Westpac

Institutional Bank

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Great expectations

What drives the New Zealand dollar

- The fall in the New Zealand dollar since July has been appropriate to the softening in global conditions this year.
- However, we don't believe the conditions for a further substantial drop in the exchange rate are in place yet.
- The improvement in New Zealand's external balances in recent years argues against the idea of a long-term misalignment in the NZD.
- Major downtrends in the NZD are typically the product of recessions, often coupled with financial sector stress. We're mindful of the risk that the global environment takes a turn for the worse, but that's not a state of affairs that anyone should be welcoming.

While the Reserve Bank has never been truly comfortable with the high level of the New Zealand dollar, its degree of concern has clearly escalated in the last few months. In the September *Monetary Policy Statement* the RBNZ strongly warned that the current level of the exchange rate is "unjustified and unsustainable", and that "we expect a further significant depreciation, which should be reinforced as monetary policy in the US begins to normalise."

The RBNZ repeated this language in a statement last Thursday, detailing why it sees the exchange rate as unjustified and unsustainable and noting that it would "welcome" a significant downward adjustment over coming months. This statement seemingly came out of the blue, though we suspect it was meant as a pre-emptive justification for this week's reveal that the RBNZ had intervened to sell NZ$521m in August.

The reason for the RBNZ's growing degree of concern is a sense that the exchange rate is not performing its usual buffering role against swings in global market conditions. Since February, dairy prices in the GlobalDairyTrade auction have almost halved. But up until July, the currency had actually risen to a new record high on a trade-weighted basis.

However, the story has changed dramatically in the last two months. The New Zealand dollar has fallen from 0.88 to below 0.78 against the US dollar, while the trade-weighted index has fallen by about 7%. So what's changed? Has the RBNZ persuaded the market to change its ways? Or is this the product of outside forces, with the RBNZ simply riding the wave? And how can we tell if this is the start of a major downtrend in the currency, or just more short-term noise?

We're taking this opportunity to recap what we know – and just as importantly, what we don't know – about what determines exchange rates. From there, we can get a sense of whether under current conditions we could reasonably expect a large and sustained fall in the New Zealand dollar. We also briefly touch on the implications for the economy if the currency's fall is sustained.

The bottom line is that it's extremely difficult to forecast exchange rates given the number of potential moving parts (many of which are unobservable and/or difficult to forecast themselves). Even saying something about today's level of the exchange rate requires a set of long-run forecasts that carry huge margins of error.

That said, our view is that current economic conditions don't suggest a large degree of misalignment in the New Zealand dollar right now. Experience tells us that large, sustained falls in the NZD typically occur during severe recessions, often coupled with a financial crisis – clearly not a turn of events that anyone should be cheering for.

"Unsustainable"

The RBNZ makes a useful distinction between short-run and long-run valuations of the exchange rate. The *sustainable* level is really a theoretical construct, one that's consistent with balance in the broader economy once the effects of business cycles wash out. However, those business cycles can warrant a higher or lower exchange rate for an extended period. This means the exchange rate can be both *justified* and *unsustainable,* in the sense that business cycles themselves are unsustainable over the long term. The exchange rate is *unjustified* only if it goes beyond what would be warranted by current conditions.

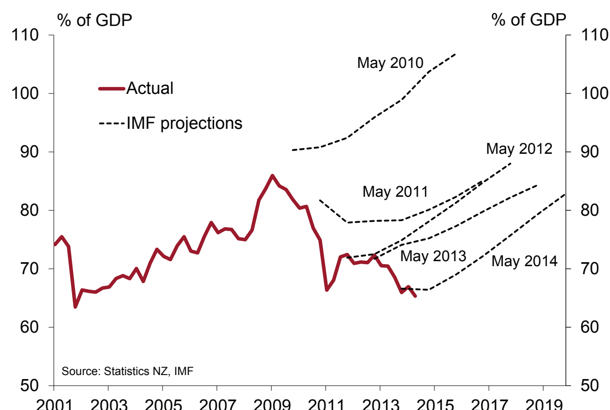
This brings us to our first major problem: determining the theoretical long-run level of the exchange rate. Perhaps the oldest concept is purchasing power parity (PPP), the idea that over time exchange rates should adjust to equalise the general level of prices across countries. Since New Zealand has typically had lower inflation than its peers over the last two decades, this theory would argue for a gradual upward drift in the NZ dollar over that time. That does seem to have been the case, but aside from this very long-run tendency PPP has almost no power to explain movements in the exchange rate.

A more current concept, used by the IMF and often cited by the RBNZ, is based on external balances – for example, the level of the exchange rate that would stabilise the level of net overseas liabilities. Note that this doesn't require the current account deficit to be eliminated, just to be small enough so that overseas debt grows no faster than GDP.

There are two steps involved here. First, generate forecasts of the current account deficit and net overseas debt based on the current level of the exchange rate. Second, use the same model to back out a level of the exchange rate that would be consistent with a stable debt to GDP ratio over the medium term, say five years from now. The gap between the current and model-generated levels of the exchange rate gives us the degree of over- or under-valuation.

And here lies the problem: any assessment of the currency's value today is only as good as the underlying assessment of the country's sustainable external balance. And as the chart to the right shows, this has been notoriously difficult to pin down. Instead of exploding higher as the IMF has predicted, the net debt to GDP ratio has actually fallen to its lowest in over a decade. For this reason, even as the currency has risen, the IMF has steadily lowered its estimate of the degree of overvaluation, recognising that the high NZD has been more sustainable than thought.

Net overseas liabilities

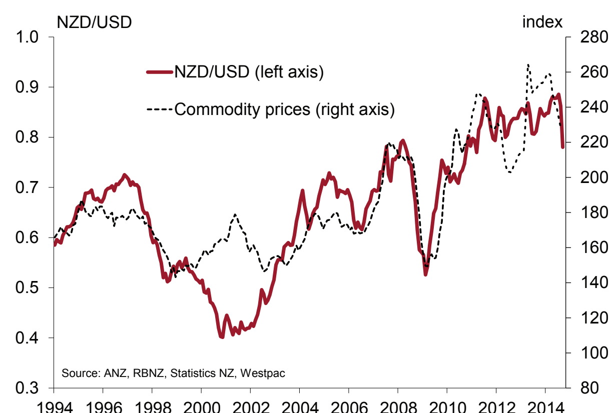


"Unjustified"

History shows that exchange rates can diverge from their long-run average levels for years at a time. There's a range of indicators that can be used to explain much of these swings in the exchange rate, thereby providing a basis for forecasting. We should point out, though, that 'explaining' doesn't necessarily mean there's a causal relationship. Rather, it's best to view these as proxies for the general health of the New Zealand economy (relative to its peers).

We find that world commodity prices are the single best indicator for the NZ dollar. Commodities make up over half of New Zealand's exports, and movements in the exchange rate often help to smooth out large swings in world prices (though that may not be true for every export industry). As the chart below shows, the correlation has been fairly close over the past two decades.

NZD and commodity prices, adjusted for inflation

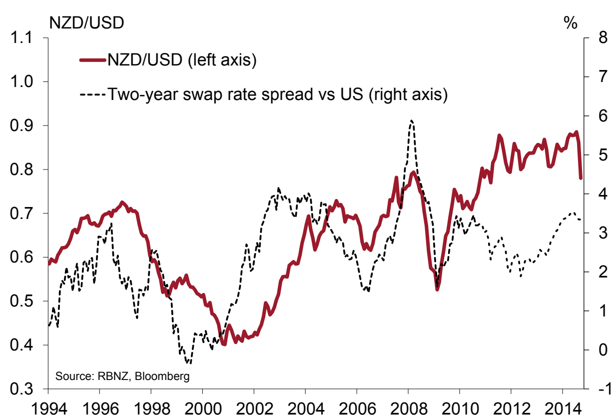


However, there are some notable exceptions. Comparing the NZ dollar with the decline in world dairy prices since the start of this year would be valid if the two were perfectly aligned in the first place – but they weren't. Last year, world dairy prices shot up to record highs in response to a drop in the in global milk supply (partly due to a drought in New Zealand). Meanwhile, the NZD barely moved, even though eyeballing the chart below suggests that a move above 90c would have been justified. The net result was a steep rise in the prices received by New Zealand dairy farmers, with Fonterra paying a record $8.40 per kilo of milk solids.

So why didn't the currency rise last year? It may be that the foreign exchange market chose to look past a temporary supply shortage, instead focusing on the steadier state of world demand. This year the global dairy market has encountered the opposite problem – a glut in milk supply, partly spurred by last year's high prices. To the extent that this oversupply also proves to be temporary, it may be rational for the exchange rate to respond only modestly.

Relative interest rates are another popular explanation for the level of the exchange rate. As the chart below shows, the relationship does seem to hold, but rather loosely. There are at least two factors that make it difficult to pin this relationship down. The first is the question of which interest rate to use. In principle, what should matter is not today's cash rate, but the market's expectation of the cash rate over a long horizon. In our chart we've used the two-year swap rate, but using a longer time horizon would paint a slightly different picture.

NZD and relative interest rates



The second factor is that there's a country risk premium embedded in interest rates, which is needed to induce investors to hold New Zealand dollar assets. When the premium is low and stable, as it was between 2005 and 2007, the New Zealand dollar tends to move in tandem with relative interest rates. But the relationship breaks down when the risk premium is rising or falling significantly, as it did in the years following the 1998 Asian crisis and the 2008 Global Financial Crisis.

Other factors that have been used to explain the exchange rate include house prices, share prices, and net migration flows (especially for New Zealand, where net migration goes through very large cycles). Again, it's more likely that these are proxies for the general health of the economy, rather than direct drivers of the exchange rate.

The RBNZ's role

The RBNZ pays a great deal of attention to the exchange rate, as it plays a major role on the outlook for inflation over the medium term. However, the RBNZ's influence over the exchange rate is quite limited.[1] As we noted earlier, interest rates do have some influence on the exchange rate – but it's market expectations of future interest rates that really matter. The RBNZ sets the Official Cash Rate today, but can only provide guidance to the market on the future path of the OCR. And of course, it has no control over the second leg of relative interest rates, namely, what happens overseas. Some of the recent fall in the NZD has been due to a broad-based rise in the US dollar, as markets have started to anticipate rate hikes by the Federal Reserve.

As for direct intervention in the foreign exchange market, decades of experience have shown that this has no sustained impact on the exchange rate. ("Sustained" being the key word; of course it's possible to disrupt the market temporarily.) The RBNZ limits its ambitions to trimming the extreme peaks and troughs from the exchange rate cycle, and has set itself some fairly stringent criteria for action.

By the way, the ineffectiveness of intervention has nothing to do with a lack of firepower. There's a common misconception that the scope for intervention is limited by the amount of foreign currency reserves that the RBNZ holds. But in this case the RBNZ is aiming to sell New Zealand dollars, not buy them, and as the sole producer of New Zealand dollars it can get hold of as many as it wants.

What could drive the NZD down?

The RBNZ has highlighted three episodes where the NZD has fallen from well above-average to well below-average levels over the course of several years. The insinuation is that the NZD is due for another of these episodes.

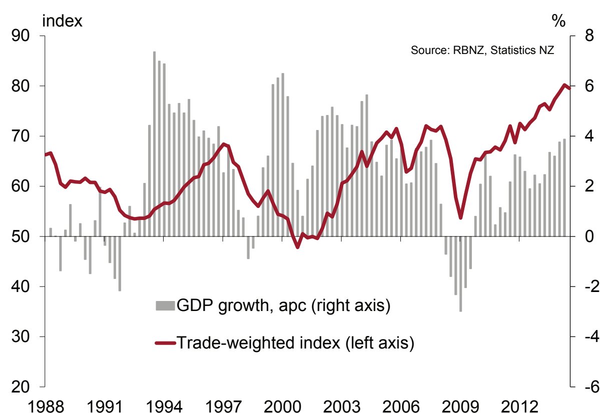
A close look at those episodes reveals some common themes. In 1988 New Zealand was going through a long period of stagnant growth and the bursting of a commercial property bubble; in 1997 the economy fell into recession after two summers of drought, compounded by the Asian financial crisis; and in 2007-2008 we suffered another drought and then the Global Financial Crisis, leading to a severe recession. In these kinds of circumstances, a big fall in the exchange rate is not only a reasonable expectation, it's a necessary part of the adjustment process.

1 The RBNZ has long recognised this point; see for instance www.rbnz.govt.nz/research_and_publications/speeches/2012/5005204.html and www.rbnz.govt.nz/research_and_publications/speeches/2013/5540550.html

Focusing on these episodes ignores the fact that there have also been several false alarms for the New Zealand dollar. For instance, the NZD fell from around USD0.70 to 0.60 in early 2006, at a time when the economy was widely – but wrongly – believed to be falling into recession. While GDP did contract slightly in the December 2005 quarter, the economy actually accelerated over 2006, growing by 3.5%. As a result, the fall in the NZD was unjustified, and was fully reversed by the end of the year.

Another example was in late 2011, when the NZD fell from 0.88 to 0.74 as global markets worried about the prospect of a euro zone break-up. Those concerns were valid at the time, but once the risk of a catastrophe had passed the NZD recovered rapidly.

NZD dollar and GDP growth



Does the latest fall in the NZD represent another false alarm, or is it the start of something bigger? We think the former is more likely. We do expect the NZD to head lower over the long term, but we don't see the right conditions being in place just yet.

A home-grown recession is the least likely outcome at the moment. The Christchurch rebuild remains a powerful stimulus for growth, and is more or less independent of the economic cycle. The fall in dairy prices has been dramatic, but the impact should be manageable as long as this season is as bad as it gets.

The international environment offers more cause for concern. Markets are clearly becoming more concerned about the state of China's economy, with slowing growth, high debt levels and falling house prices. Prices for commodities such as oil, gold, copper and iron ore have been sliding for several weeks, reflecting an expectation of weaker Chinese demand. Our view is that the pace of Chinese growth will pick up again over the next year, with the help of some selective fiscal and monetary stimulus. But the risk of an uglier turn of events can't be ruled out.

In the absence of a crisis, the best case for a substantial fall in the NZ dollar is as follows. The US Federal Reserve is expected to start raising interest rates from near-zero levels by late 2015, which could be the catalyst for a sustained recovery in the US dollar (though the impact on the NZD could be muted at first if the RBNZ resumes its own hikes around the same time.) Meanwhile, we're expecting the level of rebuild activity in Christchurch to peak by the end of 2015 and gradually wind down over the next several years. At this point the rebuild will become a drag on the rate of GDP growth rather than a boost, and the New Zealand economy will no longer look like an outperformer.

Inflation and the NZD

The most common question we've been asked is what a lower exchange rate would mean for inflation. Our modelling finds that the rate of passthrough from the exchange rate is around 0.2 for tradable goods prices, or 0.09 for overall prices. In other words, a 10% fall in the trade-weighted index would increase the CPI by 0.9%. The bulk of the impact takes 2-6 quarters to show up, apart from fuel prices where the impact is more or less immediate.

The fall in the NZ dollar to date puts it about 3% below what the RBNZ assumed in the September *Monetary Policy Statement.* If that fall is sustained, we estimate that it would add 0.3 percentage points to the RBNZ's forecasts for inflation over the next year or so – that is, from 1.6-1.7% to around 2%, which is right in line with the RBNZ's medium-term target.

That suggests the RBNZ will be quite comfortable with the fall in the currency to date. However, a further substantial decline would start to pull inflation above the medium-term target of 2%. An even greater concern for the RBNZ would be if this started to pull surveyed inflation expectations higher, or if it started to creep into non-tradables inflation as well.

Conclusion

Making judgements about the 'right' level of the exchange rate is difficult even in hindsight, let alone in the heat of the moment. But we're prepared to make three general comments. First, the degree of long-term overvaluation in the New Zealand dollar has likely been overstated. While we do expect it to head lower in the longer term, that reflects the inevitable turn in the business cycle, rather than a fundamental misalignment.

Second, we don't think that the NZ dollar's performance this year has been dramatically out of line with economic conditions. At times it has been 'too high', such as when it peaked at 0.88 in July, but it's arguably been 'too low' at other times, such as when dairy prices were peaking at the start of the year.

Third, the current state of the economy bears little resemblance to the conditions that have led to large, sustained falls in the NZ dollar in the past. Of course, that could change – for instance, if China suffered a financial crisis. But in that case, a weaker currency wouldn't be something to celebrate. At most, it would be a palliative for the pain of another recession.

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