
The Official Cash Rate one year on

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In March 1999 the Reserve Bank changed the way monetary policy is implemented in New Zealand, introducing the Official Cash Rate system. This article reviews the new regime one year on and concludes that it appears to be working well so far, fulfilling the Bank's aims that it be effective, simple, transparent and efficient. Financial market behaviour has been affected by the change, with markedly reduced volatility in short-term interest rates.

1 Introduction

In February 1999 the Reserve Bank announced measures designed to improve the way monetary policy is implemented in New Zealand. The Bank introduced the Official Cash Rate (OCR) system to manage short-term interest rates – a system similar to those used in most other developed countries.

Section 2 of this article briefly describes the nature of the changes to the implementation regime and the reasons for them.

Section 3 reviews the way that the Bank has used the OCR over the past year. This review has a deliberately narrow focus. In part this reflects the timeframe – one year is too short to know much about our use of the regime in the face of the full range of events by which we will be confronted.

In section 4, the heart of this article, we examine the consequences of the shift in short-term interest and exchange rate volatility, transaction volumes and market behaviour.

A number of international comparisons are made.

2 Background to the introduction of the OCR²

Prior to the introduction of the OCR, monetary policy in New Zealand was, since the mid-1980s, implemented using a

quantity-based system: the key quantity was the 'settlement cash target'. However, the Bank was mainly interested in affecting financial market prices. Adjusting the settlement cash target enabled the Bank to influence short-term interest rates and the exchange rate, but this influence was very imprecise. To improve our ability to manage monetary conditions, statements from the Bank ('signalling') became, in effect, the main instrument used to guide financial market prices. In practice, any particular level of settlement cash was consistent with a wide range of levels of short-term interest rates and the exchange rate.

The previous implementation regime was effective in delivering (on average) the level of monetary conditions that the Bank believed consistent with price stability. However, the regime was unsatisfactory in a number of ways and compared poorly with those by then widely used by other central banks.

First, volatility in short-term interest rates in New Zealand financial markets was unnecessarily high, compared with that in overseas markets. This was particularly true from mid-1997 through to early-1999, when bands around a desired level of the Monetary Conditions Index (MCI) were used as a framework to determine when statements would be made. (Our focus is exclusively on the short-term volatility of interest rates; day-to-day and week-to-week movements in 90 day interest rates in particular. We are not referring to the amplitudes of the entire interest rate or exchange rate cycles and it is unlikely that the switch to the OCR has any implications for these.)

Secondly, the implementation regime was confusing and complex, with excessive public and market attention being drawn to implementation issues. Under the previous regime, as at present, the Bank formally reviewed the inflation out-

¹ The authors are grateful to Michael Reddell for his extensive input to the article.

² For details on the OCR regime see the 8 February 1999 announcement, reprinted in RBNZ Vol 62 No1, "Monetary policy implementation: changes to the operating procedures." Also see Archer et al (1999) for background on the choice of implementation regimes, and our expectations of the impact of the OCR on financial markets.

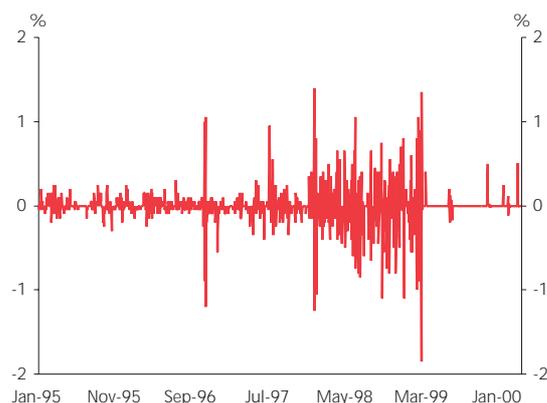
look periodically, normally quarterly. However, between reviews the Bank stood ready to comment whenever necessary in order to keep market prices consistent with the desired policy stance. For the most part, these statements were responses to fluctuations in the – inherently volatile – exchange rate.

Markets had to guess both the tone and timing of statements, often drawing incorrect inferences from silence, and, in any case, adding to the volatility of market interest rates. In addition, the statements – typically under the name of the Governor or another senior Bank official – ran the risk of appearing to address the desired **stance** of policy needed to maintain price stability, in turn putting implementation on the ‘front page’. The difficult issues of monetary policy – judgements about the level of interest rates required to deliver the inflation target in the future – are issues for the front page. The mechanics of implementation are not.

The old system also created some rather strange incentives for market participants which affected financial market pricing and behaviour. The interest rates at which the Bank transacted with the market were themselves market-linked. Consequently, financial market participants at times engaged in transactions designed solely to influence that intervention rate – the so called ‘cash market games’. This added to the volatility of short-term interest rates, particularly the overnight interest rate (figure 1).

An implementation regime should be effective, simple, transparent and efficient. The old system was effective, but fell short on the other criteria. This was true in varying degrees of all the permutations of the quantity-based system used

Figure 1
Daily changes in New Zealand overnight interest rates



since the 1980s, although the shortcomings were more apparent under some than others.

The OCR regime

The essential features of the OCR regime are as follows.

- The OCR is reviewed by the Reserve Bank approximately every six weeks on pre-announced dates (quarterly *Monetary Policy Statements* and intra-quarter reviews).
- The Reserve Bank’s financial market counterparties have ‘standing facilities’ at the Bank. These facilities allow them to obtain settlement cash³ overnight in unlimited quantities from the Bank at an interest rate 25 basis points above the OCR and deposit overnight with the Bank 25 basis points below the OCR. The OCR is, therefore, just the mid-point of the rates on these standing facilities.
- The Bank continues to perform daily liquidity management operations in order to smooth out revenue and expenditure flows across the government’s account at the Reserve Bank. By injecting or withdrawing settlement cash at market rates, these operations reduce the need for banks to use the overnight standing facilities, and hence reduce banks’ costs.
- The liquidity management operations aim to leave close to a specified level of settlement cash in the system at the end of the day. This level can be adjusted, as required, if demand from banks for settlement cash changes.

The standing facilities set a ‘channel’ within which overnight interest rates on borrowing and lending **between** the commercial banks can range. No bank would normally pay another bank a higher interest rate for overnight cash than the rate at which it could borrow from the Reserve Bank.⁴

³ The Overnight Repo Facility (ORF) is a reverse repo transaction. Institutions holding settlement accounts at the Bank may also obtain cash via the Auto-Repo Rollover (ARR) facility in the real-time gross settlement system, ESAS, at 5 basis points higher than the rate through the ORF. See Hampton (1999).

⁴ In principle, the Reserve Bank’s requirement that all settlement cash is obtained via repo with government securities could result in the market rate for unsecured overnight cash being more than 25 basis points over the OCR. In practice, this has not happened so far.

Similarly, no bank would deposit with another bank at an interest rate lower than that offered by the Reserve Bank. In practice, banks recognise those incentives have to date transacted overnight cash with each other within the bands. As a result the Bank controls overnight interest rates without having to do material volumes of transactions. The Bank's willingness to transact in large volume effectively eliminates the need to do so.

In essence, the standing facilities do what the Bank was trying to achieve under the previous regime with the unwieldy combination of the quantity-based system and statements. However, they do so simply, unobtrusively, without the same potential for misinterpretation and, therefore, more accurately.

The Bank also has substantial influence on market interest rates for terms longer than one day. This is because these rates are driven primarily by expectations of future overnight interest rates. Take the interest rate on a 30 day bank bill – a commonly traded instrument in the New Zealand market – and assume that the next OCR review date is a month away. The 30 day interest rate will then be very close to the current overnight interest rate, since that rate is expected to be unchanged for the month.⁵ What of the 60 day bill rate? This rate must incorporate the chance that at the end of the first month the Bank will change the OCR, and hence the overnight interest rate for the second month. By extension, the Bank affects longer interest rates through expectations of the future level of the OCR.⁶

It is these interest rates for periods longer than one day, particularly the key 90 day rate, which directly influence personal and corporate borrowing rates, and hence affect spending patterns.

Changes in these market interest rates reflect changes in expectations of future levels of the OCR. For example, suppose GDP data turned out to be significantly stronger than market expectations. Other things equal, financial market participants would expect the OCR to be higher in the future to combat inflationary pressure. In anticipation of this, longer-term interest rates would rise immediately.

The OCR is thus effective; it enables the Bank to manage short-term interest rates. It is simple and transparent. Commentators on financial markets in New Zealand and overseas have easily understood the way the OCR works, reflecting its similarities with overseas systems. In addition, the regime is more efficient in at least two senses. One narrow measure of efficiency is the reduced costs it imposes on the Bank's counterparties in financial markets. The market can obtain settlement cash more cheaply, and a higher deposit rate is paid on settlement cash than was the case under the previous regime. More broadly, the OCR is efficient, in that it implements policy reliably and precisely, with no need for follow-up statements.

3 Use of the OCR regime

It is early days to assess the Reserve Bank's use of the OCR regime. However, since the implementation regime in New Zealand is now very similar to those used overseas, some comparisons are useful.

The **magnitude** of OCR moves in New Zealand over the past year has been unremarkable compared with changes in official interest rates overseas over recent years (figure 2). The Reserve Bank has moved the OCR in a series of 25 and 50 basis point steps – steps that are conventional in similar overseas operating systems.⁷

Fluctuations in the overnight interest rate under our previous implementation regime stand in sharp contrast. Under that regime the Bank's intervention rate was adjusted every day, using a formula tying it to the market-determined overnight interest rate. The 'cash market games' noted in section 2 sometimes caused the overnight interest rate – and, therefore, the rate at which the Bank provided funds to the market

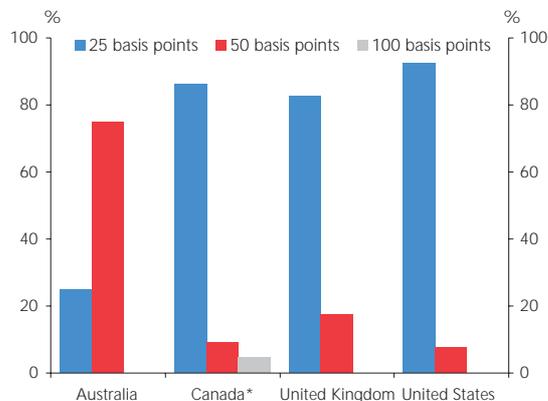
⁵ Because if 30 day interest rates were significantly higher than the expected average of the overnight interest rates for that period, traders would buy 30 day bills, bringing the 30 day yield down into line with the overnight interest rate. (The above presentation is deliberately simplified. The 30 day rate will not simply be the expected daily overnight rate compounded. Credit, liquidity and term premia all contribute to a 'wedge' between overnight and bank bill interest rates).

⁶ In addition, the Bank influences longer-term interest rates by publishing its (conditional) intentions for future levels of the OCR in the *Monetary Policy Statement*.

⁷ When introducing the OCR regime, the Bank indicated that the OCR would be moved in multiples of 25 basis points.

Figure 2
Size of official interest rate changes
1995 - March 2000

(percentage of total moves)



* The Canadian figures are calculated using data only since February 1996, when the current implementation regime was introduced.

– to be very volatile, occasionally moving several percentage points in a day. By contrast, the interest rates on the standing facilities are set directly by the Bank, and remain unchanged for the six weeks between each OCR review date. The previous high frequency volatility of overnight interest rates has been removed (figure 1), as has much of the volatility of interest rates further along the yield curve.

The Bank reviews – but does not necessarily change – the OCR eight times a year.⁸ This is consistent with the practice in the United States, and is less often than in many other countries. Table 1 sets out international comparisons.

Table 1
Frequency of official interest rate reviews

Reserve Bank of New Zealand	Six weekly
Reserve Bank of Australia	Monthly
Bank of Canada	No fixed schedule
Bank of England	Monthly
European Central Bank	Fortnightly
Bank of Japan	Twice monthly
Federal Reserve Board (United States)	Six weekly

⁸ Like other central banks, the Reserve Bank reserves the right to alter the OCR at any time should we judge that to be required. However, this right would only be exercised in clearly exceptional circumstances. In practice, the market has acted as if changes to the OCR will only occur on the scheduled dates.

To review interest rates only every three months, at the time of the *Monetary Policy Statements*, would be too infrequent. New Zealand is a small, relatively undiversified, open economy in which the exchange rate plays an important role. It is thus particularly susceptible to economic ‘shocks’, some of which require a monetary policy response. Reviewing rates only every three months (at the time of *Monetary Policy Statements*) might require unusually large interest rate steps on some occasions. It might also risk suggestions that the Bank was “behind the game” in tightening or loosening monetary policy, and would look rather unconventional to the international investors who play such a large part in our markets. (Recall that one undesirable feature of the old system was that it was unconventional by international standards.)

Reviewing interest rates every six weeks does not, of course, mean changes in rates at each review. The intra-quarter reviews have been used to change official rates on two occasions in the past year, January and April 2000. When introducing the OCR the Bank outlined the circumstances in which it foresaw using the intra-quarter reviews, stressing that the quarterly *Monetary Policy Statements* would be the main opportunities to reassess substantially the inflation outlook and the required stance of policy.

At this stage, we envisage that the quarterly reviews, with the transparency and discipline that the formal projections process helps provide, will be the main opportunity for substantial changes in the stance of policy. However, the intra-quarter review will allow us to react to major surprises in the data that have come out since the previous published projections. It will also, for example, give us the ability to adjust the Official Cash Rate gradually if we are uncertain about the strength of emerging trends, the durability of recent exchange rate changes, or the like.

Reserve Bank of New Zealand, 8 February 1999. Extract from OCR announcement press release.

4 The OCR and financial markets

This section discusses the impact of the OCR regime on financial markets. In this context the following distinction is important. Any monetary policy stance set by the Bank – tight, loose or neutral – impacts on the economy through financial markets. Via interest rates and asset prices, the financial markets transmit monetary policy to the rest of the economy and hence affect the prospects for inflation.⁹ However, the **mechanics** of implementation – **how** policy is effected in the market, irrespective of the stance – also affects financial market participants. The distinction is thus between the impact of changing the stance of policy, and the impact of changing the method by which a particular stance is implemented.

The introduction of the OCR is a case in point. Changing the mechanics of implementation has had little impact on the wider economy. The Bank sets the stance of policy to target inflation, just as it did in the previous regime, and the average level of interest and exchange rates is unlikely to have been materially affected by the choice of regime. However, the particular mechanics of the OCR are different from the previous quantity-based regime and thus affect financial market behaviour and pricing in different ways. It is these consequences of the OCR that we examine in this section.

Market focus

As discussed above, the previous regime for monetary policy implementation involved the Bank in making periodic, unscheduled public statements to manage monetary conditions. The Bank used these statements to try to maintain exchange or interest rates at levels that were consistent with a desired monetary policy stance. The standing facilities in the current regime have replaced the need for these statements. Consequently, sharp movements in interest or exchange rates (whether these are ‘noise’ or shifts in expectations of future monetary policy) no longer cause market participants to wonder each day or hour whether or not the Bank is going to react with a statement on monetary condi-

tions.¹⁰ Both the Bank and the market probably now spend less time ‘screen-watching’ as a result.

In thinking about the Reserve Bank’s setting of policy, the markets now focus on future OCR reviews. New data and movements in asset prices, such as the exchange rate, are assessed for their implications for the inflation outlook, and hence the likely interest rate response.

Foreign investors have benefited from this increased clarity. Those familiar with overseas markets were frequently confused by the previous implementation regime in New Zealand. This became particularly obvious during the MCI period 1997-99, in part because that system differed so markedly to the method of implementation used elsewhere.

Market behaviour

Under the previous regime the overnight interest rate – and hence the intervention rate at which the Bank provided funds to the market – fluctuated substantially (figure 1). The intervention rate was tied to a market-determined rate, rather than being fixed directly by the Bank. This provided an opportunity for market participants to influence the overnight interest rate to their advantage. Banks sought to influence the overnight interest rate not just because it affected the rates at which they could borrow or lend overnight, but also because doing so could, in some circumstances, influence longer-term interest rates and potentially boost the profitability of positions taken in the bank bill market.¹¹

As the Bank is now willing to borrow and lend unlimited quantities overnight to the market at predetermined rates, the new regime effectively constrains (but does not set directly) the overnight interest rate. Since banks now have less ability to influence the overnight interest rate, they also have less ability to influence longer-term interest rates. As a result, banks now devote fewer resources to trying to influence the overnight cash market.

⁹ For simplicity we are ignoring both the direct expectations link from central bank announcements on monetary policy to actual and expected inflation, and any purely quantitative channels.

¹⁰ Prior to the OCR the Bank was already moving away from this ‘statement in real time’ approach; a ‘weekly window’ for statements to the market was introduced in June 1998.

¹¹ The small number of banks operating in the New Zealand cash market and their differing appetites for risk were also important in encouraging ‘cash market games’ given the implementation structure. Such behaviour had no implications for the economy.

Table 2
International volatility of overnight interest rates

(average absolute daily change - basis points)

	Jan 95-Jun 97	Jul 97-Feb 99	Mar 99-Mar 00
New Zealand	5.1	16.4	1.0
Australia	2.0	2.4	2.1
Canada	9.8	4.5	2.4
United Kingdom*	—	23.6	23.4
United States	16.3	15.1	11.3

* Jul 97 - Mar 00: Sterling Overnight Interbank Average (Sonia). Transactions-weighted data for the United Kingdom is not available for the earlier period.

In practice, the overnight interest rate has traded almost exclusively at the OCR. This is unusual internationally. Of the countries covered in table 2, New Zealand has had the least volatile overnight interest rates over the past year. The unusually low level of volatility in New Zealand results in part from the particular type of implementation regime, and in part from market behaviour.

Most central banks seek to control short-term interest rates. This control can be exerted via a channel system of the type now used in New Zealand. Alternatively, the central bank can target its chosen short-term interest rate via open market operations. Channel systems in New Zealand, Australia, and Canada seem to generate lower overnight volatility than target systems of the type used in the United States.

Market conventions also affect the volatility of the overnight interest rate. There is an implicit market convention among the banks that overnight cash is lent at the OCR.¹² From the Reserve Bank's perspective, this is a convenient, but not an essential, feature of the regime. A small degree of volatility in overnight interest rates around the OCR would not be a concern in the setting of monetary policy.

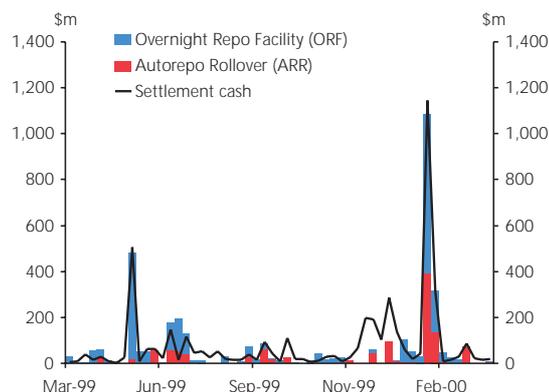
In fact, since the introduction of the OCR there have been only two brief periods in which overnight interest rates traded above the OCR (figure 3). They correspond to periods of

Figure 3
New Zealand overnight interest rate



Figure 4
Daily use of the Reserve Bank's standing facilities

(weekly average of daily values)



¹² Inter-bank conventions, whether implicit or explicit, are not unusual internationally. Prior to the OCR the New Zealand money market had an explicit convention for overnight lending (in the hours after the intervention rate was set each day). This convention periodically came under strain, as individual banks saw the opportunity to make profits by influencing the overnight interest rate. Under the OCR, the benefit of breaking the (implicit) convention of lending at the OCR is much reduced.

cash market 'friction' associated with particularly large flows between the private sector and the government. At these times those banks that had surplus settlement cash balances were demanding a higher interest rate to lend their settlement cash. Most of the other banks preferred, instead,

to borrow from the Reserve Bank at a higher interest rate via the overnight standing facilities – thus leaving more settlement cash in the system than would otherwise have been the case. Figure 4 details the use of the facilities and the level of settlement cash left in the banking system each day. If the overnight interest rate traded persistently away from the OCR this might warrant an alteration to the level of settlement cash that the Reserve Bank's liquidity management operations aim to leave in the system each day. This quantity is of no monetary policy significance; it simply reflects the Reserve Bank's estimate of the aggregate demand for settlement cash from the private banks. The Bank is, in effect, willing to alter this quantity 'on demand', and if, for example the overnight interest rate traded persistently above the OCR, this would be an indication of demand for an increased level of settlement cash.

With a channel system there is always the question of how wide to set the channel. The wider the channel, the greater the scope for volatility in overnight interest rates. The European Central Bank, for example, has a 200 basis point channel, and has experienced volatility in the overnight interest rate over three times that in Australia, New Zealand and Canada over the past year.

Conversely, a very narrow channel can result in a central bank, in effect, replacing the private cash 'market.'¹³ That is, banks may prefer to borrow from and lend to the central bank rather than first going to the inter-bank market. This has not been a problem in New Zealand so far. The standing facilities in New Zealand are generally only used when (as a result of a forecast error in the day-to-day liquidity management operations) the Reserve Bank has supplied insufficient liquidity to the market. Even when the OCR channel was reduced to just 10 basis points either side of the OCR over the Y2K period, the standing facilities were still normally only used following a forecast error.

Y2K highlighted the operational flexibility that the OCR regime offers. The Bank's approach to liquidity provision over Y2K was consistent with the philosophy of the OCR regime that, having achieved more precise control of the short-term

interest rates, the level of settlement cash in the banking system does not matter for monetary policy. Among other measures to ensure banks' access to sufficient liquidity, the Bank increased the target level for settlement cash balances from \$20 million to \$200 million (figure 4), and, in narrowing the channel around the OCR to 10 basis points either side, reduced the costs to the banks of additional settlement balances.¹⁴ The overnight interest rate remained at the OCR throughout the period. Such a liberal approach would have been more difficult under the previous 'quantity-based' implementation regimes. We would have been unclear *ex ante* what impact any increase in settlement cash would have had on short-term interest rates. Such a change to the key quantity variable would have run the risk of being misinterpreted as an easing of policy.

Market prices

The introduction of the OCR has had a marked impact on the short-term behaviour of some financial asset prices and the pattern of trading activity. The greatest impact has been in the short-term interest rate market.

Under the previous implementation regime, in its various forms, day-to-day movements in the exchange rate were, to varying degrees, prompting movements in the 90 day and other short-term interest rates. For example, during the 1997-99 MCI period, the Bank sought to constrain fluctuations in the MCI (within broad bands) between policy reviews. Statements to influence the MCI were not precise in their impact, nor frequently issued, but the threat of them was sufficient to affect market behaviour substantially. Consequently, exchange rate movements would often result in short-term interest rates moving substantially in the opposite direction, more or less offsetting the exchange rate movement in MCI terms.

Following the introduction of the OCR, the Bank no longer attempts to manage or respond to day-by-day fluctuations in the exchange rate. Instead, exchange rate movements – like all the other economic developments – are now only taken into account at the time of the *Monetary Policy Statements* (and intra-quarter reviews). Reflecting the reduced

¹³ In June 1997 the Reserve Bank of Australia widened its channel from 20 to 50 basis points in response to these concerns.

¹⁴ See Hampton (2000) for details of liquidity provision over Y2K.

Table 3

90 day interest rate increase given a 1 percent decrease in the TWI¹⁵

	Pre MCI regime (Jan 95 – Jun 97)	MCI regime (Jul 97 – Feb 99)	OCR regime (Mar 99 – Mar 00)
After one day	7 basis points	21 basis points	1 basis point

attention paid by the Reserve Bank to the exchange rate in the day-to-day implementation of monetary policy, the market has become much more inclined to absorb short-term exchange rate fluctuations without immediate and substantial offsetting adjustments in short-term interest rates. Table 3 demonstrates the extent to which interest rate responsiveness to daily exchange rate movements (as measured using the Bank's Trade Weighted Index (TWI)) has changed over the past five years.

Movements in the exchange rate still have an effect (albeit reduced) on short-term interest rates because the exchange rate continues to affect the economy and, therefore, expected future levels of the OCR.

Removing the strong day-to-day link between the exchange rate and short-term interest rates has resulted in a sharp fall in the day-to-day volatility of short-term interest rates. This has affected forward interest rates out to around one year,

but has been most marked in lower volatility of the high profile 90 day interest rate – both in actual volatility and expected volatility (as implied by options prices).¹⁶

Figure 5 demonstrates the sharp absolute fall in 90 day interest rate volatility since the introduction of the OCR. Volatility has also fallen relative to that in other comparable countries.

Having reduced the 'noise' in interest rates, there is now a more stable relationship between the OCR (and, therefore, the overnight interest rate) and the rest of the bank bill curve. To the extent that the market correctly anticipates the Bank's setting of the OCR, the 90 day interest rate will typically presage changes in the OCR. This has been broadly the case over the past twelve months. For much of this period, the 90 day interest rate has traded above the overnight interest rate, foreshadowing actual OCR increases¹⁷ (figure 6).

Figure 5
International volatility of 3 month interest rates

(average absolute daily change in 90 day interest rates)

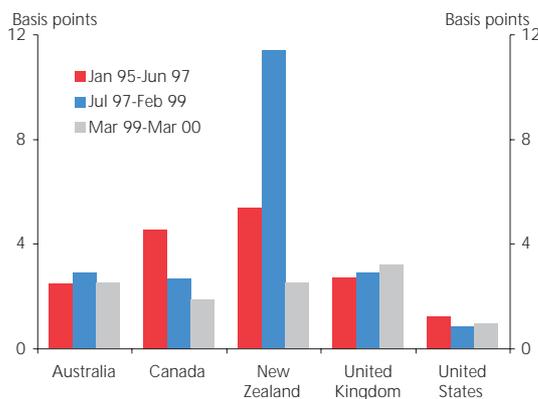
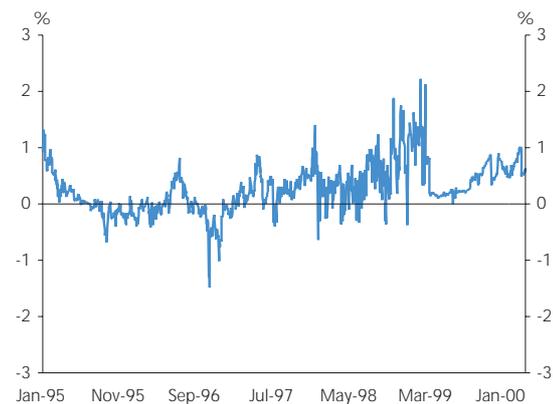


Figure 6
The difference between New Zealand 90 day and overnight interest rates
(90 day - overnight interest rates)



¹⁵ This table is based on daily observations. Using hourly data, during the MCI regime a 1 percent decrease in the exchange rate was typically followed by a 19 basis point increase in the 90 day interest rate within the first four hours. Since the introduction of the OCR, a 1 percent decrease in the TWI has typically been followed by a 4 basis point increase in the 90 day interest rate.

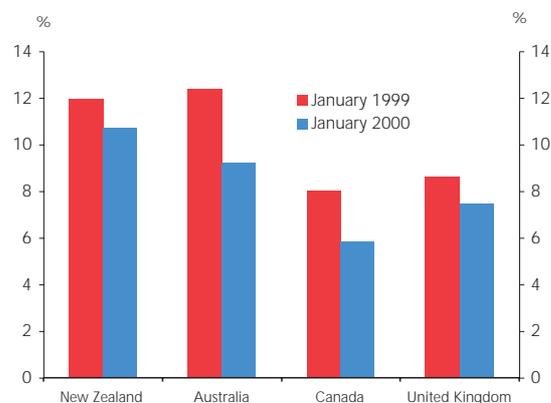
¹⁶ See Hawkesby (1999) for details on implied volatility and option prices.

¹⁷ As discussed in Footnote 5, even with no expected increase in the OCR over the following 3 months, the 90 day interest rate would still be expected to be slightly above the OCR.

There were concerns that, although the OCR would reduce volatility in short-term interest rates, this would simply be offset by higher short-term exchange rate volatility. Under this view, an independently determined degree of volatility, arising from the 'shocks' hitting the economy, could be felt either in interest rates or exchange rates, but could not be reduced simply by changing the implementation arrangements. This was not what the Bank expected, since we believed that the unwieldy nature of the previous implementation arrangement had itself contributed to volatility. Figure 7 shows that the implied volatility of the New Zealand dollar has not increased over the past year – in fact it has fallen along with the volatility of other comparable exchange rates. This suggests that introducing the OCR has not had any material impact on the volatility of the New Zealand dollar.¹⁸

Figure 7
Implied exchange rate volatility - New Zealand and overseas

(taken from one month option prices against the US dollar)



Interest rate futures markets¹⁹ are used either to increase exposure to interest rate movements – speculating – or reduce exposure to interest rate movements – hedging. The OCR regime has significantly reduced the probability of 90 day and longer interest rates moving markedly over the near term. Hence there is now less incentive for either speculators or hedgers to participate in the interest rate futures

¹⁸ As we mentioned in section 2, the switch to the OCR has no implications for the amplitude of exchange rate movements over the economic cycle. We are concentrating exclusively on short-term fluctuations, which can be measured by options volatility.

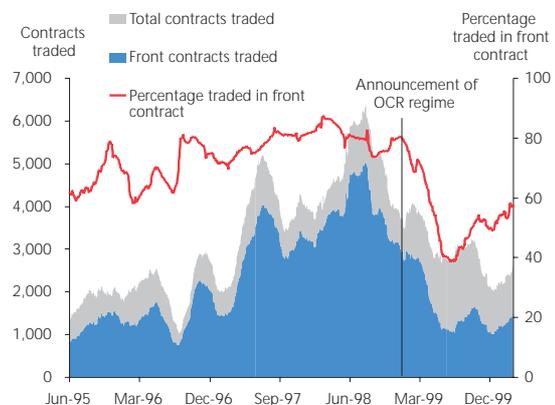
¹⁹ See Hawkesby (1999) for a description of bank bill futures contracts.

market, and traded volumes have fallen. However, despite the very sharp reduction in interest rate volatility, volumes have only dropped back to around pre-MCI levels.

The fall in volume is concentrated in the bank bill futures contracts closest to maturity. Figure 8 shows both the fall in the volume of total futures contracts traded, and the more marked fall in volume traded in the closest to maturity (or 'front') contract, both absolutely and as a proportion of total volume. Uncertainty about the path of interest rates over the next twelve months has not been altered substantially by the introduction of the OCR as the issues the Bank faces at the regular reviews of the monetary policy stance are unchanged. Hence the need and opportunities to trade the longer futures contracts are undiminished.

The reduction in the volatility of wholesale short-term interest rates since the introduction of the OCR may have enabled

Figure 8
Trading volume in New Zealand short-term interest rate futures



banks to offer more attractive floating mortgage rates to their customers, as the banks themselves carry less risk from short-term interest rate volatility. Other things equal, we would expect this to have encouraged a movement towards floating rate, and away from fixed rate, borrowing in the domestic mortgage market. There has been some shift towards floating rate loans. However, this movement has probably been stimulated less by the shift to the OCR, and more by short-term interest rates being lower than long-term interest rates over the past 12 to 18 months – relatively unusual in New Zealand. A similar influence may have been at work in corporate borrowing.

Finally, it is possible that the move to an internationally comparable instrument for implementing monetary policy, together with reduced volatility in overnight interest rates, might have boosted international investment in New Zealand dollar denominated instruments. Consistent with this, the margin between 10 year bond yields in New Zealand and the United States fell shortly after the introduction of the OCR. However, it is difficult to attribute this conclusively to the introduction of the OCR since many factors influence the demand for investment in New Zealand assets. It seems more probable that the change to the OCR neutralised one form of 'irritation' faced by those investing in New Zealand, rather than making a material change in the price investors are willing to pay for New Zealand assets.

5 Conclusion – on reflection, has the change been a success?

Both the Bank and market participants believe that the OCR regime has performed well in the past year. An implementation regime for monetary policy should be effective, simple, transparent and efficient. Against these criteria, the OCR is performing well, meeting the objectives the Bank set for it.

The OCR is effective, giving the Bank control of overnight interest rates and a substantially reliable influence over other short-term interest rates. At the same time, volatility in short-term interest rates that existed under earlier implementation regimes has fallen substantially. A majority of this reduction in volatility has resulted from the breakdown of the strong negative relationship between short-term exchange rate movements and the 90 day interest rate – which itself was a direct consequence of the previous implementation regimes.

Under the previous regimes, management of monetary conditions was imprecise. Statements from senior officials were used to bolster the control provided by the formal instrument, but the statements themselves had an uncertain

impact, and were subject to misinterpretation. The new regime is simple and transparent: the level of the OCR is reviewed and announced to the market every 6 weeks, and the technical operation of the system is easily understood.

The OCR regime is efficient. The standing facilities, by which control is exerted over short-term interest rates, do so in a 'low key' way. Neither statements nor active participation by the Bank in the market are required to achieve this control over short-term interest rates. In addition, the cost to the Bank's counterparties of implementing policy has been reduced.

The low key nature of the OCR regime has reduced the attention paid by markets and other commentators to implementation issues. This is entirely right because **implementation** of monetary policy should not be a front page matter.

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