The New Zealand dollar through the global financial crisis

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In this article, we examine the impact of the global financial crisis on the New Zealand dollar (NZD). The NZD fell, on a trade-weighted basis, by 35 percent over the period from 2007 to early 2009 during the peak of the crisis, and remains around 10-12 percent below its pre-crisis peak. The impact of the carry trade on the value of the NZD appears to have diminished, as international investors shifted their attention to higher-yielding currencies, such as the Australian dollar and the Brazilian real. There have also been several periods of market turbulence during the crisis, during which movements in the exchange rate have been driven primarily by declines in the risk appetite of international investors. These developments are consistent with the decline in liquidity in the NZD currency market compared to pre-crisis levels. Our regime-switching model of the NZD/US dollar (USD) exchange rate identifies several instances during the past three years when the key exchange rate driver has changed from relative interest rates to investors’ risk appetite.

1 Introduction

The global financial crisis (GFC) generated one of the most volatile periods in the history of financial markets. This article looks at some of the ways in which the nature of the market for the NZD has changed over the crisis. In particular, we examine movements in the NZD around the time of key events in the evolution of the financial crisis. We also examine how the role of some of the key drivers of the NZD changed over this period, including the influence of the ‘carry trade’ before and after the crisis. We also describe how our in-house empirical model of the exchange rate identifies changes in impact of different driving factors during the crisis period.

2 The crisis and the NZD

Prior to the crisis, the NZD was trading at an all-time high on a trade-weighted basis. In the lead-up to the crisis, New Zealand experienced strong economic growth, a booming housing market and record-high interest rates, which attracted significant investments from overseas investors. The international environment was one where investors generally searched for the best return they could find for their money and were prepared to take on higher levels of risk in their search for yield. The relative interest rate differential between New Zealand and Japan, for example, saw a surge in the carry trade (carry trades typically involve borrowing in a country with relatively low interest rates and investing in higher-yielding currency assets).¹

Figure 1

New Zealand dollar trade weighted index and real exchange rate*

*Normalised to same mean
Source: Bloomberg, RBNZ

1) Movements in the NZD through the crisis

Over the period from September 2008 to around March 2009, the NZD experienced a sharp depreciation against most of its major trading partner currencies, declining by 35 percent on a trade-weighted basis (see figure 1). However, it did not fall to the post-float low point seen in mid-2000. Since then, the currency has reversed much of its losses, although it is still around 10-12 percent down from the

¹ See Section 3 for more details.
2007 peak. The movement in the value of the NZD against individual currencies has varied. During the financial crisis period, there was a strong demand for the USD as a ‘safe-haven’ currency, with investors repatriating money out of ‘risky’ currencies and assets and back into USDs. The sell-off in the NZD against the USD started when Bear Stearns started to liquidate some of their hedge funds in July 2007 and gathered pace when the firm was taken over by J P Morgan in March 2008 (figure 2). The NZD then fell steadily until the collapse of Lehman Brothers in September 2008, when risk appetite in markets collapsed and investors moved out of higher-yielding currencies such as the NZD in favour of currencies that were viewed as ‘safe-havens’ such as yen and the USD. The NZD continued to decline as equity markets fell, reaching its crisis-period low in March 2009. Since then, the NZD has continued to be buffeted by different driving factors; some of the dominant forces are discussed below.

Figure 2
NZD and USD exchange rate indices

To a large extent, the NZD’s moves against other major currencies have been driven substantially by the moves in fundamentals of the other economy or by shifts in risk appetite, rather than domestic factors in New Zealand (figure 3). This saw the NZD recover strongly against the USD after reaching its crisis-period low in March 2009 as market confidence began to improve. The NZD has gained strongly against the euro, particularly over the past year as demand for the euro as an alternative ‘safe-haven’ currency has faded. European fiscal woes caused a sell-off in the euro at the start of 2010. The NZD/Australian dollar (AUD) exchange rate (that is, the number of Australian dollars received for one NZD) has generally traded in a historically narrow range of 0.78-0.82 since the start of 2009, as the attractiveness of the Australian dollar from a growth and interest rate outlook has seen continued demand for the AUD. The NZD/Japanese yen (JPY) cross rate fell sharply during 2008, and has remained below its long-term average, as the volatility in markets has made the NZD carry trade relatively unattractive to Japanese investors (see Section 3 for further details of the carry trade).

Figure 3
NZ bilateral nominal exchange rates
(Deviations from long-term averages)

b) Liquidity in the NZD market

The moves in the NZD over the crisis period have also been partially driven by changes in liquidity and the dynamics of different market participants in the NZD market. Prior to the financial crisis, liquidity (that is, the ease with which currency can be bought and sold without impacting the price) in the NZD market was relatively good. In the lead-up to the crisis, the NZD was a relatively high-yielding currency during a period of low market volatility, which made it attractive to many different market players.\(^2\) Hedge funds, real money accounts (managed accounts that have funds to buy securities rather than use leverage, e.g. pension funds), Japanese margin traders (borrowing money to purchase assets using a margin account), Toshin funds (foreign-currency denominated investment trusts), ‘quants’ (traders using empirical models to make trading decisions) and proprietary traders (institutions investing their own funds rather than

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1. Bear Stearns starts liquidating hedge funds
2. Bear Stearns purchased by J P Morgan
3. Lehman Brothers collapses
4. Equity markets reach crisis lows
5. European sovereign debt concerns emerge

Source: Bloomberg, RBNZ

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\(^2\) Some of these are discussed in Section 3, which discusses drivers of the exchange rate.
their clients’ funds) were all quite heavily involved in the market. The number of market participants helped maintain a relatively liquid market. During the crisis however, as market conditions deteriorated, the bid-offer spread for the NZD widened and traders reported poor liquidity for most of 2009 (figure 4).

Figure 4
Bid-offer spreads in foreign currency markets (10-day moving average)

An indication of the impact of the financial crisis on turnover in the NZ dollar market is available from the Reserve Bank’s survey of foreign exchange turnover by domestic banks. According to this measure, turnover volumes in the NZD market declined by around 30 percent over the crisis period, compared to the typical volumes seen over 2005-07 (figure 5). Volumes have tended to remain at a lower level compared to before the crisis.

The Reserve Bank’s market contacts have confirmed that liquidity conditions are only slowly recovering relative to the peak of the crisis. While many of the major NZD market investors still trade the NZD, contacts report that their trade volumes have significantly diminished compared to pre-crisis levels. The NZD is generally getting less attention from international investors compared to before the crisis, as relatively higher policy interest rates in other economies are attracting investors’ attention and funds. For example, one of the countries gaining favour for its relative interest rate differentials is Australia, where policy rate hikes over the start of 2010 and a more liquid market (compared to New Zealand) have attracted increasing investment interest.

c) Volatility in the NZD market

The NZD has historically been one of the more volatile major currencies, although the Australian dollar has at times been similarly volatile (figure 6). The volatility of all currencies increased sharply over the crisis, as uncertainty and risk-aversion saw spreads widen and currency markets fluctuate in response to news. Although the level of volatility declined from its crisis peak during 2009, it rebounded in 2010 during the euro area sovereign debt crisis. Increased exchange rate volatility has had a significant impact on the attractiveness of international investment strategies such as the carry trade (see the discussion below).

Figure 6
Exchange rate volatility*
3 Drivers of the exchange rate

There have been three key drivers of the NZD in recent years: interest rate differentials, commodity prices and risk appetite, which can explain most of the movements in the exchange rate over the short-to-medium-term. The remainder of this section discusses each of these key drivers in turn. It is important to note that many of the drivers of the exchange rate are not independent. For example, a positive shock to global economic demand could boost commodity prices and also lead to increased risk appetite by international investors. Both of these factors could put upward pressure on currencies. In theory, exchange rates can also be influenced by the difference in inflation rates between countries. However, empirical evidence suggests this only affects exchange rates over very long-run horizons, not the short periods we are examining here.

Interest rate differentials

In recent years, interest rate differentials have primarily impacted the NZD through the carry trade. There is no generally accepted definition of a carry trade, but it usually involves obtaining funding in low-interest rate currencies (such as the Japanese yen, Swiss franc or more recently, the USD), and investing in higher yielding currency assets (such as the NZD). The trade is often leveraged (that is, funded by borrowing), but this does not have to be the case. The presence of leverage makes the trade riskier and more vulnerable to market volatility. In this section, we interpret the carry trade broadly to cover a wide range of trades and investment flows that have taken advantage of persistently high returns on NZD assets relative to returns in other currencies. The existence of persistent profits from a carry trade violates the predictions of the Uncovered Interest Parity Hypothesis, which argues that the exchange rate should adjust to offset interest rate differentials and equalise returns across countries. According to the theory of Uncovered Interest Parity, high-yielding currencies should depreciate and low-yielding currencies should appreciate, but in practice the opposite is often found to occur. There is still significant academic debate about why the carry trade works and Uncovered Interest Parity fails. The failure of Uncovered Interest Parity is often called the ‘forward premium puzzle’. A common strategy is to argue that the persistent excess return on investing in high-yield currencies is because investors are risk averse, and require compensation to take on the additional risk. However, empirical analysis has found it difficult to find a correlation between the returns on the carry trade and traditional risk factors. One possibility is that the excess return compensates investors for the ‘peso problem’; that is, low probability events that cause large negative payoffs. Another strand of the literature focuses on the microstructure of the currency market and differences in behaviour by different types of traders to explain the failure of empirical tests of Uncovered Interest Parity.

Despite the uncertainty about its causes, it seems clear that the attractiveness of the carry trade breaks down when market conditions are stressed and exchange rate volatility increases. Unwinding carry trades, in turn, can increase the level of exchange volatility. For example, traders who had short positions in yen and long positions in NZD assets (i.e. borrowed yen to invest in NZDs) face a double hit when volatility rises and there is a rush into safe-haven assets, putting upward pressure on yen and downward pressure on the NZD. In crisis conditions, problems facing investors may be worsened by the lack of liquidity in the foreign exchange market if they try to close their positions. Investors may also be forced to close their positions during periods of exchange rate volatility by external factors. For example, institutional traders may find that volatility may increase their risk measures, such as their Value at Risk (VaR), above permitted levels.

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3 See Munro (2004) for more details.
4 See, for example, Burnside et al (2006).
5 The ‘puzzle’ is why does the forward exchange rate (that is, the exchange rate quoted today for the delivery and payment of funds on a future date) give biased forecasts of the spot exchange rate that will occur on the settlement date. If Uncovered Interest Parity and Covered Interest Parity (that is, interest rate differentials offset the difference between the current exchange rate and the forward exchange rate) hold, then the forward exchange rate should, on average, equal the future spot exchange rate. See Burnside et al (2008).
6 See the survey by Lewis (1995) and also Burnside et al (2009).
7 Gagnon and Chaboud (2007) discuss three periods of yen appreciation attributed to unwinding carry trades.
limits, forcing them to close their positions. Similarly, leveraged investors, who have borrowed funds from brokers to trade, may face margin calls from their brokers, requiring them to either post more collateral or repay the loans.

Although it is difficult to measure to total volume of carry trade activity, we can construct measures showing how attractive the trade is to investors. To do this, we calculate the return to borrowing in a low-yield currency and lending in a high-yield one, adjusted for the level of exchange rate risk. These ‘carry-to-risk ratios’ are calculated as the interest rate differentials between the two currencies divided by the exchange rate volatility expected to occur over the period of the trade. According to this measure, the attractiveness of many carry trade strategies fell sharply in later 2008, during the financial market disruption following the collapse of Lehman Brothers (figure 7), as central banks slashed interest rates and currency volatility rose. Since then, the (risk-adjusted) return on carry trades invested in NZD assets has remained low. However, carry trades investing in Australia and emerging market currencies, such as the Brazilian real, have become more attractive as interest rate differentials against funding currencies such as yen and the USD have widened.

A wide range of trading strategies can be used to implement carry trades, using both spot and derivatives markets, by both retail and institutional investors. Below, we describe three methods that have been used in the NZD market. We concentrate mainly on methods used by retail investors, as data are more easily available. More sophisticated strategies are used by institutional investors, but because they often involve trading outside of public exchanges (‘over-the-counter’ trading), little information is available about their activities.

Figure 7

Indicators of carry trade attractiveness*

(1) Foreign exchange margin trading

Foreign exchange margin trading involves investors putting down a deposit or ‘margin’ with a currency broker to take a leveraged position on a foreign currency. Margin trading has been used mainly by Japanese retail investors to take advantage of short-term currency fluctuations. The trading strategy investors have normally followed involves buying foreign currency when the exchange rate falls and selling when the currency rises. Recently, Japanese authorities introduced restrictions on the amount of leverage margin traders can take on. Under the new regulations, investors’ leverage will be limited to 50 times the amount of collateral posted from August 2010. From 2011, leverage limits will be tightened further to 25 times the value of collateral.

Margin trading positions on the NZD/japanese yen exchange rate rose steadily during 2007-08, as Japanese investors took advantage of the wide differential between New Zealand and Japanese interest rates (figure 8). During the turbulence in global financial markets during mid to late 2008, the cumulative net long positions held by Japanese margin traders in the NZD fell by nearly 90 percent, and have

* Interest rate differential between the funding currency and the investment currency, divided by the implied volatility on options between the two currencies.

Source: Bloomberg, JP Morgan

We use one-month deposit rates for interest rate differentials, and one-month implied volatilities from options prices for the expected currency volatility. See also Kohler (2010) for discussion of carry trades during the global financial crisis.

See Terada et al (2008) for more details of margin trading. Because many of these retail investors are Japanese housewives, they are often collectively described as ‘Mrs Watanabe’.

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remained at broadly the same level since then. In contrast, investors’ appetite for positions on the Australian dollar/Japanese yen exchange rate, although volatile, have generally trended upward during the past two years, as investors take advantage of the more buoyant economic conditions and more positive interest rate outlook in Australia.

Figure 8
Cumulative net long positions held by Japanese margin traders

![Graph showing cumulative net long positions held by Japanese margin traders](image)


(2) Foreign currency investment trusts

Foreign currency investment trusts are also used by Japanese retail investors to take advantage of the higher yields on international assets. The majority of investment trust funds are invested in bonds, but some trusts also hold equities and other financial instruments. Unlike margin trading, which aims to profit from short-term exchange rate volatility, foreign currency trusts tend to be longer-term investments and are generally not leveraged. As a result, they are less likely to be unwound during periods of market volatility.

Total investments in foreign currency trusts in all currencies, which peaked in 2007 at around 35 trillion yen, declined to around 24 trillion yen in May 2007, as Japanese households have become more risk averse about long-term foreign currency investments. However, there has also been switching away from NZD assets towards other currencies.

Investment trust holdings of NZD-denominated assets peaked at around 600 billion yen in 2007 and have fallen to around 350 billion yen (figure 9), while holdings of assets denominated in currencies such as the Australian dollar and Norwegian krone have risen.

Figure 9
Japanese investment trust holdings of NZD-denominated assets

![Graph showing Japanese investment trust holdings of NZD-denominated assets](image)

Source: Investment Trusts Association Japan, RBNZ

(3) Uridashi / Eurokiwi bond issuance

Offshore bonds issued in foreign currencies are usually issued by foreign banks or supranational institutions, such as the World Bank. They are usually issued in countries with high savings rates where investors are aiming to receive a higher return than they typically get on local investments. Uridashi bonds are denominated in foreign currencies such as the NZD and sold to Japanese institutional and retail investors. Offshore bonds denominated in NZDs issued in global markets other than Japan are usually referred to as Eurokiwi bonds.

In theory, purchases of offshore bonds should put upward pressure on the NZD as investors demand dollars to buy the bond, and downward pressure on the currency when the bond matures, if the investor converts their funds back into their local currency. In practice, however, the link is less clear cut, as bond purchases may be funded by switching out of other NZD assets, and maturing bonds may be rolled over into other New Zealand securities.

Issuance of Eurokiwi and NZD-denominated Uridashi bonds peaked around late 2005, and the total stock on issue rose to around NZ$57 billion during 2007 (figure 10). As global

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11 In NZD terms, foreign currency trust assets have fallen from around $7 billion to around $6 billion.

12 See Drage et al (2005) for more details of the Uridashi and Eurokiwi bond market.
risk appetite and funding market conditions deteriorated through the crisis, the volume of new issues fell below the level of maturing bonds, and the stock of bonds in circulation declined by more than 50 percent from its peak to around NZ$30 billion.

**Figure 10**
**Eurokiwi and NZD-denominated Uridashi bonds**

![Eurokiwi and NZD-denominated Uridashi bonds chart](source: Bloomberg, Reuters, RBNZ.)

**Commodity price movements**

Currencies such as the New Zealand, Australian and Canadian dollars are often referred to as ‘commodity currencies’, because movements in the currencies can be correlated with movements in the prices of commodities these countries export.

There are several possible reasons why currency movements may be correlated with commodity prices. Suppose there is a positive shock to global demand conditions, which increases demand for commodities and raw materials, putting upward pressure on world commodity prices. If the exported commodities are priced in a foreign currency, such as the USD, higher world prices may push up the receipts of exporters, increasing their demand for local currency if they convert revenue back into local currency, pushing up the exchange rate.

Another channel through which commodity prices may affect the exchange rate is that, as export prices rise, there is an expectation that the local economy will grow more strongly, forcing the central bank to tighten monetary policy and raise interest rates, increasing demand for the local currency as investors aim to take advantage of the higher returns.

During the late 1990s and early-to-mid 2000s, movements in the NZD broadly followed the direction of movements in the world price of New Zealand’s commodity exports (figure 11). Since then, however, the relationship appears to have weakened, as export prices have been much more volatile than the exchange rate. However, the timing of turning points in the commodity price cycle still closely matches the timing of turning points in the exchange rate cycle.

**Figure 11**
**New Zealand commodity export prices and the NZD**

![New Zealand commodity export prices and the NZD chart](source: Commonwealth Bank of Australia, Bloomberg, RBNZ.)

Recently, in the Asia-Pacific region, higher commodity prices have also been associated with strong demand for raw materials as economic activity has grown strongly in China. Trading restrictions mean that investors cannot trade directly on the Chinese currency (the renminbi) to benefit directly from Chinese growth. As a result, international investors have used currencies such as the Australian dollar to take an indirect exposure to Chinese economic conditions, as Australia benefits from the higher prices of its commodity exports to China. To some extent, this has also put some upward pressure on the NZD, as a result of our strong links with the Australian economy.

**Investors’ risk appetite**

The standard Uncovered Interest Parity condition discussed previously assumes investors are indifferent about risk and focus only on the expected returns from different assets when choosing where to invest (that is, they are ‘risk neutral’). In reality, most investors take account of risks when making decisions, and need an additional premium to compensate them for taking extra risks (they are ‘risk averse’). As a
result, usually when investors’ risk appetite falls, the return on those assets should rise, to restore investors’ demand. During periods of extreme market turbulence, however, many investors will prefer to switch into safe-haven assets such as US Treasury bonds. This can lead to a collapse in liquidity in the markets for these assets.

The impact of risk appetite on the NZD can be illustrated by the correlation of movements in the currency with movements in the price of other risk-sensitive financial assets. For example, market participants have noted that, during periods of high risk aversion, movements in the NZD/USD exchange rate move closely in line with changes in the S&P 500 equity index in the US (figure 12). This does not necessarily imply that movements in US equity markets cause movements in the NZD. Rather, equities and NZD denominated financial products are both seen as ‘high beta’ risky assets, and are both driven by the common factor of investors’ risk appetite.

Before the crisis, there was much concern about mispricing of risk in many financial markets, as investors’ risk appetite increased as they searched for higher-yielding assets in a low interest rate environment. As a result, there was concern that investment returns did not accurately reflect the risk that investors were taking on. An example of this is in the carry trade investments in the NZD, where investors assumed exchange rate volatility would remain low into the future.

Melvin and Taylor (2009) trace the impact of the crisis on the foreign currency market. The first phase of the crisis in mid-to-late 2007 saw a sharp fall in risk appetite resulting in a major sell-off in carry trade activity and deleveraging as financial institutions faced margin calls from brokers and were forced to liquidate positions. The market stabilised temporarily after the failure and sale of Bear Stearns in March 2008, but deteriorated sharply after the collapse of Lehman Brothers, when liquidity collapsed, the cost of trading currencies soared and it was difficult to trade in any substantial amount. Despite the collapse in liquidity, Melvin and Taylor note that turnover in many currency markets actually rose during the peak of the crisis in September-October 2008. 

4 The regime-switching model

In order to capture the different market focus at various points in time, we have developed a regime-switching model that allows the fundamental drivers of currency moves to be separated into different regimes that drive the exchange rate at different times. As discussed above, the main drivers of currency movements can vary over time and hence a switching model is useful, as it helps capture the changes in these currency drivers over time. Box 1 describes the regime-switching model in more detail.

The results of the model suggest that, on average, currency traders focus on relative interest rate differentials around 50 percent of the time (figure 13). Commodity prices account for currency moves around 30 percent of the time and risk appetite the remaining 20 percent of the time. Recently however, the risk regime has been dominant on a much more regular basis over the crisis period. This is in line with the strong correlation in moves across financial markets assets that have been observed over most of the crisis period.

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13 According to the Capital Asset Pricing Model (CAPM), the prices of ‘high beta’ assets tend to be more volatile than the price of the overall market portfolio, making them more risky, so investors demand a higher risk premium to buy them. Prices of ‘low beta’ assets are less volatile than the market portfolio and require a smaller risk premium. Goodhart (2005) has a discussion of the mispricing of risk prior to the crisis.

14 Goodhart (2008) has a discussion of the mispricing of risk prior to the crisis.

15 Melvin and Taylor (2009) describe risk during this period as analogous to a ‘hot potato’. As market conditions deteriorated, the hot potato was passed on faster than ever as no institution wanted to hold their normal level of intraday exposure.
The model presented here assumes there are three states in the foreign exchange market, under which movements in the NZD/USD exchange rate can be driven by risk appetite (regime 1), interest rate differentials (regime 2) or commodity prices (regime 3). When the parameters of the Markov model are estimated, it generates estimates of the probability of the NZD/USD being in a particular regime at any point in time. The three regimes are proxied using the S&P 500 index as a measure of risk appetite, the difference between New Zealand and US two-year swap rates for interest rate differentials and the Commonwealth Bank of Australia (CBA) commodity price index for commodity prices. The model can be written as

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\begin{align*}
\text{NZD/USD} &= 3\text{-week moving average of the weekly percentage change in the NZD/USD exchange rate}, \\
\text{S&P 500} &= 3\text{-week moving average of the weekly percentage change in the S&P 500 index}, \\
\text{NZ} - \text{iUS} &= \text{spread between 2-year swap rates in New Zealand and US}, \\
\text{COMPRICE} &= 3\text{-week moving average of the weekly percentage change in the CBA New Zealand commodity export price index.}
\end{align*}
\]

Box 1
The regime-switching (Markov) model of the NZD/USD exchange rate

The model presented here assumes there are three states in the foreign exchange market, under which movements in the NZD/USD exchange rate can be driven by risk appetite (regime 1), interest rate differentials (regime 2) or commodity prices (regime 3). When the parameters of the Markov model are estimated, it generates estimates of the probability of the NZD/USD being in a particular regime at any point in time. The three regimes are proxied using the S&P 500 index as a measure of risk appetite, the difference between New Zealand and US two-year swap rates for interest rate differentials and the Commonwealth Bank of Australia (CBA) commodity price index for commodity prices. The model can be written as

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\begin{align*}
\text{NZD/USD}_t &= \alpha_1 + 0.324 \text{NZD/USD}_{t-1} + 0.406 \text{S&P 500}_t + \text{error}_t \quad \text{if regime} = 1, \\
\alpha_2 + 0.645 \text{NZD/USD}_{t-1} + 0.06(\text{NZ}_t - \text{iUS}_t) + \text{error}_t \quad \text{if regime} = 2, \\
\alpha_3 + 0.905 \text{NZD/USD}_{t-1} + 0.721 \text{COMPRICE}_t + \text{error}_t \quad \text{if regime} = 3,
\end{align*}
\]

where

\[
\begin{align*}
\text{NZD/USD} &= 3\text{-week moving average of the weekly percentage change in the NZD/USD exchange rate,} \\
\text{S&P 500} &= 3\text{-week moving average of the weekly percentage change in the S&P 500 index,} \\
\text{NZ} - \text{iUS} &= \text{spread between 2-year swap rates in New Zealand and US,} \\
\text{COMPRICE} &= 3\text{-week moving average of the weekly percentage change in the CBA New Zealand commodity export price index.}
\end{align*}
\]

For an introduction to regime-switching models, see Brooks (2008).
in the behaviour of global financial markets. It is too early to determine the impact of the crisis on long-term trends in the NZD market.

Figure 14
Probabilities of exchange rate regimes

Regime 1 – Risk appetite

Regime 2 – Interest rate differential

Regime 3 – Commodity prices

5 Conclusions

In this article, we have examined the impact of the global financial crisis on the NZD. The NZD fell sharply, on a trade-weighted basis, during the peak of the crisis, but has recovered some of its value since then. Movements in exchange rates against individual currencies have varied. There have been some changes in the underlying drivers of the exchange rate and trading behaviour in the currency market. Before the global financial crisis, movements in the NZD were dominated by the impact of the carry trade, which aimed to benefit from high yields on NZD assets, funded by borrowing in low interest rate currencies such as the Japanese yen. During and since the crisis, as global exchange rate volatility has increased, and international investors’ risk appetite has diminished, the impact of carry trade on the value of the NZD appears to have diminished.

Although movements in the exchange rate are still mainly influenced by interest rate differentials, since the crisis there have been several periods of market turbulence when the movements in the exchange rate have been driven primarily by movements in the risk appetite of international investors. These developments are consistent with the decline in liquidity in the NZD market compared to the pre-crisis period, as investors shift their attention to investment opportunities in other currencies. Our regime-switching model of the NZD-USD exchange rate identifies several instances during the past three years when the key exchange rate driver has been investors’ risk appetite rather than relative interest rates.

References


