

# Operations in Financial Markets

The RBA undertakes a large volume of transactions in financial markets in order to carry out its monetary policy responsibilities, service clients (mainly the Australian Government) and manage its balance sheet.

While the move to using market operations to implement monetary policy took place about twenty years ago, the nature of these operations has continued to evolve over the intervening period. New instruments and new dealing arrangements have been adopted to keep pace with developments in markets. This process continued during the past year, with a further widening in the range of securities in which the RBA is prepared to deal in domestic markets.

In the case of foreign exchange operations, the main tasks during the past year were to meet the increased demand for foreign exchange by the Australian Government as it ran off its remaining foreign currency swaps, and to rebuild further the RBA's own foreign reserve holdings following the sales that took place during the currency intervention between 1997 and 2001. A strongly rising exchange rate during the first eight months of the year provided a favourable environment in which to carry out these operations.

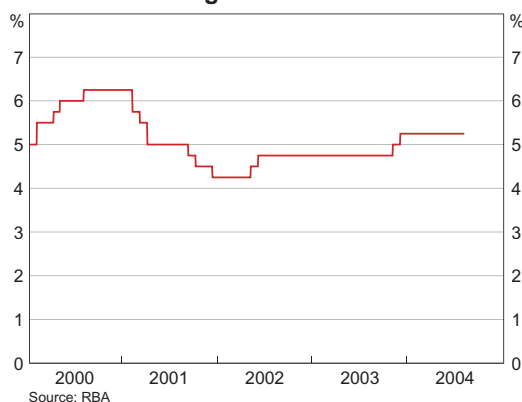
## Domestic Markets Operations

### Monetary Policy Implementation

Decisions by the Reserve Bank Board on the appropriate setting of monetary policy are made and communicated in terms of an operational target for the cash rate – the interest rate on overnight, unsecured loans between banks. The cash rate is an important determinant of other wholesale and retail interest rates which, in turn, influence the level of economic activity and inflation.

The target cash rate was increased twice in 2003/04: from 4.75 per cent to 5.00 per cent following the November Board meeting; and then to 5.25 per cent following the December Board meeting. Prior to the November increase, the target had been unchanged for 17 months. The background to both of the policy changes was provided at the time through media releases and subsequently in the RBA's quarterly *Statement on Monetary Policy* as well as in appearances by the Governor

**Graph 1**  
**Target Cash Rate**



before the House of Representatives Standing Committee on Economics, Finance and Public Administration.

The RBA is responsible for ensuring that the cash rate in the market remains as close as possible to the target set by the Board. A major determinant of the cash rate in the market is the aggregate level of balances held by commercial banks in their accounts at the RBA. These accounts, called Exchange Settlement Accounts (ESAs), constitute the most immediate source of liquidity with which banks meet their daily settlement obligations to each other and to the RBA.

The RBA discharges its responsibility for the implementation of monetary policy by ensuring that the supply of aggregate ESA balances is sufficient for the cash market to clear each day at the target cash rate. It does this by buying securities to increase the supply of ESA balances and selling securities to reduce ESA balances. These transactions may be either outright purchases or sales, or repurchase agreements which involve the sale of a security with an undertaking to repurchase it at a future agreed date and at an agreed price. Arrangements for implementing monetary policy have proved very effective over the years, with volatility in the cash rate exceptionally low by international standards. In 2003/04, it was effectively zero.

The RBA's open market operations are conducted each morning based on banks' expected liquidity demands for the day. A second round of operations may be held later in the day to offset unexpected flows or sudden shifts in demand for ESA balances, but such events are rare. In 2003/04, there were just three second-round operations. Banks also have a standing facility under which they can effectively borrow funds from the RBA at their discretion, but at a 25 basis point penalty. Banks typically use this facility when there are technical or other factors which prevent them from sourcing funds elsewhere. This facility was used on 24 occasions during 2003/04, a little more frequently than in the previous year.

The RBA's turnover in domestic securities in open market operations was \$287 billion in 2003/04, down 11 per cent on the previous year as tighter conditions in the government securities market meant that the RBA made greater use of foreign exchange swaps to reshape system liquidity flows (refer table). Repurchase agreements (or repos) in domestic securities

<b>Open Market Operations</b>					
(\$ billion)					
	1999/00	2000/01	2001/02	2002/03	2003/04
<b>Repurchase agreements<sup>(a)</sup></b>					
– Purchases	244	376	423	304	272
– Sales	14	17	16	17	11
<b>Outright purchases<sup>(b)</sup></b>	9	5	1	3	5
<b>Total operations in domestic securities</b>	<b>267</b>	<b>398</b>	<b>440</b>	<b>324</b>	<b>287</b>
<b>Total FX swaps<sup>(c)</sup></b>	<b>67</b>	<b>90</b>	<b>90</b>	<b>90</b>	<b>139</b>

(a) First leg of transaction.  
(b) Commonwealth Government securities (CGS) only until 2002/03. Thereafter includes State and Territory government securities.  
(c) First leg of transaction. Includes swaps arranged outside the daily operations.

continued to account for the bulk of domestic operations. Turnover was significantly lower than in 2002/03 despite a decline in the weighted average term of repos from 20 days to 12 days. Turnover in outright securities transactions remained modest.

Turnover in foreign exchange swaps involving the Australian dollar increased by 54 per cent in 2003/04, to \$139 billion. The RBA adds to ESA balances through a foreign exchange swap by providing Australian dollars to banks in exchange for foreign currency, with an agreement to reverse the transaction on an agreed forward date and at an agreed exchange rate. This has the same effect on ESA balances as using repos in domestic securities where the RBA purchases domestic securities from a bank and simultaneously agrees to sell them back to the same counterparty at an agreed price and date in the future.

### Changes to Eligible Securities for Repo Operations

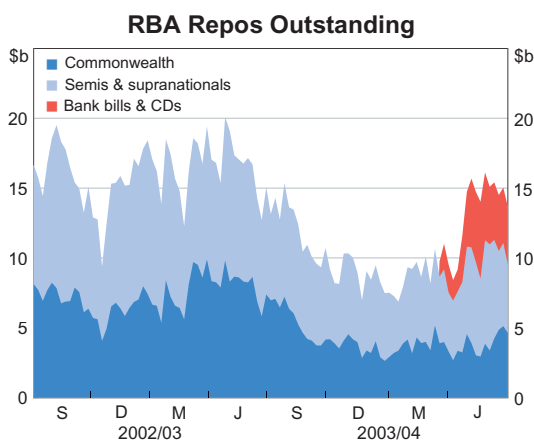
As noted in previous annual reports, shrinkage in the Commonwealth Government securities (CGS) market has been an important driver of change in the RBA's dealing arrangements over recent years. The RBA had traditionally relied on CGS when conducting its operations, and has responded to the decline in the stock of CGS by progressively broadening the range of domestic securities in which it is prepared to transact and also by making greater use of foreign exchange swaps.

In March 2004, the RBA announced that it would start purchasing bank bills and certificates of deposit (CDs) under repo in its open market operations. This decision followed a period of some months in which liquidity in the secondary market for CGS had tightened noticeably. This was marked by generally tighter conditions in the repo market and greater use of the RBA's securities lending facility. In this environment, the amount of CGS that the RBA could buy without

having a noticeable effect on pricing in the underlying markets declined markedly. By March, the RBA's holdings of domestic securities under repo had fallen from over \$14 billion at the start of the financial year to under \$10 billion (refer graph).

In light of these developments, it was decided that the range of eligible domestic securities should be broadened further. The decision to widen access to domestic securities rather than rely even more on foreign exchange swaps reflected a desire on the part of the RBA to maintain flexibility in managing the composition of its balance sheet. The decision to add bank bills and CDs to the list of eligible securities, rather than alternatives such as asset-backed securities or corporate debt securities, reflected the depth and price transparency of the bank bill/CD market combined with the low price risk of the instruments. The RBA had also gained experience in

**Graph 2**



transacting in these instruments through its intra-day repo facility, under which bank bills and CDs have been accepted since 2002.

In order to avoid introducing pricing distortions into the bill market, the RBA elected to apply relatively broad credit criteria in deciding on the eligibility of banks whose bills would be accepted. Issuing banks must have a short-term credit rating of P-1 or equivalent and a long-term credit rating of A3 or above. They must be rated by at least two major agencies. At the time these arrangements were introduced, these criteria captured 35 of the 53 banks licensed to operate in Australia and over 90 per cent of the market by value.

While extending repo operations to bills and CDs has increased the credit exposure of the RBA, the overall impact has been small. A bank dealing in repos with the RBA can offer only third-party bills, not its own, so both the repo counterparty and the issuer of the collateral would need to default before the RBA experienced a loss. Also, the counterparty selling bills to the RBA must provide the RBA with overcover of 2 per cent – i.e. the value of bills supplied must exceed the value of cash provided by the RBA by 2 per cent. Given the short-term nature of these instruments, this level of overcover protects the RBA against quite large adverse yield movements.

The RBA evaluates approaches from counterparties for repos in bank bills and CDs separately from those in government and quasi-government debt securities. The allocation of operations across the two classes of collateral is made primarily on the basis of the relative competitiveness of the approaches but also takes into account balance sheet management considerations. This means that the RBA retains discretion over the amount of bank risk that it is carrying on its balance sheet.

In recent months, the value of bank bills and CDs held under repo by the RBA has averaged around \$5 billion. The weighted average rate at which repos involving bank instruments have been accepted has been around 8 basis points above the weighted average rate offered on the “next best” repos using government and quasi-government securities.

At the time of the announcement on bank bills, the eligibility criteria for quasi-government debt securities used in repo transactions were also broadened. Until March of this year, this asset class had been limited to Australian-dollar domestic securities issued by a limited number of AAA-rated supranational institutions. In March, the criteria were extended to include similar issues by AAA-rated foreign sovereigns and government agencies. The latter are required to have an explicit government guarantee (or support deemed by the RBA to be comparable) at either the federal or state government level. This change occurred during and, to some extent, contributed to, a period of increased issuance by non-resident quasi-government entities. While RBA holdings of these securities remain small, they jumped from almost zero in the months leading up to the change in arrangements, to average over \$1 billion in May and June of 2004.

## Changes to Eligible Securities for Outright Holdings

The RBA also holds domestic securities on an outright basis to facilitate its open market operations.<sup>1</sup> Until March of this year, these outright holdings were limited to CGS. Short-dated

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<sup>1</sup> *When the RBA needs to reduce aggregate ESA balances, it typically sells securities under repo to the private sector. The RBA is not prepared to “on sell” securities that it already holds under repo and therefore must own some securities on an outright basis which it can use in sell repos.*

CGS are acquired typically in the daily open market operations.<sup>2</sup> Longer-dated Treasury bonds are acquired either at tender when the bonds are issued or in subsequent secondary market trading. As the amount of CGS on issue has declined, there have been fewer such transactions and the RBA's outright holdings of CGS have gradually fallen.

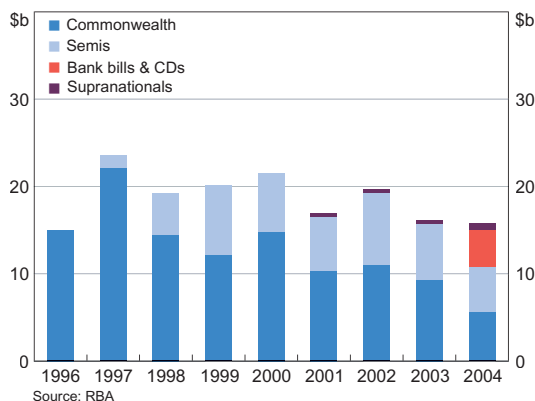
In March, the RBA announced that it would start holding domestic securities issued by Australian State and Territory governments on an outright basis. As with CGS, short-dated instruments issued by State and Territory governments can now be offered through the RBA's open market operations while separate operations will be held to acquire longer-dated securities in the secondary market.

## The RBA's Domestic Portfolio

The broadening of the eligibility criteria for domestic securities facilitated a further rundown in the RBA's holdings of CGS. Over the year, holdings of CGS and State securities fell by \$5 billion; holdings of bank bills/CDs and other securities increased by \$4½ billion.

The addition of bank instruments increased the total pool of eligible domestic securities in which the RBA will deal from around \$130 to over \$260 billion. This saw the portion of that pool held on the RBA's balance sheet decline from 12 to 6 per cent. By way of comparison, if the RBA had continued to limit its operations to CGS over the years and not used foreign exchange swaps for domestic liquidity management, it would now be holding around 80 per cent of all CGS on issue; clearly, this would not have been feasible.

**Graph 3**  
RBA Domestic Portfolio  
As at June



## Securities Lending

The RBA operates a stock lending facility to assist market participants to meet their settlement obligations in specific lines of Treasury bonds. Participants can obtain securities under repo from the RBA on an overnight basis, at a rate that is more expensive than the prevailing market rates. The relative cost of using the facility is designed to avoid undermining the development of the private sector securities lending market. The amount of stock lending the RBA can undertake is limited ultimately by its outright holdings of the securities which, as noted above, have fallen in recent years.

Use of the RBA's facility increased significantly in 2003/04 as liquidity deteriorated in the repo market. Over 180 transactions were undertaken, for a total value of \$5 billion. This

<sup>2</sup> The RBA stands ready in its normal daily liquidity operations to purchase securities with remaining maturities of up to around 18 months.

### Securities Lending by the RBA

	Number of transactions	Amount lent Face value (\$ billion)	Net income (\$ million)
2000/01	75	1.2	0.1
2001/02	119	3.1	0.3
2002/03	32	0.9	0.1
2003/04	185	5.0	0.5

was a considerably higher level of activity than in any of the previous few years. Five different securities accounted for over 90 per cent of the transactions by value.

### Foreign Exchange Operations

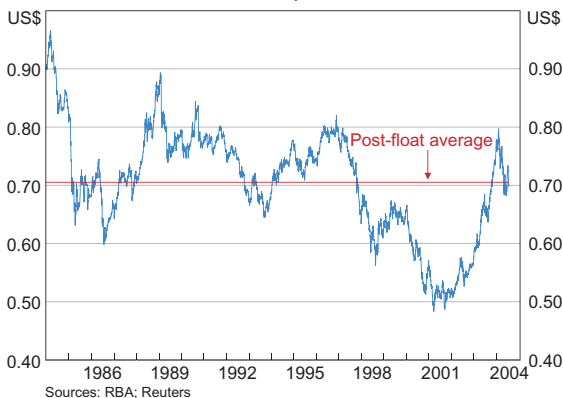
The most prominent of the RBA's operations in the foreign exchange market are those intended to influence the Australian dollar exchange rate, typically referred to as intervention. These transactions, however, are undertaken only infrequently, usually when the exchange rate has moved a long way from its long-term average and this move cannot be explained by economic developments. Most of the RBA's ongoing operations in the foreign exchange market revolve around servicing clients' foreign exchange requirements and adjusting the RBA's holdings of foreign exchange reserves following a period of intervention. In addition to these types of transactions, which all involve either outright purchases or outright sales of foreign exchange, the RBA also undertakes foreign currency swaps to assist in daily management of domestic liquidity (as discussed in the previous section).

Foreign exchange operations during 2003/04 were against the backdrop of a further significant appreciation of the exchange rate through to February 2004, which took the currency to a peak of around US80 cents, much the same level as that prevailing before the start of the Asian crisis in 1997. The exchange rate subsequently fell again and over the rest of the financial

year fluctuated around US70 cents, close to its long-term average.

**Graph 4**

**Australian Dollar**  
Daily



The RBA did not undertake any foreign exchange transactions during the year directed specifically at influencing the exchange rate. Rather, its objectives were to meet the foreign exchange needs of the Australian Government, which were significantly larger than usual, and to continue to rebuild its holdings of foreign currency reserves.

The Australian Government's needs were unusually large in the

first half of the financial year because it was continuing to pay out foreign currency liabilities that had built up since the late 1980s through cross-currency swaps. When the Treasurer decided in September 2001 to close out the swap position, the amount of swaps outstanding was around US\$6 billion. By the start of 2003/04, this had been reduced to around US\$3.5 billion, and the position was completely closed out by late December 2003. Total sales of foreign exchange to the Australian Government during the financial year were \$8.6 billion, after \$7.4 billion in the previous year; these figures were much higher than the normal level of annual sales of around \$3 billion.

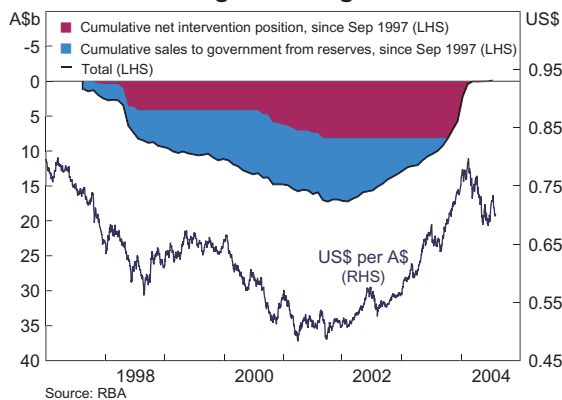
With the value of the Australian dollar at higher levels and rising strongly during the year, the RBA also stepped up purchases of foreign exchange for its own account to rebuild reserve holdings. These foreign exchange operations were the completion of an intervention cycle which began in mid 1997 when the Australian dollar fell. As the currency fell between 1997 and 2001, the RBA intervened in the market on various occasions to limit the pace of the fall, selling foreign exchange from its reserve holdings and buying Australian dollars. It also suspended its operations in the market to buy foreign exchange for the Australian Government. Such transactions would have offset the impact of intervention and would also have sent confusing signals to the market. This further reduced the RBA's holdings of foreign exchange reserves, as the Australian Government's needs were met directly from these reserves. As can be seen in the accompanying graph, cumulative net sales of foreign exchange from 1997 peaked at a little over \$17 billion by February 2002. About half of that was the result of direct intervention operations and half through sales to the Australian Government from international reserves. At that point, net international reserves had fallen to \$7 billion.

Thereafter, the Australian dollar started to rise and, from April 2002, the RBA began buying more foreign exchange in the market than was required to cover the Australian Government's needs. As such, reserve levels started rising again, although only gradually at first. During the past year, the RBA bought a further \$10 billion for its own account. The bulk of these purchases took place in late 2003 and early 2004 as the Australian dollar was rising strongly to its peak in February. Since February, the RBA has continued to purchase foreign exchange in the market to offset sales to the Australian Government, but has not made significant purchases for its own account. Net international reserve holdings were not much affected by foreign exchange transactions after February and ended the year around \$25 billion.

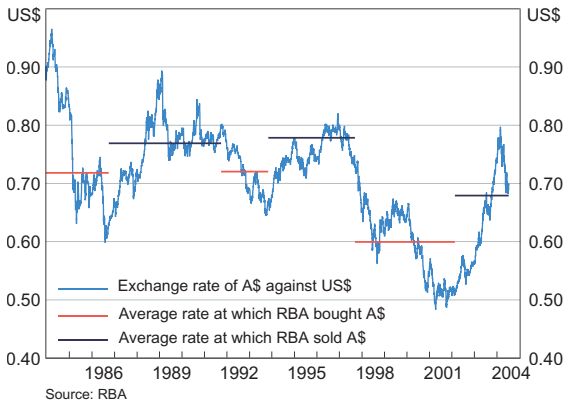
The RBA's operations in the foreign exchange market are undertaken in pursuit of its various policy objectives, rather than for the purpose of financial gain. Nonetheless, the RBA does monitor the profitability or otherwise of these

**Graph 5**

**RBA Foreign Exchange Position**



**Graph 6**  
**Australian Dollar and Average RBA Transaction Rates**

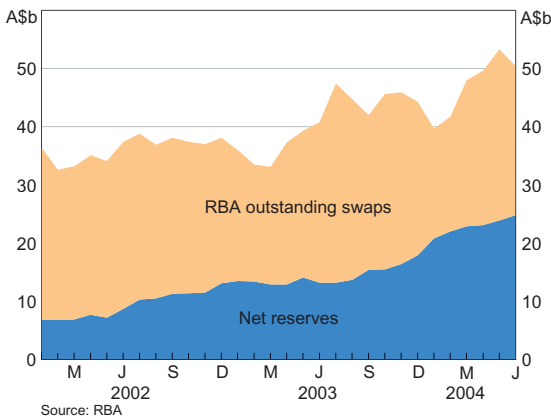


exchange rate at which Australian dollars were purchased was just under US60 cents while the subsequent sales were at an average exchange rate of around US68 cents. This was a profitable outcome as the average rate at which Australian dollars were sold was about US8 cents higher than the average rate at which they were bought. The profits from the latest cycle of intervention have not yet been realised, as profits are only realised when assets are sold.

As can be seen in the accompanying graph, this was the third cycle of intervention since the float of the Australian dollar in 1983; the previous two cycles were in the second half of the 1980s and the first half of the 1990s. In the 1980s cycle, the margin between the average exchange rate at which the RBA bought Australian dollars and that at which it subsequently sold Australian dollars was US5 cents, while in the early 1990s cycle it was US6 cents.

As noted earlier, the RBA was again active in the foreign currency swap market during the financial year, largely for domestic liquidity management. Turnover in swaps was substantially higher than in the previous year, though swaps outstanding were a little lower at the end of the financial year, at around \$26 billion.

**Graph 7**  
**Official Reserve Assets**



Total official reserve assets – i.e. amounts held outright as well as foreign exchange held under currency swaps – rose to \$50 billion, up from about \$40 billion a year earlier. This expansion in foreign asset holdings accounted for the bulk of the rise in the RBA's balance sheet during 2003/04.



## Reserves Management

Foreign currency reserve assets are held primarily to support intervention in the foreign exchange market. In investing these assets, priority is therefore given to liquidity and security, in order to ensure that the assets are always available for their intended purpose. Consistent with this, investments are confined largely to instruments issued by highly rated foreign governments, government agencies and financial institutions.

Within these constraints, these assets are managed against a benchmark which specifies asset and currency allocation across the countries in which reserves are held (the United States, Europe and Japan) as well as the duration of the portfolio. The weights given to the three portfolios are 45 per cent, 45 per cent and 10 per cent, respectively, and the duration of each portfolio is set at 30 months. Investments are maintained in a relatively narrow range around the benchmark; portfolio managers have a small amount of discretion to deviate from the benchmark in order to manage the day-to-day flows of funds.

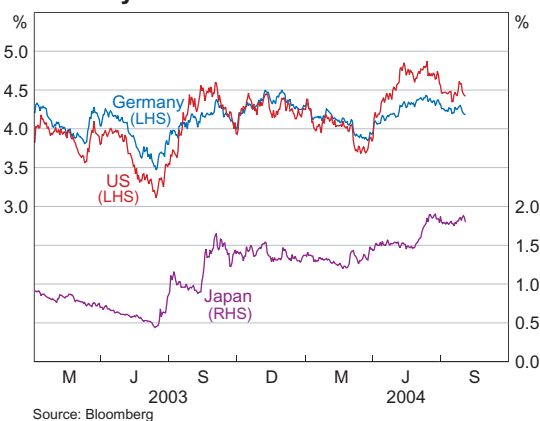
The Benchmark Portfolio			
	US	Europe	Japan
Asset allocation (% of total)	45	45	10
Currency allocation (% of total)	45	45	10
Duration (months)	30	30	30

The return on foreign currency assets for the past year was relatively low as a result of the fact that the capital value of bonds fell sharply during the financial year due to rises in market yields. Bond yields had fallen to very low levels towards the end of the previous financial year, as a result of concerns that the world economy might have been facing increased risks of deflation. In July 2003, bond yields in all three portfolios rose sharply as these fears receded. After declining somewhat in the middle of the financial year, yields again rose sharply in the United States and Europe in the June quarter of 2004 as financial markets began to speculate that a monetary policy tightening by the US Federal Reserve was imminent.

On a weighted average basis across the three currency portfolios, the rise in bond yields during the year was the largest since the current approach to reserves management began in 1991 and, as such, so too were the capital losses. The overall rate of return on the US portfolio in 2003/04 was the weakest, at 0.01 per cent. The European portfolio returned 1.89 per cent over the year, while the return on the Japanese portfolio was 0.04 per cent.

**Graph 8**

**Ten-year Government Bond Yields**



<b>Rates of Return in Local Currency by Portfolio</b>			
(Per cent)			
	<b>US</b>	<b>Europe</b>	<b>Japan</b>
2000/01	8.60	5.65	2.27
2001/02	6.09	4.68	0.40
2002/03	6.65	7.19	1.34
2003/04	0.01	1.89	0.04

Decisions taken by portfolio managers under the trading discretion available to them added \$67 million, or 21 basis points, to returns for the year. This incremental return was split between transactions which took advantage of short-term market anomalies (\$44 million) and returns from lending securities (\$23 million).

<b>Actual and Benchmark Returns</b>			
	<b>Rates of return in SDRs (Per cent)</b>		<b>Value of difference</b>
	<b>Actual</b>	<b>Benchmark</b>	<b>(A\$ million)</b>
1991/92	9.8	8.9	165
1992/93	16.3	11.6	420
1993/94	4.0	3.8	31
1994/95	5.2	7.4	-331
1995/96	4.0	3.7	40
1996/97	4.5	4.2	34
1997/98	4.5	4.6	-19
1998/99	4.9	5.1	-26
1999/00	2.8	3.8	-202
2000/01	11.0	10.8	74
2001/02	3.9	3.7	63
2002/03	6.7	6.4	77
2003/04	0.5	0.3	67

The range of eligible securities in the foreign portfolio was widened slightly during the financial year, with the RBA subscribing US\$50 million to the Asian Bond Fund (ABF). The Fund is an initiative of the EMEAP (Executives' Meeting of East Asian and Pacific central banks) Group and is designed not only to expand investment opportunities for Asian central banks but also to promote bond markets in the region. The Fund is made up of a basket of US dollar denominated bonds issued by a number of Asian sovereign and quasi-sovereign borrowers, and is managed by the Bank for International Settlements. The RBA's investment in the ABF generated similar returns over 2003/04 to its core US dollar portfolio.

## **Gold**

The RBA also holds 80 tonnes of gold, valued at \$1.5 billion. The US dollar price of gold rallied strongly during 2003/04, gaining around 25 per cent through to end April. The price subsequently eased, ending the year up 14 per cent. Part of this rise was due to weakness in

the US dollar; in Australian dollar terms, the gold price was around 10 per cent higher over the year.

The RBA seeks to augment its return on gold by making collateralised gold loans to major banks in the gold market. Demand for borrowed gold was softer during the year, reflecting reduced hedging operations by miners, and interest rates on gold loans continued to fall. Interest rates for one-year loans fell to an average of 0.2 per cent from around 0.5 per cent in the previous year. The RBA again lengthened the duration of its portfolio to gain some advantage from higher rates on three to five-year maturities. Nevertheless, returns from gold lending dropped to \$16 million in 2003/04 from \$19 million the previous year.