# Realised AONIA Methodology

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## Executive Summary

### Overview

Realised AONIA is a risk free or close to risk free rate that reflects the rate at which overnight unsecured funds are transacted in the Australian interbank cash market over prior periods covering 1 month through to 6 months. Realised AONIA is a backward looking rate based on the observed Reserve Bank of Australia (RBA) Interbank Overnight Cash Rate (Cash Rate), also known as AONIA[1], compounded daily over the relevant period in accordance with the calculation methodology and conventions set out below.

The Cash Rate is calculated and published each morning by the RBA[2] and reflects overnight unsecured borrowing and lending activity in the Australian interbank market for the prior business day. On average, around $4 billion in underlying volume is transacted in the interbank overnight cash market per day. For more information on the RBA Cash Rate methodology and procedures see the RBA domestic market operations page.

### Rationale

In recent years, the reform and resilience of global interest rate benchmarks has been a key focus of the G20 and the Financial Stability Board. Regulatory and legal bodies have been working with market participants on the development and adoption of alternative benchmarks to move the market away from the traditional Interbank Offered Rates (IBOR's) by the end of 2021. In Australia, the ASX has worked closely with market participants and the regulators on the reform of BBSW to ensure the rate is governed and calculated in accordance with global best practice principles. While BBSW remains a key Australian interest rate benchmark, the development of alternative rates in offshore markets has implications for the Australian market and users of BBSW.

Overnight risk free or close to risk free rates (RFRs) are considered a robust alternative to the IBORs given the size and liquidity of the overnight market. Regulatory bodies are also encouraging the use of RFRs where a rate including bank credit spread may not be appropriate.

Entities engaging in cross currency swaps referencing RFRs such as SOFR or SONIA, may prefer to have similar reference rates for both legs of the transaction. Replacing BBSW, which includes a bank credit component, with an Australian RFR may be a better fit for these transactions. In Australia, Semi-Government Authorities raise capital by issuing bonds and FRNs which currently reference BBSW. For these issuers, using a risk free reference rate (as opposed to a bank funding rate) may be more appropriate.

### How do I receive Realised AONIA rates?

Existing BBSW subscribers who have elected to receive BBSW rates via email will also receive Realised AONIA rates from the 27th May 2019 as part of the 2019 BBSW subscription package. Fees will initially be waived for existing BBSW subscribers. This waiver applies for **internal use only** and excludes vendor platforms. Two years of historical Realised AONIA data is available to BBSW subscribers upon request. To request access to the historical rates contact benchmarks@asx.com.au.

Participants wishing to reference Realised AONIA in contractual documentation or create product over Realised AONIA can contact the ASX market data team (marketdata.admin@asx.com.au) for information on a subscription package.

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[1] The terms Cash Rate and AONIA are used interchangeably in this document
[2] The RBA calculate and publish the Cash Rate each Business Day. The Cash Rate is available on the RBA website, free of charge.

## Inputs to the Realised AONIA calculation and conventions

| Component | Detail |
|---|---|
| **Data input** | RBA Interbank Overnight Cash Rate (Cash Rate) also known as the Australian Overnight Index Average (AONIA)[3] published by the RBA prior to 9:20am each morning on the RBA website, Reuters page RBA30 and Bloomberg page RBAO7. The published rate is the rate applicable for the prior business day (published on a T+1 basis). |
| **Tenors** | Realised AONIA is calculated and published each Business Day covering 1, 2, 3, 4, 5 and 6 month prior periods. |
| **Business days** | A Business Day is any day that banks are open for business in Sydney[4]. For non-good Business Days in the period, the previous days Cash Rate will be applicable. For example, Friday's rate will be applied to Saturday and Sunday. The Realised AONIA holiday calendar is included in appendix A. |
| **Day count** | Actual / 365 |
| **Start Date** | The Start Date is the historical straight run date for a tenor and is defined as the same calendar day as the End Date or publication date n months prior for tenors 1 -6. Where the historical straight date falls on a weekend or public holiday, modified following rules will apply unless that day crosses the end of the month in which case the historical straight run date will revert to the first preceding day that is a good Business Day. The Start Date will always be a good Business Day.<br><br>Example 1: If today is the 27th December 2018, the historical straight run date for the 1 month tenor would be 27th November 2018.<br><br>Example 2: If today is the 31st December 2018, the historical straight run date for the 3 month tenor would be 28th September 2018 given the 30th September 2018 falls on a Sunday and rolling forward would take the straight run date into October.<br><br>Example 3: If today is the 1st February 2019, the historical straight run date for the 1 month tenor would be 2nd January 2019 given the 1st January 2019 was a public holiday (modified following rules). |
| **End Date** | The day on which Realised AONIA is calculated and published. The End Date will always be a good Business Day. |
| **Rounding** | Realised AONIA is rounded to 4 decimal places. |
| **Publication** | Realised AONIA rates are published each Business Day at 10:30am AEST/AEDT. Realised AONIA will only be calculated and published if the Cash Rate is available for all Business Days in the period. Realised AONIA is available via Bloomberg and Refinitiv. See appendix B for a list of ticker/RIC codes. |
| **Data Transparency** | The RBA update the daily volume of interbank overnight cash market transactions, applicable for the prior business day, on their website by 9:20am each morning. |

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[3] The terms Cash Rate and AONIA are used interchangeably in this document
[4] Calculation is based on Sydney Banking Day convention in line with ISDA Definitions

## Realised AONIA Methodology

| Compounded setting in arrears methodology | Description |
|---|---|
| | Realised AONIA is calculated based on the observed Cash Rate compounded daily[5] in arrears over the observation period for a tenor, the observation period being the period between the Start Date (inclusive) up to but excluding the End Date. The Start and End Date will always be good Business Days. $$r = \frac{365}{d}\left[ \prod_{i=1}^{d_0} \left(1 + \frac{AONIAi * ni}{365}\right) - 1 \right]$$ Where: <ul><li>**r:** Realised AONIA rate for tenor</li><li>$d_0$: the number of Business Days in the period</li><li>**i:** a series of whole numbers from 1 to $d_0$ that each represent the applicable Business Days in the period in chronological order, from and including, the first Business Day in the period (Start Date) up to but excluding the last Business Day in the period (End Date).</li><li>**AONIAi:** Cash Rate applicable for any day "i" in the calculation period</li><li>**ni:** number of calendar days between Business Days for which the AONIAi rate applies (normally 1 day for Monday- Thursday, 3 days for Friday including the weekend. When a public holiday falls on a Friday or a Monday, ni will be 4 days)</li><li>**d:** calendar days from and including the Start Date up to but excluding the End Date (number of calendar days in the period)</li></ul> Realised AONIA will only be calculated and published where the Cash Rate is available for all Business Days. |

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[5] Compounding occurs on Business Days only. For non-Business Days interest will accrue at the prior Business Days Cash Rate, but is not compounded/reinvested until the next Business Day.

## Appendix A

Realised AONIA will not be published on weekends or the below public holidays:

| Realised AONIA public holidays[6] |
| :---: |
| New Year's Day |
| Australia Day |
| Good Friday and Easter Monday |
| ANZAC Day |
| Queen's Birthday |
| NSW Bank Holiday |
| NSW Labour Day Holiday |
| Christmas Day |
| Boxing Day |

## Appendix B

Realised AONIA rates are published each Business Day at 10:30am via email and to the below vendor pages:

| Realised AONIA codes | Bloomberg | Refinitiv |
| :---: | :---: | :---: |
| All tenors (main page) | ASX32 | AONIARF= |
| 1m | AOIAR1M | AONIA1MRF=ASXB |
| 2m | AOIAR2M | AONIA2MRF=ASXB |
| 3m | AOIAR3M | AONIA3MRF=ASXB |
| 4m | AOIAR4M | AONIA4MRF=ASXB |
| 5m | AOIAR5M | AONIA5MRF=ASXB |
| 6m | AOIAR6M | AONIA6MRF=ASXB |

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[6] Calculation is based on Sydney Banking Day convention in line with ISDA Definitions

## Document Control

### Version History

This document has been revised according to the table below:

| Version | Author | Comment | Date |
|---------|--------|---------|------|
| V1.0 | ASX Limited | Realised AONIA methodology published | 15th April 2019 |
| V1.1 | ASX Limited | Addition of Appendix B detailing Realised AONIA vendor page codes. Inclusion of footnote 2. | 28th October 2019 |

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