

The Reserve Bank's Domestic Market Operations

*This article describes the Reserve Bank's domestic market operations and how they influence financial conditions. An earlier article appeared in the June 1985 issue of the Bulletin.*¹

1. Introduction

The Reserve Bank implements monetary policy primarily through its operations in domestic money and securities markets. It also operates in these markets to smooth major seasonal and other short-term imbalances in the flow of funds, which arise mainly from the pattern of Commonwealth Government transactions.

The Bank's domestic market transactions either add funds to, or withdraw funds from, the money market through the purchase or sale of assets. This in turn affects the cost of funds, i.e. interest rates. In the first instance, the effect is on the balance of supply and demand for overnight funds and hence overnight interest rates. Over time, there are effects on interest rates more generally and,

as a consequence, decisions to spend, save and invest and, ultimately, final objectives such as inflation and economic growth.²

Most of the Bank's transactions are with two main groups of intermediaries:

- the **authorised short-term money market dealers**, who constitute the prime link between the Bank and the money market. The Bank conducts virtually all of its operations in short-term Commonwealth Government securities with them. The authorised dealers are a group of specialised intermediaries; apart from dealing with the Bank, their main functions are to make markets in short-term Commonwealth Government securities and to provide an avenue for investment of overnight and call funds by banks and others. Authorised dealers fulfil these roles by borrowing from clients in the money market, typically overnight, and using the money to invest in a portfolio of Commonwealth Government and other securities, which they then trade actively. Their activities are supervised by the Reserve Bank; and

1. Other articles dealing with market operations may be found in the following issues of the *Bulletin*: December 1986, "Open Market Operations Since the Float"; and December 1987, "Research Report: Open Market Operations – Some International Comparisons".

2. For discussion of interest rates and their relationship with economic activity see M.J. Phillips, "What Price Money?", *Reserve Bank Bulletin*, March 1990 and I.J. Macfarlane and G.R. Stevens (eds), *Studies in Money and Credit, Proceedings of a Conference*, Reserve Bank, October 1989.

- the **reporting bond dealers**, with whom the Bank conducts its operations in Commonwealth Government securities with more than one year to maturity. This is a group of 20 or so dealers comprising the largest traders of bonds in the market. The list of dealers includes banks, life offices, stock brokers, authorised money market dealers and merchant banks.

2. The money market

The Reserve Bank's market operations are conducted mainly in the **money market**, i.e. that part of financial markets where the main activities are the borrowing and lending of short-term funds and the trading of short-term securities. Financial intermediaries use the money market in managing their liquidity. When they have funds which are temporarily surplus to their needs, they may place those funds at call or invest in short-term securities; when they face a shortage, they may borrow funds in the market or sell some of their securities.

The money market is not conducted in a particular place. Transactions are effected over the telephone or by use of communication screens. In a sense it is a market of two closely connected parts. At the centre is the market for **cash** or **exchange settlement funds**. These are funds used to settle transactions between the Reserve Bank, banks and authorised money market dealers.³ All banks and dealers have clearing accounts at the Reserve Bank through which they can settle transactions with each other, thus obviating the need to use the usual clearing house system. The Reserve Bank processes these settlements by making transfers between clearing accounts on the day the transactions occur, effectively ensuring same-day value for these transactions (cash is therefore sometimes called **same-day funds**). The participants in the market for cash are limited

to authorised dealers, banks and the Reserve Bank – i.e. groups with clearing accounts at the Reserve Bank. The market forms the core of what is sometimes known as the **official money market**; and the interest rate paid on cash or same-day funds is usually known as the **official cash rate**.

The other part of the market is often called the **unofficial money market**. This market covers a much wider range of intermediaries, although authorised dealers and banks are active participants in this part of the market also. Unofficial market transactions are settled in **bank cheque** or **clearing house funds**, so called because payments are cleared by the passage of bank cheques through the clearing house system. Transactions processed through the clearing house system are posted to banks' exchange settlement accounts the following day when inter-bank settlement occurs. For this reason, bank cheque funds are also sometimes called **next-day funds**. The interest rate on bank cheque funds is usually called the **unofficial cash rate**.

The markets for cash and bank cheque funds are intimately linked through the activities of authorised dealers and banks, who are active participants in both. Banks use the unofficial money market to manage **future** availability of cash as bank cheque transactions in the unofficial market give rise to debits and credits to exchange settlement accounts when inter-bank settlement occurs next day, following the clearing of cheques. For instance, a bank expecting a deficit in its exchange settlement position tomorrow could take action today in the unofficial market – e.g. bid for deposits or sell short-term securities – to try to gain cash for the next day. These activities of banks are one way in which pressures in one part of the market are transmitted to the other part. They do not, however, change the total amount of cash available to the banks the next day; they simply change the distribution among banks.

Of particular importance in bridging the two markets are the activities of authorised dealers. Unlike banks, which must wait until

3. See Appendix for details.

inter-bank settlement before bank cheque transactions reflect in their cash positions, the authorised dealers are able to switch between bank cheque funds and cash on any given day, as they receive immediate (same-day) value for bank cheque transactions on their accounts at the Reserve Bank.⁴ This means that authorised dealers can switch between the two parts of the money market, depending on the relative availability of funds; in effect, it allows any shortage or surplus of cash to spill over into the unofficial money market. For example, if there is a shortage of cash, dealers can meet their requirement for funds by borrowing bank cheque funds in the unofficial market.

While the Reserve Bank gives dealers same-day value for bank cheques deposited into their clearing accounts, it does not itself receive funds from the bank on which that cheque was drawn until inter-bank settlement occurs next day, i.e. the addition to funds in an authorised dealer's account at the Reserve Bank when it deposits a bank cheque is not offset by the corresponding reduction in the account of the bank on which the cheque was drawn until the following day. In effect, the market as a whole receives a temporary (one-day) boost to the amount of funds available. This is an important feature of the money market arrangements which provides a mechanism by which on any given day the market can absorb fluctuations in the availability of cash, in effect by bringing cash forward from, or pushing cash into, the following day.

This arrangement helps to make money market conditions steadier and reduces the need for the Bank's operations to offset precisely each day any shortage or surplus of funds.

3. Factors affecting funds available in the money market

Transactions between authorised dealers, banks and their customers do not change the supply of cash to the market, only its distribution between the different market groups. The aggregate supply of cash can only be added to, or reduced, by transactions involving the Reserve Bank. For instance, if a Reserve Bank customer issues a cheque and pays it to another bank (or one of its customers), the Reserve Bank will pay into that bank's exchange settlement account, after the cheque has been cleared, the amount of the cheque. This increases the amount of cash available to the bank and to the system as a whole. Conversely, if a bank or its customer pays a cheque into the Reserve Bank, there will be a reduction in the amount of cash available. So, on any day, the movement in the system's supply of cash will be determined by the net balance of transactions with the Reserve Bank.

The most important factors⁵ in this are transactions of the Commonwealth Government — the Reserve Bank's major customer — and the Reserve Bank's own transactions in securities, foreign exchange and notes and coin.

Commonwealth Government transactions

There are two main types of Commonwealth Government transactions:

- budgetary transactions — spending (for example, on pensions, public service salaries) and receipts (for example, collections of taxes). When the Commonwealth Government spends, it issues cheques on the Reserve Bank which are deposited into other banks. The

4. This is in keeping with the practice followed by all banks of giving their clients immediate value for bank cheque transactions even though they themselves do not receive value until inter-bank settlement the next day.

5. The Appendix gives a complete list of these factors.

6. In terms of banks' balance sheets, the cheques are reflected as an increase in deposits on the liabilities side and, on the assets side, there is an increase in exchange settlement funds.

cheques are cleared overnight, and the next morning the Reserve Bank credits the exchange settlement accounts of the banks involved, adding to the supply of cash.⁶ In this way, government spending adds to the amount of cash available to the money market. Receipts by the Government (such as taxes) work in reverse and withdraw cash from the market; and

- financing transactions. When the Government borrows, it issues securities and receives cheques from investors. These cheques are deposited into its account at the Reserve Bank and cleared overnight, reducing the supply of cash the next day. Where banks or authorised dealers buy the securities, their accounts at the Reserve Bank are debited directly, and the supply of cash is reduced immediately. Conversely, there is an addition to the supply of cash when Commonwealth Government securities mature and funds are returned to investors.

The transactions of the Commonwealth Government can have significant effects on the amount of funds available to the money market from day to day, but over time they have little net effect. This is because the Government's budgetary transactions are offset by its financing transactions. If the Government is running a budget deficit, it needs to issue securities to finance itself; the funds that flow into the money market as a result of the budget deficit are withdrawn as investors pay for the securities. Conversely, while a budget surplus withdraws funds from the money market, they are put back when the Government uses the surplus to repay securities previously issued. It is because of

mismatches in the timing of budgetary and financing transactions — the former occur every day while the latter occur at intervals, in most cases weekly — that there are significant day-to-day effects on the supply of funds.

Reserve Bank transactions

Transactions of the Reserve Bank also affect the supply of cash available to the market. Apart from its domestic market operations, which are discussed in more detail in the next section, the more important transactions are those involving foreign exchange and notes and coin.

When the Reserve Bank buys foreign exchange, it pays in Australian dollars; the mechanics of the transaction result in a credit to the exchange settlement account of the bank from which (or from whose customer) the purchase was made. Conversely, a sale of foreign exchange by the Reserve Bank results in it being paid Australian dollars, and hence a debit to exchange settlement accounts.

Each day, the Reserve Bank issues additional notes and coin to the banks or receives some back, depending upon the changing needs of the banks' customers. On some days, for instance paydays or the days leading up to Christmas, banks need additional currency to meet withdrawals of deposits, cashing of cheques, etc. On other days, for instance after the Christmas season is over, banks may find they have more currency than they need and, since notes and coin do not earn interest, they return some to the Bank.⁷ In effect, the Reserve Bank issues currency by selling it to the banks and debiting their exchange settlement accounts in payment. When

7. The Reserve Bank has an obligation to ensure that there is always sufficient currency in circulation to meet the community's needs. It therefore supplies currency to banks on demand.
8. Repurchase agreements involve the purchase or sale of securities with a forward commitment to undertake an opposite transaction on an agreed date and at an agreed price. They provide an additional degree of flexibility in market operations as they allow both the initial transaction and its reversal to be tailored to the cash needs of the market. For instance, if the Bank wants to withdraw funds from the market today to offset a surplus, and add funds in a week's time when a shortage of funds is expected, it can do this by selling securities under a one-week repurchase agreement. The sale today withdraws funds while the repurchase restores the funds to the market.
9. The prices of short-term securities are less sensitive than those of long-term securities to a change in yields. Therefore, they are less risky for investors seeking to place surplus funds temporarily, and accordingly investors are prepared to transact in larger volumes.

currency is returned, the Reserve Bank buys it and credits the banks' exchange settlement accounts in settlement.

4. The Reserve Bank's market operations

Instruments

The Bank's market operations consist mainly of purchases and sales of **Commonwealth Government securities**, either outright or under repurchase agreements.⁸

The Bank's outright purchases and sales are mainly in short-term securities; these are more suited than long-term securities to market operations.⁹ Securities used in repurchase agreements can be of longer maturities, and do not need to be linked to the maturity of the repurchase agreement. This allows the Bank access to a much greater range of securities in its operations – e.g. a repurchase agreement in long-term bonds can be used to much the same effect as an outright transaction in short-term Treasury notes.

The Bank's transactions in repurchase agreements and shorter-term Commonwealth Government securities (up to one year to maturity) are with the **authorised money market dealers**. Occasionally, the Bank also buys Treasury bonds with less than three months to maturity direct from banks if market conditions warrant. All these transactions are settled on a same-day basis by direct entries to exchange settlement accounts at the Bank. Therefore, they affect immediately the amount of cash in the market.

Transactions in Commonwealth Government securities with more than one year to maturity are with **reporting bond dealers**. These transactions are smaller and less frequent than those with authorised money market dealers. They are not intended primarily to influence the amount of funds in the market; rather, they are directed at promoting a deep and active secondary

market for bonds to help the Commonwealth Government to undertake its present or future financing efficiently, and at least cost. The Bank's transactions with reporting bond dealers are settled the day after they are arranged (in keeping with the general practice of deferred settlement in the bond market) and on a bank cheque basis. They have an impact on the supply of cash with a lag of two days.

While the bulk of the Bank's operations are in Commonwealth Government securities, it occasionally uses other instruments. At times, it may accept **interest-bearing deposits from banks**; these have a similar effect to the sale of securities by the Bank. **Foreign currency swaps** also are used sometimes as a substitute for securities repurchase agreements. Swaps normally involve the spot purchase or sale of foreign currency with an agreement to reverse the transaction at an agreed future time and price. Such instruments give the Bank additional flexibility in dealing with flows of funds in the market.

Methods

Depending upon the needs of policy at any particular time, the Bank may be aiming, through its market operations, to:

- maintain steady monetary conditions;
- tighten monetary conditions; or
- ease monetary conditions.

If the aim is **to maintain steady monetary conditions**, the Bank would buy or sell securities so as to keep the supply of and demand for funds roughly in balance at existing interest rates. This does not mean that any cash surplus or deficiency would be precisely offset by the Bank's transactions each day. As noted above, the market itself has the capacity to absorb modest fluctuations in the supply of cash without Reserve Bank intervention. In determining whether it will operate in the market on a particular day, the Bank considers not only the cash position for that day but its forecasts for ensuing days and the capacity of the market to absorb likely fluctuations within its own resources.

If the aim is **to tighten monetary conditions**, the Bank's operating strategy is quite different. Tighter monetary conditions usually mean an increase in interest rates. The Bank uses its market operations to create a shortage of cash – e.g. by not buying sufficient securities to offset a deficit in the money market cash position, or by selling more securities than required to offset a surplus. Initially the market might absorb the shortage without much impact on interest rates. However, that would only be a temporary situation. Without much delay, the official cash rate will tend to rise as authorised dealers and banks bid for the scarce cash. That, in turn, induces authorised dealers to try to raise bank cheque funds in the unofficial market as a substitute for cash, putting upward pressure on interest rates in that part of the market also.

These increases, if sustained, feed into other market interest rates and security yields and, eventually, into rates offered and charged to their clients by banks and other financial intermediaries.

It should be noted that the creation of a shortage of cash does not mean that cash is unavailable in the final resort. Two “safety valves” exist through which the market can obtain cash, at a price, if an acute shortage develops during the day:

- the Bank stands ready to rediscount (i.e. buy back) Treasury notes with 90 days or less to maturity from any holder at an interest rate set by the Bank. This rate, known as the rediscount rate, is published each morning. It is set at a higher level than

prevailing market rates and so involves some interest penalty. This ensures that the facility is used only to overcome unexpected shortages of funds, and not on a regular basis, as this could thwart the Bank's operations; and

- authorised dealers may approach the Bank at the end of the day to sell Commonwealth Government securities to it under repurchase agreements. While use of this is at the initiative of dealers, the yields at which transactions are done are set by the Bank. As with the rediscount rate, the yields contain a penalty element.

In practice, these safety valves are used only infrequently. In most circumstances, the market clears any residual cash shortage after the Bank's operations by authorised dealers substituting bank cheque funds for cash (discussed in section 2 above). This acts as an informal “safety valve” to the market for cash.

If the aim is to **ease monetary conditions**, the Bank will normally be more generous in relieving cash shortages or less concerned about offsetting surpluses, thus encouraging a reduction in interest rates. The process by which this occurs mirrors that described for a tightening of monetary conditions.

On some occasions, the Bank announces its intentions to enter the market to achieve a certain degree of easing or tightening of monetary conditions (usually measured as a given increment in the unofficial cash rate). The tendency is for interest rates to adjust quite quickly following such an announcement so the process of tightening or easing is accelerated.

APPENDIX: THE MARKET FOR EXCHANGE SETTLEMENT FUNDS¹⁰

Reporting of operations

The Bank publishes a good deal of information about market conditions and its own operations. **Each day** it publishes its estimate of the money market cash position and a statement of the Bank's dealing intentions on the day. **Each week** (on Friday) it publishes a commentary on money market conditions in which it summarises its operations over the preceding week (usually including information on the volume of repurchase agreements and their appropriate unwinding dates) and gives its view on factors likely to influence availability of cash over the following two weeks. The Bank also publishes each week information on its balance sheet which, among other things, shows changes in the Bank's holdings of Commonwealth Government securities and foreign exchange, the main instruments used in its market operations. **Quarterly** (in the first month after each quarter), the Bank publishes in its *Bulletin* a review of financial market developments (including discussion of changes in policy) and economic conditions generally. Further commentary on aspects of financial markets and the Bank's operations is given in occasional articles in the Bank's *Bulletin* and in its Annual Report.

Exchange settlement funds, or **cash**, are the funds that banks use to settle transactions among themselves and with the Reserve Bank. They derive their name from the accounts that banks maintain at the Reserve Bank for this purpose (exchange settlement accounts). One of the more important transactions banks use these accounts for is to settle among themselves for transactions undertaken by their customers through the payments system – e.g. payments by cheque or various

electronic means. All these customer transactions are distilled down to a few transactions between banks. This process starts with the sorting and exchange of cheques, computer tapes covering electronic payments, etc., mostly through the Australian Clearing House in each state, at the end of the business day.¹¹ The next morning the Clearing House advises the Reserve Bank of each bank's position (known as its overnight settlement position) and the Bank passes the entries to banks' exchange settlement accounts.¹²

Authorised money market dealers also have clearing accounts at the Reserve Bank which they use to settle all their transactions with the Reserve Bank and certain transactions with banks. They are therefore able to participate with banks in the market for exchange settlement funds.

Banks and dealers do not earn interest on their exchange settlement or clearing accounts so they try to keep balances as low as possible. They do this by lending any surplus funds to other banks or authorised dealers who may be seeking to borrow. Most of this borrowing and lending is on an overnight basis. Banks and authorised dealers are not permitted to overdraw their accounts so if they face a potential debit to these accounts they must find funds that day to keep their account in credit. They would normally do this by borrowing from other banks and dealers, or calling loans previously made. They can also fund their accounts by rediscounting Treasury notes with the Reserve Bank, but they would do this only as a last resort because there is an interest penalty involved.

Turnover in the market for cash is usually in the order of \$2 to 3 billion per day. This is

10. A more complete, diagrammatic description of this market is given by R. Battellino, "The Reserve Bank's Domestic Market Operations", in *Reserve Bank in the Market Place*, Reserve Bank, April 1990.

11. The Australian Clearing House is a co-operative body owned by member banks.

12. Under this arrangement, there is a one-day lag between when a bank gives value to its customers and when it in turn receives value from the paying bank. This gives rise to what is known as "float". A bank receiving a deposit from a customer starts to incur interest liability one day before receiving investible funds from the paying bank. Conversely, the paying bank stops incurring interest liability one day ahead of giving up assets to the receiving bank. To overcome the inequity that can arise in this situation, banks pay each other interest on their net float positions.

estimated to be about 10-15 per cent of total borrowing and lending in the money market as a whole – i.e. including the unofficial market. While the cash market is only a small part of the total money market, it is central to the market so changes in the supply of cash feed quickly into money market conditions in general.

The market's cash position

Each morning the Bank calculates the net impact of all the known influences which will affect the supply of cash that day and publishes this figure as the **money market cash position**. The figure includes:

- the Reserve Bank's overnight settlement position vis-a-vis all other banks. This includes the net effect of the transactions of Reserve Bank customers, the most important being the Commonwealth Government;
- any Reserve Bank transactions in foreign exchange due to be settled (these are known at the start of the day because they are usually arranged two days ahead);
- transactions in notes and coin (these are not known precisely at the start of the day but are very regular and can be estimated fairly accurately);
- payments to banks and authorised dealers of Commonwealth loan interest and proceeds of maturing Treasury notes and bonds. (Payments to these groups are by direct credit to accounts at the Reserve Bank and do not flow through overnight settlements. Timing of payments is determined by the terms under which the securities were issued);
- maturing interest-bearing deposits of banks at the Reserve Bank (maturity is determined at the time the deposit is taken);
- lodgements and repayments of non-callable deposits, and payments of interest thereon (these take place at specified intervals); and

- reversals of repurchase agreements previously undertaken with the authorised dealers (reversal date is agreed at the time the transaction is undertaken).

Aside from these transactions, the only other factors that can influence the availability of cash on a day are the Reserve Bank's market operations, rediscounts of Treasury notes and settlements of Treasury note and bond tenders by banks and authorised dealers. These transactions affect the amount of cash available because they are settled by direct entries to accounts at the Reserve Bank, but are not included in the published money market cash position as they are not generally known at the start of the day.

Daily arrangements

The Bank publishes the money market cash position each morning at 9.30 a.m.¹³ As noted earlier, this figure reflects the net outcome of overnight settlements and other known transactions which will affect cash that day. At the same time, the Bank also announces:

- its dealing intentions for the day – i.e. whether it is offering to buy or sell short-term Commonwealth Government securities or repurchase agreements with the authorised dealers;
- the amounts of any settlements outstanding from Treasury note or bond tenders; and
- the rediscount rate.

The opening cash position of the market is an important factor determining the Bank's market operations on the day. The Bank also liaises with market participants during the morning to gather information on what other factors might affect market conditions on the day. This is taken into account by the Bank in forming its views on the volume of dealing to undertake.

The authorised dealers respond with bids (if the Bank is selling) or offers (if the Bank is buying) by 10.00 a.m. They do this by telephone, providing the Bank with a list of

13. This information is published on electronic news services (Reuters and Telerate) and in a press release.

the type and amounts of securities in which they are prepared to deal and the prices at which they would do so. The Bank selects those transactions that are most attractive to it, moving down the list until its proposed dealing volume has been met. It then responds to the dealers (again by telephone) informing them which of their offers or bids have been accepted or rejected. This is usually completed by about 10.30 a.m.

Because the market cash position is known at the start of the day, the Bank usually needs

to undertake only one round of dealing each day. However, it continues to monitor market conditions through the day and, if forces emerge in the market which had not been anticipated, it may on occasion undertake a second round of dealing.

The Bank's transactions with reporting bond dealers are handled separately from those with authorised dealers; they are undertaken at 11.00 a.m. As noted earlier, they are not primarily directed at influencing the availability of funds.