

INFLUENCES ON PRIMARY LIQUIDITY

This article, prepared in the Financial Markets Department of the Bank, introduces a new set of tables giving information about the influences on the levels of settlement cash and primary liquidity. The main features of the data are briefly discussed.

Introduction

Primary Liquidity (PL) is the name given to the assets used by the financial sector to settle debts at the Reserve Bank.

There are two components to PL, settlement cash and discountable securities. Settlement cash refers to the aggregate of the settlement institutions' settlement account balances at the Reserve Bank. Discountable securities are those government securities which the Reserve Bank will purchase ('discount') on request, in exchange for settlement cash (albeit at a margin above market rates).

The policy roles of PL and settlement cash were discussed in 'A Layman's Guide to Monetary Policy' (in the June 1987 *Bulletin*) and 'The Basics of Liquidity Management' (in the September 1987 *Bulletin*).

This article presents a new set of tables designed to show the main influences on the two components of Primary Liquidity, settlement cash and discountable securities. The data is given on a monthly basis. Data will also be available on a daily basis in the Reserve Bank's *Weekly Statistical Release*.

Table 1 shows the main influences on PL for each month and in future will accompany the regular *Bulletin* articles reviewing monetary conditions and policy. Tables 2-7 will be published in the *Bulletin* annually, and provide a more detailed breakdown of each of the influences in table 1. At the time of writing the detailed data for tables 2-7 was available only to March 1987.

Table 1: Influences on Primary Liquidity

Table 1 is in three sections, the first giving influences on settlement cash levels; the second giving influences on the level of discountable securities; and the third showing average PL for each month as the sum of average cash and discountable securities levels.

The level of settlement cash at the beginning of the month is adjusted for the cash transactions made in the course of public sector business over the month; ie the Government's cash influence, various non-policy Reserve

Bank transactions, and Government debt programme transactions. The Bank's liquidity management operations are aimed at offsetting these public sector transactions to leave the daily settlement cash balance at the target level of the period.

The operation of liquidity management policy has been reviewed and altered occasionally in the light of experience. These changes have impacted significantly on the PL statistics. In particular, as described more fully below, on 3 December 1985 the definition of discountable securities was narrowed to give PL greater transparency as an indicator of the Bank's monetary policy stance; and on 24 March 1986 closer targetting of cash levels was introduced to moderate some of the variation in short-term interest rates that stemmed from wide variations in settlement cash. As is readily apparent from table 1, the discountable securities component of PL has become much smaller and the cash component of PL has become more stable over the period reviewed.

Note that the monthly average settlement cash outcome shown in Table 1 can differ from the cash target set by the Bank. This reflects a variety of factors including forecast errors, discounting other than that resulting from forecast error, and government security tender settlements which differ from the allowance made for such settlements in the open market operations' (OMOs) calculation. (A better indication of the average forecast outcome requires a comparison of the cash target with the cash outcome adjusted to exclude discounting and settlements other than the level allowed for in the OMO calculation.)

Turning to the second section of table 1, it can be seen that changes in the discountable securities component of PL have two sources — the net value of securities entering PL ('net security entries') and liquidity management operations. The figures for monthly average levels of discountable securities suggest a substantial reduction in these levels after April 1986. However, this is a reflection of the definitional change already mentioned.

When liquidity management policy

commenced, the Reserve Bank was prepared to buy on demand government securities with six months or less to maturity. The Bank had announced that it was not prepared to discount longer dated securities except in exceptional circumstances.

Most government stock and a large portion of Treasury bills have been sold with maturities that coincide with tax withdrawal months. When they mature they provide cash for the banks to settle tax payments to the Government. The six month definition resulted in measured PL becoming very high six months before a tax month. But although PL may have appeared high months before a tax month, the volume of securities that could be discounted without severe penalty would have been much smaller. This is because the penalty cost of discounting, for a given penal discount margin, increases with the time to maturity of the security involved.

The six month definition of PL thus did not give a clear enough indication of the volume of securities which were effectively discountable. On 3 December 1985 the Bank announced that it would only accept securities with one month or less to maturity for discounting. By reducing the definition of PL, the build up in PL was restricted to just one month before a tax month, and the PL aggregate gave a better indication of the volume of securities effectively discountable at the Bank.

The changeover from a six month definition to a one month definition of discountable securities was phased in between November 1985 and April 1986 to allow the market time to adjust to the new definition. Between these dates, it is not possible to give meaningful figures for net security entries and liquidity management operations on discountable securities. Tables 6 and 7, along with the relevant lines of table 1 therefore contain blanks over this period.

Table 1 also shows a second substantial reduction in discountable securities from September 1986 (apart from the seasonal build up around March 1987 which allowed for tax related factors). This downward shift

in PL levels reflects the reduction in the PL target range to \$350m-\$400m which was made at that time, together with a reduction in the cash target.

Table 2: Estimated Reconciliation Between Fiscal Deficit and Government Cash Influence

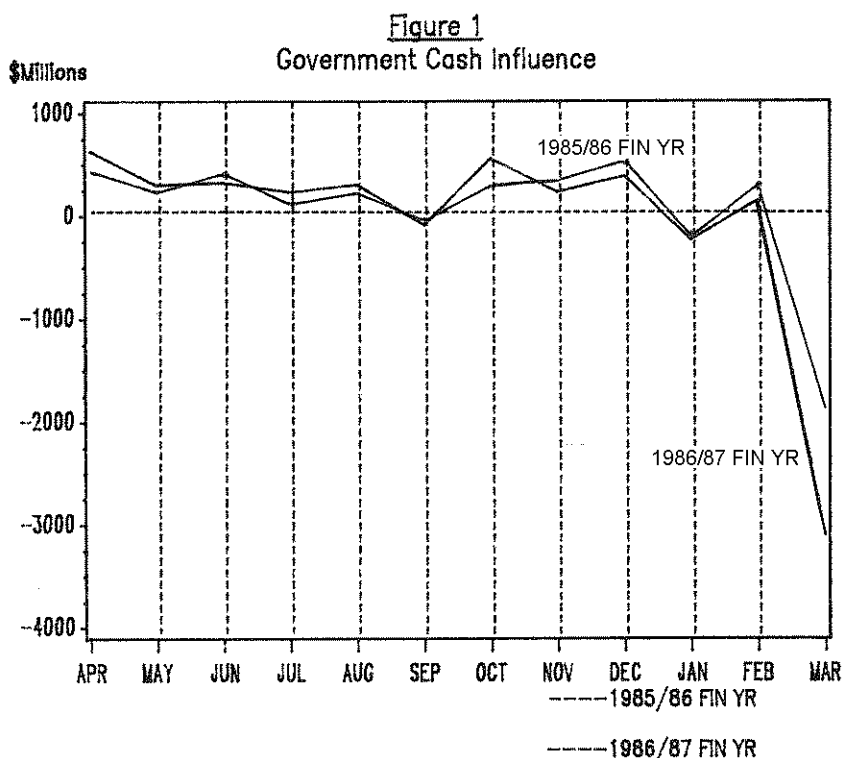
A payment from the private sector to the Government reduces or withdraws settlement cash, while a payment from the Government to the private sector increases settlement cash. Most often in the past the Government's payments have been greater than its receipts and therefore the Government cash influence is usually an injection of cash, except for some particular months of the year.

The Government's budget deficit records the excess of Government payments over receipts. This gives a first approximation to the Government's cash influence. Table 2 reconciles the Government's budget deficit with the Government's cash influence.

Since 1986 there have been two deficits given in the Government's Budget, deficit 1 and deficit 2. Deficit 1 omits major project loan refinancing while deficit 2 includes it. This analysis starts with deficit 1 and adjusts it for all major project loan refinancing that has a cash influence. It then deducts items recorded in budget deficit 1 which do not have an effect on cash available to the private sector—for example, payments between Government organisations which only involve transactions between different Reserve Bank accounts. The budget deficit must also be adjusted for items in the Budget that are recorded in the Government's accounting system for a particular month but have a cash impact in another month.

Figure 1 shows the Government Cash Influence for the 1986/87 financial year compared with the 1985/86 financial year.

The two series show a very similar seasonal pattern. March and to a lesser extent, September have been important tax months where withdrawals have exceeded injections, and hence the government cash influence has



been negative. This pattern will be changed in future by the new schedule for terminal and provisional tax payments. Four smaller troughs will occur in February, March, June and November in future. January has also been a negative month, because a large part of January's State Services pay is paid in advance before Christmas, and tax due at the end of December is often not processed until early January.

The seasonal pattern in the Government's cash influence is to some extent offset by the large maturities of stock and treasury bills, especially in March, as shown in table 4. The remaining seasonal pattern is offset by OMOs.

Table 3: Reserve Bank Transactions

This category includes all transactions between settlement banks and Reserve Bank account holders that have not already been included in the Government's Cash Influence. The large Producer Board transactions for the months of March, June and December 1986 relate to the financial reorganisation of the Boards. The item 'Other Reserve Bank Accounts' includes the effect of compensatory

deposits in April and May 1985. Under the compensatory deposit scheme, the Reserve Bank used to redeposit with the settlement banks much of the net flow of funds to Government during tax periods. These deposits were repaid by the settlement banks over the following two and a half months. Hence when compensatory deposits were made for the last time in March 1985 they were repaid in April and May 1985.

Table 3 also includes notes sold to or repurchased from settlement banks, foreign exchange transactions and net market testing by the Reserve Bank.

When the settlement banks purchase notes for use by their customers, their settlement accounts are debited for the value of the notes. Similarly when they return notes to the Reserve Bank their accounts are credited for the value of the notes. There is a seasonal pattern in the note issue. In December the banks buy extra notes from the Reserve Bank for the Christmas period, which has a negative settlement cash influence. In January they return most of these notes to the Reserve Bank generating a positive settlement cash influence.

The Reserve Bank deals in foreign exchange for Treasury and for its own

use. When it buys (sells) foreign exchange, settlement accounts are credited (debited).

In its market testing the Reserve Bank buys and sells commercial bills and government securities to assess the depth of the market and the level of interest rates without specifically attempting to influence market conditions. These transactions impact on the level of settlement cash available to the financial sector in much the same way that liquidity management operations do, but on a smaller scale. Between April and June 1985 the Bank traded commercial securities in its OMOs.

Table 4: Government Debt Transactions

In terms of its medium-term monetary policy stance, the Government is currently committed to fully offsetting net public sector injections into primary liquidity over a full year. This is known as the 'full funding' policy. It allows the Government to vary PL on a weekly or monthly basis to accommodate tax drains, for example, but on an annual basis the intention has been to achieve nil growth in PL.

Maturities of government stock and Treasury bills are important components of the overall public sector injection to be offset by Government debt sales. The stock tender programme is the mechanism through which the Government sells its long-term debt. Stock sales cause a flow of cash to Government. Government debt is also available in smaller parcels, as with Kiwi Bonds. The sale and redemptions of such stock is recorded separately in the 'net retail stock' item in table 4.

Table 5: Liquidity Management Operations on Cash

Prior to 24 March 1986, liquidity management operations were designed to offset the public sector influence over the month, so that the growth in the cash component of PL was restricted to the extent needed to ensure that PL remained within the Bank's monthly PL target. Since March 1986 liquidity management operations have been designed to offset the public sector influence on a day-to-day basis so that the level of daily cash meets the Bank's cash target. This is achieved through the weekly sale of Treasury bills and daily OMOs as shown in table 5.

Note that since the Bank began targetting cash in March 1986, its OMOs have been more active. Table 5 shows a significant increase in OMOs from this date.

Table 6: Net Security Entries

Discountable securities provide settlement banks and other financial institutions with the ability to raise cash on occasions when either they have been unable to raise sufficient cash on the inter-bank market or when the settlement system is short of settlement cash. The amount of treasury bills or government stock which the private sector has available for discounting at any particular time will depend on the PL target the Bank has set for that period. Within this overall limit, settlement banks are free to determine the size of their own holdings of discountable securities. They may choose to hold a large volume of discountable securities as a precaution against running short of settlement

cash, but in holding discountable securities they will be foregoing greater returns from other investments. Alternatively, settlement banks may hold only a small number of discountable securities and rely on bidding for settlement cash on the inter-bank market when they require it.

Table 6 gives data for securities that have become discountable (due to the fact that they reached six months to maturity or one month to maturity depending on the PL definition at the time) and subtracts maturing and discounted securities to give the net change in discountable securities over the month.

Table 7: Liquidity Management Operations on Discountable Securities.

Not only does the Bank seek to attain the daily cash target through its liquidity management operations, it can also affect the level of discountable securities available to the market, through such operations, and thus work towards the Bank's target for PL. In the Treasury bill tenders, the Bank can sell both discountable and longer dated bills. In its OMOs the Bank either sells government securities from its portfolio of bills (which are usually obtained from Treasury bill tenders) or it buys bills and stock from the private sector. By choosing the length of maturity of the securities it buys or sells the Bank can influence the level of discountable securities in the private sector's portfolio. Table 7 includes only liquidity management operations that have altered the level of discountable securities, and therefore the figures in table 7 are smaller than the total liquidity management operations in table 5.

**TABLE 1:
INFLUENCES ON PRIMARY LIQUIDITY**

	April	May	June	July	1985				Dec	1986		
					Aug	Sept	Oct	Nov		Jan	Feb	Mar
SETTLEMENT CASH												
Cash at beginning of month	21	16	11	1	1	1	7	45	1	2	1	16
GOVERNMENT CASH INFLUENCE												
RESERVE BANK TRANSACTIONS	398	193	376	76	186	- 86	259	310	497	-240	256	-1908
GOVERNMENT DEBT TRANSACTIONS	- 96	111	103	219	6	84	- 26	319	75	153	159	450
Cash after public sector transactions	212	11	37	- 93	-164	55	- 32	285	65	293	-101	2602
LIQUIDITY MANAGEMENT OPERATIONS ON CASH DISCOUNTING												
Cash at end of month	535	331	527	203	29	54	208	959	638	208	315	1160
Average Settlement cash	-611	-550	-724	-489	-472	-394	-448	-1012	-877	-303	-432	-1401
	92	230	198	287	444	347	285	54	241	96	133	241
Cash at end of month	16	11	1	1	1	7	45	1	2	1	16	0
Average Settlement cash	(80)	(44)	(65)	(40)	(45)	(85)	(86)	(109)	(92)	(53)	(43)	(122)
DISCOUNTABLE SECURITIES												
Discountable Securities at beginning of month	613	883	1264	1393	1276	996	1648	1615	2442	2322	2034	2315
NET SECURITY ENTRIES	-113	5	-347	-397	-516	335	-481	- 192	—	—	—	—
LIQUIDITY MANAGEMENT OPERATIONS ON DISCOUNTABLE SECURITIES	383	376	476	280	236	317	448	1019	—	—	—	—
Discountable Securities at end of month	883	1264	1393	1276	996	1648	1615	2442	2322	2034	2315	783
Average Discountable Securities	(941)	(1146)	(1366)	(1349)	(1257)	(1467)	(1689)	(2093)	(2394)	(2330)	(2467)	(1713)
AVERAGE PRIMARY LIQUIDITY												
Average Settlement Cash	80	44	65	40	45	85	86	109	92	53	43	122
Average Discountable Securities	941	1146	1366	1349	1257	1467	1689	2093	2394	2330	2467	1713
Average PL over the Month	1021	1190	1431	1389	1302	1552	1775	2202	2486	2383	2510	1835

**TABLE 2:
ESTIMATED RECONCILIATION BETWEEN BUDGET DEFICIT I
AND GOVERNMENT CASH INFLUENCE**

	April	May	June	July	1985				Dec	1986
					Aug	Sept	Oct	Nov		Jan
Budget Deficit 1	369	640	285	484	214	84	474	442	655	-231
Cash transactions not in deficit	0	0	0	0	0	0	0	0	0	0
Non-cash impact deficit items	-200	-155	- 43	-191	-340	-145	-189	-183	52	174
Timing Adjustments	128	- 6	66	-126	- 14	42	25	47	-128	36
Other Adjustments	101	-286	68	- 91	326	- 67	- 51	4	- 82	-219
Government cash influence	398	193	376	76	186	- 86	259	310	497	-240

**TABLE 1:
INFLUENCES ON PRIMARY LIQUIDITY**

1986									1987							
April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar	April	May	June	July	Aug
0	29	19	12	88	48	19	5	64	18	28	3	5	32	56	29	32
627	297	325	227	303	- 92	553	230	383	-236	140	-3106	776	463	578	232	518
146	119	374	287	120	172	50	241	-131	278	118	- 5	169	248	271	313	247
347	403	- 95	- 20	59	923	-363	28	-592	330	302	1792	615	189	301	- 4	-148
1120	848	623	506	570	1051	259	504	-276	390	588	-1316	1565	932	1206	570	649
-1111	-976	-694	-655	-609	-1175	-354	-533	167	-388	-695	-1048	-1672	-967	-1334	-560	-742
20	147	83	237	87	143	100	93	127	26	110	273	139	91	157	22	118
29	19	12	88	48	19	5	64	18	28	3	5	32	56	29	32	25
(51)	(34)	(34)	(30)	(39)	(42)	(26)	(23)	(53)	(42)	(37)	(38)	(40)	(32)	(27)	(18)	(19)
783	881	533	542	510	703	330	329	238	266	354	1229	347	416	254	287	275
- 440	-745	114	-350	177	- 602	- 16	-293	-107	13	787	-1063	47	-162	- 102	- 91	416
538	397	-105	318	16	229	15	202	135	75	88	181	22	0	135	78	40
881	533	542	510	703	330	329	238	266	354	1229	347	416	254	287	275	731
(873)	(623)	(622)	(518)	(692)	(866)	(327)	(224)	(320)	(343)	(956)	(1270)	(394)	(345)	(327)	(322)	(424)
51	34	34	30	39	42	26	23	53	42	37	38	40	32	27	18	19
873	623	622	518	692	866	327	224	320	343	956	1270	394	345	327	322	424
924	657	656	548	731	908	353	247	373	385	993	1308	434	377	354	340	443

**TABLE 2:
ESTIMATED RECONCILIATION BETWEEN BUDGET DEFICIT 1
AND GOVERNMENT CASH INFLUENCE**

1986											1987		
Feb	Mar	April	May	June	July	Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
415	-1960	559	457	512	657	450	-100	728	600	364	140	307	-2723
0	0	0	0	0	0	0	0	107	8	20	0	0	71
-285	- 79	-219	-221	-218	-245	-158	- 68	-239	-532	-134	-281	-153	- 511
36	80	-149	- 16	- 90	175	-180	100	70	- 40	-185	65	40	- 60
90	51	436	77	121	-360	191	- 24	-113	194	318	-160	- 54	117
256	-1908	627	297	325	227	303	- 92	553	230	383	-236	140	-3106

TABLE 3:
RESERVE BANK TRANSACTIONS

	April	May	June	July	1985 Aug	Sept	Oct	Nov	Dec	1986 Jan
Net Producer Board	59	34	- 29	- 32	- 49	- 1	15	13	- 15	- 7
Other Reserve Bank Accounts	-351	-122	- 6	5	17	- 10	- 16	14	28	- 21
Notes	17	- 30	5	29	- 30	16	-138	92	- 78	60
Net Market Testing	5	8	- 3	- 18	6	2	- 5	1	- 5	- 3
Foreign Exchange	174	221	136	235	62	77	118	199	145	124
Reserve Bank Transactions	- 96	111	103	219	6	84	- 26	319	75	153

TABLE 4:
GOVERNMENT DEBT TRANSACTIONS

Treasury Bill maturities	230	114	175	180	52	54	204	216	401	584
Stock Maturities	0	66	26	6	20	48	61	320	25	0
Stock Tender Sales	- 74	-228	-222	-312	-258	- 75	-317	-308	-314	-317
Net Retail Stock	56	59	58	33	22	28	20	57	- 47	26
Government Debt Transactions	212	11	37	- 93	-164	55	- 32	285	65	293

TABLE 5:
LIQUIDITY MANAGEMENT OPERATIONS ON CASH

Tender Sales of Treasury Bills	-327	-256	-372	-373	-336	-229	-322	-531	-417	-243
OMO Sales	- 86	-130	-125	- 44	- 42	-149	-126	-481	-475	-139
OMO Purchases	35	10	21	6	3	0	0	0	15	9
Sellback loans	0	181	0	0	0	0	0	0	0	110
Sellback Maturities	-233 *	-355 *	-248 *	- 78	- 97	- 16	0	0	0	- 40
Liquidity Management Operations on Cash	-611	-550	-724	-489	-472	-394	-448	-1012	-877	-303

* Includes maturities of commercial bills purchased in OMO's during March 1985

TABLE 6:
NET SECURITY ENTRIES

Securities that became Discountable	209	415	52	76	0	784	69	398	—	—
Secondary Maturities Discounting	-230	-180	-201	-186	- 72	-102	-265	-536	—	—
	- 92	-230	-198	-287	-444	-347	-285	- 54	—	—
Net Security Entries	-113	5	-347	-397	-516	335	-481	-192	—	—

TABLE 7:
LIQUIDITY MANAGEMENT OPERATIONS ON DISCOUNTABLE SECURITIES

Tender Sales of Treasury Bills	327	256	372	280	197	168	322	538	—	—
OMO Sales	86	130	125	0	42	149	126	481	—	—
OMO Purchases	- 30	- 10	- 21	0	-3	0	0	0	—	—
Liquidity Management Operations on Discountable Securities	383	376	476	280	236	317	448	1019	—	—

TABLE 3:
RESERVE BANK TRANSACTIONS

Feb	Mar	April	May	June	July	1986					1987		
						Aug	Sept	Oct	Nov	Dec	Jan	Feb	Mar
- 16	353	3	- 15	164	37	- 2	- 10	2	10	-140	- 5	- 9	- 1
10	- 16	- 11	- 1	- 14	- 1	0	32	- 14	- 9	18	- 2	- 6	1
- 3	- 47	60	- 33	17	- 3	- 10	15	- 53	- 19	-147	119	- 5	- 188
4	59	- 43	- 21	1	2	1	- 6	- 2	1	- 7	- 1	4	- 1
164	101	137	189	206	252	131	141	117	258	145	167	134	184
159	450	146	119	374	287	120	172	50	241	131	278	118	- 5

TABLE 4:
GOVERNMENT DEBT TRANSACTIONS

530	2362	671	633	489	463	524	1051	251	164	265	311	298	1427
0	361	55	319	88	74	0	48	24	133	31	19	0	304
-588	- 143	-404	-572	-689	-576	-474	-178	-641	-273	-895	0	0	0
- 43	22	25	23	17	19	9	2	3	4	7	0	4	61
-101	2602	347	403	- 95	- 20	59	923	-363	28	-592	330	302	1792

TABLE 5:
LIQUIDITY MANAGEMENT OPERATIONS ON CASH

-517	- 545	-554	-773	-784	-691	-345	-267	-305	-372	- 38	- 63	-189	- 23
- 70	-1007	-283	-311	-135	-149	-285	-804	-380	-221	-239	-338	-221	- 245
0	0	42	33	180	0	204	89	171	1	0	11	115	72
175	176	202	250	425	596	311	294	285	600	1058	755	525	2570
- 20	- 25	-518	-175	-380	-411	-494	-487	-125	-541	-614	-753	-925	-1326
-432	-1401	-1111	-976	-694	-655	-609	-1175	-354	-533	-167	-388	-695	1048

TABLE 6:
NET SECURITY ENTRIES

--	--	306	354	774	424	788	640	359	97	316	369	1195	941
--	--	-726	-952	-577	-537	-524	-1099	-275	-297	-296	-330	-298	-1731
--	--	- 20	-147	- 83	-237	- 87	- 143	-100	- 93	-127	- 26	-110	- 273
--	--	-440	-745	114	-350	177	- 602	- 16	-293	-107	13	787	-1063

TABLE 7:
LIQUIDITY MANAGEMENT OPERATIONS ON DISCOUNTABLE SECURITIES

--	--	350	210	50	193	67	0	0	90	0	0	35	0
--	--	230	220	25	125	153	267	30	112	135	75	53	192
--	--	- 42	- 33	-180	0	-204	- 38	- 15	0	0	0	0	- 11
--	--	538	397	-105	318	16	229	15	202	135	75	88	181