RESERVE BANK OF NEW ZEALAND

Financial Stability Report

May 2012

Contents

This report is published pursuant to Section 165A of the Reserve Bank Act 1989.
The charts and tables in the appendix to this report use data available as at 20 April 2012.
More recent statistics may be used in the main body of the report.
This report and supporting data (with some further notes) are also available on www.rbnz.govt.nz

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The survey can be accessed at this link:
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We hope to report on our findings later in the year, and thank you for helping us to improve this publication.

1 Overview

New Zealand's financial system remains vulnerable to global financial instability despite an improvement in financial market sentiment since the start of 2012. Policy measures by the European Central Bank (ECB), including the provision of substantial long-term funding to the banking system, have helped to mitigate the effects of softening European growth, deteriorating sovereign debt positions and weakening bank balance sheets. In addition, a successful debt exchange by Greece forestalled the prospect of a disorderly default, and signs of a slightly stronger recovery in the US have also helped to buoy sentiment.

However, the European situation remains fragile. While the ECB liquidity injections have taken pressure off vulnerable sovereigns and banks, little has been done to address fiscal imbalances and competitiveness issues. This will be necessary to restore confidence on a sustained basis. Markets are currently focused on imbalances in Spain and remain vulnerable to a further loss in confidence. An escalation of concerns could again risk freezing global debt markets, which are important to New Zealand's banks. Further instability would also undermine the fragile global recovery and could have significant economic and financial implications. Growth in most advanced economies remains anaemic, and there have been recent signs of slowing in Australia and China, two of New Zealand's major trading partners. Reflecting the challenging global environment, the market price of risk remains elevated on some measures.

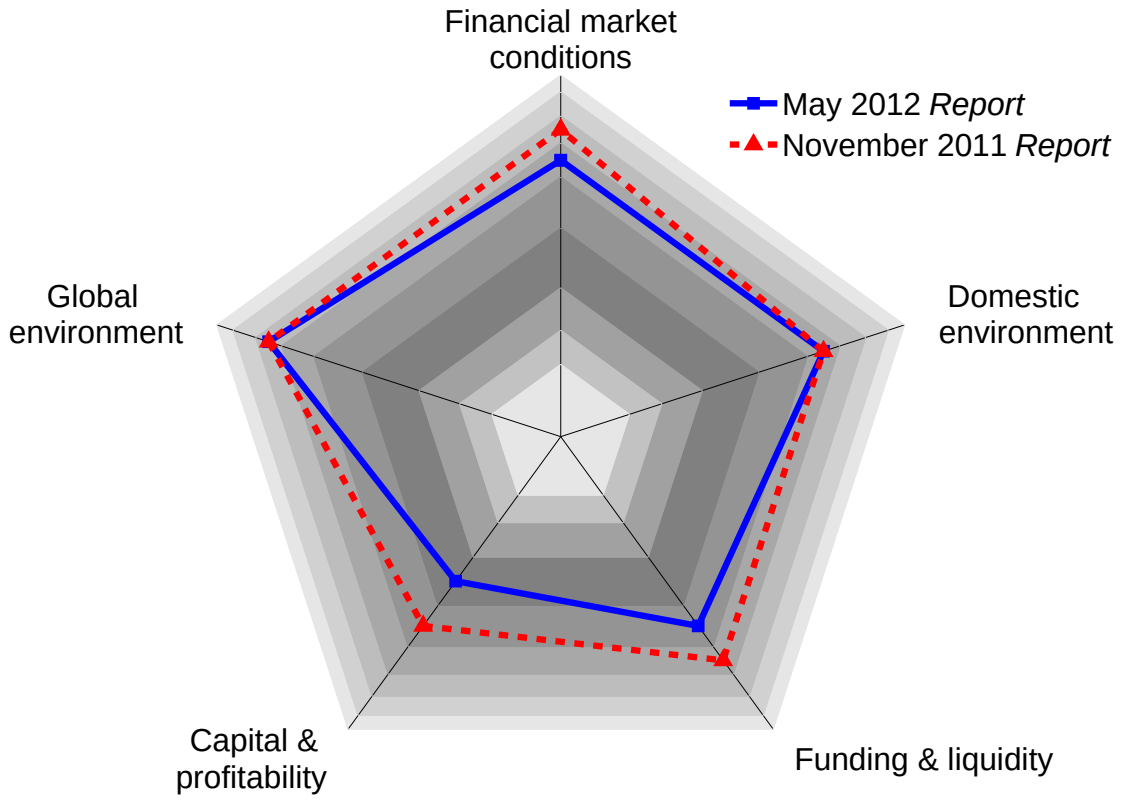
Assisted by high commodity prices, the New Zealand economy has continued to grow modestly. However, commodity prices have eased in recent months, which will dampen prospects for the primary sector and may place some farmers under stress. Private sector indebtedness remains high but has been declining relative to income. The pattern of increased caution since the global financial crisis has continued with households saving more and businesses being cautious with their investment plans. Offsetting the recovery in private savings, public debt has been increasing at a rapid rate. However, fiscal policy is now being tightened, with the aim of keeping public debt at manageable levels. Despite the growing public debt, higher private sector saving and lower investment have contributed to a modest reduction in New Zealand's net external indebtedness.

The combination of increased household saving, weak credit growth, and a freeing up of international debt markets has improved funding conditions for New Zealand banks. With term funding available but still expensive, the banks have relied more on the strong inflow of retail deposits to meet their core funding requirements. Given improved conditions since late 2011, the Reserve Bank now confirms its intention to increase the minimum core funding ratio from 70 percent to 75 percent as of 1 January 2013.

As shown in the bottom left 'spoke' of figure 1.1, the banks have also improved their capital and profitability positions. Banks are well positioned to meet the new Basel III capital standards. Asset quality has also improved, with problem loan levels declining since the start of 2011, albeit gradually. This improvement in asset quality has helped to underpin an increase in profitability.

The Reserve Bank is continuing to strengthen regulation of the financial system, drawing on lessons learned from the financial crisis. For the banking system, the Reserve Bank has released consultation papers on its proposed implementation of the Basel III capital adequacy regime. The Reserve Bank will soon respond to submissions on the Basel III proposals and release draft standards. Other key regulatory developments for the

Figure 1.1
Financial stability cobweb[1]



Source: RBNZ.
Note: Movements towards the centre of the diagram represent a decrease in financial stability risks. The darkest part of the band represents a normal level of financial risk.

banking system include the introduction of a legislative framework for covered bonds and the pre-positioning of banks' systems for Open Bank Resolution. In the insurance sector, the provisional licensing regime for insurance companies came into force on 7 March, with 105 insurers licensed to conduct insurance activity from this date.

Alan Bollard

Governor

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

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

The Reserve Bank Act requires the Reserve Bank to produce a *Financial Stability Report* twice a year. This document must report on the soundness and efficiency of the financial system and the measures undertaken by the Reserve Bank to achieve its statutory purpose. The *Report* must contain the information necessary to allow an assessment of these activities.

Chapter 2 discusses recent improvements in global financial market sentiment owing to international policy action to address the debt crisis in Europe. These events have had a significant effect on the cost and availability of funding to the New Zealand banking system. Chapter 3 discusses evidence of rebalancing on the part of households and firms, and the extent to which this is reducing New Zealand's vulnerability to adverse events.

New Zealand's banking system remains well capitalised, and has made significant progress over recent months in improving funding positions (chapter 4). Given this improvement, the Reserve Bank now confirms its intention to raise the minimum core funding ratio to 75 percent from 1 January 2013. Chapter 4 also discusses developments in insurer licensing, with all existing insurers requiring a licence from 7 March, and progress toward meeting claims from the Canterbury earthquakes.

The implementation of new arrangements for the exchange and settlement of retail payments has reduced settlement risk in the payment system (chapter 5). These changes will also support efforts to increase contestability in the payments system, which should encourage greater efficiency in the system.

Chapter 6 reports on the significant reform of banking system regulation that is ongoing following the financial crisis. The Reserve Bank has recently released consultation papers on the implementation of the new Basel III capital regime, which will entail tighter definitions of capital and higher minimum ratios. Other initiatives for the banking system include bank pre-positioning for the use of Open Bank Resolution, a legislative framework for covered bonds and the extension of the prudential liquidity policy to branches of overseas banks operating in New Zealand. The Reserve Bank has also consulted on draft regulations for statutory funds for life insurers.

2 The international environment and financial markets

Confidence in global markets fell to a low ebb during 2011 as sovereign debt positions of a number of countries in Europe became increasingly alarming. During this period, global debt markets came under significant stress. However, conditions were never as severe as in early 2009, and early 2012 has been characterised by an improvement in sentiment with the provision of longer-term liquidity to the European banking system helping to alleviate stress on European banks and sovereigns. Global term debt markets have since freed up for better rated issuers, and New Zealand banks have met a significant proportion of their funding needs for the coming year – albeit at elevated cost.

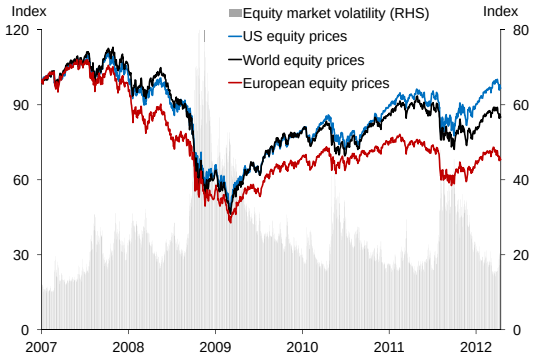
However, the global outlook remains uncertain. While funding stresses have subsided, further funding market disruption remains a key risk for New Zealand banks. Renewed sovereign and bank solvency problems in Europe could reignite market turbulence, causing further contagion and deterioration of global economic conditions. Europe is now likely to be in recession and growth in other advanced economies has been modest. Growth in emerging markets has also shown signs of slowing, as export demand from the rest of the world has weakened. Further weakness in advanced economies could weaken growth in emerging markets more substantially, and put already softening asset prices under pressure. Should global growth falter, weak export demand and consequential swings in export commodity prices would have detrimental impacts on Australia and New Zealand.

Global financial conditions remain fragile.

Four years have passed since the onset of the global financial crisis which has caused considerable economic and financial upheaval around the world. Rising indebtedness prior to the crisis left many countries particularly vulnerable and accentuated the resulting balance sheet stresses. Government support of the financial sector has contributed to the unsustainable public sector debt burdens facing a number of countries, particularly in Europe. Recovery from the crisis has been prone to frequent setbacks with financial markets coming under repeated waves of pressure.

Global financial market sentiment has improved since the last *Report*, but remains fragile (figure 2.1). During the second half of 2011, escalation of the European sovereign debt crisis saw financial market conditions deteriorate, with heightened risk aversion, market volatility, and funding market stresses. Problems were particularly evident in the European banking system, where interbank spreads widened substantially. Since the start of 2012, financial market conditions have improved, primarily due to the deployment of enhanced liquidity measures by the ECB. Positive economic data out of the US and the Greek

Figure 2.1
Global equity markets and volatility



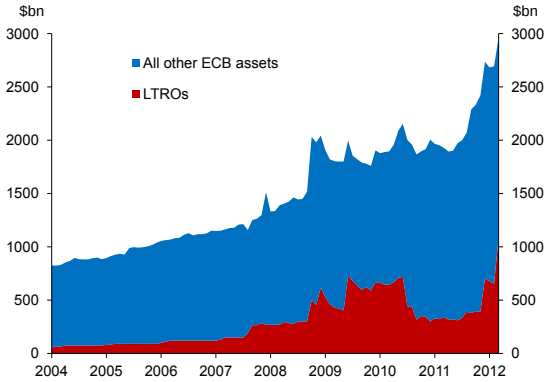
Source: Bloomberg.
Note: S&P 500, MSCI world, and MSCI Europe indices have been rebased to equal 100 in January 2007. Equity market volatility is the VIX index.

debt restructuring have also buoyed sentiment, with equity markets making significant gains during the early part of 2012. However, financial market conditions remain fragile, with Europe's ongoing financial and political challenges likely to give rise to further turbulence.

The ECB's LTROs have eased financial market strains.

In December, ongoing financial market volatility and funding market dysfunction led to the ECB enhancing its liquidity provision to the European banking system. The ECB lowered its reserve requirement, conducted longer-term refinancing operations (LTROs) at an extended maturity of three years, and widened the range of acceptable collateral in its lending operations. The ECB conducted a second LTRO operation in February, resulting in a net liquidity injection of around €500 billion across the two operations (figure 2.2).

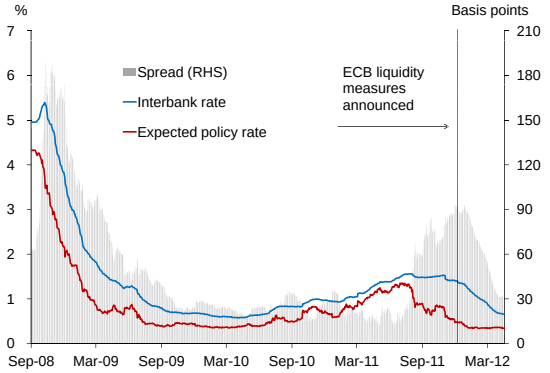
Figure 2.2
ECB balance sheet



Source: ECB, Haver analytics.

The ECB's liquidity measures, particularly the provision of longer-term LTRO funding, have reduced spreads in the European interbank market and provided some relief for European banks facing funding stress (figure 2.3). Improved market sentiment and enhanced liquidity have seen global debt markets partially reopen, though not for all participants. Some banks in peripheral countries appear to have difficulty securing market funding beyond very short terms, and remain reliant on ECB operations. Australasian banks have benefited from the improved funding conditions, with much of New Zealand banks' funding needs already met for the coming year. However, while pressure has subsided and bank credit spreads have eased somewhat, funding costs remain elevated (particularly for term borrowing).

Figure 2.3
Spreads between European interbank rates and expected policy rates



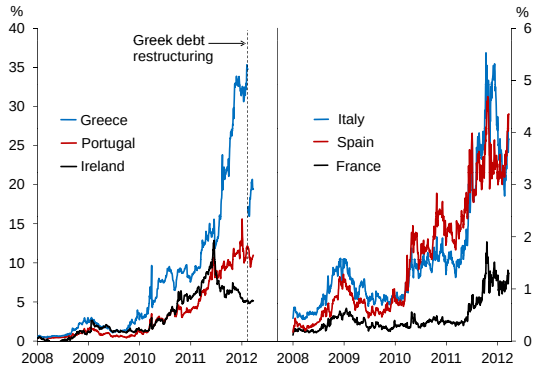
Source: Bloomberg.

Liquidity operations have also temporarily alleviated funding pressure on sovereigns, with some banks using cheap ECB funding to invest in higher-yielding sovereign debt, which can generally be used as collateral against ECB loans. While liquidity support has reduced stresses for the time being, heavily indebted sovereigns still need to bring debt down relative to national incomes, which is made more challenging by the weak growth outlook in some countries. As a consequence, the outlook remains uncertain, with ongoing political and financial hurdles and risk of further contagion.

Greek debt restructuring has created breathing space for now.

Recent calm in financial markets has been supported by the successful restructuring of Greek debt and provision of a second bailout package in February. The debt restructuring (with an effective loss of about 75 percent for private bond holders), coupled with fiscal consolidation measures and further euro area and IMF financing, has reduced Greece's debt burden. However, fundamental competitiveness issues remain and much more needs to be done to ensure fiscal solvency, with bond pricing suggesting that further debt restructuring remains a risk (figure 2.4).

Figure 2.4
European 10-year sovereign bond spreads



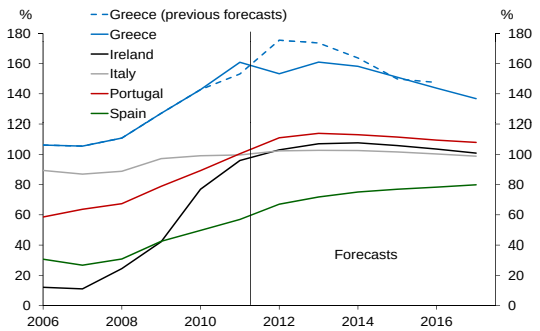
Source: Bloomberg.
Note: Spreads are relative to German 10-year government bonds.

Policymakers have made some progress towards a more comprehensive solution to the debt crisis. This has included agreement on leveraging up the European Financial Stability Fund (EFSF), accelerated introduction of the European Stability Mechanism (the EFSF's permanent replacement), and further fiscal measures in other European economies. Negotiations towards a greater firewall to deal with possible further contagion are also under way.

While Greece has the largest government debt load (figure 2.5), other countries are also facing difficulty with fiscal consolidation and/or an undercapitalised banking system. While sovereign borrowing costs initially fell in response to the LTRO and other policy measures, these have started to increase again more recently for many countries (figure 2.4). This suggests markets remain concerned that some sort of debt restructuring may be required for other countries, particularly Portugal. Spanish yields, having improved materially over the early part of the year, widened markedly in April, reflecting concern about high indebtedness and a vulnerable banking system.

There remains a significant risk of serious sovereign-bank feedbacks re-emerging. Although the LTRO has provided short-term relief, it is uncertain whether banks reliant on ECB funding will be able to re-access market-based funding over the coming years. If banks are unable to return to markets when loans mature, the banking system could again come under significant funding pressure. And given that the LTRO has encouraged banks in high-yield economies to invest in European sovereign debt, increases in sovereign yields may strain bank balance sheets. European banks are currently building capital buffers following the setting of increased target capital ratios by the European Banking Authority in December. Banks are discouraged from increasing their capital ratios by shedding assets, but raising fresh capital is difficult for many banks. Surveys suggest that credit conditions have tightened and lending growth to households and businesses has slowed. A significant contraction in private sector credit supply could undermine growth and contribute to concerns about sovereign debt sustainability.

Figure 2.5
General government net debt for selected euro area economies
(percent of GDP)



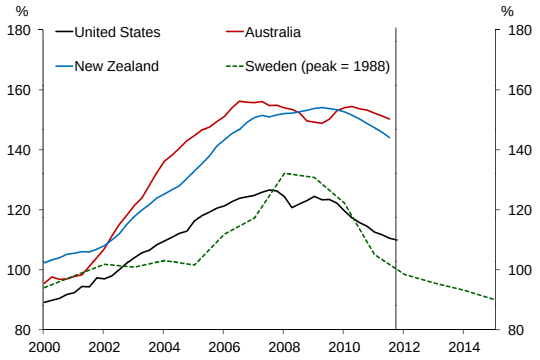
Source: IMF *World Economic Outlook*.
Note: Previous forecasts for Greece prior to debt restructuring are from the September 2011 *World Economic Outlook*; all other figures are from the April 2012 *World Economic Outlook*.

Economic growth in advanced economies remains modest.

Growth in other advanced economies remains weak, with high levels of private debt likely to exacerbate this weakness for some time. Recent New Zealand experience suggests deleveraging can be accompanied by slow growth even if no financial crisis materialises, but historical evidence suggests growth effects would likely be particularly evident for countries where the deleveraging follows a financial crisis.[1] The Swedish rebalancing after an early 1990s crisis was relatively fast and orderly, but still affected economic activity for an extended period (figure 2.6).

[1] Reinhart, C and V Reinhart (2010) "After the fall", NBER *Working Paper* No I6334.

Figure 2.6
Household debt-to-income in selected advanced economies
(percent of household disposable income)



Source: RBNZ, Reserve Bank of Australia, Haver Analytics, Statistics Sweden.
Note: Due to variation in definitions between sources, these series may not be strictly comparable.

Data from the US have indicated some strengthening in economic growth. However, the recovery remains fragile, and, as in many advanced economies, fiscal consolidation is likely to become a significant drag on growth. European banks have large cross-border operations in the US, and the US could be vulnerable to a tightening in credit conditions as European banks continue to deleverage.

Emerging market growth has been softening...

Subdued activity in advanced economies, particularly in Europe, has contributed to a slowing in growth in emerging markets through trade linkages. While most emerging economies do not have significant financial exposure to Europe, Asian financial markets have been affected by fluctuations in market sentiment, reduced US dollar liquidity, and tightening credit conditions as a consequence of the sovereign debt crisis. Market turbulence in late 2011 resulted in capital outflows from emerging markets, although these have at least partly reversed in early 2012.

While developments so far seem consistent with an orderly slowing of emerging market growth, some economies could be vulnerable to a more rapid slowdown and capital flight if global growth falters. This includes emerging Asia, where recent strong credit growth has seen residential property prices increase rapidly in a number of economies, including China. Policy measures to target property market overheating have seen residential property prices pare back somewhat in recent times.

...including in China.

China continues to be a strong source of global growth, although it has shown some signs of slowing recently. In recent years, credit expansion in China has been particularly pronounced, and a significant portion of this has been used by local government to fund infrastructure development or asset purchases. Fitch reports that total credit has increased from 124 percent of GDP at the end of 2007 to 185 percent of GDP in 2011, with a substantial amount of the increase outside of the core banking system.[2] While non-performing loans remain low, it is likely that they will increase in coming years, consistent with other episodes of leveraging up of this magnitude – particularly if growth slows. Further, despite some recent easing in property prices, China remains vulnerable to a sharp property market correction, which would exacerbate any deterioration in asset quality. If Chinese growth slowed drastically, this could impede growth across the emerging Asia region and would also significantly affect export demand for New Zealand and Australia.

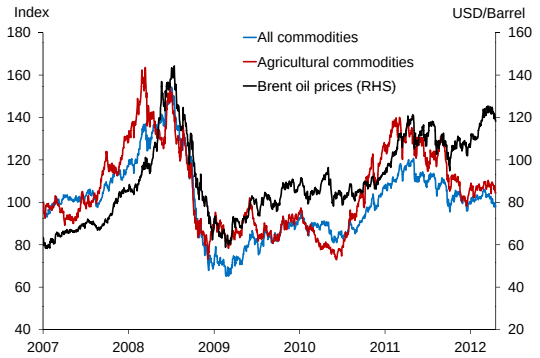
Possible swings in commodity prices pose risks.

Geopolitical tensions in a number of oil-producing regions have pushed oil prices higher in recent months. Further embargoes on Iranian oil, or difficulties transporting oil around the Middle East, could see oil prices continue to rise.[3] A sharp increase in the price of oil could impede consumption and investment in countries reliant on oil imports, and dampen the already fragile global recovery. At the same time, other commodity prices, including the prices of many that New Zealand exports, have eased (figure 2.7).

A substantial slowing in emerging economies could cause a sharp fall in commodity prices and pose financial stability risks to both Australia and New Zealand. The Australian economy continues to be buoyed by its strong

[2] Fitch (2011) 'Growth of Leverage Still Outpacing GDP Growth', Chinese Banks, July.
[3] According to the April 2012 IMF *World Economic Outlook*, 40 percent of global oil exports are transported through the Strait of Hormuz.

Figure 2.7
Commodity price indices



Source: Bloomberg, Reuters.
Note: CRB all commodities index and S&P GSCI agriculture index. Both are rebased to equal 100 in January 2007.

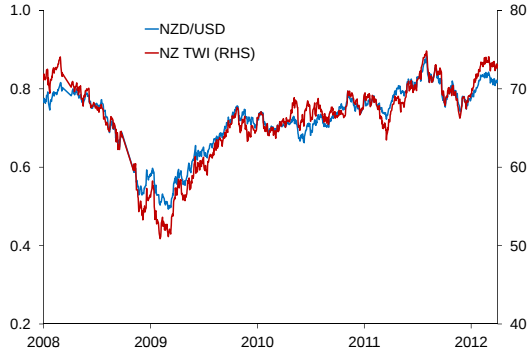
terms of trade and mining boom – however, growth has been slightly softer lately. Australia's property market has also been slowing, but developments so far are consistent with a gradual slowdown rather than a hard landing.

A sharp deterioration in the terms of trade could result in a more abrupt property market adjustment and slower growth prospects, especially given the still elevated levels of indebtedness. Similarly, New Zealand's economic prospects could be impaired if the currently elevated terms of trade were to be sharply eroded. In both cases, there would likely be some implications for bank asset quality in the commodity producing sectors, and weaker tax receipts. However, the growth effects of a sharply weakening terms of trade could be partly alleviated by a falling currency and a lower interest rate outlook, improving the prospects for parts of the economy that are not overly exposed to commodity prices.

The New Zealand dollar has appreciated.

The New Zealand dollar has increased strongly since the November *Report*, both against the US dollar and on a trade weighted basis (figure 2.8). Quantitative easing in major advanced economies and improved risk appetite since the start of the year have buoyed the exchange rate, despite some easing in key commodity prices. There also appears to have been increased offshore interest in New Zealand dollar assets as money market funds and institutional investors have re-allocated their funds out of Europe. However, deterioration in market sentiment or a more marked fall in commodity prices could see the exchange rate drop from its currently elevated level.

Figure 2.8
New Zealand dollar exchange rates

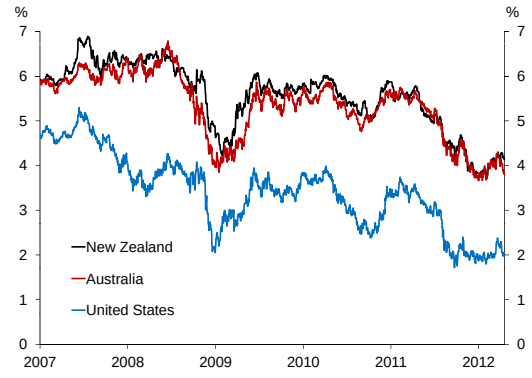


Source: Bloomberg.

The New Zealand Government can issue debt on favourable terms.

Despite turmoil in financial markets, New Zealand government bond yields have moved lower in line with yields in other non-crisis economies (figure 2.9). Despite more subdued demand in some instances, debt auctions have generally attracted good interest and the Government's borrowing programme is broadly on target.

Figure 2.9
10-year government bond yields



Source: Bloomberg.

Local governments have increased bond issuance over the past few years. The Local Government Funding Authority (LGFA) was recently established to allow centralised bond issuance for those local authorities that choose to participate. The inaugural LGFA bond tender on 15 February was successful, with strong investor interest and issuance spreads over New Zealand government

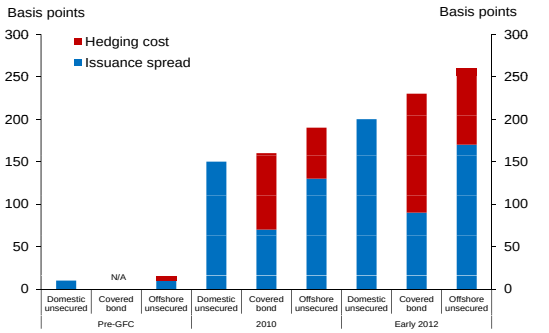
bonds coming in below pre-tender expectations from bank dealers.

Access to long-term funding markets has improved for Australasian banks.

New Zealand banks faced difficulties accessing long-term funding markets in late 2011. Since the start of the year, New Zealand banks, and to a greater extent their Australian parents, have been able to cover a significant portion of their 2012 funding requirements, including through issuance in unsecured markets. Weak credit growth and strong retail deposit growth have helped to reduce the amount of external funding required. However, funding costs have increased significantly in the past year and renewed funding market dysfunction could see funding costs increase further (figure 2.10). In addition to rising funding spreads, the cost of hedging foreign currency borrowing has also increased (see box B).

Ongoing caution towards bank debt on the part of investors has seen issuance move to more senior forms of debt – particularly covered bonds which are cheaper than other forms of bank debt. Most New Zealand banks retain a sufficient portion of their covered bond allowance. However, there is a risk that this may become a constraint for some banks if markets were to become difficult once more. There has also been some crowding out of covered bond issuance due to issuance by the Australian parents of New Zealand banks in recent times.

Figure 2.10
Indicative estimates of bank bond issuance costs



Source: RBNZ estimates.
Note: Hedging cost of covered bond issuance is the cost of swapping euros into New Zealand dollars. Hedging cost of offshore issuance is the cost of swapping US dollars for New Zealand dollars.

Some non-financial corporates are able to issue debt more cheaply than the banks.

In contrast to rising spreads on bank debt, non-financial corporate bond spreads have remained relatively contained. As a result, some larger non-financial corporates have been able to obtain funding at a cheaper rate than banks (table 2.1). This may provide an incentive for larger corporates to bypass the banking system by issuing in this market (see chapter 3).

Table 2.1
Secondary market spreads for selected unsecured NZD bonds
(as at 18 April 2012, basis points)

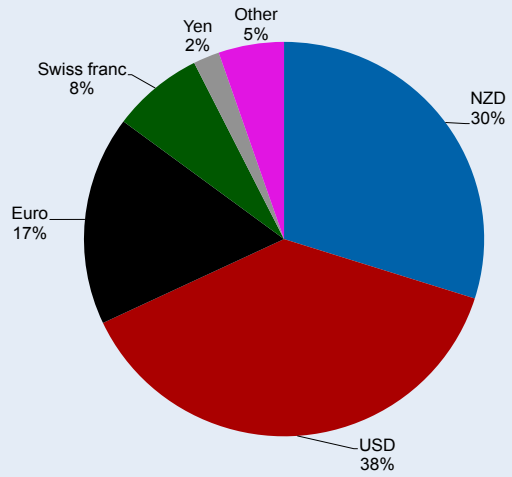
Banks			
Issuer	**S&P rating**	**Maturity**	**Spread to swap rate**
Westpac NZ	AA-	16-Mar-15	146
ASB	AA-	8-Jun-17	182
BNZ	AA-	20-Dec-18	195
Non-financial corporates			
Issuer	**S&P rating**	**Maturity**	**Spread to swap rate**
Meridian Energy	BBB+	16-Mar-15	149
Fonterra Cooperative	A+	4-Mar-16	135
Transpower NZ Ltd	AA-	30-Nov-18	135

Source: New Zealand Financial Markets Association.

Box B
Developments in basis swap markets

New Zealand banks obtain a significant portion of their funding from offshore, in a variety of foreign currencies (figure B1). The exchange rate risk created by this borrowing is routinely eliminated by swapping foreign currency back into New Zealand dollars via the cross-currency basis swap market. The costs of undertaking this hedging were negligible before 2007, but have increased sharply in the past few years and have been a significant portion of the landed cost for some recent bond issues. The increase in hedging costs is particularly striking given that the overall demand for New Zealand dollar risk appears to be quite strong, as indicated by the elevated level of the New Zealand dollar.

Figure B1
Currency composition of New Zealand bank bonds
(as at February 2012)

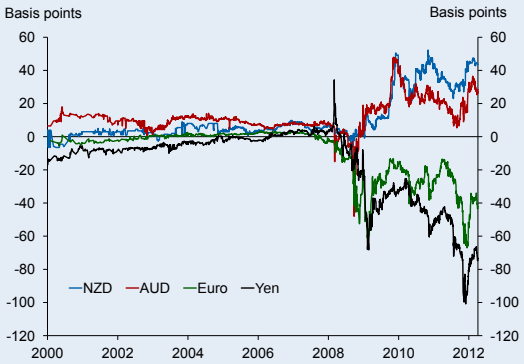


Source: Bloomberg, RBNZ estimates.

The key driver of the basis swap spread is the relative balance of supply and demand for temporary exchanges of each currency. In both the Australian and New Zealand dollar markets, the demand side of the market is driven by offshore borrowing by the banking system – which needs to be swapped into local currency to help fund the domestic loan books of the banks. By contrast, banks in Europe, Japan and Switzerland have sufficient funding in domestic currency but have an intrinsic need to raise foreign currencies to fund their foreign asset holdings. In both cases, counterparties wishing to take the other side of this transaction are required.

Before 2007, there was strong demand in Europe and Japan for highly rated, high-yielding New Zealand dollar assets which provided a counterpart to the offshore borrowing undertaken by New Zealand banks.[4] Offshore entities found it cost effective to obtain foreign currency by issuing New Zealand dollar securities (initially in offshore markets via Eurokiwi and Uridashi bonds, but increasingly onshore via Kauri bonds), and then swapping the New Zealand dollars with the New Zealand banks. This resulted in a convergence in basis swap spreads between funding and receiving currencies and reduced hedging costs for New Zealand banks (figure B2).

Figure B2
5-year basis swap spreads for selected currencies
(cost of swapping USD into local currency)



Source: Bloomberg.
Note: The total cost of hedging foreign exchange risk for New Zealand banks is somewhat larger than indicated by this graph, as there are some costs in addition to the basis swap.

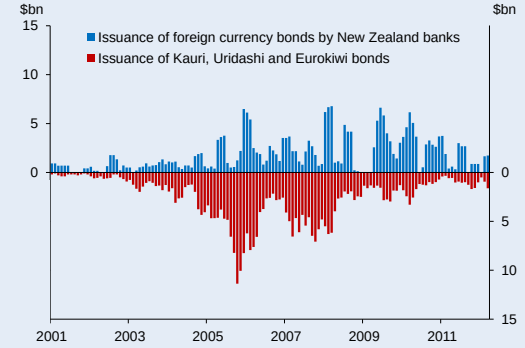
New Zealand dollar bond issuance by offshore entities has slowed significantly since 2007 for a number of reasons (figure B3). First, investors have been attracted by relatively high yields in other countries, such as Australia and Brazil. Second, stronger government

[4] For more detail on the relationship between the carry trade and New Zealand bank funding, see Drage, D, A Munro and C Sleeman (2005) "An update on Eurokiwi and Uridashi bonds", Reserve Bank of New Zealand *Bulletin*, 68:3, pp. 28-38.

Figure B3

Supply and demand in the NZD basis swap market

(3-month total)



Source: Bloomberg, Reuters, KangaNews, RBNZ calculations.

bond issuance may have reduced demand for New Zealand dollar bonds issued by foreign entities. Third, and probably most importantly, global risk aversion has increased. Many of the issuers of these bonds have been affected by the European sovereign debt crisis (European-based entities play a significant role in the Kauri market). This was particularly evident in late 2011 when some issuers were downgraded. In response, the Reserve Bank relaxed collateral rules for open market operations to prevent possible systemic consequences for the Kauri market. As financial market conditions have improved, Kauri issuance has picked up slightly in the past few months, but offshore issuance of New Zealand dollar securities remains well below pre-crisis levels.

Liquidity in the New Zealand dollar basis swap market has declined since the global financial crisis, with periods of strong issuance by the New Zealand banks resulting in higher hedging costs. Most recently, the pickup in bank bond issuance since the start of 2012 pushed the NZD/USD basis swap up by around 10 basis points, to near the highest level since 2000. Hedging costs for euro issues have been even higher, as New Zealand banks issuing in euros must first pay a significant premium to swap from euros into US dollars, before swapping US dollars into New Zealand dollars. The cost of the first leg of this transaction has increased, reflecting US dollar funding shortages faced by some European financial institutions. This has increased the landed cost for some recent covered bond issues.

The offshore issuers of New Zealand dollar securities currently receive a premium equal to the basis swap spread when swapping the proceeds into US dollars or euros. This might be expected to encourage greater issuance in the future. One factor influencing the extent of any recovery will be the interest rate differential between New Zealand dollar assets and other currencies. For example, market pricing suggests that the gap between Australian and New Zealand interest rates will diminish over the next year. Another factor will be the availability of government bonds as a substitute product for investors with an appetite for long-term New Zealand dollar risk. Regardless of whether the supply of New Zealand dollars in the basis swap market picks up, basis swap spreads are likely to be underpinned by ongoing demand from New Zealand banks for longer-term wholesale funding since the global financial crisis.

3 Financial risks to the New Zealand economy

The New Zealand economy has grown modestly over the past three years, but remains vulnerable to a downturn in global economic and financial market conditions. The domestic economy remains highly indebted, although the private sector has made progress in reducing debt levels. A rise in private savings has been offset by increased borrowing from the government sector. Nevertheless, there has been some reduction in New Zealand's external indebtedness.

Household vulnerability has been declining, with household savings rates increasing and debt falling as a share of income. A gradual correction in the housing market has also helped to reduce vulnerability, although there has been some recent strengthening in house prices – particularly in Auckland. The revival of the housing market has so far occurred without a rapid increase in credit outstanding, and sustained momentum in house prices seems unlikely. After cutting its debt markedly in recent years, the non-farm business sector has begun to borrow modestly again.

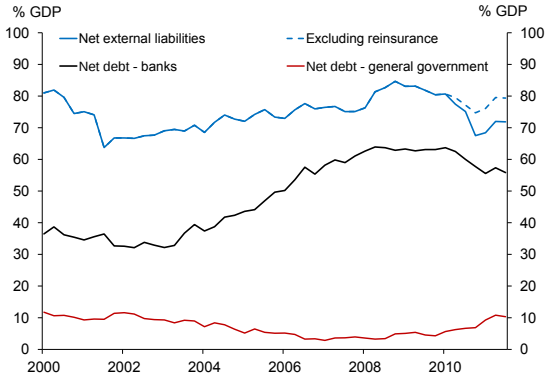
The agricultural sector has also been able to reduce debt as a share of income, as high commodity prices have allowed some farmers to pay down debt. However, debt still remains high in the sector as a whole, and sharp falls in commodity prices would expose this vulnerability.

3.1 External financing vulnerabilities

New Zealand's external debt remains high.

New Zealand's net external liabilities as a share of GDP have been high by international standards since the mid 1980s. While government debt has fallen steadily over most of the last 20 years, private sector borrowing (coinciding with significant increases in asset prices) has kept net external liabilities trending up relative to income. The increase in external liabilities was largely intermediated through the banking sector, which borrowed heavily from offshore to finance credit expansion (figure 3.1).

Figure 3.1
Net external liabilities
(percent of annual GDP)

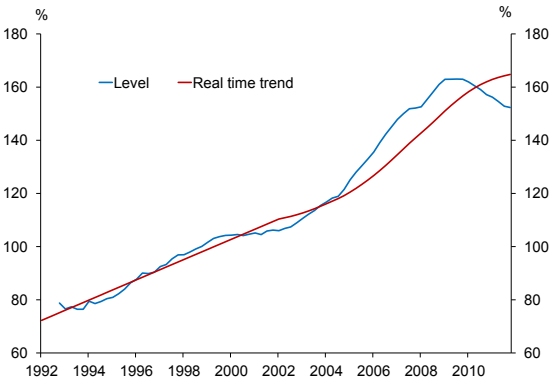


Source: Statistics New Zealand.

Credit growth has slowed dramatically over the past three years as households, businesses and lenders have taken a more cautious approach to debt. This has seen the credit-to-GDP ratio fall significantly below its recent trend (figure 3.2), and has helped to reduce banks' external funding requirements. Nevertheless, the net external debt of the banking system remains high relative to history and other developed economies. This leaves New Zealand particularly vulnerable to changes in global funding market conditions. Moreover, there is a risk that part of the rise in private savings proves cyclical in nature and that stronger demand for credit re-emerges as the economic recovery strengthens. It seems unlikely that credit would resume the growth rates of the previous decade, but a milder

upward trend in credit relative to GDP (as seen throughout the last 20 years) would be enough to intensify concerns about indebtedness.

Figure 3.2
Credit-to-GDP ratio

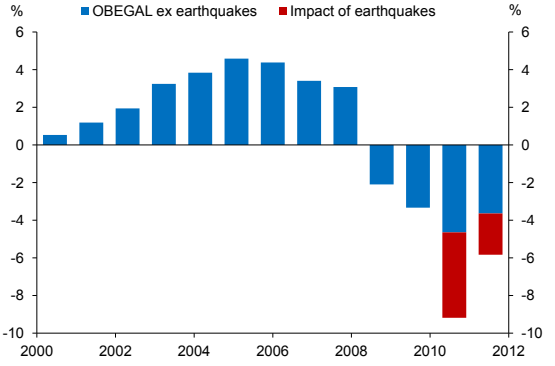


Source: Statistics New Zealand, RBNZ calculations.
Note: Real time trend is calculated at each point of time using only data available at that date.

Government borrowing is increasing.

The Crown's financial deficit has increased since the last *Report*, reflecting weaker than projected growth in the economy and the costs associated with the Canterbury earthquakes (figure 3.3). The next Crown *Budget* is due to be tabled later this month, with the Government having stated its commitment to a programme of fiscal consolidation to return the budget to surplus. The shift to surplus will help to contain overall national debt and ensure the Crown has future financial capacity to respond to a significant economic downturn, natural disaster, or other crisis.

Figure 3.3
Total Crown operating balance (OBEGAL)
(percent of GDP, June years)



Source: Statistics New Zealand, The Treasury.
Note: Data for 2012 is a Treasury estimate.

At present, the New Zealand Government faces relatively low borrowing costs and steady investor appetite. Sovereigns that have experienced difficulties recently have been mainly borrowing in either foreign currencies or a common currency that is not under national control. Countries borrowing in their own currency, such as New Zealand, have more flexibility when market funding becomes harder to access, and investors have tended to prefer to invest in these countries recently.[1] Nevertheless, renewed financial market turbulence could increase the costs of borrowing, providing another reason for proactive consolidation of the fiscal position.

3.2 Sectoral credit risks

Household savings rates have increased...

Household debt has trended down relative to income in recent years, with savings increasing and a slow down in borrowing (see box C for further discussion of drivers behind recent low household credit growth). Households have benefited from steady income growth (partly assisted by tax cuts) and relatively low growth in retail prices stemming from reduced import prices and discounting by retailers.

...aided by a resilient labour market.

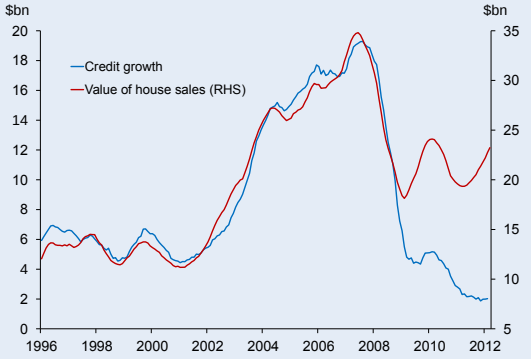
Households' efforts to save more and consolidate their balance sheets have been supported by developments in the labour market. Unemployment has not reached the levels experienced in previous recessions, in terms of either short-term or long-term unemployment (figure 3.4). Increases in unemployment (especially long-term unemployment) are a factor that can generate financial instability as households become unable to maintain debt repayments. The labour market resilience seen in the recent downturn has helped to keep financial stress in the household sector contained, with non-performing housing loans peaking at just over 1 percent. Additionally, while household debt in New Zealand is fairly high, it has

[1] See Hargreaves, D and E Watson (2011) "Sudden stops, external debt and the exchange rate", Reserve Bank of New Zealand *Bulletin*, 74:4, pp. 17-27 for more detail on this point.

Box C
Why is household credit growth so low?

Weak credit growth, despite ongoing house sales, signals some change in household borrowing behaviour. Since 2007 credit growth has slowed significantly from peak annual growth of $19 billion to less than $2 billion currently. Only around half of this slowdown in credit growth can be explained by the slowdown in house sales, based on the correlation between the value of house sales and net credit growth (figure C1). The unexplained component of the slowdown in credit growth – around $8 billion over the past year – is likely to be due to a range of factors.

Figure C1
Household credit growth and value of house sales
(annual totals)

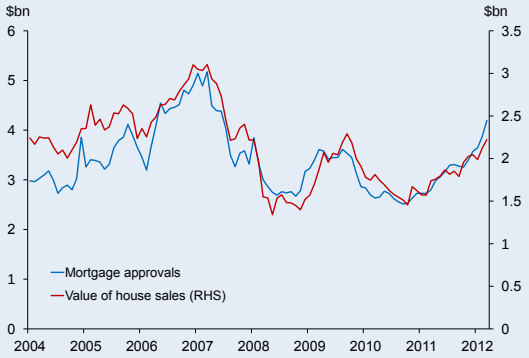


Source: REINZ, RBNZ.

Scheduled principal repayments have picked up modestly over the past few years as the mortgage stock has aged and lower interest rates have front-loaded principal payments. More significantly, anecdotal reports from banks indicate that the number of households making principal payments ahead of schedule has increased, with many households using some of the savings from lower interest rates to make these payments. If all of the interest savings from lower mortgage rates were being used to make excess mortgage payments, this could explain around half of the unusual decline in credit growth. Some households may have also paid back debt by increasing their saving over and above the effect of lower interest rates, or allocating savings away from investments towards debt repayment.

The gradual reduction in house prices since 2007 has helped to reduce credit growth. Before 2007, rapidly rising house prices meant that new buyers had to take on more debt to purchase property from existing owners who had built up large equity positions through capital gains. People reselling property bought in recent years are likely to have less accumulated equity, while for buyers, banks have tightened up on new lending with very high loan-to-value ratios. These factors are likely to have reduced the extent to which housing turnover drives net credit growth. On the other hand, the continuing relationship between mortgage approvals and housing transactions suggests that borrowing behaviour by purchasing households may not have changed materially (figure C2).

Figure C2
Mortgage approvals and value of house sales

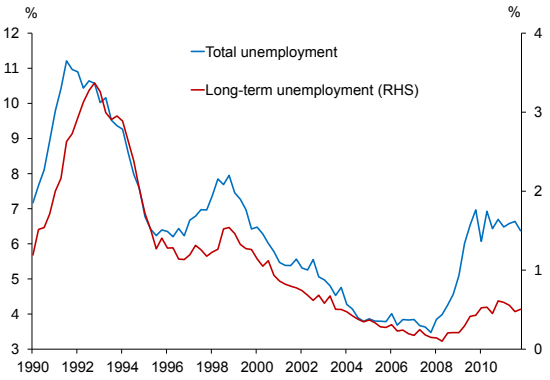


Source: RBNZ, REINZ.

Anecdotal evidence also suggests that there has been less topping up of existing mortgages (active equity withdrawal) over the past few years. There is currently no reliable way to gauge how important this has been, but it is likely to have been another factor behind weak credit growth. Finally, a temporary factor is the payouts from the Canterbury earthquakes. To date it is estimated that around $3 billion has entered the banking system from insurance payouts, some of which may have been used to reduce outstanding mortgage balances until rebuilding activity starts.

generally been originated with sound lending practices that mean that the relatively large loans are concentrated in the higher household income quintiles (see box C in the November 2011 *Report* for more details).

Figure 3.4
Unemployment – total and long-term
(percent of labour force)



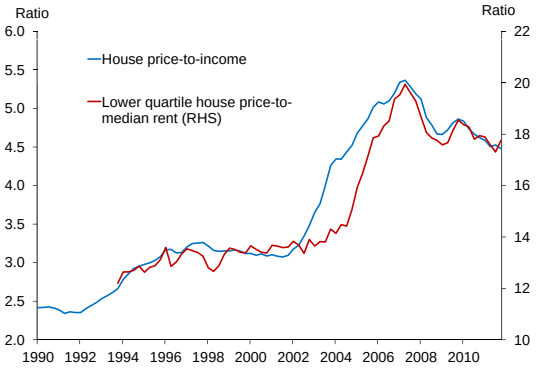
Source: Statistics New Zealand.

Housing market activity is increasing...

With high household indebtedness, sharp falls in house prices remain a key financial stability risk. A period of stagnation in the housing market has helped to reduce this risk, with nationwide house prices still slightly below their 2007 peak in nominal terms. In line with this stagnation, transaction activity within the housing market has been low for the past five years. Buyers became more hesitant in the weaker financial climate, and some prospective sellers chose to wait for better market conditions. More recently, the housing market has started to return towards more normal levels of activity, in part spurred by lower interest rates.

House prices are now rising again and a significant resurgence would be of concern given that they still appear elevated on a number of metrics, such as relative to incomes and rents (figure 3.5). While house prices may continue to rise over the short term, they seem unlikely to develop the sort of momentum seen over the 2002-2007 period. Even if confidence becomes strong, many homeowners already have significant debt loads that make it more difficult to trade up, and banks may not be willing to expand lending to the sector at fast rates in the current funding environment.

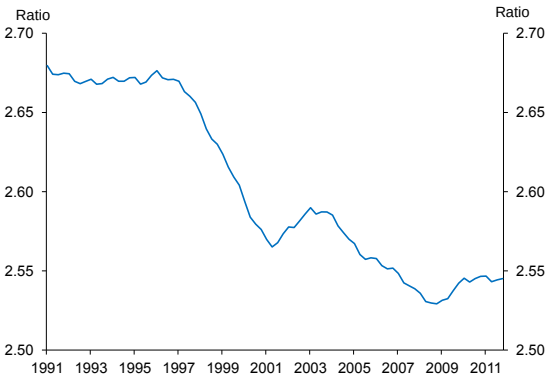
Figure 3.5
House price relative to fundamental indicators



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

A factor driving recent increases in house prices has been tight supply. House building has been low for the past four years compared to historical rates, and relative to population growth. The average number of people per dwelling has risen on a national basis after trending down for some years (figure 3.6). This rise could signal pent up demand, although it may also be that post-crisis there is lower demand for housing (less interest in owning second homes, and more interest in sharing accommodation, for example). The Productivity Commission has recently published a study of housing affordability that makes recommendations targeted at making housing supply more responsive to demand.

Figure 3.6
Estimated population to dwelling ratio

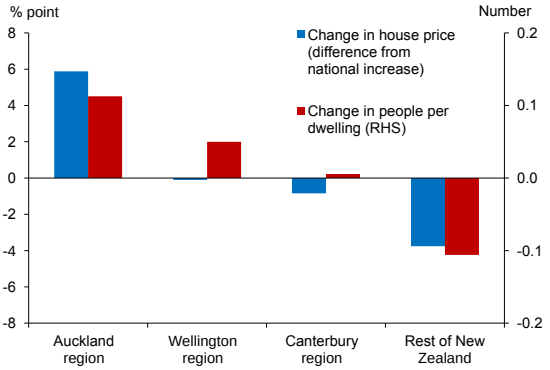


Source: Statistics New Zealand.

... particularly in Auckland.

Underbuilding relative to estimated population growth is most pronounced in Auckland, where the property market has been robust recently, with prices increasing 5.9 percent over the past year and sales activity strong (figure 3.7). Auckland house prices are back at the peak nominal levels recorded in 2007, which is not true in most other regions. Rents are also increasing relatively rapidly.

Figure 3.7
People per dwelling and house price, by region
(change between 2006-2011)



Source: Statistics New Zealand, RBNZ calculations.
Note: Figures do not allow for homes made uninhabitable by the Canterbury earthquakes.

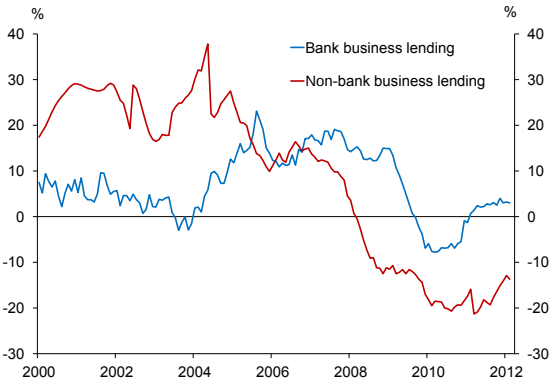
High exchange rate challenging for some firms.

The high exchange rate has hindered a rebalancing in economic activity towards the production of tradable goods and services, with some producers outside the commodity-producing sector finding conditions particularly challenging. The effects of a high exchange rate have been compounded by the relatively soft economic conditions prevailing in many trading partners.

Businesses are starting to borrow again.

Faced with challenging financial and economic conditions, the business sector sharply lowered investment in the three years following the global financial crisis, and reduced bank debt (figure 3.8). Over the past six months, businesses appear to have resumed borrowing modestly again, arresting the earlier decline in debt. To date economic activity across individual sectors remains mixed, but many have experienced modest growth over the past year. Credit conditions also appear to have eased in certain segments of the market, although they remain difficult for some borrowers (see box D).

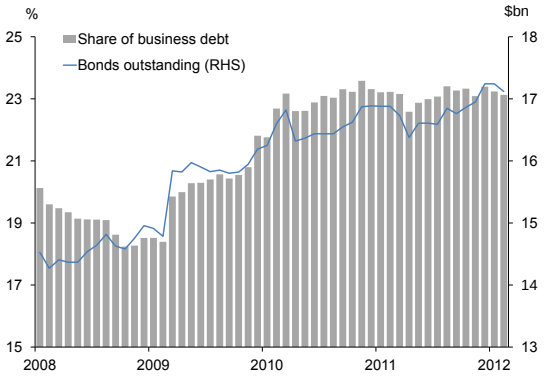
Figure 3.8
Business lending
(annual percent change)



Source: RBNZ *Standard Statistical Return* (SSR).

There has also been a moderate pickup in non-financial corporate bond issuance (figure 3.9). The corporate bond market is much smaller than business lending intermediated through the banking system. However, the cost advantage of direct issuance may make the corporate bond market increasingly attractive for larger businesses. So far, pass-through of higher marginal bank funding costs to borrowers has been limited. However, continuing elevated costs of bank issuance in wholesale markets could see lending rates rise, especially if seen in conjunction with deposit rate increases as a result of more vigorous competition for retail funding. In that case, the incentive for corporates to issue directly in the non-financial corporate bond market would be even stronger.

Figure 3.9
Non-financial corporate bond issuance

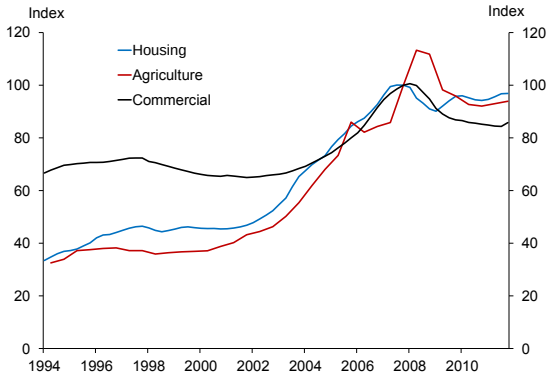


Source: Bloomberg, RBNZ calculations.

Commercial property prices have stabilised.

Commercial property prices have levelled off after a period of decline, with a stabilisation in rental rates (figure 3.10). Total returns for the sector have been increasing, and are now slightly below long-term average rates. Owners have had to reduce leverage, and some highly leveraged owners faced mortgagee sales as property prices fell. Additional building in the sector has been low to date. At the same time, there have been a number of businesses migrating out of damaged premises in Christchurch, and others choosing to vacate premises nationwide because they are well below modern earthquake safety standards. This has helped absorb surplus capacity of modern buildings, but some other buildings will have difficulty obtaining tenants, at least without strengthening work being completed. These factors may create financial stress for owners in some cases.

Figure 3.10
Property prices
(2007Q4 = 100)

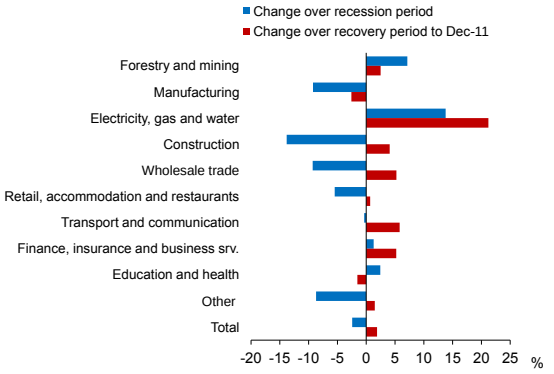


Source: IPD, Property IQ, RBNZ calculations.

Business activity is slowly recovering.

Real GDP remains slightly below the 2007 peak, with employment still 1.5 percent below the peak. Most sectors have experienced some recovery in activity and employment (figure 3.11), which is helping to reduce financial stress and has contributed to a reduction in non-performing loans in the business sector as a whole. However, the manufacturing sector has lost a significant number of jobs through the cycle, possibly from increased competition overseas and an elevated exchange rate, and there have been some company closures.

Figure 3.11
Sectoral employment growth

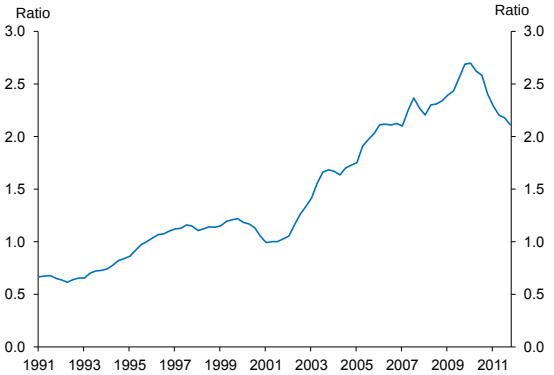


Source: Statistics New Zealand.
Note: The recession period is from the cyclical peak in GDP in 2007Q4 to the trough in 2009Q1. The recovery period is from the trough to 2011Q4.

High commodity prices have allowed debt consolidation...

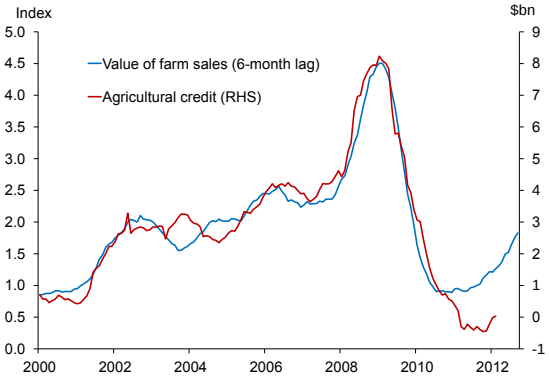
The agricultural sector has been using increased income from high commodity prices to improve its debt positions. Debt has fallen relative to incomes over the past two years (figure 3.12). With the sector still highly leveraged, and farmers and lenders still chastened by a period of weak earnings in the 2008/09 season, farm sales and farm consents in the past two years have been at a low level. With some confidence returning to the market, farm sales and consents have begun to increase over the past year. The pickup in farm sales is likely to drive some growth in overall agricultural credit, although to the extent that some sellers are quite indebted and buyers are relatively well capitalised, the pickup in credit may continue to be limited (figure 3.13).

Figure 3.12
Agricultural debt to agricultural export earnings



Source: RBNZ SSR, Statistics New Zealand.

Figure 3.13
Value of farm sales and credit growth



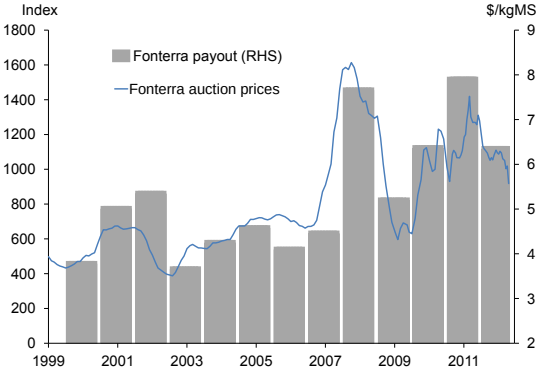
Source: REINZ, RBNZ SSR.

...although dairy prices have fallen recently.

Fonterra recently announced a reduction in the forecast payout for the current season by 15c to $6.75-6.85 per kilogram of milk solids. The reduction reflects declining commodity prices and the higher New Zealand dollar reducing revenues for the co-operative. However, on-farm conditions have been excellent, with plentiful rain resulting in strong milk production. Overall, farmers are likely to receive an income boost this season compared to previous seasons, despite the lower payout.

With prices in Fonterra's online dairy auctions falling further recently, there is a risk that payouts could be lower in coming seasons (figure 3.14). Typically, the exchange rate falls when commodity prices do, buffering New Zealand dollar returns, but the current situation of extraordinary monetary stimulus abroad could test that relationship, with the possibility that the exchange rate stays high while commodity prices fall further.

Figure 3.14
Dairy prices and Fonterra dairy payouts

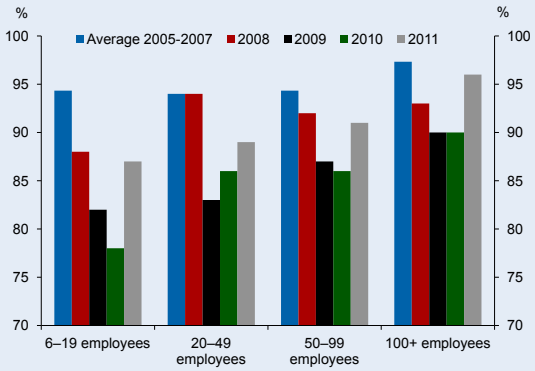


Source: Fonterra.

Box D
Business financing

Banks tightened lending standards during the global financial crisis. While there has been some easing since 2010, it appears that certain borrowers face substantially greater constraints obtaining credit than they would have five years ago. The tightening in credit supply since the crisis has been particularly notable for smaller firms (figure D1).

Figure D1
Access to finance by business size
(percent of businesses reporting finance is available on acceptable terms, August years)

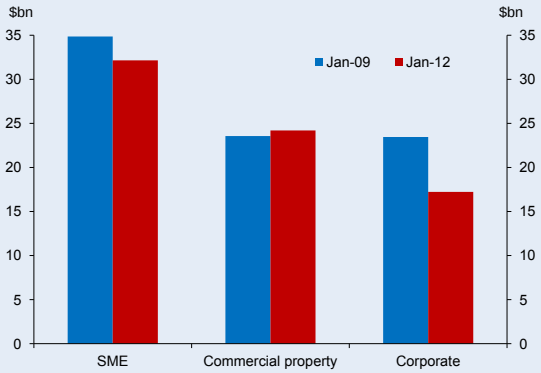


Source: Statistics New Zealand.

The tightening in credit standards was a natural consequence of an environment where banks were paying more for funding, and where falling asset prices and activity were eroding the credit quality of parts of their loan book. Additionally, a number of lenders outside the locally incorporated banking sector (including foreign banks, and non-bank lenders such as finance companies) either closed or actively reduced the size of local operations in recent years.

Bank lending to businesses (around $72 billion as at March 2012) can be divided into commercial property lending, loans to corporates, and loans to smaller enterprises. In recent years, reported lending to corporates has shrunk, which probably reflects the ability of larger corporates to switch from bank lending to direct capital markets, while lending to smaller enterprises has declined less sharply (figure D2).

Figure D2
Bank lending to businesses by sub-sector



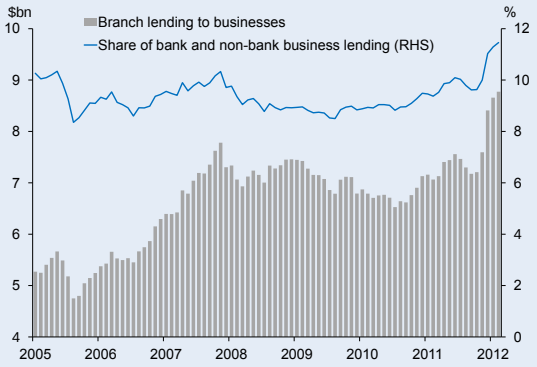
Source: Private reporting data.
Note: Excludes asset-based lending. The boundary between corporate lending and smaller business loans may not be consistent across banks.

Statistics New Zealand and the Ministry of Economic Development (MED) ran a 2004 survey of business debt. Results suggested very small firms often relied on bank finance, usually secured against business collateral and/or owner's collateral (typically the owner's home). As firms grew, they became less reliant on bank finance, instead using finance companies and credit extended by their suppliers to a greater extent. However, larger (100-500 employee) firms were also relatively reliant on bank credit, and were able to obtain it without providing as much collateral. This suggests many small firms could borrow against property, while large established firms could borrow on the basis of proven cashflows, while firms in the middle had to secure finance in a more diverse range of ways.

As banks have relaxed business lending standards since the worst of the financial crisis, they have reportedly been competing for business secured on property and business from larger established firms. The Reserve Bank *Credit Conditions Survey* (see chapter 4) suggests competition has continued to intensify more recently. This has likely limited the incentive for larger firms to seek alternative debt finance, although some had to raise fresh equity capital, particularly around 2009. There has been some evidence that business lending by offshore branches has picked up in the past six months, which is

also helping to drive increased competition for corporate lending (figure D3). If banks became less competitive in the corporate market in the future, corporate use of direct markets might grow more substantially.

Figure D3
Branch lending to businesses by non-Australasian institutions
(share of bank and NBLI business lending)



Source: RBNZ SSR.
Note: Includes institutions with greater than $500m assets. These are: Citibank, Bank of Tokyo-Mitsubishi, HSBC, General Electric Capital and Rabobank Netherlands.

At the same time, anecdotal evidence suggests that the 'gap' in the middle may have become larger, with some firms that don't have property collateral or a proven history having continuing difficulties obtaining sufficient bank funding since the financial crisis. A number of lenders (particularly non-deposit takers, including some new entrants) have continued to service the business market with various forms of lease financing, factoring,[2] and other funding. In general though, these types of finance are substantially more expensive than finance against property collateral, or the interest rates available to well rated corporate borrowers.

The tighter financial environment and generally weak trading conditions have also made it harder to sell existing SMEs. In contrast, industry contacts suggest there are a variety of buyers (offshore and onshore) interested in purchasing larger firms or assets. When offshore buyers purchase a firm or asset they may take the banking relationship offshore as well – this is thought to have been a factor reducing the business exposures of the New Zealand banking system in recent years, and is likely to continue while funding conditions for the banks remain challenging.

While tighter credit conditions can be problematic for individual businesses, it is not clear that banks are being overly cautious. Credit conditions in some segments had clearly become overly loose before the global financial crisis. It is also natural that banks are more willing to lend when they have collateral as well as confidence in the business they are lending to. In some cases, most clearly in property development, firms are likely to need larger tranches of equity and more diverse sources of finance than before the financial crisis.

[2] Factoring is lending using invoices as collateral.

4 New Zealand's financial institutions

The New Zealand banking system continues to perform strongly in the face of a difficult external funding environment. Profitability has increased, due to a reduction in bad debt expenses and a recovery in net interest margins. With international funding market stress easing at the start of this year, banks have been able to make a number of long-term debt issues, pushing core funding ratios well in excess of the regulatory minimum. New Zealand banks retain strong capital buffers and are well placed to meet the planned introduction of Basel III capital rules.

The insurance sector has passed a major milestone with all existing insurers required to be licensed by 7 March. As of that date, 105 insurers have been licensed to conduct insurance activity. The sector has continued to make progress in processing claims related to the Canterbury earthquakes, with $7.6 billion being paid out so far.

4.1 Banking sector

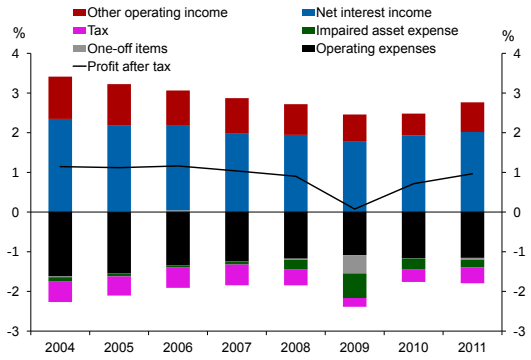
Bank profitability continued to increase through 2011...

The New Zealand banking system has continued to perform well despite a relatively modest pickup in domestic economic conditions and a difficult external funding environment. Profitability reached a trough in 2009 driven by a combination of weak income growth, increasing bad debt expenses and one-off charges related to tax expenses. Profitability has subsequently recovered, reflecting the cyclical improvement in the economy over recent years and the associated decline in bad debt expenses (figure 4.1), together with higher net interest margins.

...but future profitability growth is likely to be more limited.

Bank profitability is slightly lower than pre-crisis levels, measured either by the return on assets or the return on equity. While there is further scope for bad debt expenses to decline and boost profitability, it is unlikely that profit rates will increase much further.

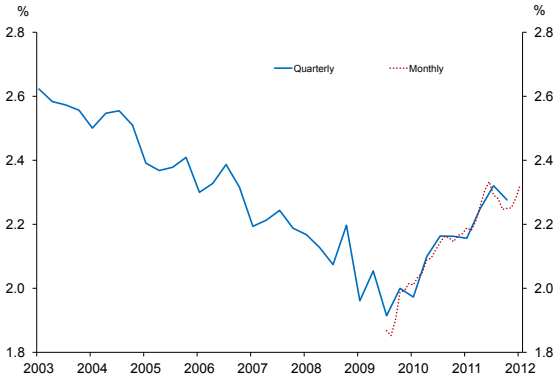
Figure 4.1
New Zealand bank profitability
(percent of assets, December years)



Source: *General Disclosure Statements* (GDS).

The outlook for banking system profitability will be shaped in part by how banks respond to lower credit demand. This response may include a focus on cost containment, or increased competition to gain market share for specific banking products and services. Greater competition would limit the potential for further increases in bank net interest margins, which have been rebuilt somewhat over the past few years (figure 4.2). This increase in net interest margins has been driven by both a re-pricing of risk on loans to households and firms, and

Figure 4.2
New Zealand retail banks' net interest margins
(3-month average, annualised)



Source: GDS, RBNZ *Net Interest Margin Survey*.

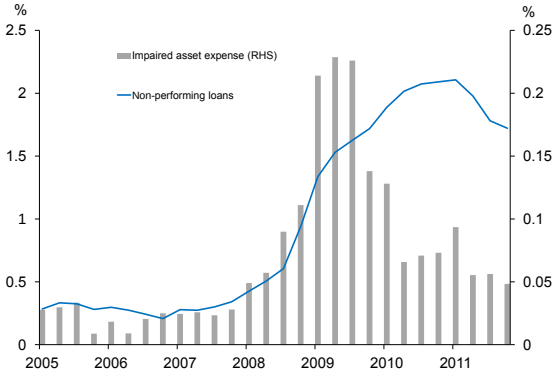
by progressively passing higher funding costs through to borrowers as relatively low margin fixed rate loans roll off.

Typical future rates of return on equity are likely to be somewhat lower as a consequence of the implementation of the new Basel III rules for capital adequacy. These rules require a larger share of equity on bank balance sheets. This reduces the downside risk to individual shareholders, since any losses are shared more widely, and will tend to mean investors are willing to accept a lower rate of return in normal times.

Non-performing loans continue to decline.

Bank asset quality has continued to improve since the last *Report*. Following a peak in early 2011, non-performing loans fell from 2.1 percent of gross lending to 1.7 percent as at December 2011 (figure 4.3).

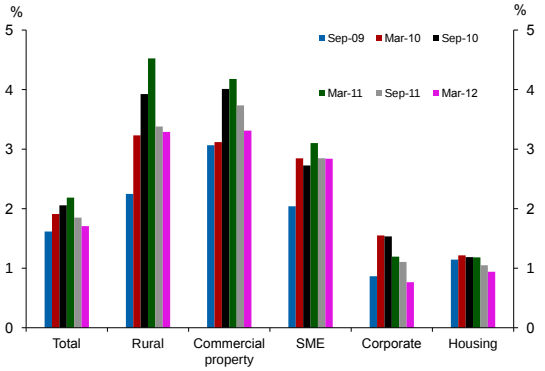
Figure 4.3
New Zealand bank asset quality and impaired asset expense
(percent of lending)



Source: GDS.

The decline in non-performing loans has been fairly broad-based across all categories of lending (figure 4.4), although most evident in sectors with a higher level of overall problem loans, including the rural sector and parts of the business sector (see chapter 3). The improvement in rural sector problem loans has been driven primarily by the dairy sector which accounts for 65 percent of bank rural lending. Asset quality for the sheep and beef sector has also improved, but other parts of the rural sector continue to experience difficult conditions. The system-wide improvement in asset quality has also been materially driven by residential mortgage lending, which accounts for around 55 percent of outstanding bank loans.

Figure 4.4
Sectoral non-performing loans
(percent of sectoral lending)



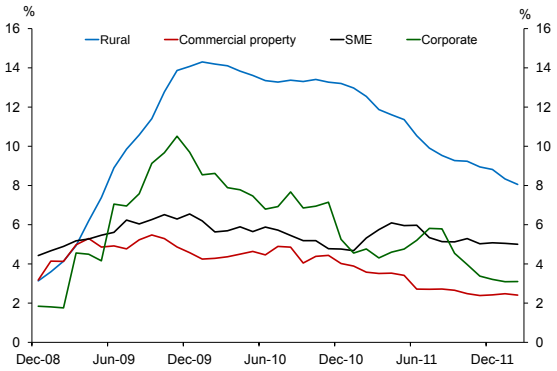
Source: Based on private reporting data from eight registered banks.
Note: Includes impaired and 90-day past due assets. Data are not standardised and definitions may vary across banks.

The improvement in asset quality is likely to continue.

With the ongoing pickup in domestic activity, asset quality is likely to continue to improve. High commodity prices have supported a stabilisation in land prices, a reduction in debt-to-income ratios and an associated decline in problem loans in the rural sector. Current levels of farm income look to be supportive of further improvement in asset quality in the near term. However with commodity prices falling recently and the currency remaining high, a renewed deterioration in asset quality for the rural sector remains a risk.

The stabilisation in property markets – both commercial and residential property – suggests ongoing improvement in the asset quality of these sectors, while the recovery in economic activity should support improvements in the business sector. The decline in watchlist loans (banks' own schedule of loans that have the potential to become non-performing) indicates that this improvement in asset quality is expected to be sustained in the near term (figure 4.5).

Figure 4.5
Sectoral watchlist loans
(percent of sectoral lending)



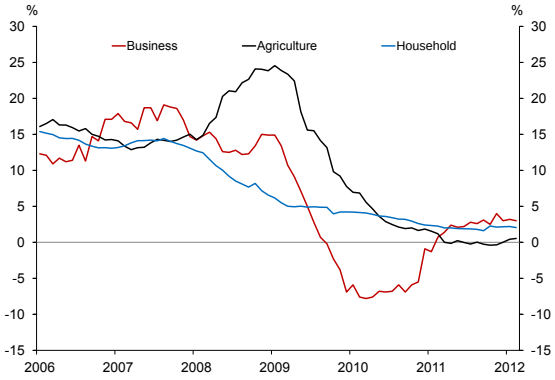
Source: Based on private reporting data from eight registered banks.
Note: Data are not standardised and definitions may vary across banks.

Bank lending growth remains modest, despite a recent pickup.

Aggregate bank lending grew 3.3 percent in the year to February 2012 following annual growth rates close to zero in 2010. Despite this increase, credit growth remains very subdued in comparison with the pre-crisis period, and lower than normal for this stage in the economic cycle.

Modest credit growth has largely reflected an ongoing period of rebalancing on the part of households (figure 4.6). Households have slowed the accumulation of mortgage and consumer debt, reducing overall debt-to-income ratios (see chapter 3). A rising level of retail deposits in the banking system also suggests more cautious behaviour on the part of households.

Figure 4.6
Registered bank lending by sector
(annual percent change)



Source: RBNZ SSR.

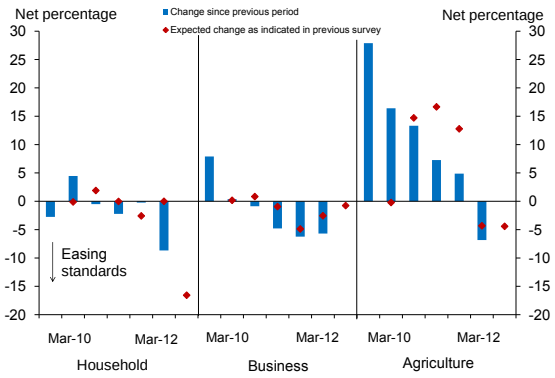
Greater caution and a reduced appetite for debt are also apparent in the agricultural sector. Recent high dairy payouts appear to have been used by some farmers to pay down debt. As a consequence, the demand for bank credit has declined. By contrast, credit growth to the business sector has recovered modestly over the past 12 months.

Banks report easier lending standards.

Results from the Reserve Bank's March 2012 *Credit Conditions Survey* suggest that the overall terms on which banks are offering credit to borrowers have eased over the past six months (figure 4.7). The change has been particularly evident for price-related conditions of credit, with banks reporting increasing competitive pressures in the banking industry. Overall there is little evidence from the survey that funding market pressures in late 2011 and ongoing elevated funding costs have materially affected lending strategies or credit terms.

The March *Survey* suggests credit conditions for households and businesses have continued to ease, and that banks have relaxed their lending standards for the rural sector for the first time in a number of years. Within the business sector, the easing in credit standards has been most evident in lending to corporate and institutional borrowers. Some other sources suggest relatively tight lending standards have persisted for some business borrowers (see box D, chapter 3).

Figure 4.7
Change in New Zealand bank lending standards

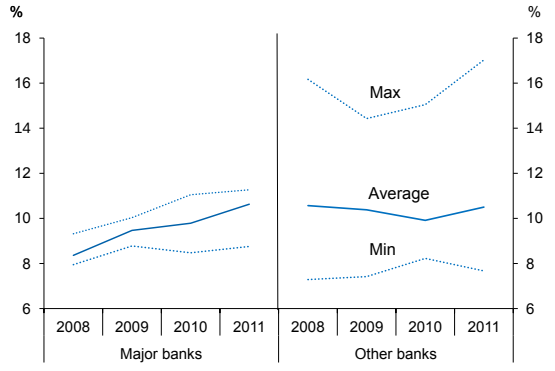


Source: RBNZ *Credit Conditions Survey*.
Note: Net percentage is the percentage of respondents reporting a tightening of lending standards minus the percentage of respondents reporting an easing. Individual bank responses are weighted by market share.

The banking system is well placed to meet new Basel III capital requirements.

The New Zealand banking system is well capitalised with significant buffers to meet unexpected losses (figure 4.8). The system-wide Tier 1 capital ratio has increased by three percentage points to 10.6 percent over the past four years. This improvement has been driven by significant increases in Tier 1 capital compared to very subdued growth in risk-weighted assets.

Figure 4.8
New Zealand bank Tier 1 capital ratios
(as at 31 December)



Source: GDS.
Note: 'Major' banks refers to the New Zealand subsidiaries of the four large Australian banks. 'Other' banks are other locally incorporated banks. Maximum ratio for 'other' banks excludes two small outliers.

As discussed in chapter 6, New Zealand will be adopting a new set of capital adequacy rules for banks based on a tighter definition of capital, together with higher minimum ratios. The New Zealand banking system is well placed to meet the new criteria set out under the Basel III capital regime, including the new 6 percent Tier 1 minimum ratio and the additional 2.5 percent Tier 1 capital conservation buffer.

The buffers within the New Zealand banking system are reinforced by the financial position of the Australian parents of the four largest New Zealand banks. The Australian banking system has also increased its loss-absorbing capacity over the past few years and holds a similar level of high quality capital to the New Zealand banking system.

Bank credit ratings remain strong despite downgrade.

On 1 December 2011 Standard and Poor's downgraded the four major Australian banks and their New Zealand subsidiaries by one notch as a result of bank rating methodology changes that increased the weight put on external debt. This was largely priced into markets, and does not appear to have contributed to funding pressure seen around this time. The four major New Zealand banks are now rated AA- with stable outlook by Standard and Poor's. This rating, and the identical rating of the Australian parent banks, remains very high relative to international peers – as noted in the Reserve Bank of Australia *Financial Stability Review*, just one of the 100 largest global banking groups has a higher rating.[1]

Bank funding positions are comfortably above regulatory minimums.

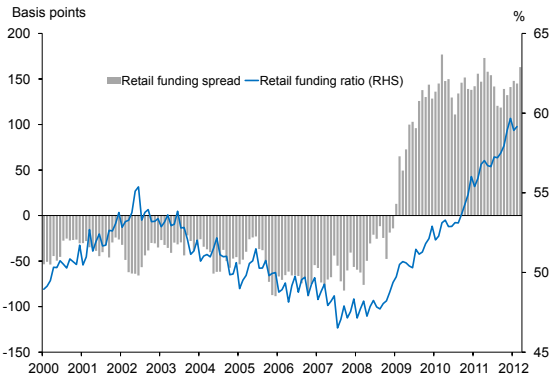
Over the past two years the New Zealand banking system has materially improved its funding position, with a reduced reliance on short-term wholesale market funding, and a shift to more stable funding including retail deposits and long-term wholesale debt. All banks that are currently subject to the prudential liquidity policy have stable

[1] Rabobank Group is the only banking group with a higher credit rating, with a Standard and Poor's rating of AA.

funding well in excess of the 70 percent minimum core funding ratio (CFR) that came into effect in July last year (see figure E1 in box E).

The share of core funding has trended up since the beginning of 2009, reflecting both market and regulatory pressures, including the introduction of the CFR. Banks' efforts to increase their stable funding sources have been supported by an increase in retail deposits from households and firms. This in turn reflects increased precautionary savings, temporary factors such as insurance payouts related to the Canterbury earthquakes, and relatively attractive returns on bank deposits compared to other forms of investment (figure 4.9).

Figure 4.9
Retail funding ratio and retail funding spreads



Source: RBNZ SSR, RBNZ *Retail Interest Rate Survey*.
Note: Retail funding ratio is for locally incorporated banks. The retail funding spread is the spread between the six-month term deposit rate and the 180-day bank bill rate.

This retail deposit growth has helped to meet bank funding needs at a time when conditions in global wholesale markets have been strained. The low level of credit growth in the economy and weak credit demand have also helped insulate banks over the past year from the need to fund balance sheet growth through long-term wholesale funding while the cost of this has been high.

But risks to bank funding remain...

The shift to more stable funding sources has increased the share of term debt in banks' funding, to 16.5 percent in March 2012. As a result, average bank bond issuance was higher over 2008-2011 than before the crisis, despite the slowdown in credit growth and the shutdown in offshore unsecured term debt markets in late 2011. Even during the market shutdown, New Zealand banks were able to issue some domestic unsecured bonds and secured debt in the form of covered bonds.

Adverse financial market conditions were an important factor behind the Reserve Bank's November 2011 decision to defer, by six months, an increase in the core funding ratio from 70 to 75 percent planned for the middle of this year. Forcing banks to rely more heavily on expensive forms of funding in an environment of financial market fragility may have risked an unwanted tightening in credit conditions at a time when credit growth in the economy was already very subdued.

As discussed in chapter 2, global funding pressures have eased recently on the back of policymakers' efforts to address sovereign debt issues in Europe. New Zealand banks have now been able to issue long-term debt in global markets, albeit at a cost that is still very high relative to pre-crisis levels. Nevertheless, developments in global funding markets remain a key risk for the banking system.

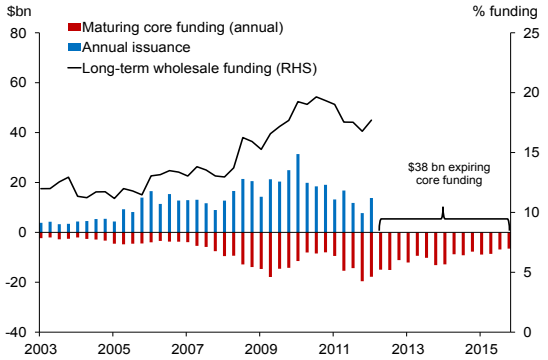
...since banks have a significant portion of core wholesale funding that is set to mature.

Should offshore term debt markets be disrupted again, it is likely that New Zealand banks would again find it difficult to issue unsecured long-term wholesale debt. These pressures are potentially accentuated as around 20 percent of long-term funding will no longer qualify as core funding by the end of 2012 (figure 4.10). By the end of 2015, more than 70 percent of the current long-term wholesale funding – or $38 billion – will no longer qualify.

In a scenario where global term markets are effectively closed to New Zealand banks for a prolonged length of time, banks' core funding buffers would be progressively eroded. This could eventually see some banks under pressure to find alternative sources of stable funding to meet the minimum CFR requirement. While banks would be able to replace some, but not all, expiring core funding with issues of domestic long-term debt and covered bonds, they would likely need to obtain significantly more retail funding.

However, much will depend on the outlook for credit growth over the next few years, and the extent to which the current inflow into bank deposits persists. Should credit demand pick up significantly, banks would find it

Figure 4.10
Long-term wholesale funding, bank bond issuance and expiring wholesale core funding



Source: RBNZ liquidity policy returns, RBNZ SSR, Bloomberg, RBNZ estimates.

difficult to respond by quickly increasing core funding in the current environment. Retail deposit rates could be bid up further if banks compete vigorously for that source of funding.

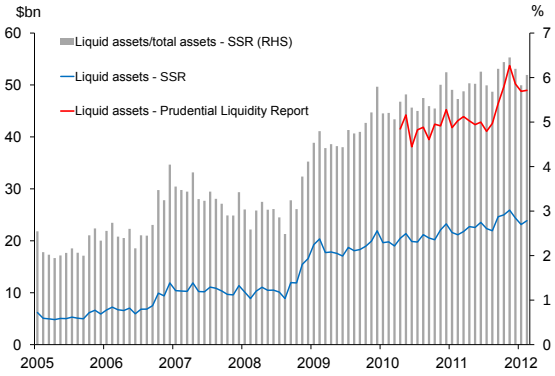
Banks have adequate liquidity buffers.

New Zealand banks have significantly improved their holdings of liquid assets since the onset of the global financial crisis (figure 4.11). The prudential liquidity policy requires locally incorporated banks to hold liquidity buffers that satisfy one-week and one-month mismatch ratios. The mismatch ratios project a bank's net cash outflows over a week and a month respectively against available liquid assets that could be used at short notice to raise cash in the event a bank is subject to a loss of confidence. All banks that are subject to the prudential liquidity policy comfortably hold liquidity buffers above the zero mismatch ratios.

A higher proportion of liquid assets, together with a greater reliance on long-term wholesale funding, will increase the ability of banks to withstand disruptions to funding markets.

An important source of New Zealand dollar liquidity is the Reserve Bank's domestic market operations. A review of domestic market operations is currently under way and covers three broad areas: securities, counterparties and facilities. As part of the review, consideration will be given to the possibility of harmonising the prudential liquidity securities schedule (BS13A) and the equivalent domestic market operations schedule. Consultation with relevant market participants is taking place during the review. The review is likely to be completed by the end of 2012.

Figure 4.11
New Zealand banks' liquid asset holdings

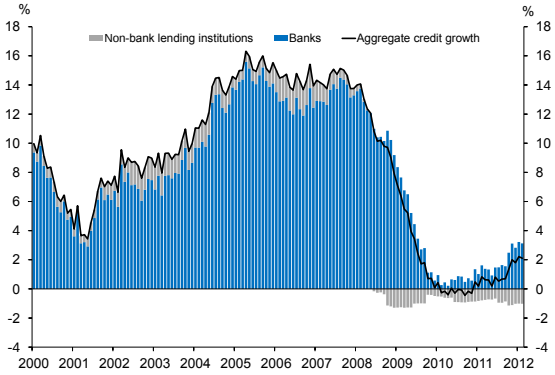


Source: RBNZ SSR, RBNZ liquidity policy returns.
Note: The SSR definition of liquid assets comprises currency, government securities and claims on the Reserve Bank. The Reserve Bank's prudential liquidity policy also includes a broad range of non-government securities rated BBB- and higher as liquid assets.

4.2 Non-bank sector

The non-bank lending sector faces ongoing pressures to consolidate in the wake of failures since 2006, particularly in the finance company sector. At its height, the non-bank lending sector had total assets of about $25 billion, and accounted for nearly 8 percent of total lending intermediated by financial institutions. Today, the sector is half that size, and accounts for just 3 percent of total credit outstanding. As lending from the sector continues to contract (figure 4.12), the relative role of the non-bank sector is still diminishing.

Figure 4.12
Credit growth by lending sector
(contribution to total annual growth)

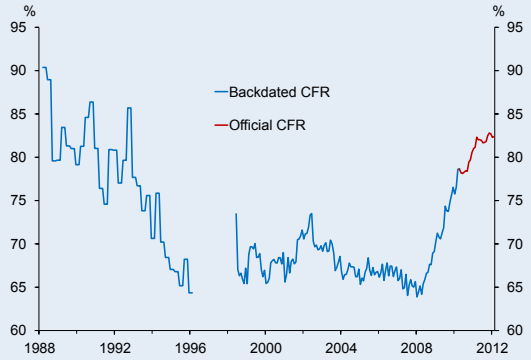


Source: RBNZ SSR.

Box E
Historical movements in bank core funding ratios

In April 2010 the Reserve Bank introduced a prudential liquidity policy for locally incorporated banks. This policy includes, among other things, a minimum core funding ratio (CFR) that requires banks to meet a minimum share of their funding from retail deposits, long-term wholesale funding or capital. A new liquidity survey was also implemented to assess compliance with this prudential requirement. While the exact data needed to construct the core funding ratio were not available before April 2010, this box presents an estimate of this ratio going back to 1988 using a range of data sources (figure E1).

Figure E1
Core funding ratio



Source: RBNZ liquidity policy returns, RBNZ estimates.
Note: No data are available for the period from February 1996 to June 1998.

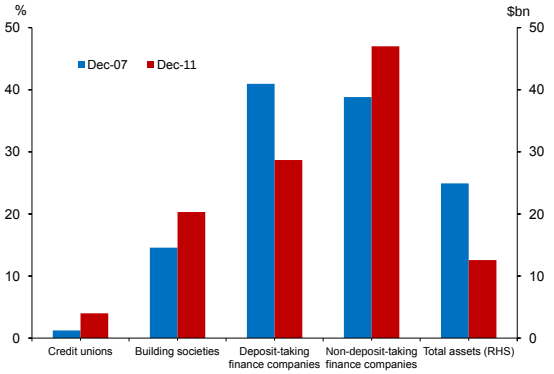
The backdated estimate demonstrates that the level of core funding in the banking system declined substantially through to the mid 1990s. Following deregulation of the financial system and freeing up of the capital account during the mid-1980s, banks increasingly substituted away from retail deposit funding to short-term wholesale funding – particularly through the US commercial paper market. Before deregulation, banks were almost entirely retail funded and would have had CFRs in excess of 100 percent.

Over the 1998-2008 period, there was little change in the CFR. During periods of strong credit growth, such as from 2003-2008, banks increasingly funded via short-term markets due to the low cost and ready availability of funding, despite the growing liquidity risk.

The experience of the global financial crisis highlighted the vulnerability posed by a reliance on short-term funding. Since then, banks have increased the shares of both retail and longer-term wholesale funding (see discussion in main text). While the move away from short-term wholesale debt began before the introduction of the minimum CFR – reflecting both market pressure and a heightened appreciation of the refinancing risks of this funding source – the CFR provides a floor which will underpin banks' use of stable funding sources and will prevent erosion of funding standards going forward. Average bank CFRs are now at a similar level to those prevailing at the start of the 1990s.

The non-bank lending sector includes deposit-taking finance companies, building societies and credit unions, which together are regulated by the Reserve Bank as non-bank deposit-takers (NBDTs).[2] In addition, it includes non-deposit-taking lenders (which are not subject to Reserve Bank regulation). The bulk of failures have been in the deposit-taking finance company sector and this sector's share of total non-bank assets has fallen significantly over the past four years (figure 4.13). Building societies and credit unions by contrast, have proven more resilient, increasing their share of total non-bank assets despite one

Figure 4.13
Non-bank lending institutions' assets
(share of total assets)



Source: RBNZ SSR.
Note: Total assets for the non-bank lending sector also include the PSIS until September 2011.

[2] The NBDT sector also included the PSIS until it registered as a bank in late 2011 (Co-operative Bank Ltd).

of the larger institutions leaving the sector and registering as a bank (SBS Bank).[3]

The building society and deposit-taking finance company segments are both now dominated by a single institution (the Heartland Building Society and UDC Finance respectively). Asset quality has generally improved in the NBDT sector, while capital buffers generally appear adequate. The NBDT sector has largely withdrawn from property development lending – a source of significant losses for the sector in recent years.

4.3 Insurance

The insurance sector faced two significant challenges in 2011 – the Canterbury earthquakes, and the transition to the new prudential regime for insurers. The 22 February 2011 earthquake alone was one of the largest aggregate insurance claims ever, due to very high insurance coverage in New Zealand. While some individual insurers have struggled with these challenges, overall the sector has coped well.

All existing insurers must now be licensed.

The Insurance (Prudential Supervision) Act 2010 (the Act) was passed in September 2010, and included a transition period to 7 September 2013 to phase in the insurance prudential regime. All insurers carrying on insurance business in New Zealand had to be licensed by 7 March 2012. There are some exceptions, for example both ACC and EQC are exempted as Crown entities.

At 7 March 2012 the Reserve Bank had issued 99 provisional licences, four s245 run-off licences (these require the insurer to have settled or transferred all their insurance liabilities by 7 September 2013) and three full licences.[4] A register of licensed insurers is contained on the Reserve Bank website.[5] As anticipated, during this provisional licence phase some insurers made commercial decisions to restructure or exit. By 7 September 2013 all insurers must have a full licence.

Before the Act there was no comprehensive register of insurers in New Zealand. Our investigations in 2010 identified 149 potential insurers, and subsequently eight further insurers have made contact with the Reserve Bank including some newly created insurers arising from corporate restructures. The total number of insurers that might have required a licence was therefore 157.

The number of insurers that actually required a licence at 7 March 2012 was 108. A summary of the licensed insurers at 7 March 2012 is shown in table 4.1 below.

The main reasons some insurers did not require a licence are shown in table 4.2 below.

It appears that a total of seven insurers exited the market primarily due to the Act, and in aggregate they comprised about 0.02 percent of the market as measured by annual premiums. With the exception of one specialist insurer which insures assets of its shareholders, 16 of the 17 insurers that made changes in order to not be an insurer are very small and in aggregate they comprise less than 0.01 percent of the market as measured by annual premiums.

Table 4.1
Insurers with licence at 7 March 2012 by type

Type of insurer	Number
Life insurer (predominantly)	30
Non-life insurer (predominantly)	56
Captive insurer	11
Reinsurer	8
Total licensed insurers at 7 March 2012	105
Unlicensed insurers (1 exempted & 2 issued a licence shortly after 7 March 2012)	3
Former insurer with licence issued and cancelled before 7 March 2012	1

[3] When the Southland Building Society left the sector in 2008 it accounted for 9 percent of the total assets of the non-bank lending sector.

[4] One insurer was issued a s245 run-off licence and subsequently completed its exit before 7 March and had its licence cancelled.

[5] http://www.rbnz.govt.nz/finstab/insurance/register/

Table 4.2

Reason a licence was not required

Reason a licence was not required	Number
Not insurer requiring licence, upon investigation	6
Completed exit unrelated to the Act (e.g., run-off commenced prior to 2010)	11
Restructures – transfer to another insurer	7
Changes made in order to not be an insurer (e.g., very small mutual making benefits discretionary)	17
Exit due to the Act – run-off, cancel or voluntary liquidation	7
Insurer failure[6]	1
Total insurers not requiring a licence	49

The requirements for a full licence are much more extensive than for a provisional or run-off licence, and the Reserve Bank is currently working through the remaining gaps on the path to compliance.

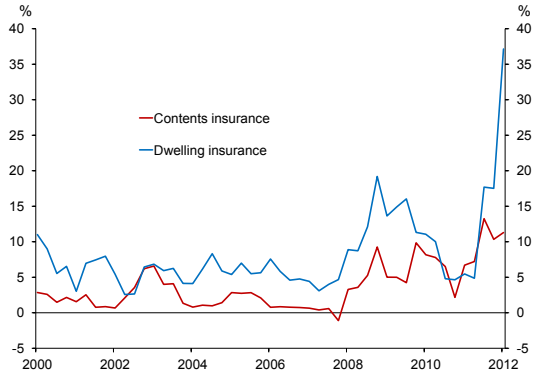
The Canterbury earthquakes continue to affect insurance markets.

Aftershocks are continuing to occur in Canterbury and continue to affect some insurance markets. Availability of new property insurance remains limited in and around Christchurch, and nationwide there have been insurability questions on high risk properties. As well as significant premium increases (figure 4.14), some insurers have made changes to reduce their exposure to future catastrophic events – by increasing excesses, changing how limits operate and moving away from uncapped replacement cover.

Figure 4.14

Residential insurance premiums

(annual percent change)



Source: Statistics New Zealand.
Note: These categories include the EQC levy and reflect the tripling of the levy in February 2012.

Insurers' estimates of their claims costs of the Canterbury earthquakes have increased further in the last six months, and now total more than $30 billion. There remains considerable uncertainty in these estimates as a low proportion of claims have been settled and little of the rebuild has started. Since the previous *Report*, additional insurers have been supported by capital injections from their parents. Some insurers are exiting the industry. Ansvar entered run-off at 31 December 2011 (and was renamed ACS (NZ) Limited), and Zurich has ceased to offer earthquake cover in New Zealand south of Waikato. In addition, a couple of minor reinsurers have indicated a desire to exit New Zealand.

From February 2012 EQC levies have been tripled to 15c per $100 of cover. A review of EQC is under way, which may affect how insurance cover of New Zealand natural disasters is provided in the future. Similar reviews following the 2011 floods in Australia resulted in changes to the provision of flood insurance in Australia. A significant proportion of the general insurance market has reinsurance renewals under way for a 1 July 2012 effective date. A further increase in reinsurance premiums is likely, on top of the very large increases experienced last year.

Following financial difficulties in the wake of the Canterbury earthquakes, the ongoing operations of AMI have been sold to IAG for $380 million. The Government will support claims in respect of all Canterbury earthquakes which occur up until the purchase is settled, through a 100 percent ownership of 'old' AMI, now called Southern Response Earthquake Services Limited. The Reserve Bank approved the purchase and restructure on 5 April 2012.

[6] The failed insurer was Western Pacific Insurance Limited. Note that 'old' AMI has received a provisional licence.

While some repair and rebuild activity is under way the volumes to date have been low due to delays caused by aftershocks (including 23 December 2011 and 2 January 2012), insurance availability, and updates to building codes and other requirements. As at 31 March 2012, insurers had paid out $7.6 billion in claims – comprising $4.6 billion from private insurers and $3 billion from EQC.

5 Payment and settlement systems

New Zealand's financial market infrastructure continues to operate effectively although two recent incidents have disrupted retail payments. In the more serious of these incidents, technical issues disrupted the exchange of payments between banks and delayed the posting of transactions to customer accounts.

New arrangements for retail payments reduce settlement risk.

Over recent months there has been a significant change to the way that retail payments are exchanged between banks and settled.[1] The Settlement Before Interchange (SBI) arrangements have been fully operational since late February 2012 and are designed to address key risks in the retail payment system.

In particular, the new arrangements reduce settlement risk – the risk that one payment system participant will not meet its payment obligations to another participant as expected. The Reserve Bank has had a longstanding concern about the threat to financial stability represented by this risk and therefore welcomes moves by the payments industry to reduce it.

The SBI arrangements change the way that retail payments are exchanged and settled between banks. Previously net bilateral obligations would be settled the following business day, leaving at least seven hours during which banks faced the risk that they would not receive full payment when it was due (liquidity risk) or at all (credit risk).[2] Under SBI, participants use SWIFT, the international financial messaging system, to directly exchange files of retail payment instructions between themselves several times a day. SBI reduces inter-participant settlement risk by having transactions settled before payment details are exchanged.

Retail payment system participants also faced the need to update the ageing technology used to exchange retail payments with each other. The design and implementation of SBI was undertaken with a view to upgrading the technology used to exchange payments between banks and to reduce settlement risk. The New Zealand retail payment system now uses up-to-date technology and has positioned itself among the best in the world in terms of managing settlement risk.

While SBI addresses inter-participant settlement risk and technology risk, other risks remain important in relation to retail payments and will need to be managed on an ongoing basis by SBI participants and the Reserve Bank as operator of the Exchange Settlement Account System (ESAS):

- Liquidity risk – SBI participants need to manage their intra-day liquidity needs. With interchange occurring several times a day and settlement required on each file of payments exchanged, banks can no longer rely on the netting impact on liquidity needs being as great as when all of the day's transactions were netted to determine a single end of day settlement obligation. Participants also face the possibility that another participant will submit a file that requires the receiver of the file to pay.

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

[2] A more detailed description of the risks associated with the previous arrangements is provided in Chan, P and S Irvine, (2008) "The Reserve Bank's payment system oversight role applied to settlement risk in the retail payment system" Reserve Bank of New Zealand *Bulletin*, 71:4, pp 29-39.

- Operational risk – SBI increases the reliance of the New Zealand financial system on SWIFT, and there have been some operational issues recently. However, operational risks are mitigated to some degree by contingency arrangements that enable retail payments to be interchanged using the Reserve Bank owned and operated securities settlement system, NZClear. ESAS availability and ESAS contingency arrangements also become more important, as interchange of payment instructions is not completed until settlement has occurred in ESAS.

Implementation of the SBI arrangements was completed as planned and the arrangements have so far worked well. On average more than 400 SBI-related transactions have been settled in ESAS each day since full implementation. With the exception of one significant disruption, settlement has otherwise largely occurred without incident and no liquidity pressures have been evident. The Reserve Bank allowed for the possibility of liquidity pressures during the implementation phase by temporarily reducing the cost to banks of accessing funds via the overnight reverse repurchase facility, but banks have not had to use this facility.

The one significant incident was the result of disruption to the exchange of payments between banks via SWIFT on 24 April. While ESAS continued to operate normally and the banks successfully invoked contingency arrangements (via NZClear), there were significant delays to the exchange of payment instructions between banks and to the posting of transactions to customer accounts. The Reserve Bank considers this to have been a serious incident, which we will be thoroughly reviewing.

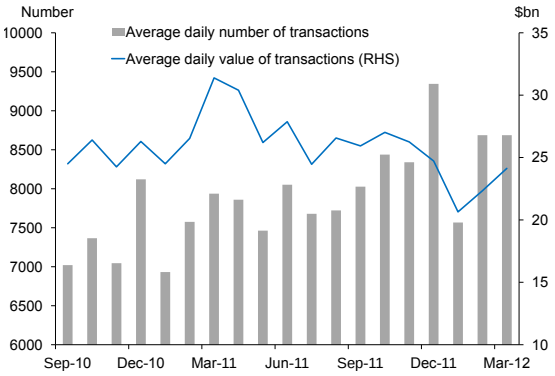
Retail payments were also disrupted in a separate incident when problems with Westpac's internal processing system delayed the exchange of some payments.

Wholesale payment and settlement systems continue to operate well.

All wholesale payment and settlement systems have generally functioned satisfactorily in recent months. Payment volumes have been well within established system parameters.

Although SBI was fully operational for the whole of March, the average number of transactions processed each day by ESAS was about the same as in February, reflecting activity in financial markets, which tends to be the major driver of transaction volumes (figure 5.1).

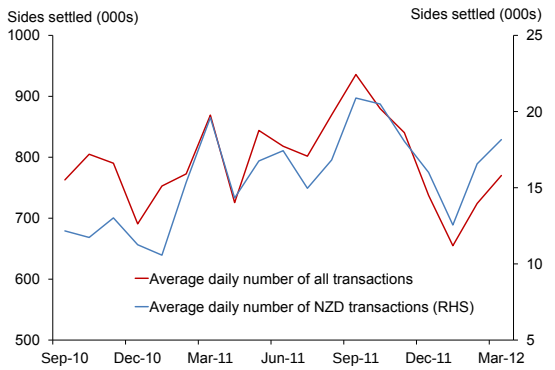
Figure 5.1
ESAS transactions



Source: RBNZ.

Similarly, activity in the CLS system increased in March but has been below recent peaks reflecting reduced activity in international foreign exchange markets (figure 5.2). All key systems have also exhibited a high degree of reliability allowing transactions to be settled in a timely fashion.

Figure 5.2
CLS transactions



Source: CLS Bank.

High value retail system transactions remain an issue...

Although the successful implementation of SBI has addressed settlement risk, other features of the payment and settlement landscape remain important areas of focus for the Reserve Bank.

The Reserve Bank has previously highlighted the potential problems caused by high value transactions being settled through the retail payment system rather than directly in ESAS. The Reserve Bank intends to revisit this issue, particularly the effect this practice can have on the value of transactions awaiting interchange and settlement at any one time (i.e., the liquidity implications) as well as the consequent implications for the possible use of Open Bank Resolution should a participant in the retail payment system fail.

...as does open entry to the payment system.

The Reserve Bank will also take a close interest in the ability of new participants to enter the New Zealand payment system. Recent changes in the retail payment system have, in part, been designed to help facilitate the entry of a broader range of participants into the system. Payments NZ Limited was established to encourage the development of a more open and innovative system and in particular to facilitate the entry of non-banks. The introduction of SBI supports this goal. Existing participants will no longer have to be as concerned about the potential settlement risk involved in letting new participants into the system.

The Reserve Bank would be concerned if these changes did not prove sufficient to allow other parties to participate directly in the payment system. We therefore plan to monitor developments, engage with relevant stakeholders and respond appropriately if it becomes evident that significant barriers to entry exist.

Global work on central derivative clearing continues.

The previous *Report* noted that the Reserve Bank would be monitoring developments as other countries move to meet the G20 commitments to have standardised over-the-counter (OTC) derivative contracts cleared through central counterparties (CCPs) by the end of 2012 and to report such contracts to trade repositories. While various countries have taken steps towards meeting these commitments, the Financial Stability Board (FSB) has expressed doubts that all G20 members will be in a position to meet the commitments by the deadline.

It appears that countries outside Europe and the US have been waiting for laws to be finalised in these jurisdictions before moving to introduce legislation themselves.[3] Various countries and international groups have also identified a number of areas of concern including:

- ensuring fair and open access to central counterparties either as direct participants or as indirect participants clearing derivatives via another institution that is a member of the CCP;
- avoiding the market fragmentation and regulatory arbitrage that may come about if there is a proliferation of CCPs due to individual countries seeking to establish their own clearing house;
- the need to establish co-operative oversight arrangements for CCPs operating in several jurisdictions;
- the recognition by regulators of CCPs based in other countries; and
- ensuring that central banks have access to relevant information in trade repositories.

These issues are all important for New Zealand. The Reserve Bank will therefore continue to monitor developments and work to ensure that New Zealand banks have access to the appropriate payments infrastructure.

[3] The Australian Government recently released a consultation paper seeking views on a proposed regulatory framework. The consultation paper is available at: http://www.treasury.gov.au/ConsultationsandReviews/Submissions/2012/Over-the-counter-derivatives-commitments-consultation-paper

6 Recent developments in financial sector regulation

In March 2012 the Reserve Bank issued a consultation paper on further elements of the Basel III capital adequacy requirements. These refer to the operation of the conservation buffer, the countercyclical buffer and minimum requirements to ensure that all classes of capital instruments fully absorb losses at the point of non-viability ('loss absorbency'). This consultation follows the November 2011 consultation on the Reserve Bank's proposals for implementing the core Basel III capital measures relating to capital ratios, the definition of capital and the leverage ratio. The Reserve Bank will soon be releasing a summary of submissions on the Basel III proposals, together with any modifications to the initial proposals.

All registered banks with retail funding of more than $1 billion will be required to pre-position their systems for open bank resolution (OBR) by 30 June 2013. The Reserve Bank is also proposing a legislative framework for the issuance of covered bonds. The purpose of the framework is to provide legal certainty for the treatment of assets in the cover pool if an issuing bank becomes insolvent.

Other elements in the Reserve Bank's regulatory work programme include extending the prudential liquidity policy to overseas bank branches in New Zealand; consultation on draft regulations for statutory funds for licensed life insurers; and issuance of the Anti-Money Laundering and Countering Financing of Terrorism programme guidelines. Meanwhile, the Non-bank Deposit Takers Bill is under consideration by the Finance and Expenditure Select Committee.

6.1 Basel III

'Basel III' is a comprehensive set of reform measures, developed by the Basel Committee on Banking Supervision, to strengthen the regulatory framework for the banking sector. An important part of Basel III is the new global regulatory standards for bank capital adequacy.[1]

In November 2011 the Reserve Bank issued a consultation paper on implementation of Basel III capital adequacy requirements in New Zealand. That paper set out the Reserve Bank's proposals for implementing the core Basel III capital measures relating to capital ratios, the definition of capital and the leverage ratio. These proposals are summarised in the November 2011 *Report*.

In March 2012 the Reserve Bank issued a consultation paper on further elements of Basel III capital adequacy requirements.[2] The main points of this paper are outlined below.

The conservation buffer is designed to ensure banks maintain a buffer of capital over the minimum capital ratio requirement that can be used to absorb losses during periods of economic or financial distress. The consultation paper suggested that a bank operating within the buffer will be required to fully restrict distribution of earnings to the extent necessary to restore capital above the buffer. This differs from the Basel III framework where constraints on the distribution of earnings vary depending on the extent to which the buffer is drawn upon.

[1] Chapter 6 of the November 2010 *Report* provides a summary of the Basel III standards, while chapter 6 of the May 2011 *Report* outlines the principles that the Reserve Bank has used to guide its implementation of Basel III in New Zealand.

[2] Information about the implementation of Basel III in New Zealand is available on the Reserve Bank's website here: http://www.rbnz.govt.nz/finstab/banking/4572979.html. The website contains the November 2011 and the March 2012 consultation papers.

The Reserve Bank will have the discretion to apply time limits on banks operating within the buffer range and will require banks operating within the buffer range to submit a capital plan for rebuilding the buffer. The Reserve Bank would expect the capital plan to show prudent management of costs and be consistent with its specified time frames.

The Basel III framework envisages that banks would be required to hold a countercyclical capital buffer when national authorities judge that excess private sector credit growth is leading to a build-up of system-wide risk. The buffer would then be able to be released when the credit cycle turns down and loan losses accumulate, helping to reduce the risk of a sharp contraction in the availability of credit. Following public consultation, the Reserve Bank will work out the specific calibration of the countercyclical capital buffer appropriate for New Zealand circumstances, including the notice period before the buffer requirement would come into effect.[3] The focus on excess aggregate credit growth means that the buffer is likely to be deployed only infrequently.

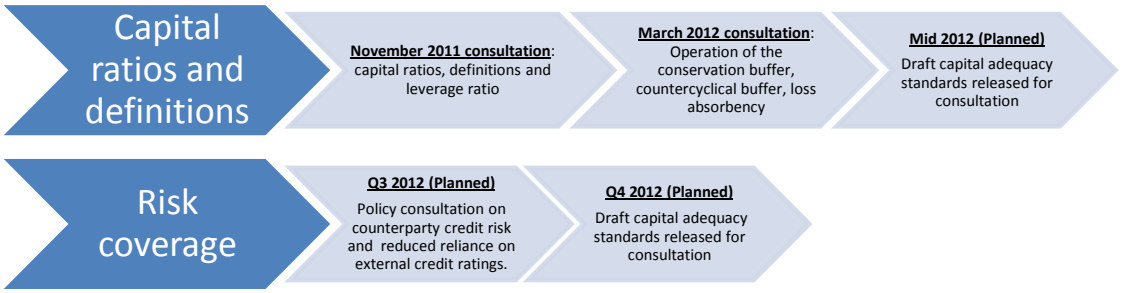
The Reserve Bank plans to adopt Basel III requirements that ensure all forms of regulatory capital are capable of absorbing losses to support the viability of a distressed bank. In particular the Reserve Bank plans to require banks to include in the terms and conditions of all non-common equity regulatory capital instruments a provision that requires such instruments to convert into common equity upon the occurrence of a trigger event. The trigger event would be when a bank is, in the opinion of the Reserve Bank, non-viable. Also, for a bank in statutory management, the statutory manager could trigger the requirement.

Most banks' capital ratios comply with, or are near to, the new standards. However, some banks will need to replace non-common equity capital instruments that do not comply with Basel III. Consequently some banks will need to raise new regulatory capital to comply with the new standards. In recognition of this, the March 2012 consultation paper proposed that the conservation and countercyclical buffers will not apply until 2014, and that a three-year phase-out period be allowed for existing capital instruments that are not recognised under Basel III. Under the Reserve Bank proposals, all other elements of the Basel III framework will apply from 1 January 2013.

The Reserve Bank has made some initial decisions in response to some key issues raised in submissions. These decisions will respond to concerns about requirements for non-common equity Tier 1 capital instruments, provide for closer alignment of our loss absorbency requirements with the Australian Prudential Regulation Authority, and provide more time for non-qualifying capital instruments to be phased out in an orderly fashion.

A summary of the submissions from November and March, the Reserve Bank response to the issues raised by submitters, and a cost-benefit analysis of the Basel III capital proposals will be issued shortly. Following that, the Reserve Bank will consult on new capital adequacy

Figure 6.1
Timing of proposed Basel III consultation



[3] This requirement is intended to apply to all registered banks that operate in New Zealand. In the case of branches of overseas incorporated banks, reciprocity arrangements would need to be considered with other jurisdictions.

standards based on its Basel III proposals and taking into account submissions received on the November 2011 and March 2012 consultation papers. The Reserve Bank expects to consult on the draft standards around the middle of this year.

6.2 Counterparty credit risk

The Reserve Bank has also begun to review the Basel III requirements for counterparty credit risk (CCR). CCR applies to over-the-counter derivative and security financing transactions. It differs from normal credit risk in that the exposure is subject to changes in underlying market factors and needs to be estimated. The Reserve Bank's existing *Banking Standards* incorporate the simplest of the three Basel methods for calculating the CCR capital charge, which is the current exposures method.

The most material amendment Basel III makes is the introduction of an additional charge, called the credit valuation adjustment, to take account of the potential mark-to-market losses from the deterioration of a counterparty's creditworthiness. Basel III also requires banks to identify and manage instances of wrong way risk – i.e., if a bank has an exposure to instruments for which there is a legal connection between the counterparty and the underlying instrument, then a higher CCR capital charge is calculated.

These amendments are aimed at enhancing risk coverage, an objective the Reserve Bank supports. The Reserve Bank will consult on the implementation of the Basel III CCR requirements later this year.

6.3 Open Bank Resolution

The Open Bank Resolution (OBR) policy requires all registered banks with retail funding of more than $1 billion to 'pre-position' their internal systems, in order to have an early release mechanism where customers are able to access their accounts the day after a bank fails. OBR thus provides a failure resolution option whereby the bank is open for business the day after an insolvency event. When it reopens the restructured bank would have a government guarantee on the available portion of deposits and other liabilities, and normal access to liquidity facilities from the Reserve Bank.

By pre-positioning, banks will be able to freeze a portion of funds held in customers' accounts that would be available to absorb losses not covered by the bank's capital, while providing next day access to the majority of customer funds. Banks are working on the technical requirements to meet the OBR policy objectives. For the most part, the technical requirements relate to IT functionality. The Reserve Bank's cost-benefit analysis will be released shortly, and points to a significant net benefit from the OBR policy.

The Reserve Bank's initial proposal was to have the OBR policy in place by the end of 2012. Following discussions with banks, the Reserve Bank will require all registered banks with retail funding of more than $1 billion to have the OBR functionality in place by 30 June 2013.

6.4 Large exposures

A large exposure is an exposure to a single counterparty that is large in relation to the balance sheet of the lending entity. Large exposures can be a key source of risk, as failure of a large counterparty can threaten the solvency of the lending entity. Banks should have management information systems that enable the timely identification of large exposures or portfolio concentrations.

The present framework for bank regulation in New Zealand does not set limits on banks' large exposures. Rather, exposures must be identified in disclosure documents and directors are responsible for ensuring that the bank has systems in place to monitor concentration risk.

The Basel Committee is currently reviewing the Core Principles for Effective Banking Supervision as they relate to large exposures. Also, a survey of banks' large exposures was undertaken by the Reserve Bank last year. The survey showed that banks in New Zealand have sound practices for identifying and measuring portfolio concentrations and have developed strategies to mitigate the risks arising from these large exposures, such as by

holding collateral. Although the Reserve Bank does not at this stage consider changes are warranted to its approach to regulation of banks' large exposures, it is considering increased large exposure reporting from banks as part of its broader review of statistical and prudential data collection (see section 6.11).

In relation to non-bank deposit taking institutions, limits on large exposures have in many cases been a requirement imposed in their trust deeds. However, this has not uniformly been the case and there has not been a standard approach to imposing such limits. The Non-bank Deposit Takers Bill, which was introduced last year, will give the Reserve Bank the power to impose requirements relating to the concentration of credit exposures as a condition of licence.

6.5 Covered bonds

The Reserve Bank expects legislation on covered bonds to be introduced to the House of Representatives shortly. The proposed Bill provides a legislative framework for the issuance of covered bonds by New Zealand banks. A covered bond is a dual recourse debt security under which bond holders have both a claim over the issuing entity and a secured interest over a specific pool of assets, called the cover pool.

The main purpose of the legislative framework is to give investors certainty as to their ability to enforce their security over the cover pool assets. The framework has the following main elements:

- a requirement that covered bond programmes be registered with the Reserve Bank;
- a requirement that banks notify the Reserve Bank when covered bonds are issued;
- a requirement that cover pool assets be owned by a special purpose vehicle that is a registered company; and
- a requirement that an asset pool monitor be appointed to each cover pool.

The Reserve Bank Act 1989 and the Corporations (Investigation and Management) Act 1989 will be amended to ensure that, should an issuing bank fail, the resolution process for the bank does not include the special purpose vehicle holding the cover pool under a registered issue of covered bonds.

6.6 Core funding ratio

The Reserve Bank brought in a minimum core funding ratio (CFR) in April 2010, requiring banks to reduce their reliance on short-term wholesale funding. The minimum was initially set at 65 percent, and the Reserve Bank stated its intention to raise the minimum in two steps, to 70 percent on 1 July 2011 and to 75 percent on 1 July 2012, subject to further analysis and market conditions at the time. The first increase went ahead as planned. However, in view of the worsening conditions in offshore funding markets in late 2011, the Reserve Bank announced in the November 2011 *Report* that it was postponing the second increase in the minimum CFR by six months, to 1 January 2013. Since then, there has been a material improvement in funding market conditions and banks have built comfortable buffers over minimum CFR requirements. The Reserve Bank now confirms its intention to raise the CFR to 75 percent on 1 January.

6.7 Branch liquidity

Most locally incorporated banks have been subject to the standard minimum ratios of the Reserve Bank's liquidity policy and its guidelines on liquidity risk management, since 1 April 2010. In January 2012 the Reserve Bank issued a consultation paper setting out its views on how the rationale for the liquidity policy applies to the overseas bank branches in New Zealand, and how the policy requirements should be adapted in their case. The main proposals are that the policy's minimum one-week and one-month mismatch ratios should be imposed on the branches, with minor adaptations. The paper argues that there would be little or no benefit in applying the policy's minimum core funding ratio, or its risk management guidelines, to the branches. The consultation closed on 30 March, and the Reserve Bank is currently considering submissions.

6.8 Non-bank Deposit Takers Bill

The Non-bank Deposit Takers Bill (the Bill) had its first reading in August 2011. It is currently being considered by the Finance and Expenditure Select Committee.

The Bill incorporates all the prudential requirements that are currently in place under Part 5D of the Reserve Bank of New Zealand Act 1989, as well as introducing:

- licensing;
- fit and proper requirements for directors and senior officers;
- requirements to obtain the Reserve Bank's consent for significant changes of ownership or control; and
- new powers for the Reserve Bank in relation to issuing directions and gathering information.

The Bill is expected to be enacted by the second half of 2012, with a 12-month transition period for existing NBDTs.

6.9 Insurance

On 7 March 2012 all existing insurers who met the definition of 'carrying on insurance business' in the Insurance (Prudential Supervision) Act 2010 (the Act) were required to be provisionally licensed, while all new insurers must be fully licensed before commencing business. All insurers are transitioning to full compliance with the Act, which must be completed by 7 September 2013. Requirements for a full licence are much more extensive and some further mergers and restructuring are likely in the period before the full licensing requirement.

During late 2011 and early 2012 the Reserve Bank released draft regulations for statutory funds for licensed life insurers. The Act requires life insurers to have at least one statutory fund. The purpose of the statutory fund is to separate out assets to meet long-term liabilities. Policyholders' interests are safeguarded by ensuring as far as possible that there are sufficient assets in the statutory fund to match estimated policy liabilities and that statutory fund assets are used only for the purpose of meeting liabilities of the statutory fund.

The statutory fund regulations relate to the following areas:

- the allocation of profits and losses to the statutory fund;
- the distribution of retained profits and shareholders' or members' capital; and
- the amount to be transferred to the statutory fund on its establishment.

The statutory funds regulations are the final major policy component required for the Act at this time.

As part of the licensing process the Reserve Bank released a *Solvency Return* for completion by insurers. All insurers were required to complete this return by 31 March 2012, except those whose business will run off before 7 September 2013. (Those insurers are not expecting to need a full licence since their liabilities are expected to be extinguished before that date.) New Zealand branches of overseas insurers were asked to prepare this first return using New Zealand solvency standards on a one-off basis (supplemented by separate evidence of the compliance of the company as a whole with the home country's solvency/capital adequacy regime).

The solvency return will give the Reserve Bank up-to-date information about the solvency position of licensed insurers and allow for closer monitoring of the financial position of licensed insurers. These returns have been received and are currently being assessed.

Over the first half of 2012 the Reserve Bank also released the *Solvency Standard for Non-life Insurance Business in Run-off* for public consultation. A separate solvency standard for non-life insurers in run-off is required to ensure these insurers have sufficient capital available to meet the liabilities while the business runs off. This standard specifies the capital requirements for licensed non-life insurers in run-off, methods for calculating and reporting solvency and related matters for a licensed insurer in run-off, and disclosure of solvency related information.

6.10 Anti-money laundering

In December 2011, the three Anti-Money Laundering and Countering Financing of Terrorism Act (AML/CFT) supervisors – the Reserve Bank, the Department of Internal Affairs and the Financial Markets Authority – jointly issued the *AML/CFT Programme Guideline*.

An AML/CFT programme comprises a reporting entity's internal policies, procedures and controls to detect money laundering and financing of terrorism, and to manage and mitigate the risk of either occurring in their business. It is based on the reporting entity's *Risk Assessment*. This guideline is designed to assist reporting entities to develop their AML/CFT programme.

In addition, in February 2012 the Bank issued the *Insurance Business Coverage Guideline*. This sets out the Reserve Bank's views on certain exemptions and carve-outs established by the Anti-Money Laundering and Countering Financing of Terrorism (Exemptions) Regulations 2011 and helps clarify how they apply to insurance business.

The Reserve Bank has also begun a formal outreach programme with the entities that it will be supervising. This will continue in the lead-up to 30 June 2013, in order to help them understand both their AML/CFT obligations and the Reserve Bank's expectations as their supervisor.

6.11 Prudential and statistical data collection

The Reserve Bank conducted a review of registered bank public disclosure requirements in 2009, with a focus on the quantity of regulatory information in *General Disclosure Statements*. In 2011, there was a material reduction in the amount of data required to be publicly disclosed and in the frequency of disclosure of certain data items. These changes were predicated on enhancing and extending the application of private prudential reporting that the Reserve Bank had implemented with major banks late in 2007 as the global financial crisis began to unfold.

The Reserve Bank has been reviewing its statistical and prudential registered bank data collections in this light and is consulting with banks and others about them. The first objective of the review is to ensure users, including the Reserve Bank, have the high quality data they require for their purposes. A second major objective is to improve the efficiency of data collection and to reduce the reporting load placed on registered banks.

The consultation document presents a high level integrated data framework that will meet international statistical financial reporting needs as well as domestic prudential and statistical requirements. The framework facilitates use of standardised data definitions that will enable the Reserve Bank to a large extent to use the same data item collected for both statistical and prudential purposes. This will assist significantly in reducing banks' reporting load, while at the same time delivering higher quality data.

Graphical appendix[1]

International

Figure A1a

Real GDP growth

(annual percent change)

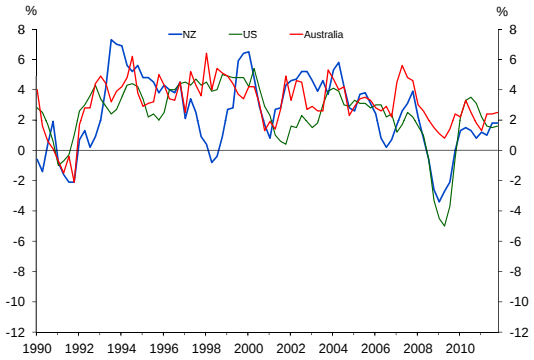


Figure A1b

Real GDP growth

(annual percent change)

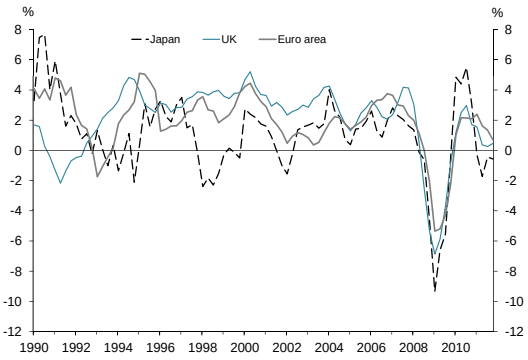


Figure A2a

Current account balance

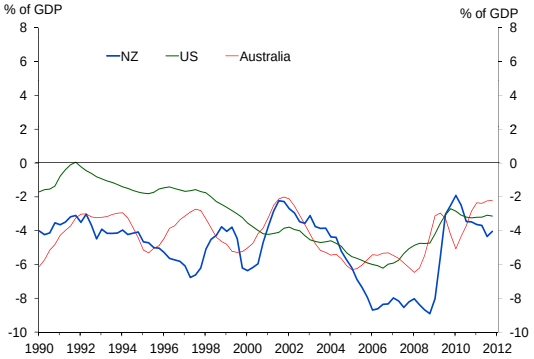


Figure A2b

Current account balance

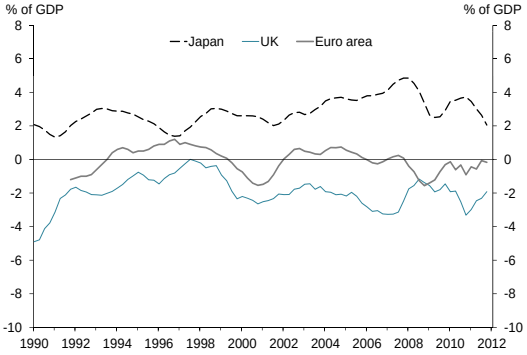


Figure A3

Trade-weighted exchange rate indices

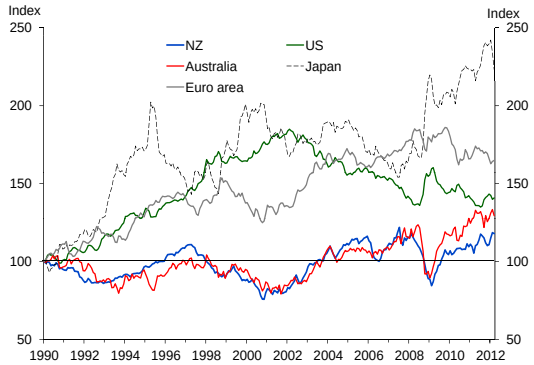
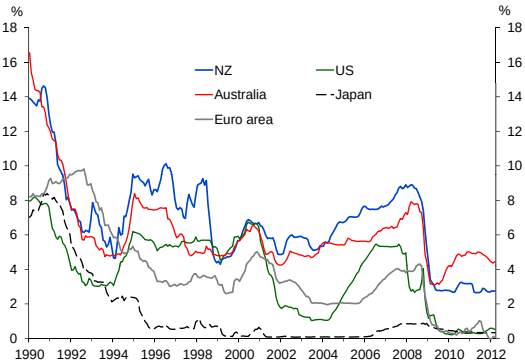


Figure A4

Short-term interest rates



[1] The data contained in this appendix were finalised on 20 April 2012. Definitions and sources are listed on pages 49-50.

Asset prices

Figure A5

Equity market indices

(1997 = 100)

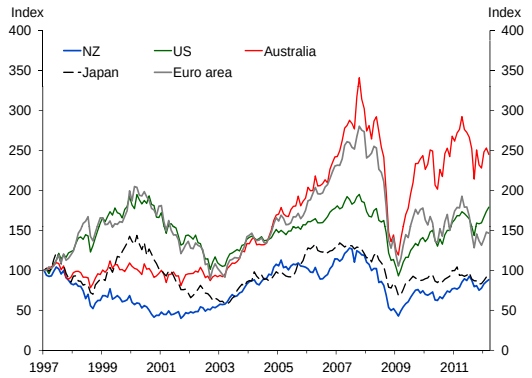
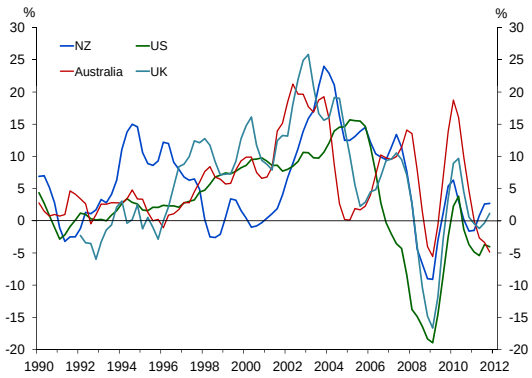


Figure A6

House price inflation

(annual percent change)



New Zealand

Figure A7

Household debt and servicing costs

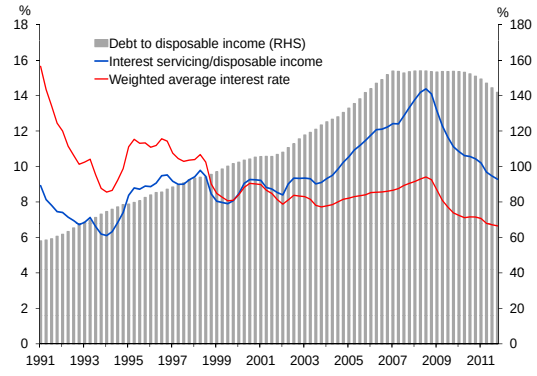


Figure A8

Household assets and liabilities

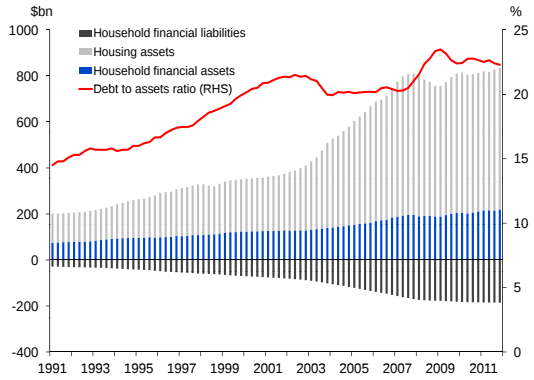


Figure A9

Property prices

(1990 = 100)

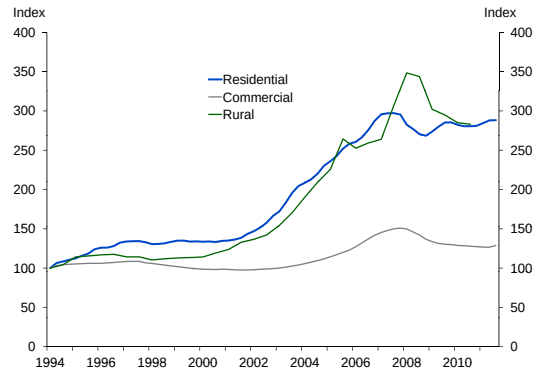


Figure A10

Government debt

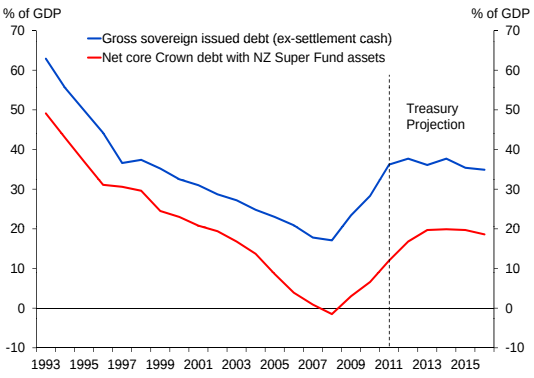


Figure A11
Government bonds on issue and turnover

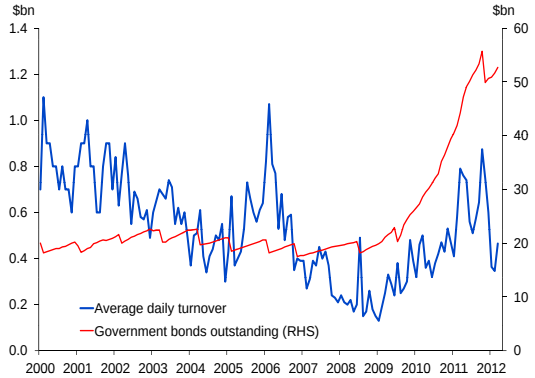


Figure A12
Ten-year government bond spreads

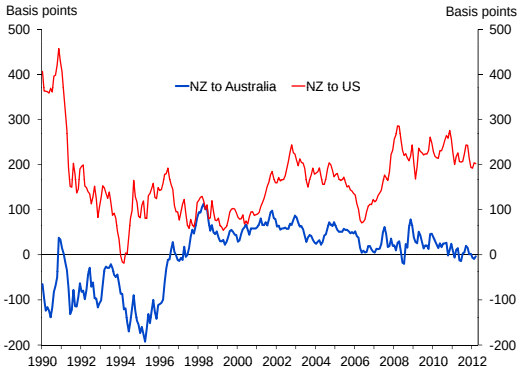


Figure A13
Yields on New Zealand government securities

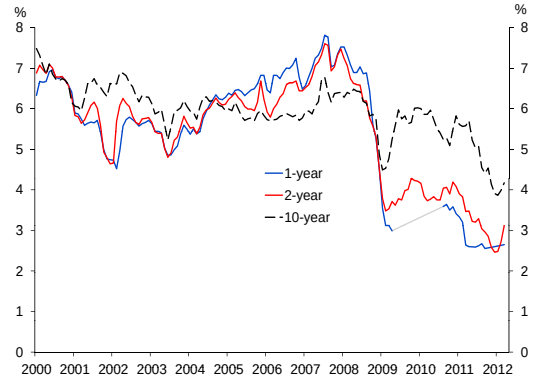


Figure A14
Non-resident holdings of New Zealand government securities

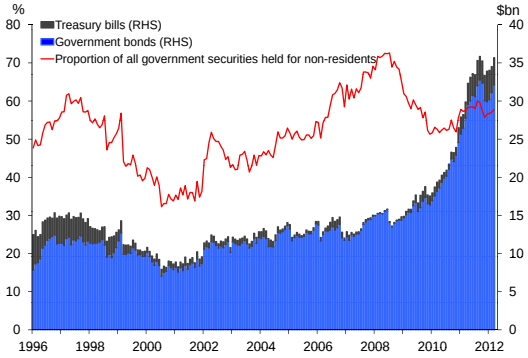


Figure A15
NZD/USD turnover in domestic markets

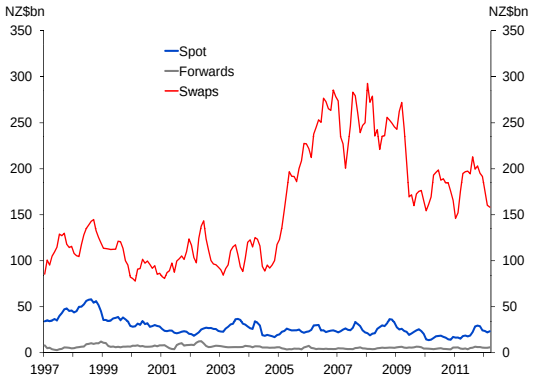


Figure A16
NZD/USD and implied volatility

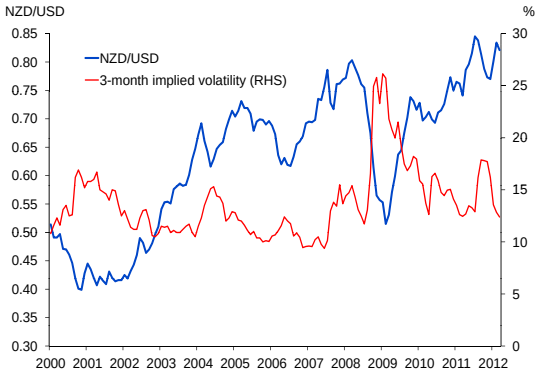


Figure A17

OCR, estimated business lending rate and effective mortgage rate

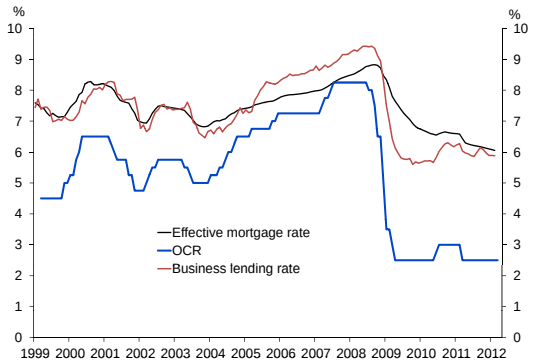
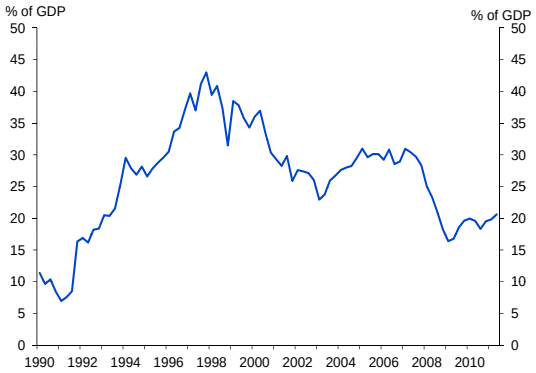


Figure A18

Equity market capitalisation



Banking sector indicators

Figure A19

System-wide capital adequacy ratios

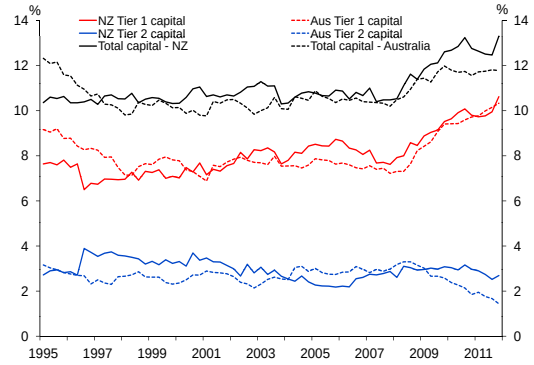


Figure A20

Asset quality

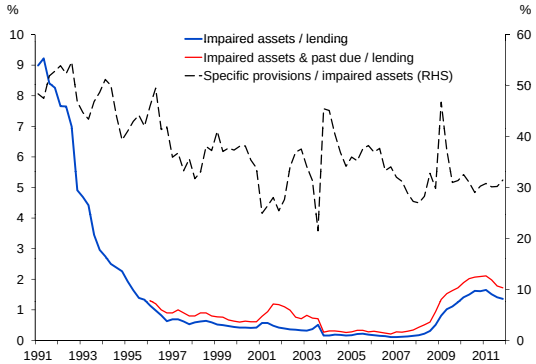


Figure A21

Return on assets

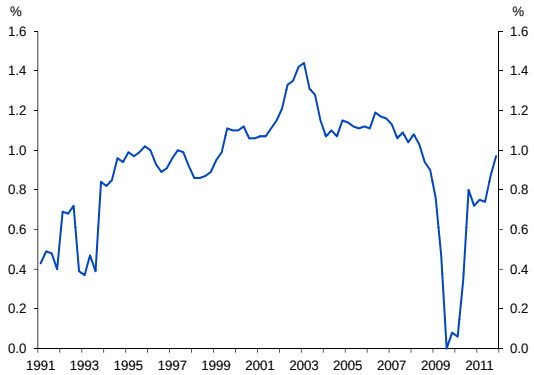


Figure A22

Operating costs to income

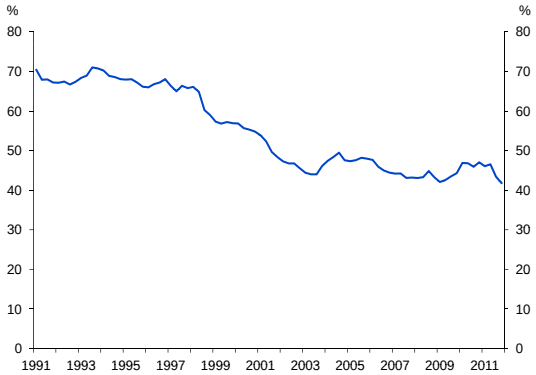


Figure A23
Interest margin

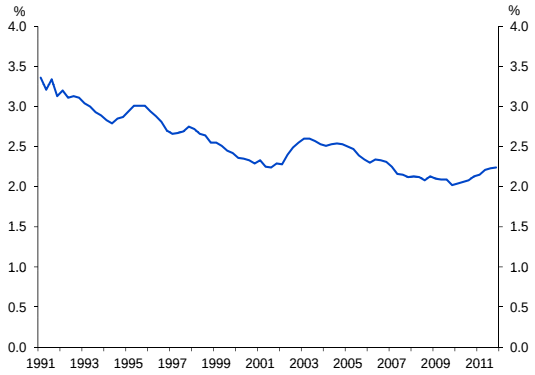


Figure A24
Registered bank offshore funding

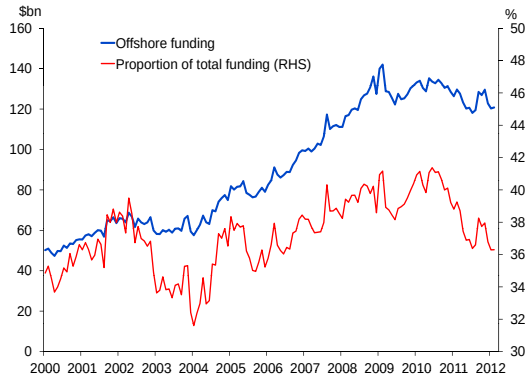


Figure A25
Bank asset composition

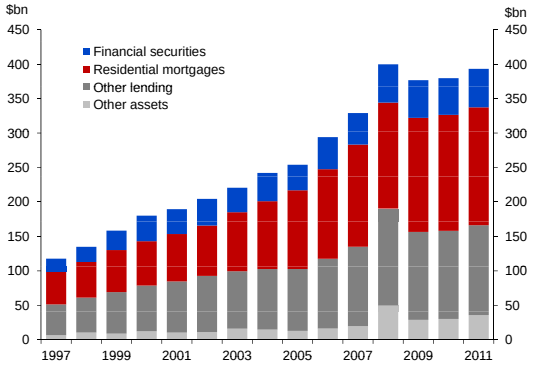


Figure A26
Bank funding composition

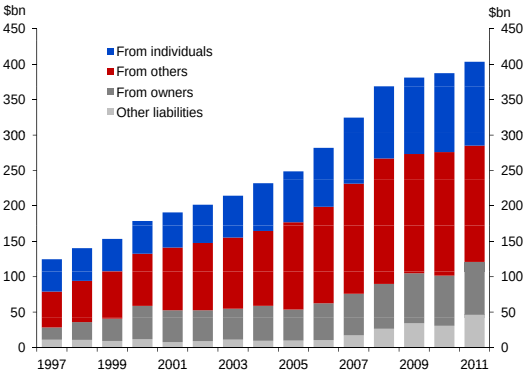


Figure A27
Bank asset growth
(annual percent change)

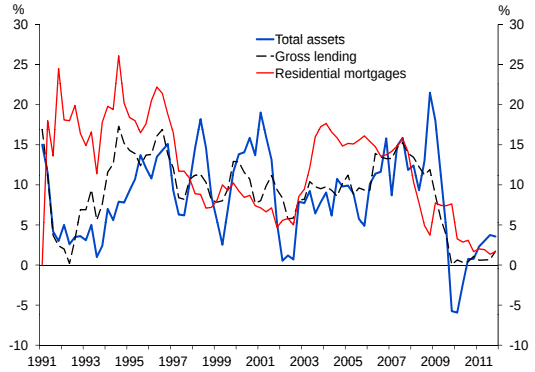
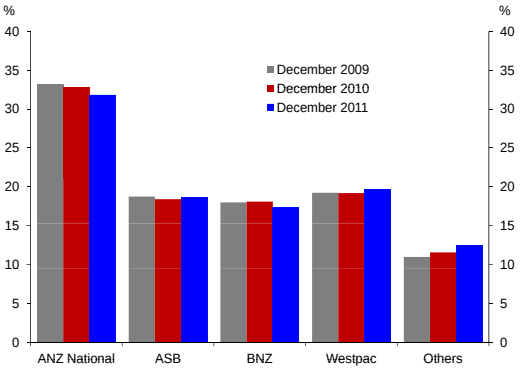


Figure A28
Bank market share



New Zealand financial system assets and liabilities

Table A1

Financial system liabilities

As at 31 December $bn	1990	1995	2000	2005	2008	2009	2010	2011
Banks								
Households	24	32	41	61	90	93	98	107
Other residents	29	35	54	84	113	102	101	104
Non-residents	11	22	56	79	128	132	128	123
Other liabilities and equity	14	14	29	30	69	51	52	59
Total	78	103	180	254	400	377	380	393
Other non-bank lending institutions								
Households	2	3	5	12	9	9	7	5
Other residents	3	2	4	7	7	6	7	7
Other liabilities and equity	1	1	2	8	11	9	7	5
Total	6	6	10	26	27	24	21	17
Funds under management								
Household assets	26	42	56	56	55	61	64	66
Other sector assets	1	1	5	7	8	8	8	8
Total	27	43	61	63	62	68	72	74
Total financial system liabilities	111	152	251	343	489	469	472	484

Table A2

Financial system assets

As at 31 December $bn	1990	1995	2000	2005	2008	2009	2010	2011
Banks								
Households	20	42	67	120	163	170	174	178
Other residents	36	45	74	101	149	135	136	140
General government	8	6	7	6	5	13	17	20
Non-residents	2	2	17	12	16	16	13	10
Other assets	12	8	16	15	66	42	40	46
Total	78	103	180	254	400	377	380	393
Other non-bank lending institutions								
Households	2	3	5	12	12	10	9	7
Other residents	3	2	4	11	12	11	9	7
Other assets	1	1	1	3	4	4	3	3
Total	6	6	10	26	27	24	21	17
Funds under management								
Domestic fixed interest	na	na	28	26	28	27	28	30
Domestic equities	na	na	7	8	6	7	8	8
Domestic other	na	na	4	4	4	4	4	4
Overseas investments	na	na	22	26	24	30	32	32
Total	27	43	61	63	62	68	72	73
Total financial system assets	111	152	251	343	489	469	472	484

Totals and sub-totals may not add due to rounding.
Source: RBNZ surveys and registered banks' GDS.

Table A3

New Zealand registered banks

Registered bank's name	Market share[1]	Credit ratings			Ultimate parent	Country of parent
		S&P	Moody's	Fitch		
Australia and New Zealand Banking Group Limited (B)[2]	2.6	AA-	Aa2	AA-	Australia and New Zealand Banking Group Limited	Australia
ANZ National Bank Limited	29.2	AA-	Aa3	AA-	Australia and New Zealand Banking Group Limited	Australia
Commonwealth Bank of Australia (B)	1.5	AA-	Aa2	AA-	Commonwealth Bank of Australia	Australia
ASB Bank Limited	16.6	AA-	Aa3	AA-	Commonwealth Bank of Australia	Australia
Bank of New Zealand	18.2	AA-	Aa3	-	National Australia Bank	Australia
Bank of Baroda (New Zealand) Limited	0.0	-	-	BBB-	Bank of Baroda	India
Bank of India (New Zealand) Limited	0.0	BBB-	-	-	Bank of India	India
Citibank N A (B)	0.5	A	A1	A	Citigroup Inc.	USA
Deutsche Bank Aktiengesellschaft. (B)	0.8	A+	Aa3	A+	Deutsche Bank Aktiengesellschaft	Germany
JPMorgan Chase Bank, N.A. (B)	0.3	A+	Aa1	AA-	JPMorgan Chase & Co	USA
Kiwibank Limited	3.7	AA-	Aa3	-	New Zealand Post Limited	New Zealand
Kookmin Bank (B)	0.1	A	A1	-	Kookmin Bank	South Korea
Rabobank Nederland (B)	0.7	AA	Aaa	AA	Rabobank Nederland	Netherlands
Rabobank New Zealand Limited	2.0	AA	-	-	Rabobank Nederland	Netherlands
Southland Building Society	0.7	-	-	BBB	Southland Building Society	New Zealand
The Bank of Tokyo-Mitsubishi, Ltd (B)	0.6	A+	Aa3	A	Mitsubishi UFJ Financial Group Inc.	Japan
The Co-operative Bank Limited[3]	0.4	BBB-	-	-		
The Hongkong and Shanghai Banking Corporation Limited (B)	1.3	AA-	Aa1	AA	HSBC Holdings PLC	UK
TSB Bank Limited	1.3	BBB+	-	-	TSB Community Trust	New Zealand
Westpac Banking Corporation (B)	2.4	AA-	Aa2	AA-	Westpac Banking Corporation	Australia
Westpac New Zealand Limited	17.1	AA-	Aa3	AA-	Westpac Banking Corporation	Australia

1 Registered banks' assets as a proportion of the total assets of the banking system, as at 31 December 2011.
2 Banks marked (B) operate in New Zealand as branches of overseas incorporated banks. All other banks are incorporated in New Zealand.
3 The Co-operative Bank Limited was registered on 26 October 2011.

Notes to the graphical appendix

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

1	**Real GDP growth**	Annual percentage change in real GDP. *Haver Analytics.*
2	**Current account balance**	Current account balance as a percentage of GDP, four-quarter total. *Haver Analytics.*
3	**Trade-weighted exchange rate indices**	Nominal trade-weighted indices, 'broad' composition. January 1990=100. *Haver Analytics (JP Morgan for Japan, Euro; RBA for Australia; Federal Reserve Board for US).*
4	**Short-term interest rates**	Yields on 90-day bank bills. *Reuters*.
5	**Equity market indices**	Morgan Stanley Capital Indices, January 1997 = 100. *Haver Analytics.*
6	**House price inflation**	Annual percentage change in national house price indices. *Haver Analytics, Property IQ*.
7	**Household debt and servicing costs**	Household debt excludes student loans. Household disposable income is gross before deduction of interest paid and consumption of fixed capital, and is interpolated from March-year data from Statistics New Zealand, with RBNZ forecasts. The weighted average interest rate is obtained from published RBNZ mortgage data (SSR, part E5.10) for residential mortgages and RBNZ calculations for consumer interest rates.
8	**Household assets and liabilities**	Housing assets are the aggregate private sector residential dwelling value. Data is from Property IQ from 1995, with RBNZ estimates based on the house price index for prior years. Household financial assets are as published annually by RBNZ, with aggregate quarterly figures interpolated prior to 1995. From 1995, quarterly figures are survey-based with minor estimation. Household liabilities are from RBNZ series as for figure A7.
9	**Property prices**	June 1994=100. Property IQ residential and rural price indices, and IPD commercial property capital return index.
10	**Government debt**	Net core Crown Debt is debt attributable to core Crown activities and excludes Crown entities and state-owned enterprises. Forecasts are from 2012 onwards and are taken from the Pre-Election Economic and Fiscal Update. *The Treasury.*
11	**Government bonds on issue and turnover**	Total government securities on issue and New Zealand government bond turnover survey. *Reuters.*
12	**Ten-year government bond spreads**	Yield on 10-year benchmark New Zealand government bonds, less yield on US and Australian equivalents. *RBNZ*.
13	**Yields on New Zealand government securities**	One-year series unavailable between May 2009 and July 2010, and between October 2011 and January 2012 due to there being no suitable bond for the one-year benchmark over these dates. *Reuters, RBNZ.*
14	**Non-resident holdings of New Zealand government securities**	*RBNZ*.
15	**NZD/USD turnover in domestic markets**	Three-month moving average. *RBNZ survey.*
16	**NZD/USD and implied volatility**	Standard deviation implied by three-month NZD/USD options. *Bloomberg.*

17	**OCR, estimated business lending rate, and effective mortgage rate**	The effective residential mortgage interest rate is item E5.10 from the registered bank aggregate SSR. The estimated business lending rate is determined residually using information from the SSR for total registered bank NZD lending rates, effective residential mortgage rates, and estimates of consumer and interbank rates. It does not include the effects of hedging activity such as interest rate swaps. *RBNZ*.
18	**Equity market capitalisation**	Total market capitalisation of the 50 largest companies listed on New Zealand Stock Exchange, as a percentage of annual nominal GDP. Latest GDP value is estimated. NZX (from 2003); Datastream (spliced to NZX series prior to 2003); *Statistics New Zealand.*
19	**System-wide capital adequacy ratios**	Capital as a percentage of risk-weighted assets for all locally incorporated banks. *Registered banks' general disclosure statements (GDS), Reserve Bank of Australia.*
20	**Asset quality**	Impaired assets plus past due as a percentage of total lending; specific provisions as a percentage of impaired assets; for all registered banks. *GDS*.
21	**Return on assets**	Net profits after tax and extraordinary items, as a percentage of average total assets, four-quarter average, for all registered banks. *GDS*.
22	**Operating costs to income**	Operating expenses as a percentage of total income, four-quarter average, for all registered banks. *GDS*.
23	**Interest margin**	Net interest income as a percentage of average interest-earning assets, four-quarter average, for all registered banks. *GDS*.
24	**Registered bank offshore funding**	*RBNZ*.
25	**Bank asset composition**	As at 31 December 2011. *GDS*.
26	**Bank funding composition**	As at 30 September and 31 December. *GDS*.
27	**Bank asset growth**	Year-on-year change in total assets of all registered banks. Gross lending before provisions. *GDS*.
28	**Bank market share**	Bank assets as a percentage of total assets of registered banks. *GDS*.