



RESERVE BANK OF AUSTRALIA

Cash Rate Methodology

Overview

Last Updated: 26 October 2021

The Interbank Overnight Cash Rate (Cash Rate) is the Reserve Bank Board's operational target for monetary policy. It is calculated as the weighted average of the interest rate at which overnight unsecured funds are transacted in the domestic interbank market (the cash market).

The Cash Rate is also an important financial benchmark in the Australian financial markets. The cash rate is the (near) risk-free benchmark rate (RFR) for the Australian dollar. It is used as the reference rate for Australian dollar overnight indexed swaps (OIS) and the ASX's 30-day interbank cash rate futures contract. The Cash Rate is also known by the acronym AONIA in financial markets.

The Reserve Bank also publishes a Cash Rate Total Return Index (TRI), which members of the public can use as a benchmark with a (near) risk-free rate of return. The TRI measures the performance of an investment earning the Cash Rate, where interest is reinvested.

The Reserve Bank is the Administrator of the Cash Rate. The [Cash Rate Procedures Manual](#) sets out:

- The Reserve Bank's internal governance arrangements for administration of the Cash Rate
- The standards applicable to the data inputs and the data methodology
- Cut-off times for publication of the Cash Rate and the TRI
- The calculation methodology employed to compute the Cash Rate and the TRI
- The use of Expert Judgment
- Error handling procedures
- Complaints handling processes
- Conflicts of interest and whistle-blowing procedures
- The process in the event of material changes in methodology

The Cash Rate is published each day that the Reserve Bank Information and Transfer System (RITS) is open for interbank settlement.

The Loading [MathJax]/jax/output/HTML-CSS/jax.js on the Cash Rate.

The following Sections summarise some of the key elements of the Reserve Bank's procedures, which are outlined in full in the [Cash Rate Procedures Manual](#).

1. The Use of Transaction Data

To calculate the Cash Rate, the Reserve Bank uses transaction data sourced directly from RITS. This methodology was introduced in May 2016 and superseded the use of survey data which banks were required to submit to the Reserve Bank. The transaction data include the individual amounts and interest rates at which banks transact in the cash market.

The Reserve Bank uses cash market transactions between banks that settle any payments across their own Exchange Settlement Account (ESA). A list of banks with ESAs is provided as part of the [RITS membership list](#). This list includes a number of banks that may use a settlement agent for the management of their ESA (identified with an asterisk) and as such do not conduct any cash market transactions. Where banks decide to transact in the cash market, their transactions must be appropriately identified in RITS as cash market transactions.

The following types of transactions are not in scope of the Cash Rate calculation:

- transactions concluded between banks outside of RITS;
- transactions involving non-bank institutions;
- transactions with banks that use a settlement agent for the operation of their ESA;
- intragroup cash market transactions, such as transactions between two subsidiaries of a banking group or between an Australian branch of a banking group and its subsidiary;
- transactions in which the commitment to lend (or accept) funds was made in advance of the value date or included a commitment to lend (or accept) further funds on future days;
or
- transactions in which the terms of the interbank loan were negotiated as part of a broader agreement that included other obligations between the two parties.

2. Method of Data Collection

The Reserve Bank collects information on all RITS cash transfers for each day that RITS is open for interbank settlement. Banks must complete this information in the RITS Cash Transfer Entry system to effect settlement of a cash market transaction, and it includes:

- the **value of each cash market transaction** – the principal value of unsecured funds borrowed by the receiver and lent by the payer in the first leg of the transaction, and the return of the principal with interest in the second leg unwind of the transaction
- the **counterparty banks** to the transaction
- the **deal date** – the date the cash market transaction was contracted

Loading [MathJax]/jax/output/HTML-CSS/jax.js

- the **settlement date** – the first leg must be for same-day settlement (the deal date) and the second leg (unwind) settlement date must be the next business day (overnight term)
- the **interest rate** at which interbank funds were borrowed and lent
- **identifier codes** to enable detection by the Reserve Bank of cash market transactions – banks must enter IBOC1 for the first leg of a cash market transaction and IBOC2 for the second leg unwind of the transaction.

3. Calculation

The Cash Rate is calculated as the volume-weighted average interest rate at which cash market transactions were settled. The Cash Rate is rounded to two decimal places.

Reserve Bank staff ensure that all cash market transactions within RITS are matched and refer any apparent mismatches or other anomalies to the transacting banks for clarification.

4. Publication

The Cash Rate calculated from RITS transaction data and the TRI are published to market data services (Reuters RBA30; Bloomberg RBA07) prior to 9.20am AEST/AEDT for each day that RITS is open for interbank settlement (the Publication Date).

The Cash Rate is the rate applicable on the business day preceding the Publication Date while the TRI is the applicable index on the Publication Date. The history of the Cash Rate and the TRI are available in [Statistical Table F1](#) [\[XLS\]](#), which also includes data on the number and aggregate value of cash market transactions, and the range of interest rates (highest and lowest) at which banks transacted individual cash market transactions.

Under limited circumstances, the Reserve Bank may defer the publication time of the Cash Rate. This may be due, for example, to technical problems or because more time is required to resolve a material inconsistency within the transaction data.

In case of insufficient data or technical problems, the Cash Rate is determined by fall back procedures, which include reference to the last Cash Rate published, or the new Cash Rate Target should one be announced by the RBA Board, or another rate that reflects the interest rate relevant to unsecured overnight funds for Cash Market Participants as determined by the Cash Rate Administrator, in its Expert Judgement and based on market conditions. Such instances – for example, due to insufficient Transaction Data or a technical problem – are identified on the market data services (including Reuters RBA30 and Bloomberg RBA07) by addition of the following text:

Cash Rate determined by reference to fall back procedures – Insufficient Data (or) Technical Problem

5. Procedures for Errors

Loading [MathJax]/jax/output/HTML-CSS/jax.js

Banks should inform the Reserve Bank promptly if they become aware that they have incorrectly identified or failed to identify a cash market transaction within RITS.

Such reports should be made to the Reserve Bank's Market Operations staff on the following number: [+61 2 9551 8321](tel:+61295518321).

Where the Reserve Bank becomes aware of an error in the identification of cash market transactions by banks or its own calculation processes on the Publication Date of the Cash Rate, the Reserve Bank may republish the Cash Rate and TRI up until 04.00pm AEST/AEDT on the Publication Date.

In such circumstances, the Reserve Bank will add the term '**Republication**' to the dedicated pages on market data services (Reuters RBA30 and Bloomberg RBA07).

Where such reports of errors in identifying cash market transactions are made to the Reserve Bank after 04.00pm AEST/AEDT on the Publication Date of the Cash Rate, or where the Reserve Bank identifies after this time that it is responsible for an error in the calculated Cash Rate, the Reserve Bank will not revise the published Cash Rate and TRI.

The Reserve Bank will thoroughly investigate the sources of any such errors it has made and take corrective steps to maintain confidence in the calculation methodology and process.

6. Confidentiality

All transaction data used by the Reserve Bank are kept strictly confidential, except in the event that inconsistent or erroneous transaction data are identified and the Reserve Bank considers it is necessary or desirable to provide the data to a bank that is party to the transaction so as to address or resolve the inconsistency or any other material issue with the data.

7. Cash Rate Total Return Index (TRI)

The TRI measures the performance of an investment earning the Cash Rate, where interest is reinvested:

$$TRI_t = TRI_{t-d} \times \left(1 + \frac{Cash\ Rate_{t-d} \times d}{365 \times 100} \right)$$

TRI = Cash Rate Total Return Index

t = a business day that the cash market is open

d = the number of days since the previous business day when the cash market was open

The formula assumes that interest earnings are only paid and reinvested on business days. On non-business days, the interest accrues at the Cash Rate of the preceding business day, but is not paid and reinvested until the next business day.

Loading [MathJax]/jax/output/HTML-CSS/jax.js

The base period for the TRI is 4 January 2011 = 100.

The materials on this webpage are subject to copyright and their use is subject to the terms and conditions set out in the [Copyright and Disclaimer Notice](#).

© Reserve Bank of Australia, 2001–2023. All rights reserved.

The Reserve Bank of Australia acknowledges the Aboriginal and Torres Strait Islander Peoples of Australia as the Traditional Custodians of this land, and recognises their continuing connection to Country. We pay our respects to their Elders, past, present and emerging.