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# THE FOREIGN EXCHANGE MARKET

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Economic Monitoring Group

New Zealand Planning Council Monitoring Report

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Economic Monitoring Group  
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20 March 1985

The Chairman,  
New Zealand Planning Council,  
WELLINGTON.

Dear Mr Douglas,

I have pleasure in forwarding to you the fourth report of the reconstituted Economic Monitoring Group, which in accordance with the independent right to publish that the Planning Council has given the group, will be released soon.

Yours sincerely,



G.R. Hawke  
Convenor  
Economic Monitoring Group

11 JAN 1988

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This report, published by the New Zealand Planning Council, was prepared independently by the Economic Monitoring Group. The views expressed are the sole responsibility of the Economic Monitoring Group and are not necessarily endorsed by the Planning Council.

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# The Argument

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The foreign exchange market is the major connection between New Zealand and overseas economies. An understanding of economic policy requires an appreciation of the links between the foreign exchange market and other parts of the New Zealand economy, and of the development of the foreign exchange market itself.

The New Zealand foreign exchange market has undergone significant change in recent years and is now developing rapidly. It has become larger, much more so than is generally recognised, and it has become more competitive. It has acquired an increased capacity to service New Zealanders engaged in international transactions and it is coming to occupy a significant place in the network of the world monetary system. Further developments can be expected.

The Government has adopted an economic strategy of establishing and maintaining a consistent set of policies across the main instruments of economic policy. This strategy is close to that advocated in earlier EMG reports. It gives central importance to responding to international trends rather than suppressing them, providing appropriate signals to private investors, and relying predominantly on competitive markets to channel investment into those areas which promise greatest growth.

The Monitoring Group sees no reason for seeking a change in the average exchange rate now. The developmental effect of last year's deval-

uation can be achieved only over time and the nominal exchange rate ruling now makes some allowance for the problems of the transitional period, such as a temporary surge of inflation. On the other hand, a significant upward movement of the average exchange rate could put at risk the policy moves which have been taken with respect to industrial protection and support.

Nevertheless, the Monitoring Group supports the Government's willingness to allow more flexibility in exchange rates than has been customary in the past. There are, however, risks inherent in the decision to allow exchange rates to float. The persistence of the internal budget deficit, combined with tight monetary control, creates a risk of an undesired upward movement of exchange rates, while suggestions of a relaxation of monetary control could create a risk of an undesired downward movement of those rates. A floating dollar therefore intensifies the need for the Government to persist with reducing the fiscal deficit. Furthermore, while the early days of the float have shown remarkable stability in the exchange rate, and the public is learning not to attach undue importance to small movements, there is still a risk of excessive volatility while market operators become more experienced at reading and responding to what is happening. Floating the exchange rate is therefore no panacea, but it is a worthwhile further step in the Government's response to our economic problems.

# Foreign Exchange and the Macro Economy

New Zealand's foreign exchange dealings are a reflection of our relationship with the rest of the world. As such they depend on events in New Zealand as well as in the wider world. For example, foreign capital movements to and from New Zealand depend, at least in part, on relative financial conditions in New Zealand and in the rest of the world. Given the relatively small size of New Zealand, the only factors on which New Zealand can realistically expect to have much effect are those in New Zealand. In terms of monetary flows, what happens to New Zealand's foreign reserves follows automatically from the balance of transactions on current account and the balance on capital account.

Capital movements occur in two quite distinct ways. First, there are those that depend on private sector assessment of market opportunities. These private sector flows can be either equity capital or loan capital and can be either inwards or outwards. Secondly, there are those capital flows, usually loans, originating with the Government. As pointed out in an earlier EMG report<sup>1</sup>, government overseas borrowing is largely a balancing factor to maintain an appropriate level of overseas reserves in the light both of the trading situation on current account and of private capital flows. Of the \$16,123 million overseas debt outstanding at 31 March 1984, official debt amounted to \$9,336 million. The July 1984 devaluation, together with further borrowing to cover the deficit since then, will have substantially increased this sum expressed in NZ dollars. Most of this official debt was incurred to offset current account deficits which were built up over previous years.

There are a number of ways of viewing the adjustment process through the balance of payments. The more traditional approach has been to look at the current account of the balance of payments and trace the changes an exchange rate adjustment would have on the relative prices of traded goods and services. Thus, for example, an increase in the domestic money supply may lead to additional demand for imports and may also increase domestic costs and

make exports less competitive. This would lead to a deterioration of the current account. Without official intervention to maintain the exchange rate, there would be a deterioration in the exchange rate. If such an exchange rate shift offset the relative changes in inflation rates (i.e. restored the real exchange rate), this would restore the competitiveness of domestic production and would therefore tend to rectify the current account imbalance and to restore external equilibrium.

Clearly, however, this adjustment process through relative prices of goods and services is not instantaneous and indeed may take place over a long period. Recent international experience would seem to indicate that in fact adjustments to the balance of payments take place over relatively short periods and that it is more fruitful to look at the capital account for an explanation. This involves studying the reasons why people hold various types of assets denominated in different currencies. There are essentially two factors which determine whether a person holds assets denominated in one currency as against another. First there are relative interest rates; secondly there are expectations about both future interest rates and future exchange rates.

Thus for example, with an increase in the domestic money supply, interest rates will decline, which may lead to a net capital outflow. Without official intervention, the exchange rate may depreciate. This depreciation will continue not until the current account is restored to equilibrium, but until market operators expect that an appreciation is likely and that such an appreciation may outweigh the decline in interest rates. The net capital outflow could therefore give way to a capital inflow and cause the exchange rate to appreciate. There is therefore a tendency for the exchange rate to overshoot before moving back to a more suitable, longer-run position.

The problem essentially lies in the different response rates in various parts of the economy. Finance and foreign exchange markets tend to respond quickly to change — exchange rates and interest rates adjust relatively quickly. On the other hand, prices in goods markets tend to respond more slowly to change. This leads to two conclusions. First, at least in the short

<sup>1</sup> Economic Monitoring Group, *Foreign Exchange Constraints, Export Growth and Overseas Debt*, New Zealand Planning Council, 1983

run, it is not the current account which brings about equilibrium in the foreign exchange market. Rather the capital account, because of the more ready responses in the financial and foreign exchange markets, must bear that responsibility at least in the short run. Secondly, these responses in finance and foreign exchange markets may exceed those required in the underlying real economy in the longer run.

Thus, while the relative rate of inflation between two countries is an important determinant of competitiveness in goods and service markets, it is not necessarily an important factor in short-term exchange rate adjustments. In addition to the relative price movements, there are other factors that have an impact on the exchange rate. These include:

- expectations of relative foreign and domestic interest rates
- expectations of a shift in real exchange rates.
- expectations of relative inflation rates.

Expectations are therefore of key importance in determining exchange rate movements. Many of these expectations are formed, nowadays, on the basis of the Government's stated and actual monetary and fiscal policy and the success it is thought to be having in containing the rate of growth of the money supply. This is seen to be of critical importance as it carries with it expectations about future levels of inflation and interest rates.

A key determinant in all this is the size of the fiscal deficit and the way it is financed. This clearly affects interest rates and liquidity conditions in New Zealand and, depending on the exchange rate regime, also expectations about the exchange rate. This is a crucial policy interaction between fiscal, monetary and exchange rate policies.

The charts on pages 7 and 8 seek to map some of the key linkages.

Chart 1 shows the possibilities when the fiscal deficit is financed by raising loans on the New Zealand market. A large demand for funds by the Government will generally lead to a significant pressure on domestic interest rates, which in turn will lead to foreign capital inflow as New Zealand business (both domestically, and foreign, owned) seek cheaper sources of finance from overseas, and as foreigners seek to take advantage of the high interest rates. Under a fixed exchange rate regime, the combination of a large fiscal deficit and rising foreign capital inflow will make control of the money supply difficult. By exacerbating inflationary pressures, this will cause a loss of international competitiveness and lead to increased demand for imports. Both these factors will lead to a worsening of the current account of the balance

of payments by putting a squeeze on exports and encouraging imports. Under a floating exchange rate regime, the high domestic interest rates required to finance a large fiscal deficit may well lead to a significant foreign capital inflow. The result, at least in the short term, may be an appreciation of the exchange rate. The impact of this on the balance of payments depends on the relative strength of the two main effects. On the one hand, an exchange rate appreciation will squeeze those sectors (both export and import competing) exposed to foreign competition. On the other hand, there could be a lessening of domestic inflation and thereby some competitive gains. (Over the longer term, market participants may take the view that a depreciation of the exchange rate is required as part of the adjustment the economy needs to undergo.)

Chart 2 shows the possibilities when the fiscal deficit is financed by ways which lead to an expansion of the money supply. This will lead to inflation and a consequent loss of competitiveness internationally. An expanding money supply will also stimulate a rise in imports. Under a fixed exchange rate, this will lead to balance of payments difficulties. Under a floating exchange rate regime, the rate will tend to depreciate. This will have an inflationary impact but will also be of assistance to those sectors exposed to foreign competition. The balance between the direct inflationary impact and the redistribution effect towards the tradeable sector will depend on other events in the economy.

Charts 1 and 2 describe the consequences of the two extreme positions where either all the budget deficit is financed by domestic borrowing, or all by monetary expansion. In most situations, the budget deficit will be financed in a variety of ways so that the outcome will be a mixture of higher interest rates and larger money supply. The larger the fiscal deficit, the higher the proportion that is likely to be monetised. In its second report, *The Government Deficit and the Economy*,<sup>2</sup> the Monitoring Group pointed out that a large fiscal deficit would be likely to impact adversely on the economy, either through the process of monetisation or through the crowding out effects of high interest rates, or both. There are likely to be some inflationary consequences under either method of financing.

Since the 1984 election, the Government has sought to control the monetary consequences of the budget deficit by raising the required sums on the market and paying market rates of interest. With the deficit the size it is, this has led to a sharp rise in interest rates, but

<sup>2</sup> Economic Monitoring Group, *The Government Deficit and the Economy*, New Zealand Planning Council, 1984

Chart 1

OPERATION OF FOREIGN EXCHANGE MARKET UNDER LARGE FISCAL DEFICIT FINANCED IN A NON-MONETISED WAY

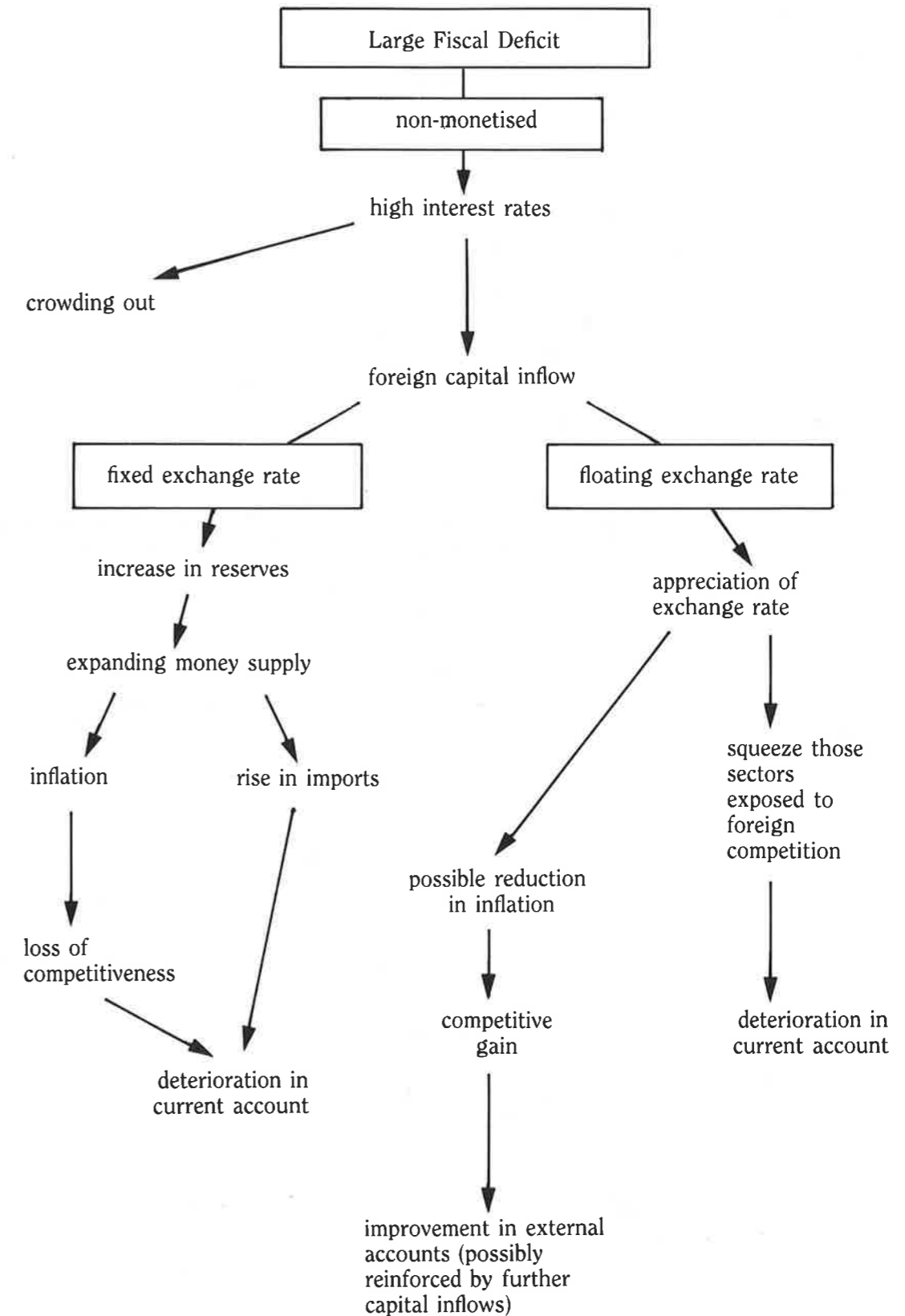
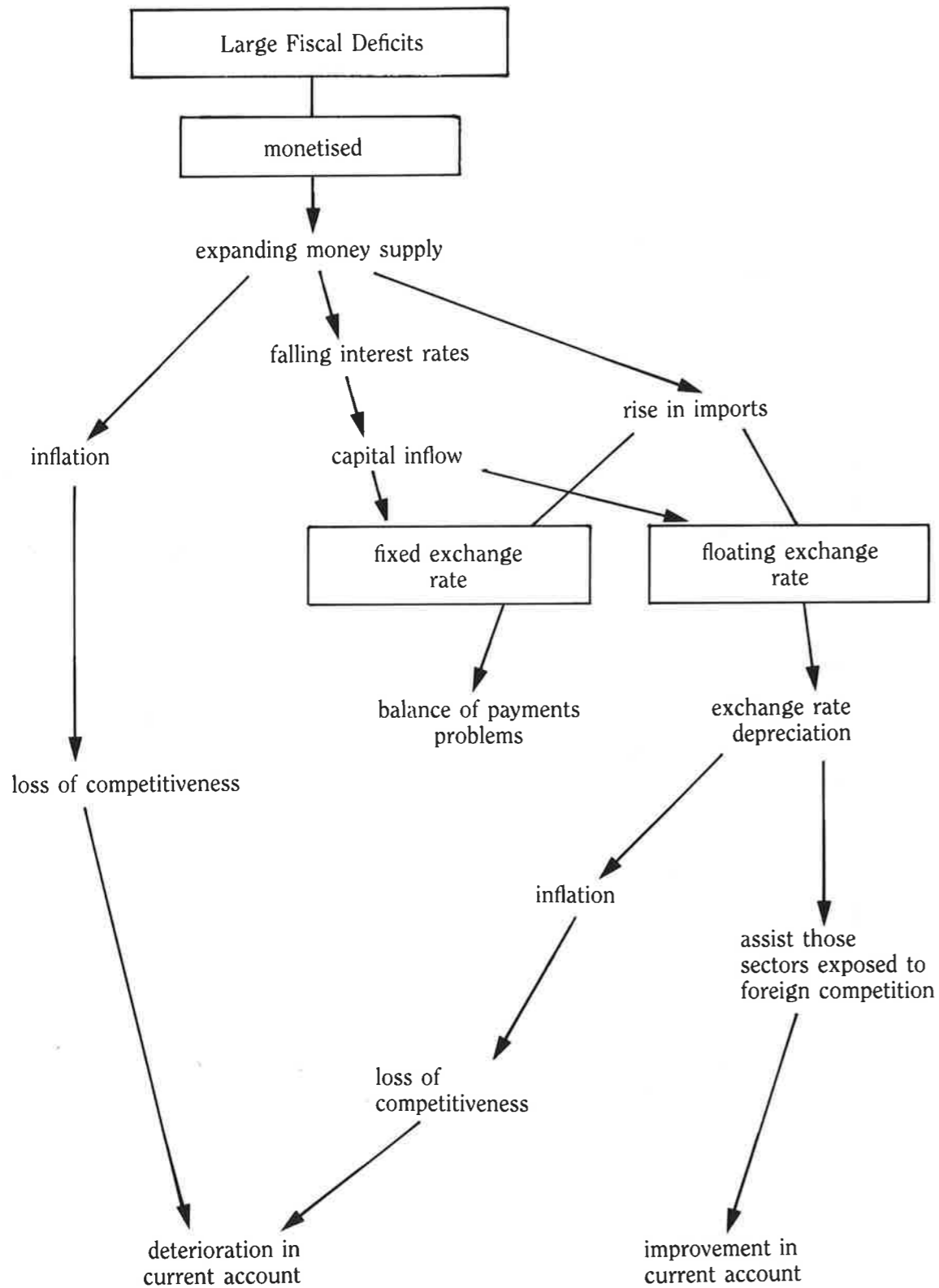


Chart 2

OPERATION OF FOREIGN EXCHANGE MARKET UNDER LARGE FISCAL DEFICIT FINANCED IN A MONETISED WAY



the expectation is that interest rates will fall in the face of government action to reduce substantially the size of the deficit. Thus, high current interest rates with the prospect that these rates will fall, encouraged substantial foreign capital inflow late last year. But the capital flow itself expanded the money supply and increased the amount that the Government needed to borrow to control the money supply. The high rate of capital inflow therefore led to the possibility that interest rates would continue at a high level as further foreign capital flows were attracted. As a result of these high interest rates, demand for loanable funds declined. Furthermore, New Zealanders increasingly borrowed overseas, even individuals for relatively small sums (e.g. a farmer borrowing overseas \$0.25m to refinance his farm, a not untypical minimum figure for New Zealand financial institutions). The large interest rate differential, together with an exchange rate which people no longer expected to change, made it advantageous to borrow overseas rather than domestically. It should, however, be noted in passing, that with a fixed exchange rate against a basket of currencies, as the NZ dollar was, the degree of exchange rate risk depended on the currency borrowed overseas. For example, the US dollar has been appreciating signifi-

cantly over recent months and this would clearly have resulted in higher NZ dollar debt servicing for those who borrowed US dollars.

Thus high domestic interest rates, brought about by an attempt to contain the threat of excess monetary growth, a realistic exchange rate, a relaxation in October 1984 of Overseas Investment Commission rules on New Zealand companies borrowing overseas and institutions which are able to handle a range of international capital transactions, combined to increase substantially foreign capital flows into New Zealand. (More recent uncertainty about the exchange rate has led to capital outflows during February and early March, in spite of high domestic interest rates.)

It might also be noted that it was the opposite conditions in mid-1984 that prompted substantial foreign exchange outflow (i.e. artificially low domestic interest rates and expectations that the overvalued exchange rate would be altered substantially). Even before the relaxation of exchange control, the degree of integration of New Zealand financial markets and those overseas allowed for substantial foreign exchange movements in response to perceived relative financial conditions.



# How Foreign Exchange Markets Work

Foreign exchange markets are concerned with the buying and selling of various currencies in relation to each other. These markets exist because although it would be possible for everybody involved in purchasing or selling goods and services in different countries to manage their own affairs, it is simpler and more efficient (because of lower transaction costs) to have a specialised market. Major foreign exchange markets (e.g. Singapore and London) trade simultaneously in a wide range of currencies, not necessarily in relation to demand for their own currency. Foreign currency dealings in New Zealand have historically been largely related to the needs of international trade — the conversion of foreign currency export earnings into NZ dollars and NZ dollars into foreign currencies to pay for imports — and the capital inflows and outflows to finance New Zealand's development. As will be seen later in the report, this is rapidly changing as the volume of transitory capital flows increases.

In an abstract sense, there is little to distinguish a foreign exchange market from other markets in which there is a relatively free interplay of market forces (e.g. the share market). The supply of one currency relative to the demand for that currency will interact to determine a price for that currency (all in relation to another currency). That price is the exchange rate between the two currencies in question. For example, in a free market, the NZ dollar price of an Australian dollar would be determined by the demand for Australian dollars by New Zealanders (to pay for imports from Australia or to invest in Australian assets) relative to the supply of Australian dollars available to New Zealanders (as receipts from exports to Australia or from Australians wishing to invest in New Zealand). Few, if any, foreign exchange markets operate in this simplistic way, but nevertheless it is a basic starting point.

There are conceptually two main contributors to flows through foreign exchange markets; those flows arising from international trade in goods and services, and those arising from international capital transactions. Different economic factors govern the flows under these categories. The factors affecting international trade in goods and services have largely to do with competitiveness and the nature of foreign

markets. Competitiveness in these markets depends on variables such as:

- real costs of production; technical efficiency, efficiency of management, labour costs, material costs
- conditions of production; regulatory and taxation environment
- trading environment in foreign markets; tariffs, quantitative restrictions, market demands, competition
- international transaction costs; freight, insurance, exchange rates.

Changes to most of these variables tend to take place slowly and therefore changes in competitiveness and in trade flows often occur over several years. On the other hand, changes in the pattern of capital flows often involve very large sums of money over very short periods of time. Many of the relevant factors determining these capital flows differ from those listed above and include:

- comparative interest rates and interest rate regimes
- expectations about comparative interest rates
- other conditions in the domestic money markets
- expected movements in exchange rates
- exchange control
- borrowing conditions in international markets
- the rules affecting the operations of financial institutions
- taxation.

Even from the above brief outline, it can be seen that foreign exchange markets are interconnected with many other markets in the economy. In addition to these direct economic factors, the expectations of those operating in foreign exchange markets about policy changes and about the effects of those policies are of crucial importance. This applies with respect to both domestic and foreign government policies.

Furthermore, central banks have a key role in foreign exchange markets in many countries, either as independent agencies or as overt instruments of government policy. In some countries, the central bank is a key trader in the market in buying and selling foreign curren-

cies. In other countries, it may intervene to influence exchange rates in an otherwise relatively free market.

Prior to the floating of the NZ dollar, the Reserve Bank, in addition to administering what remained of exchange control, acted as a wholesaler of US dollars to the foreign exchange dealers. Now its role is much smaller.

### Spot Markets

There are two broad types of markets for foreign exchange: spot markets and forward markets. The spot market is where currencies are bought and sold at an exchange rate fixed today but for settlement within two days (the time allowed for cables to be sent and actioned). Prior to the recent floating of the NZ dollar, the Reserve Bank of New Zealand fixed the exchange rates at which it was prepared to buy or sell US dollars in exchange for NZ dollars. It operated on the basis of a 5 point spread either side of the mid rate. This gave the foreign exchange dealers a benchmark for transactions in other currencies. For example, a trading bank wishing to purchase French francs for a New Zealand client obtained a quote from a foreign exchange dealer in, say, London or Singapore, for purchasing French francs with US dollars. By combining this rate with either the Reserve Bank quoted rate for US dollars into NZ dollars or with a market determined rate for NZ/US dollars, the bank could obtain a French franc/NZ dollar rate for its client.

The Reserve Bank is no longer providing this underpinning to the market, which is free to find its own level.

For the service provided, the foreign exchange dealer takes a margin between the rate at which foreign currency is bought and the rate at which it is sold. Foreign exchange dealers therefore quote different exchange rates depending on whether they are buying or selling the foreign currency in question. Out of the margin between the buying and selling rates and also out of fees and charges, the dealers meet their costs and make their profits. Profits or losses can also be made on exchange rate movements in relation to their holdings of foreign currencies. When trading banks had the sole rights to deal in foreign exchange, this margin was agreed between the banks. With the expansion in the number of foreign exchange dealers in New Zealand, the market became a lot more competitive and margins between buying and selling rates prior to the float narrowed significantly to about international levels. In the uncertainty surrounding the float, margins have again widened as dealers seek to cover their risks.

Unless the foreign exchange dealers themselves

are seeking to make speculative gains on movements in exchange rates, they will want to match their sales and purchases of foreign currencies each day to ensure they are not exposed to exchange rate shifts beyond what they deem to be prudent either during the day or overnight. It would, however, be a happy coincidence should this matching occur. They will either be overbought in one currency (long) or oversold (short) in another. Dealers in New Zealand adjust the extent to which they are overbought or oversold by trading among themselves (the so-called interbank market), or (prior to the float), by buying from, or selling to, the Reserve Bank.

It should be noted that, apart from a very small trade in foreign notes and coins in relation to tourism, foreign exchange dealings do not involve the transfer of currencies out of the country in which they are legal tender. That is, US dollars rarely leave the United States and Japanese yen rarely leave Japan. When a New Zealand foreign exchange dealer buys, say, US dollars, it will involve a transfer in the United States of those dollars from the account of the American dealer selling US dollars, into the American account of the New Zealand purchaser, and an offsetting transaction in New Zealand from the account of the New Zealand purchaser of US dollars and the New Zealand account of the American seller of US dollars. This transaction will take place at the exchange rate agreed between the two parties. Thus foreign exchange dealing mostly involves a series of book entries in the countries concerned, rather than the actual transfer of cash.

### Forward Markets

Forward markets are those that involve the making of contracts to buy or sell foreign currencies at specified exchange rates at some specified future dates. The usual terms are for 30 days, 90 days or 180 days forward, but in principle, contracts could be written for any time period. By means of these forward contracts, traders and dealers can cover themselves from risk associated with movements in exchange rates.

Thus, in its simplest form, forward cover is an insurance against changes in the exchange rate. An exporter can contract to sell foreign currency to a foreign exchange dealer at an agreed rate at some stipulated future date (presumably when the receipts from the exporting come to hand). Similarly, an importer can contract to buy a given amount of foreign exchange at an agreed rate for delivery on a stipulated date (presumably when payment for the imports falls due). In this way the exporter or importer can, at a price, be protected against exchange rate movements. The foreign exchange dealers, through their international correspondent deal-

ers (be they banks or other institutions), match up buying and selling transactions in order to cover themselves against as much exchange risk as they wish.

As well as providing a hedge against exchange risk, forward cover can also change the currency in which credit is given or received. For example, a New Zealand exporter may give three months' interest free credit with the sale of his goods. Thus an Australian buyer may be required to pay the invoiced amount in Australian currency, three months after invoicing. In giving this credit, the New Zealand exporter is forgoing the interest that could have been earned on an Australian dollar three months' deposit. If the exporter then takes out forward cover, the cost to him would reflect the differential in interest rates between Australia and New Zealand, together with any additional risk premium (or discount) thought appropriate. Thus there are two aspects of the cost of giving credit. First, there is the Australian dollar interest earnings forgone, and secondly, there are the costs associated with changing the currency of credit (as far as the exporter is concerned) from Australian dollars to NZ dollars.

Clearly, in overseas transactions, the currency of invoice is an important aspect of risk. Currency risk for the exporter could be completely avoided if export invoices were in domestic dollars. In that case, the foreign importer would carry the exchange risk. These days, much of world trade is carried out in a few major currencies (e.g. US dollars), which reflects in part a desire to reduce currency risk associated with trading in minor currencies. The currency in which trade is invoiced will depend, in part, on the relative strengths of the trading partners, each one presumably endeavouring to maximise its advantage in terms of its own domestic currency.

Prior to August 1983, the Reserve Bank of New Zealand provided the underpinning to the forward market. The Bank ceased operating in the forward market from that time, with the exception of the period between 18 June and 13 July 1984, when it acted under instructions from the Government in view of the unsettled market conditions.

How does the foreign exchange dealer, the one providing the forward exchange, protect himself against the risks taken on? First, there may be a natural cover inherent in the volume of business the dealer is involved in. That is, equal and opposite risks may arise which cancel each other out. For example, an exporter may sell forward US\$100,000 for a particular date and an importer may contract to purchase US\$100,000 on the same day to pay an import

bill. Both the import and export transactions involve exchange risks for the foreign exchange dealer but put together, no risk is involved. On the same day, the dealer will take delivery of US\$100,000 from the exporter and will be able to deliver it to the importer at the agreed rate. Such perfect matching is unlikely, but a large degree of natural covering of risks does arise in the course of a dealer's operations.

To the degree that natural forward cover does not arise, a dealer may buy spot the currency required to provide the necessary cover for the risk undertaken. If, for example, a dealer has contracted to sell US\$100,000 to an importer in 90 days' time, he could borrow NZ dollars, buy US\$100,000 spot and invest the money for 90 days. On maturity, he has the required money to fulfill the forward contract.

### Futures

The above is a basic description of hedging in the foreign exchange market. Recent developments in foreign exchange markets overseas and also beginning in New Zealand, have introduced a number of other instruments for trading in foreign exchange. 'Futures' foreign currency contracts can now be bought and sold on some overseas exchanges. US dollar futures trading in New Zealand began in January this year. Whereas a forward contract is between a foreign exchange dealer and a customer with the size and timing of sale or delivery of foreign exchange arranged to meet the customer's needs, a futures contract is freely tradeable for a standard amount of foreign exchange deliverable on certain standard dates. Because of the standard nature of the contracts, transaction costs are relatively low. The tradeable nature of the standard contract gives the holder of the contract flexibility as to when to convert into another currency up to the expiry date of the contract. With the opening of a futures market in New Zealand, trading in foreign currency futures will increase the alternatives for foreign exchange users.

### Options

A more recent development still, overseas, is foreign currency options. Unlike forward or futures contracts, an option does not obligate the contract holder to purchase or sell the contracted amount of foreign currency, but rather, as the name suggests, gives the contract holder the option to purchase or to sell a specified amount of a foreign currency at a specified exchange rate and at (European option), or up to (American option), a specified date. While the holder of the contract has these rights, the seller of the contract has to fulfill

the contract should the holder so wish. Clearly, the buyer of the contract must pay the seller some price for providing the option and taking the inherent risk.

The option will be exercised if the spot rate for the currency in question is such that it is more profitable to obtain the foreign currency through exercising the option, rather than by means of a purchase on the spot foreign exchange market. The option market, by means of a purchase of both the option to sell and the option to purchase foreign currency at the same exchange rate, can provide cover for the risk associated with significant exchange rate movements. Options markets exist not only for the purchase of spot currency but also for the purchase of forward contracts. That is, an option can be bought which gives the right to purchase a forward contract in a given currency.

Two further aspects of foreign exchange markets need to be discussed: arbitrage and the role of speculation.

### Arbitrage

Arbitrage arises because there is not a single foreign exchange market but rather many markets, and involves the simultaneous purchase and sale of foreign currency in different markets for a profit, arising from price differences between markets. Various forms of arbitrage exist.

First, there is spatial arbitrage arising from different exchange rates for the same pair of currencies in different markets around the world. Purchase and sales of this currency would continue until the difference in exchange rates was smaller than the transaction costs.

Secondly, triangular arbitrage involves ensuring exchange rates are mutually consistent. For example, if the exchange rate between the US and NZ dollars was not consistent with the combination of exchange rates between the US and Australian dollars and between the Australian and NZ dollars, there would be the opportunity for profit-making by trading in these three currencies.

Thirdly, there is interest arbitrage, whereby interest rate differentials between various countries are exploited. There is, however, the ad-

ditional factor of exchange rate risk. The opportunity for virtually riskless interest arbitrage exists if there are profit opportunities even after the exchange risk has been covered in the forward exchange market.

### Speculation

While arbitrage involves little risk for those who engage in it, profits (and losses) can also be made by those who deliberately assume exchange risks. This is known as speculation. Speculation arises whenever a person or institution takes an unhedged net position in any foreign currency. Such speculation can be either passive, in the sense that it arises in the course of other foreign currency transactions, or active, in the sense of deliberate sales or purchase of foreign currency with a view to making profits out of exchange rate movements.

Too often speculation is thought of solely in negative terms, as someone or some institution seeking to take advantage of other vulnerable persons or institutions. This side of speculation undoubtedly exists. However, a speculator is really someone who is prepared to take risks. To enable those who want to avoid risks to do so, there need to be others who are prepared to take risks, and pay the penalty or reap the rewards accordingly. This is particularly important in the foreign exchange market. For example, in purchasing an *option*, the buyer is paying the seller to assume his exchange risk. Risk avoidance is important to the efficient working of foreign exchange markets. In many respects, speculation provides the basis of a stronger market in which foreign exchange transactions can take place, and hence is a means by which those who wish to avoid exchange risk can have their needs accommodated.

The foregoing outlines various ways in which foreign exchange markets can meet the needs of the participants. Spot deals, forward contracts, futures and options are able to meet the differing requirements of traders, whether they are importers or exporters or dealers wanting to cover risk. This range of market instruments enables growing specialisation. Further development of these can be expected in the New Zealand market as has been the case overseas.

## Chapter 3

# New Zealand Foreign Exchange Market

Over the last ten years or so, the structure of New Zealand's financial institutions has undergone a number of significant changes. The direction of change has been towards greater freedom from government regulation, although the path has not been steady or uniform.

One of the early significant events was the decision by the Minister of Finance in 1971 to allow overseas shareholding in local merchant banks. Prior to this, local merchant banks had been small operators on the short-term money market, essentially acting as intermediaries in the inter-company market. With the involvement of overseas companies in merchant banking, there was a major expansion of inter-company financial transactions. Greater overseas participation enabled an expansion of the capital base of merchant banks and brought with it close links to major overseas financial institutions and overseas expertise. Merchant banks also became involved in the foreign exchange market. It was in fact their involvement that became a catalyst for change in that market.

Prior to 1983, the trading banks and the Reserve Bank were the only institutions with authority to offer the full range of foreign exchange transactions. (Thomas Cook and American Express had permission to sell foreign exchange for travel purposes, while the Post Office could sell foreign exchange for travel and small, personal remittances.)

In the early 1970s, the Development Finance Corporation of New Zealand (DFC) and merchant banks were prominent in developing the hedging market for forward currency risks at a time when official forward cover was available on only a very limited basis (on trade transactions alone and then only for 10 days before the risk arose). In this operation the merchant banks and DFC essentially acted as brokers, bringing together parties with different risk exposures and seeking to match them up to cover the risk. In the 1979 budget, a liberalised forward exchange scheme was announced. This enabled both local residents and non-residents to enter into forward exchange contracts with the trading banks. Where a customer could not complete this forward contract (e.g. where the underlying commercial transaction did not eventuate), the trading bank with which the con-

tract had been made, was authorised to buy or sell the required foreign exchange to close out the deal. This move effectively killed the unofficial hedging market that had previously been provided by the merchant banks and by DFC.

In 1980, the closing out provision was widened to enable customers to obtain from, and sell to, *any* trading bank the required foreign exchange to settle otherwise undeliverable forward exchange contracts. This gave the customer the opportunity to obtain a more competitive spot quote with which to close out the contract. While it did provide a more competitive edge to the market, it also posed substantial problems in supervising the exchange control regulations. As a result, in mid-1981, special reporting arrangements were introduced to enable better supervision.

These closing out provisions enabled the merchant banks to take a bigger role in the foreign exchange market. As brokers, they could negotiate quotes from the trading banks in New Zealand and also with overseas banks, and thus handle a variety of foreign exchange deals that would otherwise have been carried out by a trading bank. By being able to buy spot foreign exchange to close out an undeliverable forward contract, merchant banks could undertake a wide range of foreign exchange deals while still operating through the trading bank system and maintaining a balanced book.

This posed even greater problems for the supervision of exchange control, as in effect, the merchant banks were exercising the sort of authority which had been delegated to the trading banks in terms of operating exchange control. While there was no evidence of breach of the regulations, the fact was that adequate mechanisms no longer existed to ensure the exchange controls then in force were being complied with.

The increasing scope of involvement by the merchant banks and DFC in the foreign exchange market as agents for their clients and in the hedging market, meant that by the early 1980s it was difficult in some respects to distinguish between their operations and those of the licensed dealers, namely the trading banks and the Reserve Bank. The solution to this problem in relation to the exchange control lay

either in removing the authority given to merchant banks to act as agents in this way, or in increasing the number of authorised foreign exchange dealers. Following a brief suspension of the limited role given to the merchant banks, the Government chose the latter course by establishing criteria and inviting applications for additional authorisations as foreign exchange dealers. There are now 16 authorised dealers, listed in Appendix I. This extension in the number of dealers also had the goal of increasing competition in the foreign exchange market.

There is no fixed number of authorised foreign exchange dealers. If applicants can satisfy the Reserve Bank on a number of issues, essentially of a prudential nature, authorisation is granted. The relevant issues are listed in Appendix II.

Thus, in terms of opening up the foreign exchange market, the inter-company loan market and other aspects of financial markets, the decision in 1971 to allow foreign participation in local merchant banks can be seen to have had a strategic importance, probably not recognised at the time. The introduction of foreign competition triggered off, over a number of years, changes to the way things have been done which improved the range and price of financial services available to traders.

The other major policy move on freeing up financial markets came in March 1976. While in the years prior to this, there had been a slow evolution of the financial system towards greater freedom and flexibility, the decisions announced in March 1976 represented a dramatic shift in government policy. Whereas prior to this time there had been fairly comprehensive controls on the borrowing and lending interest rates of most deposit-taking institutions, these were largely removed. (A second step in 1977 freed up the controls on savings banks.) This enabled competitive forces in money markets to take a much larger hand in determining the performance of the various institutions. Further, the 1976 measures indicated a much more competitive stance by the Government in relation to the interest rates payable on public sector securities.

While at the time of the change it was argued that the banks had been so used to operating in a non-competitive environment that they would still not compete effectively even in a freer environment, this has not been the case. With the greater freedom has come greater competition and the struggle to maintain or enlarge market shares. Arrangements (such as the solicitors' market) that thrived during the era of extensive controls, now have a reduced role in the provision of financial services, as financial institutions are better placed to provide the type of services required.

Extensive controls were re-imposed between 1982 and 1984 as a component of the Government's policy of controlling wages and prices, but the difficulties encountered then showed up the increasingly diverse and competitive nature of the finance sector. Controls on competition at one point divert activity into non-controlled areas. Over recent months, the re-imposed controls have been removed and further controls have been taken off, providing yet greater competitive freedom for financial institutions.

Thus over the last ten to fifteen years, there have been substantial changes taking place in the provision of financial services. This in turn has involved New Zealand financial markets more in international financial markets, particularly with the greater role being played by the merchant banks. Local companies are much more aware, and willing to take advantage, of the availability of foreign capital should funds from the domestic market be unavailable or too expensive.

### The Market Structure Prior to Floating<sup>3</sup>

The local foreign exchange market now has 16 operators — the four trading banks and 12 non-bank dealers. The banks still dominate the market in terms of daily turnover but the shares are changing as the market develops.

The market has undergone enormous change over the last year or so and has been developing very rapidly in terms of overall turnover.

Hard data on this is difficult to obtain but indications from the market are that overall daily turnover, both spot and forward, is probably on average in the range of NZ\$3bn to NZ\$4bn. Turnover in the spot market involving NZ dollars is up to \$1.5bn per day — this has increased by a factor of four or five during 1984. Spot trading of third currencies (i.e. not involving the NZ dollar) provides up to a further \$2bn per day. Forward market trading both involving NZ dollars and in third currencies is much smaller and more variable, each category providing up to about \$300m of turnover daily. Only about 10 percent of the spot NZ dollar trading relates to customer trading. The balance is inter-bank trading. For third currencies, it is practically all inter-bank trading.

Clearly such a growth in the market does not arise out of growth in exports and imports. Market growth in terms of turnover arises because of an increasing awareness of market opportunities and risks by those involved. For

<sup>3</sup> The information in this section is based on enquiries made by the Monitoring Group. The foreign exchange market is not well described in official statistics and, as is indicated in the text, the market is changing rapidly.

example, a person may take forward cover on a foreign exchange deal and close it out and re-open it several times before the underlying deal is completed, say, after three months. This would be done to take advantage of favourable movements in exchange rates. The volume of these sorts of transactions will continue to increase as companies, in particular, become more aware of the impact foreign exchange risks and opportunities can have on their profits.

In terms of turnover, the Bank of New Zealand (BNZ) still dominates the market with a share variously estimated at between 40 percent and 60 percent. In fact, even in international terms, the BNZ has a large role in foreign exchange markets essentially arising from its long involvement internationally. This dominance in the domestic foreign exchange market is greatest in the area of third currency deals (i.e. those without an NZ dollar leg), but is less so in the NZ dollar spot market, where other dealers play a more major role.

The New Zealand market is reported to be very competitive. Large companies can obtain foreign exchange deals that are as competitive as anywhere in the world. On these sort of deals profit margins are very small, especially for the smaller dealers. Reasonable margins can, however, still be made on medium to small deals, particularly if associated with an on-going relationship between the foreign exchange dealer and the company concerned.

An unpublished Reserve Bank study on the costs and margins of various financial institutions shows that trading bank income on foreign exchange operations as a percentage of average balance sheet totals has changed little over the period 1973 to 1983. There was a slight upward movement in 1982 and 1983, and preliminary (and incomplete) figures suggest this income ratio remained high in 1984 and that the 'fees' component of total foreign exchange income was at about the same proportion as in the previous two years. This would suggest that any narrowing of margins due to increased competition has been approximately offset by foreign exchange income from other sources.

The recent removal of exchange control may also increase the turnover of the local foreign exchange market. The speed of change in the market has shown up a number of problem areas. Some of these have been dealt with. The requirement for merchant banks operating in New Zealand to have a 30 percent local ownership tended to result in the merchant banks being undercapitalised. The Government recently changed its policy and authorised the Overseas Investment Commission to agree to

levels of overseas participation of up to 100 percent in cases where it was shown that New Zealand would benefit through having a higher level of overseas participation. Further, a potential has been shown to exist for New Zealand to develop increasingly as a major link in the international network of foreign exchange markets. New Zealand's favourable location in the time zone between Asia and the United States is increasingly being recognised internationally and this is witnessed to by the substantial growth in foreign exchange dealings over the last 12 months or so. For a period of each day, New Zealand is the only US dollar market in the world that remains open. For the foreign exchange market to continue to develop and provide employment and foreign earnings to New Zealand, there are still a number of problems to be dealt with.

- (a) There is presently a severe shortage of experienced foreign exchange dealers and competent operators are commanding high salaries. This shortage of experienced staff is a worldwide problem given the rapid development of foreign exchange markets internationally.
- (b) Since 1964, New Zealand's tax law (S309-327 of the Income Tax Act 1976) has included a *withholding tax* of 15 percent of gross interest paid from New Zealand to non-residents. This tax is reduced to 10 percent in respect of countries with which New Zealand has double tax arrangements. (This includes most of the OECD countries.)

Prior to 1983, a number of exemptions existed. Initially the exemptions applied to interest paid on government loans and on loans raised by public and local authorities. From about 1975, exemptions were also granted on the interest paid on private sector borrowings, and this practice grew until it was virtually a blanket exemption for non-resident investments in New Zealand. In 1983 a decision was taken, essentially on tax policy grounds, to tighten up the law on withholding tax, the intention of these changes being to try to make the tax effective instead of being largely inoperative. The moves have not been wholly successful.

First, the tax, although ostensibly aimed at 'non-residents', is almost always borne by the New Zealand resident. The New Zealand resident has the responsibility to make the payment to the Inland Revenue Department.

Secondly, there are difficulties in policing the payment of the tax, especially where the borrowing is carried out through an

intermediary such as a broker. In these circumstances, the borrower often has no knowledge of whether the lender is resident or non-resident and therefore whether the tax is payable.

Thirdly, there are evidently ways in which borrowing operations can be set up which avoid the necessity to pay the tax, but that involves extra cost and effort to structure the arrangement.

Statistics are not collected in a way which enables the revenue generated by the tax to be accurately assessed. However, such information as is available would seem to indicate the annual revenue is unlikely to exceed \$10m. From the above, it appears the withholding tax does not serve a useful

purpose in relation to the foreign exchange market. However, any review of the tax needs to be in the context of overall tax policy.

- (c) Management of company funds, particularly those involving foreign exchange, needs to be recognised increasingly as an important ingredient of overall management. This involves companies employing appropriate staff and giving them the flexibility to respond to the rapid changes that occur in foreign exchange markets.
- (d) More sophisticated telecommunications need to be available in order to minimise risk, as speed is very important in foreign exchange dealing.

## Chapter 4

# Government Policy Issues

This chapter deals with two main policy areas — exchange controls and the method of determining the exchange rate. Other policy issues, such as withholding tax, are dealt with in other sections of the report.

### Exchange Control<sup>4</sup>

Exchange control in New Zealand dates from December 1938. Before 1933, exchange rates and transactions between New Zealand and other countries were left to the trading banks, although individuals and firms could offset their purchases and sales of currencies outside the banking system if they so wished. In practice, before the 1930s, the banks maintained a convention that the key exchange rate, which was then between New Zealand currency and sterling, should be kept very close to parity, and they used credit rationing rather than price adjustments as the main means of meeting market pressures. When the Reserve Bank began operations in 1934, its willingness to deal with anybody for amounts of £stg.1,000 or more at announced buying and selling rates set limits to the exchange rates which the trading banks could sensibly quote to their customers. The convention of a fixed exchange rate supported by credit rationing remained strong, although in October 1938 the trading banks moved from a range of £NZ124-124 1/2 for £stg100 to one of £NZ124 1/2-125 (all within the Reserve Bank's range of £.NZ124-125). No official permission for external transactions was required.

During 1938, overseas reserves declined very sharply which led the Government to introduce both exchange control and import licensing. During the 1940s, the main components of exchange control were:

- a requirement that export receipts be returned to New Zealand through the banking system
- controls over all payments from New Zealand
- controls over private holdings of foreign currencies or securities
- rules relating to transactions outside of the sterling area.

The implementation of exchange control fluctuated throughout the 1950s, predominantly in relation to the balance of payments situation. The election of a National government in 1949 saw the relaxation of some of the controls on both foreign exchange and imports. The relaxation enabled a freer allocation of foreign exchange to pay for imports under import licences and also freed control over sterling area currency holdings. These could be freely traded within the sterling area and could be used to purchase foreign goods under 'no-remittance' licences. However, with the worsening of the balance of payments in 1952, an exchange allocation scheme was introduced whereby only up to 80 percent of the foreign exchange allocated to a particular importer during 1950 could be sold to that importer during 1952. Any amount over that had to be authorised by the Reserve Bank, having regard to its priorities for the use of foreign exchange. An improvement in the balance of payments enabled that scheme to be abolished at the end of 1954.

A further crisis in the balance of payments saw the intensification in 1958 of exchange control and the reimposition of overall import licensing.

Between 1958 and 1967 the overall impact of exchange control remained largely unchanged. There were, however, some changes in this period. The requirement that export receipts be returned to New Zealand through the banking system was broadened to include overseas remuneration arising from the provision of services overseas. The rules relating to New Zealand residents' holdings of non-sterling currencies and securities were relaxed, and sterling area securities and currencies became more freely tradeable. Also in 1966, a limited market in overseas securities was established under the close supervision of the Reserve Bank, whereby overseas securities could be bought and sold for New Zealand currency, under tightly regulated conditions.

The policy regarding capital remittances was also clarified in 1962, and equalised between sterling and non-sterling areas. The policy, which remained unchanged until the end of 1984, allowed considerable freedom for overseas residents to repatriate capital that had been brought into New Zealand through legitimate channels. This freedom extended to capital gains and capitalised profits. Interest, profits

<sup>4</sup> For a fuller description of exchange control history, see *External Economic Structure and Policy*, Deane, Nicholl & Walsh (eds), Reserve Bank of New Zealand, 1981

and dividends earned on overseas capital in New Zealand have always been remittable.

In 1967, in the face of a serious worsening of New Zealand's economic position, the foreign exchange allowances for overseas travel were temporarily reduced and the remitting of legacies and the repatriation of emigrants' funds were required to be spread over a number of years. These restrictions were lifted in 1969.

Between 1971 and 1973 there was a wide range of liberalising measures affecting current payments. These involved liberalised overseas travel allowances, freedom to remit legacies and emigrants' funds, and greater authority given to the trading banks to approve foreign exchange for current transactions. These measures and the termination of the non-remittance import schemes made the holding of foreign currencies and assets less attractive. This resulted in some increase in invisible receipts and private capital inflow.

The Exchange Control Regulations were revised in 1978 to bring all these changes together. Until effectively abolished recently, exchange controls have over the last 15 years or so been relatively free for almost all current transactions and for outward capital transactions by non-residents. The controls that have been in place have primarily been there to enable capital outflows by New Zealand residents to be policed.

It should also be noted that most developed countries have had exchange controls in place. Some degree of supervision over capital flows particularly was generally accepted, and acknowledged by the International Monetary Fund (IMF).

### *Current Receipts*

The controls on receipts of foreign exchange were aimed at ensuring that the foreign exchange earned from the exports of goods and services was returned to New Zealand through the banking system. To this end, virtually all exports from New Zealand required an export licence from the Customs Department as part of the checking mechanism against the receipts which flow from those exports. In this way, a check existed against the unauthorised export of capital.

Receipts from exports were required to be returned to New Zealand as soon as possible, but at most within six months of the date of export. Thus some flexibility existed for exporters to retain funds overseas to take advantage of favourable interest rates or of expected exchange rate movements. This was, of course, constrained by liquidity requirements in New Zealand.

Other receipts, such as interest, dividends or gifts received overseas, were not required to be returned through the banking system to New Zealand.

### *Current Payments*

While all remittances from New Zealand required the approval of the Reserve Bank, the practice was that virtually all current payments were approved under delegated authority by the trading banks. For imports, the relevant documentation (e.g. invoices, shipping documents) was normally required prior to payment being approved but this was not always so. Approvals for genuine overseas travel purposes were usually forthcoming.

Other current payments were subject to closer scrutiny, again in an attempt to prevent the export of capital sums.

### *Capital Transactions*

It is in the area of capital controls on New Zealanders that exchange controls retained a major impact until last December. It was not generally permitted for New Zealanders to acquire portfolio investments overseas, although a limited market in some overseas securities did exist under the tight control of the Reserve Bank. Furthermore, New Zealanders who wished to set up a business or a joint venture overseas were required to obtain the approval of the Reserve Bank. The attitude of the Bank varied with the balance of payments situation.

Although exchange controls have effectively been abolished, overseas investment in the equity of New Zealand companies where the investor has 25 percent or more of any class of shares on issue by a New Zealand company, requires consent under the Overseas Investment Regulations 1974, issued pursuant to the Overseas Investment Act 1973. Consent is still required under the Overseas Investment Regulations for overseas companies to borrow in New Zealand and for all companies to borrow overseas. As a matter of policy, consent for such borrowings is given automatically.

Approval is required from the Minister of Finance or the Overseas Investment Commission before:

- overseas acquisition of 25 percent or more of any class of shares issued by a New Zealand company (for companies with assets of less than \$500,000 approval is more or less automatic)
- commencement of business or the establishment of a branch in New Zealand by an overseas interest.

The general policy criteria used by the Commission are:

- (a) to ensure that New Zealand's natural and human resources are developed to the benefit of New Zealand, in a manner which accords with the best interests of New Zealand and consistently with the preservation of a social and physical environment which promotes the well-being of all New Zealanders.
- (b) Within this over-riding objective, to maximise the benefit to New Zealand available from the international transfer of capital and technology, and thus to ensure that overseas investment contributes to the maintenance of a satisfactory rate of economic growth in New Zealand, while making certain that ownership and control of New Zealand resources is not unwisely or unnecessarily transferred to overseas residents.

Apart from the requirements of the Overseas Investment Act, there remain virtually no controls on foreign exchange transactions. The Exchange Control Regulations 1985 provide for the authorisation of foreign exchange dealers and require all transactions to be carried out through an authorised dealer. The other main requirements relate to the provision of information. What can be expected to be the economic consequences of removal of controls on capital outflows?

- (a) Amongst other things, controls on capital outflows provided some support for an overvalued exchange rate. Without exchange control, expectations of a devaluation would lead to a large outflow and heighten pressure for a devaluation. However, given the flexibility that previously existed for non-New Zealanders who had brought capital into New Zealand to take it out together with retained earnings and capital gains, and given that exporters and importers had some degree of flexibility with the timing of receipts and payments, even the system as it was until late last year allowed considerable pressure to be brought onto the exchange rate. Events surrounding the 1984 election seem to confirm that exchange control in the form it was then could not protect the exchange rate against substantial capital movements. The removal of exchange control increases the need to maintain a realistic exchange rate.
- (b) Controls on capital outflow existed to prevent New Zealand investors exporting money to take advantage of higher returning investments overseas. If there were not more productive investments overseas, then

presumably there would be less need for controls on capital movements. Retaining funds in New Zealand by means of controls would thereby reduce the rate of return on these funds. This may have also led to lower GNP growth, depending on the degree of repatriation of interest and profits from overseas investments that would occur in the absence of capital controls. In the absence of controls, there would be no reason why profits etc. should not be repatriated. Thus the removal of capital outflow controls could lead to a higher rate of economic growth. Apart from balance of payments considerations, exchange controls, especially on capital transactions, have been used to increase local investment and employment, but this may have been at the expense of growth.

- (c) The very presence of controls on capital outflows gave an incentive to avoid repatriation of funds where this was possible. With the removal of controls it could be expected that there would be less incentive for those who were able to retain funds overseas to do so. With greater freedom in sending funds overseas, it is likely that a higher proportion of these overseas earnings will be repatriated, rather than retained overseas.
- (d) Higher costs are imposed on the economy in complying with, and enforcing, controls, or in finding methods of evading them. Thus the removal of exchange controls should reduce business costs.
- (e) The previous policy allowing non-residents to move funds reasonably unhindered into and out of New Zealand amounted to discrimination in favour of multinational business. They could take advantage of favourable international conditions in the organisation of their affairs that were not open to local businessmen. Abolishing exchange controls removes this discrimination.

### **Methods of Determining the Exchange Rate**

There is a range of methods of determining the exchange rate — from a free float of the national currency against all others, on the one hand, to a rigidly pegged exchange rate against all other rates, on the other. In between are arrangements such as managed floats, group floats (such as the European Monetary System), crawling pegs, and pegged but adjustable rates. The distinction between a fixed but adjustable rate and a floating rate which is subject to government intervention, may not be significant in practice. Conceptually, the difference is

whether the foreign exchange market or the Government is the dominant determinant of exchange rate levels.

The following outlines three of the 'text book' options for determining the exchange rate.

#### *Fixed Rate*

The main advantage of a fixed rate of exchange is the degree of day-to-day stability it brings to those involved in foreign exchange dealings, such as exporters and importers. Pricing decisions can be taken with reasonable certainty about the exchange rate. While there is not a risk of frequent fluctuations in the exchange rate, there remains a degree of uncertainty associated with large infrequent changes. There are a number of disadvantages of fixed exchange rates.

First, the exchange rate often becomes dislocated from market realities. This leads to the wrong pricing signals being given to business and consumers, which in turn leads to distorted economic decisions being taken. Usually the exchange rate becomes over-valued, as a consequence of government unwillingness to devalue, and this operates against export and efficient import substitution industries. It means returns from exports in local dollars are reduced and the local price of competing foreign goods is lower. An over-valued exchange rate is detrimental to exports and in favour of imports. It therefore can give rise to calls for protection against imports or for subsidies for exporters. Over the longer term, a fixed exchange rate is likely to lead to poorer allocation of resources and therefore to a poorer growth performance in the economy<sup>5</sup>.

Secondly, the maintenance of the fixed exchange rate becomes substantially a political question. Any question of devaluation (not with revaluation to the same extent) becomes a matter of political credibility to which other, perhaps more important, objectives need to be sacrificed.

Thirdly, control of the money supply is made more difficult because a fixed exchange rate removes from operation one of the means a government has of dealing with foreign capital flows.

Fourthly, government support for and protection of a fixed exchange rate is likely to be very costly to taxpayers. When the exchange rate is over-valued, the Government will almost certainly be forced to borrow overseas to support the rate. The cost of servicing this borrowing will be borne by the taxpayers, who

may also in the end have to pay the servicing costs in devalued local dollars because governments usually cannot hold out against a sustained run on the currency, as indicated by our experience of June/July 1984.

Fifthly, it can cause instability in other markets (for example in relation to reserves and interest rates), especially in a relatively free capital market.

The exchange rate could be fixed in relation to a single currency (as the NZ dollar was to the pound sterling prior to 1971 and to the US dollar from 1971 to 1973), or in relation to a basket of currencies, usually trade weighted (as the NZ dollar was from 1973 to 1979 and from 1982 until March 1985).

If the exchange rate is fixed in relation to a single currency, there is the risk that the movement of the currency to which the exchange rate is fixed becomes out of line with the needs of the country concerned. This occurred in New Zealand when the NZ dollar was tied to the US dollar between 1971 and 1973. During that time, the US dollar weakened in relation to most other currencies and the NZ dollar weakened with it, in spite of the fact that this was not warranted by the state of New Zealand's balance of payments. This was a major factor in moving to link the NZ dollar with a basket of currencies in 1973. Given the diversification of New Zealand's trading patterns, it became inappropriate for the NZ dollar to be linked to any single currency. (However, it is not inconceivable that in the context of future development of CER, there may be discussion on the relationship between the Australian and NZ dollars.)

The basket approach does allow some movement in the bilateral rates between any two currencies within the overall stability. There are, however, still major disadvantages associated with fixed rates.

#### *Crawling Peg*

Between June 1979 and June 1982, the New Zealand exchange rate was adjusted at frequent intervals by small amounts in such a way as to reflect primarily the differences in the rate of inflation between New Zealand and its major trading partners. Account was also taken of other factors, such as long-term changes in the terms of trade and other structural considerations. Over this period, the NZ dollar depreciated at an average annual rate of 6 percent per annum. Other countries have also used this method of adjustment.

The underlying rationale for this method, and perhaps its main advantage, is that it provides exporters and domestic import substitution industries with an assurance that reasonable

competitiveness will be maintained, even in the event of relatively higher domestic inflation. This in turn provides a degree of security for manufacturers to invest in production for export or for competing with imports. A second advantage is that it avoids the disruption that comes with large discrete exchange rate movements (as is the usual pattern of adjustment when a fixed exchange rate is attempted). Thirdly, the more-or-less automatic adjustment process largely de-politicises the exchange rate. The exchange rate is then seen for what it is — *one* of the significant economic variables that needs to move in line with other developments in the economy to maintain domestic and international balance.

However, while making exchange rate movements more predictable is an aid to the export sector, it also makes it relatively easy for operators in foreign exchange markets to make almost riskless profits. With reasonably widespread knowledge of the currencies in the basket and their approximate weightings, it is not difficult to calculate the likely magnitude of exchange rate adjustments in advance of their implementation. When the Reserve Bank was operating in the forward exchange market, it was relatively easy to obtain protection against almost certain exchange rate movement, with the taxpayer paying the inevitable loss made by the Reserve Bank.

A crawling peg method of adjustment focuses solely on the current account of the balance of payments — i.e. the adjustments are made to maintain the competitiveness of exporters and import substitutors. In a world of open capital markets, it is capital flows that, at least in the short run, have a dominant impact on exchange rate pressures. Thus exchange rate movements under a crawling peg may be inappropriate, either in direction or magnitude, having regard to capital flows. In not making allowance for the impact of capital flows, the crawling peg does not help in dealing with monetary control.

#### *Floating Exchange Rate*

A freely floating exchange rate is one where the sole determinants of the rate are the supply of, and demand for, a particular currency<sup>6</sup>. A managed floating rate is one where the Government intervenes from time to time, by means of buying or selling foreign currency, to adjust what the exchange rate would otherwise have been. The major world currencies have, over the last decade or so, floated reasonably freely against each other. About 75 percent of world

trade is carried out in floating currencies, even though on a numerical basis most countries have rates which are fixed either in relation to another currency or to a basket of currencies.

When floating currencies became more prevalent in the mid-1970s, it was envisaged that a number of advantages would flow — namely, it would remove the problems associated with balance of payments adjustment, it would free up domestic policy-making by removing the balance of payments constraint, it would remove the need to hold the same level of overseas reserves, and by maintaining a constant level of real exchange rate (i.e. by maintaining competitiveness), it would help to prevent trade restrictions.

Clearly, floating exchange rates have not wholly lived up to the expectations of those promoting them. In part, this has been because the world economy has been through a period of severe dislocation which would have put enormous pressure on any exchange rate regime. That aside, the early protagonists of floating exchange rates overstated their case. Let us now look at various aspects of floating rates and at international performance.

First, floating exchange rates have not totally removed concern about aspects of the balance of payments. While in theory, a free float should allow the exchange rate to act as an equilibrating device, this has not actually happened to the extent required to remove concern about the balance of payments. The major floating currencies still have balance of payments problems, such as current account deficits or surpluses, which cause concern. There are a number of reasons for this. Floating rates were intended to allow the adjustment of the overall balance of payments (capital and current account combined), and by definition this still occurs. However, governments remain concerned about the balance of transactions on current account. There is usually a significant time lag between an exchange rate change and the subsequent impact on export and import prices and volumes. Hence, although the exchange rate may float to precisely the right level, it will take time for the production processes to change to reflect that. Other factors include the impact of non-price aspects (e.g. quality, delivery times etc.) in determining trade flows and the impact of other policies, such as government budgetary policy. Further, as most of the floats have been subject to government intervention, it would not be expected, even in theory, that the balance of payments would find equilibrium.

Secondly, it was thought that floating rates would enable governments to operate monetary policies that are independent of other countries.

<sup>5</sup> See Economic Monitoring Group report, *Strategy for Growth*, New Zealand Planning Council, 1984

<sup>6</sup> This relates to overall supply and demand. Government supply of, and demand for, foreign exchange is part of overall supply demand, even in a situation where it is not intervening for the purpose of changing the exchange rate.

This would mean inflation rate differentials between countries could exist over the longer term without affecting international competitiveness. Overseas experience has shown that an independent monetary policy is not possible.

Thirdly, it was envisaged that floating rates would reduce the transmission of international fluctuations into domestic economies. Clearly the economic traumas of the 1970s have had serious repercussions around the world, but in spite of severe pressure at some points, the international economic system has (so far) survived remarkably well. There has not been a collapse of the financial system nor has international trade retreated behind protectionist barriers. Whether this is due to the operation of flexible exchange rates with the currencies used most in international trade is debatable. It is likely, though, that exchange rate flexibility aided the adjustment process.

Fourthly, an important question that needs to be addressed is whether uncertainty in floating exchange rates has inhibited trade. The evidence from the 1970s shows there were sizeable variations in bilateral nominal exchange rates on a daily basis. Variations of between 2 percent and 4 percent from one day to the next have not been uncommon and they have reached as high as 6 percent. Over longer periods, bilateral exchange rate fluctuations have been substantial. For example, between March and July 1973, the US dollar depreciated against the Deutsch mark by about 20 percent. By the end of 1973, the movement had been the other way by a similar percentage. But in the first quarter of 1974, the movement had again reversed with the US dollar depreciating by 11 percent.

Exchange rate shifts of these magnitudes and variability exceeded the inflation rate differential between the two countries. There were therefore, and have been in relation to other currencies, substantial shifts in the real exchange rate over this period. The concept of purchasing power parity (i.e. that exchange rates will move to offset inflation differentials between two countries) has not therefore been effective in explaining exchange rate changes.

Exchange rate fluctuations against a trade weighted basket have been smaller than in a bilateral context. They have, however, still been higher under floating rates than under the previous regime of pegged rates.

Given that exchange rate fluctuations under floating regimes have been considerable even in real terms, the question still needs to be asked as to whether this has disrupted trade. Early studies on this question suggested there was no detrimental effect on trade.

A more recent statistical study of US/West German trade<sup>7</sup> takes in a longer data period, and seems to indicate that exchange rate variability has affected both exports and imports of manufactured goods, either directly or through the price mechanism. A Bank of England study<sup>8</sup> shows no such link for British trade. The effect on trade of exchange rate variability remains an open question, particularly as to any likely effects for New Zealand.

Fifthly, it was expected that floating exchange rates would substantially reduce the need to hold reserves because the balance of payments would adjust itself without the need to use reserves. This has not turned out to be the case. In fact one study<sup>9</sup> suggests that, in the period immediately following the floating of exchange rates in the early 1970s, reserve use actually rose. The study also indicates, however, that since that time, there has been a tendency for reserve use to decline in industrial countries.

To sum up, what are the advantages and disadvantages of a floating exchange rate (either freely floating or a managed float)?

- (a) A floating exchange rate enables international market information to be more clearly transmitted to producers and customers in the domestic market. This facilitates decision-making which is more likely to lead to a more efficient allocation of resources.
- (b) In allowing the exchange rate to float, there is a broader range of markets through which the economy can adjust to changing circumstances. For example, with a fixed exchange rate, the impact of a large budget deficit or of a sizeable foreign capital inflow will be borne in domestic capital markets, mainly affecting interest rates. With a flexible exchange rate, part of the impact can be borne by the exchange rate.
- (c) Similarly, within the foreign exchange market itself, a floating exchange rate broadens the range of avenues through which adjustment can be made. With a pegged rate, any adjustment occurs through the volume of currency bought and sold, whereas with a flexible rate, both price and quantity can be part of the adjustment.
- (d) Floating exchange rates can lead to considerable day-to-day fluctuations, especially if

<sup>7</sup> "Effects of Exchange Rate Uncertainty on German and US Trade" by M.A. Akhtar and R. Spence Hilton, *Federal Reserve Bank of New York, Quarterly Review*, Spring 1984

<sup>8</sup> "The Variability of Exchange Rates: Measurement and Effects", *Bank of England Quarterly Review*, September 1984

<sup>9</sup> "Exchange Rate Flexibility and Reserve Use" by John Williamson, *Scandinavian Journal of Economics*, 1976

the foreign exchange market is not well developed, and this creates uncertainty for traders. Uncertainty usually leads to higher costs for the enterprises concerned. A well-developed forward market should mitigate this effect. There is, however, a trade-off between the costs associated with covering fluctuating exchange rates and those relating to interest rate volatility.

- (e) Because financial and foreign exchange markets adjust faster to change than goods or factor markets, there is a tendency for the exchange rate to overshoot, in the shorter term, the position it needs to reach in the medium term in relation to the economy as a whole. The Government could intervene to prevent or limit overshooting, but would the authorities know by how much to adjust?



## Policy Implications for New Zealanders

Over the last 15 years, New Zealand has had an exchange rate regime which at various times has involved a rate pegged to a single currency, a rate pegged to a basket of currencies and a crawling peg. Now the New Zealand dollar has been floated.

The size of the fiscal deficit and the market's expectations in relation to government action to deal with the deficit, are probably the key factors determining events in financial and foreign exchange markets. Given the present size of the fiscal deficit, there are two broad scenarios, the difference centering around expectations.

In the first scenario, the market operators expect that the Government's fiscal and monetary policy objectives will be achieved. In this case, there will be upward pressure on interest rates in the short term as the Government borrows domestically to cover its deficit. This high level of interest rates will lead to foreign capital inflows which will exacerbate the problems of monetary control. If the market participants believe that the Government will achieve its stated purpose, they will regard the high level of interest rates as temporary and the foreign capital inflows as sustainable while the deficit is being reduced. Clearly, however, the Government would want to deal with the monetary consequences of these capital inflows in a way that did not perpetuate the cycle of high interest rates and further capital flows. There are a number of alternatives.

- (a) It could offset the monetary consequences of the private capital inflow by repaying official foreign debt, to the extent that this is possible. This is at best a temporary solution as there are limits to the extent to which it can, or should, prematurely repay foreign debt. The relevant factors are the costs involved and the optimal distribution of debt covering length to maturity and currency. In the last budget, the Government set out a programme for reducing the fiscal deficit. To the extent that repaying official foreign debt provides a temporary respite while the Government reduces the fiscal deficit, it is a useful component of the Government's policy of keeping monetary growth under control.
- (b) The floating of the NZ dollar will enable

key exchange rates to appreciate to the point where the expectations of market participants are that they could move back the other way. Such an appreciation would tend to cut off the extent of net capital inflow because of the risk of capital loss associated with any future depreciation.

Thus the first scenario — when market participants expect the Government to succeed in its attempts to reduce the fiscal deficit — would lead to a temporary high level of interest rates, which could be exacerbated by foreign capital flows. However this would be a relatively short adjustment phase.

In the second scenario, market participants do not expect the Government to succeed in reducing the deficit either because of a loss of nerve to see the process through, or because other events knock the economy off course. If the Government, while not succeeding in reducing the fiscal deficit, maintained its monetary policy objectives, this would lead to a continuing high level of interest rates. Foreign capital would continue to be attracted by the high interest rates with the attendant monetary control problems. Presumably, this capital flow would continue until foreign investors became sufficiently concerned about the underlying fundamental problems, that they eased back on the flow of funds even though there may be a substantial favourable interest margin. The United States has been running a substantial fiscal deficit for a number of years and this is expected to continue. Foreign investors are still prepared to take advantage of relatively high interest rates and the strong dollar, but a point may well be reached where rising nervousness about the fiscal position leads to a falling away of foreign investment. This situation would be reached much earlier in New Zealand if there were signs that the fiscal deficit were not coming under control.

If the Government lost monetary as well as fiscal control, the process of capital outflows, a depreciating exchange rate and inflation would start much sooner and be much more difficult to control.

The key difference between these scenarios lies in the expectations of market participants, both foreign and local. In the Monitoring Group's

view, the Government is on the right track in seeking to reduce the fiscal deficit as quickly as possible, and should continue with present policies to this end and reinforce them, if necessary. The process of adjustment will not, however, be easy. There will be higher inflation, at least temporarily, and the exchange rate may depreciate as a reflection of this. There may also be a temporary slowdown in economic activity with consequential effects on incomes and employment. These should be regarded as temporary transition costs, although attention will need to be paid to their impact and distribution.

With these two possibilities, what are the areas of risk now that the exchange rate has been floated? Essentially there are three areas; the size of the fiscal deficit, the changing nature and level of industry assistance, and the maturity of the foreign exchange market.

- (a) As a key factor determining events in financial markets at present, a major reduction in the fiscal deficit is, in the Monitoring Group's view, a necessary condition for a successful float of the NZ dollar. While a substantial deficit remains and interest rates stay at a high level, there is a risk that the introduction of a flexible exchange rate may result in an appreciation of the dollar. This would be unfortunate if it continued for some time.
- (b) The second area arises out of the first. As substantial reductions in assistance to exporters are taking place (through the phasing out of export incentives and the removal of large parts of assistance to agriculture) with the *quid pro quo* being the 20 percent devaluation last July, it would pose considerable difficulties should the exchange rate appreciate by even a modest amount. It would put financial pressure on exporting industries and in turn would almost certainly renew calls for government-funded assistance to the sectors concerned. This would be a retrograde step. There are therefore clear risks associated with a policy that may facilitate a rise in the exchange rate to the detriment of both exporters and domestic industries and to the credibility of a more sensible long-term industrial policy.
- (c) A further risk is the immaturity of the foreign exchange market in New Zealand. As noted earlier, the market is going through a period of rapid growth and change. Will it be able to stand such a major change with regard to exchange rate policy? A commonly aired view is that with the present thinness of the market, a floating exchange rate would be at risk of being manipulated by major financial institutions

and of being extremely volatile. There are a number of points that should be made about this issue.

- (i) As shown in chapter 3, the market is not as thin as most people probably have thought. Even so, some market operators are of the view that a single transaction between \$30m and \$50m (or maybe even smaller) would be likely to have an effect on the exchange rate.
- (ii) Moving large sums of money through the exchanges would tend to shift the exchange rate against the interests of the speculator. Thus, to bring, say US\$50m, into New Zealand would increase the supply of US dollars and therefore tend to reduce the rate of exchange into NZ dollars. Taking a similar-sized sum offshore again would similarly tend to reduce the speculator's takings. It would, however, be possible for a major financial institution to 'piggyback' some of its own money through the foreign exchange market if it had a substantial commercial deal to accompany it. However, that would contain the risk of loss of future business if the company with the commercial part of the deal found out.
- (iii) The previous point is based on the way markets would operate in a perfect world. However, money markets tend to operate on the basis of rumour and the 'herd instinct'. For example, if the market operators could be led to believe, with a relatively small outlay, that there was a substantial foreign exchange deal to be transacted, the market would operate on the basis of that rumour and the exchange rate adjust accordingly. The operator who was responsible for the rumour could stand to make money at the expense of the other operators who follow the rumour.
- (iv) A floating exchange rate calls for greater sophistication not only by foreign exchange dealers themselves but also by the major users to ensure that they were obtaining maximum advantage from their foreign exchange dealings.
- (v) The Government has indicated that the Reserve Bank will intervene if required to stabilise the market. Many market operators have considerable misgivings about whether the Reserve Bank has the appropriate experience in day-to-day involvement in the market to manage successfully a floating dollar.

## Reactions to the Float

At the time the Government decided to float the dollar, this report was virtually finalised for publication. In the two weeks since the float, reactions have been sought from those operating in the market with a view to obtaining at least a preliminary view about market reactions.

A number of common perceptions have emerged. Those engaged in the market have adopted a very cautious approach and have sought to minimise their risks. Dealers have approached this on two fronts.

First, the margins between their spot buying and selling rates, which before the float were as low as 3 points, have expanded to between 30 and 50 points. Spreads are often wider still early in the trading day. (A point is a one hundredth of a cent on, say, the NZ/US dollar rate.) Narrow margins were offered previously because the Reserve Bank effectively underwrote the whole system by standing ready to buy and sell US dollars at a 10 point spread. In effect the Reserve Bank was taking the major risk. Now that risk lies wholly in the market place, dealers require a wider spread between their buying and selling rates. The expectation is that as the market adjusts to the changed regime, the spreads will narrow.

Secondly, the size of deal which dealers are prepared to transact on the interbank market has been reduced significantly. Only the bigger dealers (notably the banks) are prepared to transact deals larger than about NZ\$3m interbank. In this way the smaller operators are seeking to protect themselves against exchange rate shifts which may be associated with larger transactions. Again the expectation is that in time the average size of deal on the interbank market will rise.

The early post-float stability in the exchange rate was largely a reflection of the very high short-term interest rates on the domestic money market. This meant the cost of borrowing short-term to meet commitments often exceeded the likely exchange gain arising from a falling NZ dollar that many market participants expected to follow the float. Consequently, overseas-held funds were brought into New Zealand, which held the exchange rate up and even caused it to appreciate against the US dollar. The very tight monetary conditions which caused the high interest rates for overnight money were the result of the confluence of a number of factors. These included the large sums of money (estimated at between \$500m and \$1,000m) which had left New Zealand in the previous ten days, exporters holding off bringing funds back to New Zealand, tax payments having to be made by 7 March and high overdraft limit utilisation as companies accumulated stocks.

This has clearly shown the direct links that exist between the foreign exchange market and the domestic money market. Conditions in one market spill over very quickly into the other.

It is not altogether clear what effect the float has had on market turnover. Some dealers have indicated that the market for the NZ spot dollar has thinned out very significantly, probably to half its previous volume. This lower volume, however, is being transacted in smaller parcels (as indicated above). A number of dealers have also reduced trading in third currencies (i.e. those without an NZ dollar leg), primarily so their limited resources could be focused on NZ dollar business. This is expected to be a temporary phase and third currency dealing will probably not be unduly affected. With regard to the NZ dollar spot market, some market participants expect it to remain thin until there is an increase in the number of more highly capitalised dealers. Some dealers have virtually ceased operations for the time being.

Other dealers have indicated an increase in business since the float, as the greater day-to-day uncertainty has both created opportunities for profit-making and also the need for forward cover on transactions.

It seems likely that major corporate exporters are holding off repatriating funds for as long as possible. In the present thin market, repatriation of even a modest amount is likely to move the exchange rate against the exporter. Individual transactions will therefore tend to be small.

## Conclusion

The Monitoring Group supports the Government's willingness to allow more flexibility in exchange rates than has been customary in the past. There are, however, risks inherent in the decision to allow exchange rates to float. The persistence of the internal budget deficit, combined with tight monetary control, creates a risk of an undesired upward movement of exchange rates, while suggestions of a relaxation of monetary control could create a risk of an undesired downward movement of those rates. A floating dollar therefore intensifies the need for the Government to persist with reducing the fiscal deficit. Furthermore, while the early days of the float have shown remarkable stability in the exchange rate, and the public is learning not to attach undue importance to small movements, there is still a risk of excessive volatility while market operators become more experienced at reading and responding to what is happening. Floating the exchange rate is therefore no panacea, but it is a worthwhile further step in the Government's response to our economic problems.

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# APPENDIX

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## Appendix I

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# Authorised Foreign Exchange Dealers

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Bank of New Zealand

Australia and New Zealand Banking (New Zealand) Limited

Westpac Banking Corporation

National Bank of New Zealand Limited

Barclays New Zealand Limited

Broadbank Corporation Limited

Citicorp Forex Limited

Development Finance Corporation of New Zealand

Elders (Merchant Finance) Limited

Hill Samuel NZ Limited

Indosuez New Zealand Limited

Marac Corporation Limited

NatWest Lombank (New Zealand) Limited ✓

NZI Securities Limited

South Pacific Merchant Finance Limited

Wardley NZ Limited

## Reserve Bank Guidelines

While there are no formal criteria which the Reserve Bank uses to evaluate proposals from firms seeking authorisation as foreign exchange dealers, there are a number of areas that are looked at.

- (a) The applicant's, or its parent company's, background of experience in foreign exchange dealing.
- (b) The proposed capital structure — is there an adequately sized capital base?
- (c) The proposed management structure and how that relates to the operations of a parent company.
- (d) Any particular benefits and expertise that the company would bring to New Zealand (in the case of an overseas company).
- (e) An assessment of any particular area in which the applicant planned to specialise.
- (f) The exposure limits the applicant would expect to operate under.
- (g) An assessment of the applicant's information systems to ensure that they could meet reporting requirements.

SERIALS

