THE COMPENSATORY DEPOSITS SCHEME

BACKGROUND

Most of the Government's revenue and expenditure transactions are spread reasonably evenly throughout the year. Accordingly, they do not have a particularly disruptive effect on the banking system. The major exception is company and self-employed person's tax revenues.[1] Whereas wage and salary earners pay their income tax liability throughout the year, by way of PAYE source deductions, corporate and self-employed taxpayers pay their annual tax liability in two instalments. The first, for most non-PAYE taxpayers, falls due on September 7, and represents provisional payment of one third of the current year's income tax (based on an estimate of income for the year). The second, which falls due on March 7, comprises the balance of the current year's provisional tax (again based on estimated income) and terminal tax for the previous year (i.e. any discrepancy between the previous year's provisional tax payments and the actual tax liability.

These instalments, particularly those due in March, represent major flows to the Government, and cause correspondingly large losses of reserve assets for the trading banks[2] and sharp upward movements in their advances to deposits ratios. For example, in the period during which tax payments were processed in March 1980 (nine working days) the net flow to the Government (i.e. after allowing for the Government's expenditures and financing transactions) amounted to some $750 million, compared with a total trading bank reserve asset level of $1,500 million at the commencement of that period. The advances to deposits (excluding compensatory deposits) ratio rose from about 67 percent to about 76 percent.

Movements of this order of magnitude, in the absence of compensatory deposits prior to March 1978, tended to put pressure on the banks. although they were able to operate on the basis of the tax flows being of a seasonal nature, to be more-or-less reversed in the succeeding months, they nevertheless needed to pay prudent attention to their investment portfolios in the months preceding the tax flow and to their advances to deposits ratios over the tax flow period. The result was that the banks tended to be more competitive for deposits each March and September, and short term interest rates in financial markets correspondingly generally rose in those months, sometimes quite sharply if the tax flow was unexpectedly heavy or fast.

So far as trading banks' reserve asset ratio policy was concerned, it was possible to maintain a reasonably stable policy stance (i.e. a stable target level of 'free' reserve assets) without compensatory deposits only by making substantial reductions to the ratios each March and September. Even if policy changes to the target free reserve asset margin were required in March or September, these would have been small relative to the magnitude of the tax flow, and accordingly the latter would have still dominated the setting of the ratios.

The need for ratio changes to accomodate the tax flow, which in principle were no different from the adjustments required on account of other seasonal influences, did not pose any problems for reserve asset ratio policy as such. However, the authorities were faced with a degree of uncertainty concerning the precise amount and timing of the tax flow. While this was not a problem peculiar to the tax flow influence on reserve assets, it was significant because of the amounts involved. A small variation in the tax flow in percentage terms from the amount forecast when setting the reserve asset ratio could result in a free reserve asset outcome for the month considerably different from the target level of 'free' reserves. In addition, because reserve asset requirements are specified in terms of average daily holdings, any variation in the rate at which tax cheques were processed by the Inland Revenue Department from that assumed when setting the reserve asset ratios similarly caused the free reserve assets outcome to deviate from the target free reserves margin.

The tax flows, and resulting need for the trading banks to relinquish reserve assets, involved the discounting at the Reserve Bank of substantial amounts of Government securities[3], and accordingly required them to pay close attention to this influence when organising the maturity structure of their portfolios. In order to avoid the structure of their portfolios being disrupted, it was necessary for the flows to the Government to be covered by short term Government securities (Treasury bills), or alternatively Government stock with a maturity date reasonably close to the tax flow period.

Portfolio management by the trading banks was also subject to the uncertainties mentioned above in the context of reserve asset forecasting. On those occasions when the tax flow exceeded expectations, the banks were faced with the prospect of having to discount longer-dated securities. In these circumstances (which generally also gave rise to the prospect of a reserve asset shortfall), the banks were inclined to become even more competitive for deposits, thereby imparting strong upward pressures on short term interest rates. It was these sharp, temporarily destablising interest rate consequences that the compensatory deposits scheme was designed to counter.

THE SCHEME

Compensatory deposits are unsecured deposits made by the Reserve Bank with the trading banks in such a way that they are effectively temporary redeposits of tax money. In broad terms, the compensatory deposits scheme serves to largely offset the impact on the banks of the March and September tax flows to the Public Account as they occur, and effectively spreads them over a longer period in a predictable manner. While the tax flow related loss of reserve assets remains the same,

1. Public servants' back pays, and some of the Government's domestic financing transactions can also have a relatively sharp impact on the banking system. The impact of the latter is more marked when competitive Government security issues are made. The availability of 'tap' issues of Government stock as from November 1980, should, however, result in a more even pattern of Government stock sales throughout the year.

2. Readers not familiar with the manner in which reserve assets are injected into and withdrawn from the trading bank system are referred to an article entitled *The Formation of Trading Banks' Reserve Assets* which appeared in the July 1977 *Bulletin*. This article has been subsequently republished by the Bank as Chapter 10 in the volume *Monetary Policy and the New Zealand Finanacial System*.

3. Note holdings and balances with the Reserve Bank also qualify as reserve assets, but owing to the fact that neither bear interest, they are generally kept at working levels only. Thus, any influences on reserve assets are reflected almost entirely in the trading banks' Government security portfolios.

the overall peak to trough movements in reserve assets resulting from the tax flows are reduced since the compensatory deposit repayment period generally coincides with injections of reserve assets from other sources. This provides the banks with a more stable and certain environment which brings with it the benefit of more stable short term interest rates.

Details on how the compensatory deposits scheme currently operates are set out below:

1.Institutions covered by the Scheme

The compensatory deposits scheme is available only to the trading banks. It is not compulsory but all five banks have participated on all occasions (each March and September) since the scheme was introduced in March 1978. As trading banks cheques are the major means of payment used in New Zealand, the tax flow necessarily involves a loss of funds for the trading banks as a system, irrespective of how the taxpayer funds his tax liability. Of course, this is not to say that other institutions, e.g. money market dealers and finance companies, do not similarly lose funds, but the compensatory deposit scheme as applied to the trading banks at least indirectly assists these institutions through the tax flow period by reducing interest rate pressures, and possibly also by making the trading banks more willing to provide short term overdraft accommodation for the non-bank institutions.

2.Banking Arrangements

The Inland Revenue Department generally commences the processing and banking of tax cheques in the Public Account at the Reserve Bank on the second working day following the last day for the payment of tax, and the bulk of the tax flow generally takes place during about 8 - 10 days in March, and 4 - 5 days in September. The compensatory deposits lodged with the trading banks funded by the Reserve Bank not the Public Account. The operation of the compensatory deposits scheme does not affect the Public Account cash balance therefore.

3.Calculation of the Amount of Compensatory Deposits

The objective is to compensate the banks for 75 percent[4] of the *net* flow to Government over the tax flow period (after making an allowance, up to March 1981 for any flow *from* Government in the days of the months preceding the commencement of the tax flow — from September 1981 onwards these flows from Government in the early part of the month will not be netted off in the calculation of compensatory deposit). An estimate of the tax flow is arrived at some months in advance on the basis of Treasury and Reserve Bank forecasts, and it is on this estimate that the banks' 25 percent share is calculated. Therefore, the banks know in advance what the tax related loss of funds for the trading bank system as a whole will be.[5] A numerical example based on the March 1980 tax flow period is set out as Appendix I.

4.When the scheme was initially introduced the banks were compensated for 100 percent of the net flow to Government but this was reduced to 75 percent from March 1979 tax-flow period.

5.Up to and including March 1981 there was some residual uncertainty as the total tax loss to be faced by the banks, resulting from the procedure of netting-off pre-tax flows from Government, the amount of these flows being unknown in advance.

4. Payment of Compensatory Deposits

Compensatory deposits are paid daily, i.e. on each day of the tax flow period, unless the tax flow for the day is less than the share to be met by the banks. The Reserve Banks is able to obtain sufficient information by about 1.30 p.m. of each day to enable a reasonably accurate estimate to be made of how much the banking system will lose to the Government on the day, and it can therefore place compensatory deposits (adjusted for the discrepancy between the estimated and actual flow for the previous day) before the close of business on that day.

5. Allocation of Compensatory Deposits among the Banks

The allocation of compensatory deposits among the five trading banks is determined by their deposit shares over a twelve month period. A lengthy period is adopted in order to avoid any surge in competition for deposits which might occur if the allocation criterion was deposit shares as the end of, or for a more limited period. Any attempt to link compensatory deposits more closely with the amount lost by each bank through cheques drawn for tax purposes would not necessarily provide a more equitable distribution of the deposits, because each paying banks' customers may have funded their accounts from other sources and because payments from the government to the private sector during the tax flow period may not be correspondingly spread among the banks. Nevertheless, alternative mechanisms for determining the share of compensatory deposits as between banks are under an on-going review.

6. Interest Rate

The interest rate charged on compensatory deposits is set equal to the yield on Treasury bills. As the banks' short term reserves are usually held as Treasury bills this means that compensatory deposits have little direct impact on the profits of the banks.

7. Repayment of Compensatory Deposits

Once the tax flow period has concluded, compensatory deposits payments are stopped, and a repayment schedule is calculated. Repayments are spread evenly over each of the working days in the remainder of the tax flow month (March or September as the case may be) and the subsequent two months, with the interest being paid as a lump sum on the last day.

CONCLUSION

The scheme as outlined above is essentially the same as when it was introduced in March 1978, although some amendments have been made as the result of experience gained from its operation over six tax flow periods. While it remains possible that further amendments may be made, it can be expected that the scheme's basic structure will be maintained, given that it is supported by the trading banks and given that it has largely achieved the objectives set for it.

APPENDIX 1
COMPENSATORY DEPOSITS SCHEME
MARCH 1980[1]

($ million)

March	*Estimated Tax Flow*[2]	*Actual Tax Flow*[1]	*Banks' 25% Share of Tax Flow*[3]	*Adjustments*[4]	*Compensatory Deposit Payment*[5]
11	135.8	121.4	−33.3	—	102.5
12	125.1	121.7	−33.3	−14.4	77.4
13	115.3	181.9	−33.3	− 3.4	78.6
14	130.4	151.7	−33.3	+66.6	163.7
15	. .	. .	. .	. .	
16	. .	. .	. .	. .	
17	82.3	85.1	−33.3	+21.3	70.3
18	93.7	90.7	−33.3	+ 2.8	63.2
19	41.2	45.3	—	− 3.0	38.2
20	31.3	25.9	—	+ 4.1	35.4
21	43.2	46.2	—	− 5.4	37.8
	798.3	869.9	200.0	+68.6	667.0[6]

1. These figures are based on the actual flows recorded for the March 1980 compensatory deposit period, with some modifications.
2. These estimates are the daily mid-afternoon estimates of each day's tax flow, and are used as the basis for calculating each day's compensatory deposit payment.
3. The banks' 25 percent share of the tax flow at $33.3 million per day for six days ($200 million in total) was based on an advance forecast of an overall net flow to Government over the tax flow period of $800 million. This estimate compares with an actual outcome of $869.9 million — see second column.
4. Adjustments comprise:
   (a) Up to March 1981 for the first day of the tax flow period an allowance for any net flow *from* Government in the pre-tax flow period. For March 1980 the flow over this period was in the opposite direction and accordingly no adjustment was necessary.
   (b) For subsequent days in the tax flow period an allowance for the difference between the estimated and actual flows to Government on the previous day.
5. Equal to column 1, plus column 3, plus column 4.
6. Compensatory deposit repayments commenced on 25th March (the 22nd and 23rd being a week end, and the 24th being set aside for the calculation of the repayments schedule) at the rate of $14.5 million per day. The last repayment (which included interest) was made on 30th May.