
The Reserve Bank's new foreign exchange intervention policy

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Last year the Reserve Bank concluded a review of its foreign exchange intervention policy. The review resulted in a recommendation to the Government that the Bank be given the capacity to broaden the objectives of foreign exchange intervention towards helping the Governor achieve monetary policy objectives as dictated by the Policy Targets Agreement (PTA). This article describes our new intervention role and the implications for the management of the Bank's foreign reserves.

1 Introduction and background

On 30 March 2004, the Government approved a Reserve Bank proposal that gives the Bank the capacity to use foreign exchange intervention in order to influence the level of the exchange rate. This new approach allows for intervention at the extremes of the exchange rate cycle, directed at leaning against trends in the exchange rate which the Bank assesses to be unjustified by economic fundamentals.

The new policy is in addition to our usual foreign exchange (FX) intervention objectives. Since the exchange rate was floated in 1985, the Reserve Bank's policy has been to use intervention only in times of 'extreme market disorder'. The focus of our existing policy is on preserving the functioning of the foreign exchange market in a crisis, rather than preserving any given level of the exchange rate *per se*.¹ This policy is for those very rare occasions when the market itself breaks down, transactions are unable to be completed, and where the stability of the wider financial and economic system is threatened. Thankfully, in the 20 years since the New Zealand dollar was floated the Reserve Bank has not needed to intervene to forestall such a crisis. The Bank's NZD 3.3 billion portfolio of foreign reserves is maintained for the purpose of providing a stock of foreign exchange that can be used to finance crisis intervention. The Bank's existing crisis intervention policy and the reserves required to fulfil that role are not affected by the new intervention policy.

The new policy provides the Bank with another monetary policy tool – in addition to the Official Cash Rate (OCR). The PTA requires the Bank to maintain price stability whilst avoiding unnecessary volatility in output, interest rates, and the exchange rate. This new tool is designed to help trim those peaks and troughs of the exchange rate cycle that

make the task of achieving price stability while minimising unnecessary volatility difficult. Usually the Bank will use the OCR to implement monetary policy, but sometimes (probably rarely) intervention may assist the Bank to achieve its PTA obligations.

The Bank will implement its new intervention policy independently of the Government, in the same way it sets the OCR. Intervention will only be used at times when it is most likely to be effective and when intervention is consistent with the PTA. The Bank has developed criteria to help judge when it is most appropriate to use intervention. These criteria have been publicly disclosed and agreed with the Minister of Finance, consistent with the Bank's generally transparent approach to the formulation of monetary policy. If intervention occurs, it will be transparently communicated to the public after the fact, allowing stakeholders to hold the Bank accountable for its actions.

Underpinning the new intervention policy are adequate financial resources which ensure the Bank's ability to implement its strategy independently of the Government, while maintaining its credibility with markets and the public.

This article lays out the framework for the new policy. Section 2 summarises the broad objectives and strategy of the new policy. This is followed in section 3 by a discussion on the criteria the Bank will use to assess the merits of

¹ As part of its ongoing legal commitment to advise the Minister of Finance on exchange rate matters, the Reserve Bank is also increasing the level of reserves it holds for 'insurance' purposes. For a discussion of the Bank's crisis management foreign exchange policy, see Michael Gordon's article in this issue of the *Bulletin*.

intervention in any given circumstance. In section 4 the implications of the new policy for the Reserve Bank's balance sheet are highlighted. The final section describes how intervention will be implemented, and how the intervention policy will be communicated to markets, the public and the Government.

2 Intervention objectives and strategy

What is FX intervention?

Foreign exchange intervention by the Reserve Bank is the purchase or sale of New Zealand dollars in exchange for foreign currencies in the foreign exchange market, with the objective of influencing the level of the exchange rate. This is distinct from merely transacting in the FX market to manage normal foreign exchange requirements as such transactions are done with the aim of minimising any impact on the exchange rate.²

Objectives of the new policy

The new intervention policy is aimed specifically at trimming the peaks and troughs of medium-term fluctuations in the New Zealand dollar (NZD) exchange rate, where there is a misalignment between the exchange rate and its 'fundamentals'.

In general, a floating exchange rate helps the economy to adjust to ever-changing domestic and global conditions, and encourages the efficient allocation of productive resources. The value of the exchange rate over the medium to long run is determined by, among other things, relative inflation and interest rate differentials, the stage in the business cycle in relation to its trading partners, movements in the terms of trade, and productivity differentials.³ These relationships mean that the exchange rate can act as a significant buffer for the economy. When the New Zealand economy is weak,

for example, profitability and asset returns tend to be low, reducing demand for New Zealand dollar denominated assets. This, in turn, is likely to lead to a depreciation of the exchange rate, helping to promote a return to stronger activity.

But there may be times when exchange rate fluctuations do not fully reflect fundamentals. Examples might include instances where the short-run value of the exchange rate over- or under- shoots its 'fair value' because of non-fundamental factors such as the trend-following behaviour implied by some 'technical' trading rules followed by foreign exchange dealers, or other short-term speculative behaviour.

Non-fundamental drivers may at times push the exchange rate to extreme levels, putting undue pressure on some parts of the economy, such as the export sector. For example, when the New Zealand dollar is significantly over-valued in relation to 'equilibrium' or its long-run average, exporters may experience declines in their New Zealand dollar denominated export returns.⁴ These firms may refrain from investing or expanding their operations in such a climate, while some may go out of business altogether.⁵

Instances where there is a significant misalignment between the exchange rate and its fundamental value are probably few and far between. Further, it can be hard to identify exchange rate misalignments. Consequently, it is likely that we will intervene relatively rarely to influence the level of the exchange rate.

Basic strategy

Figure 1 (overleaf) presents a stylised picture of the basic strategy. When the New Zealand dollar is too high (under the benchmark criteria explained in section 3), the Reserve

² Some examples of standard FX transactions include those associated with the payment of bills denominated in foreign currencies or transactions to help manage the Bank's exposure to exchange rate risk.

³ For a discussion of some of these factors see, Anella Munro (2004) "What drives the New Zealand dollar?" *RBNZ Bulletin*, Vol. 67, No. 2, pp. 21-35

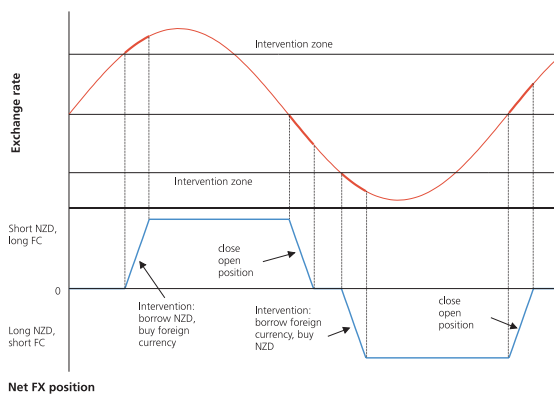
⁴ Note that exporters may experience fluctuations in their incomes due to factors other than the exchange rate, such as variations in foreign currency commodity prices. Declining export earnings are not necessarily a sign that the exchange rate is over valued.

⁵ Such developments raise the possibility of 'hysteresis' effects, whereby the growth of firms during low exchange periods is not sufficient to offset declining numbers in high periods. In turn, the overall result could be slower growth of the export or tradables sector than might otherwise be the case.

Bank will sell New Zealand dollars and buy foreign currency in the foreign exchange market. Conversely, when the currency is too low, the Reserve Bank will buy New Zealand dollars and sell foreign exchange.

Intervention near the peaks of the exchange rate cycle will leave the Bank with an open (unhedged) net 'long' foreign currency position, while intervention at troughs will result in an open net 'short' foreign currency position.⁶ Open foreign currency positions will be closed when the exchange rate nears the middle of the normal cyclical range – that is, when the exchange rate is near its long term equilibrium value. For example, if the Bank had a net long foreign currency position, it would look to buy back New Zealand dollars at that point.

Figure 1
Illustrative intervention scenario



How intervention works

Intervention is thought to work best in situations where it provides a signal to markets about future monetary policy settings or the level of the equilibrium exchange rate. The signal might relate to information the central bank has but market participants do not. The act of intervention may convey a message about monetary policy settings or the exchange rate that gives market participants greater confidence to trade in ways that will encourage the exchange rate to revert towards more justified levels.⁷

⁶ A net 'long' ('short') foreign currency position is one when the value of the Bank's foreign currency assets exceeds (is less than) that of its foreign currency liabilities.

⁷ For a discussion of the relevant literature see L Sarno and M P Taylor (2001), "Official intervention in the foreign exchange market: is it effective and, if so, how does it work?", *Journal of Economic Literature*, No. 39, pp. 839-868.

Another reason why intervention might have an impact on the exchange rate in some cases is the idea that exchange rates are partly determined by the underlying structure of the financial markets.⁸ For example, simple technical trading rules that try to take advantage of the continuation of short term trends in financial prices are used widely in the markets.⁹ If exchange rates are at times partially determined by trend following behaviour rather than fundamentals, then it is possible intervention could have an impact on exchange rates if intervention disrupts the signals that trend followers look for. A relatively modest transaction by the central bank at the right time may be sufficient to slow or even prevent further movements of the exchange rate away from equilibrium. It might also be the case that intervention could encourage short term traders to jump in behind the Bank reinforcing the efficacy of the initial intervention transaction.

However, all of these mechanisms are subtle drivers of markets. We do not expect that intervention will be effective enough to offset the impact of fundamentals. This view is consistent with the experience of other central banks who have tried to intervene against fundamental trends and have been unsuccessful (e.g the Bank of England's attempt to defend the pound in 1992).

3 Criteria for assessing the appropriateness of intervention

The previous section briefly discussed how the new intervention policy would work, with the goal of trimming the peaks and troughs of extreme medium term movements in the exchange rate.

To successfully implement foreign exchange intervention the Bank has developed a framework and criteria to guide

⁸ Sarno and Taylor (2001) provide a light overview while M Evans and R K Lyons (2002), "Order flow and exchange rate dynamics", *Journal of Political Economy*, Vol. 110, No. 1, pp. 170-180, provides a more in depth examination.

⁹ See Y Cheung and M D Chinn (2001), "Currency traders and exchange rate dynamics: a survey of the U S market", *Journal of International Money and Finance*, 20, pp. 439-471 for a survey of the practices of market participants.

decision making on when to intervene. This will help to ensure that the Bank implements intervention in line with its stated objectives, and that any financial and reputational risks of intervention are managed in a prudent fashion.

Specifically, before intervening the Bank will need to be satisfied that all of the following criteria are met:

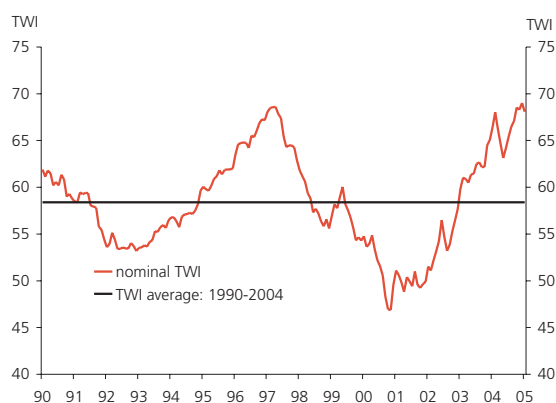
- the exchange rate must be exceptionally high or low;
- the exchange rate must be unjustified by economic fundamentals;
- intervention must be consistent with the PTA; and
- conditions in markets must be opportune and allow intervention a reasonable chance of success.

When is the exchange rate exceptionally high or low?

Since the float of the New Zealand dollar in 1985, the nominal trade weighted index (TWI) has fluctuated in a wide range around a fairly stable 'equilibrium' or long-run average (see figure 2).¹⁰

Assessing when the exchange rate is exceptionally high or low is largely a statistical exercise. We compare the current level of the exchange rate to historical deviations from its long-run average, and look for situations when the deviations are unusually large. This criterion probably involves the least amount of judgement in comparison to the others.

Figure 2
Nominal TWI



¹⁰ The TWI comprises the currencies of Australia, the Euro zone, Japan, the US and UK, weighted according to each currency's share of New Zealand's merchandise trade and their share of the 5-country aggregate GDP.

Our main focus is on the 'effective' exchange rate or TWI, as this best represents a measure of the exchange rate relevant for the whole economy on average. However, we also look at individual exchange rates as a cross-check to see whether our broad measure is being unduly driven by factors specific to particular currencies.

When is an exchange rate unjustified by fundamentals?

Although the first requirement for intervention might be satisfied – the exchange rate could be *exceptional* by historical standards – it does not automatically follow that the level is unjustified.

In reaching a judgement as to whether the exchange rate might be unjustified, the Bank will look for evidence of a disjuncture between the value of the exchange rate and the broader cyclical position of the economy, or the specific fundamental factors underpinning medium-term trend movements in the exchange rate.

Any assessment of whether a given exchange rate is *unjustified*, requires a judgement of where the currency should be relative to where it actually is, based on particular information on the direction of economic fundamentals. This judgement involves bringing together information from a number of sources. This information set includes, among other things:

- The *broad cyclical position* of the economy relative to our trading partners: the exchange rate should depreciate if our expected relative growth rate slows. Specific factors include indicators relating to domestic consumption, net migration, the housing market, and relative output gaps. Relative cyclical positions are also often reflected in interest rate differentials, especially given that most TWI partner countries target low inflation. For example, a softer economy implies lower New Zealand interest rates, and hence lower interest rate differentials with our trading partners.
- The *terms of trade*: this measures the ratio of merchandise export prices to merchandise import prices. An increase in the terms of trade indicates that the real purchasing

power of exports has increased, and this tends to be associated with a strengthening of the New Zealand dollar.

- the *current account position*: the current account is a broad indicator of both external and internal balances which may indicate whether the exchange rate is justified. For example, an unusually large current account deficit in New Zealand compared to our trading partners might suggest that the exchange rate is overvalued and that a downward correction in the New Zealand dollar is warranted to bring about external balance.
- Other evidence about the general condition of the tradables sector of the economy. For example, indicators of a significant change in activity or profitability within the export sector could provide corroborative evidence that a particular level of the exchange rate was unjustified.

These indicators are not intended to be a fixed checklist relevant for all situations. An all encompassing set of indicators suitable for deciding whether the exchange rate in every situation is unjustified does not exist. This means that the Bank cannot take a mechanistic approach to deciding whether intervention is warranted. Each potential intervention will be assessed on a case by case basis using information that seems most appropriate to the situation at hand.

Intervention consistent with the PTA

The third hurdle that must be overcome before we consider intervention is that intervention must not conflict with the PTA. The PTA states that the Bank must aim for inflation outcomes between 1–3% over the medium term, while avoiding unnecessary instability in output, interest rates, and the exchange rate.

At one level, the new intervention policy can help contribute directly to avoiding unnecessary instability in the exchange rate if intervention helps offset a misalignment of the exchange rate from economic fundamentals.

But intervention must not compromise the overriding objective of price stability. In other words, the Reserve

Bank will need to be comfortable that any inflationary or disinflationary impact from intervention will not push inflation outside the target range over the medium term.¹¹ For example, intervention to dampen an upward exchange rate cycle implies less exchange rate restraint on inflation pressures, all else being equal. Hence the Bank will also have to be confident that future interest rate increases will not be necessary to compensate for a successful foreign exchange intervention.

An implication of the PTA consistency criterion is that intervention should be timed to roughly coincide with the broad thrust of interest rate settings. For example, it makes little sense to intervene to try and push the exchange rate lower when the Bank believes that higher interest rates may be required in the near future to control inflation pressures. In this situation, a successful intervention would inappropriately loosen monetary conditions. Normally, the Bank would look to adjust its main policy lever – the OCR – when overall monetary conditions seem too tight or easy. However, there might be occasions when the Bank is reluctant to move the OCR. For example, the Bank might conclude that further interest rate tightening to offset domestic inflation pressures is inappropriate, but that it is too soon to begin actually cutting interest rates. The Bank could intervene in response to an overvalued exchange rate that is extreme and unjustified, thereby effectively loosening monetary conditions without prematurely beginning an interest rate easing cycle.

Intervention must be opportune

Even if intervention is warranted from a policy standpoint (ie, intervention satisfies the first three criteria), conditions in the foreign exchange markets must be conducive to having a meaningful impact on the exchange rate. It would be pointless, and potentially costly, to intervene in circumstances where there was little chance of affecting prevailing market

¹¹ A depreciating dollar makes imports of consumption goods and inputs more expensive in New Zealand dollar terms and so adds to inflation pressure. Conversely, an appreciating currency constrains inflation pressure by reducing the cost of imports in New Zealand dollar terms.

trends. At the extreme, speculators could be encouraged to trade against the Bank in the foreign exchange market.

Intervention is more likely to be opportune and thus effective when most of the following apply:

- there is a relative absence of capital flows that might offset intervention;
- market participants are becoming less sure that the exchange rate will remain significantly above or below fair value;
- market participants are becoming less confident that recent trends in the exchange rate that have taken the exchange rate further away from fair value will persist;
- the balance of capital flows is shifting towards pushing the exchange rate back towards equilibrium, and there is some prospect that capital flows in the future will bias the exchange rate to move in a similar direction to that implied by intervention; and
- market participants are positioned in such a way that they are vulnerable to a sudden movement in the exchange rate towards fair value – should such a movement occur then they would need to transact to reduce their exposures, with such transactions supporting the direction of intervention.

The Bank is a regular participant in the foreign exchange market and maintains an extensive array of contacts from whom we can extract information useful in making judgements on whether the above considerations are satisfied, and thus whether intervention is opportune.

Taken together, the four criteria provide a robust framework for assessing when to intervene. If the exchange rate is exceptionally and unjustifiably high, and it is opportune to intervene, then it is most likely that intervention will be effective in trimming the peaks and troughs of the exchange rate cycle. It is also more likely that the financial and reputational risks associated with intervention will be minimised as much as possible. The reputational risks are managed because the criteria minimise the chance that intervention will conflict with monetary policy. The financial risks are managed as the criteria reduce the chances of the Bank running down its capital and thus its reputational

standing trying to defend a particular level of the exchange rate, or going against fundamentally determined trends in the exchange rate.

4 Financial implications for the Bank

This section describes the implications that intervention has on the Reserve Bank's annual net income and on the structure of our balance sheet.

The impact of intervention on the Bank's profitability and capital requirements

Intervention, if required, will add significant volatility to the Bank's earnings. This volatility mainly reflects the nature of a floating currency and thus the exchange rate risk inherent in net open foreign positions accumulated through intervention.

Corporations hold capital partly to see them through the times when the company is less profitable than average. In bad years, companies 'dip' into their capital to cover financial losses so they can continue operating. The Reserve Bank is no different in this respect. The Bank holds capital in the form of investments in New Zealand government securities that can be liquidated to cover any losses incurred while conducting normal business activities.

As intervention implies a higher level of financial risk compared to the Reserve Bank's other activities, the Bank needed additional capital to cover the potential for losses associated with intervention.

The Bank estimated the amount of capital required to be NZD 1 billion, given the strategy it wished to implement and a conservative view of the peak losses that might stem from the strategy. The Bank's request for a capital injection from the Government, to give it the financial capability to implement intervention independently of the Government, was one of the key recommendations the Bank made to the Minister of Finance. The Minister of Finance and Cabinet endorsed the Bank's request for additional capital and that capital was delivered to the Bank in June 2004.

The following two sections describe in more detail the nature of the factors that give rise to the financial risks associated with FX intervention: specifically exchange rate and interest rate risks.

The impact of exchange rate changes

Generally, the Reserve Bank's balance sheet has quite a low exposure to changes in exchange rates. This is because the Bank typically matches the currency denomination of its assets with the liabilities that finance those assets. In normal times, if the exchange rate rises (falls), the New Zealand dollar value of its foreign currency assets and liabilities falls (rises), together creating no net change in the equity of the Bank.

In contrast, foreign exchange intervention deliberately creates a mismatch between the currency denomination of the Bank's assets and liabilities. For example, if the Bank intervenes by selling New Zealand dollars for foreign currencies and the exchange rate rises further, then the Bank records a loss as the New Zealand dollar value of the foreign currencies purchased falls relative to the New Zealand dollar amount originally paid.

The potential for exchange rate risk is relatively large as exchange rates are volatile. The criteria used to decide when to intervene can mitigate but not entirely eliminate this exchange rate risk. Losses from net open intervention positions could accrue for a while. However, these are likely to be temporary or 'unrealised' losses, as in the end, unrealised losses will disappear provided the exchange rate reverts back to its equilibrium or long run average.

A more serious situation is one where the Bank might not identify a change in the equilibrium exchange rate and intervenes inappropriately. In this case losses could well become 'realised', or appear permanently on the Bank's balance sheet. However, the appropriate application of the intervention criteria will help minimise the potential for permanent realised exchange rate losses being incurred. Indeed, the basic strategy of buying low/selling high should prove profitable in terms of realised exchange rate gains over the medium term for the Bank's balance sheet.

The impact of interest rates

The Bank's normal approach of matching the currency denomination of its assets and liabilities implies that the average carrying cost of holding reserves (ie the difference between the interest earned on reserves investments and interest paid on the loans financing reserves) is low and relatively stable. This is because the rates at which the New Zealand Government can borrow foreign currencies to fund reserves are reasonably close to the rates the Bank earns on its invested reserves.¹² For example, in the 2003/04 financial year the passive holding costs of reserves totalled around NZD 2.3 million for the Bank's NZD 3.9 billion reserves portfolio (as at 30 June 2004).

Intervention results in the Bank investing and borrowing in different currencies at potentially quite different interest rates, making the average carrying cost of holding reserves more variable and perhaps larger.

New Zealand interest rates tend to be higher than those in the countries where the Bank invests reserves (currently the US and Europe). This means that when the Bank intervenes to lean against a high exchange rate, and thus when it has borrowed New Zealand dollars to invest offshore, the average carrying cost of holding reserves will rise.

At the other end of the exchange rate cycle the opposite occurs. The Bank earns extra income by borrowing at relatively low foreign interest rates and investing at higher New Zealand rates.

Over the entire exchange rate cycle, the periods when the Bank's carrying cost of holding reserves is higher than usual should be broadly balanced by periods when the reserves carrying cost is lower. However, it is probably the case that interest rate differentials will be a bit higher on average at the top of the exchange rate cycle than when the exchange rate is relatively low. Hence on average it is quite likely that intervention will add a modest amount to the average carrying cost of holding reserves. These higher average carrying costs should be balanced by the potential

¹² In fact, recently the Government has been able to borrow foreign currencies for the Bank to invest in reserves at historically attractive rates that should imply that reserves are profitable to hold in the future.

for realised gains on the exchange rate described earlier, implying that intervention overall shouldn't prove costly over the medium term, and may prove to be profitable.

The impact of intervention on the level of foreign reserves

Foreign exchange intervention requires the Bank to take on an exchange rate exposure to try to influence the exchange rate. Taking that exchange rate exposure may or may not affect the level of foreign reserves the Bank holds, depending on the mechanism it uses to create a currency mismatch between our assets and liabilities.

Intervention will result in a change in the level of our foreign reserves if we have to borrow to accumulate further assets. For example, intervention at the top of the exchange rate cycle will result in an increase in the Bank's reserves if its sales of New Zealand dollars are financed by borrowing New Zealand dollars from the Government. The total size of our balance sheet will grow and the level of foreign reserve assets will increase.

Stylised RBNZ balance sheet

RBNZ buys FX, sells NZD to reduce the value of the

NZD	
Assets	Liabilities
Foreign reserve assets	
– in foreign currency ↑	Foreign currency loans
– in NZD	NZD loans ↑

Intervention at the troughs of the exchange rate cycle will increase the level of the Bank's reserve assets if it chooses to build up a stock of New Zealand dollar denominated investments financed through foreign currency denominated loans. Note that in this case the Bank's stock of foreign currency reserve assets does not increase as it is New Zealand dollar denominated assets that are accumulated. However, the Bank's total reserve assets (defined as foreign currency denominated assets and New Zealand dollar denominated assets) will rise.

Stylised RBNZ balance sheet

RBNZ sells FX, buys NZD to increase the value of the NZD

Assets	Liabilities
Foreign reserve assets	
– in foreign currency ↑	Foreign currency loans ↑
– in NZD	NZD loans

However, intervention need not affect the Bank's total holdings of reserve assets as there are other ways for the Bank to create a mismatch between the currency denomination of its assets and liabilities. An alternative approach at the top of the exchange rate cycle is to finance intervention by changing the currency denomination of the foreign currency loans the Bank already has (by using derivatives, or by repaying existing loans early and replacing them with new New Zealand dollar denominated loans). The Bank's existing stock of foreign currency assets would be unchanged by intervention of this form – but the structure of its liabilities changes, creating the exchange rate exposure implied by intervention.

Stylised RBNZ balance sheet

RBNZ sells FX, buys NZD to increase the value of the NZD

Assets	Liabilities
Foreign reserve assets	
– in foreign currency →	Foreign currency loans ↓
– in NZD	NZD loans ↑

The Bank could also use foreign exchange (FX) swaps to finance intervention transactions. In a FX swap the Bank simultaneously agrees to buy New Zealand dollars and sell foreign currency now, and reverse the deal at some time in the future. This deal has no impact on the exchange rate (there is no net sale or purchase of New Zealand dollars from the FX swap), but when combined with a transaction in the spot market to sell New Zealand dollars and buy foreign exchange (which does affect the exchange rate), effectively delays settlement of the Bank's intervention transactions until some time in the future. At that time, the Bank could either refinance its intervention by doing another FX swap,

or it could close out its FX exposure by buying New Zealand dollars and selling foreign exchange.

Transactions when intervention is financed using FX swaps, RBNZ sells NZD, buys FX to reduce the value of the NZD

	Spot	In 3–6 months
Intervention		
– sell NZD	↓	
– buy FX	↑	
Swap financing		
– buy NZD	↑	– sell NZD
– sell FX	↓	– buy FX
Net	Nil	Short NZD Long FX

Intervention and the maintenance of adequate crisis reserves

In principle, intervention could result in the Bank running its foreign reserves down to the point where it has insufficient reserves to adequately deal with market dysfunction in a crisis. For example, when intervening at the bottom of the exchange rate cycle, it could fund purchases of New Zealand dollars by selling foreign currency assets held as reserves. In practice this will not occur, as the Minister of Finance has instructed the Bank to ensure that in conducting intervention the Bank maintain a stock of foreign currency investments of at least SDR 2.45b (currently around NZD 5.1b).¹³ This means that the Bank will have to borrow in foreign currencies to finance intervention at the bottom of the exchange rate cycle.

At an aggregate level, intervention at the bottom of the exchange rate cycle implies that the Bank’s foreign currency denominated liabilities exceed its assets. Whilst this means that the Bank will have negative net foreign

reserves in aggregate, its crisis intervention capacity will not be significantly impaired as it ensures that no more than 20 per cent of its foreign currency loans come due in any year. The foreign currency loans used to finance intervention would be medium term, leaving the Bank’s short-term crisis management capacity intact.

Intervention at the bottom of the exchange rate cycle can also be financed with FX swaps by doing the opposite of the transactions described earlier. As long as the swaps are of a medium-term maturity then the Bank’s crisis intervention capability will not be substantively affected by intervention.

5 How will intervention be implemented?

Institutional framework

The Bank conducts its crisis intervention policy as an agent of the Minister of Finance using section 17 of the Reserve Bank Act, which allows the Minister to instruct the Bank to deal in the foreign exchange markets on the Government’s behalf. This means that, while the Bank advises the Minister on crisis intervention, and would implement crisis intervention, the actual decision on whether to intervene and the financial implications of that intervention rest with the Minister and the Crown.

The new intervention role is set up differently. Foreign exchange intervention in support of the PTA has been organised to give the Bank full operational independence from the Minister and the Government, in the same way the Bank has independence to formulate and implement monetary policy. This operational independence for FX intervention is provided for in section 16 of the Reserve Bank Act. The implication of this greater independence is that the Governor and the Bank accept the full financial implications of intervention – profits and losses accrue to the Bank and sit on the Bank’s balance sheet.

The reason why FX intervention for monetary policy purposes has been set up differently from crisis intervention reflects an effort to manage some of the risks that can be inherent with intervention in non-crisis situations. In particular, as the

¹³ Currently, the Bank holds foreign reserves for crisis intervention of SDR 1.6 billion. The amount of our crisis reserves will grow to SDR 2.45 billion over the next few years. See Michael Gordon’s article in this issue of the *Bulletin* for details.

Bank has sole responsibility for the timing of intervention and the subsequent squaring out of intervention positions, there is little scope for the Bank to be forced to abandon its strategy early under pressure from the Government. This would help to manage some of the financial risks inherent in intervening at cyclical extremes, as it gives the Bank the ability to hold positions for the time that will generally be required to exit at a profit (once the exchange rate reverts to more average levels). Another reason for maintaining operational independence around FX intervention concerns the potential for intervention policy to conflict with monetary policy if decisions to intervene did not rest solely with the Bank. Because the Bank has control of intervention decisions, there is little scope for conflicts between intervention policy and price stability to arise, given that the Reserve Bank Act clearly defines a single objective: price stability.

Transactions

Intervention will usually be conducted in the New Zealand dollar/US dollar currency pair. This is because market participants quote this currency pair the most actively and most other currency pairs are derived with reference to the NZD/USD exchange rate.¹⁴ Using this currency pair best allows the Bank to conduct its intervention in the quickest and most efficient manner, maximising the impact on the New Zealand dollar exchange rate against all other currencies.

The Bank intends to be flexible in its implementation style and will not adopt any fixed method of implementation. However, transaction actions will generally be with wholesale market participants, and would typically be of a similar size as the standard market parcel (NZD 10 million) or larger. To maximise the strength of the intervention signal the Bank is likely to transact with a number of market makers simultaneously. The Bank will not transact directly with corporates or individual exporters or importers.

The style of intervention transaction is key to the effectiveness of intervention. Normally, market participants (including the

Reserve Bank) try to conduct FX transactions in a manner that will minimise the impact of the transaction on the exchange rate. This is usually optimal, as to do otherwise results in higher transaction costs. The execution approach in intervention situations will be quite the opposite, as the aim of the operation would be to maximise the exchange rate impact. This implies that the Bank would look to intervene at times when there is relatively little interest by other market participants to trade against it. Also the style of execution will be relatively aggressive – the Bank will ask market participants to quote it a price and would deal on those prices, thereby forcing transactions into the market. This approach is more likely to result in the Bank's counterparties quickly acting to pass on the Bank's deals to others, creating ongoing transaction activity in the direction the Bank desires, maximising the impact on the exchange rate. The intervention execution approach stands in contrast to the Bank's normal approach of easing transactions into the market with the aim of having no impact on the exchange rate.

Generally, intervention will be quite open and will involve as many market makers as possible, to maximise the signalling impact of intervention. On occasion, though, it may be the case that intervention is covert, involving only one or two market makers, if it seems that this is more likely to lead to a greater chance of success.

The Bank's open foreign exchange position will be closed once the exchange rate returns to near its long-term equilibrium value. The associated transactions will be performed in a manner consistent with minimising the impact on the exchange rate. For example, the Bank will pick times when there are a number of other investors interested in trading in the opposite direction, and its execution style will be very passive. Such transactions have quite a different character to intervention, reflecting their quite different objectives and style.

¹⁴ For example, a market quote in the NZD/JPY would normally be calculated as the product of the NZD/USD and USD/JPY exchange rates – both of which are individually and actively quoted.

Communications

The Reserve Bank adopts a very transparent approach to communicating its policies and operations in general. This will also apply to its approach to foreign exchange intervention.

Often, intervention will be very open and public. In these cases the Bank will issue a press release shortly after having intervened, noting it has intervened and the rationale for the intervention. Sometimes, though, the Bank may wish to intervene covertly, which will mean that there will be no comment from the Bank at the time of intervention. The policy regarding commentary is that the Bank will comment on intervention if it thinks such commentary is useful in enhancing the effectiveness of the operation. Otherwise it will not make on-the-record comments to anyone in response to questions regarding intervention.

Regardless of whether intervention is open or covert, intervention will be apparent after the fact. Each month the Bank and the Crown publish data on the status of the Bank's balance sheet and the foreign exchange transactions the Bank has made with the markets. This information will clearly indicate when intervention has occurred within a month or two of intervention actually having occurred.

Finally, the Bank's Monetary Policy Statements, testimony to Parliament's Finance and Expenditure Committee, and the Bank's Annual Report will all contain commentary describing the Bank's intervention activities, their rationale, and their impact on the Bank's balance sheet. All of these communication media are important in ensuring that the Bank is accountable for any intervention activities.

6 Summary

This article has provided an elaboration on the Reserve Bank's new foreign exchange intervention policy. The new policy adds another instrument to the monetary policy toolkit, one specifically designed to trim only those peaks and troughs of the exchange rate cycle that are viewed as exceptional and unjustified by economic fundamentals.

The Bank has full operational independence to conduct intervention, but any decision to intervene must be consistent with the Bank's primary objective of price stability laid out in both the Reserve Bank Act and the PTA.

The conditions attached to intervention manage the financial and reputational risks the Bank may face when pursuing intervention. This prudent approach to intervention is further reinforced by both the NZD 1 billion of capital reserves added to the Reserve Bank's balance sheet, and the transparency attached to the intervention regime as a whole.

The degree of judgement required to undertake intervention, and the management of risks associated with any actual intervention, present an on-going challenge for the Bank to develop and maintain an appropriate level of intervention capability. This capability involves ensuring that the Bank's monitoring and forecasting of economic data is of a high standard, and that there exists a level of technical expertise (and relationship management) to carry out intervention in the foreign exchange market.

As with any other facet of monetary policy, the performance of the Governor of the Reserve Bank in carrying out any intervention decisions would be subject to specific accountability arrangements. These include monitoring by the Bank's Board, the Finance and Expenditure Committee, and the Minister of Finance, together with the general scrutiny provided by market participants and the public at large.

The Bank does not envisage that intervention will be used frequently, as by and large its view is that New Zealand's floating exchange rate does a good job buffering the economy from external shocks. The new policy gives the Bank the capability to consider intervention in those rare instances when it is appropriate and useful. The new policy will not be a panacea for the large swings in the value of the New Zealand dollar that are a fact of life for a floating exchange rate. At best, intervention offers a mild palliative, and the bulk of exchange rate risk management will continue to sit with firms and individuals within New Zealand.