



[Link to market survey](#)

## MARKET NOTICE

**Market Notice:** 2 - 2015  
**Date:** 14 August 2015  
**Subject:** Complementary Financial Benchmarks

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AFMA is working with member firms and the Australian regulatory authorities to develop a robust, near-risk-free benchmark interest rate for the Australian market<sup>1</sup>. The indications are that a near-risk-free benchmark will, for certain applications, hold attraction to users of existing interest rate benchmarks. That said, the new benchmark is being designed to complement the existing Bank Bill Swap (BBSW) rate, which has a vital ongoing role as a benchmark in the financial system.

### 1. Considerations in developing a near-risk-free benchmark rate

AFMA's 2013 survey of the use of benchmarks in the Australian marketplace indicated ancillary demand for a benchmark that would provide an *ex post* profile of the overnight cash rate. In reviewing options for the design of the complementary benchmark, AFMA through its markets committees considered the merits of a rate calculated by an *ex post* compounding of the Reserve Bank of Australia's Interbank Overnight Cash Rate (IBOC). This rate has existing application, serving as the benchmark used to determine the interest rate on the floating leg of an overnight indexed swap (OIS) contract.

Subsequent research and member feedback indicates that the publication of a compounded total return index, which quantifies the compounded return of the daily cash rate, may simplify the process of including the benchmark in a broader array of fixed income products, and thereby encourage its take-up. As examples:

- a. In the same way that the publication of the Australian Bureau of Statistics' *Consumer Price Index*<sup>2</sup> (CPI) simplifies the calculation methodology for pricing inflation-linked securities and other inflation-linked derivatives, the construction of a compounded daily cash rate total return index is intended to encourage the proliferation of products using the overnight cash rate;
- b. Fund managers offering highly liquid investment products with very low credit and interest rate risk may find application of this index as a performance measurement benchmark.

Based on this research, the two options under review by AFMA are summarised as follows:

- a total return index which displays the compound return of an investment earning the daily overnight cash rate; and
- a compounded daily average rate series, which displays a compounded effective floating rate on a look-back basis.

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<sup>1</sup> See [http://www.afma.com.au/media/2015\\_03\\_16\\_Complementary\\_Benchmark.pdf](http://www.afma.com.au/media/2015_03_16_Complementary_Benchmark.pdf).

<sup>2</sup> In its July 2015 [Report 440](#) on Financial Benchmarks, the Australian Securities and Investments Commission (ASIC) has determined that the CPI is a financial benchmark of potential systemic importance.

These two options and the calculation methodologies applied are illustrated in Boxes 1 and 2.

### Box 1

#### **Option 1 – AFMA IBOC Total Return Index (IBOC TRI)**

An AFMA-sponsored *ex post* total return index, which quantifies the compounded return of the daily cash rate, would reflect the performance of a daily-rolled deposit or investment earning the RBA's benchmark Interbank Overnight Cash Rate, where interest earned is reinvested. The publication of the IBOC TRI is intended to encourage market industry discussion on the use of robust near-risk-free benchmarks and thereafter the proliferation of products using the overnight cash rate.

The index for any business day would be published on the next business day.

The formula for calculating the total return index is as follows:

$$ICL_t = ICL_{t-1} \times (1 + IBOC_{t-1}/36500)$$

Where:

**ICL<sub>t</sub>** is the Index Closing Level for the current business day\*

**ICL<sub>t-1</sub>** is the Index Closing Level for the previous business day

**IBOC<sub>t-1</sub>** is the IBOC rate for the previous business day

**ICL<sub>0</sub>** = 100.00 as at 30 June 2014 (in this example)

The calculation will not be subject to any rounding convention, however the index will be published to 6 decimal places.

\*A *business day* is a day for which the RBA publishes the Interbank Overnight Cash Rate

Sample output

	RBA IBOC (%)	IBOC Total Return Index		RBA IBOC (%)	IBOC Total Return Index
01/07/2015 <sup>1</sup>	N.A.	102.395908			
30/06/2015	2.00	102.390298	19/06/2015	2.00	102.328605
29/06/2015	2.00	102.384688	18/06/2015	2.00	102.322999
26/06/2015	2.00	102.367860	17/06/2015	2.00	102.317392
25/06/2015	2.00	102.362251	16/06/2015	2.00	102.311786
24/06/2015	2.00	102.356643	15/06/2015	2.00	102.306180
23/06/2015	2.00	102.351034	12/06/2015	2.00	102.289365
22/06/2015	2.00	102.345426	11/06/2015	2.00	102.283761

<sup>1</sup> Sample effective date

## Box 2

### Option 2 - Compounded Daily Average Rate Series

The Compounded Daily Average Rate Series would be the *ex post* compounded daily average overnight cash rate, to be published as a backward looking series covering the previous six months.

Already independently calculated by interest rate swap practitioners and used in the determination of the floating leg of OIS contracts, AFMA's production of this rate may serve to streamline operational processes for swap counterparties, particularly for less-sophisticated users that may not have internal systems to generate the calculations. As is the case for an IBOC total return index, the publication of this rate series is intended to further encourage market discussion on the use of robust near-risk-free benchmarks and the development of instruments which reference the overnight cash rate. The formula for calculating a daily compounding look back series is as follows:

$$\left[ \prod_{i=1}^{do} \left( 1 + \frac{IBOC_i \times n_i}{365} \right) - 1 \right] \times \frac{365}{d}$$

Where:

"*do*" is, for the elapsed time between two dates, the number of business days on which the RBA publishes the IBOC rate;

"*i*" is a series of whole numbers from 1 to "*do*", each representing the relevant RBA publication date in chronological order from, and including, the first RBA publication date in the elapsed time between two dates;

"*IBOC<sub>i</sub>*", for any day "*i*" in the relevant elapsed time between two dates, is a reference rate equal to the RBA's overnight cash rate;

"*n<sub>i</sub>*" is 1, except where the RBA publication date is the day immediately preceding a day on which the RBA does not publish its overnight cash rate, e.g. a public holiday or weekends, in which case it is the number of calendar days from, and including, that RBA publication date to, but excluding, the next RBA publication date; and

"*d*" is the number of calendar days in the elapsed time between two dates.

The calculation will not be subject to any rounding convention, however the rate will be published to 4 decimal places.

Sample output:

	RBA IBOC	ex Compound	post IBOC		RBA IBOC	ex Compound	post IBOC
01/07/2015 <sup>1</sup>							
30/6/2015	2.00%	2.0000%		19/6/2015	2.00%	2.0005%	
29/6/2015	2.00%	2.0001%		18/6/2015	2.00%	2.0006%	
26/6/2015	2.00%	2.0002%		17/6/2015	2.00%	2.0007%	
25/6/2015	2.00%	2.0002%		16/6/2015	2.00%	2.0007%	
24/6/2015	2.00%	2.0003%		15/6/2015	2.00%	2.0008%	
23/6/2015	2.00%	2.0003%		12/6/2015	2.00%	2.0009%	
22/6/2015	2.00%	2.0004%		11/6/2015	2.00%	2.0010%	

<sup>1</sup> Sample effective date

Irrespective of the methodology ultimately applied, the complementary benchmark will reference the **Reserve Bank of Australia's Interbank Overnight Cash Rate (IBOC)**, now recognised both domestically and globally as a robust near risk-free financial benchmark<sup>3</sup>. IBOC is the RBA's operational target for monetary policy and it strongly influences other interest rates in the economy. It represents the volume-weighted average interest rate of the aggregate value of unsecured funds both borrowed and lent through the interbank market for overnight terms and is calculated by the RBA from transactional

<sup>3</sup> In its July 2015 Report 440 on Financial Benchmarks, ASIC also has determined that RBA's IBOC rate is a financial benchmark of potential systemic importance. Similarly, the Financial Stability Board (FSB) has described it as a nearly risk free benchmark rate in its July 9 2015 [Interim Report](#) on Progress in Reforming Major Interest Rate Benchmarks.

data submitted by all banks that settle payments across Exchange Settlement accounts. IBOC is formed by the competitive forces of supply and demand, is anchored in observable transactions and is already recognised as a benchmark.

Having regard the above feature of IBOC, AFMA believes that this provides strong assurance about the quality of the data that would underpin a complementary benchmark based on the proposed *ex post* index and/or rate series using IBOC. This would also leave the complementary benchmark well placed to accord with the overarching framework for benchmark rates as published by the International Organization of Securities Commissions (IOSCO) Principles for Financial Benchmarks (July 2013).

## **2. Quality, robustness and reliability considerations**

The calculation methodology employed for either a total return index or a rate series would involve the application of a mathematical formula to an existing financial benchmark (i.e. IBOC). As it is mechanical, the calculation methodology is highly resilient against any form of market interference.

As with all aspects of the financial system, unexpected structural changes and/or systemic risk events could occur and, in this instance, could drive interbank activity away from the overnight unsecured market and compromise RBA's ability to calculate IBOC.

Should it no longer be deemed feasible or appropriate to calculate the cash rate from activity in the unsecured market, the RBA may contemplate altering its methodology to include coverage of other activity (e.g. the secured market). In this event, AFMA expects the RBA would notify and/or consult with relevant stakeholders (including those that use the cash rate as a financial benchmark) regarding any material changes in its methodology in advance of their implementation.

## **3. Your view - AFMA survey on the design of near-risk-free benchmark rates**

AFMA is conducting a survey of potential users of an *ex post* near-risk-free benchmark rate as a means to determine its optimal design based on the abovementioned options. The survey will be circulated widely, both internally and across industry, to capture the views of the different business divisions within financial and non-financial entities that use benchmark rates.

The survey will also serve to gauge the market's interest in the development of a near-risk-free benchmark rate with tenor attributes similar to the BBSW rate. AFMA's 2013 survey of the use of benchmarks in the Australian marketplace identified that market participants may also desire near-risk-free benchmark rates for products that lock in future interest payments and interest rate duration. AFMA had previously identified the fixed OIS rate as the most appropriate near-risk-free rate given the notional principal characteristic of the underlying derivative for which a deep and liquid market already exists.

The survey is accessible via the link at the top of this document, and responses are due by Friday 18 September 2015. All respondent details and individual responses will be treated in confidence. Any questions should be directed to [Murray Regan](#), Director Markets and Rates.

### **About AFMA**

The Australian Financial Markets Association (AFMA) is the leading industry association promoting efficiency, integrity and professionalism in Australia's financial markets and provides leadership in advancing the interests of all market participants. These markets are an integral feature of the economy and perform the vital function of facilitating the efficient use of capital and management of risk. Market participants perform a range of important roles within these markets, including financial intermediation and market making.

AFMA represents over 130 members, including Australian and international banks, leading brokers, securities companies, state government treasury corporations, fund managers, traders in electricity and other specialised markets and industry service providers.