

Russell Insights

September 2009



What should you do about currency?

It seems that almost every day there is an article in the business press with economists commenting on the value of the New Zealand dollar. As the dollar's value increases relative to other currencies, it moves further away from what economic theorists suggest is its "fair" value.

Russell recommends a strategic currency hedge ratio of 100% for offshore investments and most of our clients have adopted this recommendation. But if the New Zealand dollar ("NZD") falls sharply, it would be better to be unhedged. So should you be altering your currency hedge position?

Strategic hedge ratio

We continue to recommend a fully hedged strategy because:

- There has been an interest rate gain of almost 4% p.a. built into the hedge. As a consequence, since 1988 a fully hedged portfolio has outperformed an unhedged portfolio by 4.2% p.a. on average.
- A fully hedged portfolio has slightly less risk.

Quick Overview

- Russell advises its NZ clients to implement a strategic currency hedge ratio of 100% for offshore investments
- We believe that taking a strategic approach to currency hedging is better than trying to time the currency market for a number of reasons:
 - Investors benefit from the interest rate differentials
 - It is difficult to pick exchange rate turning points - even the currency experts get it wrong



"Hedging is equivalent to borrowing cash overseas, buying NZ dollars and depositing the money in NZ"

Julian Darby
CONSULTING ANALYST
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The interest rate gain from hedging

The interest rate gain from hedging is very important. For example, over the last three years the hedged MSCI World Index has outperformed the unhedged index by 5.7%, but only 1.5% of this was due to currency movements. The remaining 4.2% came from the interest rate differential between NZ and foreign countries. The investor is able to benefit from this interest rate gap because of the process involved in hedging. Hedging is equivalent to borrowing cash overseas, buying NZ dollars and depositing the money in NZ. The NZ short-term interest rate has averaged 3.6% p.a. higher than the combined MSCI World Index countries since 1988. Over this period, the hedged MSCI World Index outperformed the unhedged index by 4.2% p.a., 3.6% of which was this interest rate differential.

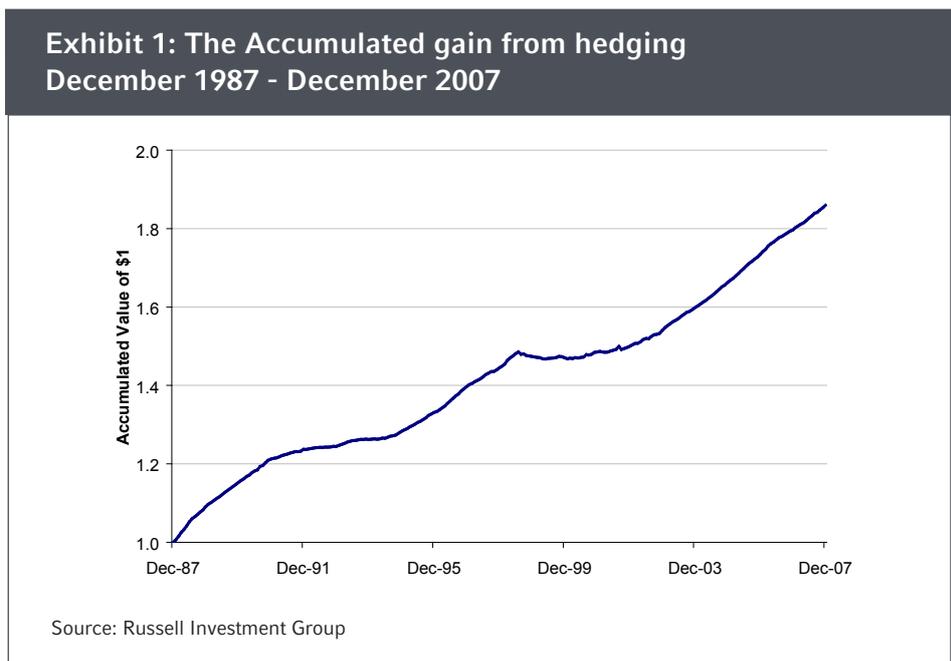
The accumulated effect of the gain from hedging since December 1987 is shown in Exhibit 1.

The price of removing the hedge is the interest rate differential

If your portfolio had been unhedged since 1988, then this would have meant an average loss of 3.6% p.a. By removing the hedge from your portfolio, you may gain from the currency moving in your favour, but you will lose the interest rate differential. This is the price of being unhedged and we consider that too heavy a price to pay, which is why we maintain that the best strategic position is fully hedged.

Academic research¹ provides further support showing that it takes the NZD on average between two and three years to move from an extreme position half-way to the long-run average. The common view is that the NZD is about 25% overvalued, so according to this model the NZD is likely to decline between 4% and 6% p.a., about the same as the

¹ Casein, P. and McDermott, C.J. 2001. "An Unbiased Appraisal of Purchasing Power Parity." IMF Working Paper WP/01/196



interest rate differential in the hedge. If this is so, there would be no benefit to removing the hedge (but no loss, either).

How easy is it to predict the exchange rate?

It is important to recognise that hedging the currency is a strategic investment decision, not a tactical one. Nevertheless, if we were able to pick the major turning points in the exchange rate cycles (possible only in retrospect – which is the difficulty), then there is no doubt we could increase our returns substantially.

Picking turning points

Exhibit 2 on the following page shows the USD-NZD exchange rate since 1986, with major turning points noted.

If we picked the turning points denoted in Exhibit 2 accurately where the hedge was taken off at the top of each cycle and put it back on at the bottom, then Table 1

| Table 1 | Return % pa |
|--|-------------|
| MSCI World Index unhedged | 8.4 |
| MSCI World Index hedged | 12.1 |
| Picking the turning points exactly | 14.8 |
| Picking the turning points 6 months early | 12.7 |
| Picking the turning points 12 months early | 11.5 |

shows how we would have fared over the full period compared with the MSCI World Index.

If we could have picked the turning points exactly, it would certainly have been worthwhile timing the hedge, taking it off at the top and putting it back on at the bottom. But if we were just 6 months early (note that the cycles average 4½ years) then there would have been almost nothing in it. And if we were 12 months early at each turning point, we would have lost.

Clearly, a high level of accuracy is crucial to making profits from picking turning points. But not even the currency experts get it right all the time. In fact, they have been known to get it very wrong. Since 1994, NZ economists have been surveyed for their forecasts of the level of the Trade Weighted Index ("TWI") in one year. Exhibit 3 shows the range of results plotted against the actual TWI one year later. The red line reflects the median forecast with the grey area reflecting the range of forecasts. The data show that even expert economists have a poor track record in predicting the TWI.

Active currency managers

What about professional currency managers? A research study by Russell² found no convincing evidence that active currency managers could make money consistently on the Australian dollar, to which the NZD is closely linked.

From other performance data, it appears easier for managers to produce good returns on currency portfolios in the US and other countries. Overall though, the evidence suggests that returns from timing currency markets are at best uncertain. And worst of all for investors concerned with the security of their investments, there is no way to measure the associated risk of an unhedged portfolio.

What other investment decisions do we make on the basis of unknown returns and no idea of the risk?

A different way of looking at the problem

There is another way of looking at the problem that puts manipulating the hedge in a very useful perspective.

We start by noting that, if we want to invest in the MSCI World Index, we don't have to buy the equities. We can get exactly the same result by putting the money in the bank and buying MSCI futures to give us the extra return (and risk) that we would get from investing in shares directly. (In fact, some index funds do precisely this.) The financial effect is exactly the same.

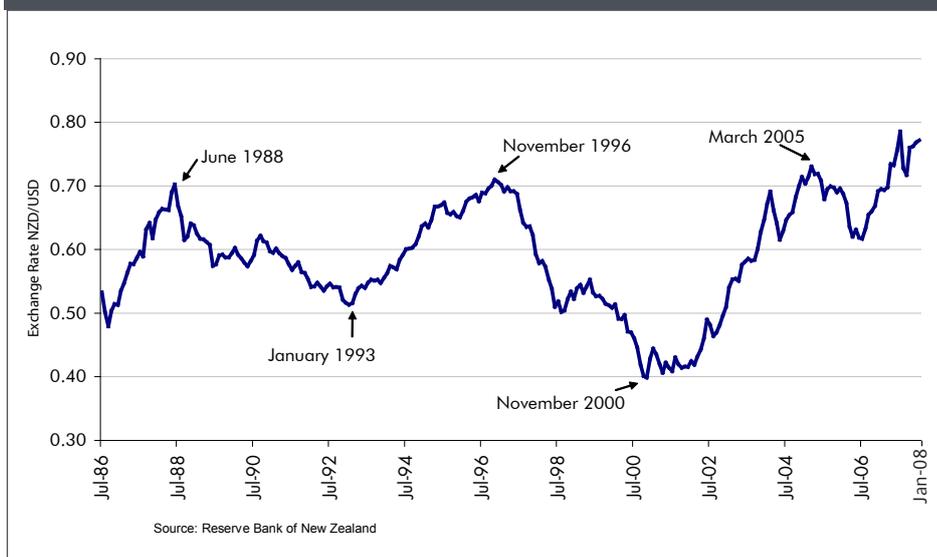
The return on a futures contract is just the difference between the return on the index portfolio and the return on cash. This type of measure is called the excess return, and it applies not just to an index portfolio, but to any equity portfolio:

$$\text{Excess return} = \text{Return on equities} - \text{return on cash}$$

The excess return for equities averages around 4% p.a., with a volatility of about

² Yvonne Ooi & Craig Ansley, *Performance of active currency managers*. Russell Research for Excellence, September 2004

Exhibit 2: NZ-USD Exchange Rate July 1986 - January 2008



16%. This may not sound very good, but you get it without investing anything. You just have to agree to pay up when it goes negative, which it does regularly (as recent equity investors will attest), as well as accepting the returns when they are positive. (That's exactly how a futures contract works.) The excess return is the pure risk part of the equity return. On average, the excess return is positive, which rewards us for the risk we are taking.

It is more useful for us to write the relationship between returns as:

$$\text{Return on equities} = \text{Cash return} + \text{excess return}$$

But what cash return are we talking about? This is a key element in our discussion of currency hedging.

- If the cash is offshore, then the total equity return is the unhedged equity return.
- If the cash is New Zealand cash, then the total equity return is the hedged equity return.

The currency risk resides with the cash investment – the capital – not the excess return component. If the investment is in offshore banks, it is unhedged. If it is in a NZ bank it is hedged. The excess return is not affected by currency.

If you are hedged, then reducing the hedge is exactly the same as taking cash out of a NZ bank and putting it in offshore banks with lower interest rates. And your capital will be subject to currency risk that wasn't there before.

Are you sure you want to put your cash offshore?

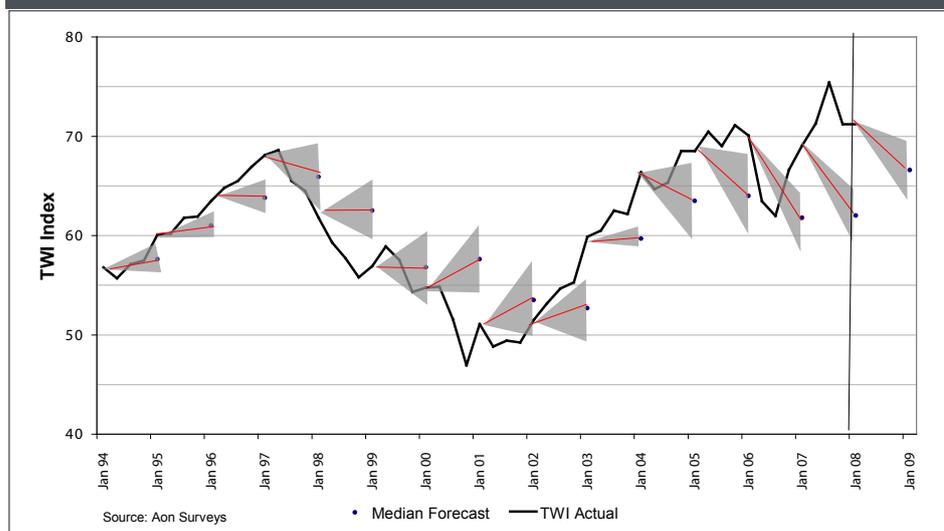
Breakdown of returns on global equities

MSCI Excess Return

| | |
|---------------|-------------|
| + | + |
| Overseas cash | NZ cash |
| = | = |
| Unhedged MSCI | Hedged MSCI |

The return on global equities can be broken down into two parts: the excess return, or pure risk component, plus cash collateral. If the collateral is held overseas, the investment is unhedged. If it is held in NZ, it is hedged. Removing a hedge is equivalent to taking cash from a NZ bank and depositing it in banks overseas, where it will learn a lower rate of interest and be subject to currency risk.

Exhibit 3: NZD TWI - Actual vs Forecast
January 1994 - January 2008



Hedging keeps the risk/return trade-off the same

If you are hedged, you get exactly the same average return for risk as offshore investors. Offshore investors get the offshore cash return + excess return, and are rewarded for the risk of the excess return by its positive long-term average. A NZ investor with a hedged investment gets the NZ cash return + the same excess return, and so gets exactly the same reward for risk as offshore investors.

In this sense, NZ investors with a fully hedged portfolio should be *indifferent* to currency movements, because they are already getting a fair return for risk, and they will continue to get it whatever the exchange rate does.

A falling dollar may present an opportunity

Because NZ investors with hedged offshore investments receive the correct excess return reward for the risk they are

taking on regardless of the exchange rate, there is no risk from a falling dollar (nor reward from a rising dollar).

The potential gain from removing the hedge in anticipation of a falling dollar is therefore only an opportunity.

Is removing your hedge the best opportunity for the fund?

There are many opportunities available for NZ investors. The right way to sift through them is to look at the rewards (expected returns), risks (volatilities) and potential for portfolio diversification (correlations with other asset classes). You can then consider factors like liquidity, product availability, cash flow requirements and fees, and put the opportunities in order.

Before considering whether to reduce your hedge in case the NZD falls, have you fully investigated all other opportunities? What about hedge funds, collateralised commodity futures, property, private equity and

infrastructure? Each of these has a track record showing good excess returns and diversification properties with a reasonable trade-off against risk.

We have mentioned active currency funds, where the risk is controlled through global diversification. Taking one big bet, as you would do by removing your hedge, is seldom a good idea. There are also global tactical asset allocation funds which take diversified positions across a large number of asset classes in several countries, again with good results.

We have research on the risks and returns of all of these opportunities. We suggest that these be considered before contemplating NZD exchange rate timing as an opportunity.

What should you do about your currency hedge?

You should start by recognising that reducing your hedge is only a potential opportunity. If the dollar falls sharply and you are fully hedged, you won't have lost, you will have just missed an opportunity.

Nevertheless, if you are convinced that the dollar is about to fall sharply, you should reduce your hedge. What you are saying is that you have an opportunity to make money with no risk.

We are not convinced. The exchange rate forecasters' track records are poor. We can't quantify the potential returns from trying to pick turning points, and we can't measure the risk.

We think you should look at all your other opportunities first, and, unless you're very sure about where the dollar is going, leave the hedge where it is.