A NEW MEASURE OF THE EFFECTIVE EXCHANGE RATE

The Bank is shortly to release a new effective exchange rate index, and new financial institutional data derived from a recently introduced standard statistical reporting requirement.

The Reserve Bank effective exchange rate summarises in a single measure the value of the New Zealand dollar against the currencies of New Zealand's most important trading partners. The bilateral exchange rates of the countries in the index are weighted according to their importance in New Zealand's total trade. Hence the effective exchange rate is sometimes called the 'trade weighted' index. In the same way that the consumer price index is a weighted sum of a specific sample of many individual retail prices, an exchange rate index (or effective exchange rate) is a weighted sum of a currency's price in terms of a specific sample of foreign currencies.

The method of calculation of the Reserve Bank's effective exchange rate has been revised. The revised index and the previous index are shown in graph 1.

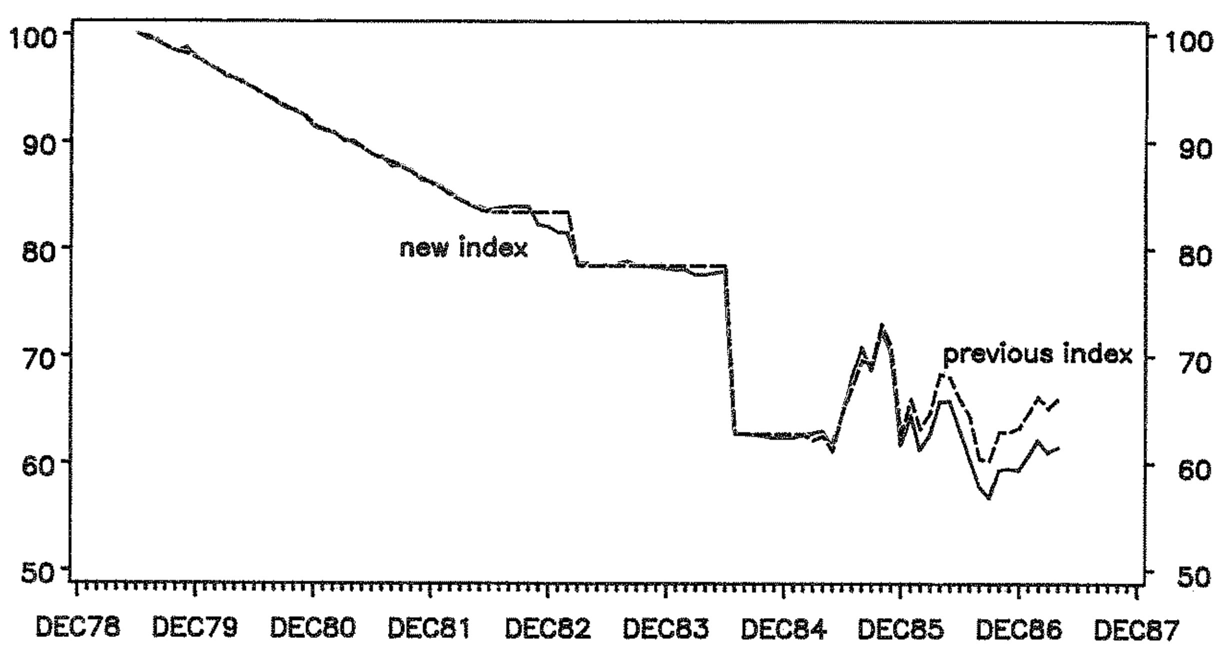
The revised index is similar in many respects to the index previously published in the *Bulletin*. It is a weighted geometric average of percentage changes in the market exchange rates of the New Zealand dollar against the currencies of New Zealand's five largest trading partners (United States, Australia, United Kingdom, Japan and West Germany), from the base exchange rates of 18 July 1984. The index is set to equal 100 at the base period, June 1979.

The major difference between the old and new indices is in the averaging technique used. The previous index was arithmetically averaged. This method had an undesirable property; namely, it imparted a systematic upward bias to the measurement of changes in the dollar's average exchange value. The geometric averaging technique now being adopted is free from this problem.

Along with this revision, there has also been a change in the data used to determine the trade weights. This change was necessitated by the fact that the Overseas Exchange Transactions data (used previously to determine the weights) is no longer compiled. Department of Statistics merchandise trade data will now be used, and when external trade in services data becomes available on a quarterly basis this will be incorporated in the determination of trade weights.

This index is designed for the purpose of readily monitoring the changes in the average exchange rate. It is useful as a short term indicator of day to day nominal movements in the New Zealand dollar. It should be noted that any assessment of changes in international competitiveness and the international purchasing power of the New Zealand dollar, over longer periods, requires analysis of a real exchange rate measure. This latter measure takes into account differences in inflation rates among countries. To enable analysis of trends in international competitiveness, the Reserve Bank intends to publish in the near future a quarterly real effective exchange rate index.

Graph 1
The New Trade Weighted Index



End of month rates. June 1979=100

New Financial Statistics and Monetary Aggregates

The Reserve Bank initiated a major re-evaluation of its statistical operations, in response to the report of the Review Committee on Finance Statistics and other factors such as the changing nature of financial markets. The re-evaluation resulted in the introduction of a more comprehensive and integrated statistical questionnaire which most financial institutions will be required to complete and submit to the Reserve Bank each month. A preliminary version of the new questionnaire was circulated first to banks in November 1985, and to other institutions in May 1986. After consultations, the finalised version was introduced in April this year. The resulting new statistics will be incorporated in the Reserve Bank's *Weekly Statistical Release* and the *Bulletin* over coming months.

As indicated above, the revamp of financial statistics was motivated in large part by the growing inadequacies of the old system. That system had developed in a piecemeal manner and reflected historical distinctions between institutional groups which had become less relevant in recent times. This differentiation in the treatment of the various financial institutions meant that the reporting requirements of some groups were more detailed than they were for others. For example, the four banks previously defined collectively as the trading banks were required to report balance sheet statistics to the Reserve Bank on a weekly and monthly basis whilst the finance companies were required to supply comprehensive reports only quarterly and less detailed reports monthly. More importantly, the blurring of the legal and functional distinctions between institutional groups, which has accelerated since the beginning of the deregulation of the financial system, has rendered the different treatments of various institutions inappropriate. Also, changes in business forms in the financial sector have over the years meant that substantial aspects of financial activity were not being captured by the old reports or were being captured in an inappropriate way as they were forced into categorisations not originally designed with such activities in mind.

It is hoped that these problems will be substantially resolved with the introduction of the new monthly questionnaire (the Standard Statistical Return) which will be used to survey the following institutional groups[1]:

1. Registered banks, including the four trading banks and their private savings bank subsidiaries;
2. Savings institutions, including the Post Office Bank, the trust banks and the building societies
3. Finance companies, merchant banks (commercial bill dealers) and stock and station agents.

It should be noted that although the new return was introduced in April 1987, some surveyed institutions will phase in its implementation. Therefore, some new statistics will tend to become available only gradually over the next year. (Information on individual financial institutions will not be provided.)

In the return lending and deposits will be replaced by the broader concepts of claims and funding. Each of these definitions will contain lending and deposits respectively, but will also include other items such as commercial bills and local authority securities held (in the case of claims), and other borrowings such as 'eurokiwi' loans and bonds (in the case of funding).

Both New Zealand dollar and foreign currency funding and claims will be recorded and each of these classifications will be further divided into New Zealand resident and non-resident categories. Funding and claims, and certain components comprising transferable instruments, transactions between financial institutions, and non-resident items, will be recorded by time to maturity.

Interest rate statistics will be 'focussed' with the use of weighted average rates rather than the current range data. In particular the quarterly weighted average interest rate paid on New Zealand dollar funding and received on New Zealand dollar claims will be reported. The weighted average interest rate on new funds raised over each month will also be available for total new funds and by the term of new funds.

A final section within the new return requires institutions to report off-balance sheet items. This section includes provision for items such as bill acceptances and endorsements, standby facilities granted, other commitments such as underwriting facilities, together with options, futures and forwards, and swaps.

New Monetary Aggregates

Monthly monetary aggregates (M1, M2, M3, private sector credit [PSC]and domestic credit [DC]) have been compiled by the Reserve Bank since 1976 while quarterly aggregates were made available during the 1960s. At the time when these aggregates were introduced, a specific group of financial institutions were classified as M3 financial institutions. The liabilities of these institutions were mostly in the form of deposits and money in the hands of the public, and their assets comprised, in large part, credit extended to the private sector. That is, the monetary and credit aggregates could be derived from the balance sheets of these institutions.

Full implementation of the standard statistical return will enable monthly monetary and credit aggregates to be compiled which better reflect the principles underlying the money and credit aggregates. For example, this applies to:

1 Individual financial institutions have been included in the survey if they have funding or claims in excess of $20 million (excluding funding to, or claims on, other surveyed institutions). This size criterion will be raised from time to time. Life offices and superannuation funds are excluded from the monthly survey, but participate in a quarterly survey that focusses mainly on asset holdings.

1. The nature of the business being recorded. For example, the money aggregates in principle measure liquid financial assets used directly in transactions, and progressively less liquid financial assets i.e. those that are progressively less direct substitutes for transactions money. The new standard statistical return will focus more clearly on the transactions distinction noted, and less on the issue of whether the financial assets are interest bearing or otherwise.
2. The range of financial assets and liabilities being considered. Previously, some forms of financial intermediation which were for all intents and purposes identical in effect to 'deposits' and 'loans' as conventionally defined were not included in the figures. The new aggregate measures will involve a more complete coverage.
3. The range of financial institutions surveyed. Previously, for example, building societies were not covered by the M3 measure. More generally, the institutional coverage will take account of the rapid changes in the institutional makeup of the financial market.
4. A clearer distinction between currency denomination of financial instruments and residency of the holders of such instruments. For some purposes, it is important to separate New Zealand currency funding and claims from their foreign currency equivalents.

It is envisaged that the new aggregates will appear in the *Bulletin* later this year.

For the record, the definitions of the monetary and credit aggregates are listed[2] :

M1 = notes and coin on issue
- till money of M3 institutions
+ chequable, EFT'POS or sweep account deposits
- inter-institutional chequable or EFT'POS deposits
- central government deposits

M2[3] = M1 + all non-M1 call funding
- inter-institutional non-M1 call funding

M3[4] = M2 + all other funding
- all other inter-institutional deposits

PSC
(Private Sector Credit)
= the sum of the M3 institutions total claims on the private sector
-inter-institutional lending

D.C.
(Domestic Credit)
= PSC + claims on Government, and on the marketing and stabilisation account balances

The aforelisted definitions differ from the existing ones in that non-resident New Zealand dollar funding is explicitly recognised and will be allowed for, data permitting, and M1 is net of all inter-institutional chequable and EFT'POS deposits.

2 Each money supply aggregate excludes New Zealand dollar funding from non-residents' and foreign currency funding.

3 Call funding includes funding on terms (time) that can of right be broken without break penalties, and overnight money.

4 The published M3 series will be a New Zealand dollar aggregate. Data on foreign currency funding from residents will also be collected and published so that an expanded series can be calculated by those interested.