
DISCUSSION PAPERS

DP 2011/03

Evaluating density forecasts: model combination strategies versus the RBNZ

Chris McDonald and Leif Anders Thorsrud

Forecasting the future path of the economy is essential for good monetary policy decisions. The recent financial crisis has highlighted the importance of tail events, and that assessing the central projection is not enough. The whole range of outcomes should be forecast, evaluated and accounted for when making monetary policy decisions. As such, we construct density forecasts using the historical performance of the Reserve Bank of New Zealand's (RBNZ) published point forecasts. We compare these implied RBNZ densities to similarly constructed densities from a suite of empirical models. In particular, we compare the implied RBNZ densities to combinations of density forecasts from the models. Our results reveal that the combined densities are comparable in performance and sometimes better than the implied RBNZ densities across many different horizons and variables. We also find that the combination strategies typically perform better than relying on the best model in real-time, that is the selection strategy.

DP 2011/04

An estimated small open economy model with frictional unemployment

Julien Albertini, Güne Kamber and Michael Kirker

This paper investigates labour market dynamics in New Zealand by estimating a structural small open economy model enriched with standard search and matching frictions in the labour market. We show that the model fits the business cycle features of key macroeconomic variables reasonably well and provides an appealing monetary transmission

mechanism. We then extend our analysis to understand the driving forces behind labour market variables. Our findings suggest that the bulk of variation in labour market variables is solely explained by disturbances pertaining to the labour market.

DP 2011/05

Time-varying returns, intertemporal substitution and cyclical variation in consumption

Emmanuel De Veirman and Ashley Dunstan

This paper studies the importance of intertemporal substitution in consumption for the cyclical co-movement of consumption, net worth and income in New Zealand. We can largely explain the empirical hump-shaped consumption response to a transitory wealth increase by allowing for time-varying returns in an otherwise standard Permanent Income Hypothesis (PIH) model. At the net worth peak, households bring consumption forward in anticipation of low returns on saving. The PIH model fully explains the empirical response when households initially expect the net worth shock to be permanent, but gradually learn that it is in fact transitory.

ANALYTICAL NOTES

AN 2011/1

The macroeconomic impact of the Rugby World Cup

Adam Richardson

Rugby World Cup 2011 kicks off in September 2011. The tournament will be a significant event for New Zealand. The Reserve Bank's main interest is in how the tournament affects domestic economic activity, capacity pressures and New Zealand's national accounts. This article aims to outline the Reserve Bank's current estimates of these impacts and to identify where some of the key uncertainties lie.

NEWS RELEASES

Reserve Bank's *SOI* shows focus on stability

30 June 2011

The Reserve Bank's *Statement of Intent* (SOI) for 2011-2014, released today, demonstrates the Bank's focus on maintaining stability despite shocks from devastating earthquakes and continuing world financial and economic uncertainties.

"The effects of the Canterbury earthquakes are complex and significant," Reserve Bank Governor Alan Bollard said. "At the same time, internationally, much of the world is still in recovery from the Global Financial Crisis, with continued uncertainty in some financial markets. On the economic front, rising commodity prices are improving export incomes, but putting pressure on the exchange rate."

Dr Bollard said that the strategic priorities the Bank has adopted for the next year focus on work contributing to economic and financial recovery and stability.

"Our work programme includes assessing the impact of the Canterbury earthquakes and their implications for the Bank's monetary policy.

"We will also be developing an implementation framework for macro-prudential policy tools in New Zealand which takes into account the inter-relationships with monetary policy."

In terms of promoting a more stable financial system, the Bank will develop a plan for implementing the Basel III prudential requirements for banks, suitably adapted for New Zealand conditions.

"We will also seek to have insurers on the path to obtaining full licences by September 2013, meeting at least the provisional licensing requirements by March 2012."

The Bank also intends to undertake initial planning for a new issue of bank notes.

Reserve Bank *Bulletin* Released

30 June 2011

The Reserve Bank today released the June 2011 issue of the Reserve Bank of New Zealand *Bulletin*.

This edition centres on the Bank's financial stability and

financial markets responsibilities, looking firstly at rural lending. The last few years have highlighted to borrowers and lenders alike that rural lending can be risky and this article provides background on the Reserve Bank's new minimum requirements and looks at how they might affect rural lending margins.

Sitting alongside this is an article detailing the results of a "stress" test carried out by the Reserve Bank to better understand how severe shocks in the dairy industry might impact banks.

The June *Bulletin's* third article focuses on financial system efficiency. This piece reports on the Bank's analysis and policy development in financial system efficiency. It includes preliminary findings on rates of return in banking, based on cross-country results.

The final article looks back to the international financial crisis and the extraordinary measures the Reserve Bank took at that time to manage domestic liquidity conditions and to avoid the risk of a more serious domestic credit crunch. This includes formal statistical tests on the announcement effects of the various measures employed.

The article suggests that the supportive actions undertaken by the Reserve Bank played a significant role in maintaining the functioning of the New Zealand money market and the flow of domestic credit during the financial crisis.

New rural lending rules take effect

30 June 2011

The Reserve Bank's new capital adequacy requirements for farm lending take effect today, requiring New Zealand's four largest banks to hold more appropriate regulatory capital to back their rural lending portfolios.

The changes affect the risk weights used in regulatory capital calculations and mean the four big banks will have higher regulatory capital requirements than when the existing Basel II capital regime commenced in 2008.

The exact impact on each bank varies depending upon the make-up of their rural lending portfolio. Loans carrying lower risks attract lower risk weights.

Reserve Bank Deputy Governor Grant Spencer said the new risk weights are more conservative and reflect a more accurate assessment of risk.

“The new rules will ensure banks are better prepared for any extreme shock to the rural sector,” Mr Spencer said.

“The Reserve Bank expects the new average risk weight across these banks will be about 80 to 90 percent. This is an increase on existing risk weights. However, it is important to note that before 2008 – i.e., before the Basel II capital regime was introduced – this figure was 100 percent.

“The changes are expected to have only a minor impact on rural loan margins, as banks have already adjusted pricing considerably over recent years.”

The rule change affects only New Zealand’s four largest banks, also known as internal models (IM) banks, which use their own Reserve Bank approved models for determining minimum capital requirements.

All other banks use a standardised model and are subject to a risk weighting of 100 percent.

See this Q&A for responses to frequently asked questions about the rural lending rules.

New Zealand banknote upgrade project underway

21 July 2011

The Reserve Bank announced today that planning has begun to upgrade New Zealand’s current series of banknotes.

Reserve Bank Governor Alan Bollard said the project will involve updating all five banknotes, the \$5, \$10, \$20, \$50 and \$100.

“This upgrade will ensure our banknotes benefit from the technical advances that have been introduced in banknote security over the last 12 years. Such upgrades are carried out on a regular basis and help to maintain New Zealand’s low counterfeiting levels. The project will also look to improve the quality of these notes,” he said.

Dr Bollard emphasised that planning for the upgrade project is at an early stage and the various new banknotes will be progressively released from 2014 at the earliest.

A recent survey carried out by Nielsen for the Reserve Bank found the public is satisfied with the colours, design and themes of the existing notes and that the different note denominations were easy to distinguish. The public were also happy with the range of notes available.

“As a result of these survey findings, we will not be making significant changes to the overall themes of the notes themselves. This includes continuing to use the five respected individuals currently depicted on our notes.” Dr Bollard said.

“However, we are planning to modernise the designs, as modern printing techniques will allow us to give the notes a new look.

“At this point in the project it is envisaged the new notes will be phased in and will be used alongside the existing notes for a period once they are released.”

The Reserve Bank has already begun contacting business and consumer groups with a special interest in currency matters to gather technical feedback. Further such groups can contact the Bank at newnotes@rbnz.govt.nz.

Further details of the Currency Survey carried out by Nielsen can be found on the Reserve Bank website at <http://www.rbnz.govt.nz/currency/>.

OCR unchanged at 2.5 percent

28 July 2011

The Reserve Bank today left the Official Cash Rate (OCR) unchanged at 2.5 percent.

Reserve Bank Governor Alan Bollard said: “The economy has grown more strongly than was expected, and it appears that the recovery is getting back on track, supported by a strong terms of trade. At the same time, however, current fragility in global financial markets, including the uncertainty around the US Government’s debt ceiling, continues to highlight the downside risk to trading partner activity noted in the June Statement.

“Annual headline CPI inflation continues to be above the Bank’s 1 to 3 percent target band. However, much of the current spike in inflation has been driven by the October 2010

increase in the rate of GST, and will therefore be temporary. Wage and price setters should focus on underlying inflation, which is currently estimated to be below 2.5 percent.

“Provided current global financial risks recede and the economy continues to recover, the Bank sees little need for the March 2011 ‘insurance’ cut to remain in place much longer. The current very high value of the New Zealand dollar is acting as a drag on the New Zealand economy. If this persists, it is likely to reduce the need for further OCR increases in the short term.”

Improving New Zealand’s banking system post-crisis

6 August 2011

Improving the resilience of New Zealand’s financial system has been an important focus for the Reserve Bank since the global financial crisis. The efficiency of the system in providing financial products and services to the rest of the economy also needs to be considered, says Reserve Bank Governor Dr Alan Bollard.

In a speech delivered to the NZ Shareholders Association in Tauranga this morning, Dr Bollard said banks play the dominant role in New Zealand’s financial system. They remained relatively resilient to the global financial crisis and the resulting slowdown in economic activity.

“Our banks remained sound. They stuck to their knitting over the boom, engaging in very profitable lending to households and the rural sector in the main, without resorting to the sort of exotic financial innovations witnessed elsewhere,” he said.

The Reserve Bank’s efforts to reinforce the soundness of the banking system for the future have been centred on implementing stronger capital and liquidity standards; determining the role of various macroprudential tools in managing system-wide risks; and improving the resolution framework for dealing with bank failures.

Prior to the global financial crisis, New Zealand and Australian banks look to have been among the most cost-efficient and profitable in the OECD. While high rates of return could be seen as evidence of a lack of competition, the interest

margins earned on products like residential mortgages were not particularly high relative to other countries.

However, operating conditions for banks have changed profoundly since the financial crisis, with regulatory changes, weak credit demand by households and businesses, and higher funding costs all likely to affect financial performance.

“All things considered, it seems unlikely that the rates of return in banking enjoyed over the past decade can be sustained in the future,” Dr Bollard said.

Rugby World Cup significant event for NZ economy

18 August 2011

The Reserve Bank has today published the first paper in a new ad hoc research series entitled *Analytical Notes*.

Reserve Bank Head of Economics Dr John McDermott, said the inaugural paper presents an analysis of the potential economic effects of this year’s Rugby World Cup tournament.

“It describes the tournament as a significant event for the New Zealand economy, estimating it will attract 95,000 visitors to the country, who are likely to spend a total of \$700 million on local goods and services,” he said.

This first paper in the series comes as the Reserve Bank Museum launches a special ‘Ruggernomics’ exhibition in spring, showcasing currency from rugby playing countries around the world.

Dr McDermott said the Reserve Bank’s new Analytical Notes series is designed to provide an outlet for research by Bank staff that does not fit into the brief of existing series such as the Reserve Bank *Bulletin* and Discussion Papers.

Those interested in signing up for email notification of new releases of *Analytical Notes* can do so at the Reserve Bank website.

RBNZ MPS/OCR and FSR dates for 2012-13

26 August 2011

Following is the Reserve Bank's schedule for the release of its quarterly *Monetary Policy Statements*, the intervening Official Cash Rate reviews, and the six-monthly *Financial Stability Reports*. The schedule covers 2012 and, provisionally, the first half of 2013.

Each *Monetary Policy Statement* includes within it an OCR announcement. Each announcement will be made at 9.00 am on the day concerned. The schedule includes the first six months' for the following year, to assist financial markets' planning, but these 2013 dates are provisional, subject to confirmation in August 2012.

Monetary Policy Statement/OCR

2012

26 January	OCR announcement
8 March	<i>Monetary Policy Statement</i>
26 April	OCR announcement
14 June	<i>Monetary Policy Statement</i>
26 July	OCR announcement
13 September	<i>Monetary Policy Statement</i>
25 October	OCR announcement
6 December	<i>Monetary Policy Statement</i>

2013

31 January	OCR announcement
14 March	<i>Monetary Policy Statement</i>
24 April	OCR announcement
13 June	<i>Monetary Policy Statement</i>

Financial Stability Report

2012

9 May
7 November

2013

8 May

The Bank reserves the right to change this schedule, if required, due to unexpected developments. In such an event, markets and the media will be given as much warning as possible.

Monetary Policy Challenge winners announced

26 August 2011

The Reserve Bank announced today that Saint Kentigern College from Auckland is the national winner of the Reserve Bank 2011 Monetary Policy Challenge (MPC). Waikato Diocesan School for Girls from Hamilton was placed second and Havelock North High School came third.

The national final took place at the Reserve Bank in Wellington yesterday and was hotly contested. The judges were Assistant Governor John McDermott and two Bank economists, Rebecca Craigie and Tony Wolken.

Saint Kentigern College won \$2,500 in prize money for their school and will visit the Reserve Bank on 15 September to watch the announcement of the next *Monetary Policy Statement* by Governor Alan Bollard.

Waikato Diocesan School for Girls won \$1,500 and Havelock North High School won \$750 in prize money for their respective schools. The other competitors in the national final were Epsom Girls' Grammar School (Auckland), Papanui High School (Christchurch) and James Hargest College (Invercargill).

The judges said the finalists performed to a very high standard, and determining the winning school was a difficult task. They were particularly impressed with the depth of economic understanding shown by Saint Kentigern College.

"Saint Kentigern College were a very polished team, who answered many difficult questions with great composure. They clearly demonstrated their understanding of economic relationships," said the judges.

The MPC is designed to expand senior secondary school economics students' understanding of monetary policy, and it links to NCEA achievement standards.

Just like economists working in the Reserve Bank, each team analyses the economic conditions facing New Zealand and the outlook for inflation. On the basis of that analysis, they decide on an appropriate setting for the Official Cash Rate (the Reserve Bank's interest rate). Each team provides the reasons for their decision in a written submission

and, if selected as a regional or national finalist, an oral presentation.

“Rather than just expecting students to learn established facts, this competition confronts them with the challenges, ambiguity and uncertainty of actual decision-making,” Dr McDermott said.

The MPC is open to all New Zealand secondary school economics students and runs annually from May to August.

New anti-money laundering code sets standard for customer ID checks

1 September 2011

Customers of financial institutions and casinos can expect more stringent identity checks in the lead up to 30 June 2013, when anti-money laundering legislation comes fully into force. Businesses now have access to guidance on the standard those identity checks should meet.

The Anti-Money Laundering and Countering Financing of Terrorism Act 2009 places obligations on New Zealand’s financial institutions and casinos to detect and deter money laundering and terrorism financing.

An Identity Verification Code of Practice being Gazetted today applies to all reporting entities being supervised by the Reserve Bank, the Financial Markets Authority and the Department of Internal Affairs.

The code sets out an acceptable practice for verifying the name and date of birth of customers (people, not corporations) whom the reporting entities have assessed as low to medium risk. The code details acceptable forms of identification, and outlines when secondary or supporting identification is required – for example, a passport on its own, or a New Zealand Driver Licence with an Eftpos card.

Although the code is not mandatory, it constitutes a ‘safe harbour’ – a reporting entity that fully complies with the code is deemed to be compliant with the relevant parts of the legislation. If a reporting entity decides to opt out of the code, it must adopt practices that are equally effective, otherwise it risks non-compliance.

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Markets Authority: Nick Stride 09 985 4868 or 021 739 052

Background information:

The Anti-Money Laundering and Countering Financing of Terrorism Act 2009 (AML/CFT) will come fully into force on 30 June 2013 under a commencement order Gazetted on 30 June 2011. Reporting entities now have less than two years to establish and implement their AML/CFT programme and comply fully with their obligations under the Act.

Money laundering is how criminals disguise the illegal origins of their money. Financers of terrorism use similar techniques to money launderers to avoid detection by authorities and to protect the identity of those providing and receiving the funds.

The AML/CFT Act requires reporting entities to obtain identity information about their customers and verify that information.

The Reserve Bank of New Zealand supervises banks, life insurers, and non-bank deposit takers.

The Financial Markets Authority supervises issuers of securities, trustee companies, futures dealers, collective investment schemes, brokers, and financial advisers.

The Department of Internal Affairs supervises casinos, non-deposit taking lenders, money changers, and any other financial institutions not supervised by The Reserve Bank or The Financial Markets Authority.

Examples of financial activities include (but are not limited to):

- accepting deposits or other repayable funds from the public
- making a loan to or for a customer
- issuing a debit or credit card
- managing the means of payment
- supplying goods through a finance lease (other than for consumer products)
- providing remittance services which transfer money or property

- issuing or accepting liability under life insurance policies
- issuing or selling securities and derivatives
- safekeeping or administering cash or liquid securities on behalf of other persons exchanging foreign currency.

New Council to support close regulatory cooperation

13 September 2011

A new Council of Financial Regulators has been established to foster cooperation between financial and prudential regulators in New Zealand.

On 9 September, the Council held its first meeting, chaired on this occasion by Reserve Bank Governor Alan Bollard.

The permanent members of the Council are the Bank and the Financial Markets Authority (FMA). Associate members are The Treasury and Ministry of Economic Development. Senior officials of the four organisations were present at Friday's inaugural two-hour meeting.

"What the Council means for New Zealand is that the two key financial services regulators are talking together regularly and at a high level," said Dr Bollard.

FMA CEO Sean Hughes said: "We aim to implement a new era of cooperation and information sharing that will result in better, more informed regulation of New Zealand's capital and financial markets."

The Reserve Bank had good working relations at an operational level with FMA's predecessor bodies, such as the Securities Commission. The Council embeds and reinforces those working relationships and ensures important issues are discussed at the most senior level.

The Council's objectives include the sharing of information, identifying important trends and issues and coordinating responses to those issues, and ensuring appropriate coordination arrangements are in place to respond to events and developments. The regulators expect that the arrangement will enable them to identify and respond more quickly to emerging common concerns in the financial system.

At the meeting's end, a Memorandum of Understanding (PDF 1.2MB) was signed between Dr Bollard and Mr Hughes on behalf of their respective organisations.

The Council will meet on a quarterly basis, and the Bank and FMA will take turns to chair the meetings. Issues discussed will remain confidential unless disclosure is required by law or agreed by the permanent members.

OCR unchanged at 2.5 percent

15 September 2011

The Reserve Bank today left the Official Cash Rate (OCR) unchanged at 2.5 percent.

Reserve Bank Governor Alan Bollard said: "The New Zealand economy has performed relatively well while headline inflation has increased somewhat since the June *Statement*. At the same time, however, global economic and financial risks have increased.

"Domestic economic activity has surprised on the upside and capacity usage appears to have increased. Continued high export commodity prices and, in time, reconstruction in Canterbury are expected to provide impetus to demand over the projection horizon.

"However, the outlook for New Zealand's trading partners has deteriorated markedly. There is now a real risk that global economic activity slows sharply.

"Global financial market sentiment has also deteriorated. Sovereign debt concerns in Europe and the weakened global outlook have caused international bank funding markets to tighten. If conditions do not improve, New Zealand bank funding costs will increase.

"Largely because the New Zealand economy has been doing better than many others, the New Zealand dollar has appreciated since the June *Statement*. The high level of the New Zealand dollar is having a dampening influence on some parts of the tradable sector and on imported inflation.

"Annual headline CPI inflation continues to be above the Bank's 1 to 3 percent target band. However, much of the current spike in inflation has been driven by last year's increase in the rate of GST, and will therefore be temporary.

Wage and price setters should focus on underlying inflation, which, while rising, is currently estimated to be near 2 percent.

“If recent global developments have only a mild impact on the New Zealand economy, it is likely that the OCR will need to increase. For now, given the recent intensification in global economic and financial risks, it is prudent to continue to hold the OCR at 2.5 percent.”

View the *Monetary Policy Statement* page <http://www.rbnz.govt.nz/monpol/statements> for the current policy assessment, *Monetary Policy Statement*, and data file.

PUBLICATIONS

Regular publications

Annual Report

Financial Stability Report

Monetary Policy Statement

Reserve Bank of New Zealand Statement of Intent, 2010-2013

Published in October each year.

Published six-monthly. A statement from the Reserve Bank on the stability of the financial system.

Published quarterly. A statement from the Reserve Bank on the conduct of monetary policy.

Recent Reserve Bank Discussion Papers

2011

- DP 2011/01 Any port in a storm? The impact of new port infrastructure on New Zealand exporter behaviour
Richard Fabling, Arthur Grimes and Lynda Sanderson
- DP 2011/02 Fluctuations in the international prices of oil, dairy products, beef and lamb between 2000 and 2008: a review of market-specific demand and supply factors
Phil Briggs, Carly Harker, Tim Ng and Aidan Yao
- DP 2011/03 Evaluating density forecasts: model combination strategies versus the RBNZ
Chris McDonald and Leif Anders Thorsrud
- DP 2011/04 An estimated small open economy model with frictional unemployment
Julien Albertini, Güne Kamber and Michael Kirker
- DP 2011/05 Time-varying returns, intertemporal substitution and cyclical variation in consumption
Emmanuel De Veirman and Ashley Dunstan

A full list of Discussion Papers is available from Administration, Economics Department.

Analytical Notes

2011

- AN 2011/1 The macroeconomic impact of the Rugby World Cup
Adam Richardson,

Selected other publications

Testing stabilisation policy limits in a small open economy: proceedings from a macroeconomic policy forum
Finance and Expenditure Select Committee inquiry into the future monetary policy framework: submission by the Reserve Bank of New Zealand

Pamphlets

Explaining Currency

Explaining Monetary Policy

The Reserve Bank and New Zealand's Economic History

This is the Reserve Bank

Your Bank's Disclosure Statement – what's in it for you?

Snakes and Ladders – a guide to risk for savers and investors, by Mary Holm

For further information, go to www.rbnz.govt.nz, or contact:

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Articles in recent issues of the Reserve Bank of New Zealand *Bulletin*

Vol. 73, No. 3, September 2010

Connecting the dots: a yield curve perspective on New Zealand's interest rates

The New Zealand dollar through the global financial crisis

Anti-money laundering and countering the financing of terrorism – the Reserve Bank's responsibilities and approach

The currency denomination of New Zealand's unhedged foreign reserves

Vol. 73, No. 4, December 2010

Regulating non-bank deposit takers

Bringing financial stability legislation to the insurance industry – the Insurance (Prudential Supervision) Act 2010

Global currency trends through the financial crisis

New Zealand's imbalances in a cross-country contest

Vol. 74, No. 1, March 2011

Making sense of international interest rate movements

We're all in this together: the transmission of international shocks to open economies

Towards better data on New Zealand debt securities markets

Submission to the Savings Working Group

Looking into the crystal ball: a forecast and some risks for the year ahead

Vol. 74, No. 2, June 2011

Bank farm capital: does it cost the earth?

Stress testing New Zealand banks' dairy portfolios

Understanding financial system efficiency in New Zealand

New Zealand's emergency liquidity measures during the global financial crisis