were processed much later in the day than would normally occur.

4 For more detail, see the FMA's [webpage on the life insurance replacement business](#).

5 For more detail, see the FMA's [webpage for its report on soft commissions](#).

The incident did not have a significant impact on the broader payments system, and intra-day liquidity issues and communications with other banks and customers were well managed. Even so, such incidents highlight the need for participants to have robust contingency plans and to keep customers and other banks fully informed. The Reserve Bank closely monitored the situation during the event and will be discussing the root cause and management of the issue with Westpac.

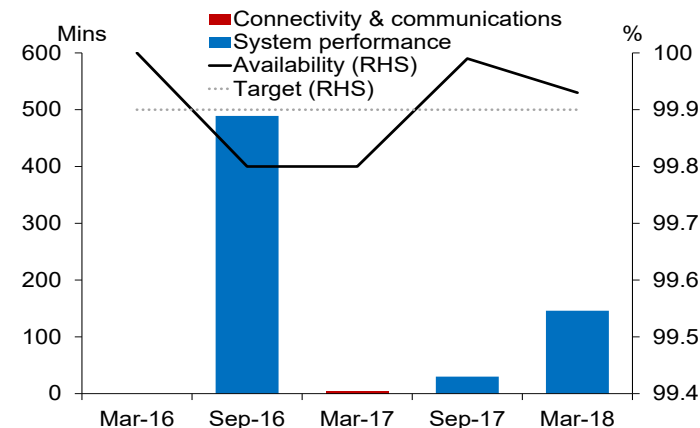
Interbank payments were briefly disrupted.

The Exchange Settlement Account System (ESAS), operated by the Reserve Bank, settles all financial transactions in New Zealand that involve interbank payments. In the past 12 months, the Reserve Bank's ESAS/NZClear system has been fully available for 99.93 percent of the time, above the target availability of 99.9 percent (figure 4.11). However, three disruptions to normal operations occurred in January, which resulted in a total down time of 2 hours 26 minutes. The Reserve Bank takes ESAS outages seriously and has made system changes to prevent this problem arising again.

New ESAS and NZClear systems are being developed.

The Reserve Bank is currently replacing its ESAS and NZClear IT systems. This project encompasses the replacement of the existing Real Time Gross Settlement system and of the existing central securities depository. Aspects of the project have been challenging, and there is a risk that there may be delays in implementing the new system. Based on progress so far, and the Reserve Bank's plan for the remainder of the project, the new systems are expected to be completed and go live in April 2019. The Reserve Bank continues to work with industry participants to ensure that they are aware of progress and understand what will be required of them.

Figure 4.11
ESAS/NZClear
availability
and outages



Source: RBNZ.

Note: System performance outages and connectivity and communications outages are for the six months to the end of the given month. Availability is for the 12 months to the end of the given month. ESAS and NZClear availability are reported together because of the close links between the two systems.

While the new system is being developed and built, it is vital that the current ESAS/NZClear system continues to be available and reliable. If there are unexpected delays to the implementation of the new system, the operational risks of continuing to run the existing system increase. Maintenance of the existing system, therefore, remains a high priority.

Special focus: The culture and conduct of financial institutions in New Zealand

The financial system is regulated by various authorities (see table 4.1 for an illustration of regulators' responsibilities in relation to New Zealand banks). The Reserve Bank's particular responsibility is to promote a sound and efficient financial system. It uses a three-pillar approach to meet this responsibility, comprising the use of: **self-discipline** by firms and their boards; **market discipline** by customers and investors, driven by transparency and disclosure; and **regulatory discipline** by the Reserve Bank and other regulators imposing requirements on financial firms.

The regulatory requirements that the Reserve Bank imposes on firms reflect the fact that:

- They operate in New Zealand, and must abide by the laws and regulations of New Zealand.
- Foreign-owned firms that operate in New Zealand are subject to 'home' regulations, in addition to Reserve Bank requirements. The Reserve Bank looks to harmonise with international standards and home country requirements when it can, but will depart when necessary for New Zealand.
- The regulations must balance the dual aims of soundness and efficiency.

Proper conduct and culture are important for soundness and efficiency.

While the Reserve Bank is not solely responsible for promoting the soundness and efficiency of the financial system, all interested parties must play their part, including boards, management, consumers, competitors, and financial market participants. This is implied by the three-pillar approach, and the emphasis that the Reserve Bank places on self-discipline and market discipline. The conduct and culture of financial firms is central to self-discipline and is crucial to how all three pillars perform. It affects how firms manage their legal, financial, reputational, and operational risks, and influences how they are perceived and trusted by customers and markets.

The importance of firms' culture to the soundness and efficiency of the financial system is being dramatically illustrated by the series of ongoing inquiries into financial services conduct in Australia. Included is the Australian Prudential Regulation Authority's inquiry into governance, culture and accountability within the Commonwealth Bank of Australia, the parent of ASB Bank Ltd. There is also a Royal Commission into Misconduct in the Banking, Superannuation and Financial Services Industry.

Given that New Zealand's largest banks are Australian owned, the Reserve Bank, along with other financial regulators, is taking a close interest in how the Australian parent banks are responding to these inquiries. The culture and conduct of banks in New Zealand is a shared focus of the Council of Financial Regulators (CoFR), comprising: the Reserve Bank; the Financial Markets Authority (FMA); the Ministry for Business, Innovation and Employment; and the Treasury. The Reserve Bank also works with the Commerce Commission and the Banking

Ombudsman. Collectively, CoFR has requested that the boards of New Zealand banks provide assurances and evidence to demonstrate that the cases of misconduct highlighted by the Royal Commission in Australia are not systemic in New Zealand.

Bank culture is increasingly under the microscope in New Zealand...

The Reserve Bank examines the conduct and culture of banks in New Zealand through a number of lenses, and is taking steps to help sharpen our focus on culture. These lenses include:

- The bank directors' attestation regime, which requires bank directors to attest to the accuracy and robustness of their disclosure statements. This includes statements that the bank has, and is properly applying, systems to monitor and control the material risks of the banking group. An appropriately implemented attestation regime requires, among other matters, the directors to have confidence (via robust due diligence) that the right culture is in place in the organisation to ensure that 'bad news flows upwards' and that the bank learns from any issues.
- Regular engagement with banks at a variety of seniority levels, from chair of the board down. The Reserve Bank looks at the key issues and risks currently facing a bank, and the underlying cause of such risks. Internal culture of an organisation is one such risk that is considered, especially through our scrutiny of banks' risk management practices.
- The Reserve Bank's on-site visits of banks conducted for the purposes of supervision of anti-money laundering and countering

of financing terrorism activities. This oversight provides additional insight into institutional culture and practices.

The Reserve Bank recently reviewed the bank directors' attestation regime with an external party, Deloitte. While the review found that the regime was 'largely effective', the importance of culture was reiterated. One outcome has been increased oversight of how bank directors gain confidence in their attestations, with the expectation that they provide evidence to support their view.

Ultimately, bank boards are responsible for instilling and maintaining a culture that supports confidence in the banking sector. Accordingly, it is in banks' best interest to publicly demonstrate that their practices are sound and appropriate. For example, banks ought to be able to demonstrate that directors are acting in the best interests of the New Zealand registered bank, are taking reasonable steps to ensure information provided through disclosures is accurate, and that directors are meeting specific requirements in regards to independence.

...as is the conduct of life insurers

The Reserve Bank and FMA have also written to New Zealand's licensed life insurers to ask them to demonstrate how they identify and address conduct and culture issues.¹ Life insurers have been asked to provide written responses by 22 June that outline the actions they have taken or plan to take to identify and address culture and conduct risk, and their plans to address issues identified by the Australian Royal Commission.

¹ For more details, see the FMA's webpage.

Table 4.1
Distribution of responsibilities in relation to New Zealand banks
(boxes highlighted in red indicate the responsibilities of each authority)

	Prudential supervision	Disclosure	Fair dealing of financial products and services	Dealing in financial products on markets	Governance and supervision of financial products and services	Financial reporting	Competition law	Anti-money laundering	Register of banks	Licensing banks to provide market services	Directors' obligations	Enforcement, liability and redress
Reserve Bank of New Zealand												
Financial Markets Authority												
Commerce Commission												
Takeovers Panel												
Companies Office												
Banking Ombudsman Scheme												

Erratum: this replaces an earlier version in which the FMA/licensing box was incorrectly blank.

Box B

An open mind on open banking

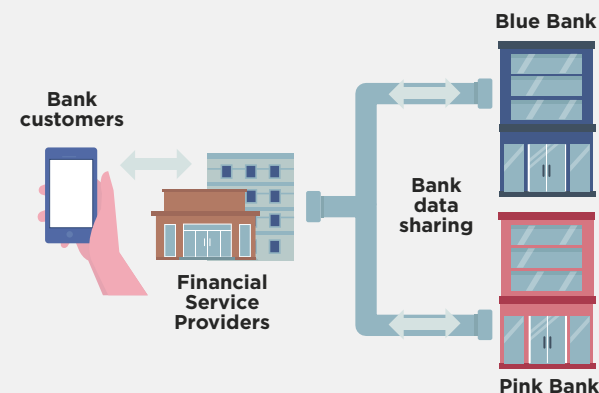
‘Open banking’ refers to a standardised and secure framework for sharing bank customer data with trusted financial service providers (‘providers’), such as technology companies (see diagram B1). It will enable providers to offer a wide range of new financial services. For example, retail payment mechanisms could be developed to allow restaurant bills to be split and paid automatically using mobile phone applications. Or applications could offer timely and personalised budget advice, for example when a customer enters a shop.

The development of open banking is in its infancy but a number of jurisdictions, including the UK, EU and Australia, have taken steps to promote its growth. New Zealand banks and providers are currently trialling software that will enable providers to make retail payments on behalf of their customers. The trials have been coordinated by Payments NZ and are expected to be completed late this year. They will help Payments NZ to establish common standards that banks and providers can use to share customer data.¹

Open banking could improve the soundness and efficiency of the financial system. It could increase competition and reduce concentration in the provision of financial services, reducing the systemic importance of large banks and reducing the cost of financial services. Greater sharing of customer data could also help financial services to be better tailored to customer requirements, improving the efficiency with which the banking sector’s resources are allocated and reducing the risk that customers obtain loans that they cannot repay.

¹ For more detail, see [Payment NZ’s webpage on the API framework project](#).

Diagram B1
Open banking involves the sharing of customer banking data



However, open banking could also create risks. Some risks are likely to be temporary, as the financial system adapts to the new entrants. For example, greater competition could weaken the profitability of banks that are slow to adapt to the changing financial system landscape.

Other risks are likely to be longer lasting. Increasing the number of firms that handle sensitive customer data may increase the risk of data mishandling. Customers may also hold banks responsible if their data are compromised, even if customers approved the sharing of their data, creating reputational risk for banks. Open banking could also increase banks’ liquidity risk, by making it easier to move deposits between banks. And creating more ways for customers to access banking services could make it more difficult to monitor for money laundering.

The Reserve Bank is monitoring the development of open banking. If necessary, it will act to minimise potential threats to the soundness and efficiency of the financial system, and to amend regulations that unnecessarily hinder the development of open banking.

Chapter 5

Key regulatory developments



In the past six months, the Reserve Bank has made progress on a number of regulatory policy initiatives. These are outlined below.

Foreign margin requirements for over-the-counter derivatives

New rules are being introduced by G20 countries that require parties to certain types of derivatives contracts to exchange security known as 'margin'. These rules apply across borders and will cover some New Zealand entities, including banks. Aspects of New Zealand law currently impede the ability of New Zealand entities to comply with the requirements. This may limit New Zealand banks' ability to enter into derivative contracts and access offshore funding markets, and could increase bank funding costs, and borrowing costs for the New Zealand economy.

The Reserve Bank and the Ministry of Business, Innovation and Employment (MBIE) consulted on these issues in 2017. Cabinet recently

agreed to amend legislation to remove the legal impediments to New Zealand entities complying with the margin requirements.

The amendments will apply only in relation to derivatives contracts that meet certain requirements and only where those contracts were entered into by certain entities.¹ This will minimise adverse impacts on the rights of creditors and the coherence of existing corporate insolvency and rehabilitation regimes, and personal property securities law.

The amendments will mean that derivatives counterparties can enforce their security interest over margin immediately and rank ahead of other creditors in the event that the other counterparty defaults. More specifically, the amendments:

- will carve out these derivative-related claims from general moratoria on claims that apply in statutory management and voluntary administration; and
- will ensure that when these derivatives counterparties enforce their security interest over posted margin, their claim ranks ahead

¹ These entities consist of all registered banks, the ACC, the New Zealand Superannuation Fund, and all central counterparties that are designated settlement systems under the Reserve Bank of New Zealand Act 1989.

of other potential claims under the Companies Act 1993 and the Personal Property Securities Act 1999.

A bill implementing the amendments is being drafted and, subject to Cabinet approval, is likely to be introduced into Parliament soon.

The review of bank capital requirements

In March 2017, the Reserve Bank announced that it was undertaking a wide-ranging review of the capital requirements that apply to locally incorporated banks. The Reserve Bank has released three public consultation papers as part of the review.² These papers addressed the scope of the capital review; what should qualify as regulatory capital (the ‘numerator paper’); and the measurement and aggregation of risk (the ‘denominator paper’). The Reserve Bank has released the public submissions to these consultations on its website.

In December 2017, the Reserve Bank responded to submissions on the numerator paper. This included four in-principle decisions on the types of capital that could qualify as regulatory capital under a new regime. The Reserve Bank will start a work programme to give effect to these decisions this year, and will publicly consult on key issues.

The Reserve Bank expects to respond soon to submissions on the denominator paper and to provide in-principle decisions on the measurement and aggregation of risk. The Reserve Bank will then seek feedback from banks on the impact of the proposed changes and

incorporate this into policy decisions. In the final stage of the review, the Reserve Bank plans to consult on the calibration of capital requirements.

Loan-to-value ratio restrictions

The Reserve Bank continues to maintain loan-to-value ratio (LVR) restrictions, which limit the proportion of borrowers taking on large mortgage debts, relative to the value of their housing collateral. The restrictions were eased slightly on 1 January 2018. The current policy stance is discussed in chapter 1.

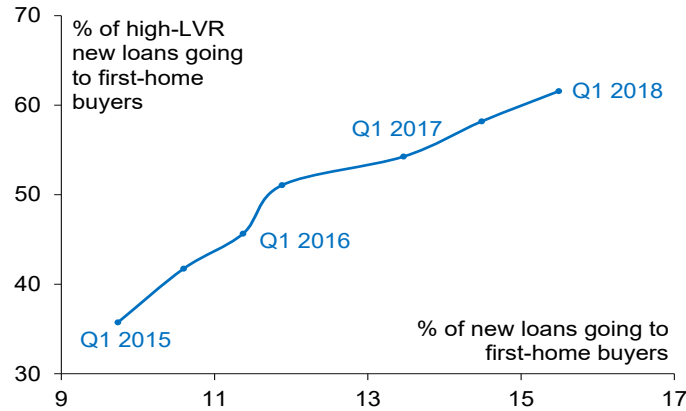
Banks and borrowers have started to adjust their behaviour in response to the relaxation of the LVR policy. So far, banks have made partial use of the higher owner-occupier speed limit, with the share of high-LVR owner-occupier lending rising to 13 percent in April, from 10 percent in late 2017.³ The easing of the restriction on lending to investors has increased the share of housing lending with an LVR between 60 and 65 percent. That share may increase further as banks and borrowers continue to adapt to the new LVR policy.

In recent years, a substantial and increasing share of high-LVR loans has gone to first-home buyers and the share of total new commitments going to first-home buyers has grown steadily (figure 5.1). Overall, this implies that the LVR policy can mitigate stretch in household balance sheets without greatly impeding home ownership.

2 These are available on the Reserve Bank’s [webpage](#).

3 This includes around 4 percent in owner-occupier lending which is exempt from the policy, for example Welcome Home Loans or loans for new construction.

Figure 5.1
New commitments to first home buyers



Source: Registered banks' disclosure statements, RBNZ *Lending Position Survey*.

Note: New commitments are residential mortgage loan offers recorded when a bank sends loan documentation to borrowers' solicitors.

EU Benchmark Regulation and BKBM

New European legislation regulates the benchmarks that can be used in financial market contracts. The EU Benchmark Regulation (BMR) prevents EU-supervised entities from using non-EU benchmarks within the EU in any new contracts entered into after 1 January 2020, unless a benchmark qualifies for use under the BMR.

New Zealand's current regulatory regime for the Bank Bill Benchmark Rate (BKBM) is judged as not sufficient to meet the EU's equivalence standard.⁴ This is because the BKBM and the New Zealand Financial

⁴ The BKBM is the reference short-term interest rate used as a benchmark for New Zealand dollar floating rate resets in interest rate and currency derivatives. It is an interest rate set by participating banks each day for short-term maturities (generally 90 days) and is based on observable, published, traded rates.

Markets Association (NZFMA), the administrator of the BKBM, are not subject to 'binding requirements' under the BMR, and the NZFMA is not 'authorised or registered' in New Zealand. Without regulatory reform, the use of BKBM will be restricted in the EU from 1 January 2020.

New Zealand banks and other financial institutions make extensive use of interest rate and currency derivatives to hedge funding risks on their balance sheets. A significant reduction in EU counterparties able to enter into these transactions, due to non-recognition of BKBM under the BMR, could significantly increase the costs of hedging and potentially impede domestic banks' ability to fund themselves.

A working group, comprising of MBIE, the Financial Market Authority and the Reserve Bank, has been established to facilitate changes to New Zealand legislation and/or enter into further negotiations with the EU, to ensure that BKBM remains an approved benchmark.

Phase 2 review of the Reserve Bank Act

Last year the Government announced a two-phased review of the Reserve Bank of New Zealand Act 1989. Phase 1 of the review focused on monetary policy. Phase 2 focuses on modernising aspects of the Reserve Bank's financial stability framework, including the macro-prudential policy framework. Phase 2 will pick up a number of the IMF's Financial Sector Assessment Programme findings and recommendations published in May 2017.

Both the Reserve Bank and the Treasury have provided advice to the Minister of Finance on the scope for Phase 2. The terms of reference for

Phase 2 will be published by the Government in June. Phase 2 will be a significant undertaking and could take a number of years to complete.

Outsourcing policy

After extensive public consultations, the Reserve Bank finalised the outsourcing policy in September 2017. Locally incorporated banks with liabilities in excess of \$10 billion, net of amounts owed to related parties, are required to fully comply with the revised outsourcing policy by 30 September 2022. Currently, this applies to five banks: ANZ, ASB, BNZ, Kiwibank and Westpac. The Reserve Bank has been working closely with each bank on its implementation of the revised policy.

The four Australian-owned banks are also preparing a draft separation plan, with reference to the Reserve Bank's guidance. They are required to obtain an independent, external review of their separation plan in each year of the five-year transition period. Banks are currently working towards getting Reserve Bank approval for the appointment of their external reviewer and the terms of reference for their annual review.

Mortgage bonds as bank collateral

When the Reserve Bank lends to banks and other counterparties, it does so against 'eligible collateral'. In November 2017, the Reserve Bank published a consultation paper proposing a new standard for mortgage bonds that can qualify as eligible collateral. Fourteen submissions

were provided to the Reserve Bank in response to the consultation paper.⁵ Responses from potential investors were generally supportive. Bank responses were more mixed: they broadly accepted that current standards needed to be improved, but views varied on the extent of improvement necessary and how best to achieve this.

The Reserve Bank has met with investors and banks to discuss the design of the standard and possible modifications to the original proposal. Insights from these discussions will inform the Reserve Bank's final decision. The policy is expected to be finalised in the second half of 2018.

5 A summary of submissions was [published on the Reserve Bank website](#).

Box C

Insights from the dairy benchmarking exercise

Four banks – ANZ NZ, ASB, BNZ, and Westpac NZ – are allowed to use their own models to determine their capital requirements, after approval by the Reserve Bank. These capital requirements are determined by the relative riskiness of loans, which is summarised by the risk weights attached to those loans. Risk weights reflect both the probability that the loan will default (PD) and the loss a bank expects to incur if the loan defaults (loss given default, LGD).

The Reserve Bank has conducted an exercise to assess the relative levels of conservatism across the models that these banks use to determine risk weights for their farm lending portfolios.

Banks estimated the relative riskiness of loans...

The exercise required the banks to measure the risk of the same portfolio of loans to 20 hypothetical dairy farms. These farms represented a range of characteristics and varying degrees of risk. Banks were then provided with financial data and descriptive information for each farm, as well as the details of the hypothetical loans.

Banks were asked to estimate the PD and LGD for each loan using their approved models.¹ Where appropriate, banks applied overrides to the model estimates to reflect information not captured by the model. This mirrors the approach that banks use in practice.

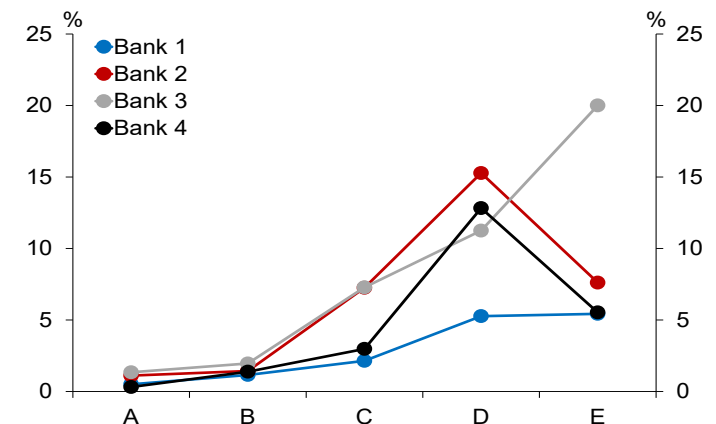
¹ Banks were also asked to estimate a third parameter – the expected exposure at the time of default. This parameter impacts capital requirements, but is not part of the risk weight calculation.

...and the estimates varied significantly across banks.

The preliminary results of the exercise indicate significant differences in estimates across banks. The highest and lowest average risk weight for the whole hypothetical portfolio differed by 40 percentage points, leading to differences in the hypothetical capital requirement.

Variation in both PD and LGD estimates was significant. Figure C1 shows the range of average PD estimates across five groups, each containing four loans, ranging from the group of loans with the lowest estimated PDs to the group with the highest estimated PDs. Each line represents the estimates of one bank, before overrides. Absolute variation was largest at the mid- to high-risk end of the spectrum, but proportionate variation was large across all levels of risk. The model overrides applied by banks tended to reduce the variation across banks, but it remained significant.

Figure C1
Bank model estimates of loan probability of default (average PD for groups of 4 loans)



Source: Private reporting from banks.

LGD estimates also varied, with the highest average LGD estimate for the whole portfolio 18 percentage points higher than the lowest average LGD estimate. Although banks model the LGD of farm loans, the Reserve Bank imposes minimum values based on the LVR of the exposure. These minimums are binding in most cases, but still vary across banks due to differences in the way banks measure LVRs. This is either because banks recognise different kinds of assets as security or because they apply different discounts to 'book values' to adjust security values.

Next steps

The provisional results show significant variation in model outcomes, even for the same level of underlying risk. The Reserve Bank is conducting further analysis of banks' farm lending portfolios to see if patterns in actual risk estimates are consistent with the results of the hypothetical exercise. This work will help inform the Reserve Bank's review of bank capital requirements.

Appendix

Reserve Bank enforcement actions



The Reserve Bank is the industry regulator for the banking, insurance, payments and settlements, and non-bank deposit-taking sectors. It has responsibility under legislation preventing anti-money laundering and countering the financing of terrorism. The Reserve Bank monitors entities' compliance with their obligations under legislation administered by the Reserve Bank. 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 actions:

- February 2018 – the Reserve Bank successfully applied to the High Court to appoint McGrathNicol as interim liquidator for CBL Insurance Limited (CBL). The Reserve Bank has reasonable grounds to believe that CBL breached a direction issued under section 143 of the Insurance (Prudential Supervision) Act 2010 on 12 February 2018 by making an unauthorised payment of €25 million to Alpha Insurance A/S.
- May 2018 – an industry notice was issued regarding First American Title Insurance Company of Australia Pty Limited. This followed a private warning for failing to disclose an overseas policyholder preference to a policyholder, as required under the Insurance (Prudential Supervision) Act 2010.