

FLOATING EXCHANGE RATES AND INFLATION TARGETS: THE NEW ZEALAND EXPERIENCE

Market exchange rates are symptoms and not causes of economic conditions, argues **Matt Nolan**

Following the global financial crisis, analysts, politicians and the public in New Zealand have been taking stock of what has gone right or wrong for the New Zealand economy. Unlike many countries, the lift in unemployment in New Zealand been relatively restrained. This was an impressive result given that New Zealand faced the large 2007–08 drought and the collapse of the non-bank financial sector prior to the global financial crisis, and was then struck by the tragic twin earthquakes in Christchurch in September 2010 and February 2011.

However, there is always an understandable desire to ask: ‘How could we have done things better?’ This has found its way into debates about the role of the exchange rate and exchange rate management in New Zealand.

The ‘exchange rate’ is not all one thing. Each type of exchange rate is a price, and to figure out whether there is some type of market or government failure making the ‘price’ wrong is a big question. To help understand what New Zealand is doing, and what policy concerns are relevant, we need to understand both exchange rates and an inflation targeting central bank.¹

Exchange rate and an inflation target: A primer

The exchange rate is a relative price. When we say that a New Zealand dollar is worth 80 US cents, we are saying that at the moment we can trade a New Zealand dollar for 80 US cents. In this way, the exchange rate tells us about the relative value of two different currencies.

We do not value a New Zealand dollar or a US dollar because of the pretty pictures drawn

on them. We value them for the goods and services we can purchase with that currency. We could use New Zealand dollars to buy goods and services from people who accept New Zealand dollars (generally people within New Zealand), to save or invest in New Zealand or to buy New Zealand goods and services in the future.

The ability to hold a New Zealand, Australian, or US dollar is important because it makes us realise that currency is an asset. We buy, trade and hold a country’s currency based on the expected rate of return on funds in that country, the goods we can buy in that country now, the goods we expect to buy in the future, and the price we expect people to pay for that currency in other currencies. As a result, an exchange rate gives us information on expected relative economic growth, expected relative rates of return, and expected relative price growth for goods and services (inflation).

With floating exchange rates, this is all set in the currency markets. So where does a central bank come into this?

We may say central banks set the quantity of currency available. However, the days of trying to



Matt Nolan is an economist at Infometrics Ltd in New Zealand, and a blogger on the Visible Hand in Economics. His opinions are his own and do not necessarily represent the views of Infometrics Ltd or his co-bloggers at the Visible Hand.

explicitly set the ‘quantity’ of money are well behind us in New Zealand. Instead, the Reserve Bank of New Zealand sets the price—the interest rate—and accommodates shifts in the demand for currency.

However, we can take a step back from all this and just say the Reserve Bank’s ‘monetary policy’ is its inflation target for an average price growth of 1% to 3% over the medium term.

Actually, telling the market what the price or quantity of anything should be is not something any institution can do in real time. However, by committing to a medium-term inflation target, the Reserve Bank is saying it will set the official cash rate in such a way that prices can grow at an average rate of 2% per annum.

In New Zealand, and to a lesser extent in Australia, there is a view that the currency has been persistently too strong.

The official cash rate sets the opportunity cost for retail banks regarding lending so they can adjust interest rates and lending based on the Official Cash Rate (OCR)—the higher the OCR, the less lending they will perform. The higher the interest rates, the less lending banks do, the slower growth will be, and the weaker inflationary pressures will become. As a result, the central bank uses this lever to push inflation outcomes towards its target. Since inflation tends to be self-reinforcing, a credible central bank is able to achieve this in a fairly straightforward manner.

The key point here is that the central bank does not set interest rates in of itself—it sets interest rates conditional on meeting its inflation target. The interest rates required to achieve this depends on real economic factors.

This comes back to exchange rates through the interest rate and inflation channel. By setting an inflation target, investors know that the value of a New Zealand dollar (in terms of goods and services) in someone’s pocket (excluding changes in the exchange rate) will depreciate by 2% a year. Meanwhile, the interest rate represents the rate of return someone can earn if they are able to lend

that dollar to someone in New Zealand (usually through an intermediary).

Nominal and real exchange rates

At this point, it is important to distinguish between nominal and real exchange rates. As discussed above, the value of a currency relative to goods and services would depreciate at the rate of inflation. This is a tautology. However, if two countries experience the same price inflation, their relative value would not change—the exchange rate should stay the same!

We can extend this idea. If the price of goods and services suddenly doubled in Australia in Australian dollars, but was unchanged in New Zealand in New Zealand dollars, the value of an individual Australian dollar against a New Zealand dollar would halve—and the nominal exchange rate would adjust to represent this (the Australian dollar would halve in value against the New Zealand dollar).

However, the underlying value of goods and services made in the two countries has not changed. As a result, the adjustment in the nominal exchange rate that occurs is to keep the real exchange rate (which is determined by real economic factors) unchanged. This may not happen in the short term, but prices will adjust such that the real exchange rate is unchanged in the long term. This is called the long-term neutrality of money.

When we talk about competitiveness, or many of the real economic factors driving relative currencies over the longer term, it is the real exchange rate we care about.

The long term: What do we mean when our ‘currency is too high’

In New Zealand, and to a lesser extent in Australia, there is a view that the currency has been persistently too strong, which goes back to the real exchange rate. In the long run, changes in price in different countries can be fully represented in their currencies. For the currency to be ‘too high’ for a long time, something must be going on in the real economy of a country.

The assumptions used here is that money is ‘neutral’ and the marginal actions of the central

bank do not have any impact on the economy in the long term. (Note: A central bank's failure to appropriately action its mandate to target inflation outcomes, or to close the output gap in a timely fashion, could influence the economy over a longer period—but this is a separate issue).

New Zealand has had a current account deficit every year since 1975. This indicates that New Zealand's real exchange rate is elevated, and that domestic investment has exceeded domestic savings for a long time. Furthermore, real interest rates in New Zealand have been higher than in other countries during this period. Although persistent current account deficits and higher real interest rates are not necessarily a bad thing, we need to ask why these are the case.

This question has received a large number of potential (but not always satisfactory) answers from analysts over the past decade. Some of the explanations are given below:

1. High levels of government consumption
2. Size and scale of government transfer programs. Transfer programs (such as Working for Families) could raise the real exchange rates depending on their impact on labour supply and demand for non-tradable goods
3. Interventionist policies in the 1970s and early 1980s²
4. High population growth and domestic investment for a developed nation³
5. Misallocation between saving and investment due to the lower taxation of housing investment relative to other investment classes⁴
6. Inherent impatience of New Zealanders
7. Lack of a compulsory savings program (relative to other countries)⁵
8. So-called permanent lift in New Zealand's terms of trade since the early 2000s
9. Lack of scale or competition in service industries leading to low productivity in the sector⁶
10. Increases in local body rates and regulations
11. In terms of just the real exchange rate, the idea of significant trade promoting policies among Asian economies (specifically China)

12. In terms of just the real interest rate, the idea of a high 'risk premium' on investing in New Zealand.

Some of these explanations indicate a policy failure, a market failure, or that the high interest rates and current account deficit are merely positive trends!

In truth, the drivers of the current account deficit have changed through time, and it is unlikely that one of these causes has been the dominant driver of borrowing over the past 50 years.

The key point is that when we look at these ideas in detail, it becomes obvious that policy changes to attempt to lower the real exchange rate are not free lunches.

New Zealand has had a current account deficit every year since 1975.

For example, we could reduce the real exchange rate with fewer government transfers. This would raise the competitiveness of its export industries and lift GDP in the long run. But often, government will have introduced policies with redistributive goals in mind. The 'lower real exchange rate' in this situation is merely an indication of the equity-efficiency trade-off that always exists with policy, with the boost to exporters coming from lower levels of redistribution.

This is an especially interesting outcome in New Zealand, whose centre-left and leftwing parties (Labour and the Greens) are arguing strongly for a lower exchange rate and improving the competitiveness of exporters. However, the policies required for this will hurt lower income households, so we need policies that cancel some of the transfer and spending policies of the Clarke government. It is not clear whether New Zealand's leftwing politicians recognise this.

The trilemma of the medium term

All this talk about long-run issues of 'competitiveness' (implied in the demand for a lower exchange rate) is old hat. In New Zealand, monetary policy actions occur over

the short term, and have short-term impacts. In this context, the short term has a specific meaning—it is a period of time when prices, especially relative prices, have not been able to fully adjust to economic shocks.

However, before we can make sense of that, we have to remember that policy targets are set over the ‘medium term.’⁷ This is the period of time where prices have adjusted for shocks but ‘stocks’ are not yet back in equilibrium (e.g. the capital stock or the net investment position).

The trade-off faced by a central bank in terms of its short-term policy action and medium-term targets is represented by a concept called the ‘impossible trinity.’ The central bank can choose to set a target or targets for interest rates, exchange rates, or base money, but it has to work within the constraint that it can only have two of the following:

1. a fixed exchange rate
2. an independent monetary policy
3. free capital flows.

To understand this, let us look at the following example. Imagine a small country that wants to lift its interest rate to keep inflation near target. However, with free global capital flows and a fixed exchange rate, this country cannot change its interest rate from the world interest rate—if the country attempted to so, it would be swamped with capital from foreigners seeking a higher rate of return. The ensuing flood of capital would render futile the attempt to control inflation.

New Zealand, Australia and many other countries have picked independent monetary policy and free capital flows.

If the central bank wants to set interest rates above the global rate, it can do so by limiting capital inflows or allowing the exchange rate to vary. When a currency appreciates above its fundamental value, investors will expect it to depreciate in the future, increasing the return (interest rate) they need to lend money to the domestic economy. Similarly, when a central bank limits capital inflows, domestic

lenders can charge domestic borrowers interest rates above the world interest rate as the lenders do not face competition from overseas.

New Zealand, Australia and many other countries have picked independent monetary policy and free capital flows. The reason New Zealand chose this specific makeup stems from where shocks are believed to hit the New Zealand economy and the idea of central bank credibility.

New Zealand is a trade and foreign capital-exposed nation with a limited ability to influence the price we get for goods, or the conditions we face when borrowing. So when there is a shock to either factor, we want the exchange rate and the price we pay for capital to adjust quickly to represent this new reality. Having free capital flows and a floating exchange rate provides this.

Furthermore, in terms of economic welfare, it is the deviations in output due to the least ‘sticky’ prices not moving that are most costly. As a result, independent monetary policy allows us to minimise this cost in the short term. Over the medium term, monetary policy is simply an inflation target—as the exchange rate and interest rates are driven by underlying factors in the real economy.

The second point on credibility ties together the short term (see below) and the medium term. If the central bank lacks credibility on its inflation target, people will have some expectation that the central bank would print money to finance the government deficit (an inflation tax). Or they may expect the central bank to boost inflation to push up GDP growth before an election. Unexpected inflation would achieve this by convincing firms and workers to increase their supply of goods, services and labour as they see the price of their goods go up, only to discover later that it was not because people wanted their product more, it was just inflation!

This boost cannot be sustained, as in time people’s expectations about price changes would adjust. The end result would be to make firms and households wary of responding to price shocks in the future, and it would make further efforts to boost the economy less successful. But one overlooked point is the cost of doing so in the first place—the boost because firms and workers were tricked into thinking the return on their time was

higher than it was. As a result, the lost leisure time and resources from doing this when the economy is already fully utilised is also part of the cost!

A credible central bank promises not to use monetary policy to trick us, so an inflation target of 2% is credible—and is used as an expectation of rising prices when firms and households set prices. Therefore, it is self-reinforcing.

Exchange rates, currency and the short term

In the short term, we need to think explicitly about how central banks respond to the shocks they face in the moment. It is during this time that money is ‘non-neutral’ and when many of the impacts we associate with central bank policy actually occur.

With central bank credibility, and inflation targeting with flexible exchange rates and capital flows, a central bank is not really responding to growth in consumer prices. Instead, it is responding to changes in demand in the economy.

This is why the idea of nominal GDP targeting has become so popular in monetary policy. The central bank wants to communicate with the public that it is keeping inflation ‘anchored’ at 2%—but if people are setting prices based on this, then having consumer prices growing at 2% does not necessarily tell us what is going on with the economy in the short term!

Nominal GDP tells us how quickly spending (in current prices) is growing in the economy. If this suddenly slows when there has been no decline in the economy’s ability to produce, we can tell that, the economy is experiencing a negative demand shock. The central bank needs to cut interest rates, produce high powered money, buy bonds, or merely talk in a way that boosts demand. This is the operation of monetary policy—by achieving credibility over inflation in the medium term, the central bank can smooth out demand shocks in the short term.

Central banks have begun to push things a bit further in an operational sense in the past decade.

The clearest example is active management of the currency. If the New Zealand dollar is believed to have temporarily headed massively out of line with the fundamentals, the Reserve Bank can try to counter this by making sterilised currency purchases (where the central bank cancels out

the increase in the monetary base stemming from currency purchases for example, by selling bonds domestically) or unsterilised currency purchases (this boosts the money supply and is another form of monetary easing).

The RBNZ uses these tools sparingly—and only to avoid undermining credibility. Fundamentally, a central bank is fine using the tools it thinks are necessary to deal with shocks to demand—but it has to be constrained by medium-term credibility on the inflation target. If a central bank loses this credibility, it loses its true ability to smooth the economic cycles—and is more likely to create uncertainty and pain for the economy.

The manufacturers’ struggles have nothing to do with the short-term movements in the exchange rate—and everything to do with long-term factors.

It is due to these short-term trade-offs that some people believe the central bank can change the level of output, or micromanage the structure of the economy, over a long period. However, as mentioned earlier, it is over these longer periods of time that prices adjust to represent the relative values of goods and services within the economy, and as a result, money is neutral.

In New Zealand, these calls have appeared specifically from manufacturers. With their profitability undermined by falling global manufacturing products, technological improvements overseas, and the increasing relative profitability of primary sectors in New Zealand (specifically dairy), a vocal manufacturing lobby group has appeared demanding that the Reserve Bank lowers the exchange rate.

Reserve Bank research⁸ indicates that unanticipated changes to interest rates have little impact on the dollar, and that even though the exchange rate may remain ‘persistently overvalued’ in the medium term, the drivers of this are generally unrelated to monetary policy.⁹ As a result, demand from manufactures and their supporters has warped towards growing calls for capital controls and direct taxation on households and housing to support ‘productive industries.’

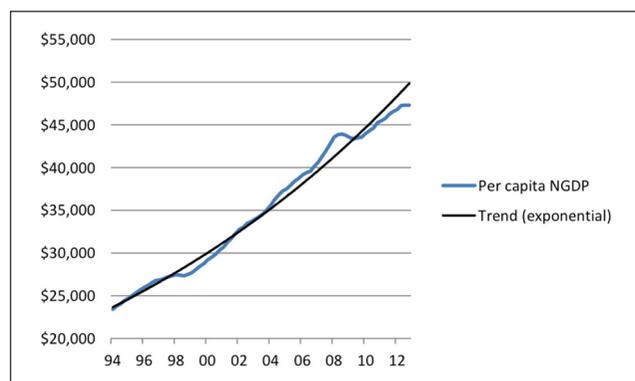
However, when people complain about short-term movements in the exchange rate, two key points need to be kept in mind:

1. Exchange rate variability can be hedged by the people feeling the impact more easily than price, output and investment volatility, which lack hedging instruments. Policy targets that try aim for a smoother exchange rate will add to variability in these variables—moving the cost to people who have less of an ability to deal with it.
2. Firms that cannot stay in business, and following a short-run currency overvaluation, are obviously not adding much value as their underlying profitability is weak. It is hard to justify supporting these firms as supporting ‘high value productive industries’!

The manufacturers’ struggles have nothing to do with the short-term movements in the exchange rate—and everything to do with long-term factors. In the same way that aristocrats and other large landholders struggling to deal with technological changes in the sixteenth, seventeenth and eighteenth centuries were demanding subsidies, a number of New Zealand manufacturers are demanding subsidies as their sales are undermined by competition and poor productivity growth.

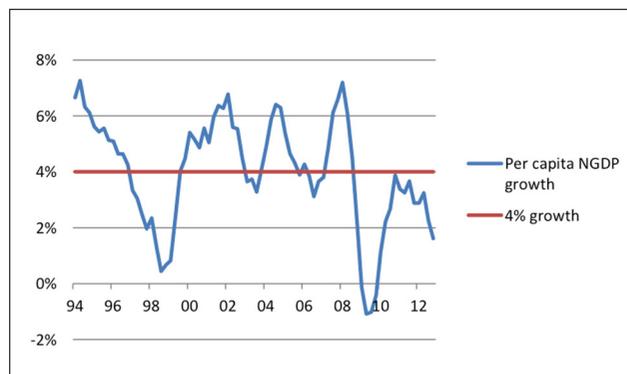
But if we use the idea of nominal GDP targeting to view monetary policy, how has New Zealand’s central bank done?

Figure 1. Per capita NGDP (1994–2012)



Source: Statistics New Zealand.

Figure 2. Per capita NGDP annual growth (1994–2012)



Source: Statistics New Zealand.

Although figures 1 and 2 point to a poor performance, New Zealand has experienced a series of shocks during this period. Droughts, earthquakes, sharp changes in export prices, the collapse of our non-bank financial sector—all have pushed around nominal GDP.

Also our views will be naturally tainted by our view on what ‘rate of growth in nominal GDP’ a central bank should view as normal. Figures 1 and 2 show the 1994–2012 average, but a better comparison could be based on an explicit view of the inflation target and the economy’s real ability to produce.

If we were to take a leap and decide the NGDP figures suggested that monetary conditions in New Zealand have been too tight, then those saying the ‘exchange rate is too high’ have a point. However, the point is not that the RBNZ should start trying to directly play in currency markets but that it has set prohibitively tight monetary conditions contradicting its own mandate!

Conclusion

When discussing monetary policy and the exchange rate above, we came to several conclusions:

1. In the short term, depending on the shock, central banks take into account the exchange rate in an operational sense. However, they are justifiably constrained in how they chase exchange rates and interest rates by their desire to maintain credibility about inflation.

2. When an economy is a small player in global capital and trade markets, more flexibility is good.
3. Over the long term, there are factors that can influence the real exchange rate of a country—and these can be thought of as shocks to a country’s ‘competitiveness.’
4. In the long term, lower competitiveness through a higher real exchange rate can be seen as part of a policy choice by a government—where the choice has other non-economic benefits. There is no free lunch.

Monetary policy settings in New Zealand have generally been consistent with this way of viewing exchange rates, interest rates, and inflation—and this framework can be used to understand the concerns of groups in society.

However, it also illustrates why many of the long-term demands being made of monetary policy are unreasonable. Monetary policy and exchange rates are symptoms, not the cause of developments in the broader economy. If interest rates or the exchange rate are deemed too high over the long term, we need to work out the cause rather than blame the central bank.

Endnotes

- 1 The recent Reserve Bank and Treasury symposium on exchange rates helped significantly in tying these questions together in the New Zealand context. Details of the conference can be found at ‘Exchange Rate Policy Forum: Issues and Policy Implications’ (Wellington: Reserve Bank of New Zealand, 26 March 2013).
- 2 Bryce Wilkinson, *New Zealand’s Global Links: Foreign Ownership and the Status of New Zealand’s Net International Investment* (Wellington: The New Zealand Initiative, April 2013), 5.
- 3 Michael Reddell, ‘The Long-term Level “Misalignment” of the Exchange Rate: Some Perspectives on the Causes and Consequences’ (Wellington: RBNZ, Exchange Rate Policy Forum: Issues and Policy Implications (26 March 2013), 28.
- 4 Anne-Marie Brook, ‘Policy Options to Narrow New Zealand’s Savings-Investment Imbalance’ (Wellington: RBNZ, Exchange Rate Policy Forum: Issues and Policy Implications (26 March 2013), 20.
- 5 As above, 30.
- 6 Productivity Commission, ‘Boosting Productivity in the Services Sector,’ *Analytical Papers* (April 2013).
- 7 The period of time where prices have adjusted for shocks but ‘stocks’ are not yet back in equilibrium (for example, the capital stock).
- 8 Bevan Cook and Jason Wong, ‘Do Actual or Expected Changes in the OCR Affect the New Zealand Dollar?’ *RBNZ Analytical Note Series* 1:9 (October 2012).
- 9 Chris McDonald, ‘Kiwi Drivers—The New Zealand Dollar Experience,’ *RBNZ Analytical Note Series* 1:2 (May 2012).