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## DISCUSSION PAPERS

DP2010/02

### All together now: Do international factors explain relative price co-movements?

*Özer Karagedikli, Haroon Mumtaz and Misa Tanaka*

Recent research has found evidence of increasing co-movement in CPI inflation rates across industrialised countries. This paper considers whether this increased international co-movement in inflation rates can be attributed to greater global integration of product markets. To examine this question, we use a data set of 28 matched product category price indices for 14 advanced economies for 1998Q1 - 2008Q2, and decompose the inflation rates into a world factor, country-specific factors, and category-specific factors using a Bayesian dynamic factor model with Gibbs sampling. We find that the category-specific factors account for a large part of the co-movement in the prices of goods which are intensive in internationally traded primary commodities; but this is less evident for other traded goods. We also find that both the world factor and the category-specific factors become more significant in explaining the movement in the relative prices in the second half of our sample.

DP2010/03

### Multi-period fixed-rate loans, housing and monetary policy in small open economies

*Jaromír Beneš and Kirdan Lees*

We investigate the implications of the existence of multi-period fixed-rate loans for the behaviour of a small open economy exposed to finance shocks and housing boom-and-bust cycles. To this end, we propose a simple and analytically tractable method of incorporating multi-period debt into an otherwise standard consumer problem. Our simulations show that multi-period fixed-rate contracts can help insulate the economy from the adverse effects of particular shocks. This insulating mechanism is particularly effective for countries with high debt positions exposed to foreign exchange fluctuations, or countries operating a fixed exchange rate regime.

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## NEWS RELEASES

### March 2010 Reserve Bank *Bulletin* released

*Date 31 March 2010*

Implications for policy in light of the global financial crisis, both in New Zealand and across the globe, are the focus of the March 2010 Reserve Bank of New Zealand *Bulletin*, released today.

The lead article notes that, while inflation targeting has been successful in reducing the level and volatility in inflation, it has not guaranteed financial stability or macroeconomic stability. The article looks at the debate around whether monetary policy should have leaned more strongly against economic imbalances in the lead-up to the crisis, and whether the policy toolkit for macroeconomic stabilisation needs to be expanded.

The second article summarises some of the issues discussed at a recent monetary policy conference marking the 20th anniversary of inflation targeting. As part of the conference, Mark Gertler, Professor of Economics at New York University and the author of a key paper on the crisis, visited the Reserve Bank of New Zealand. The third article in the *Bulletin* is an interview with Mark Gertler, who offers his thoughts on a variety of topics, including inflation targeting and the global financial crisis.

This is followed by an edited transcript of Professor Charles Goodhart's public lecture, given in Wellington at the start of the year, on "How the new architecture of financial regulations may develop?" Audio of the public lecture is available on the Reserve Bank's website ([www.rbnz.govt.nz](http://www.rbnz.govt.nz)).

The fifth article is a background paper to an address given by Governor Alan Bollard to the Canterbury Employers' Chamber of Commerce in late January. The Governor focuses on the lessons for monetary policy to be learned from the crisis.

The sixth article details lessons from past US recessions and recoveries, and offers predictions on how the US economy might recover out of the current recession.

The final article details recent trends in New Zealand's circulating notes and coins over the past year.

### OCR unchanged at 2.5 percent

*29 April 2010*

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 is recovering broadly as expected and growth is predicted to pick up further through 2010.

"Trading partner activity has recovered more quickly than we expected. Growth in Asia has been particularly strong. Consistent with this, export commodity prices have increased close to their 2008 peak. At the same time, risks to the global outlook remain elevated.

"Notwithstanding the impact of stronger than expected export earnings, New Zealand households remain cautious, with the housing market and household credit growth subdued. Similarly, business spending is weak and firms continue to reduce debt.

"On balance, we continue to expect the New Zealand economy to recover in line with or slightly faster than our March Statement projection. Annual CPI inflation, which has been close to 2 percent for the past year, is expected to track within the target range over the medium term.

"As previously indicated, we expect to begin removing policy stimulus over the coming months, provided the economy continues to evolve as projected.

"The increased wedge between the OCR and lending rates, as well as a steeply positive-sloped interest rate curve, is expected to make OCR increases more effective than in the past. Accordingly, these factors should reduce the extent to which the OCR will need to be increased relative to previous cycles."

### Handling our economic recovery

*Date 6 May 2010*

New Zealand's recovery from the Global Financial Crisis is entering a new, less fragile stage, which will allow monetary policy stimulus to be removed, Reserve Bank Governor Alan Bollard said today.

"New Zealand has been fortunate in some respects, allowing

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most of our crisis liquidity and guarantee measures to be terminated. Conventional monetary policy will now guide the stages of recovery," Dr Bollard said in a speech to the Otago and Southland Zones of Local Government New Zealand in Dunedin.

"Overall, we are emerging from the crisis with some reconstruction of our external deficit, as a result of strong exports, weaker import growth, suppressed domestic profits, and some consolidation of balance sheets."

On the other hand, the domestic sector is seeing a more fragile recovery, with business bruised but not permanently scarred. It is behaving very cautiously, still not looking to invest in plant and equipment or re-employ staff.

"Banking sector credit data continues to be extraordinarily restrained. Whatever the explanation, we certainly wish to see credit available for all sound business ventures."

In the household sector, there has been only a soft pick-up in house prices, new building and sales. Householders are building up savings and reducing debt.

Dr Bollard said the stage is set for the Bank to influence the pace of recovery through more conventional discretionary monetary policy.

"In our Official Cash Rate Review last week we noted: '...we expect to begin removing policy stimulus over the coming months, provided the economy continues to evolve as projected.'

"We used the words 'begin removing stimulus' deliberately. With an official cash rate at an historically low level of 2.5 percent we are clearly in a very stimulative position.

"Using a truck driver analogy, our foot is strongly on the accelerator. Over coming months we expect to reduce the pressure on this pedal, but in effect to keep some throttle going. Truck drivers know they must reduce acceleration long before the corner. We are not talking about tightening policy yet. We do not expect to have to touch the brake pedal for some time.

"Financial markets currently expect the Reserve Bank to begin raising the official cash rate around the middle of the year and continue to do this in small steps for some time.

This is broadly in line with our current views as outlined at last week's OCR Review.

"However, the timing and pace of returning the OCR to more normal levels will ultimately depend on economic developments. Both markets and ourselves foresee that the official cash rate will not need to rise as far in this cycle as it did in the last one.

"But a final caution: recovery so far has been full of surprises. There will be more to come."

## **Financial system outlook improved but fragile**

*Date 19 May 2010*

The outlook for the financial system has improved over recent months, reflecting a recovery in the New Zealand economy driven by stronger trading partner activity and a sharp lift in the terms of trade, Reserve Bank Governor Alan Bollard said today when releasing the Bank's May 2010 *Financial Stability Report*.

"However, the global financial markets remain fragile," Dr Bollard said. "The sovereign debt concerns facing some European economies have weighed heavily on financial markets in recent weeks. European authorities and the IMF have recently announced initiatives to support sovereign debt markets and to begin dealing with the underlying problems. But there is clearly a risk of further turbulence if adequate progress is not made.

"As an external debtor country, New Zealand could be vulnerable to any renewed deterioration in global debt markets. At the same time, the process of fiscal consolidation could dampen the global recovery, although our major trading partners in Asia and Australia should be less directly affected."

Dr Bollard noted that global imbalances have reduced over the past two years with higher savings helping to shrink current account deficits. New Zealand has also seen a marked narrowing of its current account deficit.

"New Zealand households have increased their savings, which is positive for financial stability. It will be important that households maintain a cautious approach to debt accumulation as the recovery continues."

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Commenting on the financial system, Deputy Governor Grant Spencer said that the New Zealand banks remain in good shape and will benefit from the economic recovery. Non-performing loans appear to be plateauing out and, notwithstanding the recent market hiccups, banks have successfully been issuing term debt over the past year, lengthening their maturity structure and reducing liquidity risk.

“Bank credit growth was restrained through the recession, reflecting weaker demand for credit by households and businesses and tighter lending standards,” Mr Spencer said. “We believe the banks have the capacity to meet an increase in demand for credit and doing so will be important to sustain the economic recovery.”

Mr Spencer noted that a gradual rationalisation of the finance company sector is continuing, with the new more stringent regulatory regime promoting further consolidation.

“A number of finance companies have joined the extended Retail Deposit Guarantee Scheme to give them more time to realign their balance sheets. We do not expect the banks to enter the extended guarantee scheme given there is no need for them to do so,” Mr Spencer said.

“Significant changes to financial sector regulation are occurring around the globe. New Zealand will adopt measures that improve the soundness of the financial system while not undermining its efficiency. A new Prudential Liquidity Policy for banks became effective in April and we expect to make further changes to the bank regulatory regime.

“The new non-bank regulatory regime should be largely in place by the end of the year. And the Insurance Bill, giving the Reserve Bank oversight of the insurance industry, is currently progressing through Parliament.”

## **Reserve Bank raises OCR to 2.75 percent**

**10 June 2010**

The Reserve Bank today increased the Official Cash Rate (OCR) by 25 basis points to 2.75 percent.

Reserve Bank Governor Alan Bollard said: “The economy has entered its second year of recovery with growth becoming more broad-based.

“The recovery in trading partner activity is continuing, with growth in Asia particularly strong. Along with ongoing growth in Australia and recovery in the United States, this has so far offset weak growth in some other export markets. Against this backdrop, New Zealand’s export commodity prices have increased sharply over the past few months, boosting export incomes.

“In contrast to signs of global economic recovery there has been renewed turmoil in financial markets. Currently, we expect the main impact on New Zealand to come through continuing upward pressure on the cost of funds to the banking system.

“In New Zealand, growth of around 3½ percent is expected this year and next. The main drivers of this outlook are higher export prices and volume growth, an improving labour market and a pick-up in residential and business investment. However, we expect households to remain relatively cautious, with the housing market and credit growth staying subdued. This moderate household spending contributes to some rebalancing in the economy.

“Underlying CPI inflation is expected to track within the target range even as the economy expands further. That said, headline CPI inflation will be boosted temporarily by the announced increase in GST and other government-related price changes. Provided households and firms do not reflect this price spike in their wage and price-setting behaviours we do not expect a lasting impact on inflation.

“Given this outlook and as previously signalled, we have decided to begin removing some of the monetary policy stimulus that is currently in place. The further removal of stimulus will be reviewed in light of economic and financial market developments.

“The fact that bank funding costs are higher, long-term interest rates are higher than short-term interest rates, and a greater proportion of borrowers use floating rate mortgages should all reduce the extent to which the OCR will need to be increased relative to previous cycles.”

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## PUBLICATIONS

### Regular publications

*Annual Report*

*Financial Stability Report*

*Monetary Policy Statement*

*Reserve Bank of New Zealand Statement of Intent, 2007-2010*

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

#### 2009

- DP2009/04 Forecasting national activity using lots of international predictors: an application to New Zealand  
*Sandra Eickmeier and Tim Ng*
- DP2009/05 Using wavelets to measure core inflation: the case in New Zealand  
*David Baqaee*
- DP2009/06 Analysing wage and price dynamics in New Zealand  
*Ashley Dunstan, Troy Matheson and Hamish Pepper*
- DP2009/07 Developing stratified housing price measures for New Zealand  
*Chris McDonald and Mark Smith*
- DP2009/08 Evaluating a monetary business cycle model with unemployment for the Euro area  
*Nicolas Groshenny*
- DP2009/09 Entrepreneurship and aggregate merchandise trade growth in New Zealand  
*Richard Fabling and Lynda Sanderson*
- DP2009/10 A theoretical foundation for the Nelson and Siegel class of yield curve models  
*Leo Krippner*
- DP2009/11 A cobweb model of financial stability in New Zealand  
*Paul Bedford and Chris Bloor*
- DP2009/12 A quarterly post-World War II real GDP series for New Zealand  
*Viv B Hall and C John McDermott*
- DP2009/13 The "suite" smell of success – complementary personnel practices and firm performance  
*Richard Fabling and Arthur Grimes*
- DP2009/14 Impulse response identification in DSGE models  
*Martin Fukac*
- DP2009/15 Measuring output gap uncertainty  
*Anthony Garratt, James Mitchell and Shaun P. Vahey*
- DP2009/16 Structural macro-econometric modelling in a policy environment  
*Martin Fukac and Adrian Pagan*
- DP2009/17 Global shocks, economic growth and financial crises – 120 years of New Zealand experience  
*Michael D Bordo, David Hargreaves and Mizuho Kida*
- DP2009/18 Forecasting New Zealand's economic growth using yield curve information  
*Leo Krippner and Leif Anders Thorsrud*
- DP2009/19 Whatever next? Export market choices of New Zealand firms  
*Richard Fabling, Arthur Grimes and Lynda Sanderson*
- DP2009/20 Measuring changes in firm-level volatility – an application to Japan  
*Emmanuel De Veirman and Andrew Levin*

#### 2010

- DP2010/01 Evaluating household expenditures and their relationship with house prices at the microeconomic level  
*Mark Smith*
- DP2010/02 All together now: Do international factors explain relative price co-movements?  
*Özer Karagedikli, Haroon Mumtaz and Misa Tanaka*
- DP2010/03 Multi-period fixed-rate loans, housing and monetary policy in small open economies  
*Jaromír Beneš and Kirdan Lees*

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

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### **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](http://www.rbnz.govt.nz), or contact:**

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

### Vol. 72, No. 2, June 2009

#### Forecasting the New Zealand economy

Introducing KITT: the Reserve Bank of New Zealand's new DSGE model for forecasting and policy design

The use of statistical forecasting models at the Reserve Bank of New Zealand

The Reserve Bank's process for forecasting business investment

The demographics of household inflation perceptions and expectations

Exchange rates and export performance: evidence from micro-data

The evaporation of trust: Prasanna Gai on financial crises

### Vol. 72, No. 3, September 2009

Quality of bank capital in New Zealand

Anchoring fiscal expectations

'Mordacious years': socio-economic aspects and outcomes of New Zealand's experience in the Great Depression

Financial crises, sound policies and sound institutions: an interview with Michael Bordo

The financial crisis: whodunnit?

Economic recovery

### Vol. 72, No. 4, December 2009

The Reserve Bank's new liquidity policy for banks

Assessing recent external forecasts

Banking crises in New Zealand – an historical perspective

The evolution of New Zealand's trade flows

### Vol. 73, No. 1, March 2010

The crisis and the Reserve Bank's stabilisation rate

Twenty years of inflation targeting

Inflation targeting, the financial crisis and macroeconomics: an interview with Mark Gertler

How may the new architecture of financial regulations develop?

Lessons from previous US recessions and recoveries

The crisis and monetary policy: what we learned and where we are going

Recent trends and developments in currency