

A REVIEW OF GOVERNMENT STOCK TENDERING

Introduction

In September 1983 the new system of selling government stock by tender was introduced, replacing the previous tap issue system which had been used since 1980. Tenders have now been held on twenty-one occasions up to July 1985, and the system has become the principal tool for the operation of monetary policy. This article provides an overview of the experience with Government stock tenders to date. The arguments for tendering and its role as an instrument of monetary policy were discussed in some detail in an article in the June *Bulletin*, entitled 'Monetary Policy in New Zealand'.

The principal reason for shifting to a tender system of selling government stock was that it permits the Government to determine the quantity of stock sold in line with its monetary policy objectives, while allowing market participants to determine by competitive tender the price at which they are willing to hold the stock. This was consistent with a general shift in the focus of monetary policy towards controlling the growth of the monetary and credit aggregates, following the experience of high and variable rates of growth in these aggregates through the 1970s. However, stock tendering was introduced during a period in which government policy was being directed at controlling interest rates and this limited the effectiveness of the tender system as a monetary policy instrument prior to July 1984. A feature of the following discussion is the contrast between the experience with tendering over the first eight tenders held prior to July 1984 and the experience since that time.

Amendments to the Tender System to Date

The stock tender system has operated largely unchanged since its introduction. Nevertheless, there have been a number of technical changes and these are outlined below.

Bid Allotment Method

The original method of setting the rate at which successful bids were allotted was known as yield bid, under which successful bidders were allocated stock at

the yields they had bid in the tender. As from the fourth tender in December 1983, a uniform yield allotment system was adopted, whereby all successful bids were allotted at the highest successful yield bid. This system was maintained until September 1984, when the yield bid system was reinstated.

In terms of the interest cost to Government there is little difference between the two allotment methods. The average rate at which the community as a whole is willing to lend funds to the Government will be determined by factors more fundamental than the chosen allotment method. The yield bid system has generally been preferred in order to encourage the development of a secondary market in government stock. A dispersion of yields and the resulting opportunity for trading profits provides greater incentives for 'market makers' to participate in the tenders. Prior to July 1984, however, Government limitations on the maximum interest rates acceptable in the tenders, meant that voluntary holdings of government stock were low so that there was little scope for growth of secondary market trading. Accordingly, there were temporary advantages in moving to the uniform yield method in terms of being able to sell more stock at rates acceptable to the Government.

Non-Competitive Facility

Concerns that a yield bid system may disadvantage less sophisticated investors who are not closely attuned to secondary market rates led initially to the provision of a non-competitive bid facility, which allowed for bids of up to \$100,000 (totalling not more than 5 per cent of the total stock on offer) to be allotted at the weighted average yield in the tender. This facility was subsequently withdrawn for tenders 4-11, since under a uniform yield system a non-competitive facility is not required. Though it has since been reintroduced, use of the non-competitive facility has been relatively minor. Non-competitive bids have generally totalled less than \$300,000 for any given maturity, and have only once exceeded 0.5 per cent of the stock on offer.

Oversubscription Facility

With effect from the fifth tender in February 1984, the tendering system was amended to allow the

Government to accept oversubscription of up to 20 per cent of the amount offered in any individual maturity, provided that the total of the amounts accepted in all maturities did not exceed the total amount on offer. Again this change was primarily made to provide the Government with greater flexibility to sell as much stock as possible within the upper limits that had been set on acceptable interest rates. The oversubscription facility was used frequently in the environment of constrained interest rates, but has not been used since September 1984.

Amounts on Offer and Bids Received

In a freely operating tender system, bids received would normally be expected to substantially exceed the amount on offer. The only exceptions to this may be if market interest in lending to Government was influenced by other considerations such as increased uncertainty in financial markets generally or expectations that the Government would not accept rates above a certain level.

The New Zealand experience to date is summarised in table 1:

TABLE 1
TOTAL SUBSCRIPTIONS RECEIVED

	<i>Amount on Offer \$m. (1)</i>	<i>Bids Received \$m. (2)</i>	<i>Subscription Ratio (2)/(1)</i>
Tenders 1-8	2,950	3,678	1.3
Tenders 9-21	4,350	10,818	2.5
Total :	7,300	14,496	2.00

In tenders 5 and 8 (February and June 1984) subscriptions were insufficient to cover even two-thirds of the tenders while in tenders 14, 16 and 20 (November 1984, and January and June 1985) subscriptions were more than three times the amount on offer. In the most recent tender, tender 21, bids received were greater than four times the amount on offer.

The low level of subscriptions in tenders 2-8 appears to have reflected a lack of investor interest as a result of indications from the Government that it was not prepared to accept interest rates above a certain level. Though maximum acceptable rates were never formally announced, it quickly became clear from the range of bids accepted in the tenders that the Government was not willing to pay more than 11 per cent on conventional stock and 6 per cent on index-linked stock. The rate constraints discouraged many investors from placing bids and as a result demand for stock was largely limited to those institutions who were forced to meet government security ratio requirements.

The only significant exception to this was the demand for inflation index-linked stock. A major reason for the lack of investor interest in conventional stock was probably market uncertainty over the future path of inflation. Although an 11 per cent nominal interest rate was well in excess of the then current inflation rate under the wage and price freeze, investors were clearly not confident that continuing low inflation rates would be maintained in the future.

One way of removing the effect of this uncertainty was to offer an instrument which paid a fixed interest rate over and above the rate of inflation (i.e. a fixed real rather than a fixed nominal rate). Index-linked stock was first offered in the fourth tender and proved to be more attractive to the market, at least in comparison with low interest conventional stock. It also provided the Government with a way of selling more debt without the need to offer higher nominal interest rates (though the effective interest yield on index-linked stock could potentially be higher than on conventional stock if inflation subsequently increased).

The Government relied heavily on sales of index-linked stock between December 1983 and June 1984, offering almost twice as much index-linked as conventional stocks in the tenders over this period (see table 2 below). Reflecting the greater market demand for this stock, the subscription ratio was 1.5 as compared with 0.6 for conventional stock.

Following the change of Government in July, less emphasis was placed on index-linked stock in view of the incoming Government's willingness to accept market rates of interest on conventional stock. No index-linked stock has been offered since tender 11 in August 1984.

TABLE 2
**COMPARISON OF SUBSCRIPTIONS FOR
CONVENTIONAL AND INDEXED STOCKS**

	<i>Amount On Offer</i>		<i>Bids Received</i>		<i>Subscription Ratio</i>	
	<i>Index- Linked \$m. (1)</i>	<i>Conven- tional \$m. (2)</i>	<i>Index- Linked \$m. (3)</i>	<i>Conven- tional \$m. (4)</i>	<i>Index- Linked (3)/(1)</i>	<i>Conven- tional (4)/(2)</i>
Tenders 4-11 (Tenders 4-8) ¹	1975 (1425)	1425 (825)	2839 (2178)	1444 (527)	1.4 1.5	1.0 0.6

¹ Prior to July 1984.

Stock Sold

The need to reduce the liquidity of the financial system in order to obtain control over monetary conditions meant that relatively large tenders continued to be offered over the first half of 1984. However, the interest rate limits imposed by the Government meant that this objective was frustrated and a large number of otherwise successful bids were rejected because of excessive yields. As table 3 indicates, of the first eight tenders only 69 per cent of tender stock was allocated.

TABLE 3
TENDER STOCK ALLOTTED
(as a percentage of amount offered)

Tenders 1-8	69.1
Tenders 9-21	98.2
All tenders	86.4

Since August 1984 the scheme has operated as originally envisaged with all stock being allotted if valid bids are sufficient to cover the tender. The market now determines the interest rate required to sell the stock, and both the market and the authorities can be more certain of the amount of stock which will be sold.

The breakdown of the stock sold between ordinary and indexed stock and by maturity provides some interesting data on the way tendering has been used.

The monetary policy objective of selling government stock is to reduce the liquidity of the financial system by offsetting the injections to liquidity which arise from the ongoing fiscal deficit and from maturities of existing debt. It is therefore generally desirable that longer-dated stock be sold where possible in order to minimise the liquidity of government stock holdings and to spread the refinancing requirement out over a long period.

Under the previous tap issue system, it had generally not been possible to sell longer-dated stock since the yields offered by the Government were not sufficiently attractive to induce investors to commit themselves for a long period. Most investors were institutions which were required to hold stock for ratio purposes and preferred shorter-dated maturities on which the potential capital loss from a subsequent rise in interest rate levels was lower. The bulk of the tap issue stocks were therefore in the 3-5 year range with no maturities beyond six years.

As table 4 indicates, this pattern continued over the early period of tendering, at least as far as conventional stock was concerned. Over the first eight tenders, 61 per cent of conventional stock sold had a maturity of less than two years and no stock was sold with a maturity of more than eight years. Index-linked stock was more successful in this regard — investors were clearly more willing to buy longer-dated stock when the inflation risk, and therefore a significant part of the interest rate risk, was removed. Almost half of the index-linked stock on issue is for maturities of more than eight years.

Since July 1984, the Government's willingness to accept market interest rates has facilitated the sale of more longer-dated conventional stock. The Government is now selling ordinary stock with up to 10 years to maturity, with around 31 per cent of the stock sold since July 1984 being in the 8-10 year range. However, interest rates bid in the tenders have generally been higher than the Government believes is justified by the medium-term outlook for inflation and so, by comparison with many other countries (e.g. the United Kingdom and United States) there has to date been a relative absence of longer-dated stocks and a complete absence of very long-dated stocks. The Government has not been willing to become locked into paying very high nominal interest rates for a long period given its expectation that the inflation rate will be substantially reduced beyond the short-term.

TABLE 4
VOLUME OF STOCK SOLD BY MATURITY
(\$ million, nominal value)
(percentage of total in brackets)

	<i>Less than 2 years</i>	<i>2-5 years</i>	<i>5-8 years</i>	<i>Greater than 8 years</i>	<i>Total</i>
Indexed Stock	— (0.0)	339.7 (19.0)	583.1 (32.7)	863.0 (48.3)	1,785.8 (100.0)
Ordinary Stock	818.9 (18.1)	827.5 (18.3)	1,729.4 (38.2)	1,147.8 (25.4)	4,523.8 (100.0)
Total :	818.9 (13.0)	1,167.3 (18.5)	2,312.6 (36.6)	2,010.8 (31.9)	6,309.6 (100.0)
Tenders 1-8 (Sep. 83-June 84)					
— Total	495.0 (24.3)	335.1 (16.4)	345.0 (16.9)	863.0 (42.3)	2,038.1 (100.0)
— Ordinary	495.0 (60.7)	258.9 (31.7)	61.9 (7.6)	— (0.0)	815.8 (100.0)
Tenders 9-21 (July 84-July 85)					
— Total	323.9 (7.6)	832.2 (19.4)	1,967.6 (46.1)	1,147.8 (26.9)	4,271.5 (100.0)
— Ordinary	323.9 (8.7)	568.7 (15.3)	1,667.6 (45.0)	1,147.8 (31.0)	3,708.0 (100.0)

Interest Rates

Both the level and term structure of interest rates have changed markedly since tendering was introduced in September 1983. In late 1983 the inflation rate had reached its lowest point for many years and a combination of market forces and Government regulation was lowering the overall level of interest rates. Limits on the maximum acceptable interest rates on new issue government stock, together with an increasing array of controls on other interest rates, continued until the July 1984 election when the removal of interest rate controls and the new Government's commitment to an active debt sales programme saw an immediate increase in government stock rates of around 5 percentage points.

Rates continued to firm steadily over the remaining period prior to the float in early March, with private capital flows tending to act as a stabilising factor on interest rates over most of this period. There was a further sharp increase in government stock rates in the first two tenders (18 and 19) held after the float, apparently reflecting increased market uncertainty and a fall-off in overseas interest in the immediate post-float environment. However, this trend appeared to be reversed following the announcement of a lower budget deficit estimate in June and medium-term stock rates in tenders 20 and 21 fell back close to pre-float levels.

Interest rates by maturity in the tenders to date are summarised in table 5 below.

Institutional Participation in Tenders

The overall environment in which financial institutions operate has also changed markedly in the twenty-three months since tendering commenced.

Ratios and interest rate controls have been removed, restrictions on overseas investment in New Zealand have been eased, and the prohibitions on New Zealanders engaging in portfolio investment abroad have also been removed. Thus the Government no longer compels any person or institutional group to invest in New Zealand government stock.¹

Trends in the share of tender stock taken up by various institutional groups to some extent reflect this changing environment and are summarised in table 6, both in terms of the experience pre and post-July 1984 and in terms of the yield bid and uniform yield allotment methods.

Some caution must be exercised in interpreting the data, partly because of difficulties in classifying bidders, but also because the data relate to new issue stock purchased in the tenders only and do not reflect subsequent secondary market trading.

Perhaps the most interesting feature of the institutional classification is the development of sharebroking firms, through their nominee companies, as major participants in the new issue market for government stock. These firms generally operate primarily as dealers and brokers, purchasing stock on behalf of clients or on their own account for trading rather than for their own investment purposes. Their activity in the new issues market therefore mirrors a more active secondary market. Given this role, it is not surprising that the stockbrokers' share of successful bids has increased sharply since the freeing up of interest rates and the return to a yield bid allotment method.

¹ By mutual agreement, the Post Office Savings Bank still maintains a minimum government security ratio, although this will be progressively removed over the period to 38 per cent by March 1990.

TABLE 5
INTEREST RATES
(per cent)
(index-linked rates in parentheses)

ate	Tenders	< 2 years	2-5 years	5-8 years	> 8 years
1/ 9/83	1	8.7	9.0		
1/10/83	2	9.5	9.9	10.6	
1/11/83	3	10.6	10.6	10.9	
1/12/83	4	9.9	11.0	11.0 (6.0)	(6.0)
1/ 2/84	5	11.0	11.0	(6.0)	(6.0)
1/ 3/84	6		10.0	(5.3)	(4.59)
1/ 5/84	7	10.0	(5.0)		(4.95)(4.55)
1/ 6/84	8	10.0	(5.0)		(5.0)
1/ 7/84	9		15.0 (5.0)	15.5 (5.0)	
1/ 8/84	10	15.5	(6.0)	(6.0)	15.25
1/ 8/84	11		(6.0)	15.49	15.25
1/ 9/84	12	16.0		15.6	15.5
1/10/84	13			17.4	17.0
1/11/84	14		17.4	17.1 16.9	
1/12/84	15		17.3	17.0	16.8
1/11/85	16		17.9	17.5	17.1
1/ 2/85	17		18.4	17.8	17.4
1/ 4/85	18			19.0	18.0
1/ 5/85	19	21.8		20.4	19.2
1/ 6/85	20	19.6		18.2	17.3
1/ 7/85	21			18.2	17.9

TABLE 6
Institutional Composition of Total Successful Bids
(Average of tenders in each category)

	<i>Trading Banks</i>	<i>Finance Companies</i>	<i>Merchant Banks</i>	<i>Share- brokers</i>	<i>Life Offices</i>	<i>Govt. Corps</i>	<i>Sub Total</i>
Bill							
Tenders	16.9	13.1	23.0	12.9	14.2	11.2	91.3
Sept 1983- June 1984	17.2	10.6	21.8	6.1	12.8	20.2	88.7
July 1984- July 1985	16.6	14.5	23.7	17.3	15.0	5.8	92.9
Yield Bid							
Tenders	17.8	10.9	22.7	16.3	12.8	13.4	94.0
Uniform Yield							
Tenders	14.5	16.5	23.5	7.6	16.6	7.9	86.6
Range	0.0-37.3	1.5-27.7	11.4-59.0	0.6-37.3	2.7-35.2	0.0-55	

There are two interesting aspects to the role of brokers in the market. Various broking firms have developed retailing operations in small parcels of tender stock, designed to compete with debentures and term deposits. This activity has probably been at least partly responsible for an increase in personal holdings of government stock from \$35 million in July 1984 to \$138 million by July 1985. Despite this, however, there is still an obstacle to large scale private holdings of government stock in terms of the lack of an established secondary market for small parcels of government stock. Thus, unless someone is prepared to 'make' such a market, it is unlikely that a significant proportion of private savings will be invested directly in wholesale government stock.

The second aspect of broker participation in tenders relates to overseas investment in New Zealand government stock. It is apparent that sharebrokers (and merchant banks) have been acting as agents for overseas investors which have shown an increasing interest in New Zealand since the removal of interest rate controls and the relaxation of exchange controls. It is unlikely that significant amounts of New Zealand government stock were held by or for non-residents prior to July 1984. Unofficial survey data suggest that such holdings had grown to around \$580 million by the end of May 1985, mostly from investors in Japan and the United Kingdom, but to a lesser extent also from Singapore, Hong Kong and Australia.

Other features of the institutional classification include:

- The higher proportion of sales to life offices and finance companies under the uniform yield allotment method. For the former group, this probably reflects the fact that uniform yield tenders largely coincided with the offering of indexed stock, of which the life offices purchased a relatively large proportion. For the latter group, this probably reflects the fact that the uniform yield tenders also coincided with much of the period over which a marginal ratio requirement was applied to finance company lending.

- The decline in the share of the tenders taken by government corporations since June 1984. The figures for the earlier period are inflated by heavy purchases in the first three tenders, when government organisations accounted for around 35 per cent of total sales.
- The fall-off in participation by the M3 institutions in recent months is highlighted by the results of stock tenders 20 and 21 where M3 institutions managed to purchase only 6 and 3 per cent respectively of the total successful competitive bids. This compares with an average M3 institution uptake of 34 per cent over the previous five tenders.

Summary

This article has presented available data on the experience with stock tendering to date. In a technical sense the move to a tender system for selling wholesale government stock has proceeded smoothly, with few changes having been made to the tendering system since its introduction.

Tendering is the most efficient method of meeting the Government's quantitative debt sales objectives, both in terms of financing the fiscal deficit and in terms of monetary policy objectives. However, it may be a less satisfactory system of selling debt when the Government has over-riding interest rate objectives. This was the case prior to July 1984 and, as a result, the potential benefits of moving from a tap to a tender system were somewhat eroded over this period.

Since July 1984, the tender system has been operated as originally intended and, against the background of the removal of interest rate controls and the floating of the exchange rate, stock tendering has become the principal tool of monetary policy.