The Association of Corporate Treasurers (ACT)

Briefing note

Practical alternatives to Libor: AUD, CAD, DKK, NZD & SEK

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The Association of Corporate Treasurers – setting standards under Royal Charter

The Association of Corporate Treasurers (ACT) sets the benchmark for international treasury excellence. As the professional body for treasury incorporated by Royal Charter, we lead the profession through our internationally recognised treasury qualifications, define standards, promote best practice and support continuing professional development. We are the voice of corporate treasury representing the real economy.

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1 Background

LIBOR is currently published for ten currencies and fifteen maturities. The ACT regards the availability of reference rates such as BBA LIBOR as very important and functioning as a significant public good. For users the focus is on utility: reliable and representative rates available in a timely manner each business day.

The Wheatley Review of LIBOR final report, published in September 2012, concluded that "there are a number of published LIBOR benchmarks that are both difficult to support using trade data, and are not heavily used by market participants. Furthermore, given the low usage of many of the currencies and tenors for which LIBOR is published, the Wheatley Review has concluded that a carefully managed and phased reduction in the number of LIBOR benchmarks published could occur without significant market disruption."

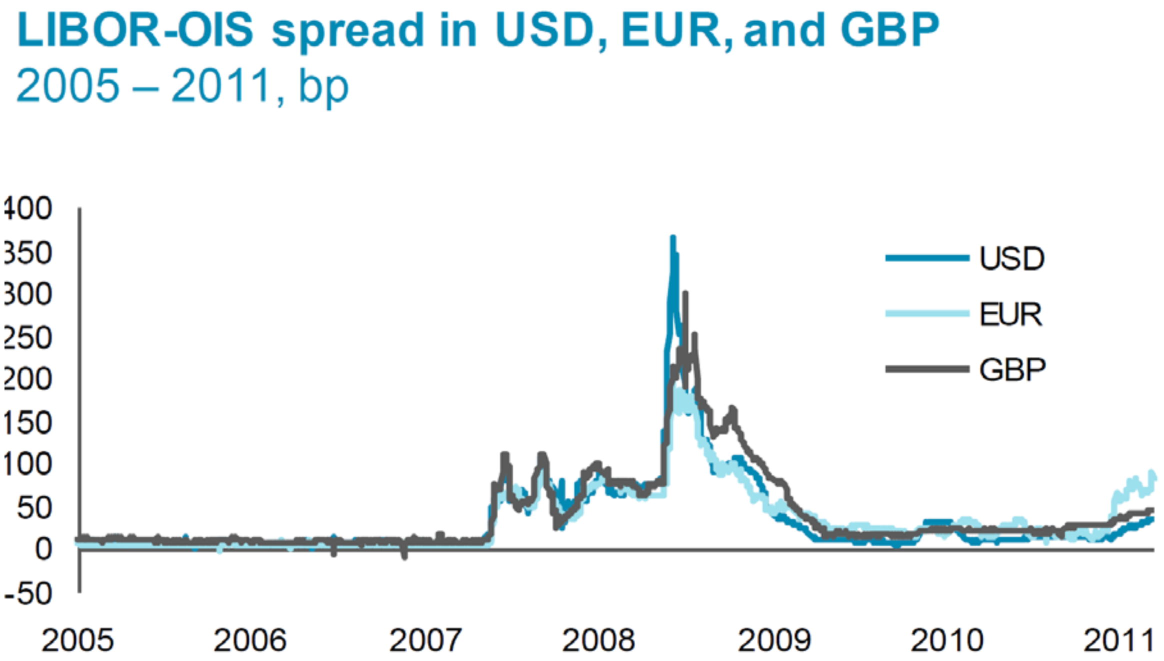
Specifically Wheatley recommended the publication of all LIBORs for the following currencies to be discontinued:

- Australian Dollars (AUD)
- Canadian Dollars (CAD)
- Danish Krone (DKK)
- New Zealand Dollars (NZD) and
- Swedish Krona (SEK)

The British Bankers' Association (BBA) LIBOR consultation paper published in November 2012 proposes that the Australian Dollar and New Zealand Dollar rates will no longer be compiled and published from the end of February 2013 and the Canadian Dollar, Danish Krone and Swedish Krona rates from end of March 2013. The BBA's Feedback Statement published on the 14th December 2012 has revised this timetable; NZD will cease at end February, DKK and SEK at end March and AUD and CAD at end May 2013.

For use by non-financial corporates the reference rates need to have a reliable relationship with sovereign rates and the relative credit standing of representative high-quality banks and also to reflect market liquidity issues appropriately. Hence pure central bank rates are inappropriate as are security backed financial rates e.g. repos. Similarly Overnight Indexed Swap (OIS) rates are unsuitable. The fixed rate of OIS is typically an interest rate considered less risky than LIBOR because it is influenced by the central bank rate and has less counterparty risk (as only the net interest rate differential is paid at maturity). The LIBOR-OIS spread is a measure of risk and liquidity in the money market. Refer Graph 1 below.

Graph 1:



Source: Bloomberg. Presentation: Oliver Wyman

This briefing note aims to provide details of widely used locally published rates for the currencies stated above. The Wheatley Review also noted that "for some of the less-used currencies, benchmarks calculated in domestic jurisdictions tend to be preferred to LIBOR, due to the greater liquidity of transactions in the domestic markets. For example, the Stockholm Inter-bank Offered Rate (STIBOR) is used more frequently than the corresponding Swedish Krona LIBOR benchmark."

This briefing note sets out some alternatives to LIBOR for the withdrawn currencies. **The ACT is not in a position to be able to endorse alternative benchmark rates**. By the inclusion of alternative rates the ACT does not assert they are preferred to LIBOR in their local markets nor are we recommending them, we are listing them as options for corporates in considering the most relevant benchmark rate that matches their requirements.

2 Alternatives to LIBOR published rates

2.1 Australian Dollar

2.1.1 The bank bill interest rate is treated as the wholesale interbank rate within Australia and is published by the Australian Financial Markets Association (AFMA). It is the borrowing rate among Australia's top market makers.

2.1.2 The AFMA website states that "The bank bill swap interest rate (BBSW) is Australia's equivalent of LIBOR or SIBOR and is used as a reference rate in much the same way." Hence a variable floating rate may quote 100 basis points over BBSW. The reference rate is typically referred to as the "bank bill rate" although the actual term is the "bank bill swap interest rate" hence the abbreviation BBSW.

2.1.3 BBSW rates are made public on a 24 hours delay basis from AFMA's website – see http://www.afma.com.au/data/bbsw.html. Live rates are available for a paid subscription or on vendor pages such as Bloomberg and Reuters.

2.1.4 AFMA Bank Bill Swap Rates (BBSW) are fixed at 10:00am, Sydney time, and are available for the following maturities:

- 1 month
- 2 months
- 3 months
- 4 months
- 5 months
- 6 months

2.1.5 The AFMA data website provides information on the calculation methodology – refer http://www.afma.com.au/afmawr/_assets/main/lib90031/bank%20bill%20swap%20(bbsw)%20reference%20rate%20procedures.pdf The AFMA BBSW Committee is responsible for the overall management and rate setting calculation mechanism of BBSW. There are currently 14 BBSW panel members contributing mid rates on the basis specified:

- Australia and New Zealand Banking Group Limited
- BNP Paribas, Australia Branch
- Citibank NA, Australia Branch
- Commonwealth Bank of Australia
- Deutsche Bank AG, Australia Branch
- HSBC Bank Australia Limited
- J.P. Morgan Chase Bank NA, Australia Branch
- Lloyds TSB Bank plc, Australia Branch
- Macquarie Bank Limited
- National Australia Bank Limited
- Royal Bank of Canada, Australia Branch
- Suncorp-Metway Limited
- UBS AG, Australia Branch
- Westpac Banking Corporation

2.1.6 Mid rate contributions are provided for each tenor by 10:05 am Sydney-time to reflect each BBSW panellist's view of the mid rate for non-government-guaranteed bank paper at 10:00am. Before calculating the BBSW rate, the highest and lowest mid rates are eliminated. The average of the remaining mid rates is calculated to four decimal places for each tenor. A consistent basis point bid/offer spread (currently 10 basis points) is applied to the mid rate to produce the bid/offer rates for each tenor.

2.1.7 The International Swaps and Derivatives Association (ISDA) has defined BBSW for the purposes of determining an Australian Dollar "relevant rate" as "the average mid rate, for Australian dollar bills of exchange having a tenor of the designated maturity, which appears on the Reuters Screen BBSW page at approximately 10.10 am, Sydney time, on that Reset Date." It also provides alternative procedures if the rate does not appear. Refer Appendix 4 of http://www.afma.com.au/afmawr/_assets/main/lib90031/bank%20bill%20swap%20(bbsw)%20reference%20rate%20procedures.pdf

2.1.8 A technical committee member of the Finance & Treasury Association (FTA) of Australia has noted the following differences between LIBOR and BBSW:

- LIBOR is the Offered Rate whilst generally BBSW is based on the mid rate.
- LIBOR is a cash based market where are BBSW is a physical bank accepted bill or certificate of deposit
- Definitions – LIBOR incorporates the individual banks credit spread whilst BBSW is the generic bank market:
  - LIBOR is defined as: The rate at which an individual contributor panel bank could borrow funds in the interbank in reasonable market size, just prior to 11.00am London time
  - BBSW is the average mid rate at 10am Sydney time for Australian Dollar bills of exchange, accepted by an approved bank, having a tenor with the designated maturity
- Because BBSW is a physical market you get fluctuations reflecting the buying and selling interest in the underlying security, e.g. funds may buy early in the month due to the index they manage to.

2.2 Canadian Dollar

2.2.1 The Canadian Dollar Offered Rate (CDOR) is the recognised benchmark index for bankers' acceptances with maturities up to one year. It is calculated and published daily at 10:15 by Thomson Reuters on the CDOR page of Reuters' Monitor Service. CDOR is used as a reference rate in setting the floating interest rate in commercial agreements and as the settlement price for a number of derivatives including futures contracts and swaps[1]. The rate sponsor, the Investment Industry Regulatory Organization of Canada (IIROC), announced in summer 2012 it is performing a review of CDOR.[2]

2.2.2 CDOR fixings are published for the following maturities:

- 1 month
- 2 months
- 3 months
- 6 months
- 1 year

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[1] IIROC Regulatory Study, Review and Recommendations concerning the manufacture and distribution by IIROC member firms of Third-Party Asset-Backed Commercial Paper in Canada October 2008 pg viii

[2] Reuters "Canada reviews CDOR setting after Libor woes" July 13, 2012

2.2.3 CDOR is determined daily from a survey of nine voluntary market makers in bankers' acceptances including:

- BMO Nesbitt Burns
- CIBC World Markets
- Deutsche Bank
- HSBC Bank Canada
- National Bank Financial
- RBC Dominion Securities
- Scotia Capital Inc.
- TD Securities Inc.

2.2.4 The nine survey participants provide bid-side prices at 10 am each day. The high and low are removed and the arithmetic average of the remaining survey rates is calculated on an annual basis for a 365-day year to generate the official rate.

2.2.5 Further information is available from The Montreal Exchange's website http://www.m-x.ca/marc_terme_bax_cdor_en.php

2.3 Danish Krone

2.3.1 The Copenhagen Interbank Offered Rate (CIBOR) is compiled and published by NASDAQ OMX at approximately 11am daily. Prior to April 2011 CIBOR was calculated and published by Denmark's central bank. It represents the average interest rate at which term deposits are offered between prime banks in the Danish wholesale money market or interbank market.

2.3.2 CIBOR fixings are available for the following maturities:

- 1 week
- 2 weeks
- 1 month
- 2 months
- 3 months
- 4 months
- 5 months
- 6 months
- 7 months
- 8 months
- 9 months
- 10 months
- 11 months
- 12 months

2.3.3 The Danish Bankers Association which has the overall responsibility for CIBOR publishes rules governing CIBOR rate fixings. These can be found at (in Danish) http://www.finansraadet.dk/tal--fakta/satser/regler-for-fastlaeggelse-af-cibor.aspx . However following the LIBOR scandal the Danish government plans to pass legislation (in late 2012) to move supervision of rate-setting to the Danish Financial Supervisory Authority http://www.finanstilsynet.dk/en.aspx

2.3.4 As of 1 January 2014 the number of maturities for CIBOR will be reduced to:

- 1 week
- 2 weeks
- 1 month
- 2 months
- 3 months
- 6 months
- 9 months
- 12 months

2.4 New Zealand Dollar

2.4.1 The New Zealand Financial Markets Association (NZFMA) manages, calculates and distributers New Zealand official market reference rates and pricing services[3] including the NZ Bank Bill Reference Rate (BKBM). New Zealand's Bank Bill reference rate calculation system was referenced in a 2011 Financial Times article as being an accurate barometer of the cost of funding[4].

2.4.2 NZ BKBMs are downloaded to the NZFMA website at approximately 4 pm New Zealand Time (NZT) each day – refer http://www.nzfma.org/system/bkbm/default.aspx . Live rates are available on a paid subscription basis. NZFMA Bank Bill rates are also published and available on Thomson Reuters: page code BKBM and Bloomberg: page code NZFM1<GO> through the NZdata service.

2.4.3 Bank Bill Reference Rates are available for the following maturities:

- 1 month
- 2 months
- 3 months
- 4 months
- 5 months
- 6 months

2.4.4 Contributors supply mid rates for maturities of cash for the relevant maturities, with the mid rate to reflect where Prime Bank Bill Paper has predominantly traded in the market at 10.30am NZT i.e. starting precisely at 10:30am zero seconds and ending at 10.30am 59 seconds. Prime Bank Bill Paper is NZD denominated discount securities issued by the following banks:

- ANZ National Bank Ltd
- ASB Bank Ltd
- Bank of New Zealand ltd
- Citibank
- Deutsche Bank
- Kiwibank Ltd
- Westpac Banking Corporation Ltd

2.4.5 A bid/offer spread (ten basis points, five basis points added to each side of the mid rate to obtain the BKBM bid/offer rates for each tenor) is applied to the calculation process.

2.4.6 For increased market transparency NZFMA now publish the NZ Bank Bill Daily Rate Set Transaction Report[5] which lists trades occurring during the 2 minute trading window prior to the BKBM rate set.

2.4.7 The NZdata service is overseen by the NZFMA Board, and the Rates and Foreign Exchange Committee. The NZdata system is owned by the NZFMA and its members. Contributors to the NZdata service are bound by the operating rules and principles of the market to which they contribute. NZFMA operating rules and principles for contributors to page BKBM (Reuters) and page NZFM1 (Bloomberg) are available at http://www.nzfma.org/Site/practices_standards/reference_rate_rules.aspx

2.5 Swedish Krona

2.5.1 The Stockholm Interbank Offered Rate (STIBOR) is compiled and published by NASDAQ OMX Stockholm at 11.05am daily.

[3] As quoted on the NZFMA website http://www.nzfma.org/Site/about_nzfma/default.aspx

[4] As quoted on the NZFMA website http://www.nzfma.org/Site/data/default.aspx

[5] Refer NZFMA website http://www.nzfma.org/data/search.aspx

2.5.2 STIBOR is an arithmetic average of the rates quoted by five banks on the STIBOR panel. These banks are:

- Danske bank
- Handelsbanken
- Nordea
- SEB
- Swedbank

2.5.3 STIBOR is based on the offered rates that each bank in the panel can offer to the other banks in the panel for unsecured loans in SEK. If the lowest and/or highest bid differs with 25 basis points or more from the second lowest and second highest bid it will be excluded from the calculation. STIBOR is then calculated as an average of these rates.

2.5.4 The STIBOR rate sponsor is Riksbank. Riksbank performed a review of STIBOR in November 2012 outlining the need for a number of reforms. A copy of the report can be found at: http://www.riksbank.se/Documents/Rapporter/Riksbanksstudie/2012/rap_riksbanksstudie_stibor_121128_eng.pdf

2.5.5 Historical STIBOR fixings are available free of charge for personal use only from http://nordic.nasdaqomxtrader.com/trading/fixedincome/Sweden/historical_fixings/ . Real time data is available for a paid subscription to NASDAQ OMX Global Data Products.

2.5.6 There are currently 8 different maturities for STIBOR:

- Tomorrow-next (TN)
- 1 week
- 1 month
- 2 months
- 3 months
- 6 months
- 9 months
- 12 months

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The ACT welcomes comments on this report

Please send your comments to technical@treasurers.org

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V.1 Rev: None