Volume 68, No. 2, June 2005

Contents

Editor’s Note 3

Articles
The modernisation of New Zealand’s currency and cash distribution 4
  Alan Boaden, Currency and Building Services Department

Savings and the household balance sheet 13
  Khoon Goh, Economics Department

Developments in the New Zealand corporate sector 23
  Khoon Goh, Economics Department

Overview of the New Zealand retail sector 32
  Hannah Kite, Economics Department

Speech
Bank regulation and supervision in New Zealand: recent and ongoing developments 42
  Dr Alan Bollard, Governor, Reserve Bank of New Zealand

For the record
Discussion papers 48
News releases 49
Publications 51
Articles and speeches in recent issues of the Reserve Bank Bulletin 52

This document is also available on http://www.rbnz.govt.nz

Copyright © 2005 Reserve Bank of New Zealand

ISSN 1174-7943
Editor’s note

Few topics in central banking are of wider public interest than bank notes and coins. Most of us have at least a passing interest in the design, manufacture and circulation of the currency and we all like to compare our notes and coins with those of other countries. In the first article of this issue, Alan Boaden from the Bank’s Currency and Building Services Department reports on New Zealand’s experience with polymer bank notes, which were first introduced in 1999, together with changes to the processes used to distribute cash to the registered banks. Alan also discusses the outcome of the recent review of New Zealand’s ‘silver’ coinage, which will see the move to smaller and lighter 10, 20 and 50 cent coins, and the withdrawal of the 5 cent coin from circulation. Coloured pictures of the new coins are included in the article.

The second article is by Khoon Goh, a recent secondee to the Economics Department from the New Zealand Treasury. The article reviews trends in household savings behaviour over the past 15 years, along with other developments in the household balance sheet. There is a useful discussion of how household savings fits within the savings picture for the country as a whole, and a reconciliation of national savings with the country’s current account balance. The article also briefly considers the implications of New Zealand’s ongoing reliance on foreign savings for the macro-economy at large.

Khoon is also the author of the third article, which provides an overview of the corporate sector, a term used to describe New Zealand’s business sector. Comprehensive data covering the sector are lacking, but Khoon has assembled some interesting statistics relating to the scale and size of the sector, its recent profitability, and balance sheet developments. A key finding is that the corporate sector has enjoyed strong profit growth and increased margins over the past few years on the back of strong economic growth. The debt-to-profit and debt-to-asset ratios of the sector appear to have fallen.

In the fourth article, Hannah Kite of the Economics Department provides an overview of New Zealand’s retail sector. The article reports strong growth in retail sales over the past five years, but also finds that the scale of the sector (the number and size of retail operators) has been expanding at the same time. This appears to have constrained profitability for retailers as well as maintaining competitive pressure within the sector. Another interesting area discussed is pricing, with some dramatic movements in pricing evident in some parts of the retail sector due to a variety of factors.

Finally, this issue includes a recent speech by the Governor that should be of interest to anyone wishing to keep abreast of the latest policy developments in banking regulation and supervision in New Zealand.

Bernard Hodgetts
Editor
Reserve Bank of New Zealand Bulletin
PO Box 2498
Wellington 6001
Telephone 64 4 471 3781
Facsimile 64 4 473 1209
Email hodgettsb@rbnz.govt.nz
1 Introduction

The Reserve Bank of New Zealand Act (1989) provides the Bank with the sole right to issue bank notes and coins. In undertaking this role, the Reserve Bank manages the design and manufacturing of New Zealand's currency, and controls the issuance of notes and coins to the registered banks. The Bank also withdraws damaged or unusable currency from circulation.

In recent years, the Bank has implemented a number of measures to modernise New Zealand's currency and has made some important changes to the process by which cash is distributed to banks. Polymer bank notes were introduced in 1999, replacing the previous paper notes. In 2000 the Bank withdrew from its role in the daily distribution cycle of bank notes, with this function now performed by the registered banks and security companies. In March 2005, following a review of the country's silver coinage, the Bank announced a decision to remove the 5 cent coin from circulation and to make the remaining silver coins smaller and lighter. Collectively, these changes should help to ensure that New Zealand's currency (and the process by which it is provided to the public) continues to meet or lead international best practice.

The purpose of this article is to review the various changes to the currency and cash distribution procedures that have occurred in recent years, together with the more recent decisions to modernise the 'silver' coins. In what follows, these topics are covered in sequence, starting with the polymer notes and cash distribution procedures, and finishing with the recent decisions around changes to the silver coins.

2 Polymer bank notes

Introduction

In May 1999 the Reserve Bank first introduced bank notes printed on polymer; until that date all notes were printed on traditional cotton-based paper. Polymer is a relatively new technology developed by the Reserve Bank of Australia with technical input from the Commonwealth Scientific and Industrial Research Organisation (CSIRO) of Australia. The first polymer bank note was issued into circulation in Australia in 1988.

The polymer substrate is exclusively provided by Innovia Films Limited under a joint venture with the Reserve Bank of Australia. The substrate is manufactured using the 'bubble' process, which produces a film that is based on a specialised form of Biaxially Orientated Polypropylene. The film used for bank notes differs significantly from other polymers and is not available commercially. In addition, the advantages of a polymer substrate for bank note printing are significant:

- Polymer is non-porous and non-fibrous and is resistant to attack from water, oils, beverages, sweat and most common household chemicals.
- Polymer is more robust than paper, and being non-fibrous, it does not break down physically with repeated folding.
- Polymer has a high resistance to tearing, especially compared to paper.
- Polymer bank notes are given a protective overcoat of two layers of clear lacquer on each side of the note, which enhances protection from ink wear and extends the life of the note.
- Polymer allows for greater security to be incorporated into the bank note through the interaction of the substrate, print and add-on features – for example, the ability to provide a clear window incorporating a security feature.

Since May 1999 the Bank has issued 165 million polymer bank notes into circulation. The key expectations for polymer were for the notes to:
- reduce the risk of counterfeits;
- have improved structural durability and cleanliness; and
- be more cost-effective to issue.

Counterfeits
In the past four years, with most notes in circulation being polymer, the number of counterfeits detected per million notes in circulation has dropped dramatically. Figure 1 illustrates this.

To date, nearly six years since the first polymer note was issued into circulation, there have been no counterfeit notes printed on plastic. All forgeries have been printed on ordinary paper and have been relatively easy to detect.

Bank notes incorporate quite sophisticated anti-counterfeiting features. There are three levels of verification. First, the ‘general public features’ need to be difficult to counterfeit but easy to find. For polymer notes the key public security feature is the transparent ‘window’ which is unique to the polymer substrate. New Zealand bank notes contain two transparent windows, one incorporating the denomination numeral embossed in it, and the other in the shape of a fern leaf.

For the cash handler, such as a bank teller, a genuine note can reliably be verified by the use of an ultraviolet light. Most commercial papers glow under such light; however, polymer note substrate is UV dull and will not glow. In addition, special inks used in the note will appear only under an ultraviolet light. New Zealand notes will display the denomination numeral, as illustrated in figure 2 for a $5 note.

Durability
Experience in New Zealand to date confirms that polymer bank notes retain their structure and cleanliness over a much
longer period than paper notes. In the March year 1997/98, when all bank notes in circulation were paper notes, the Bank destroyed 57 per cent (40 million notes) as unfit for circulation. In the year to 31 March 2005 the Bank has destroyed just 15 per cent (17 million notes).

In addition, before being destroyed as unfit, the polymer notes are currently lasting 82 months on average. This is more than four times the life of a typical paper note.

Polymer bank notes are generally removed from circulation due to ‘mechanical’ faults, such as physical damage (holes or tears or parts of the note missing), tape attachment, defacement, and adherence of any substance that causes the notes to stick together. The detectors on the processing machines at the Reserve Bank are designed to recognise these faults and destroy the note (by shredding).

Some security companies also use note processing machines that check notes for authenticity and quality. If a machine in a security company meets Reserve Bank specifications, unfit currency detected by the machine may be sent to the Bank for destruction at the Bank’s cost.

In the situation where a person has a portion of a bank note in their possession, the Reserve Bank guideline is that if there is at least two-thirds of a note in a single piece then it is worth full value. If there is less than two-thirds but more than one-third of the note in a single piece then it is worth half the face value. If there is less than or equal to one-third of the note then it has no value.

Cost-effectiveness

Polymer notes have also proved very cost-effective. In the four years prior to the introduction of polymer notes, note issue expenses averaged $3.4 million per annum or 5.2 cents per note in circulation. In the year to 31 March 2005, note issue expenses were $2 million or 1.8 cents per note.

The future

In recent years the number of countries that have introduced at least one polymer bank note into circulation has risen significantly. Countries to recently introduce polymer notes include Mexico, Malaysia, Chile, Zambia, Vietnam and Singapore. The polymer substrate is also proving very adaptable to new and enhanced security features. It is now possible to incorporate quite sophisticated features into the clear window, such as a diffractive optical element which will produce an image when a light source is targeted on the window.

At present, the Bank is not considering changing the bank notes as the designs and sizes are well accepted, note life is meeting expectations, and counterfeiting is very low. However, it is desirable to keep ahead of the counterfeiter and it is likely that the Bank will take advantage of advances in technology to upgrade the security feature in the transparent window, probably within the next five years or so.

Figure 3
Note destruction rates

Destruction rate %

Figure 4
Note issue expenses

Cost-effectiveness

Polymer notes have also proved very cost-effective. In the four years prior to the introduction of polymer notes, note issue expenses averaged $3.4 million per annum or 5.2 cents per note in circulation. In the year to 31 March 2005, note issue expenses were $2 million or 1.8 cents per note.

The future

In recent years the number of countries that have introduced at least one polymer bank note into circulation has risen significantly. Countries to recently introduce polymer notes include Mexico, Malaysia, Chile, Zambia, Vietnam and Singapore. The polymer substrate is also proving very adaptable to new and enhanced security features. It is now possible to incorporate quite sophisticated features into the clear window, such as a diffractive optical element which will produce an image when a light source is targeted on the window.

At present, the Bank is not considering changing the bank notes as the designs and sizes are well accepted, note life is meeting expectations, and counterfeiting is very low. However, it is desirable to keep ahead of the counterfeiter and it is likely that the Bank will take advantage of advances in technology to upgrade the security feature in the transparent window, probably within the next five years or so.

1 Destruction rates are for the 2004/05 March year (polymer), and for the 1997/98 March year (paper).

2 The spikes in this chart in 1999 and 2000 coincide with the introduction of polymer notes and removal of paper notes from circulation.
3 Cash distribution procedures

Prior to the year 2000 the Reserve Bank played an integral role in the cash distribution process, with all surplus notes held by individual registered banks being deposited with the Reserve Bank on a daily basis and re-issued to other banks requiring cash. In 1998, 540 million notes were deposited with the Reserve Bank and 544 million were issued. At that time the Bank operated from three sites. These were in Wellington, Auckland and Christchurch.

The introduction of polymer notes provided the catalyst to change the role of the central bank from a retail processor of notes to predominantly a wholesale supplier. In 2004, 72 million notes were issued by the Bank and 67 million deposited from one site. About half of the annual note flow occurred around the seasonal peak times of Christmas and Easter.

As wholesale supplier, the Bank ensures that a sufficient stock of notes (and coins) is held securely to meet the needs of the community. This includes holding a sufficient supply of currency to meet a possible ‘flight to cash’ scenario that might occur following a natural disaster or some other large event. Also, the Bank encourages and facilitates the withdrawal and return of unfit currency, where it is checked for authenticity and destroyed.

The daily distribution of currency in the community is undertaken by the registered banks and security companies and generally appears to work very effectively; to date we have received no indications of shortages of either notes or coin anywhere in the country.

The withdrawal of the Bank from the daily distribution cycle has reduced expenditure considerably. For the currency function (note and coin issue and cash operations), average expenditure from 1996 to 1998 was $16.4 million per annum, accounting for about 40 per cent of the total expenditure of the Bank. In the year ended June 2004 total currency functional expenditure was $8.8 million or 24 per cent of the Bank’s total expenditure.

With the change to the lower value coins it is expected that expenditure on the currency function will reduce to just 17 per cent of total Bank expenditure by 2007/08.

4 Modernisation of ‘silver’ coinage

On 31 March 2005, the Reserve Bank announced decisions regarding the modernisation of New Zealand’s silver coinage. This will involve replacing the current 10, 20 and 50 cent coins with smaller, lighter coins and withdrawing the 5 cent coin from circulation.

This section of the article describes:

- the process of consultation and analysis that was undertaken;
- the nature of the decisions and their rationale;
- the demonetisation of current coins; and
- the future timetable.

Consultation and analysis

The Bank undertook an extensive exercise in gathering and evaluating information before making decisions on the modernisation of the coinage. Bank staff held meetings with representatives of banks, security companies, vending machine suppliers, retailers and various organisations representing the general public. Information was collected about these organisations’ views on the merits of possible changes, and how any changes would affect them and their members.

The Bank commissioned a private research company, AC Nielsen Ltd, to undertake representative surveys of large retailers, small retailers and the general public. These surveys asked how coins were used by retailers and the general public, and whether there was support for possible changes.

On 11 November 2004 the Bank announced proposals and invited public submissions on them. The proposals included the introduction of new, smaller 10, 20 and 50 cent coins, and the withdrawal of the 5 cent coin from circulation. The Bank received 2,050 submissions. These comprised 456 email messages, 124 individual letters, 186 submissions from school students, and 1,284 form letters (photocopied letters distributed by a third party). Bank staff read and replied to all of them. The Bank contracted AC Nielsen to analyse the
feedback received from the general public in order to have an independent assessment.

The main purpose of the Bank's public consultations was to test its proposals through public scrutiny and to find out if any important issues had been overlooked. The Bank found that no major surprises emerged from public submissions. Bank staff had already considered all serious suggestions made and they were already aware of the main issues raised.

The decisions
The Bank carefully evaluated public submissions, together with the information that had earlier been collected directly from interested parties and the general public. On 31 March 2005 the Bank announced its decisions that:

- The 10, 20 and 50 cent coins will be made smaller and their composition will be changed to plated steel;
- The new 20 and 50 cent coins will be nickel-plated to give a silver appearance and the 10 cent coin will be copper-plated;
- The 20 cent coins will have a 'Spanish flower' edging, and the 10 and 50 cent coins will be unmilled; and
- The 5 cent coin will be withdrawn from circulation.

The new coins are illustrated in box 1. The reasons for these changes are as described below.

a. The size of coins
A majority of the general public favour smaller 20 and 50 cent coins. The most common reason is that the current coins are too bulky or heavy to carry around. New Zealand's 50 cent coin is one of the largest coins in circulation anywhere in the world. It is, for example, 75 per cent heavier than the modern 50 eurocent coin. There is considerable anecdotal evidence that many people have large collections of coins at home in jars or drawers.

Most major business users of coins (retailers, banks, security firms and the vending industry) expect short-term transition costs but important longer-term benefits from changing the coins. Banks and security firms have said that smaller coins will be easier to handle, with benefits to transport, storage, and occupational health and safety. FINSEC, the major financial sector employees' union, has strongly supported downsizing on health and safety grounds.

Retailers have reported that staff would find smaller coins easier to carry in floats and tills. Smaller coins would also be easier to store and would leave more space in tills. A smaller 50 cent coin could be used more widely in vending machines.

b. The composition of the 10, 20 and 50 cent coins
New Zealand's existing 'silver' coins are manufactured from cupro-nickel (75 per cent copper and 25 per cent nickel). These are relatively expensive metals and their prices are subject to significant variability. In the past two years both metals have risen in price by around 100 per cent.

In recent years a new technology has become established, using steel, plated with either nickel (to give a silver appearance) or copper (to give a reddish appearance). Europe, the United Kingdom, Canada and South Africa have issued plated steel coins. Plated steel coins are considerably cheaper, with nickel-plated steel costing about 25 per cent less than cupro-nickel, and copper-plated steel being 33 per cent cheaper. The plating comprises about 3 per cent of the coin.

The physical characteristics of plated steel coins are the same as the existing coins. They will 'feel the same', but they will be lighter. The average expected life of a plated steel coin is less than that of a cupro-nickel coin, but only marginally so. In the year to June 2004 it cost the Bank $3.5 million to meet demand for 5, 10, 20 and 50 cent coins. When the size of these coins is reduced and they are manufactured in plated steel, the Bank, and thus the taxpayer, will save approximately $2 million per annum.

c. Edge treatments
Bank staff have spoken with the Royal New Zealand Foundation of the Blind (RNZFB) and the New Zealand Association of Blind Citizens regarding the proposed new coins during the consultation phase. The edge treatments of
coins, as well as their weight and diameter, are very important for helping blind and visually impaired people to distinguish between coins. Unmilled edges on the 10 and 50 cent coins, and the 'Spanish flower' edging on the 20 cent coin will give the new coins 'a whole new feel', making it easier for blind people to differentiate the new coins from the current ones in the transition phase. RNZFB representatives said that New Zealand’s current coins are good by international standards but the new coins would be superior. It was likely that blind people would not need to compare coins but would be able to identify any coin by simply holding it alone. If blind people can distinguish between the new coins in this way, then sighted people should be able to do so easily too.

d. The 5 cent coin

Today, the 5 cent coin is worth less than half a cent was worth in 1967 when decimal currency was introduced. Surveys show that most people favour dropping the coin. This percentage has steadily risen from 19 per cent in 1987 to 68 per cent (with another 4 per cent neutral) in 2004. Reported comments indicate that most people regard the coins as a nuisance. One reason for this is the increased availability and use of EFTPOS which makes coins less necessary to make transactions.

The Bank has issued almost 600 million 5 cent coins since their introduction in 1967. This is about 150 for each man, woman and child in New Zealand. Each year the Bank issues a further 20 to 30 million 5 cent coins. They appear to be mainly used by shops to give change in cash transactions. They are not used in many vending machines because of their low value and because their small size often causes the machines to jam.

The AC Nielsen survey of the general public asked people what they did with 5 cent coins. Answers revealed that after almost half of transactions involving a 5 cent coin the person receiving the coin removes it from circulation. Some people do recirculate 5 cent coins. However, over time the predominant trend is for the coins to be issued by the Reserve Bank to trading banks, then to shops and then to be removed from circulation. They have increasingly become a ‘one transaction coin’ rather than a circulating coin.

The most common reason why some people favoured retaining the 5 cent coin was that they thought prices would rise if it was withdrawn. They thought shopkeepers would increase prices or would round up totals ending in 5 cents. In contrast, some retailers were concerned that competition would force them to lower prices, or round them down, and that this would reduce margins to unacceptable levels.

In reality it is very likely that some prices ending in 5 cents will be increased to end in 9 or 10 cents; some will be reduced; and many will be unchanged. The Consumers Institute undertook a survey after the 1 and 2 cent coins were withdrawn and found that prices actually fell slightly. It is again likely that competition in the retail sector will restrain widespread price increases. The overall impact on the cost of living and on retailers’ sales and profitability is likely to be very small.

The Bank’s Economics Department has undertaken some analysis of the potential impact of the removal of the 5 cent coin. This work, which has been posted on the Bank’s website (www.rbnz.govt.nz), concluded that the effect on prices faced by most households would be negligible. Statistics New Zealand has checked this analysis and has found it to be sound.

The Bank concluded that the balance of arguments favoured withdrawal of the 5 cent coin. One important consideration is that this is a major review of our coinage. The Bank should make decisions that will not need to be reviewed for 30 years or longer. As time passes the 5 cent coin would become less valuable and more of a ‘nuisance’.

e. Industry transition costs

The introduction of the new coins will bring major ongoing benefits to businesses involved in handling cash, and to their staff. As noted above, banks, security companies and retailers have said that smaller, lighter coins will bring significant benefits, particularly in terms of the cost and ease of handling, and from alleviating OSH issues.

However, there will be transition costs for many businesses that handle coins. The largest costs will be for the recalibration of coin ‘changer’ vending machines, and coin...
The existing $1 and $2 coins will not change.

The Bank will assist those in the coin-handling business by:

- providing sample coins for inspection as early as possible;
- distributing production coins for testing and for the calibration of machines six months before the first issue day;
- facilitating the transfer of new coins to retailers; and
- facilitating the return of old coins to main centres.
f. The number of coins
The Bank is a monopoly supplier of currency. It is therefore very important that it orders sufficient coins to satisfy the demand for the new coinage. There would be significant costs and inconvenience for businesses and households if there was a shortage. On the other hand, if the Bank purchased an excessive number of coins then it would pay additional holding costs for a number of years. On balance it seems prudent for the Bank, when deciding how many coins to have struck, to be prepared to pay a reasonable ‘insurance premium’ to avoid the risk of having insufficient coins.

The Bank plans to order 140 million 10 cent coins, 50 million 20 cent coins and 40 million 50 cent coins, i.e. 230 million coins altogether. The Bank estimates that this would be sufficient to replace the active balances of businesses and households, and for the Bank to hold stocks equal to three years’ normal net issues of coins. This is a large volume of coins. The total weight will be about 860 metric tonnes and will require about 35 shipping containers to transport them to New Zealand.

g. Other issues
The $1 and $2 coins were not included in this review for several reasons.

- They are comparatively new coins, having been introduced in 1991.
- They are not overly large like the current 20 and 50 cent coins.
- They appear to circulate well rather than be hoarded or lost like the lower value coins.

The Bank decided in October to leave the designs of the coins unchanged because:

- The current designs are seen as good images; and
- To do otherwise would generate considerable public debate and would distract attention from more important priorities.

Demonetisation
The Bank proposes to ‘demonetise’ the current coins with effect from about three months after the new coins are issued. The Bank will declare early in 2006 that the old coins will not be legal tender after a specified date, yet to be determined. From that date they need no longer be accepted as payment for goods and services. However, the Bank itself, or its agents, will always redeem them at face value.

It is important that the old coins be demonetised and withdrawn from circulation for several reasons.

- Banks, shops and other large cash-handlers would face considerable staff costs in handling and sorting two sets of coins.
- Many bulk coin handling and sorting machines would not be able to process the higher number of coin sizes. Coin weighing machines would be rendered ineffective unless coins of the same value were continually separated by size.
- Businesses operating vending machines, including parking meters, would like to see a fast changeover so that they can quickly convert their machines to accept the new coins.
- Many of the general public would probably find it confusing and annoying having coins of two different sizes for the same denominations.

Demonetising is a normal procedure following a currency change. In the recent past the Bank has demonetised 1 and 2 cent coins and $1 and $2 notes. The Bank will sell the old coins that are recovered for scrap.

Future timetable
The Bank invited several overseas mints to submit tenders for the supply of new coins. These are currently under consideration and a decision will be made by 31 July. Later this year the Bank will invite tenders for the sale for scrap of old coins that will be recovered after the changeover in 2006.
A group has been formed, chaired by the NZ Bankers’ Association, to plan arrangements for the distribution of the new coins and the recovery of old coins. It includes representatives of individual registered banks, security companies and the Reserve Bank.

Later this year the successful mint will prepare sample coins and production coins for testing by the vending industry and by some other organisations, including the Royal NZ Foundation of the Blind.

In early 2006 the Bank will launch a public awareness programme to explain what will happen when the new coins are issued and what people should do with their old coins.

The Bank expects to issue the new coins around July 2006 and the current coins will be demonetised about three months later. Experience from the introduction of the euro in Europe suggests that four to six weeks after the first issue of the new coins they will have largely replaced the existing coins.

The introduction of the new coins will affect everyone in New Zealand to a greater or lesser extent. They will bring major benefits to businesses involved in handling cash, to their staff, and to the general public. It is expected that the Bank will not need to make any other changes to these coins, unless it decides to change the designs, for at least 20 or 30 years.

5 Conclusion

The Reserve Bank issues currency, notes and coins to meet the transaction needs of the New Zealand public, both businesses and households. The Bank continually reviews the currency that it issues and its distribution arrangements in order to ensure that it achieves its objectives efficiently and effectively.

In recent years the Bank has significantly improved the quality of notes in circulation and reduced their cost by converting them from paper to polymer. It has also lowered costs by focusing on its role as a ‘wholesale’ supplier of currency to banks rather than providing free daily ‘retail’ services. The introduction of new, smaller 10, 20 and 50 cent coins will bring further benefits to cash-handling businesses and the general public.

These changes all represent the progressive modernisation of the nation’s notes and coins, and should help ensure that New Zealand’s currency remains at the leading edge of international best practice.
Savings and the household balance sheet
Khoon Goh, Economics Department

The past decade and a half has seen a consistent decline in the household savings rate in New Zealand. This trend is not isolated to New Zealand, but is also occurring in other OECD countries. In addition, household indebtedness has risen at a faster rate than in other OECD countries. It is difficult to know how much further the savings rate will fall and household indebtedness will increase, but an adjustment in behaviour is likely at some point. The low household savings rate has contributed to an ongoing reliance on foreign savings. The banking system appears to manage the risks associated with using foreign savings well. However, as New Zealand's reliance on foreign savings increases, the economy at large potentially becomes more exposed to changes in international investor preferences, while households may become more sensitive to changes in interest rates, the labour market or house prices.

1 Introduction
Over the past 15 years, the level of savings undertaken by New Zealand households has fallen sharply, a trend mirrored in other OECD countries. During this period, household debt has risen sharply, largely for the purposes of financing housing activity. This article reviews developments in household savings and the wider household balance sheet against the backdrop of savings behaviour for the New Zealand economy as a whole. It draws some comparisons with other countries and explains the link between savings behaviour and the country's current account deficit.

Household savings is a subject of considerable interest to a wide range of policy-makers and raises a host of issues. Many – such as whether households are saving adequately for retirement – are beyond the scope of this article. However, the article highlights some important macro-economic issues. As household saving falls, the reliance on foreign savings to fund investment tends to increase unless the fall in household savings is offset by a rise in savings by other domestic sectors. In turn, the economy potentially becomes more exposed to shifts in the investment preferences of foreign investors and their willingness to lend to New Zealand. In addition, a more indebted household sector may become more sensitive to changes in interest rates and incomes, a factor of particular importance to monetary policy.

2 Savings by sector
National savings is the proportion of a country's income that is not consumed in a particular period and is therefore available for investment (see box 1). While this article focuses on household savings, it is useful to look at how the overall national savings rate has trended. Figure 1 shows the sectoral breakdown of savings by households, business and the public (government) sectors, each expressed as a percentage of GDP. The household savings rate has been trending downwards, and this will be analysed in further detail later on. Business savings, on the other hand, have been trending upwards since the early 1990s, and have been the main contributor to national savings. Business savings are the retained profits or undistributed income of companies, so the increase in business savings is largely a reflection of rising profitability among New Zealand companies. After a period of running budget deficits, the government started to run budget surpluses from the mid-1990s. This resulted in an improvement in public savings, which is now a strong contributor to national savings.

Although both business and public savings have increased significantly over the past decade, this improvement has only just been enough to offset the continual decline in household savings. The net national savings rate has been almost flat since the late 1980s apart from the decline in the early 1990s, but has remained positive apart from the 1992/93 period. Despite a positive net national savings rate, this has been insufficient to fully fund new investment in

1 This article was written while the author was on secondment from The Treasury.
2 This article was finalised prior to the release of updated household asset and liability estimates by the Reserve Bank on 10 June. These statistics can be accessed at http://www.rbnz.govt.nz/statistics/monthly. Some statistics reported in this article may differ from these updated estimates.
3 Household saving includes that of farmers. Public saving captures only central government. Business saving is the residual, capturing local government, non-profit organisations, companies and state-owned enterprises.
the economy, and the country has continued to run current account deficits (figure 2 and box 1).

New Zealand’s investment to GDP ratio has been broadly similar to the OECD average over the past two decades. And for most of the past two decades, New Zealand’s gross national savings rate (which includes depreciation) has been below that of the OECD average, resulting in lower current account balances. In 2004, New Zealand’s current account deficit stood at 6.4 per cent of GDP, larger than the OECD average of 1.2 per cent, but comparable to the deficits of Australia and the US (figure 3). Since the late 1990s, the gross national savings rate gap with the OECD has closed, partly due to the OECD savings rate declining, but also largely due to the improvement in New Zealand’s business and public savings. The increase in the current account deficit with the OECD is due to an increase in New Zealand’s investment to...
Box 1
Relationship between national savings, investment and the current account

In an open economy, the relationship between national savings, investment and the trade balance can be expressed by the following national accounts identity:

\[ \text{GDP} = \text{C} + \text{I} + \text{G} + \text{NX} \]  

(1)

where GDP is gross domestic product, C is consumption, I is investment or gross fixed capital formation, G is government expenditure, and NX is net exports. Allowing for net income paid abroad (the balance of income earned on New Zealand’s foreign assets and paid to service its foreign liabilities), results in:

\[ \text{GDP + NI} = \text{C} + \text{I} + \text{G} + \text{NX} + \text{NI} \]  

(2)

Rearranging equation (2) yields:

\[ [\text{GDP + NI - C - G}] - \text{I} = \text{NX + NI} \]  

(3)

The variables on the left hand side in brackets form national savings, and the variables on the right hand side make up the current account balance. Hence, we can rewrite equation (3) as:

\[ \text{GSAV - I} = \text{CAB} \]  

(4)

where GSAV is gross national savings and CAB is the current account. There are two concepts of national savings – gross and net. Gross savings represents the resources available for investment (capital formation) including replacement of fixed capital. Net savings (NSAV) is derived from gross savings by subtracting depreciation (consumption of fixed capital, CFK):

\[ \text{NSAV} - [\text{I} - \text{CFK}] = \text{CAB} \]  

(5)
GDP ratio over the past few years. Years of running current account deficits have resulted in New Zealand incurring a negative net international investment position which is one of the largest in the OECD.

3 Trends in household savings and the balance sheet

Household savings trends

There are two approaches to the measurement of savings. It can be measured in terms of “flows” (i.e. the difference between current income and consumption expenditure), or as the change in the “stock” of accumulated net wealth (i.e. the difference from one year to the next of assets less liabilities). The flow measure, sometimes known as financial savings, is most commonly used in analysing household savings. The stock measure, sometimes known as economic savings, provides an alternative measure of savings which incorporates not only the flow measure (positive savings add to households’ asset base) but also increases (or decreases) in the value of assets and liabilities. Asset price changes are therefore an important driver of changes in the stock measure of savings.

Figure 5 shows the two savings measures. The flow savings measure was trending upwards over the 1970s, peaking at 5.8 per cent of income in 1980. Thereafter, the flow savings measure has been on a downward trend, falling to a new historic low of -12.3 per cent of income by 2004. Since 1993, the flow savings rate measure has been negative. The stock savings rate measure declined at a slower rate to trough at -5.0 per cent in 1999. The stock savings rate measure then rose sharply from 2001 to reach 83 per cent in 2004, while the flow savings rate continued its downward decline. It is unclear how the flow measure of savings is influenced by changes in the stock measure. However, it is possible that the decline in the flow measure of savings is partly a response to the sharp rise in the stock measure in recent years, brought about by a rapid rise in house prices. How the flow measure may evolve now the housing market is cooling is unclear.

Figure 5

Financial and economic savings ratea
(as a per cent of household disposable income)

![Chart showing financial and economic savings rate]

Sources: Statistics New Zealand, Reserve Bank of New Zealand.

Household balance sheet trends

The focus of attention on the household balance sheet tends to be on debt, due to its rapid accumulation over the 1990s. The debt-to-income ratio was fairly stable throughout most of the 1980s, averaging around 50 per cent of disposable income. Following financial deregulation from the mid-1980s, the debt-to-income ratio accelerated to reach around 140 per cent of disposable income (figure 6). A characteristic of New Zealand household indebtedness is the concentration of debt to large financial institutions, secured against housing. Almost 90 per cent of total household debt is owed to large financial institutions, and of that over 90 per cent is for mortgages. There is little

Figure 6

Household debt-to-income ratio
(as a per cent of household disposable income)

![Chart showing household debt-to-income ratio]

Source: Reserve Bank of New Zealand.
empirical work on the determinants of household debt. Apart from financial liberalisation freeing up households’ ability to access credit, little is known about what drives debt accumulation decisions (Hull, 2003). However, the increase appears to be inextricably linked to the rapid rise in house prices, with expectations on capital gain likely to have driven debt decisions for many households. It is also likely that lower (and less volatile) interest rates (nominal and real) since the early 1990s have made many households more willing to take on debt.

Given that a large share of household debt is in the form of mortgage debt, much of the increase in debt would have been used to fund investment in new housing. Tentative support for this is provided in figure 7, which shows the relationship between the annual change in mortgage debt and the nominal value of residential investment. Higher residential investment activity, typically reflecting the overall housing market, will correspond with increased mortgage debt accumulation. From mid-2003, the increase in mortgage debt exceeded the amount required to fund the value of new residential investment, suggesting households were accessing the increased equity in their properties for general consumption or investment purposes (for example, investment in a small business).

Figure 7
Nominal residential investment and mortgage debt

Sources: Statistics New Zealand, Reserve Bank of New Zealand.

On the asset side, a characteristic of New Zealand households is the dominance of housing. In 1980, the proportion of household assets was almost evenly split between housing and financial assets. Today, housing assets account for around 70 per cent of New Zealand households’ total assets. The relative increase in housing assets has been particularly marked in the past few years due to high house price inflation. As a percentage of disposable income, housing assets increased from 162 per cent in 1980 to 435 per cent in 2004. Financial assets increased from the early 1980s to peak in 1986 at 200 per cent of disposable income. After the sharemarket crash of 1987, however, the financial asset ratio fell and was largely static throughout the 1990s at around 175 per cent of disposable income (figure 8).

Figure 8
Household asset-to-income ratios
(as a per cent of household disposable income)

Source: Reserve Bank of New Zealand.

Comparison with OECD countries

Household savings rate comparison

The decline in New Zealand’s household savings rate is not an isolated case. The past few decades have seen a similar decline in the household savings rates in many industrial countries (table 1 and figure 9). New Zealand’s household savings rate appears to be consistently one of the lowest among OECD countries, but its decline is not the steepest. Australia and Japan experienced larger falls in their savings rates from the 1970s. However, cross country comparisons of savings rates are fraught with difficulties due to differences in measurement, institutional arrangements, financial market development, demographics, and time

5 Only the flow measure of saving is compared.
Box 2  
Savings measurement issues
The flow measure of savings is derived from the Household Income and Outlay Account (HIOA) produced by Statistics New Zealand. This measure is consistent with the System of National Accounts (SNA) and allows for cross-country comparisons. The stock measure of savings is derived from the Reserve Bank’s household assets and liabilities data. The stock measure of savings is larger than the flow measure due to the inclusion of asset price changes (note the scales in figure 4).

Both the flow and stock measures of savings are the difference between two very large numbers (being disposable income and household consumption for the flow measure, and changes in assets and liabilities for the stock measure), and are subject to wide margins of error. The hidden economy, which is likely to be larger on the income side than the consumption side, biases the flow measure of savings downwards (Claus and Scobie, 2002).

In addition, the flow measure of savings is currently being redeveloped by Statistics New Zealand and is not an official statistic. The work to date by Statistics New Zealand on the redevelopment indicates that a number of the series in the HIOA will be revised, and while some of these may be offsetting, it is anticipated that key residuals such as household savings will be affected.

In the stock measure of savings, household liabilities are overstated because some of the lending is in effect loans to small businesses secured by residential mortgages. Thorp and Ung (2000) estimated that some 10 to 20 per cent of household debt in New Zealand is secured on housing but used for business purposes. Assets, on the other hand, are likely to be understated. For example, direct investments in forestry and unlisted business equity are not included in the financial asset estimate, and direct holdings of overseas equities are likely to be underestimated (Thorp and Ung, 2000).

Table 1
Household savings rate in selected countries  
(decade averages as a per cent of household disposable income)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Australia</td>
<td>14.2</td>
<td>11.1</td>
<td>5.0</td>
<td>0.1</td>
</tr>
<tr>
<td>United States</td>
<td>9.6</td>
<td>9.1</td>
<td>5.2</td>
<td>1.7</td>
</tr>
<tr>
<td>Canada</td>
<td>12.0</td>
<td>15.3</td>
<td>9.1</td>
<td>3.1</td>
</tr>
<tr>
<td>Germany</td>
<td>13.1</td>
<td>12.8</td>
<td>11.6</td>
<td>10.4</td>
</tr>
<tr>
<td>France</td>
<td>13.2</td>
<td>9.5</td>
<td>10.0</td>
<td>11.2</td>
</tr>
<tr>
<td>Netherlands</td>
<td>4.1</td>
<td>14.3</td>
<td>13.9</td>
<td>10.1</td>
</tr>
<tr>
<td>Japan</td>
<td>23.7</td>
<td>16.3</td>
<td>12.3</td>
<td>6.8</td>
</tr>
<tr>
<td>OECD</td>
<td>16.6 *</td>
<td>17.3</td>
<td>13.0</td>
<td>10.4</td>
</tr>
<tr>
<td>New Zealand</td>
<td>3.6 **</td>
<td>2.8</td>
<td>-1.6</td>
<td>-6.9</td>
</tr>
</tbody>
</table>

* average over 1977–79.
Sources: Statistics New Zealand, OECD.

preferences. Bearing these in mind, a broad stylised fact is that household savings rates across most industrialised countries have been falling. In some OECD countries, the decline in savings rates has coincided with increases in households’ net financial wealth. This has not been the New Zealand experience, where the net financial wealth ratio has been steadily declining (figure 12).

There is a substantial international literature on savings and its determinants. The baseline models in most empirical studies of household savings include public and business savings, demographic changes, real interest rates, inflation, proxies for financial liberalisation, and income growth.

6 Measurement differences include whether private pension benefits less pension contributions are included in disposable income or not, whether saving rates are gross or net of depreciation, and whether non-profit institutions are included or not. The OECD attempts to make adjustments where it can.
Empirical research on the determinants of New Zealand’s household savings rate is scarce. The most recent examples are Choy (2000) and IMF (2003). Choy\(^7\) found that changes in the household savings rate are primarily explained by movements in real wealth (proxied by real house prices) and business savings (corporate veil argument),\(^8\) both having a negative effect. Positive effects come from the indirect tax ratio and real interest rates. The IMF study found that the trend decline in New Zealand’s household savings rate was reasonably well explained by the fundamental determinants of higher public savings (partial Ricardian equivalence),\(^9\) higher government pension and income support, increased household wealth, and improved access to credit.

A simple casual observation between household, public and business savings seems to lend some support to the corporate veil and Ricardian equivalence hypothesis (figure 10). In the absence of proper econometric estimation, this casual observation can only be indicative. It does suggest however, that the downward decline in the household savings rate is partly in response to rising public and business savings. There is, however, no general agreement on whether Ricardian equivalence or even the corporate veil theory holds, and further work in this area is required.

**Household balance sheet comparison**

Figure 11 compares the debt-to-income ratio for New Zealand against selected OECD countries. Apart from France, all countries have exhibited an upward trend in their debt ratios. In the case of Australia and New Zealand, the ratio rose faster than other countries to be at the upper end of the range. This increase came off a much lower base and

---

\(^7\) It should be noted that due to the lack of cointegration in the household saving rate equation and limited time series, Choy’s result should be viewed as tentative.

\(^8\) The corporate veil argument states that households perceive business saving to be their own because businesses are ultimately owned by households. Households therefore reduce their own saving when business saving increases, and vice versa.

\(^9\) Ricardian equivalence states that government deficits have little real economic effect because households anticipate the fact that any government borrowing has to be repaid later, and households respond by increasing their saving.
occurred later, suggesting that Australia and New Zealand were catching up to other developed countries after financial liberalisation, increasing their debt towards desired levels as access to credit became easier.

Housing wealth accounts for around 70 per cent of New Zealand households’ total assets, compared with around 65 per cent for Australia and Italy; between 50 to 55 per cent for the United Kingdom, Germany and France; and around 37 per cent for the United States. When expressed as a percentage of household disposable income, New Zealand’s housing wealth is comparable to Australia’s and the United Kingdom’s. Its holding of financial assets on the other hand is extremely low, contributing to the low net financial wealth and total net wealth position (table 3). In addition, while other OECD countries’ net financial wealth rate has risen, New Zealand’s has been on a decline (figure 12). New Zealand’s total net wealth to disposable income ratio is predominantly driven by house prices, more so than of other OECD countries.

The reasons for the relatively low level of financial asset holdings in New Zealand households are not clear. Measurement issues could be one, but is unlikely to account for all the difference. The absence of a compulsory savings scheme (as in Australia); the absence of tax incentives to promote savings (as in the United States’ 401k); a preference for investment in property; risk aversion after the 1987 sharemarket crash; a lack of access to diversified financial investment products; and a relatively generous minimum retirement income level may be reasons for New Zealand’s lower financial asset holdings compared to other countries.

Figure 11
Household debt comparison
(as a per cent of household disposable income)

Sources: OECD, Reserve Bank of Australia, Reserve Bank of New Zealand.

Table 2
Household balance sheet in selected countries
(as a per cent of household disposable income)

<table>
<thead>
<tr>
<th></th>
<th>Non-financial assets (housing)</th>
<th>Financial assets</th>
<th>Debt</th>
<th>Net financial wealth</th>
<th>Total net wealth</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Zealand</td>
<td>441</td>
<td>178</td>
<td>137</td>
<td>41</td>
<td>482</td>
</tr>
<tr>
<td>Australia</td>
<td>564</td>
<td>301</td>
<td>135</td>
<td>165</td>
<td>729</td>
</tr>
<tr>
<td>United States</td>
<td>243</td>
<td>420</td>
<td>118</td>
<td>302</td>
<td>545</td>
</tr>
<tr>
<td>United Kingdom</td>
<td>455</td>
<td>413</td>
<td>139</td>
<td>269</td>
<td>725</td>
</tr>
<tr>
<td>Canada</td>
<td>290</td>
<td>345</td>
<td>120</td>
<td>225</td>
<td>515</td>
</tr>
<tr>
<td>Germany</td>
<td>338</td>
<td>282</td>
<td>112</td>
<td>171</td>
<td>509</td>
</tr>
<tr>
<td>France</td>
<td>380</td>
<td>303</td>
<td>79</td>
<td>227</td>
<td>607</td>
</tr>
</tbody>
</table>

Note: Figures are for 2003, except for France where 2002 figures are used and for New Zealand where 2004 figures are used. Sources: OECD, Reserve Bank of New Zealand.
5 Macroeconomic implications

New Zealand consistently runs current account deficits, indicating that national savings is insufficient to fully fund new investment. Sustained current account deficits have led to a large negative net international investment position, which currently stands at 84 per cent of GDP. In the absence of further improvements to national savings (improvements to date have been limited by the negative savings rate of the household sector), meeting the country’s future investment needs will continue to require more foreign capital. Over time, an increasing reliance on foreign capital may increase the sensitivity of the New Zealand economy to changes in global or domestic economic circumstances.

Growing debt levels, combined with a relative lack of diversification of its assets, potentially increases the sensitivity of the household sector to changes in interest rates, incomes or house prices. Higher debt levels implicitly mean a greater sensitivity to interest rate fluctuations than in the past as debt servicing burdens are higher. The IMF recently estimated that the sensitivity of consumption to interest rates has increased, with a 1 percentage point rise in real interest rates now estimated to reduce consumption by 2.3 per cent after two years, as compared to a 0.8 per cent reduction in the late 1980s.

To some degree, central banks may be able to take an increase in household interest rate sensitivity into account.
when setting monetary policy. Over time, the size of the cycle in interest rates may be reduced to reflect the increased leverage that interest rate changes exert on household demand. However, the central bank is not the only entity that affects interest rates in the economy – global interest rate developments have an important bearing on New Zealand’s interest rate structure, particularly for longer-term interest rates. Moreover, even if the amplitude of the interest rate cycle does reduce over time, some heavily indebted households may still be more exposed to interest rate changes than in the past.

Higher debt servicing burdens may also make some households more exposed in the event of a rise in unemployment (e.g. in the case where one partner in a household financing a home loan loses their job). On the asset side, the relative lack of financial assets means that households have less of a buffer in the event of a significant shock to incomes. This potentially means that more of the adjustment to an income shock (e.g. from a significant increase in unemployment) would have to come through reduced spending, or by selling illiquid assets (such as housing), potentially at a loss. Similarly, the dominance of housing assets in the household balance sheet may leave household wealth more vulnerable to a fall in house prices, than would be the case if assets were more diversified.

As the use of foreign savings increases, New Zealand implicitly becomes more exposed to changes in the investment preferences of the foreign investors who provide those funds. Foreign investors have been very willing to fund New Zealand’s current account deficits in recent years – with capital inflows placing some upward pressure on the exchange rate – but their willingness to provide funds could change in the future. Although the banking system appears to manage its exposures associated with funding from abroad very well, New Zealand may be exposed to changes in the terms under which foreign investors are prepared to make funds available. Such shifts could result in a change in the price of funding (i.e. the interest rate) and could prompt a significant exchange rate adjustment. There are many factors that could prompt a re-assessment of investor preferences, some of which may have little to do with the New Zealand economy itself. Changes in global investment preferences are a fact of life, even for countries with limited external debt. However, as debt levels increase, the potential for such changes to have a more significant effect on the exchange rate or economic activity will tend to increase.

6 Conclusion

The past decade and a half has seen a consistent decline in the household savings rate in New Zealand, at a time when debt levels relative to income have also increased rapidly. It is impossible to know at which point household behaviour may change, prompting a levelling off (or outright fall) in debt ratios. It is also noteworthy that similar trends have been observed in other countries. In the meantime, higher debt levels associated with dis-saving may increase the sensitivity of households to various economic ‘shocks’. A further consequence of increased reliance on overseas funds is that New Zealand may be more exposed to changes in international investor preferences than used to be the case.

References


Developments in the New Zealand corporate sector
Khoon Goh, Economics Department

This article examines recent trends in the New Zealand corporate sector by analysing data from various sources. The corporate sector has enjoyed increased profitability over the past few years on the back of strong economic growth. While the absolute level of debt has also been rising in the past few years, the overall balance sheet position has improved. The recent strong investment growth appears to have been funded out of retained earnings or equity raisings rather than via debt. This has allowed businesses to strengthen their balance sheets while investing for future growth at the same time. Margins started to come under pressure towards the end of 2004. Looking forward, rising input and labour costs, and higher cost for some capital items may lower profitability over the coming year. At this stage, it appears that businesses in the non-tradables sector are more likely to pass on increased costs on to customers. Businesses in the tradables sector have more limited pricing power.

1 Introduction

The corporate sector plays an important role in the economy. The sector produces goods and services, determines the demand for labour, and undertakes investment decisions that expand the productive capacity of the economy. Understanding developments in the corporate sector is important from both a monetary policy and macro-stability perspective. The sensitivity of the corporate sector to changes in interest rates and the exchange rate is an important consideration when setting monetary policy. Like the household sector, the effect of monetary policy is partly dependent on how leveraged the corporate sector is. From a macro-stability perspective, a weak corporate sector can lead to instability if it is unable to withstand economic shocks. The International Monetary Fund cited financial and corporate sector weakness as having played a major role in the Asian crisis in 1997.2

Despite its importance, the New Zealand corporate sector is difficult to analyse in the same detailed manner as the household sector. A main reason for this is the dearth of aggregate data on the corporate sector as a whole.3 In forming a view on how the corporate sector is performing, the Reserve Bank pays close attention to various business surveys, and has regular direct contacts with individual businesses via a programme of regular business visits around the country. Useful as this information is, it provides only a limited perspective on balance sheets and other aspects of company performance, such as profitability and cost structures. This article attempts to pull together aggregate data on the corporate sector from various sources to examine recent developments in the sector.

2 The corporate sector in brief

Table 1 shows the number of corporate enterprises by industry and the number of people employed as at February 2004. Growth over the 2000 to 2004 period is also shown. In 2004, there were some 160,000 for-profit corporate enterprises operating in New Zealand, including those owned by central (state owned enterprises) and local government (local authority trading enterprises). These enterprises had over 1.1 million employees. Farmers and sole proprietors are not included in the analysis because they have different characteristics to a typical corporate. For example, farmers and sole proprietors mainly pay ‘other persons’ tax rather than company tax. It is also likely that small operators borrow against their mortgage as a source of business finance. In addition, three-quarters of sole proprietors do not employ anyone.

Almost a third of corporate enterprises are involved in the property and business services industry. A further 13 per cent are in the retail trade business, and some 12 per cent are in construction. There has been a 41 per cent increase in the number of corporate enterprises between 2000 and 2004, with all industries recording increases. The number of enterprises in the education, and health and community services industry has increased by 2.8 per cent. The transport, postal and telecommunications industry has seen a 10.8 per cent decline.

1 This article was written while the author was on secondment from The Treasury.
3 There is a lot of information on publicly listed companies, but their industry coverage is not a good representation of the New Zealand economy due to the dominance of a few companies.
Table 1
Number of enterprises and employees\(^4\)
(as at February 2004)

<table>
<thead>
<tr>
<th>Industry</th>
<th>Corporate enterprises</th>
<th>Employees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Number</td>
<td>% of total</td>
</tr>
<tr>
<td>Agriculture, Forestry and Fishing</td>
<td>4,920</td>
<td>3.1</td>
</tr>
<tr>
<td>Mining</td>
<td>340</td>
<td>0.2</td>
</tr>
<tr>
<td>Manufacturing</td>
<td>14,960</td>
<td>9.4</td>
</tr>
<tr>
<td>Electricity, Gas and Water Supply</td>
<td>170</td>
<td>0.1</td>
</tr>
<tr>
<td>Construction</td>
<td>18,960</td>
<td>11.9</td>
</tr>
<tr>
<td>Wholesale Trade</td>
<td>13,570</td>
<td>8.5</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>21,150</td>
<td>13.2</td>
</tr>
<tr>
<td>Accommodation, Cafes and Restaurants</td>
<td>6,770</td>
<td>4.2</td>
</tr>
<tr>
<td>Transport and Storage</td>
<td>6,150</td>
<td>3.8</td>
</tr>
<tr>
<td>Communication Services</td>
<td>760</td>
<td>0.5</td>
</tr>
<tr>
<td>Finance and Insurance</td>
<td>7,010</td>
<td>4.4</td>
</tr>
<tr>
<td>Property and Business Services</td>
<td>50,800</td>
<td>31.8</td>
</tr>
<tr>
<td>Education</td>
<td>1,410</td>
<td>0.9</td>
</tr>
<tr>
<td>Health and Community Services</td>
<td>5,160</td>
<td>3.2</td>
</tr>
<tr>
<td>Cultural and Recreational Services</td>
<td>3,700</td>
<td>2.3</td>
</tr>
<tr>
<td>Personal and Other Services</td>
<td>3,960</td>
<td>2.5</td>
</tr>
<tr>
<td>Total</td>
<td>159,790</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Source: Statistics New Zealand.

services industry recorded the largest percentage increase from 2000, albeit from a small base. In absolute terms, half of the increase in corporate enterprises over the 2000 to 2004 period came from two industries – property and business services, and construction.

In terms of employment, over 22 per cent of people employed by corporate enterprises are in the manufacturing industry. Retail trade is the second largest employer at 17.4 per cent. The number of people employed by corporate enterprises rose 23.3 per cent over the 2000 to 2004 period. All industries except communication services increased their workforce. Employees in the education industry almost doubled over this period, possibly due to the rapid expansion of language schools and private training establishments. In absolute terms, half of the increase in employees over the 2000 to 2004 period came from three industries – property and business services, retail trade, and manufacturing.

3 Profits and costs
Profit measures for the corporate sector are not readily available. A broad aggregate measure of corporate profits can be obtained from Statistics New Zealand’s estimate of net operating surplus, published as part of the annual National Accounts. Net operating surplus is equivalent to accounting profit before the deduction of direct taxes, dividends, interest paid and bad debts, and before the additions of interest and dividends received. It is roughly equivalent to an EBITDA\(^5\) measure, as it also deducts the consumption of fixed capital (or depreciation). The net operating surplus figure has been adjusted to exclude farmers, sole proprietors and owner-occupied dwellings, to correspond as closely as possible to profits generated by the corporate sector. Another source of information on overall corporate profits is the amount of company tax collected by the government. The company tax data is a useful verification of the corporate profit measure estimated from the National Accounts data.

Figure 1 shows the growth in corporate profits and company tax since 1994. Corporate profits correlate reasonably

---

\(^4\) The figures have been rounded to the nearest 10. The figures may not add up due to rounding.

\(^5\) Earnings before interest, tax, depreciation and amortisation.
well with the business cycle. Corporate profits recovered strongly following the recession of 1997/98, and since 2000 have grown by an average of around 11 per cent per annum. Profit growth rose over 2004, in line with the pick-up in GDP growth for that year. Not surprisingly, there is a strong correlation between the growth in corporate profits and company tax, but with the former leading by about three quarters. This can be explained by timing differences between when corporate profits are accounted for and when taxes are paid. Over the past few years, company tax has been growing at a faster pace than corporate profits, even after adjusting for the timing differences. A run-down in the stock of past accumulated tax losses when corporate profits recovered strongly in the late 1990s could explain the faster growth in company tax. Another possible explanation may be that the estimate of corporate profit growth over the past year or so has been underestimated, and actual profit growth could in fact be much higher.

Another measure of profitability is the profit margins that companies earn from their sales. Information on this can be obtained from the Regional Economic Indicator (REI) and Quarterly Employment Survey (QES) data compiled by Statistics New Zealand. The REI uses Goods and Services Tax (GST) data to produce estimates of total sales and purchases by selected industry types. The QES provides total labour cost estimates by industry. By subtracting purchases and labour cost from sales, a profit measure akin to an EBITDA measure can be obtained. An estimate of profit margins can then be calculated by dividing the EBITDA measure by sales. The REI and QES data relate to the total economy, and not just corporate enterprises. Therefore, the profit margins estimated and shown in table 2 should be regarded as indicative estimates only of the margins experienced by the corporate sector. Education, and health and community services have been excluded due to the dominance of the government sector, and the agriculture, forestry and mining sector is excluded due to difficulties in reconciling the different data sources.

Table 2
Profit margins
(EBITDA as a per cent of sales)

<table>
<thead>
<tr>
<th>Industry</th>
<th>1998</th>
<th>1999</th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manufacturing</td>
<td>9.5</td>
<td>10.0</td>
<td>8.5</td>
<td>7.5</td>
<td>9.7</td>
<td>10.4</td>
<td>9.5</td>
</tr>
<tr>
<td>Construction</td>
<td>13.4</td>
<td>12.5</td>
<td>12.7</td>
<td>15.1</td>
<td>14.7</td>
<td>14.9</td>
<td>15.1</td>
</tr>
<tr>
<td>Retail Trade</td>
<td>7.2</td>
<td>6.5</td>
<td>6.5</td>
<td>6.6</td>
<td>6.9</td>
<td>7.6</td>
<td>7.4</td>
</tr>
<tr>
<td>Accommodation, Cafes and Restaurants</td>
<td>9.7</td>
<td>11.1</td>
<td>10.4</td>
<td>9.9</td>
<td>11.6</td>
<td>12.8</td>
<td>15.5</td>
</tr>
<tr>
<td>Transport and Storage</td>
<td>40.9</td>
<td>38.4</td>
<td>36.1</td>
<td>36.8</td>
<td>38.5</td>
<td>36.5</td>
<td>39.1</td>
</tr>
<tr>
<td>Property and Business Services</td>
<td>22.6</td>
<td>24.6</td>
<td>24.0</td>
<td>25.8</td>
<td>26.9</td>
<td>26.9</td>
<td>26.2</td>
</tr>
<tr>
<td>Cultural and Recreational Services</td>
<td>20.2</td>
<td>18.2</td>
<td>18.3</td>
<td>18.9</td>
<td>21.8</td>
<td>24.5</td>
<td>25.4</td>
</tr>
<tr>
<td>Personal and Other Services</td>
<td>15.5</td>
<td>12.2</td>
<td>18.4</td>
<td>19.1</td>
<td>18.4</td>
<td>19.4</td>
<td>16.9</td>
</tr>
<tr>
<td>Other</td>
<td>17.2</td>
<td>15.6</td>
<td>14.9</td>
<td>14.6</td>
<td>14.2</td>
<td>15.5</td>
<td>15.4</td>
</tr>
<tr>
<td>Total</td>
<td>16.3</td>
<td>15.6</td>
<td>15.1</td>
<td>15.1</td>
<td>15.7</td>
<td>16.5</td>
<td>16.6</td>
</tr>
</tbody>
</table>

* This was an explanation put forward by The Treasury in the 2003 December Economic and Fiscal Update to explain the rapid growth in company tax.
Table 2 suggests that overall profit margins have risen since 2001, with most industries experiencing increased margins. The retail trade industry has the lowest margin, largely reflecting the “high volume, low margin” nature of the business. The services industries on average enjoy higher margins, with transport and storage estimated to have the highest margin. Higher margins in these areas may reflect the large fixed-cost nature of many parts of the service sector.

Despite strong profit growth and increased margins over the past few years, the backward nature of the data does not tell us how the corporate sector will perform over the current year. Business surveys of firms’ future profit expectations can give us some insight into how corporate profits will evolve. Figure 2 shows the relationship between growth in corporate profits and profit expectations from the Quarterly Survey of Business Opinion (QSBO) and the monthly National Bank Business Outlook (NBBO) survey. The surveys warn of a slowdown in corporate profits for this year, although profit expectations tend to be volatile and past historical relationships suggest caution in reading too much into the data.

**Figure 2**

**Corporate profits and expectations**

A further dis-aggregation into tradable and non-tradable sectors shows a divergence in price patterns (see figures 4 and 5). Producers involved in the tradables sector have seen a more rapid increase in their input costs over the past year than those involved in the non-tradables sector, although this followed a period of declining input costs. Despite producers in the tradables sector increasing their output prices, it was not sufficient to cover the increase in their input costs since the second half of 2004. In contrast, producers in the non-tradables sector have consistently been able to increase their output prices by more than the growth in their input costs since the end of 2001.

On top of rising input costs, the corporate sector is also facing rising labour costs (figure 6). In addition, the cost of inputs into production, as measured by the producer price index,7 Figure 3 shows the changes in output prices charged by producers, and prices incurred by producers for their non-labour inputs. Again, the data relates to the total economy and not just corporate enterprises, and should be seen as indicative of changes in prices experienced by the corporate sector. The large increase in input costs over 2000 was due to a depreciating exchange rate, which increased the cost of imported materials. Producers were unable to increase their prices by more over this period, and this saw margins contract. Since mid-2002, producers appear to have lifted output prices more quickly than input prices, perhaps due to relatively buoyant demand conditions in the economy. This is consistent with the rise in profit margins shown in table 2. Over the latter part of last year and early this year, however, input costs have risen faster than output costs, possibly signifying an end to margin expansion.

---

7 The producer price index measure price changes in costs of production, excluding labour and depreciation costs. Agriculture, government sector and owner-occupied dwellings have been excluded from the index.
some capital goods associated with construction has been rising rapidly. Offsetting this somewhat is the declining cost of capital equipment due to the rising New Zealand dollar. For example, the cost of plant, machinery and equipment has fallen for the previous 13 consecutive quarters, and the price level is 7.7 per cent lower than in the December 2001 quarter.

The corporate sector has enjoyed strong profit growth and margin expansion over the past few years. But the rising costs of production, labour and some capital items, in conjunction with limited pricing power especially for businesses in the tradables sector, should see lower profit growth and margin contraction over the course of 2005. This is consistent with current surveys of profit expectations. The degree of the slowdown in profit growth will depend on the ability of firms to take costs out of their business, and how much they can contain their wage bill.

4 Leverage and balance sheets

Comprehensive data on corporate debt are difficult to obtain. The Reserve Bank collects data on lending to businesses by banks and non-bank financial institutions. This domestically sourced debt funding includes a small amount of debt issued by non-financial corporates on New Zealand financial markets. Data on other sources of funding by businesses, such as corporate bonds and direct offshore loans, are more difficult to obtain. A very rough estimate of corporate lending sourced directly from overseas can be obtained from the International Investment Position (IIP) statistics. The IIP disaggregates overseas borrowing into banks, public sector and other sectors (table 3). As banks borrow from overseas to on-lend to households and businesses (which are already captured by the Reserve Bank data), the ‘other sector’ borrowings are assumed to be by the corporate sector. Data on other domestic sources of funding, such as those via managed funds and corporate bond issuance to non-financial institutions, are scarce and have been left out of the analysis.8

---

8 Thorp (2002) estimated that some $8.6 billion of business debt was sourced from managed funds and non-institutions in 2000, which was around 10 per cent of total borrowings from financial institutions and overseas.
There are two complications in using the overseas debt data from the IIP, which should be borne in mind when analysing the corporate debt position. The first is that the figure is influenced by the exchange rate. Around half of the value of overseas debt is denominated in New Zealand dollars, with a further one-third in United States dollars and the remainder mainly in currencies included in the Trade Weighted Index (TWI). Hence, changes in the value of overseas debt due to exchange rate fluctuations could misrepresent the true level of borrowing. This is especially the case for companies that hedge their foreign currency borrowing. In 2004, some 88 per cent of total foreign currency denominated overseas debt is hedged.

The other complication relates to borrowings, either directly or indirectly, from a non-resident related entity. Borrowing by a firm from their overseas parent company is an example of a direct borrowing; while indirect borrowing can involve the issue of debt to a holding company in New Zealand, which then takes an equity position in a firm. In the latter case, debt issued to a holding company is recorded as overseas debt, when in fact the economic substance of the flow to the actual investment is equity. In some instances, debt due to direct borrowing from related entities may really function as equity, much like debt issued to holding companies. When adjustments for direct investment relationships are made, the overseas sourced debt levels are around 35 per cent of what was originally reported (table 3).

Table 3
Foreign borrowing by New Zealand (NZD millions)

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Banks</td>
<td>70,627</td>
<td>72,004</td>
<td>76,150</td>
<td>80,990</td>
<td>76,957</td>
<td>86,734</td>
<td>85,528</td>
</tr>
<tr>
<td>General government</td>
<td>19,002</td>
<td>17,578</td>
<td>18,682</td>
<td>18,240</td>
<td>16,007</td>
<td>18,503</td>
<td>19,685</td>
</tr>
<tr>
<td>Monetary authorities</td>
<td>4</td>
<td>10</td>
<td>2</td>
<td>6</td>
<td>1</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>Other sectors</td>
<td>47,117</td>
<td>44,707</td>
<td>42,347</td>
<td>43,669</td>
<td>46,440</td>
<td>46,626</td>
<td>47,088</td>
</tr>
<tr>
<td>Total</td>
<td>136,751</td>
<td>134,300</td>
<td>137,181</td>
<td>142,903</td>
<td>139,406</td>
<td>151,867</td>
<td>152,305</td>
</tr>
<tr>
<td>Other sectors adjusted for direct investment relationship</td>
<td>17,061</td>
<td>15,359</td>
<td>14,562</td>
<td>15,388</td>
<td>16,594</td>
<td>16,836</td>
<td>16,297</td>
</tr>
</tbody>
</table>

Source: Statistics New Zealand.

Figure 7 shows the growth in corporate debt sourced domestically, and the estimate of debt sourced directly from overseas. Growth in corporate domestically sourced debt was stable at around 7½ per cent per annum over the 1998 to 2001 period, and started to slow over 2002 and 2003 before accelerating sharply over 2004. In contrast, growth in overseas sourced debt has been quite volatile, peaking in 1998 and trending downwards since then with a sharp decline over 2002 and 2003. Exchange rate fluctuations are likely to have contributed to this volatility.

Figure 8 shows two common debt ratios – debt to profit and debt to net capital stock, which can be viewed as a rough proxy for the debt to asset ratio. The debt to profit ratio rose from 1994 and peaked in 1998, due to slowing corporate profit growth and rapid growth in overseas sourced borrowing. Since then, the debt to profit ratio has trended downwards as profit growth recovered from the 1997/98 recession and overseas sourced borrowing slowed rapidly. The debt to net capital stock ratio rose from 1994 to peak in 2001, and has trended downwards since then. The decline in the two debt ratios suggests that the corporate sector has improved its aggregate balance sheet position over the past few years, although there are likely to have been significant sectoral variations around this general trend.

See Hull (2002) for more information on debt to related entities.

The net capital stock data is Statistics New Zealand’s measure of fixed assets (excluding land) at replacement cost. Agriculture, owner-occupied dwellings and the government sector are excluded.
Figure 9 shows the growth in total corporate debt and nominal business investment. The sharp rise in business investment growth in 2004 was not matched by a similar rise in total corporate debt. Even the growth in corporate debt sourced domestically was at a slower rate than the growth in business investment. This could be an indication that the corporate sector is funding new investment either from retained earnings or through raising new equity. In contrast, during the mid to late 1990s, the growth in total corporate debt remained high despite investment growth being very weak. This suggests that during that period, the corporate sector was leveraging its balance sheet to either make payments to shareholders, fund working capital, or to fund shortfalls in operating revenues.

Figure 10 illustrates the growth in agriculture debt and rural land prices. The agriculture sector has been benefiting from record high world commodity prices, offset to some extent by a high New Zealand dollar. Lending to the agriculture sector has been much stronger over the past few years compared to the corporate sector, although growth has slowed over the past year. Credit growth to the agriculture sector is likely to have been driven by high rural land prices, which have risen strongly since bottoming out in 1998 (figure 10). As a consequence, the debt to farm income ratio in the agriculture sector has been rising sharply over recent years. This is in contrast to the corporate sector which has been reducing its debt ratio since 1998 (figure 11). The agriculture sector’s...
The debt to net capital stock ratio has also risen to record high levels, but the majority of the agriculture sector’s assets are in land, which is not included in the measure of net capital stock (figure 12). With rural land prices rising strongly, the true debt-to-asset ratio for the agriculture sector is likely to be much lower.

Figure 11
Corporate and agriculture sector debt to income comparison

![Graph showing corporate and agriculture sector debt to income comparison from 1994 to 2004]

Source: Statistics New Zealand, RBNZ.

Figure 12
Corporate and agriculture sector debt to net capital stock comparison

![Graph showing corporate and agriculture sector debt to net capital stock comparison from 1994 to 2004]

Source: Statistics New Zealand, RBNZ.

6 Conclusion
The corporate sector has enjoyed strong profit growth and increased margins over the past few years on the back of strong economic growth. While the absolute level of debt has also been rising in the past few years, the debt to profit and debt to asset ratios have improved. The corporate sector seems to be funding the recent strong investment growth of the past year out of retained earnings or equity raisings, rather than via debt. This has allowed the corporate sector to strengthen its balance sheet while investing for future growth at the same time. Overall, the corporate sector appears sound and there are no immediate signs of stress across most sectors.

There are signs that profit margins started to come under some pressure towards the end of last year. Surveys of profit expectations of firms point to a slowdown in profit growth for this year. Rising input and labour costs, and higher cost for some capital items will likely be key drivers of the lower profitability ahead. At this stage, it appears that firms in the non-tradables sector are better able to pass on increased costs onto customers. Firms in the tradable sector have more limited pricing power. The degree of the slowdown in profit growth will depend on the ability of firms to take costs out of their business, and how much they can contain their wage bill. However, most parts of the corporate sector are in a good position to weather any profit slowdown, and its strong balance sheet position should allow the sector as a whole to absorb any temporary shocks.

Credit growth in the agriculture sector has been stronger compared to the corporate sector, and the debt to farm income ratio has risen strongly since 2002. Although strong growth in rural land prices would have improved the sector’s debt-to-asset ratio, the agriculture sector appears to be more vulnerable to shocks compared to the corporate sector.

References


Box 1
Data on the New Zealand corporate sector

The majority of the data used for this article comes from Statistics New Zealand. Data on the number of corporate enterprises comes from the Business Demography Statistics collected by Statistics New Zealand. The business demography statistics provide an annual snapshot, as at February, of the structure and characteristics of New Zealand businesses. Statistics are available on a range of variables, including industry, region, institutional sector, business type, degree of overseas ownership, and employment levels. This data is available from the Statistics New Zealand website (www.stats.govt.nz). The net capital stock series by industry is also available from the website. The annual capital stock series was interpolated into a quarterly series.

The corporate profit data was estimated using customised data from Statistics New Zealand. A net operating surplus figure excluding agriculture and owner-occupied dwellings was provided by Statistics New Zealand based on the Annual National Accounts. Income from sole proprietor was deducted by using the non-farm entrepreneurial income series from the Household Income and Outlay Account, to arrive at a corporate profit estimate. The annual data was then interpolated into a quarterly series.

The Regional Economic Indicator (REI) and Quarterly Employment Survey (QES) data used to calculate profit margins can be obtained from Statistics New Zealand. The REI is an experimental series derived by integrating Goods and Services Tax data from the Inland Revenue Department with the Statistics New Zealand Business Frame.

Historical company tax data (defined as gross company tax less refunds) is available from the Treasury website (www.treasury.govt.nz). Domestically sourced corporate debt data is available from the Reserve Bank of New Zealand’s website (www.rbnz.govt.nz). Overseas sourced corporate debt data was provided by Statistics New Zealand based on their Quarterly International Investment Survey (QIIS) questionnaire.
Overview of the New Zealand retail sector

Hannah Kite, Economics Department

This article provides an overview of the retail sector over the past five years. Strong sales growth across all store types has been a key feature of the retail sector over the period. The scale of the retail sector has also been expanding, with a significant increase in the number of new stores, and a tendency toward larger store sizes as operators seek competitive advantages of increased buying power and other scale economies. Low price inflation, particularly for stores that sell imported goods, has been another feature of the retail sector; low or negative inflation in the sector has been driven by the rising New Zealand dollar, and a fall in world prices for manufactured consumption goods. Productivity growth within the retail sector appears to have been lower than in other parts of the economy, but may be increasing over time. Profit margins within the sector have lifted slightly over this period but appear to have been constrained by strong competition and further increases in capacity within the sector.

1 Introduction

The retail sector is an important part of the economy, acting as a channel for a large component of household consumption, and spending by international visitors. The aim of this article is to provide an overview of trends within the retail sector since 1999.

A key finding is the strong sales growth within the sector over the past five years, with sales lifting by nearly 30 per cent. This represents a significantly stronger rate of growth than for many other sectors of the economy. At the same time, there has been an increase in the overall size of the retail sector, with a movement towards larger stores and retail chains at the expense of smaller merchants. This reflects an international trend, with increased buying power and scale economies potentially adding to growth.

Price inflation is another feature of the retail sector that is strongly influenced by international trends. Very low, or negative, rates of inflation are evident in stores selling imported goods, or substitutes for imports; the ongoing fall in import prices a result of a fall in world prices and the rising exchange rate.

Productivity growth within the retail sector has been relatively modest. Increases in retail sector capacity may have suppressed productivity growth for the sector as a whole, as sales growth is spread over an increasing number of operators. Profit levels within the sector have followed this general trend, with profit margins lifting only modestly.

The main source of information for this article is Statistics New Zealand’s Retail Trade Survey. As shown in table 1 (a summary of retail sector sales and prices) this survey covers 24 separate sub-sectors of retailing. These sub-sectors include accommodation, cafes and restaurants, motor vehicle retailing, repairs, and fuel. The inclusion of these particular sub-sectors is in contrast to many countries, where some or all of these areas are excluded from statistics on the retail sector. When discussing the New Zealand retailing sector, it is quite common to quote retail statistics excluding the motor vehicle sector, owing to the relatively volatile nature of both sales and prices.

2 Retail sector sales

Strong growth has been evident in the New Zealand economy since 1999, the time of worldwide recovery from the 1997 Asian crisis. This recovery was mirrored by the New Zealand retail sector. As shown in figure 1 total retail sector sales have grown by an average annual rate of between 4 and 8 per cent since 1999. With price inflation in the sector averaging just 1.3 per cent, there has also been substantial growth in the volume of sales (ie the number of units sold). Overall there has also been a substantial rise in per capita sales (see figure 2, p. 34).

1 Growth in retail sector GDP has averaged 4.5 per cent since 1999, compared to 3.9 per cent for all industry GDP. Growth is measured as a per cent change from the same quarter of previous year.

2 Calculations that exclude motor vehicle retail will be noted.
Box 1: Key Facts

- Prices of imported consumer goods have fallen steadily over recent years, and in 2004 were about 12 per cent lower than five years earlier.
- Around 15 per cent of New Zealand’s business enterprises are classified as retail outlets, according to the business demography statistics published by Statistics New Zealand.
- As at December 2004 the retail trade sector accounts for about 19 per cent of total employment.
- Retail sector activity represents 7.5 per cent of total GDP, with sales of around $51 billion in 2004.\(^3\)
- Supermarket and grocery stores are the largest store type in the retail sector, accounting for around 28 per cent of all ex-auto retail sales over the past six years. Department stores and cafes and restaurants are the second largest store types, each with an 8 per cent share of total sales.
- The supermarket and grocery store type employs 16 per cent of retail sector employees.
- Auckland has the greatest geographical share of sales, accounting for 34 per cent of total retail sales.
- An estimated 20 per cent of retail sales are directly imported.
- Inflation in the retail sector has averaged around 1.3 per cent across stores other than automotive sales, repairs, and fuel over the past five years.

Table 1
Retail sector annual sales and price movement (2004)

<table>
<thead>
<tr>
<th>Store Type</th>
<th>Sales ($million)</th>
<th>Per cent of total</th>
<th>Annual growth in 2004</th>
<th>Average annual growth since 1999</th>
<th>Price movement in 2004</th>
<th>Average annual price movement since 1999</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supermarket and Grocery Stores</td>
<td>11,255</td>
<td>20.4</td>
<td>7.1</td>
<td>6.19</td>
<td>0.8</td>
<td>2.3</td>
</tr>
<tr>
<td>Motor Vehicle Retailing</td>
<td>8315</td>
<td>15.0</td>
<td>6.0</td>
<td>5.90</td>
<td>-2.8</td>
<td>-0.7</td>
</tr>
<tr>
<td>Automotive Fuel Retailing</td>
<td>4450</td>
<td>8.0</td>
<td>17.8</td>
<td>5.88</td>
<td>9.6</td>
<td>5.5</td>
</tr>
<tr>
<td>Department Stores</td>
<td>3351</td>
<td>6.1</td>
<td>5.0</td>
<td>8.13</td>
<td>-1.7</td>
<td>0.4</td>
</tr>
<tr>
<td>Cafes and Restaurants</td>
<td>3043</td>
<td>5.5</td>
<td>7.4</td>
<td>8.13</td>
<td>2.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Other Retailing</td>
<td>2496</td>
<td>4.5</td>
<td>0.3</td>
<td>5.13</td>
<td>1.9</td>
<td>2.9</td>
</tr>
<tr>
<td>Accommodation</td>
<td>2210</td>
<td>4.0</td>
<td>9.4</td>
<td>5.30</td>
<td>4.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Clothing and Softgoods Retailing</td>
<td>2130</td>
<td>3.9</td>
<td>9.9</td>
<td>7.22</td>
<td>-0.4</td>
<td>0.8</td>
</tr>
<tr>
<td>Recreational Goods Retailing</td>
<td>2117</td>
<td>3.8</td>
<td>6.9</td>
<td>5.37</td>
<td>-0.1</td>
<td>1.5</td>
</tr>
<tr>
<td>Appliance Retailing</td>
<td>2110</td>
<td>3.8</td>
<td>8.9</td>
<td>7.56</td>
<td>-7.3</td>
<td>-3.9</td>
</tr>
<tr>
<td>Automotive Repair and Services nec</td>
<td>1654</td>
<td>3.0</td>
<td>3.6</td>
<td>10.00</td>
<td>3.8</td>
<td>3.7</td>
</tr>
<tr>
<td>Chemist Retailing</td>
<td>1543</td>
<td>2.8</td>
<td>13.2</td>
<td>5.02</td>
<td>1.8</td>
<td>0.3</td>
</tr>
<tr>
<td>Other Personal Services</td>
<td>1469</td>
<td>2.7</td>
<td>13.2</td>
<td>7.32</td>
<td>2.5</td>
<td>2.6</td>
</tr>
<tr>
<td>Furniture and Floor Coverings</td>
<td>1354</td>
<td>2.4</td>
<td>7.3</td>
<td>5.25</td>
<td>-0.3</td>
<td>1.9</td>
</tr>
<tr>
<td>Auto Electrical, Smash Repair, Tyres</td>
<td>1346</td>
<td>2.4</td>
<td>11.0</td>
<td>6.59</td>
<td>1.4</td>
<td>2.1</td>
</tr>
<tr>
<td>Hardware Retailing</td>
<td>1106</td>
<td>2.0</td>
<td>11.3</td>
<td>6.66</td>
<td>-0.5</td>
<td>1.3</td>
</tr>
<tr>
<td>Bars and Clubs</td>
<td>1091</td>
<td>2.0</td>
<td>2.7</td>
<td>2.44</td>
<td>3.8</td>
<td>2.9</td>
</tr>
<tr>
<td>Liquor Retailing</td>
<td>986</td>
<td>1.8</td>
<td>5.9</td>
<td>0.87</td>
<td>3.3</td>
<td>2.4</td>
</tr>
<tr>
<td>Takeaway Food Retailing</td>
<td>886</td>
<td>1.6</td>
<td>13.4</td>
<td>7.19</td>
<td>2.4</td>
<td>2.5</td>
</tr>
<tr>
<td>Fresh Produce Retailing</td>
<td>816</td>
<td>1.5</td>
<td>5.5</td>
<td>9.20</td>
<td>0.8</td>
<td>3.4</td>
</tr>
<tr>
<td>Other Food Retailing</td>
<td>732</td>
<td>1.3</td>
<td>14.7</td>
<td>5.73</td>
<td>1.5</td>
<td>2.2</td>
</tr>
<tr>
<td>Footwear Retailing</td>
<td>317</td>
<td>0.6</td>
<td>11.9</td>
<td>5.17</td>
<td>-2.4</td>
<td>0.2</td>
</tr>
<tr>
<td>Household Equipment Repair Services</td>
<td>306</td>
<td>0.6</td>
<td>-2.1</td>
<td>7.42</td>
<td>-0.7</td>
<td>1.4</td>
</tr>
<tr>
<td>Personal and Household Goods Hiring</td>
<td>206</td>
<td>0.4</td>
<td>13.0</td>
<td>9.35</td>
<td>1.1</td>
<td>1.4</td>
</tr>
<tr>
<td>Ex-Auto TOTAL</td>
<td>39,521</td>
<td>70</td>
<td>7.4</td>
<td>6.2</td>
<td>0.02</td>
<td>1.34</td>
</tr>
<tr>
<td>TOTAL</td>
<td>55,287</td>
<td>100</td>
<td>7.9</td>
<td>6.2</td>
<td>0.35</td>
<td>1.33</td>
</tr>
</tbody>
</table>

\(^3\) The data are for the year to September 2004.
Activity in the retail sector tends to reflect trends in the economy at large – given a strong connection between retail demand, employment, and incomes. Strong population growth over the period from 2001 to 2003, due to record levels of net immigration, appears to have fuelled demand in the retail sector with the associated rise in labour supply more than matched by growth in labour demand (figure 4). Consequently, employment has increased, adding to household sector spending power.

High net immigration provided an initial stimulus to the housing market, as new immigrants settling in New Zealand sought out accommodation. In addition, existing residents increasingly participated in the buoyant housing market, adding to the demand for both new and existing homes and providing a particular source of strength for the retailing sector. With an estimated 65,000 new residential building consents issued between 2002 and 2004 alone, the boost to demand for housing-related retail goods has been considerable. As new houses are built, and the turnover of the existing housing stock increases, the demand for new appliances, furnishings, and related goods will increase (see figure 5).

Increased tourist numbers have also had a strong impact on the retail sector, particularly in hospitality-related areas. Record numbers of overseas visitors throughout 2002 and 2004 supported the high levels of retail sales growth over more income-inelastic. Rates of growth in sales of these goods have remained high, underpinned by population growth and a buoyant housing market.
this time. In the first half of 2003 a substantial decline in visitor arrivals, as a result of the impact of the war in Iraq and the SARS crisis interrupted this trend. This downturn in tourist numbers is shown in figure 6.\footnote{The sharp decline in mid 2001 may be due to the impact of the US September 11 terrorist attacks. This seemed to have a smaller impact on retail sales when compared to the SARS crisis in 2003.}

Growth in retail sales from 1999 was initially supported by strong growth in export incomes. A falling exchange rate from about 1999, combined with strong world commodity prices, saw a sharp rise in export incomes over 2000–2001. Consequently, the strong growth in retail sales evident in urban areas of New Zealand was also matched by growth in sales in many rural areas (figure 7). Growth in rural incomes has slowed since 2002, as the New Zealand dollar has increased, but much of the momentum in sales growth appears to have remained, with retail sales growth recently accelerating in some rural economies.

Figure 4
Population net migration and annual growth in retail sales

Figure 5
Furniture and appliance sales

Figure 6
Visitor numbers and annual revenue growth in the hospitality sector

Figure 7
Regional sales growth
(annual average percentage change)

3 Retail sector prices

Over the past five years, the retail sector has displayed lower rates of price inflation when compared to other sectors of the economy. Between 1999 and 2004, prices across all areas of the retail sector rose by an average of around 1.3 per cent per annum, while inflation in the Consumers Price Index averaged around 2.5 per cent over the same period.

However, across the different categories of retailing, pricing trends have varied considerably, as shown in table 1. Low or negative rates of inflation have been seen in many store-types selling imported goods, or goods competing directly with imports. Examples include appliance, footwear, hardware, department stores, and motor vehicle retailing. The most striking example is appliance retailing, where...
prices have dropped by almost 4 per cent per annum on average over the past five years (figure 8).

Throughout much of this period, a rising New Zealand dollar has placed considerable downward pressure on import prices for consumer goods, as is shown in figure 9. The world prices of manufactured retail goods also appear to have fallen significantly, placing further downward pressure on import prices. The ongoing fall in import prices has contributed to an increase in the share of imports in retail sales (figure 10) with demand apparently switching toward these cheaper products.

However, the exchange rate and intense competition may not have been the only factors helping to keep prices low in parts of the retail sector. Other influences include the following:

- Retailers have actively continued to source cheaper goods from overseas suppliers in an effort to keep prices low. This activity is reflected in the increasing significance of imports from some countries such as China. From 2000 to 2004, imports from China increased from 8 per cent to 10 per cent of total imports. Much of this increase was made up of electrical goods.

- Product life cycle effects may also be playing a role in suppressing prices in parts of the retailing sector. For example, television and video equipment prices have plummeted in recent years, falling by about 40 per cent since 1999 (figure 8 (b)). This is well in excess of reductions that may have been expected due to
the exchange rate. These price falls often occur as technology matures and the costs of production fall. Although prices have been falling in some areas of retailing, increases have been evident in other areas. Rising oil prices have contributed to substantial increases in prices within automotive fuel retailing, where prices have risen by an average of 5.5 per cent since 1999. Other parts of retailing with relatively high rates of inflation include accommodation, liquor, bars and clubs, cafes and restaurants. Since these sectors have little direct reliance on imports, prices will have been relatively unaffected by the rising exchange rate. Stronger activity levels and a tightening labour market are likely to have contributed to higher prices. Occupancy rates have lifted consistently in the accommodation sector since 2000, buoyed by stronger demand from domestic and international tourists, which is likely to have been accompanied by some increase in prices.

4 Size and scale of the retail sector

Against the backdrop of strong sales growth, the overall size of the retail sector has been expanding in recent years. Hours worked have grown rapidly (see figure 11) and significant numbers of new stores have opened.

Statistics New Zealand’s business demography statistics suggest more than 4,500 new retail stores have opened since 2000, an increase of almost 10 per cent. Some of these stores represent expansions by existing operators (largely chains), while others will be new entrants to the industry.

The data also suggest that retail stores are, on average, becoming larger over time (table 2). Scale is a relatively complex variable to measure comprehensively, and data in this area are limited. However, between 2000 and 2004, the average number of persons employed per retail store increased from 5.5 to 5.8. Although this might at first not appear a dramatic increase, it would suggest that retail stores have become 7 per cent ‘larger’ on average (taking average employment per store as a very rough proxy for store size). These numbers imply that the capacity, or scale, of the sector has grown significantly since 2000 (ie by over 15 per cent). The increase in capacity would be consistent with claims sometimes made by retailers that an increased volume of retail sales has had to be shared across a growing pool of operators and larger stores, in some cases leading to a fall in sales on a same store, or square metre, basis.

The trend toward larger stores reflects international trends, and there are a range of drivers. Many retail operators are likely to have been seeking competitive advantages in the form of greater buying power from suppliers, and scale economies in areas such as staffing and advertising. Some stores recently established in New Zealand have been part of companies operating in Australia or further afield, and may have been able to leverage further competitive advantages from their international presence. Consumer preferences also continue to drive the shift towards larger stores and shopping centres, seeking the added convenience of factors such as on-site parking, as well as a greater range of products, and lower prices.

Statistics New Zealand data on non-residential building activity bears out the significant expansion in retail sector capacity in recent years. The number of building consents issued for shops, restaurants, and taverns has grown at an

Figure 11
(Growth in hours worked in the retail sector. (annual average percentage change))

<table>
<thead>
<tr>
<th>Year</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>1999</td>
<td>0</td>
</tr>
<tr>
<td>2000</td>
<td>2</td>
</tr>
<tr>
<td>2001</td>
<td>4</td>
</tr>
<tr>
<td>2002</td>
<td>6</td>
</tr>
<tr>
<td>2003</td>
<td>8</td>
</tr>
<tr>
<td>2004</td>
<td>6</td>
</tr>
</tbody>
</table>

3 If we remove ‘Accommodation, Cafes and Restaurants’ from the calculation, the size of retail stores alone has increased by 10 per cent on average over the same period. More detailed data also confirms that Hardware, Department Stores and Footwear have exhibited the biggest increases in employment per store.

4 Detailed data from the business demography directory show that there has been substantial growth in the number of larger sized stores, with stores with more than 10 employees having increased sharply over the past few years.
annual average of 16.8 per cent since mid-2002. Much of this building activity has been evident in the refurbishment and expansion of shopping centres throughout New Zealand. Substantial new investment in bulk retail stores continues, including a $50 million shopping complex currently under construction in Hamilton, as well as other areas of the country. Much of the demand for new retail space is purportedly from Australian retailers looking to enter or expand their operations in New Zealand.

5 Labour productivity

Given the strong growth in sales and ongoing structural changes, it is useful to investigate how labour productivity in the retail sector has evolved over recent years. To what extent have the high rates of sales growth been matched by increases in output per worker? Answers to this question can help shed light on the competitiveness and profitability of the retail sector.

Labour productivity can be measured by dividing the retail sector component of GDP – which measures valued-added in retailing – by hours worked.\(^7\) As a measure of hours worked we use the Quarterly Employment Survey (QES) estimate of hours paid. This data is sourced directly from administrative records of firms, and allows us to isolate hours paid in the retail sector, from hours paid in the wholesale sector.\(^8\)

The resulting calculation suggests that growth in retail sector productivity has been rather weaker than growth in productivity for the economy at large. Over the period from 1990 to 2004, productivity growth rates average 0.1 per cent per annum for the retail sector, compared to 1.1 per cent per annum for the total economy (see Figure 12 and table 3).\(^9\) While there is an indication that productivity is increasing over time, this result should be taken with caution due to the arbitrary nature of the break and the volatility of the series.

One explanation for the weaker productivity growth rates in retailing, at least for the earlier period in table 3, may be the significant expansion of opening hours that occurred in retailing during the 1990s. With many stores moving to seven day opening and extended opening daily hours (driven by legislative changes and customer demand), sales achieved per worker may have come under pressure. This explanation would be consistent with the transition to faster productivity growth rates later in the period.

Another explanation for lower rates of measured productivity growth may be that increases in retail sector capacity (due to the entrance of new operators and stores) have acted to suppress productivity growth for the sector as a whole. Although retail sales have been growing rapidly, the growth in sales has been spread across a larger pool of retailers.

It can be argued that there is less opportunity for capital deepening (greater use of plant and equipment) in the retail sector when compared to other sectors of the economy. Retailing is inherently a relatively labour intensive activity.

---

\(^7\) We use GDP as it measures the real service provided by retailers in the provision of transactions to customers. This is in contrast to using total sales, which is simply the total value of the goods sold. An ARIMA trend has been used to smooth the series.

\(^8\) The Household Labour Force Survey (HLFS) estimate of hours worked, used in recent work on productivity at The Treasury, compiles data for the wholesale and retail sectors as an aggregate.

\(^9\) Retail sector productivity improves significantly when accommodation, restaurants and bars are removed from the measure. The low productivity of the hospitality sectors is the direct result of the labour-intensive nature of this industry.

\(^{10}\) In a recent report by the OECD the ratio of physical capital to total employment was found to be lower in the ‘retail trade and wholesale, hotels and restaurants’ sector when compared to other service industries for all OECD countries. (Wölfl, Anita (2005) “The Service Economy in OECD Countries” STI Working Paper, OECD.)
and this may limit the scope for productivity gains.\textsuperscript{10} However, this explanation can be challenged: there has been a significant influx of new technology into the retail sector, such as electronic inventory management and sales systems. This, along with increases in the average size of retail stores, and highly competitive conditions, may have been expected to result in substantial productivity gains.

As shown in figure 12, growth in retail sector productivity tends to move in line with productivity in the wider economy. The large fall in productivity in the retail sector in 1997 was driven by a substantial fall in retail sector activity over this period. This may have been a result of the decline in tourist numbers following the 1997 Asian Crisis, which had a significant impact on parts of the retail sector (including accommodation and stores catering for tourists).

In light of the trend towards more international retailers in New Zealand, it is interesting to compare productivity growth with that seen overseas. Insights into retail sector productivity in New Zealand compared to the OECD are illustrated in a recent paper by the OECD on the services economy.\textsuperscript{11} The OECD combines the wholesale and retail sectors of the economy when reporting results. For 1980–1990 New Zealand had the lowest wholesale and retail sector labour productivity of the reported countries, at -1.0 per cent.\textsuperscript{12} From 1990–2001 this increases to a level of 1.6, a level that was about average for the OECD.

6 Profitability

Given the substantial growth in sales over recent years, the increase in the number of operators within the sector and signs of relatively modest productivity growth, how has retail sector profitability fared? Unfortunately, the Statistics New Zealand Retail Trade Survey does not directly measure retail sector profitability, but an estimate can be gleaned from other sources.

In what follows, a measure of profitability is derived by subtracting purchases and labour costs from sales. This measure of profitability is analogous to an EBITDA (earnings before interest, tax, depreciation, and amortisation measure) and is calculated using the Regional Economic Indicator (REI) and Quarterly Employment Survey (QES) data. Estimates of total sales and purchases are obtained from the REI where they are derived from Goods and Services Tax (GST) data; the QES provides estimates for total labour costs.\textsuperscript{13} An estimate of profit margins can be calculated by dividing the estimate of total profit by total sales.

In the retail sector, profit has increased significantly since 1999 (see figure 13). The rise in profitability is reflective of the strength within the sector over the period, and is also

\begin{table}
\centering
\caption{Average labour productivity growth}
\begin{tabular}{|c|c|c|}
\hline
 & 1990Q1-98Q4 & 1999Q1-04Q3 & 1999Q1-04Q3 \\
\hline
Economy wide labour productivity & 1.1 & 1.2 & 1.1 \\
Retail sector labour productivity & -0.4 & 1.0 & 0.1 \\
Retail sector labour productivity (ex-accomodation) & 0.3 & 1.3 & 0.7 \\
\hline
\end{tabular}
\end{table}

\textsuperscript{10} This does not include Hotels and Restaurants. If we include these operators, labour productivity growth is -1.4 per cent from 1990-1990, still the lowest value reported. This increases to 1.1 per cent in 1990-2001.


\textsuperscript{12} Ibid.
a reflection of the recovery from the lower levels of profit following the 1997 Asian crisis. While growth in profits has been strong, this has levelled off over the last year. The data suggest only a small increase in profit margins, from a level of 7.2 per cent of sales in 1998 to 7.4 per cent of sales in 2004. This small increase in profit margins may reflect the relatively competitive nature of the retail industry and the increase in the sector’s size that was noted earlier. In contrast, profit margins in the accommodation, cafes and restaurants sector appear to have increased substantially since 1998, from 9.7 per cent to 15.5 per cent in 2004 (figure 14). Actual profits have also increased significantly, albeit from a very low level in 1998. The rise in profits has been largely driven by an increase in sales, with increased demand from international and domestic tourists.

To get an idea of how some New Zealand retailers have been performing, it is worth looking at the experiences of some of the major retailers listed on the New Zealand Stock Exchange. Individual company reports have been mixed, with some stores reporting high levels of growth, while others have faced more challenging conditions. Annual sales are shown in figure 15. Note that the sales data for The Warehouse Group, Michael Hill International, Hallenstein Glassons Holdings, and Restaurant Brands New Zealand include sales from international branches; however, these sales tend to comprise a small proportion of total sales. Overall sales have been increasing steadily over time for these major retailers. Akin to profitability measures, growth in sales was strongest over 2001–2002 but has tapered off more recently.

While recent reports suggest performance is still mixed, overall the outlook for revenue seems a little more reserved. Stores associated with the housing market still note a boost to revenue as a result of high sales. However, in general, a fall in purchasing costs, fuelled by the high New Zealand dollar and low world prices of consumer goods, is thought not to have provided a major boost to earnings. This is reported to be the result of either an increase in operating costs due to the opening of new stores, or as a result of high competition

---

**Figure 13**
Profitability in the retail sector.

**Figure 14**
Profitability for accommodation, cafes and restaurants.

**Figure 15**
Annual sales of some major New Zealand retailers.

---

leading to increased sales without increases in volumes (and with the increased costs associated with higher turnover). As a result some companies have reported decreases in sales on a square meter or same store basis.

7 Concluding comments
This article has provided an overview of the general trends within the retail sector over the past five years. Strong growth in retail sector sales, across all store types, is the most significant feature identified. Increased population, as a result of record levels of migration, a buoyant housing market, and high income levels, have underpinned high sales growth since 1999. At the same time, the overall size of the retail sector has also been increasing, with a tendency towards larger stores and retail chains. This reflects an international trend, with increased buying power, scale economies, and consumer preferences driving the trend.

The retail sector has shown lower rates of inflation than many other sectors. The very low or negative rates of inflation have been predominantly in those stores selling imported goods, or substitutes for imports; the ongoing fall in import prices driving lower prices in this sector. In addition, increased buying power as a result of increases in store size, and greater competition resulting from a larger international influence, adds to this effect.

While labour productivity in the retail sector appears to have increased over time, productivity growth rates have still been lower than for other sectors of the economy. This may be the result of increased capacity acting to suppress productivity, despite the high level of sales growth since 1999. Similarly, profit margins within the retail sector (ex-accommodation, cafes and restaurants) have remained relatively stable. Scale economies within the sector and the significant influx of new technology may lead to increased productivity in the future. Whether this increased productivity will transform into higher profit margins remains to be seen, however, in light of strong competition within the sector, and the more subdued outlook for sales recently noted by some retailers.
Speech

Bank regulation and supervision in New Zealand: recent and ongoing developments

An address by Dr Alan Bollard, Governor, Reserve Bank of New Zealand, to the Australasian Institute of Banking and Finance

23 March 2005

Vigilance and reinvigoration

The New Zealand economy has experienced a very good period of growth over the last ten or so years, averaging 3.4 per cent GDP growth per annum. In the last five years, with growth averaging 3.8 per cent per annum, New Zealand has been one of the fastest growing economies in the OECD even ahead of Australia. New Zealand’s unemployment rate is now at a multi year low of 3.6 per cent.

The banking sector has played a significant role in this economic growth, being the main intermediator of people’s savings into investment and gateway for foreign investment funds. At around 74 per cent, banks account for the lion’s share of financial system assets in New Zealand. In comparison, banks account for about 50 per cent of financial system assets in Australia.

Bank balance sheet growth has been exceptional for several years, dominated by lending to households. What is pleasing to date is that the soundness of the banking sector has also remained intact. Banks are experiencing a period of very low loan default and strong profitability.

However, it should never be forgotten that despite our impressive growth, New Zealand remains a small, open, and indebted economy. We have also been benefiting from a strong terms of trade upswing, and a structural rise in households’ debt appetite, neither of which will be sustained forever.

The potential vulnerabilities of our economy are reflected in the banking sector. Over half of New Zealand’s foreign borrowings are sitting on banks’ balance sheets, with New Zealand’s private sector relative indebtedness the highest in the OECD.1 What’s more, our banking sector displays amongst the highest levels of foreign ownership in the world – foreign banks own 98 per cent of New Zealand banking system assets, with 85 per cent being Australian-owned.

Despite the benefits that foreign ownership and capital bring, these features mean that any banking crisis New Zealand faces is as likely to be caused by external influences as it is internal. The New Zealand financial system is vulnerable to shocks within the banking system (such as the mismanagement of a local bank), outside of the banking system (such as a wider economic threat), as well as shocks in other countries, especially Australia, that may be transmitted through our banking system. The serious mismanagement of an Australian bank, or a major shock to the Australian economy, could have serious negative repercussions for the New Zealand banking sector and financial system.

It is awareness of these potential vulnerabilities that motivates the RBNZ’s vigilance, and that has led to a particular focus over the last couple of years in assessing and reinvigorating how we go about regulating and supervising banks, as well as driving trans-Tasman policy harmonisation.

The RBNZ’s responsibility to supervise banks in New Zealand is prescribed in the Reserve Bank of New Zealand Act. This Act requires us to use the powers it gives to the Bank to promote the soundness and efficiency of the New Zealand financial system, and to avoid significant damage to the financial system that could be caused by the failure of a registered bank. For some time now the RBNZ has taken a three pillars approach, based on a regulatory culture of self, market and regulatory discipline. This approach places risk management largely in the hands of those closest to it, and lays responsibility for outcomes with boards of directors, management, and creditors – that is, those who have the most to lose from a mismanaged bank.

The first pillar is self-regulation. This is all about the policies and structures that promote effective governance by banks’ boards of directors, including effective oversight by local directors, and a culture of risk management and accountability. Over the last couple of years the RBNZ has been working with the industry to ensure that these policies and structures are in place, and that they are being effectively implemented.

1 According to IIP data as at September 2004.
boards of the local banks’ managements. We expect high standards of corporate governance from the boards of New Zealand banks, and this expectation is reinforced by some quite severe penalties that could apply should a bank’s directors fail to properly discharge their responsibilities. In the wake of the Enron-type corporate governance scandals and subsequent numerous reviews, the importance of good self-regulation has gained a lot more recognition recently with the passing of such legislation as the Sarbanes Oxley Act. In its Basel II recommendations, the Basel committee has also put a lot more weight on the importance of good self-regulation for ensuring bank stability than it did previously.

The second pillar is market discipline. For many years, banks in New Zealand have been subject to obligations to make quite comprehensive quarterly financial and prudential disclosures to the marketplace. These disclosures, combined with a policy of not bailing out failed institutions, help to strengthen market scrutiny of banks, and the market disciplines that go with that.

The third pillar consists of our regulatory and supervisory requirements. Although our regulatory framework is somewhat less intrusive than that of many countries, it nonetheless contains most of the standard features, the centrepiece of which is the requirement that banks in New Zealand be adequately capitalised.

In its Financial Sector Assessment Programme (FSAP) review of the New Zealand financial system last year, the IMF confirmed that we have a good model for host country supervision.

Fulfilling the second element of our statutory responsibilities – to avoid significant damage to the financial system that could be caused by the failure of a registered bank – requires the Reserve Bank to have a crisis management strategy. That is, we must be ready with a range of tools and options that would enable us to step in should a bank get into serious difficulties.

What has reinvigoration involved?
The Bank has been reassessing and testing each of the pillars described above, and at the same time putting a lot of effort into developing its crisis management capabilities.

Maintaining and encouraging soundness and efficiency
We strengthened the first pillar of self discipline, in the middle of last year, by implementing a policy of ‘fit and proper’ review of appointees to positions as senior managers or directors of registered banks. Recruitment into these positions is still the sole responsibility of the banks’ respective boards. The ‘fit and proper’ policy simply means that the Reserve Bank seeks a ‘negative assurance’ when appointments to senior management or boards are made. In no way does this relieve boards of their responsibilities.

Our outsourcing and local incorporation policies also reinforce that a bank’s board must act in the interest of the New Zealand bank. The use of parent-bank systems, tools and techniques is of course permitted, but only with the full understanding and ownership of the local bank and board. The local bank board is responsible and accountable for all aspects of bank operations.

Some minor changes to the second pillar will take place at the end of March when several amendments to our disclosure requirements come into force. The amendments will facilitate banks’ adoption of international financial reporting standards. and make a number of other changes relating to earlier changes to banking supervision policy and the disclosure regime.

Basel II capital requirements have led to us reassessing aspects of the third pillar. We have decided to increase our emphasis on harmonisation with APRA when implementing the capital requirements of Basel II. Banks operating in New Zealand, and meeting certain criteria, will have the option to use the Internal Ratings Based and Advanced Measurement Approaches to calculating regulatory capital.

The Reserve Bank is also developing a framework that will help it understand in more detail how banks are fulfilling their regulatory and supervisory requirements.
Section 95 of the RBNZ Act gives the Reserve Bank the power to require a bank to provide us with a report by a Reserve Bank-approved, independent person. These reviews, the cost of which will be met by the banks themselves, are likely to investigate such issues as risk management, operational systems, and the nature of outsourcing. We have already exercised our section 95 powers in relation to one bank’s outsourcing arrangements.

Crisis management
It is very important that, when dealing with a troubled bank, the New Zealand authorities should have a range of options available that can prevent a wider systemic crisis. These can range from the power to give directions, through statutory management, through to liquidation or a full-blown rescue. To exercise any of these options, it is essential that the bank in question have the records, people and systems it needs to operate on a stand-alone basis – that is, it must be a bank, not a shell of a bank.

We are putting a considerable amount of effort into securing our ability to manage a crisis, both by developing the Reserve Bank’s crisis management capabilities, and by ensuring that there exists the legal and practical ability to continue to operate a failed bank via our local incorporation and outsourcing policies.

Simply stated, our local incorporation and outsourcing policies require that systemically-important banks in New Zealand be incorporated locally, and that they maintain the capacity to function on a stand-alone basis, if required. Without that capacity, there is a material risk of the banking system becoming dysfunctional in a banking crisis. The measures we are introducing to counter that risk have recently been affirmed by Standard and Poor’s, who noted that they “could well enhance the strength of the New Zealand banking sector and its ability to withstand a period of financial stress”.2

Outsourcing is a reality in today’s world, where national borders are permeable and the business environment highly specialised. However, where systemically-important banks are concerned, the Reserve Bank needs to be satisfied that any outsourcing undertaken does not compromise their legal, operational, or financial ability to meet their obligations. Although it has not been an issue to date, outsourcing could well become more of an issue for Australia over the next few years.

In November last year we released a paper for consultation, setting out the RBNZ’s proposed outsourcing policy. We had already established principles for our proposed outsourcing policy and applied those to ANZ National Bank upon approval of its merger. The consultation paper formalised these principles and set out a policy framework for application to all systemic banks and some other categories of banks. Submissions on the discussion paper closed at the end of February and bank staff are currently working their way through those submissions.

The outsourcing policy is very much outcomes-focused, so individual banks can tailor a solution that best suits their situation and needs, while meeting our requirements. In this way costs can be minimised and a level playing field maintained. We intend to work closely with banks as they go about implementing the policy.

There is no doubt that banks will incur some operational costs due to the outsourcing policy. However, we think these costs will be small and manageable, especially relative to Australian banks’ annual gross revenue, profits, and the potential costs of a bank failure, despite the claims in the media to the contrary.

Much of the public debate around the outsourcing policy has focussed on direct operational costs and thus the relatively small loss in productive efficiency that may occur. However, there are other aspects to efficiency to consider also, including allocative and dynamic responses. For example, our outsourcing policy could lead to better capital allocation due to more local decision-making capacity, as well as systems that are more flexible and responsive to local needs. These aspects are especially important for the growth of small to medium size enterprises that dominate the New Zealand business landscape. Such benefits could accrue to

---

bank shareholders and customers, as well as the wider New Zealand economy.

At the heart of the Reserve Bank’s crisis management work is the development of a crisis management toolkit that will provide tools, policies and procedures to guide the high-stakes decisions supervisors would have to make under very tight time frames.

Crisis management can be thought of as having two phases. Phase one is the very short period, perhaps a day or two, immediately following the discovery that a bank is in severe distress. It involves decisions around whether and how to get the bank solvent and operating again. Phase two is the potentially lengthy subsequent period, during which it must be decided what to do with the bank over the long term. It involves decisions around the bank’s value and long term ownership. It is important to have options for the initial phase that avoid destroying future economic value or squandering taxpayer money, or that ultimately reduce the options in phase two.

Perhaps the most original of the tools we have been exploring for phase one is Bank Creditor Recapitalisation or BCR, which could enable the Reserve Bank to respond to a bank failure in a way that avoided or minimised costs to the taxpayer, while still maintaining systemic stability. Essentially, it involves applying a ‘haircut’ to depositors and other creditors to recapitalise the bank, and then quickly making available to depositors the non-haircut portion of their deposits.

BCR addresses some of the same issues as deposit insurance, which is currently receiving attention in Australia, in that it quickly restores liquidity for depositors. However, with BCR the costs of imprudent risk management and monitoring are borne by depositors, management and shareholders, thus reinforcing the market and self-discipline that underpins our regulatory culture.

Much has been done to advance this project, including pilot testing of some IT prepositioning at one of the major banks. We are confident that, from an IT technical perspective, a BCR approach is likely to be feasible. However, substantial work remains to be done and no decision has yet been taken to formally adopt it as a crisis management tool.

Regarding the bank ‘work out’ phase, we are developing our thinking on other failure management options, such as good bank/bad bank split, partial sale of failed banks’ assets and liabilities, government bail-out, and industry support. Although these are well known, almost garden variety, options for dealing with a bank failure, putting in place the decision-making frameworks, policies and procedures that will facilitate effective, low-cost management of a bank crisis is a big job.

The trans-Tasman dimension

As I made mention of at the beginning, New Zealand is very dependent on foreign capital, and the bulk of this foreign capital is intermediated through a predominantly Australian-owned banking sector. This industry and geographic concentration of foreign ownership in one country makes the New Zealand banking sector quite unique.

As you will be aware, home and host countries undertake their banking supervision roles and responsibilities within the framework of home-host supervision set out in the Basel Concordat. The Concordat emphasises the general responsibility of home country authorities to supervise banks’ worldwide consolidated activities, as well as the host country responsibility to supervise foreign bank establishments in their territories as individual institutions.

Our emphasis on market and self discipline, and our less prescriptive regulation, has led to New Zealand’s supervisory and regulatory activity neatly complementing that of APRA and the other home supervisors with whom we share banks. In fact, we feel that New Zealand leads the world in home/ host dovetailing from the host viewpoint within the very general framework provided by the Basel Concordat.

When it is done well, both home and host supervisors can benefit in obvious ways from each other’s supervision. In New Zealand, we openly acknowledge the benefit that our financial system derives from the role played by APRA, and the other home-country regulators. However, we are also keenly aware that the interests of home and host supervisors can and do diverge, and that these divergences lead to differences in the style and substance of supervision and regulation. Moreover, these differences are likely to manifest
themselves most sharply in the very pressured circumstances that a distressed bank brings. Such differences include:

- Different statutory objectives. For example some supervisors have depositor protection as their main objective, while others have soundness and stability.
- How capital should be allocated. Each supervisory authority would like to see as much capital reside within its own jurisdiction as possible.
- How risk should be allocated. Each supervisory authority would prefer that the risk resides outside its own system.
- Each supervisory authority is only responsible for financial stability in its own system. The effects on the financial systems of other jurisdictions of any actions taken to manage a bank failure in one's own jurisdiction are likely to be considered second order.
- Different views on appropriate techniques for responding to bank stress.
- Different perceptions of when a crisis is systemic – a particular risk when the subsidiary plays a much larger role in the host system than the parent plays in the home system.
- Each system may also be subject to different destabilising influences.

These differences are not straightforward to resolve when there is a largely bilateral relationship between home and host countries, of the kind faced by New Zealand. For these reasons, and in the absence of any fair and formalised, operationally and legally robust, international framework, a host authority would not purely rely on the home authority to protect the host financial system. All supervisors’ actions are ultimately bounded by the legislation under which they operate. And in the midst of a crisis situation there is no room to negotiate legal boundaries.

That said, we also recognise that the most effective response to a cross-border crisis would desirably involve very close cooperation and coordination between the home and host authorities. To this end the RBNZ has been active in pursuing closer cooperation with APRA. We have had for some time Memoranda of Understanding with APRA and the Financial Services Authority in the UK that allow for the sharing of supervisory information. However, a number of other cooperative measures have been undertaken recently:

- We have initiated a secondment strategy of senior staff members between APRA and the Bank. We believe that we can learn from one another.
- We have established a terms of engagement with APRA so that we can dovetail our Basel II implementation initiatives.
- We are assessing all of our requirements of banks under the Basel Core Principles (BCP) so as to best ensure we have a single set of regulatory ‘rules’ where possible and sensible.
- We have agreed to share visits to Australian-owned banks on either side of the Tasman with APRA staff.

The RBNZ has agreed with APRA a Terms of Engagement for Basel II implementation. The Terms of Engagement sets out the RBNZ’s and APRA’s intent to implement Basel II in such a way that each supervisor’s right to set its own minimum levels of capital is maintained, while at the same time seeking to reduce compliance costs where possible. It also requires that the RBNZ and APRA will conduct supervisory reviews of banks operating in both jurisdictions in a way that makes use of each supervisor’s comparative advantage. This will involve joint sharing of information on, and recognition of, supervisory tools used and reviews undertaken.

In February, New Zealand’s Minister of Finance and the Australian Treasurer announced the formation of a Trans-Tasman Council on Banking Supervision to consist of the respective Reserve Banks and Treasuries, and APRA. This Council will be represented at the highest level within the member institutions. Its main role will be the monitoring and coordinating of trans-Tasman home-host regulatory issues.

The Council is not based on statute. Rather its role is that of monitoring and advice, with reporting duties to the relevant Ministers. A key goal for the Council is to promote the maximum coordination, cooperation and harmonisation of trans-Tasman bank regulation where sensible, so as to best minimise compliance costs.
Preliminary work is underway at the moment for the first meeting of the Council, which is scheduled to happen soon. The first key output of the Council is to report to Ministers in late May on any legislative changes that may be required to ensure APRA and RBNZ can support each other in the performance of their current regulatory responsibilities at least regulatory cost.

There are other significant early gains that could be made for the Council over the coming year. For example, we anticipate good progress on the home-host coordinated implementation of Basel II that I outlined in the Terms of Engagement earlier. We also think good progress can be made on gaining a clearer understanding of trans-Tasman bank failure management strategies and coordination.

We look forward to building the trans-Tasman regulatory community based on the principles of cooperation and harmonisation. But, we will also work diligently to continue developing the capacity to preserve New Zealand’s systemic financial interests.

Conclusion

Overall, the strong presence of foreign banks has brought many benefits to New Zealand in terms of soundness and efficiency. It has enhanced risk management capacity within the banking system, facilitated the entry of new banking products and services, and reduced the financial system’s vulnerability to domestic economic shocks. However, along with the many benefits it brings, having an open, foreign-owned banking system also increases the chances of our financial system being adversely impacted by off-shore developments.

The Reserve Bank of New Zealand is developing and maintaining the ability to deal with troubled banks in a way that is fiscally responsible, and that causes minimal disruption to real activity.

We are also actively engaging with our trans-Tasman counterparts, and are optimistic about the opportunities the trans-Tasman Council and further harmonisation might offer.
RESERVE BANK DISCUSSION PAPERS

This section sets out the abstracts of recently issued Reserve Bank Discussion Papers. Papers are available for download on www.rbnz.govt.nz, and may also be requested in hard-copy from the Reserve Bank.

DP2005/01

Factor model forecasts for New Zealand

by Troy Matheson, May 2005

This paper focuses on forecasting four key New Zealand macroeconomic variables using a dynamic factor model and a large number of predictors. We compare the (simulated) real-time forecasting performance of the factor model with a variety of other time series models and gauge the sensitivity of our results to alternative variable selection algorithms. We find that the factor model performs particularly well at longer horizons.
NEWS RELEASES

For the record: news and information releases issued by the Reserve Bank, March-June 2005

OCR unchanged at 6.75 per cent

28 April 2005

The Reserve Bank has left the OCR unchanged at 6.75 per cent.

Reserve Bank Governor Alan Bollard said: “At the March MPS we expressed concern about the persistence of inflation pressures in the economy which were severely limiting our inflation headroom. We still take that view. While recent indicators have shown signs of a slowdown in the second half of 2004, analysis of the data suggests that underlying demand and inflation pressures remain strong. In this environment, further policy tightening cannot be ruled out.

Recent GDP data and business surveys have been difficult to interpret in the context of the economic cycle. Several years of strong growth have led to productive resources becoming stretched, with capacity utilisation and measures of labour shortages remaining at or near record highs. The recent soft GDP outturns may have been affected by these capacity constraints and do not necessarily reflect a weakening of aggregate demand. Recent indicators of demand support this view, with retail trade, housing market data and imports all remaining very robust. Consequently, we expect some rebound in GDP growth over the first half of 2005.

Price data also point to inflation pressures remaining at least as strong as in our March assessment. The March quarter CPI was heavily influenced by temporary factors, such as the large seasonal fall in international airfares. Underlying inflation pressures are persisting, as evidenced by rising business costs and ongoing labour market tightness.

Over the coming weeks we will be reviewing our forecasts in more detail, in particular to assess the strength of pipeline interest and exchange rate effects, household demand and ongoing labour market pressures. This assessment will be used to confirm whether further policy tightening is warranted at the June 2005 Monetary Policy Statement. Certainly, the current outlook offers no scope for an easing of policy in the foreseeable future.

Reserve Bank reinforces last week’s statement

Speech excerpt on monetary policy, from an address by Dr Alan Bollard, Governor, Reserve Bank

3 May 2005

As part of a presentation to a Masterton District Council Business Community Breakfast Meeting

Reserve Bank Governor Alan Bollard today reinforced his statement of 28 April 2005 that economic data suggests that underlying demand and inflation pressures remain strong and that, in this environment, further policy tightening cannot be ruled out.

Dr Bollard was speaking to a Masterton District Council Business Community Breakfast Meeting.

“Last week I announced that the Official Cash rate (OCR) would remain at 6.75 per cent,” Dr Bollard said. “But I reiterated our concerns about the persistence of inflation pressures in the economy, which are severely limiting our inflation headroom.”

Dr Bollard said that over the coming weeks the Bank would be reviewing its forecasts in more detail, in particular to assess the strength of pipeline interest and exchange rate effects, household demand and ongoing labour market pressures.

“This assessment will be used to confirm whether further policy tightening is warranted at the June 2005 Monetary Policy Statement. Certainly, the current outlook offers no scope for an easing of policy in the foreseeable future.”

Financial Stability Report, May 2005

17 May 2005

The Reserve Bank today released its Financial Stability Report, a twice-yearly report that assesses the robustness of the New Zealand financial system.
Reserve Bank Governor Alan Bollard commented: “The New Zealand financial system, overall, is well placed to weather a possible slowdown in the economy.”

Dr Bollard said that New Zealand’s major banks had sound balance sheets, very low levels of problem loans, and had been recording strong earnings. The Australian parents of those banks are similarly placed.

Dr Bollard added that “finance companies have grown rapidly, including in some higher risk markets. They offer generally higher returns to investors, but are more exposed when the economy slows. As such they currently represent a greater risk. But, despite their rapid growth, finance companies remain only a small part of the financial system.

Dr Bollard added that while the financial system as a whole was in good shape, the risks to investors, households and some firms had been increasing. Household and farm sector indebtedness has continued to increase.

“These developments could result in some financial strains if the economy slows, the boom in agricultural export prices does not last, or the New Zealand dollar appreciates further,” he said.

Another possible development Dr Bollard noted was banks seeking to maintain recent years’ strong growth in lending and earnings by taking on higher risk business.

“The Reserve Bank will be watching to ensure that the banks maintain appropriate credit standards, and that they have adequate capital to support the risks they take,” Dr Bollard said.
PUBLICATIONS

Annual Report  Published in October of each year
Monetary Policy Statement  Published quarterly. A statement from the Bank on the conduct of monetary policy. First copy free, subsequent copies $12.00.

Reserve Bank of New Zealand Statement of Intent, 2004–2007
Snakes and Ladders – a guide to risk for savers and investors

Recent Reserve Bank Discussion Papers
2004
DP2004/01 Estimating a time varying neutral real interest rate for New Zealand
Oliver Basevant, Nils Björksten and Özer Karagedikli
DP2004/02 Do inflation targeting central banks behave asymmetrically? Evidence from Australia and New Zealand
Özer Karagedikli and Kirdan Lees
DP2004/03 The equilibrium exchange rate according to PPP and UIP
Dominick Stephens
DP2004/04 Estimates of the output gap in real time: How well have we been doing?
Michael Graff
DP2004/05 What can the Taylor rule tell us about a currency union between New Zealand and Australia?
Nils Björksten, Arthur Grimes, Özer Karagedikli and Christopher Plantier
DP2004/06 Improving implementation of inflation targeting in New Zealand: An investigation of the Reserve Bank’s inflation errors
Philip Liu
DP2004/07 A model of equilibrium exchange rates for the New Zealand and Australian dollar
Simon Wren-Lewis
DP2004/08 Examining finite-sample problems in the application of cointegration tests for long-run bilateral exchange rates
Angela Huang

2005
DP2005/01 Factor model forecasts for New Zealand
Troy Matheson

Full lists of Discussion Papers are available from Administration, Economics Department. Lists of the Working Papers and the Research Notes can also be obtained from the Economics Department.

Pamphlets
Central banking in New Zealand
This is the Reserve Bank
Monetary policy over the business cycle
Your Bank’s disclosure statement – What’s in it for you?

For further information, go to www.rbnz.govt.nz, or contact:
Knowledge Centre,
Knowledge Services Group,
Reserve Bank of New Zealand,
2 The Terrace, P O Box 2498
WELLINGTON
phone (04) 4722–029
Articles and speeches in recent issues of the Reserve Bank of New Zealand Bulletin

Vol. 67, No. 2, June 2004

Articles
Interpreting Clause 4(b) of the Policy Targets Agreement: avoiding unnecessary instability in output, interest rates, and the exchange rate
What drives the New Zealand dollar?
Developments in the New Zealand banking industry in 2003
Outcomes of the Financial Sector Assessment Programme for New Zealand
Musings on financial stability issues: an interview with Professor George Kaufman
Bank regulation and foreign-owned banks

Speech
Speech excerpt on the Reserve Bank’s exchange rate intervention proposal

Vol. 67, No. 3, September 2004

Articles
The long-run effects of monetary policy on output growth
NZIER’s Capacity Utilisation index
Promoting strong corporate governance in New Zealand banks

Speeches
Supervising overseas-owned banks: New Zealand’s experience
What’s happening in the property sector?

Vol. 67, No. 4, December 2004

Articles
Liquidity management in the New Zealand banking sector
Currency hedging by exporters and importers
GDP-12 – the Bank’s measure of trading partner demand
A note on the Reserve Bank inflation calculator

Speeches
Systemic financial crises – resolving large bank insolvencies
A prosperous but vulnerable nation

Vol. 68, No. 1, March 2005

Articles
Foreign reserves for crisis management
The Reserve Bank’s new foreign exchange intervention policy
An overview of the manufacturing sector
Amendments to bank disclosure requirements
New Zealand economic and financial chronology 2004

Speech
New Zealand’s potential growth rate