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# **Monetary Policy Strategy and Practice in Australia, Canada and New Zealand: Some current issues**

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*The opinions expressed in this paper are those of the author and do not necessarily reflect the views of the Bank of Finland.*



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Australia, Canada and New Zealand are all independently targeting inflation. Indeed New Zealand (1989) and Canada (1991) were the first two countries to adopt this approach (Australia followed in 1993<sup>1</sup>). Nowadays there are more than 20 countries explicitly inflation targeting and several others pursuing policies that are similar, including the United States and the euro area according to some commentators (Blinder, 2007). Moreover no country as yet has been forced to abandon inflation targeting, although some, including Finland, have chosen to do so voluntarily. Nevertheless there have been some important changes over the last 20 years in the light of experience and inflation targeting these days is very different in execution from what it was at the outset when it was an untried idea. Moreover, New Zealand is now experiencing some strains and for the first time since floating the exchange rate in 1984, has found it appropriate to intervene in the foreign exchange market – not in the common manner of earlier years to support its own currency but to try to inhibit its rise.

This experience for inflation targeting countries, which are typically small open economies,<sup>2</sup> of seeing their exchange rate fluctuate widely, has been common and pressures in tradable sectors has become uncomfortable in a number of countries.<sup>3</sup> The issue of *exchange rate fluctuations* is therefore explored further in this note along with three others. The first is '*what is the target?*', and the second '*what should be the operational target for a achieving that objective?*'. The third is '*indicating the future direction of policy*'.

Most central banks, whether or not inflation targeting, are usually seeking some form of price stability as their principal target. In its current form inflation targeting simply takes each year at a time and tries to keep inflation in a given region. However, when inflation targeting started, price stability was treated much more literally and the aim was effectively to stabilise the price level over the longer term (after allowing for measurement bias). This issue is now back on the agenda not just in Canada, where a longer term definition of the objective is being sought, but more generally (Gaspar et al., 2007). Similarly the fluctuations in some components of the price index have become so substantial in recent years – energy and housing for example – that targeting 'headline' inflation has been problematic on occasion. Australia's practice of focusing on a more stable core may therefore be generally more attractive. Lastly, one of the major debates in the setting of monetary policy has been over

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<sup>1</sup> Some date the adoption of full inflation a little later to the September 1996 joint statement on monetary by Treasurer Costello and incoming Governor MacFarlane (Reserve Bank of Australia Bulletin, September, 1996, pp.1-2).

<sup>2</sup> Australia, Canada and New Zealand have some important economic differences that affect their policy – size and openness for example. Their populations are, in order, 20, 32 and 4 million and their openness as measured by the ratio of the sum of exports and imports to GDP, 0.45, 0.80, 0.60.

<sup>3</sup> Gudmundsson (2007) contrasts the experience of New Zealand with Iceland, where the problem has been the most extreme.

whether an authority should simply set a very short run interest rate and say nothing explicit about how policy may develop in the future or whether it should give some indication of what may happen next. The Reserve Bank of New Zealand has been a leader in this regard in showing in each (quarterly) *Monetary Policy Statement* how monetary policy could evolve, on the basis of a simple monetary policy rule, current and expected circumstances and the Bank's econometric model, to ensure that the inflation target is met over the policy horizon of three years. It has now been followed by the Norges Bank and the Sveriges Riksbank and it looks as if this approach may become more general.

It is immediately clear that these four issues that have been affecting Australia, Canada and New Zealand have immediate relevance for the euro area and its member countries. The swings in the euro exchange rate have been substantial – with the \$/€ moving from 1.16 when the euro started in January 1999 to 0.85 in June 2001 to 1.43 in October 2007<sup>4</sup> - and the euro area has been subject to a number of (upward) commodity price shocks. Owner-occupied housing is also excluded from its target price index, the Harmonised Index of Consumer Prices (HICP), but this is because of statistical difficulties and the intention is to include the cost of housing when the difficulties are overcome. Furthermore there has been an active debate in both the US and the euro area about the signalling of the future direction of policy. Thus far the Eurosystem has simply been concerned to make sure that the next move in the policy rate does not come as a surprise but the Federal Reserve has gone to some trouble to set out the general shape of its likely policy over a longer horizon after abandoning indicating the likely direction of the next move.

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<sup>4</sup> The nominal US dollar rate exaggerates the overall real exchange rate fluctuation for the euro. The real effective exchange rate (i.e. trade weighted and deflated by the consumer price indices) fell by around 15% from the beginning of 1999 to the middle of 2001 and then rose by 30% till the end of the third quarter of 2007, the latest month for which the ECB has done the calculations. Nevertheless these are major changes and have striking effects on international competitiveness.

# 1 Three versions of inflation targeting<sup>5</sup>

Although all three countries operate the same generic inflation targeting regimes there are important distinctions in the detail of how they go about it. They are all targeting annual consumer price inflation: both the Bank of Canada and the Reserve Bank of New Zealand (RBNZ) in the range of 1% to 3%, while the target of the Reserve Bank of Australia (RBA) is 2-3%. However, Canada has remained with the more traditional concept of seeking to keep inflation in the range all of the time whereas New Zealand and Australia seek to do this over 'the medium term'. Thus Australia is in a sense aiming a little higher than the other two, although all three could be achieving their target with the same values. Given that they target a rather broader definition of the CPI that appears to increase perhaps half a percentage point faster per year than the HICP used by the Eurosystem, the Eurosystem's target of below but close to 2 per cent over the medium term might not be materially different from what is being sought in New Zealand at least.

Canada and Australia have effectively maintained the same target throughout, although Canada started targeting while it still needed to bring inflation down, while Australia started with inflation in the range. New Zealand on the other hand has changed twice: starting with 0-2%, moving to 0-3% in December 1996 (both on a continuing basis) and finally to 1-3% over the medium term when the present Governor was appointed in 2002. The definition of the inflation to be targeted has also changed slightly over time but is now the full CPI.

The nature of the decision making is different in each country. In New Zealand the Governor is personally responsible and in recent years has chosen to take decisions with the benefit of advice from an Official Cash Rate Advisory Committee, which contains two external members appointed by the Bank. In Canada decisions are taken by the Governing Council composed of the (six) Governors, while in Australia the Board of the Bank decides. The Reserve Bank Board comprises nine members: three *ex officio* – the Governor (who is Chairman), the Deputy Governor (who is Deputy Chairman) and the Secretary to the Department of the Treasury – and six external members, who are appointed by the Treasurer

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<sup>5</sup> The institutional arrangements underlying inflation targeting are crucial to its success but setting these out is beyond the scope of the present note. See Pétursson (2004) for a clear exposition.

(the title for the minister of finance in Australia). The Canadian Governing Council explicitly takes decisions by 'consensus' – as does the Governing Council of the ECB.

All three central banks now use a very short (overnight) 'cash' rate to implement monetary policy. However, the documents that each of central banks use to explain policy do differ. The RBNZ produces a *Monetary Policy Statement* every quarter, a document of around 40 pages that includes a quantified forecast looking three years ahead, including a track for the possible future evolution of the policy interest rate. The RBA also publishes a *Statement on Monetary Policy* quarterly, with some 60 pages but in this case there is only a brief forward look with just inflation quantified. *The Monetary Policy Report* in Canada is also published quarterly but alternate issues are in the form of an 'update'. Although the shortest of the three at around 30 pages, a third of this is a full forward look.

Their experience over the last two decades is clear (Charts 1-3). Inflation has been brought down rapidly and has remained close to the target. There has been a little upward drift, particularly of course in New Zealand, where the target has been revised upwards and upward pressure has been more common than downward. Maintaining that target has required relatively active monetary policy as is clear from the path of interest rates, with New Zealand showing the largest changes and highest rates. The interest rate differential with respect to the US has only fallen clearly below 200 basis points between late 1998 and early 2001 and has been in excess of 400 basis points for over 4 years since 1989. The real effective exchange rate has also fluctuated considerably, largely reflecting the changes in these differentials.

## 2 Exchange rate fluctuations

Inflation targeting is normally viewed as the antithesis to fixed exchange rate arrangements – the exchange rate is allowed to fluctuate as an important part of the adjustment needed to maintain overall price stability. It is thus regarded as a shock absorber. However, all three countries have seen their exchange rates move substantially in recent years. The nominal effective exchange rate in Canada rose by 20% between mid-2004 and mid-2006 and has remained around that higher level since. The Australian trade weighted index (TWI) rose by 20% during the course of 2003 and by April 2007 had increased a further 10%, reaching levels not seen since 1985. However, New Zealand has seen the greatest fluctuation and in June 2007 the TWI reached 74, its highest value since the New Zealand dollar was floated in

1985 and 45% higher than the low point in February 2002. This prompted the first intervention in foreign exchange markets since the floating of the dollar.<sup>6</sup> Like the RBNZ, the Bank of Canada has allowed a free float since 1998 (except the co-ordinated intervention in support of the euro in September 2000), but the RBA has intervened quite frequently (Edison et al, 2003). However, Canada has a current account surplus so the exchange rate is not an immediate source of concern. The deficit has risen in Australia to 6% of GDP in the December 2006 quarter but the increase in commodity prices means that the trade deficit is only 1½% of GDP. The problem case is thus New Zealand, where, like Australia, the main source of the deficit is net income and not trade, but in the year to December 2006, the deficit was 9% of GDP.

When a small country is out of phase with much of the rest of the world, it not only has to change interest rates substantially to have an effect but that difference in interest rates draws in foreign exchange. Foreign entities, particularly Japanese, issued New Zealand dollar bonds (uridashis) with a value outstanding equivalent to over 30% of GDP in early 2006.

With the fluctuations in the US dollar over the last few years many countries have seen major fluctuations in exchange rates, so the problem is not unique to inflation targeting countries. The euro for example rose by over 60% compared to the US dollar between June 2001 and October 2007. The euro area also found the extent of exchange rate fluctuation too large to tolerate and the Eurosystem intervened when it thought rates had become too low, in part in concert with the other major central banks. That appeared to work and the fall in the euro was arrested.

There has been increasing discomfort in New Zealand with high exchange rates during periods of strong monetary policy pressure to contain inflation. This contributed to the decision, by the government, to raise the ceiling for the inflation target in 1996. The Reserve Bank has looked at the options since then and indeed organised a conference on the topic in 2002. The problem is greatest for small developed country economies which do not have an obvious alternative route to price stability through pegging to a major trading partner that itself stands a good prospect of price stability and meets a considerable proportion of the requirements for the creation of an optimal currency area. The RBNZ undertook an extensive

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<sup>6</sup> The TWI rose another 2% in July 2007 but has since fallen away somewhat as part of the world-wide loss of confidence stemming from the problems with sub-prime mortgage debt in the US is but still above the values at the beginning of 2007.

programme of internal and external research on the advantages of a currency union (principally with Australia) from which it concluded that there was no strong economic case that could be made (and there has been no great political appetite to do so in either country).

In 2004, it also changed its view on the subject of intervention in the foreign exchange market (RBNZ, 2005). Previously intervention had only been thought to be necessary in periods of considerable market turbulence (disorderly markets) and normally with the approval of the minister of finance. Then it suggested that intervention would be appropriate to influence 'the level of the exchange rate to reduce cyclical exchange variability when the rate is exceptionally and unjustifiably high or low' – unjustifiably in terms of 'economic fundamentals'. Its remarks about the appropriate circumstances and what can be achieved are very guarded 'when ... there is a material prospect of influencing the exchange rate and in ways that seek to avoid giving rise to destabilising intervention'. Nevertheless, June 2007 saw just such an intervention, when the overnight cash rate was raised to 8%.

Intervention is normally viewed unenthusiastically especially when it is sterilised, as most central banks are small relative to their markets. But on occasion this appears to have been successful in Canada – Siklos and Weymark (2006) point to an example in 1995. And in Australia it is argued that even though the RBA may have had limited success in 'leaning against the wind', intervention has been a profitable strategy by buying foreign currency when the dollar was high and selling it when it was low (Kim and Sheen, 2002). However, it may increase volatility rather than smooth it (Edison et al., 2003). What this episode emphasises is that for even the most committed inflation targeters there are occasions when the impact on the real economy will take precedence.

The challenge for inflation targeting is thus more one of a challenge for all monetary policies in small open economies. They are too small to move markets much. Should they therefore soften the focus on overall inflation and place some limits on how far they are prepared to let the exchange rate move away from 'equilibrium' along the way? If they permit such short term deviations will this harm credibility and make inflation control more costly over the longer term?

## 3 Stabilising prices

There are clear differences in view over what constitutes price stability. Undoubtedly when New Zealand started targeting inflation it was a long term concept. Policy was intended to protect the value of savings and the 0-2% target was intended to enshrine that, as inflation of the order of 1% a year was expected to stem from measurement problems – a somewhat lower figure than estimated by the Boskin Commission for the US (1996). Thus with random shocks and errors in policy an outcome near the middle could be expected. It is now clear that all three countries are targeting low and stable inflation and the Bank of Canada has been most explicit in using these words rather than some concept of price stability. With inflation targets of 2-2.5% in the long term it is clear that the price level will rise – the purchasing power of money will fall.

This is not the opportunity to debate what rate of inflation is in some sense optimal but to note that this move towards the longer term represents two things. First that expectations are sufficiently well embedded that excursions outside the inflation target, even for fairly extended periods, are unlikely to shift them (New Zealand inflation was above 3% for 5 consecutive quarters in 2005/6 for example). Second that short term fluctuations are no longer thought so important.

The first of these two is a natural evolution as central banks gained credibility with inflation targeting. When Australia introduced its medium term focus it took a while for inflation expectations to come down. When the ECB introduced such a focus (in 1998) there was no such problem as the credibility already existed. There was therefore no need for policy to be so prompt or so vigorous. In any case policy was very approximate in the early years of inflation targeting as there was little knowledge of the parameters of the transmission mechanism.

The longer focus and the credibility therefore permit policy to be somewhat more gradual. One traditional justification for this is that it enables monetary policy to have a somewhat less harsh impact on output without anything much in the way of an impact on inflation. The drawback, as Blinder (2006) points out, is that a central bank following a gradual approach '*will from time to time find itself falling "behind the curve" – and will subsequently have to play catch-up. That in itself can cause turbulence in financial markets.*

*More important, falling "behind the curve" presumably means either that the inflationary cat gets out of the bag or that the economy suffers a longer slump than is necessary.'* (p.31). This has led to extended debate in New Zealand. Monetary policy in Australia has typically been more gradual and on the whole the Australian economy has tended to outperform its New Zealand counterpart. The question is whether there is any causal relation between the two. However, despite a more gradual approach since 2002 when the medium term approach was introduced in the PTA, New Zealand is now facing nominal interest rates of 8.25% and real rates of around 6%, which impose distortions on the economy.

Canada is still to some extent in transition to price stability and is debating the issue. When Governor Crow presented the ideas initially he had something in mind along the lines of the original New Zealand target. Now Gaspar et al. (2007) have raised the issue of whether it might not be preferable to target the price level rather than inflation. Under inflation targeting errors are not corrected nor is any allowance made for bias. However, in the case of Canada it would be very difficult to distinguish the two in practice. Over the period 1999-2006 the price level (as measured by core CPI) was never more than 2% away from a 2% trend. There are thus no serious errors to correct and worries that price level targeting might require deflation or run into trouble with the zero bound for the nominal rate of interest seem misplaced. Indeed, Svensson (2006) argues that a price level target for Japan would have helped get round the zero bound problem and Berg and Jonung (1999) suggest that the price level target in Sweden in the 1930s helped limit the impact of falling prices on output – something that was also noted in the gold standard era (Bordo and Filardo, 2005).

Perhaps price level targeting offers a plausible means of permitting a strategy of limiting exchange rate fluctuations – short run deviations from the target will be offset. However this is only likely to apply at the extremes. The behaviour of economies in this regard is clearly non-linear (Mills and Wood, 2007). Large fluctuations can have real effects where smaller fluctuations do not, something Friedman and Schwartz (1982) noted for the US and UK.

## 4 Choosing an operational focus

The Reserve Bank of New Zealand along with the authorities in many other countries has become concerned about the rate of increase in house prices and the implications this has

for general inflation. It is not a new concern and may reflect concerns over financial stability as much as price stability (Bollard, 2004).<sup>7</sup> When inflation picked up in 1994 after having been brought into the 0 to 2% range for the first time, housing was the most important contributory factor. Although that was in part due to the unique way that housing was included in the New Zealand CPI (Roger, 1998) it would have had an important impact on most headline CPIs unless, like the Eurosystem's HICP, it is largely excluded.

However, rises in house prices present two challenges to inflation, of which the direct contribution to the headline index is usually clearly the lesser. The second is that houses are an asset against which households can borrow. Rises in their price therefore represent not just an increase in wealth but also an increase that can readily be turned into spending at low rates of interest through well functioning mortgage markets. They may therefore be indicators of future general inflation rather than simply elements of current inflation. Indeed one way of handling this is to compute a financial conditions index (Mayes and Virén, 2002) which summarises the potential pressure on inflation not just from interest rates and the exchange rate as discussed above but also through house and to a limited extent stock market prices.

In February 2006 the Reserve Bank and the New Zealand Treasury published a joint report on the subject of 'Supplementary Stabilisation Instruments'. The concern was simple '*whether there might be useful tools, with a direct bearing on the housing market and/or the market for residential mortgage credit, which could supplement the central role of interest rates in managing inflation, either in this cycle or in future cycles in which housing-related pressures played a particularly important role. If such measures, targeted more closely to the housing or housing finance sectors, were available they might alleviate some of the pressures on the exchange rate, and on the tradables sector of the economy.*' (p.1) The conclusion was immediate and suggested no real way out – '*it should come as no surprise that there are no simple, or readily implemented, options that would provide large payoffs.*' (p.1).

This concern with housing reflects a more general worry that sometimes parts of the price index move so much that it might make sense to exclude them from the target. This is especially true for prices that fluctuate a lot but are mean reverting, such as seasonal food, and for prices over which the central bank has no influence – commodity prices and indirect

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<sup>7</sup> Goodhart and Hofmann (2007) give a comprehensive review of the main issues: should house prices be included in the general price index and how should central banks react to house price changes?

taxes, for example. The early Policy Targets Agreements in New Zealand explicitly excluded these prices from the target for policy.<sup>8</sup> Similar exclusions were made for administered prices in transition economies such as the Czech Republic, where they formed an important element of the price index and were well away from market levels. More recently, however, targets have become the full price index, as that is what the consumer faces. However, that does not mean that to achieve the target policy should aim at the whole index. Aiming at the core, less volatile, elements is likely to keep inflation within the required bounds but with smoother policy. It is not worthwhile targeting fluctuations whose period may fall within the time lag that policy has its main effect. However, this still leaves the problem of drift that may affect commodity or administered prices if their long run mean lies above that for the price index as a whole.

This is most clearly seen in Canada, where according to the official document:

*'... the inflation-control target is expressed in terms of the year-over-year rate of increase in the total CPI. This is the best available measure of the changes in the cost of living for most Canadian households. Although the target is specified in terms of the total CPI, the Bank uses the core CPI (the CPI excluding eight of the most volatile components as well as the effect of changes in indirect taxes on the remaining components) as the basis for its policy actions. Core CPI inflation is, therefore, the operational target for monetary policy.'*

*'Many of the short-run movements in the total CPI are caused by fluctuations in the prices of eight of the most volatile components that cannot be offset by monetary policy, since the effects of policy are spread over longer periods. By removing these transitory influences, core CPI inflation provides a better measure of the underlying trend of inflation and is, therefore, a more appropriate guide for policy. ... Provided fluctuations in the prices of eight of the most volatile components have only temporary effects on inflation, the total and core measures of the CPI would move in a similar fashion over the medium term.'* (<http://www.bank-banque-canada.ca/en/graphs/notes-1-target.html#cpi>)

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<sup>8</sup> During the short inflation-targeting period in Finland in 1993-1996, the Bank of Finland targeted an indicator of underlying inflation in which the effects of indirect taxes and interest rates (on housing costs) had been removed from the CPI, see Spolander (1994).

Being transparent about the operational processes being used in setting policy to achieve price stability over the medium term is likely to contribute to avoiding fluctuations outside the core CPI having much influence on overall expectations.

## 5 Setting out the possible future path of policy

Until recently the RBNZ was the only central bank that produced forecasts that accepted that the setting of monetary policy might change in the future if price stability is to be maintained. However, the RBA does not appear to have followed the New Zealand example and says nothing about the interest rate basis used in the forecast. The Bank of Canada is less explicit than the RBNZ but does indicate in general terms the direction in which policy will need to move on the basis of current forecasts. These different choices reflect a difficult debate – see Kontulainen et al. (2004) for an exposition.

It is rare that a period of 2-3 years would go by without a central bank finding that it needed to change the setting of its policy rate in order to achieve its inflation objective. The same is thus likely to be true of any forecast period. However, if a central bank projects its own policy rate this could imply some commitment to act in the future, which policy makers would find unacceptable. They take decisions on the current rate on each occasion on the information then available. It is fairly rare for them to make remarks about future rate changes, although some, such as the Federal Reserve in the US, have given indications of 'bias' or the balance of risks or, as in the case of the ECB, have used code words to indicate the likelihood of changes. However, if a forecast does not incorporate interests rates that are consistent with the achievement of policy objectives it will not only fail to be internally consistent (and the model underlying the forecast may fail to solve) but worse still might imply a policy failure and a change in objective.

The RBNZ has picked the most obvious route out of this dilemma by using a policy rule (reaction function) in its forecasting model, which is a reasonable but approximate description of its policy objective (bringing inflation into the middle of the range over the policy horizon in a smooth manner). However, in presenting the forecast it gives a much more restricted discussion of the policy outlook and publishes a smoothed track for the interest rate. The RBNZ has been endogenising policy in this manner since 1994, when it

realised that for the first time since achieving the 0-2% inflation target that it would be forecasting a failure to hit the target, if it did not permit policy to change (Mayes and Riches, 1996). The rule and the model have since become more sophisticated with more explicit modelling of expectations (Black et al, 1997). Both Norges Bank and the Riksbank have now taken this further and have an open discussion of the assumptions for the policy rate and the consequences of other interest rate scenarios.

While it is now normal for central banks to have a monetary policy rule in their models for simulation purposes it is less common for them to use it in forecasting. The usual alternative is to extract what the market expects the policy rate to be by a well-established formula from the shape of the yield curve or from forward interest rates. The Bank of Finland and the Eurosystem do this on the basis of market expectations drawn from the yield curve, using the method popularised by Svensson (1995). In making this assumption, central banks do not imply that they endorse the market's view nor that they have any specific view about the interest rates they may set in the future. It simply gives a basis that is consistent with the current policy strategy. The Bank of England contrasts the outlook on the basis of market rates with a simulation of what would be the outcome under constant rates, assuming that nobody viewed this as implying that the policy objective had changed. (This would be very unrealistic if the expected movement in interest rates by the market were anything other than small.)

The position of the forecast in the Bank's decision making affects what assumptions can be made. Since the policy board is responsible for Monetary Policy Report in Canada and describes the forecast as the 'Bank's' forecast it is able to discuss the endogenous policy rate. The same is true for the RBNZ where the Governor is personally responsible. The RBA on the other hand with external members on its policy board would have more difficulty and hence steps back from the issue. Clearly where the published forecast is owned by the 'staff', and not by the decision-making body as in the Eurosystem, the interest rate projection has to be transparently rule-based and not stemming from some attempt by the staff to forecast decision makers on the basis of their previous actions.

## 6 Concluding remark

Inflation targeting has matured as the experience of Australia, Canada and New Zealand shows. It is not without problems and the general flavour of change has been to make policy smoother, with a target that is correspondingly longer term. In many respects this makes it operationally similar to monetary policy in the euro area. The greater explicit emphasis on the monetary pillar in informing decisions does not imply any departure from the focus on price stability.

It would be unusual if any change in policy regime were to be permanent. The step beyond inflation targeting is not yet on the agenda despite problems with asset prices and volatility. Maybe recent concerns for instrument stability will alter the focus in that direction. Certainly the success in being more transparent about the future needs of policy when forecasting seems set for wider adoption.

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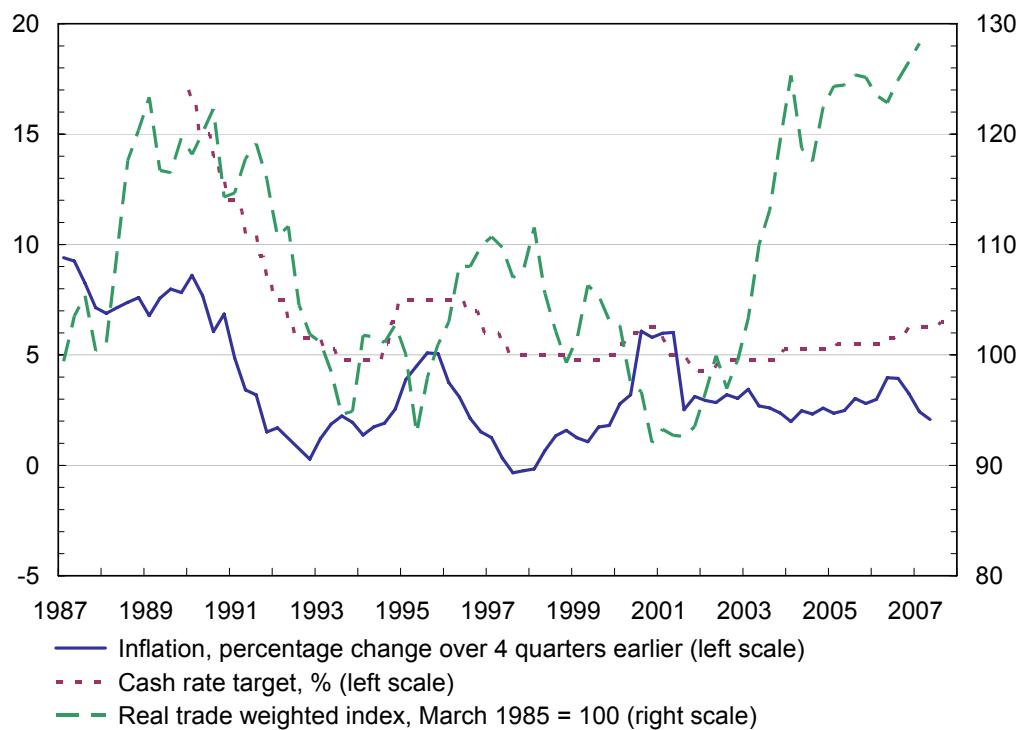
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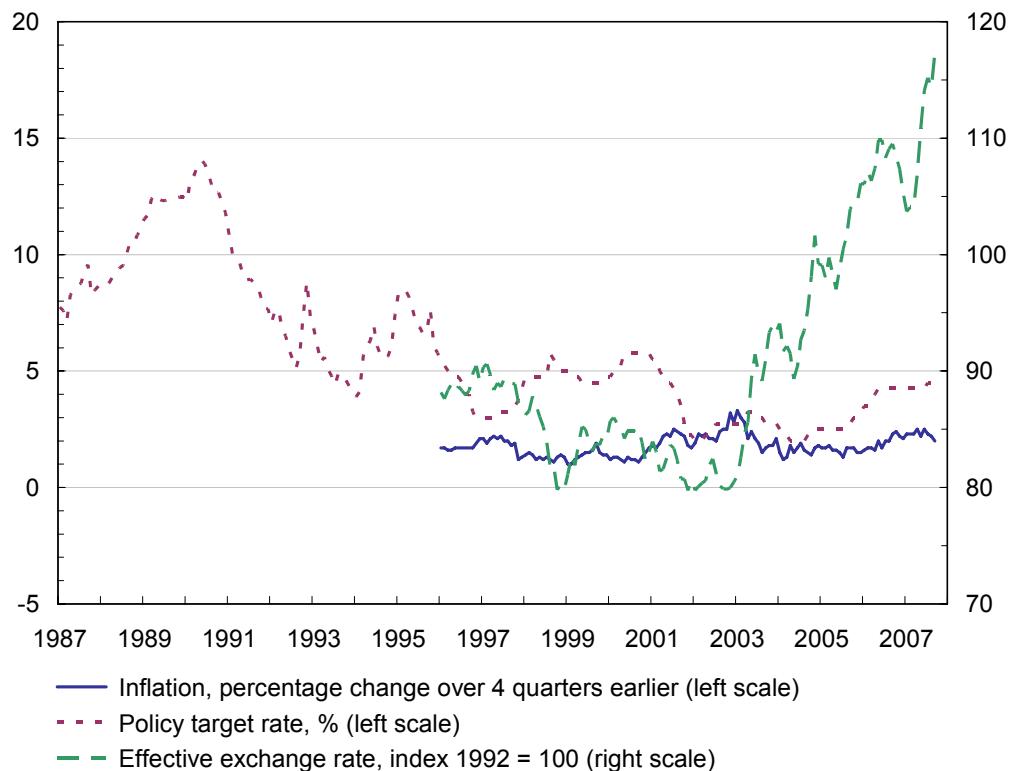
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Chart 1. Inflation, Interest Rates and the Real Exchange Rate in Australia



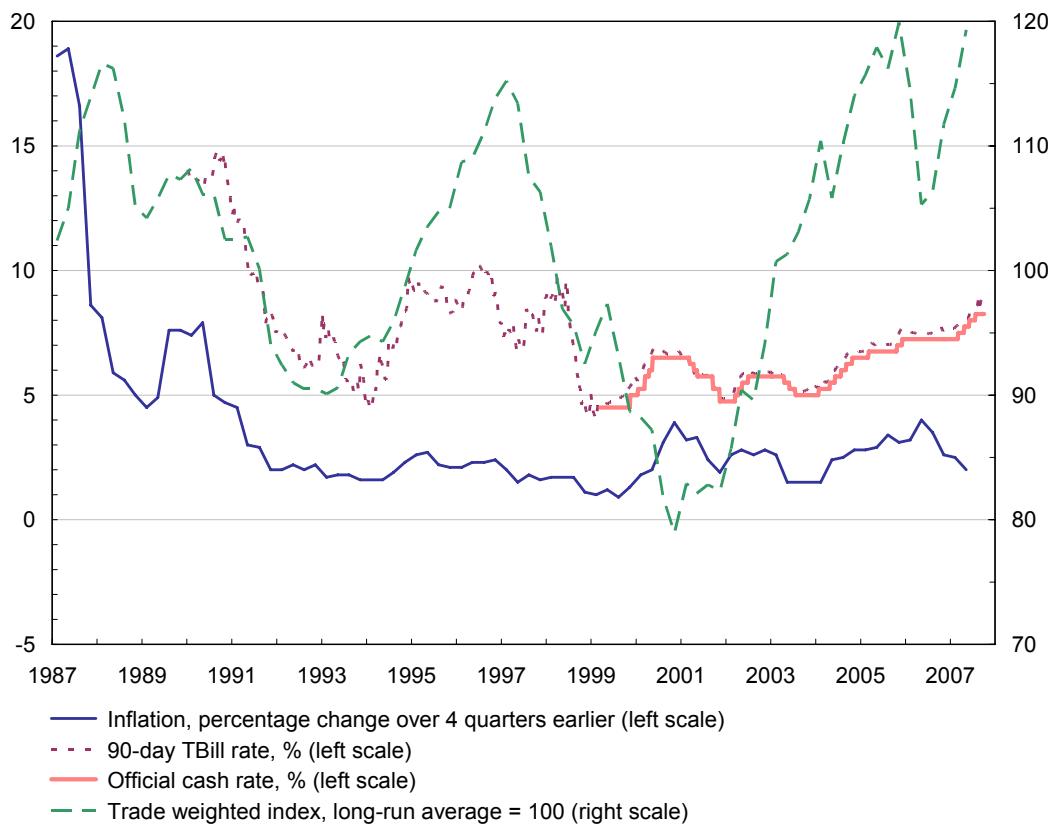
Notes: Source is Reserve Bank of Australia data bank available from their website [www.rba.gov.au](http://www.rba.gov.au)

### Chart 2. Inflation, Interest Rates and the Real Exchange Rate in Canada



Notes: Source is Bank of Canada data bank available from their website [www.bank-banque-canada.ca](http://www.bank-banque-canada.ca)

Chart 3. Inflation, Interest Rates and the Real Exchange Rate in New Zealand



Notes: Source is Reserve Bank of New Zealand data bank available from their website [www.rbnz.govt.nz](http://www.rbnz.govt.nz)