



Outlook

(1 May 2009)

Exchange Rate – Sustaining Trade

Foreword

This series of papers has been developed to underpin the policy advocated by the New Zealand Manufacturers and Exporters Association (MEA).

The Association advocates a targeted tax approach to enhance and accelerate innovative behaviour in New Zealand firms. We draw on the analysis and experience of our membership, and other research, to substantiate and present our perspective on how New Zealand can increase the growth rate of productive innovation and enjoy a first world future.

This paper looks at what factors influence the exchange rate and what impact this has on the economy as a whole. New Zealand’s exchange rate regime is contrasted with others from around the world demonstrating that New Zealand’s tends to be more volatile. Some alternatives to the current system that could alleviate this volatility are offered.

Introduction

According to the United States’ State Department, there are 194 independent countries in the world and there are approximately 178 different currencies in use, therefore not all countries have their own currencies, but most have. Used as a unit of exchange a currency facilitates the transfer of goods and/or services. That raises the question of how business transactions proceed when trading with parties in other countries who use different currencies? The answer is easy. Just like in other markets, international prices help coordinate the decisions of buyers and sellers as they interact in world markets.

The (nominal) exchange rateⁱⁱ is a key element in international trade. It is the rate at which a person can trade the currency of one country for the currency of another. In other words, the exchange rate is a price of a currency specified in the terms of another.

Theoretically an exchange rate may be a simple conversion ratio between two different currencies, but a couple of implications associated with it cannot be ignored. First, the exchange rate impacts firm profitability and international competitiveness. For most businesses, the key to survival is profit, which is the difference between revenue and costs. As a result of globalisation, firms are no longer working within a nation’s borders; exporting and importing have become parts of business operation. When the exchange rate changes firms’ revenue and costs are affected depending on their export and import portfolios. It may be difficult to determine the exact exchange rate impact on firm profitability; however, exporters are considered to be less competitive internationally as the overseas buyers face a higher purchase price. All markets are subject to the same pressure; a high exchange rate reduces margins returned to New Zealand from export markets and lowers the cost in the New Zealand market of competing imports. An adverse 10% swing in the exchange rate can threaten the profitability of a firm. The wild recent swings of 60% are capable of wrong footing even substantial listed companies with vast resources. Complex products require volume to amortise development and capacity expansion costs, and most markets inside New Zealand are too small to carry these costs. Consequently any complex or expensive development must contemplate export markets subjecting their returns to variations in the exchange rate.

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Secondly, volatile exchange rates deter future investments. Investment decisions are generally costly and require long term planning and commitment. Extreme volatility in exchange rates create an uncertain environment for potential investors. As a consequence, investment projects can either be temporarily deferred or permanently ceased.

Note that not all exchange rates are free to vary, as some of them are fixed to a value or a specified range. The flexibility of exchange rates has a close relationship with the regime adopted.

Possible Exchange Rate Regimes

Traditionally, exchange rate systems have been divided into two categories, namely systems with a fixed exchange rate and systems with a flexible exchange rate. The main difference between these two categories is the flexibility that monetary authorities show towards fluctuation in the exchange rate. These systems are often referred to as Fixed Peg and Floating regimes, where the exchange rate is usually a political decision in the former system, and in the latter prices are determined by the market forces in accordance with demand and supply.

“volatile exchange rates deter future investments.”

A fixed peg regime exists when the exchange rate of the home currency is fixed to an anchor currency. A Currency Board Arrangement is one such regime based on an explicit legislative commitment to exchange domestic currency for a specified external currency at a fixed exchange rate. This means that the domestic currency is fully backed by foreign assets and is issued only against foreign exchange. Otherwise, economies with no separate national currency of their own also operate a fixed peg regime. Countries do not have a separate national currency, either when they have formally dollarised, or when the country is a member of a currency union (e.g. the Euro).

Floating regimes are the most common exchange rate regime today. These consist of independent floating and managed floating systems. In independent floating systems the exchange rate is determined by the market and monetary policy usually functions without exchange rate considerations. Foreign exchange interventions are rare and are meant to prevent undue fluctuations. No attempt is undertaken to achieve or maintain a particular rate. Managed floating systems usually let the market take its own course, but the monetary authorities intervene in the market to manage the exchange rate, if needed, to prevent high volatility and to stimulate growth. The monetary authorities do not specify a “suitable” exchange rate level.

A range of systems between these two extremes have developed, which are referred to as soft pegs. Here we will give a brief introduction to a few of them:

- **Conventional Fixed Peg:** a currency is pegged at a fixed rate to a major currency or a basket of currencies, allowing the exchange rate to fluctuate within a narrow margin of plus or minus one percent around a formal central rate. The monetary authority intervenes in the market if the fluctuation is outside these limits.
- **Horizontal Band:** similar to a conventional fixed peg, but a horizontal band is softer in the sense that it allows the exchange rate level to fluctuate within certain margins of a formal central rate. The central bank commits itself to keeping the exchange rate within a specified range.
- **Crawling Peg:** the currency is adjusted periodically in small amounts at a fixed rate or in response to changes in selective quantitative indicators (e.g. past inflation differentials vis-à-vis major trading partners). Maintaining a credible crawling peg imposes constraints on monetary policy in a similar manner to the fixed peg system.

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- **Crawling Band:** the exchange rate band is allowed to adjust periodically by either being adjusted up or down, or gradually widened or narrowed. The central bank keeps the exchange rate within the band.

Since possibilities remain to mix various systems to produce new hybrid systems, the list of intermediate regimes is not exhausted. In practice, the distinction between different exchange rate regimes can be blurred. For example, a pegged exchange rate with wide bands, or one that is adjusted regularly, may resemble a floating exchange rate while a floating rate, affected by regular central bank intervention in either the foreign exchange or domestic money markets, essentially resembles a fixed rate.

An appropriate choice of exchange rate regime should be consistent with the government's monetary policy objectives, provide the most accurate price signals to domestic agents and facilitate adjustment to a variety of external and internal shocks.

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Determinants of Exchange Rates

So what factors determine the value of an exchange rate? The exchange rate is a price of a currency, and like any price its value is determined by supply and demand. As a general rule, the exchange rate appreciates in value when the demand for the currency increases, and depreciates in value when supply increases.

Typically, there are four main sources of demand for a currency.

- Exports bring in foreign currency, which needs to be exchanged into local currency for day-to-day use.
- Foreign investment flows into the domestic economy.
- Market speculators purchase local currency in the expectation of making a profit over time.
- The central bank buys local currency for intervention purposes.

Similarly, the sources of supply for a currency are:

- Consumers paying for imported goods and services in local currency.
- Outward capital investment flows overseas for a greater return.
- Market speculators sell local currency for another currency for a profit.
- The central bank sells local currency for intervention purposes.

As a whole, we can divide exchange rate determinants into two groups; trade related and non-trade related factors.

The trade related factors include the balance of payments, economic growth and inflation. The balance of payments summarises transactions between residents and nonresidents during a period. It consists of the current account, the capital account and the financial account. The current account shows flows of goods and services, primary and secondary income, and its balance shows the difference between the sum of exports and income receivable and the sum of imports and income payable. If a country is running a substantial trade surplus, the demand for the currency is expected to be high, and the national currency should appreciate. By contrast, a massive trade deficit usually causes the currency to lose value. Economies with strong “export-led” growth are likely to experience an appreciation in the currency, as the market expectation rises due to an increase in confidence. It is normal to expect a slight appreciation of the currency over a period of time in a healthy economy, while slower growth, and concerns such as a persistently high level of unemployment can result a weakening in exchange rate. Inflation is an increase in the overall level of prices in the economy. It also affects the exchange rate because in a high inflation environment, a country becomes less competitive in international trade, causing an increase in the trade deficit. In the long run, countries with higher than average inflation are likely to see their exchange rate fall.

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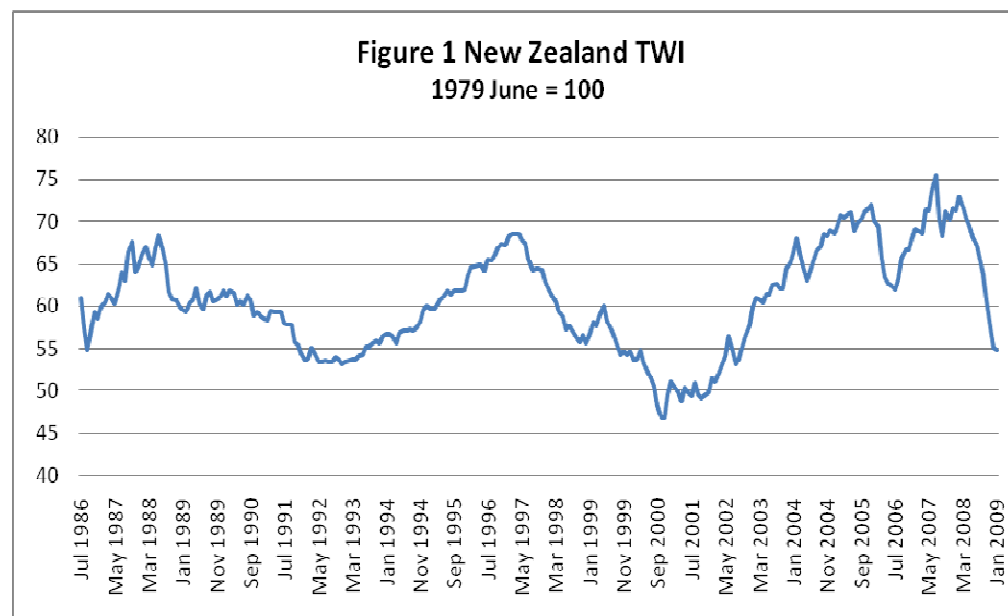
The non-trade related factors include market speculation and relative interest rates. In the foreign exchange market, speculators expect a currency to be at a certain level in the future, and when they act on their expectations and buy/sell the currency, it ends up at the predicted level, confirming their expectations. Special factors such as political events and changes in commodity price can have an effect on market expectations. To a certain extent, the exchange rate is determined by market sentiment, especially in the short run. Speculators can simply compare interest rates across countries; high interest rates indicate a high potential return for investors. If the country's interest rates are higher than elsewhere, this will attract money into the country to take advantage of the high interest rate. The interest rate differential boosts the demand for the currency, and may cause the currency to appreciate.

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Factors such as a country's credit rating and risk profile also affect the attractiveness of its currency, so in order to attract additional demand high risk currencies will need to offer higher returns (i.e. a higher interest rate) than low risk currencies.

New Zealand and its Exchange Rate

The Reserve Bank of New Zealand (RBNZ) operates an independent floating exchange rate regime; only intervening to counter extreme disorderly conditions in the currency market. In June 2007 the Bank announced that it had intervened in the New Zealand dollar market for the first time since the New Zealand dollar had been floated in March 1985. On a Gross Domestic Product (GDP) basis, the New Zealand dollar is one of the most traded currencies in the world. The daily trade average for 2007 was around 54¢ per dollar of GDP. The United Kingdom was second at 22¢ per dollar of GDP, Australia 28¢, USA 20¢, Japan 12¢ and Euro 11¢, all in USD terms using April 2007 cross rates. (Note, calculated using GDP (PPP) data by the International Monetary Fund 2007, and foreign exchange market daily average turnover data from Triennial Central Bank Survey 2007.)

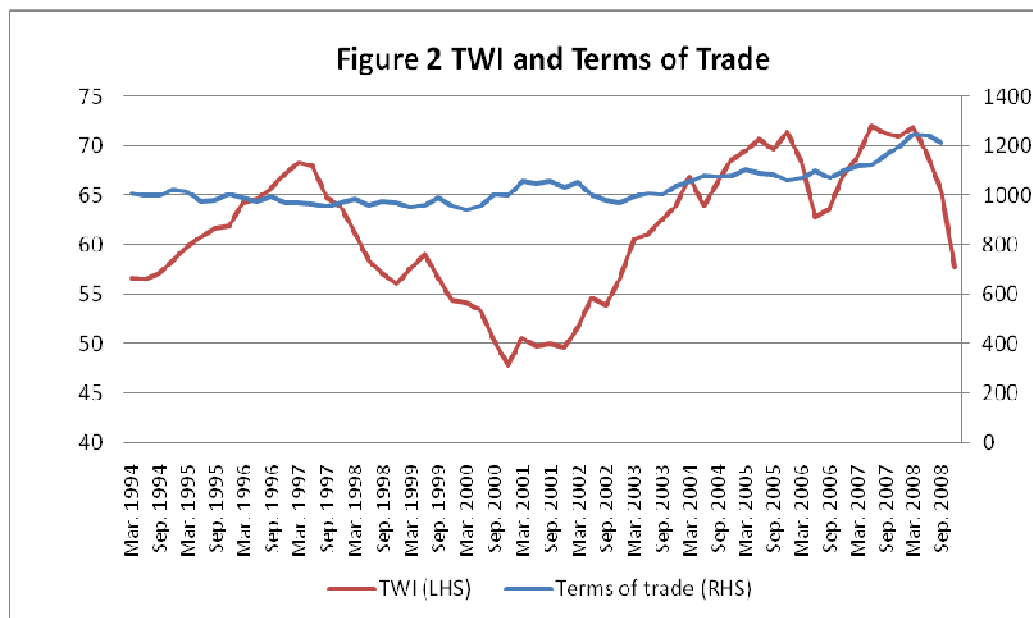


In order to obtain an overall trend of the NZD, an aggregated measure of the trade weighted index (TWI) is calculated (see Figure 1). This comprises the currencies of Australia, the Euro zone, Japan, the US and the UK, which are 50:50 weighted according to each currency area's share of New Zealand's merchandise trade (exports plus imports) and their share of the five-country aggregate nominal GDP. The weights are adjusted annually, and the last re-weight took effect on 22 December 2008. Notice at firm level TWI may not be a suitable indicator as individual firms would have their unique trading profile, which would be different to the weights used at the national level.

Since 2000 the index has averaged 60.7, however, its monthly average ranges from 46.9 in October 2000 to 75.4 in July 2007, the largest monthly increase in TWI was 5.8 percent, and the largest depreciation in a month was close to 7 percent. According to a calculation carried out by Infometricsⁱⁱⁱ, New Zealand's exchange rate was 18 percent more variable than the Australian dollar from 1996 to 2007. This level of fluctuation creates extreme exchange rate risks, which have affected the performance of the external sector.

It has been argued that the New Zealand dollar has the characteristics of a commodity currency, meaning its value (i.e. the exchange rate) changes with world demand for the commodities that New Zealand supplies. Accompanied with very large increase in commodity prices over the last decade, New Zealand's terms of trade rose 30 percent in the eight years from March 2000 to March 2008, which is only about half the 61 percent trough to peak increase in TWI during the similar period. Clearly there are factors other than commodity demand (i.e. non-trade related factors) influencing movements in the exchange rate (see Figure 2). To maximize New Zealand's growth potential, it is important for the country to reduce exchange rate variability. It is impossible to eliminate all non-trade related factors; however, some unnecessary fluctuations within the exchange rate can be avoided by adjusting policy framework appropriately.

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As mentioned in the previous section, the interest rate influences the level of exchange rate. In New Zealand, the market interest rate is guided by the Official Cash Rate (OCR), which is the overnight interest rate that the RBNZ uses to settle inter-bank transactions. By varying the level of OCR, the RBNZ keeps inflation within the Target Range (i.e. 1-3 percent) on average, over the medium term. An expansionary policy seeks to stimulate the economy by lowering the OCR, and a contractionary monetary policy can be achieved by increasing the OCR in times of inflation. One disadvantage of the OCR tool is its impact on exchange rate. As monetary policy alters the market interest rate, currency speculators profit expectations also change. The contrast of monetary policy from one jurisdiction to another (for good or bad reasons) can create large interest rate differentials between countries, which creates greater demand and causes the currency to appreciate. Such an overvalued currency has made New Zealand firms less competitive internationally. Therefore, pursuing stability in the exchange rate will require an inflation control mechanism tool with minimal impact on the exchange rate.

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Possible Policy Instruments

In this section we will propose a number of possible policy instruments, which would provide the RBNZ an additional tool to control inflation, without provoking extreme volatility in exchange rate.

In practice, the OCR will remain as the overnight cash rate, which is used to settle inter-bank transactions and no limit is placed on overnight borrowing. However, the setting of the OCR will no longer respond to the inflation target. Instead, a supplementary tool will be introduced in addition to the OCR to control inflation. The OCR will be set at a level that is appropriate for the country's risk profile, in the sense that there are relatively small incentives for carry trades, so the exchange rate should mainly be determined by trade related factors. When necessary the OCR can be adjusted to influence the exchange rate by encouraging or discouraging currency trading.

The supplementary tool can take many different forms, such as a Mortgage Levy, variable GST, an Interested Linked Saving Scheme,^{iv} a Compulsory Saving Scheme,^v or Variable Excise Tax^{vi} among others. The common feature of these instruments is the mechanism that enables the RBNZ to withdraw liquidity from the monetary system as the inflationary pressure persists. The collected funds would be appropriately invested, so they can be injected back into the economy in uncertain times where a fiscal stimulus is needed. Since we now have a National Saving Scheme (i.e. Kiwisaver), a savings based supplementary tool is likely to be most cost efficient.

Conclusion

Exports account for almost 30 percent of New Zealand's GDP, making them more important for New Zealand than Australia, the US and most other OECD countries. Consequently policy in New Zealand should have a greater focus on external price stability. A more stable exchange rate is required to lower risk and increase domestic investment targeted at export markets. In recent years, under a free floating exchange rate regime, the volatility of New Zealand's exchange rate has stymied economic growth. Most of the exchange rate instability is not trade related, and the conventional inflation control mechanism (the OCR) fails to address such matters effectively. Monetary policy cannot continue to ignore the collateral damage to the real economy without at some point delivering irreparable damage to our economy as a whole.

In this article, the need for supplementary monetary policy tools has been discussed and some have been proposed. Two levers would be used; the OCR lever would target the external deficit and the variable savings lever would target domestic inflation, delivering broad price stability to both the domestic and external economy.

Two levers for the two targets would give the RBNZ sharper and faster acting control options controlling inflation without the collateral exchange rate impacts. Detailed policy design needs debate, but in principle this is a necessary step in the right direction towards sustainable non-inflationary growth in New Zealand.

Overall Policy Position

The New Zealand Manufacturers and Exporters Association see policy as an interconnected framework, doing some things but not all is helpful but misses the opportunity to fully leverage one policy on another. The creation of high added value activity offers the best hope for future growth in the New Zealand economy.

Encouraging more investment in productive activity:

- *A balanced taxation regime across income, profits and realised capital gains^{vii}.*
- *Isolate our exchange rate from our inflation control methods.^{viii}*

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- *Extended deductibility on early stage investment for R&D based firms^{ix}.*
- *Remove housing from the measure of CPI.^x*

More R&D based commercial out-turns in firms:

- *Tax credit for R&D (see our R&D Outlook).*
- *Expense all productive equipment and patents.*
- *Tax credit for people and skills development targeted at new products and process.*

A range of policy settings are required to support innovation. Expensing plant, equipment and patent costs, early stage investment deductibility, tax credits for skills development, and R&D tax credits would level the playing field for New Zealand firms with regard to the rest of the world. The other policy changes provide a coherent approach to encourage a diverse range of innovation across our entire economy.

Members of the New Zealand Manufacturers and Exporters Association make nearly \$2.0 billion in sales and have an export value of around \$1.0 billion. Our organisation can trace its existence back to the early history of New Zealand. As a legacy of the hard work and careful financial management of the past, we have a significant asset base that enables our independence and extends our activity. Subscriptions fund only a very small part of our current operating costs.

Membership is open to all manufacturers and exporters and others at the discretion of our Council. Enquiries should be directed to mea@mea.org.nz

ⁱ Formed by the Canterbury Manufacturers Association (CMA) and the New Zealand Engineering Federation (NZEf) in August 2007.

ⁱⁱ An exchange rate can always be presented in two ways, direct and indirect quotation. Direct quotation uses a country's home currency as the price currency (i.e. 1 foreign currency unit = x home currency units); the indirect quotation uses a country's home currencies as the unit currency (i.e. 1 home currency unit = x foreign currency unit), which is commonly used in New Zealand, Australia and the euro zone. The notion of appreciation and depreciation were introduced to indicate an increase or a decrease in the value of a currency as measured by the amount of foreign currency it can purchase. For instance, if exchange rate rises from 60 to 70 yen per dollar, the dollar is said to appreciate, because one dollar can now exchange for more yen, whereas the yen is said to depreciate. Since exchange rates are always calculated in pairs, there are many exchange rates for any given country, without an aggregate measurement, it can be difficult to determine the overall trend of a currency. In order to average several individual exchange rates, economists are often referring to an exchange rate index.

ⁱⁱⁱ Page 5, "Reducing the impact of monetary policy on exchange rate, for New Zealand Wine", Dec 2008.

^{iv} Verry, P., 'Interest Linked Saving Scheme', <http://www.mea.org.nz/document.ashx?id=435>

^v 'A Case for Compulsory Superannuation', <http://www.mea.org.nz/document.ashx?id=36>

^{vi} Brash, D., 'Would Giving The Governor Power To Vary The Excise Tax On Fuel Reduce The Amplitude Of Exchange Rate Fluctuations?' <http://www.mea.org.nz/document.ashx?id=495>

^{vii} 'Assets, Tax and Productivity', <http://www.mea.org.nz/document.ashx?id=442>

^{viii} 'Monetary Policy and Productivity', <http://www.mea.org.nz/document.ashx?id=454>

^{ix} 'Research and Development', <http://www.mea.org.nz/document.ashx?id=411>

^x 'Monetary Policy and Productivity', <http://www.mea.org.nz/document.ashx?id=454>