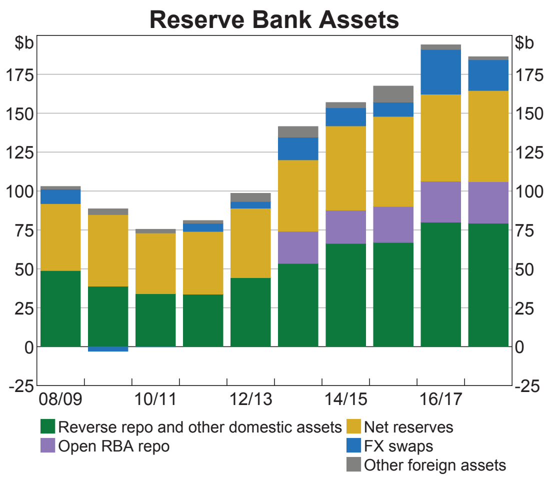
Operations in Financial Markets

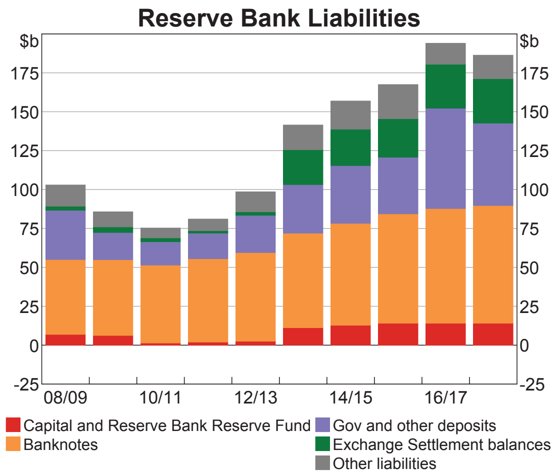
The Reserve Bank operates in domestic and international financial markets in order to achieve the policy objectives for which it is responsible. These operations include implementing the monetary policy decisions of the Reserve Bank Board, facilitating the smooth functioning of the payments system, managing the nation's foreign exchange reserve assets and providing banking services to clients (mainly the Australian Government and foreign central banks).

Balance Sheet

Over the past year, the Reserve Bank's balance sheet decreased by $8 billion and ended the 2017/18 financial year at $186 billion. The decrease in liabilities was mainly due to a decrease in deposits held by the Australian government with the Bank. These deposits are used by the government to manage the timing of its receipts and outlays, and can vary considerably over the course of a year. On the asset side of the balance sheet, the decrease in liabilities was matched by a decrease in foreign currency assets sourced via foreign exchange swaps.



Source: RBA



Source: RBA

Domestic Market Operations

Monetary policy implementation

The Reserve Bank Board's operational target for monetary policy is the cash rate – the rate at which banks borrow and lend to each other on an overnight, unsecured basis. The Board decided to leave the cash rate target unchanged at 1.50 per cent throughout 2017/18. The cash rate is also a significant financial benchmark referenced in overnight indexed swaps and ASX's 30-day interbank cash rate futures contract.

Over the course of the year, the daily liquidity management operations of the Reserve Bank were conducted so as to ensure that the cash rate remained consistent with the target set by the Board on all days.

The funds traded in the cash market are the balances held by financial institutions in their Exchange Settlement Accounts (ESAs) at the Reserve Bank. These accounts are held by around 100 financial institutions and are used to settle payment obligations between these institutions. The aggregate level of Exchange Settlement (ES) balances changes as a result of payments made or received by customers of the Bank (principally the Australian Government) and ESA holders. The Bank also undertakes transactions on its own behalf to affect ES balances available to financial institutions. This includes undertaking repurchase agreements (repos) collateralised with eligible securities, buying or selling government securities on an outright basis, or using foreign exchange swaps involving Australian dollars. The Bank conducts these transactions with a view to maintaining the aggregate level of ES balances consistent with demand at the cash rate target.

The bulk of ES balances arise from 'open RBA repos' (that is, repos contracted without a maturity date) contracted with the Reserve Bank by financial institutions to meet their liquidity needs outside of normal banking hours. As these balances are remunerated at the cash rate target and are held to facilitate the effective operation of the payments system, they have no implications for the implementation of monetary policy. At the end of June 2018, these balances were around $27 billion.

the Reserve Bank's
balance sheet
was $186 billion

The remainder of ES balances, referred to as surplus ES balances, fluctuated around $2 billion in line with demand during 2017/18. There is no scope for ESA holders to allow their accounts to be in deficit and any surplus balances are remunerated at an interest rate that is 25 basis points below the cash rate target. Therefore ESA holders typically aim to maintain their accounts with a small positive balance. Day-to-day demand for these surplus ES balances can be volatile for a number of reasons, including because, at times, some institutions choose to hold ES balances as high-quality liquid assets (HQLA) to comply with prudential requirements. There can also be increased demand for holding liquid balances at the central bank at certain times of the year.

On 12 June 2018, the Reserve Bank conducted an additional round of dealing to address a technical issue in the payments system that arose at one of the major banks; the Reserve Bank injected $8.7 billion under reverse repo for an overnight term and the reverse repo book temporarily rose to $76.5 billion. Conditions reverted to normal the following day after the technical issue was resolved.

As well as ensuring that the cash rate remains consistent with the target, the Reserve Bank is responsible for calculating the cash rate. The Bank calculates the cash rate directly from market transactions, sourcing individual transaction data from the Reserve Bank Information and Transfer System (RITS). In 2017/18, there were around 35 cash market transactions each day, with aggregate daily activity in the cash market averaging around $5 billion.

Open market operations

On a day-to-day basis, the Reserve Bank transacts in domestic markets to ensure that the demand and supply for ES balances remains consistent with attaining the cash rate target set by the Board. Through these open market operations (OMO), ES balances are supplied in order to offset the effect on the availability of ES balances arising from the payment flows between ESA holders and the Bank (discussed above), and to accommodate changes in aggregate demand for ES balances by financial institutions. The Bank publishes the aggregate results of its OMO dealing rounds on market data services and on its website each day.

Most of the Reserve Bank's transactions in the domestic market are reverse repos contracted as part of its regular morning OMO.[1] Reverse repos involve the purchase of high-quality collateral securities where the Reserve Bank acquires the security for a period of time in return for providing cash. As a result, there is very little risk of the Bank suffering financial loss in its operations. These include securities issued by the Australian Government, the Australian states and certain approved sovereign and supranational international issuers. Securities issued by banks, such as bank bills, bonds and residential mortgage-backed securities (RMBS), are also eligible for repo in the Reserve Bank's OMO.

A new calculation methodology for the bank bill swap rate (BBSW) was introduced during 2017/18; BBSW is a major interest rate benchmark for the Australian dollar and is widely referenced in many financial contracts. The new methodology, which was fully implemented in May 2018, strengthens the benchmark by calculating it directly from transactions in the bank bill market. Because of the change to the calculation methodology, from November 2017 the Reserve Bank's main OMO dealing round was brought forward from 9.30 am to 9.20 am, so that it is generally concluded before the BBSW 'rate-set window' for trading bank bills, which runs from 8.30 am to 10.00 am. This provides market participants the opportunity to trade bank bills during the rate-set window taking into account their repo allocation in the OMO dealing round.

1 A reverse repo involves an agreement to buy and then later sell securities; this is economically similar to a secured loan, with the difference between the purchase and sale price representing the interest earned on the transaction.

During 2017/18, the cash rate remained consistent with the target set by the Board on all days

In conducting its operations, the Reserve Bank takes account of its forecasts of the liquidity needs of the financial system, as well as of the pricing of the bids and offers received in the OMO dealing round. In 2017/18, the repo transactions conducted in these operations had an average maturity at origination of around 35 days and a maximum term of around four and a half months. Reflecting the role that repos play in managing system liquidity, the total amount of cash lent by the Bank under repo (the 'repo book') averaged around $59 billion during the financial year. The Bank lent cash under repo to banks, insurance companies, non-bank securities firms and government institutions.

To ensure that unexpected payment flows during the day do not adversely affect the cash rate, the Reserve Bank has the option of undertaking additional rounds of market operations in the late afternoon. Such additional rounds were announced, on average, five times per month during 2017/18, with around two-thirds of these operations offering to inject additional liquidity into the system. Terms for these operations are typically shorter than the morning operations, with a maximum term of around 10 days in 2017/18. In the event of unforeseen liquidity developments in the evening, further dealing rounds can be announced to ensure the appropriate level of ES balances in aggregate. The Bank conducted one such round in 2017/18.

The Reserve Bank also uses foreign exchange swaps when managing system liquidity (swapping Australian dollars for foreign currencies increases the supply of ES balances in the same way as a repo transaction).[2] This is necessary because of the limited capacity of the domestic repo market to absorb sizeable fluctuations in the Bank's positions, such as those associated with large maturities of Australian Government Securities (AGS). Reflecting the role of the Bank's foreign exchange swaps in assisting with short-term liquidity management, these swaps have typically been contracted at maturities of around three months.

The Reserve Bank purchases government securities on an outright basis to assist in the management of large AGS maturities. This reflects the Bank's need to mitigate the liquidity impact on the maturity date of the funds that are paid out of the Australian Government's account at the Bank into ESAs (for the credit of the security holder). These purchases for liquidity management purposes are carried out for near-to-maturity securities (usually less than 12 months). They have no implications for the stance of monetary policy. To offset the liquidity effect of AGS maturities, the Bank purchased $9.2 billion of the July 2017 bond and $7.9 billion of the January 2018 bond prior to their maturity. Given the overall size of these maturities, the Bank also contracted sizeable reverse repos and foreign exchange swaps to offset their impact on ES balances. In recent years, the Australian Office for Financial Management (AOFM) has also started to buy back AGS directly in the secondary market prior to the maturity date, but typically ceases to do so around the time that the Bank enters the market to commence its purchases. These buybacks by the AOFM assist the Bank in managing ES balances on the day of a maturity. In preparation for the large AGS maturities scheduled for the current financial year, by the end of June 2018 the Bank had purchased $3.4 billion of the October 2018 bond and $4.0 billion of the March 2019 bond. The Bank's outright holdings of AGS are published monthly on the Bank's website.

The Reserve Bank holds a small amount of longer-term semi-government securities (semis) on an outright basis in its domestic portfolio. These are available to be sold as collateral under repo when the Bank conducts operations to drain liquidity from the overnight money market. At the end of 2017/18, the Bank held around $2.8 billion of semis on an outright basis. These securities are generally purchased as part of the Bank's daily OMO or separately through outright purchase operations. The latter, which are conducted over the Yieldbroker DEBTS trading platform, occurred three times in 2017/18.

The Reserve Bank continues to operate a Securities Lending Facility on behalf of the AOFM. The securities available through the facility comprise all Treasury Bonds and Treasury Indexed Bonds currently on issue. The Bank sells these securities under intraday or open repos to RITS members eligible to participate in the Bank's domestic market operations.

2 While the use of foreign exchange swaps increases the Reserve Bank's holdings of foreign exchange, it has no effect on net foreign reserves, as the increased holdings of foreign exchange are matched with a commitment to sell foreign exchange at a predetermined price and date. For the same reason, the use of swaps has no effect on the exchange rate.

Standing facilities

Separate from its OMO, the Reserve Bank also provides certain standing facilities, primarily to support the smooth functioning of the payments system. Through these facilities eligible counterparties transact with the Bank on pre-arranged terms, with liquidity made available via repos. The most frequently used standing facilities are those for the provision of intraday liquidity to ESA holders. The Bank can also extend overnight funding via repo where an ESA holder faces a shortage in ES balances that cannot be borrowed from another financial institution; such funding is extended at an interest rate 25 basis points above the cash rate target. During 2017/18, this arrangement was used on six occasions.

Open repos are provided under the Reserve Bank's standing facilities for ESA holders that have to settle payment obligations outside normal business hours, such as 'direct-entry' payments. Open repos are also used to facilitate the settlement of after-hours transactions through the New Payments Platform (see also chapter on 'Banking and Payment Services' for details). At the end of June 2018, 16 financial institutions had open repo positions with the Bank, valued at around $27 billion. To collateralise these open repos, the Bank has permitted the use of certain related-party assets issued by bankruptcy remote vehicles, such as self-securitised RMBS.

Eligible securities

The Reserve Bank has established criteria that determine which securities are eligible to be purchased under repo in its domestic market operations. To protect against a decline in the value of the collateral securities should the Bank's counterparty not meet its repurchase obligation, the Bank requires the value of the security to exceed the cash lent by a certain margin. These margins, which are listed on the Bank's website, are considerably higher for securities that are not issued by governments.[3] From time to time, the Bank reviews its eligibility criteria and the margin schedule. In March 2018, the Bank updated its policy for margins by announcing it would also apply margin on the securities it sells under repo. Securities sold under repo by the Bank are sourced from its outright holdings of AGS and securities issued by the state and territory borrowing authorities ('semis'). Unlike reverse repos, which involve the purchase of securities against cash and are conducted to inject liquidity, the Bank conducts a very small number of repos involving the sale of securities against cash, which are conducted in order to drain liquidity. Reverse repos form the great bulk of the Bank's domestic operations.

Participants in the Reserve Bank's market operations tend to be the fixed-income trading desks of banks and securities firms, as well as bank treasuries. Reflecting this, over half of the securities held by the Bank (excluding those under open repo) are government-related obligations, with most of the remainder being bank-issued debt securities and RMBS.

Domestic securities purchased by the Reserve Bank are held for safe custody in an account that the Bank maintains in Austraclear, the securities depository and registry operated by the ASX. Securities transactions conducted between the Bank and its counterparties are settled in the Austraclear system, mostly on a bilateral basis. The Bank also settles repo transactions contracted in its OMO within ASX Collateral, a collateral management service. During 2017/18, around 30 per cent of the total amount of securities the Bank purchased under repo was settled within ASX Collateral, up from around 20 per cent in 2016/17. The use of this system reduces the manual processing, mark-to-market

3 See <https://www.rba.gov.au/mkt-operations/resources/tech-notes/margin-ratios.html>

and margin maintenance activities associated with managing collateral securities.

Asset-backed securities form a significant share of the collateral securities the Reserve Bank purchases under open repo. Around 95 per cent of the outstanding amount of open repos is backed by self-securitised RMBS. Self-securitised RMBS used in open repos do not have directly observable market prices, as they are retained in full by the bankruptcy remote trusts of originating institutions and therefore are not traded. As a result, the Bank uses an internal valuation model for self-securitised RMBS based on observed market prices of similarly structured RMBS; this internal model has been externally reviewed.

Asset-backed securities – particularly self-securitised RMBS – are also the major asset provided as collateral for the Committed Liquidity Facility (CLF) (see below). Given the importance of asset-backed securities to the Reserve Bank's operations, the Bank has mandatory reporting requirements for securitisations to remain eligible for repo. In 2017/18, the Bank received around 3,600 monthly data submissions on around 300 asset-backed transactions from issuers or their appointed information providers. For eligible RMBS, this covers 1.7 million underlying individual housing loans with a combined balance of around $410 billion, which is around one-quarter of the total value of housing loans in Australia. The required data include key information on the structure of the RMBS and the relationships among counterparties within the RMBS structure; the required data also include anonymous information on each of the residential mortgage loans and the underlying collateral backing the RMBS structures.

Reflecting the Reserve Bank's interest in promoting increased transparency for investors in asset-backed securities, issuers are also required to make securitisation information available to investors and other permitted users. The data provided to these users are broadly similar to the data provided to the Bank; however,

Australian Dollar Securities Held under Repurchase Agreements(a)

	June 2015		June 2016		June 2017		June 2018	
	$b	per cent of total	$b	per cent of total	$b	per cent of total	$b	per cent of total
AGS	22.8	28	32.8	35	43.8	43	49.9	48
Semis	11.3	14	7.4	8	6.2	6	8.7	8
Supranational	4.7	6	3.4	4	3.5	3	3.6	3
Government guaranteed	0.0	0	0.0	0	0.0	0	0.0	0
ADI issued	16.1	20	16.8	18	12.5	12	8.1	8
Asset-backed securities	25.3	31	31.6	34	35.6	35	32.7	32
– Of which for open repo	24.1	30	27.2	29	33.5	33	32.3	31
Other	0.1	0	0.6	1	0.6	1	0.6	1
Total	80.3	100	92.5	100	102.2	100	103.7	100
– Of which for open repo	25.6	32	29.3	32	35.7	35	34.2	33

(a) Market value of securities before the application of margins; includes securities held under triparty repurchase agreements
Source: CEIC; RBA

issuers may redact particular fields where the information poses a potential risk to privacy obligations and provide aggregated data instead.

The mandatory reporting requirements allow the Reserve Bank (and other investors in RMBS) to analyse in detail the underlying risks in asset-backed securities and to price and manage risk for such securities accurately.[4]

Committed Liquidity Facility (CLF)

Banks subject to the Liquidity Coverage Ratio (LCR) under Basel III prudential standards are required to hold sufficient HQLA (which, in the Australian context, consist of AGS and semis) to meet outflows during a period of stress of 30 days. Given the relatively low levels of government debt outstanding in Australia, there is a shortage of HQLA securities. To address this, the Reserve Bank provides some institutions with a contractual repo funding commitment – the CLF – subject to certain conditions. These conditions include a fee of 15 basis points per annum on the committed amount that financial institutions pay. In addition, any bank seeking to use the CLF must have positive net worth in the opinion of the Reserve Bank, having consulted with the Australian Prudential Regulation Authority (APRA). The banks are able to contract these repos using securities eligible in the Bank's domestic market operations. The full terms and conditions of the facility are available on the Bank's website.[5]

The Reserve Bank administers the CLF, while APRA determines which banks have access and the amount available (in aggregate and to each bank). During 2017/18, 14 banks were permitted to access the CLF. The aggregate size of the CLF is the difference between APRA's assessment of banks' overall LCR requirements and the Reserve Bank's assessment of the amount of HQLA securities that could reasonably be held by banks without unduly affecting market functioning. For 2018, APRA assessed banks' overall LCR requirements to be $474 billion and the Reserve Bank assessed the banks' reasonable holdings of HQLA securities to be $226 billion, such that the total size of the CLF was $248 billion. This was $31 billion higher than the total size of the CLF in 2017, largely reflecting banks targeting higher buffers over the minimum LCR requirement of 100 per cent. For 2019, the Reserve Bank has assessed that banks can reasonably hold $225 billion of HQLA securities, which represents a quarter of the projected stock of these securities. In determining the amount that banks can reasonably be expected to hold, the Reserve Bank takes into account factors such as the holdings of other market participants and the impact on the liquidity of HQLA securities in secondary markets.

Foreign Exchange Operations

The Reserve Bank transacts in the foreign exchange market on almost every business day. The majority of these transactions are associated with providing foreign exchange services to the Bank's clients, the most significant of which is the Australian Government. During 2017/18, the Bank sold $10 billion of foreign currency to the government (not including sales related to International Monetary Fund (IMF) financing).

The Reserve Bank typically purchases the necessary foreign exchange in the spot market. However, the Bank retains the option – especially during periods of market stress – to use its existing stock of foreign currency reserves to fund its customer business, subsequently

4 Some analysis of the securitisations data was included in speeches by Christopher Kent, Assistant Governor (Financial Markets), in August 2017 and by Marion Kohler, Head of Domestic Markets Department, in November 2017. See <https://www.rba.gov.au/speeches/2017/sp-ag-2017-08-14.html> and <https://www.rba.gov.au/speeches/2017/sp-so-dm-2017-11-20.html>.

5 The CLF legal documentation is available at <https://www.rba.gov.au/mkt-operations/resources/tech-notes/pdf/clf-terms-and-conditions.pdf> and <https://www.rba.gov.au/mkt-operations/resources/tech-notes/clf-operational-notes.html>.

Net foreign currency assets were … US$35.7 billion

replenishing those reserves when market conditions have stabilised. Using foreign currency reserves in this manner has not been considered necessary since 2008, at which time global financial market functioning was significantly impaired. Similarly, the Bank has not intervened in the foreign exchange market since 2008. During 2017/18, the Bank's assessment was that trading conditions in the market were sufficiently orderly and it was not necessary to support liquidity in the market through its own transactions. The Bank nevertheless retains the discretion to intervene in the foreign exchange market to address any apparent dysfunction and/or a significant misalignment in the value of the Australian dollar. Intervention data are published, with a lag, on the Bank's website.

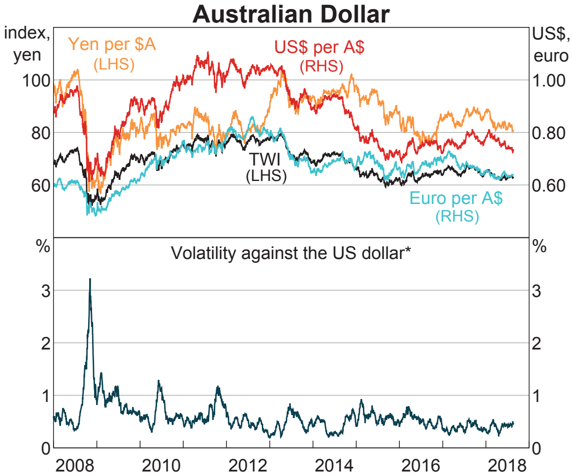
The Reserve Bank also transacts in the foreign exchange market when managing its foreign currency reserves. As discussed below, the relative weightings of foreign currencies in the Bank's portfolio are tightly managed against a benchmark. To maintain the portfolio at these benchmark weights, or to accommodate discrete changes in the weights, the Bank transacts in spot foreign exchange markets. The final settlement of these rebalancing flows may be deferred through the use of foreign exchange swaps, whereby one currency is exchanged for another with a commitment to unwind the exchange at a subsequent date at an agreed (forward) rate. Swaps can also be an efficient way to manage the shorter-term investments within the reserves portfolio. During 2017/18, the Bank generally maintained around $20 billion in swaps for these purposes.

As discussed above, the Reserve Bank also makes use of foreign exchange swaps in its domestic market operations. Swapping Australian dollars for foreign currencies does not affect the exchange rate, but alters the supply of ES balances in the same way as the Bank's repo transactions. Throughout the year, the amount of foreign currency held under swaps against Australian dollars can vary significantly. In 2017/18, the amount held by the Bank ranged between $10 billion and $35 billion.

Foreign currency swaps executed by the Reserve Bank are generally for no more than three months' duration. The resulting forward foreign exchange positions with each of the Bank's counterparties are marked to market daily and collateral is held against net exposures. The terms under which collateral is exchanged are defined in two-way credit support annexes to the International Swaps and Derivatives Association Master Agreements, which the Bank has executed with each of its counterparties (see the chapter on 'Risk Management').

The Reserve Bank's activities in the foreign exchange market are conducted in a manner consistent with the principles of the FX Global Code. A 'Statement of Commitment to the FX Global Code' has been signed on behalf of the Bank.[6] Further, the Bank now transacts in the foreign exchange market only with counterparties that have also signalled their adherence to the code by signing such statements.

6 For the Reserve Bank's Statement of Commitment, see <https://www.rba.gov.au/mkt-operations/pdf/statement-of-commitment-to-fx-global-code.pdf>.



* Daily absolute percentage change, 22-day rolling average
Sources: RBA; Thomson Reuters

Reserves management

Australia's official reserve assets include foreign currency assets, gold, Special Drawing Rights (SDRs – an international reserve asset created by the IMF) and Australia's reserve position in the IMF. At 30 June 2018, these assets totalled $75.8 billion. All components of official reserve assets are owned and managed by the Reserve Bank with the exception of Australia's reserve position in the IMF, which is an asset of the Australian Government.[7]

Official foreign currency assets are held by the Reserve Bank to facilitate various policy operations, including in the foreign exchange market (described above) and to assist the Australian Government in meeting its commitments to the IMF (discussed below). The Bank's capacity to undertake such operations is best measured by its foreign currency holdings net of any forward commitments (such as foreign currency the Bank has obtained from short-term swaps against the Australian dollar). As at 30 June 2018, these net foreign currency assets were SDR25.4 billion or US$35.7 billion. (In Australian dollar terms, net foreign currency assets totalled $48.3 billion, an increase of $1.6 billion from 12 months earlier, reflecting valuation effects.) The amount held represents the level assessed as necessary to meet policy requirements.

To ensure a strong balance sheet, the Reserve Bank holds capital against certain risks arising from its reserve assets (see the chapter on 'Earnings, Distribution and Capital' for more detail). These assets can expose the Bank to market, liquidity and credit risk, which the Bank seeks to mitigate where possible, such as by holding a diversified portfolio and investing only in assets of high credit quality and appropriate liquidity (see the chapter on 'Risk Management' for more detail).

The composition of the Reserve Bank's net foreign currency assets is managed against an internally constructed benchmark. This benchmark is assessed to be the combination of foreign currencies and foreign currency assets that maximises the Bank's expected returns over the long run, subject to the Bank's tolerance for risk. The structure of the benchmark is reviewed periodically and in response to significant changes in market conditions.

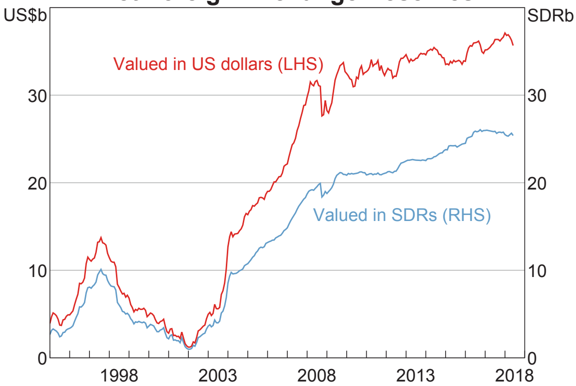
Foreign Assets
June 2018

	A$m
Official Reserve Assets	75,790
Foreign Currency	65,139
Gold	3,739
SDRs	5,557
Reserve Position in the IMF	1,355
Other Foreign Currency Assets	68
Net Forward Commitments	–16,336
Foreign currency	–16,940
Gold loans	604
Net Foreign Reserves	59,522
Memo item:	
Net Foreign Currency Assets	48,266

Source: RBA

7 For information on recent changes made to the reporting of Australia's official foreign currency assets, see <https://www.rba.gov.au/publications/bulletin/2017/dec/1.html>.

Net Foreign Exchange Reserves



Source: RBA

During 2017/18, no changes were made to the currency allocation of the benchmark portfolio. The Reserve Bank maintains the largest allocation to the US dollar at 55 per cent, reflecting the significant liquidity in US dollar currency and asset markets.

Reflecting the generally low level of global interest rates, duration targets have remained short for most of the foreign currency portfolios. Short duration targets reduce the risk of capital losses in the event yields in these currencies increase in the future.

Investments in the benchmark currencies are limited to deposits at official institutions (such as central banks) and debt instruments issued (or guaranteed) by sovereign entities, central banks and supranational agencies. Debt instruments issued by quasi-sovereign entities can also be accepted as collateral under reverse repos.

Sovereign credit exposures are currently limited to the United States, Germany, France, the Netherlands, Canada, Japan, China, the United Kingdom and South Korea.

At the end of June 2018, the Reserve Bank's foreign currency reserves included $19.8 billion of foreign currency sourced from swaps against Australian dollars. Foreign currency obtained in this manner does not comprise part of the benchmark portfolio but reflects domestic liquidity operations. It is invested to ensure that the Bank's forward commitments to sell foreign currency are hedged against currency and interest rate risk.

As has been the case for some years, when the cost of hedging currency risk is taken into account, yields on short-dated Japanese investments have generally exceeded those available in the other currencies in the Reserve Bank's portfolio. Reflecting this, the bulk of the foreign currency the Bank obtains from swaps against Australian dollars is Japanese yen.

For the same reason, the Reserve Bank also swaps other currencies in its foreign exchange reserves portfolio against the yen to enhance returns. As a consequence, while the Bank's exposure to changes in the value of the yen remains small (consistent with the yen's 5 per cent allocation in the benchmark), an additional $21 billion of yen was held at the end of June 2018 as a result of swaps against other foreign currencies in the portfolio.

A small component of the Reserve Bank's net foreign currency reserves sits outside the benchmark framework. This encompasses investments in a number of Asian debt markets through participation in the Executives' Meeting

Benchmark Foreign Currency Portfolio

30 June 2018

	US dollar	Euro	Japanese yen	Canadian dollar	Chinese renminbi	UK pound sterling	South Korean won
Currency allocation (per cent of total)	55	20	5	5	5	5	5
Duration (months)	6	6	<3	6	18	3	18

Source: RBA

Foreign Currency Assets[a]

A$ million, 30 June 2018

Currency	Securities held outright	Securities lent under repurchase agreements	Deposits at official institutions[b]	Total (gross)	Forward foreign exchange commitments[c]			Total (net)
					Against AUD	Against other currencies[c]	Other	
US dollar	9,354	–447	749	9,655	185	14,429	1,890	26,159
Euro	5,953	–550	6,378	11,781	–6,770	3,714	943	9,668
Japanese yen	20,680	0	15,911	36,591	–13,192	–21,040	0	2,360
Canadian dollar	790	0	5	795	0	1,566	0	2,361
Chinese renminbi	1,741	0	611	2,352	0	0	0	2,352
UK pound sterling	837	0	1	838	–1	1,546	0	2,384
South Korean won	2,343	0	9	2,353	0	0	0	2,353
Total	41,698	–997	23,664	64,365	–19,777	215	2,834	47,636

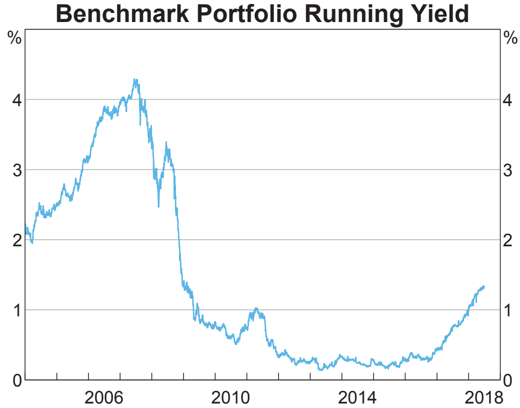
(a) Excludes investments in the Asian Bond Fund
(b) Includes deposits at foreign central banks and the Bank for International Settlements
(c) In accordance with IMF guidelines, 'forward commitments' reflect notional values of unsettled spot and forward transactions, converted to Australian dollars at the prevailing forward exchange rate; other forward commitments largely reflect cash lent under repurchase agreements
Source: RBA

of East Asia and Pacific Central Banks (EMEAP) Asian Bond Fund Initiative. This initiative was established following the Asian currency crisis in the late 1990s to assist in the development of bond markets in the region. At the end of June 2018, the total allocation of the Bank's reserves to these funds was $628 million and the return on these investments in 2017/18 was 0.3 per cent when measured in SDR terms, with capital losses on bond holdings and depreciation of Asian currencies partially offsetting interest earnings.

Measured in SDRs, the overall return on the Reserve Bank's foreign currency assets over 2017/18 was 0.8 per cent. This return was slightly lower than that in each of the previous three years, reflecting the negative impact of exchange rate valuation changes. Capital losses on bond holdings also partially offset the positive impact on returns from higher yields. The running yield on the benchmark portfolio increased by 0.6 per cent to 1.3 per cent over 2017/18, driven by an increase in yields for the US dollar, Canadian dollar, UK pound sterling and Korean won portfolios. Yields remained negative and relatively stable for the euro portfolio.

The Reserve Bank's holdings of SDRs at 30 June 2018 amounted to $5.6 billion, $0.4 billion higher than the previous year, mainly owing to a depreciation of the Australian dollar against

Benchmark Portfolio Running Yield



Source: RBA

the SDR. Under voluntary arrangements with the IMF, the Bank is willing to transact in SDRs upon request from other countries or prescribed holders. In these transactions, the Bank will generally either buy or sell SDRs in exchange for foreign currencies (such as euros or US dollars). While such transactions do not alter the level of Australia's reserve assets (only the respective proportions held in SDRs and foreign currency), the Bank occasionally chooses to replenish foreign currency sold in exchange for SDRs by purchasing additional foreign currency against Australian dollars in the spot market.

Australia's reserve position in the IMF comprises that part of Australia's quota in the IMF that is paid in foreign currency as well as other credit that Australia has extended to the IMF in support of its lending programs. At the end of June 2018, Australia's reserve position in the IMF was $1.4 billion, $0.3 billion larger than the previous year, reflecting both the depreciation of the Australian dollar and greater provision of foreign currency to the IMF. As noted above, Australia's reserve position in the IMF is not held on the Reserve Bank's balance sheet. However, the Bank will sell to (or purchase from) the Australian Treasury the foreign currency the Treasury needs to complete its transactions with the IMF. In contrast to other foreign exchange transactions with the Australian Government, the Bank will typically draw on (or add to) its foreign currency reserves when providing (or receiving) foreign currency for IMF-related purposes because these transactions do not alter the level of Australia's reserve assets. Nevertheless, as with SDR transactions, on certain occasions the Bank may decide to offset the impact on foreign currency holdings of these IMF transactions by buying or selling foreign currency in exchange for Australian dollars in the spot market.

Gold holdings (including gold on loan) at the end of June 2018 were around 80 tonnes, unchanged from the previous year. Gold prices rose by 5 per cent in Australian dollar terms over 2017/18, increasing the value of the Reserve Bank's holdings of gold by around $0.2 billion to $4.3 billion. At $0.71 million, income from gold loans was slightly lower than the previous year, as a result of lower lending rates.

Bilateral currency swaps

In April 2018, the Reserve Bank renewed a bilateral local currency swap agreement with the People's Bank of China. The agreement allows for the exchange of local currencies between the two central banks of up to A$40 billion or CNY200 billion. The agreement is for a further three years and can be extended by mutual consent. The Reserve Bank has similar agreements with the Bank of Japan, Bank of Korea and Bank Indonesia. The purpose of these agreements is to allow each central bank to support trade settlement in local currencies, particularly in times of market stress, or to support financial stability.

RBA Bilateral Local Currency Swap Agreements[(a)]
June 2018

	Agreement signed/renewed	Size (A$b)
People's Bank of China	April 2018	40
Bank of Japan	March 2016	20
Bank Indonesia	December 2015	10
Bank of Korea	February 2017	10

(a) All swap agreements have 3-year terms
Source: RBA

Banking and Payment Services

The Reserve Bank provides banking and payment services to support the efficient and stable functioning of the Australian financial system. The Bank is currently engaged in projects to renovate and strengthen its banking and settlement capabilities and operate new infrastructure to support real-time payments by households and businesses on a 24/7 basis. This will enable the Bank to continue to meet the banking and payment needs of its government and agency customers and, in turn, the Australian public.

Banking

The Reserve Bank's banking function provides services in two broad groups: central banking services and transactional banking services. Both are provided with the objective of delivering secure and efficient arrangements to meet the banking and payment needs of the Australian Government and its agencies. In addition, the Bank provides banking and registry services to a number of overseas central banks and official institutions.

The key aspect of the Reserve Bank's central banking services is the role it plays as banker to the Australian Government. Among other things, this requires the Bank to manage the consolidation of all Australian Government agency account balances, irrespective of the financial institution that provides transactional banking services to each Australian Government agency. These balances are transferred at the end of the business day into a group of accounts known as the Official Public Accounts (OPA) Group, which is where the Commonwealth's overnight at call cash balances are held. Daily payment instructions from the Department of Finance are then processed to move funds from the OPA to agency bank accounts to meet agency payment obligations. The Bank also provides the government with a term-deposit facility for investment of its cash holdings, as well as a very limited short-term overdraft facility to cater for occasions when there is unexpected demand for government cash balances. While the Bank manages the consolidation of the government's accounts, the Australian Office of Financial Management has responsibility for ensuring there are sufficient cash balances in the OPA to meet the government's day-to-day spending commitments and for investing excess funds in approved investments, including term deposits with the Bank.

The transactional banking services offered by the Reserve Bank have evolved rapidly over recent years as its government agency customers look to embrace new technology to deliver convenient, secure, reliable and cost-effective payment options to the public. The public launch of the New Payments Platform (NPP) in February 2018 was an important milestone in this evolution. The NPP allows fast, versatile and data-rich payments to be made 24/7. In the six months since the NPP's launch, the Bank's government clients have received NPP payments to the value of $179 million, primarily from individuals and businesses to pay tax liabilities. The Bank is working with government agencies, such as the Department of Human Services and the Australian Taxation Office (ATO), to ensure they are able to fully utilise the new payments technology, including via future planned overlay services. The Bank expects that the NPP will affect volumes for its more traditional payment and collection services in coming years.

The Reserve Bank also continues to provide a number of other channels to make payments from government agencies to recipients' accounts. In 2017/18, the Bank processed around 312 million domestic and 1.1 million international payments, totalling $534 billion and $11.6 billion respectively, for government agencies. Most of these payments were direct entry payments made on behalf of the Department of Human Services. The Australian Government also makes payments by the real-time gross settlement (RTGS) system, cheque, BPAY and prepaid cards. After declining over recent years, cheque payment volumes were steady in 2017/18.

In addition to payments, the Reserve Bank provides government agency customers such as the ATO with access to a number of services through which they can collect monies owed

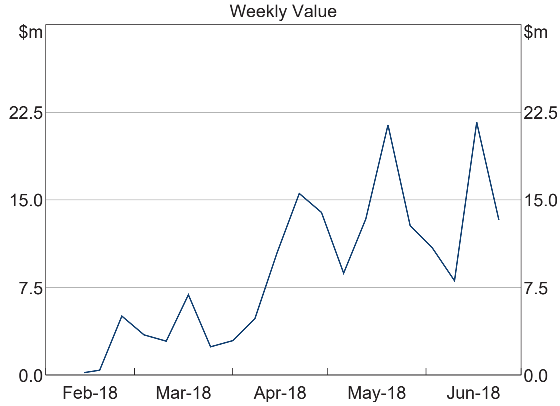
The New Payments Platform allows fast, versatile and data-rich payments to be made 24/7

from both domestic and international payers. These include direct entry, RTGS, BPAY, cheque, eftpos, cash, and card-based services via the internet and phone. The Bank processed 36 million collections-related transactions for the Australian Government in 2017/18, amounting to $509 billion. Agencies continue to actively encourage customers to use lower-cost electronic payment options, with cheque and cash payments declining by 17 per cent to $4.8 million and electronic payments representing 98 per cent of all collections-related transactions in 2017/18.

The provision of transactional banking services is consistent with the Reserve Bank's responsibilities under the *Reserve Bank Act 1959*, which requires the Bank to provide these services to the Australian Government if so required. The Bank provides transactional banking services to over 90 Australian Government agencies. A key difference between the Bank's central banking and transactional banking services is that the latter are offered in line with the Australian Government's competitive neutrality guidelines. To deliver the services, the Bank competes with commercial financial institutions, in most instances bidding for business via tenders conducted by the agencies themselves. The Bank must also cost

RBA's Government Clients' NPP Receipts

Weekly Value



Source: RBA

and price the services separately from its other activities, including central banking services, and meet a prescribed minimum rate of return.

Pro forma business accounts for transactional banking are provided on page 128 of this report.

The Reserve Bank works closely with its transactional banking customers, the Australian Government and the payments industry more broadly to ensure that its customers have access to the services which meet their needs and those of the public. For some services, the Bank combines its specialist knowledge of the government sector with specific services and products from commercial providers to meet the government's banking needs. In 2017/18, the Bank explored new options for collecting online payments. The Bank will continue to make use of combined service arrangements with commercial providers as the government's banking needs evolve.

Registry services are also provided by the Reserve Bank to supranational organisations issuing Australian dollar-denominated securities. Eight organisations currently use these services, with this number having been relatively steady over recent years.

In the six months since the NPP's launch, the Bank's government clients have received NPP payments to the value of $179 million

The Reserve Bank has undertaken a significant program of work to upgrade its banking systems since 2012, moving them to a more modern programming language and architecture, and re-engineering a number of related business processes. Further milestones in the program were achieved during 2017/18, with work on renovating the systems used to process most government payments and collections almost complete. The Bank has also made good progress with the project to upgrade the Bank's account maintenance system, with the first phase completed. This program of work is on schedule to be completed during the September quarter 2019.

Since the launch of the NPP, the Reserve Bank has continued to develop further capabilities that will assist in providing more reliable, cost-effective, faster and better-integrated services to expand the usage of the NPP. As part of this work, an Application Programming Interface (API) will be introduced by the end of 2018 to facilitate open, secure and automated communications between the Bank and its agency customers.

After-tax earnings from the Reserve Bank's transactional banking services were $1.5 million in 2017/18, $1.9 million lower than in the previous year. The fall was due largely to higher project costs associated with systems development and service improvements combined with reduced interest income.

Settlement Services

The Reserve Bank owns and operates the Reserve Bank Information and Transfer System (RITS), which is used by banks and other approved institutions to settle their payment obligations. Settlement in RITS is effected across Exchange

Settlement Accounts (ESAs) held with the Reserve Bank, and is final and irrevocable. Around 90 per cent of the value of payments exchanged between financial institutions in Australia is settled in RITS individually on a real-time gross settlement (RTGS) basis. This includes high-value customer, corporate and institutional payments, wholesale debt and money market transactions and the Australian dollar legs of foreign exchange transactions. By providing a mechanism for RTGS, RITS eliminates the settlement risk that would otherwise arise between participants in high-value payment, clearing and securities settlement systems. On average, 47,600 RTGS transactions worth $182 billion were settled in RITS each day in 2017/18. In recent years, the value of transactions has increased at a lower rate than the volume of transactions. In addition, RITS provides deferred net settlement services for low-value retail payment systems, equity settlements and settlement of property-related transactions.

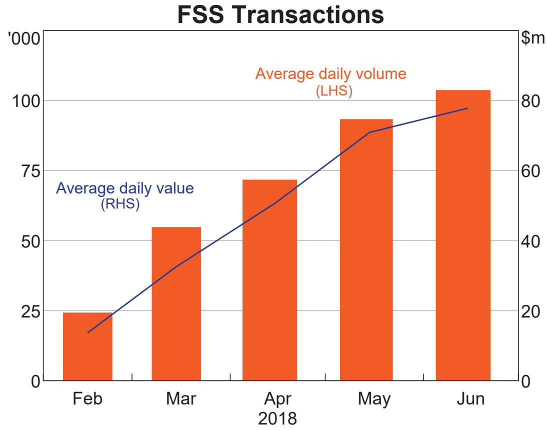
RITS also provides a real-time settlement service to support the operation of the NPP. The public launch of the NPP in February 2018 was the result of a large collaborative undertaking by payment service providers and the Reserve Bank. The key features of the NPP include: enabling users to make retail payments in real time; allowing more complete remittance information to be sent alongside the payment; enabling easy addressing of payments to payee accounts using simple identifiers (called PayIDs), such as email addresses, mobile phone numbers or ABNs; and facilitating the sending and receiving of payments outside normal business hours with 24/7 operation. To support innovation in the Australian payments system, the NPP is structured so as to allow the commercial development of new payment and related services using the capabilities of NPP's infrastructure. At the end of June 2018, more than 60 financial institutions offered NPP payments to their customers, with around 1.8 million registered PayIDs. Many of these institutions are smaller authorised deposit-taking institutions (ADIs) connecting via the services of an aggregator. The number of registered PayIDs is expected to grow significantly through 2018/19 as participants progress their NPP roll-out.

NPP transactions are settled in the RITS Fast Settlement Service (FSS). This is a new system within RITS designed to process and settle a high volume of transactions in real time, but without the transaction queuing and management capabilities provided by core RITS for the management of high-value transactions. The real-time settlement of NPP transactions via the FSS removes the credit risk that would otherwise exist if these transactions were settled on a deferred net basis as is currently done for other low-value payments. Transaction volumes settled via the FSS have grown steadily since launch, reaching over 100,000 transactions per day in June 2018, with an average transaction value of around $750. This amounted to a total of 10.2 million transactions with a total value of $7.3 billion settled via the FSS between public launch and the end of June 2018. To support the FSS, the hours of operation of the RITS Help Desk were extended to provide 24/7 technical assistance to members. Since its launch, the FSS has operated smoothly, with no major disruptions to operations.

While the introduction of the NPP has resulted in more low-value payments being settled in real time, the bulk of low-value payments continue to settle in RITS on a net basis. The average daily value of net settlements in RITS was around $12 billion in 2017/18. This includes obligations for payments exchanged through low-value clearing systems for cheques, debit and credit cards, BPAY and direct entry transactions. For these transactions, RITS combines multiple bilateral obligations submitted by members into a single net obligation for each member, which are then settled in RITS at predetermined times. During 2017/18, these low-value clearing arrangements accounted for a net daily average of $9.5 billion, of which around 85 per cent was intraday settlement of direct entry transactions. The substantial increase in the value of these low-value clearing arrangements over the past five years reflects a fragmentation of settlement arrangements, with the introduction of the five intraday settlement runs for direct entry and other new batch settlement arrangements, which supplement the long-established arrangement of a morning settlement session of net deferred obligations at around 9.00 am.

In the batch settlement arrangements, an approved administrator for each batch is responsible for calculating the net obligations of the batch participants and submitting those to RITS for settlement. The Clearing House Electronic Sub-register System (CHESS) batch, which effects settlement of payments arising from stock market transactions and is administered by ASX Settlement Pty Limited, averaged around $1 billion per day in 2017/18. The Mastercard batch, for settlement of domestic Mastercard obligations and administered by Mastercard International, averaged around $684 million over the same period. On 30 August 2017, a new eftpos batch, administered by eftpos Payments Australia Limited, went live for settlement of point-of-sale transactions processed through the eftpos system. Previously, these transactions had been settled the next day at around 9.00 am. The eftpos batch averaged around $284 million per day for the part of 2017/18 during which it was operational.

The FSS settled 10.2 million transactions totalling $7.3 billion between public launch and the end of June 2018



Source: RBA

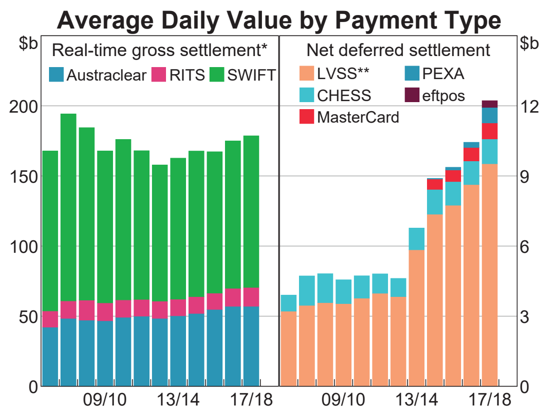
A batch feeder arrangement in RITS also supports the settlement of obligations arising from electronic property transactions processed by Property Exchange Australia Limited (PEXA). Timelines for migration to electronic e-conveyancing set by several state governments have contributed to ongoing strong growth in the number and value of property settlement batches processed in RITS, although off a low base. During 2017/18, the PEXA batch settlements averaged $668 million per day, more than double the figure for the previous year.

Reflecting the critical importance of RITS to the Australian financial system, the Reserve Bank conducts regular reviews of the resilience of RITS. An important part of this is the annual assessment of RITS against the *Principles for Financial Market Infrastructures* (PFMI) set by the Committee on Payments and Market Infrastructures (CPMI) and the International Organization of Securities Commissions (IOSCO). The May 2018 assessment of RITS against the PFMI concluded that RITS adhered to all relevant principles. It noted the existing high level of resilience of RITS, which includes replication of critical components and duplication of systems across two geographically separate sites, while also supporting the Bank's ongoing work to enhance resilience. Key examples of this work are an investigation into the potential use of non-similar technology to enhance recovery from cyber attacks, and the implementation of the remaining recommendations from the Bank's major reviews of security and resilience conducted through 2015 and 2016. The Bank has also commenced a multi-year project to upgrade the core network and application infrastructure of RITS.

At the end of June 2018, 58 RITS members were using their own ESA to settle their payment obligations. An additional 41 RITS members held a dormant ESA, settling all their obligations through another ESA holder acting as their settlement agent. There were also 65 RITS members that did not hold an ESA, but held RITS membership to satisfy requirements for participation in the Reserve Bank's open market operations.

Recent changes in bank regulations seeking to enhance competition and innovation in payment services have resulted in corresponding changes in the Reserve Bank's ESA Policy. In May 2018, the *Banking Act 1959* was amended to allow all ADIs to use the term 'bank'. The Australian Prudential Regulation Authority is also introducing a phased approach to authorising new ADIs, which allows new entrants to fast track a restricted ADI licence. As the bank designation is no longer a useful criteria for determining the appropriate type of RITS membership, the prior requirement for all banks to hold an ESA has been removed. The requirement for ADIs contributing more than 0.25 per cent of total wholesale RTGS value to hold and operate their own ESA remains. The new policy means that holding a dormant ESA has become optional for many existing ESA holders, although the Reserve Bank continues to offer the use of a dormant ESA to eligible banks and other payment service providers for contingency purposes.

The Reserve Bank offers accounts to other central banks and official institutions overseas to allow for settlement of certain Australian dollar payments, and provides safe custody services to these overseas agencies. The face value of securities held in custody by the Bank in this capacity was around $72 billion at the end of June 2018. The Bank also provides settlement services for banknote lodgements and withdrawals by commercial banks.



* Excluding FSS transactions
** RITS Low Value Settlement Service, including cheque, direct entry, ATM and Visa settlements
Source: RBA