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RODNEY'S RAVINGS

What really drives the NZD/USD?

EXECUTIVE SUMMARY

There is a widely held view that the level of NZ interest rates relative to US interest rates is the key driver of the NZD/USD exchange rate. This rule of thumb is rolled out regularly by the media, economists and even politicians despite the fact that it is more myth than reality.

The real game for investors and traders who play the largest part in driving the NZD/USD is parking money in the NZ fixed interest market while the NZD is appreciating and trying not to get caught holding NZ dollars prior to major depreciations. Capital gains and losses on the exchange rate dominate the total returns for the investors and traders, and swamp the benefit of higher NZ interest rates. So while the interest rate differential between NZ and the US is a part of what drives the NZD/USD there is much more going on than just interest rates.

At the heart of the major cycles in the NZD/USD is relative economic strength. When the NZ economy is outperforming the US economy, which can also occur when NZ growth prospects are deteriorating less than US prospects, the NZD rises relative to the USD. Equally, when the NZ economy is significantly under-performing the US economy, the prospect of the investors and traders experiencing large capital losses on their NZD holdings frightens them off creating a self-fulfilling depreciation in the NZD.

This Raving is designed to help readers better understand what drives the major cycles in the NZD/USD. Our views on near-term NZ-US growth prospects and what these might mean for the NZD/USD are reserved for subscribers of our monthly **Forex Prospects** and twice monthly **NZD/USD Hedging Strategy** reports, while the insights contained in this Raving plus much more will be made available to firms that sign up to our NZD/USD currency hedging advisory service. Contact me if you would like to see a one-page information sheet on our currency hedging advisory service.

But can the economic forecasters help you? Any firm that used the economists' currency forecasts to help them manage their currency risks will have most likely gone out of business a long time ago. Our NZD/USD currency hedging advisory service is much, much more than a currency forecasting service. It provides a framework for making strategic and tactical currency hedging decisions that is founded on an understanding of what really drives the NZD/USD and much more.



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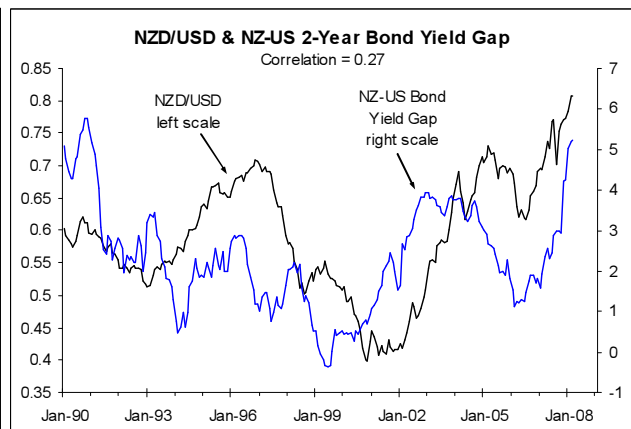
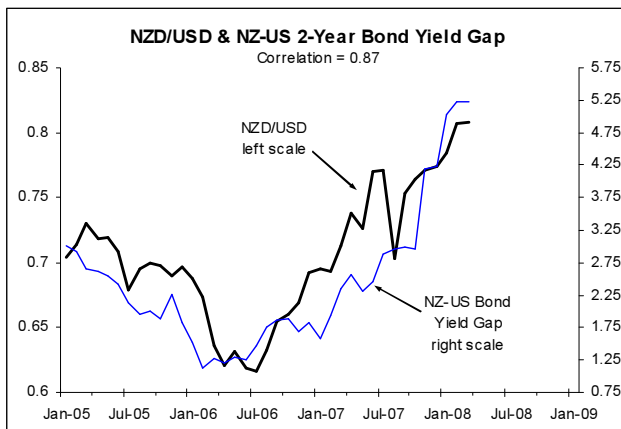
Myth busting the link between the interest rate differential and the NZD/USD

There is a widely held view that the level of NZ interest rates relative to US interest rates is the key driver of the NZD/USD exchange rate. This rule of thumb is rolled out regularly by the media, economists and even politicians despite the fact that it is more myth than reality.

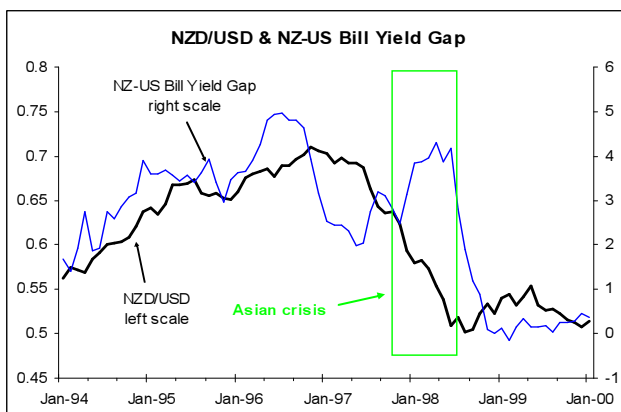
The left chart shows the relationship between the NZD/USD (the black line) and one measure of the NZ-US interest rate differential (the gap between the NZ and the US 2-year bond yields). Overseas investor interest in NZD-denominated 2-year fixed interest securities is a reason for looking at the 2-year interest rate differential in the context of the exchange rate, although the choice of maturities is not overly important.

There is a high correlation of 0.87 between the two lines in the left chart, with 1.0 being a perfect fit. So the claim that the interest rate differential drives the NZD/USD exchange rate has some empirical support, albeit using a highly selective slice of history starting in January 2005.

When this rule of thumb is tested over a longer period of history it breaks down. Since 1990 the correlation between the NZ-US 2-year bond yield differential and the NZD/USD exchange rate is a miserly 0.27, which is much closer to zero than a perfect score of 1.0 (the right chart below). Our brains are good at finding patterns so when people look at the right chart and squint with one eye closed they swear they can see a good relationship between the two lines. But correlations don't suffer from visual deception and closer inspection of the chart shows why the correlation is low. At times the two lines have moved in opposite directions (e.g. 1992-93 and 1997-98), at times the interest rate differential has been relatively low and yet the NZD has been high relative to the USD (e.g. 1997), and at times the interest rate differential has increased materially and yet the NZD/USD has been unmoved (e.g. 2001). This is one busted myth!



The Asian crisis in 1997 provides a superb case study about the link between interest rates and the exchange rate. In October 1997 equity markets in Thailand, South Korea, Malaysia and Taiwan tumbled signalling the start of the Asian crisis. The foreign exchange market reacted quickly by pushing the NZD down, especially relative to the USD (see the green box), because NZ exports to Asia were at risk due to the crisis. But the RBNZ was concerned that the falling NZD would push up import prices, so despite the negative shock to exports it forced local interest rates up, with NZ short-term interest rates rising dramatically relative to US short-term interest rates (see the red line in the chart). But despite a large increase in the NZ-US interest rate differential in late-1997/early-1998 the NZD did not appreciate against the USD, instead it kept falling.

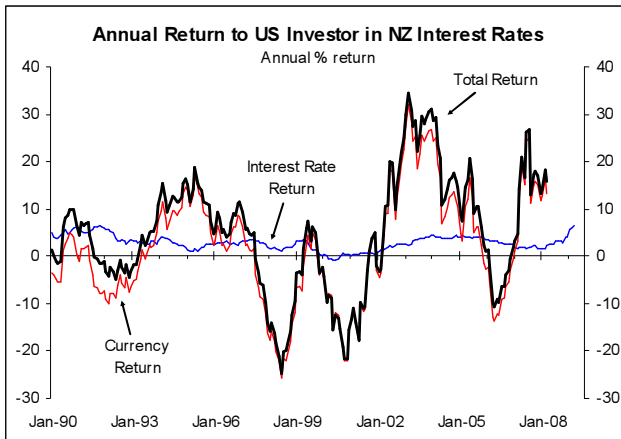


signalling the start of the Asian crisis. The foreign exchange market reacted quickly by pushing the NZD down, especially relative to the USD (see the green box), because NZ exports to Asia were at risk due to the crisis. But the RBNZ was concerned that the falling NZD would push up import prices, so despite the negative shock to exports it forced local interest rates up, with NZ short-term interest rates rising dramatically relative to US short-term interest rates (see the red line in the chart). But despite a large increase in the NZ-US interest rate differential in late-1997/early-1998 the NZD did not appreciate against the USD, instead it kept falling.

The RBNZ was the only central bank to respond to this negative external shock by forcing up interest rates. The foreign exchange market reacted by pushing down the NZD in response to the higher interest rates because it could see that the NZ economy was at risk of heading into a recession, made more likely because the summer of 1997/98 delivered one of the worst droughts in many years.



Why the importance of interest rate differentials is overstated



The blue line in the chart shows the annual return, pre-costs and without gearing that a large financial institution could gain from borrowing money in the US for one year and investing it in NZ for one year. At times NZ rates have been more than 6% or 600 bps above US rates, making it most attractive.

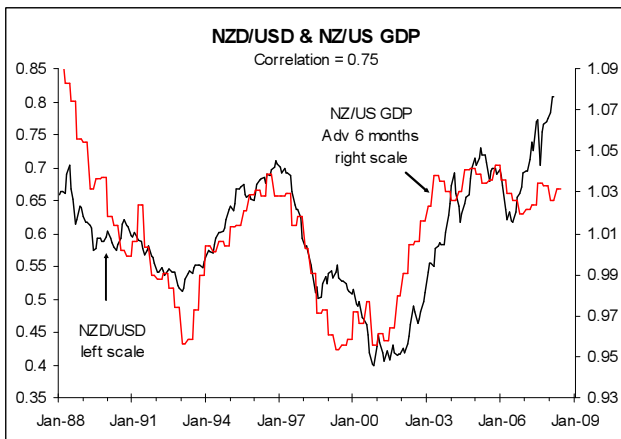
But to gain this return the investors are exposed to fluctuations in the NZD/USD. In good years investors can get 20-30% capital gains from the exchange movement in addition to the interest rate premium, but in a bad year the investor can lose 20% of the capital value of their investment (the red line), which swamps the benefit of even a 6% interest rate differential.

The black line in the chart above shows the total annual return to a US-based investor or trader, including the benefit of NZ's interest rate premium (the blue line) and the impact of exchange rate movements (the red line). The chart makes abundantly clear that the return to the investors/traders from exchange rate movements dwarf the much talked about interest rate differential.

The real game is parking money in NZ while the NZD is appreciating, and trying not to get caught holding NZ dollars prior to major depreciations. So while the interest rate differential between NZ and the US is a part of what drives the NZD/USD there is much more going on than just interest rates.

What really drives the major cycles in the NZD/USD?

The big financial institutions and traders do dominate exchange rate movements. The magnitude of the funds they have available to invest in, or withdraw from NZ swamps the currency flows associated with exports and imports. So what turns the investors and traders on and off NZ?



The adjacent chart best shows what drives the decisions of the investors and traders. The black line is the NZD/USD (left scale) and the red line is NZ relative to US economic activity or GDP. The best fit between the two lines, with a correlation of 0.75 (1.0 is a perfect fit), is with NZ/US GDP advanced or leading the NZD/USD by six months.

At the heart of the major cycles in the NZD/USD is relative economic strength. When the NZ economy is outperforming the US economy, which can also occur when NZ growth prospects are deteriorating less than US prospects, the NZD rises relative to the USD. A stronger NZ economy favours higher interest rates in NZ than in the US, which is part of

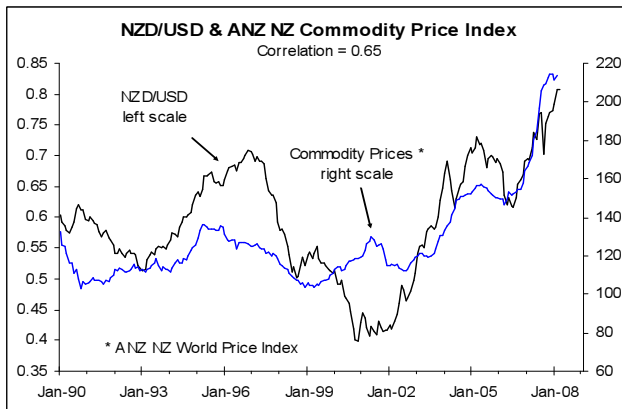
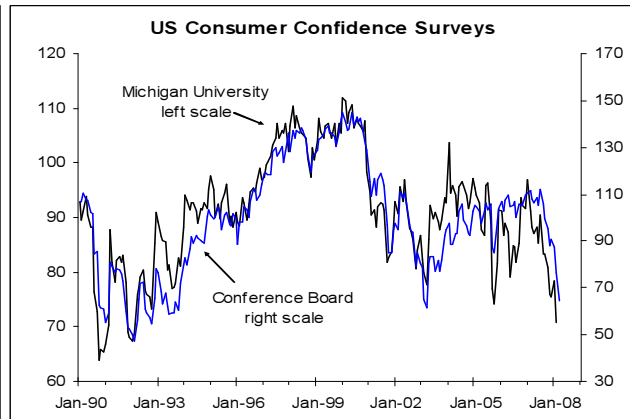
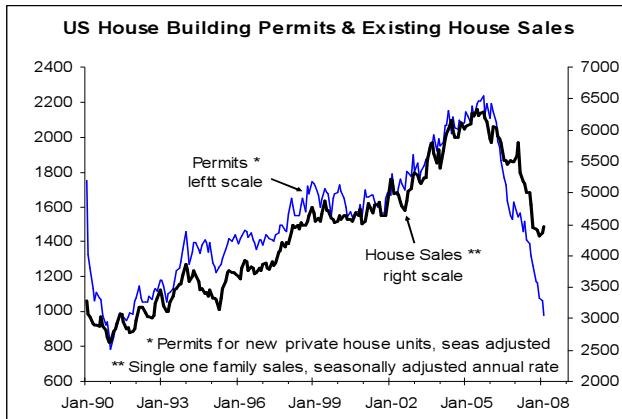
what attracts the traders, but a strong economy is reason for them to expect to achieve large capital gains via an appreciating NZD (or depreciating USD) so they buy NZDs and create a self-fulfilling prophesy. Equally, when the NZ economy is significantly under-performing the US economy, reflected in major falls in the red line in the chart above, the prospect of the investors and traders experiencing large capital losses on their NZD holdings frightens them off creating a self-fulfilling depreciation in the NZD relative to the USD.

Based on the recent relative performance of NZ and US GDP shown in the chart the NZD/USD should not currently be as high as it is, so this framework for explaining the major cycles in the exchange rate may seem faulty. However, the US GDP data are only available up to the December quarter of 2007, while NZ GDP data are only updated to the September quarter of 2007 (we have used the RBNZ's estimate for the December quarter to update the red line in the chart up to the December quarter of 2007, although again note that this line has been advanced or shifted to the right by two quarters in the chart above). So without up to date GDP data the investors and traders are driving the NZD/USD on the back of the leading



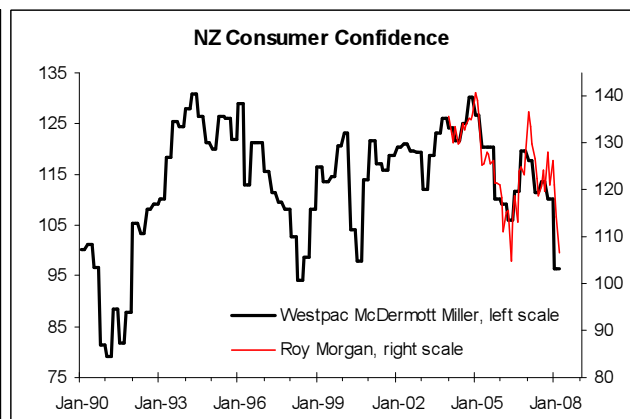
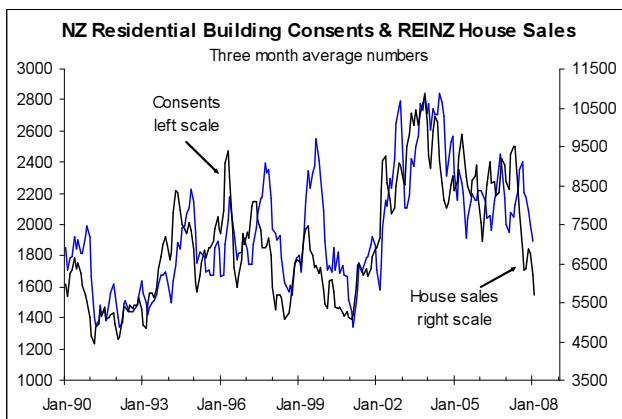
indicators for growth and on that front until recently US indicators were deteriorating much more than NZ indicators (see the top two charts below, especially the blue house building permits line in the left chart).

The US economy is being hit by a housing sector crisis and a finance/banking sector crisis (of a sort last seen in NZ after the 1987 share market crash), and these have driven consumer confidence down to levels not seen since the early-1990s (right chart below). There has been talk of the US economy heading for recession for some months, so up until very recently there has been good reason to expect the NZ economy to out-perform the US economy, which in part explains the strength of the NZD against the USD in recent months even if it is best described as weakness in the USD than strength in the NZD.



Commodity prices also shape the traders' views on NZ growth prospects (the adjacent chart). The black line is the NZD/USD (left scale) while the blue line is ANZ's measure of NZ export prices in world price terms. There is a 0.65 correlation (1.0 being a perfect fit), but at times the two lines have moved in opposite directions. The surge in commodity prices goes some way to explaining why the NZD has appreciated against the USD since mid-2006, with the investors and traders chasing the NZD because it was a play on booming international dairy prices, although we may have probably seen the peak in commodity prices.

But most recently NZ leading indicators of growth are taking a pounding (see the two charts below), which is the sort of news that should put at least a temporary halt to the rise in the NZD against the USD and could even nudge the NZD lower. However, this Raving is designed to help readers better understand what drives the major cycles in the NZD/USD, our views on near-term NZ-US growth prospects and what these might mean for the NZD/USD are reserved for subscribers of our monthly **Interesting Times** reports, while the insights contained in this Raving plus much more will be made available to firms that sign up to our NZD/USD currency hedging advisory service.



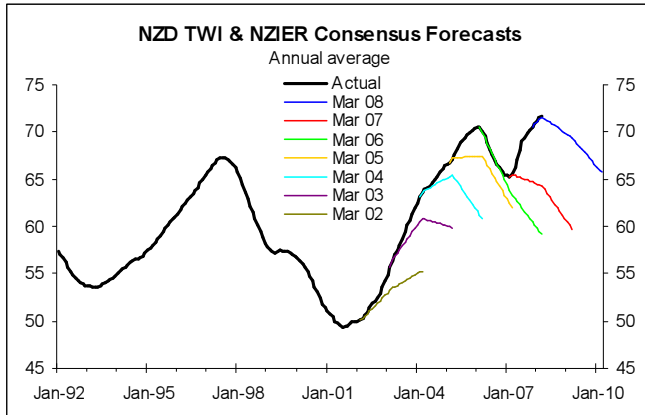
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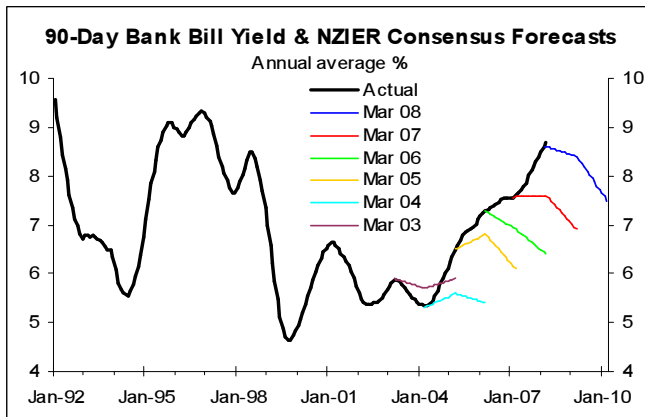
The economists' currency forecasts are useless for business risk management purposes

But can the economic forecasters help you? Anyone who used the economists' currency forecasts to help them manage their currency risks will have most likely gone out of business a long time ago.

Once a quarter NZIER surveys ten or eleven economic forecasts, with the March 2008 survey including the predictions of the economists at ANZ-National Bank, ASB, BERL, BNZ, Deutsche Bank, First New Zealand Capital, NZIER, Reserve Bank of New Zealand, Treasury, UBS and Westpac. The coloured lines in the chart below reflect the average forecasts for the NZD TWI of the economists surveyed by NZIER in each of the last seven March surveys (e.g. the light blue line is from the March 2004 survey).

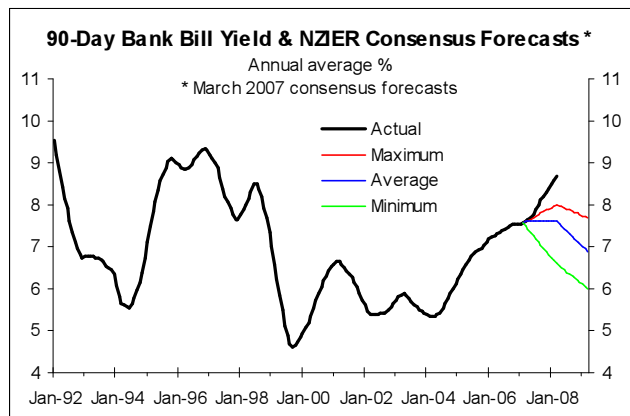
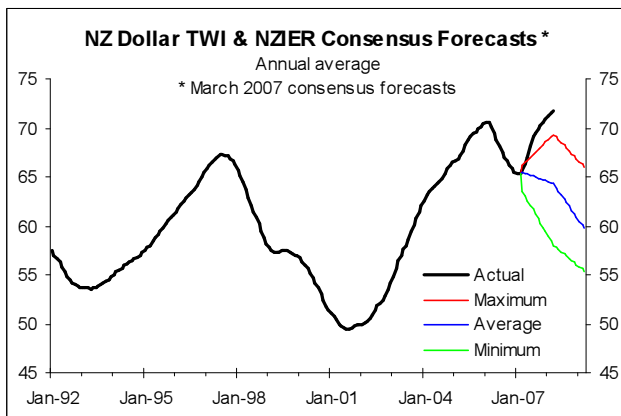


Aside from showing that the economists are not very good at forecasting the exchange rate, the chart shows the tendency for the forecasts to "mean revert". When the NZD TWI was below the historical average in 2002-04 the economists generally forecasts that it would increase back towards the average, and when it moved above the average they generally predicted that it would fall back towards the average. Having a consistent framework for forecasting is great, but when the forecasts exhibit such obvious "mean reverting" tendencies you would be better off employing monkeys armed with darts.



The economists are also of little help managing interest rate risks, as the adjacent chart shows. When the 90-day bill yield, the key short-term wholesale interest rate, was low in 2003-04 the economists generally predicted that it would stay low (see the purple and light blue lines). But once the 90-day bank bill yield rose above 6% they kept predicting that it would fall (see the orange, green, red and dark blue lines). Interestingly, the economists have spent the last few years forecasting falling interest rates to coincide with a falling NZD, which has helped reinforce the myth that there is a close link between the two.

Surely it is cruel to tar all the economic forecasters with the same brush, some must have predicted that the NZD TWI and 90-day bank bill yield would surge over the last year?! The left chart below shows the range of forecasts for the NZD TWI in NZIER's March 2007 survey, with one forecaster predicting the TWI to rise although not as much as it did (the red line). The right chart below shows the range of forecasts for the 90-day bank bill yield in March 2007, with none of the economists predicting that that 90-day bill yield would increase above 8%. It seems that most of the time most of the economic forecasters should be tarred.



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