Understanding the construction and operation of BBA LIBOR – strengthening for the future

a consultative paper from the bba

10 June 2008

Executive summary

LIBOR (the London Interbank Offered Rate) is the most widely referenced interest rate index in the world. It is set at 11am UK time in 10 currencies and for several maturities. LIBOR is owned by the BBA, the data compilation and calculation is undertaken by Reuters for the BBA and the process is overseen by an independent committee of market participants, the Foreign Exchange and Money Market Committee.

In this current historically difficult period for credit markets, liquidity and credit premia have risen very significantly since August 2007. LIBOR is a benchmark representing the rate at which contributor banks perceive they could raise unsecured funds depending on a number of factors. LIBOR panel banks, for example, are invariably those with the best credit ratings and in the current diminished credit capacity of the market it is therefore not surprising that some institutions will not be able to access funds at the LIBOR rate.

The four major LIBOR currencies are US Dollar, Sterling, Euro and Yen, but the recent commentary has been primarily in respect of Dollar LIBOR. Whist some institutions (primarily European) consider that the current US Dollar LIBOR fix can be too low, others (primarily US) consider it can be too high. However, like the other LIBOR currencies, US Dollar LIBOR is a benchmark set by panel banks in the London market; it is the rate for the Euro Dollar, not the domestic US Dollar; and not only are participants in this market extremely risk averse, but there is also a relative shortage of US Dollar funding in European markets.

This paper "Understanding the Construction and Operation of BBA LIBOR – Strengthening for the Future" explains in some detail how LIBOR is set and emphasises that it is a benchmark for cash and is not a derivative or FX benchmark. It also gives some insight into the panel selection process, explaining that any bank with significant business in the relevant currency in the UK market can apply to join the panels. There have, though, been no new applications from banks over the last 12 months who are not currently on the selection lists. Those who move from the selection list to a panel do so because of the volume of the relevant business that they undertake in London.

The BBA is grateful for the input from the public and private sectors in the preparation of this paper.

Strengthening LIBOR for the future includes taking a number of steps.

- As of now, the BBA is strengthening the governance by the Foreign Exchange and Money Market Committee to incorporate a tight scrutiny mechanism that will require any contribution discrepancies to be reviewed and justified.

- The membership of the Committee is being widened to include non contributing banks from Europe, the USA and elsewhere as relevant. Arrangements are also being put in place to invite interested parties from the public and private sectors to provide ongoing commentary and opinion into the process.
- In addition, although the current currency panels capture a very large majority of the activity that takes place in the London markets (and indirectly elsewhere in Europe) and there have not been any new banks asking to participate, discussions have commenced with a number of other US and EU banks for the purpose of establishing whether their business qualifies for inclusion on the relevant panels. It is important to note that any bank may volunteer to join the BBA LIBOR panel for any currency.   Similar discussions will need to take place with banks from other major LIBOR currency countries. This may well result in panel sizes being increased but there will be no changes without clear rationale. Again this work will be done in close dialogue with interested parties from the public and private sectors.
- Transparency has long been one of the key attractions of LIBOR. Other indices either keep their contributors confidential (H15) or the bank is asked to contribute the rate at which it considers a hypothetical bank would borrow (EURIBOR). LIBOR contributors on the other hand provide the rate at which they believe they could borrow should they propose so to do. The issue has been raised as to whether this has the potential to stigmatise contributions and therefore the BBA proposes to explore options for avoiding any stigma whilst maintaining transparency.
- Whilst this paper sets out predominantly the steps that are already being taken in respect of LIBOR there are three questions on which specific comments are sought.
    1. Whether in addition to the 11am fix of US Dollar LIBOR there is demand for another London fix later in the day after the US market has opened. Hitherto market participants on the Committee have suggested that this would raise considerable legal issues in respect of contract currently linked specifically to the 11am fixings, as well as cause confusion, particularly in standardised netting contracts. Nevertheless, but comments would be appreciated from all others who hold a view.
    2. Whilst the majority of Euro Dollar trading takes place in London, the BBA will investigate demand for the creation of an additional European Dollar index that seeks to capture US Dollar trading in Europe.
    3. Whether the description “reasonable market size” would benefit from being more specifically defined.

This paper represents the views of the Foreign Exchange and Money Markets Committee, many other members of the BBA and incorporates the overwhelming number of informed comments that the BBA has received. As the BBA takes the steps outlined in the paper, the receipt of any further comments from market participants and interested parties is welcomed.

1. Introduction

1.1 BBA LIBOR is by far the most widely referenced interest rate index in the world. Its importance goes beyond that of inter bank lending and touches everyone from large international conglomerates to small borrowers. It is central in interest rate swaps and the great majority of floating rate securities and loans relate to LIBOR. Independent research indicates that around $350 trillion of swaps and $10 trillion of loans are indexed to BBA LIBOR. It is the basis for settlement of interest rate contracts on the world's major futures and options exchanges. It is written into standard derivative and loan documentation such as the ISDA terms and is also used for an increasing range of retail products.

1.2 LIBOR is owned by the BBA which is a not for profit organisation funded primarily by subscriptions from its voluntary members. The data for the LIBOR fixes is compiled and calculated by Reuters for the BBA. The contributing banks for each LIBOR currency are selected on objective criteria and may or may not be members of the BBA. Those who are members they pay an annual standard subscription to the Association. There is no levy charged for any bank which contributes to or participates in the LIBOR fix.

1.3 LIBOR has an unbroken back-history stretching back to 1985 and it has enjoyed an enviable reputation since its inception.

CONSTRUCTION AND OPERATION

2. Impact of the Credit Crunch on the Credit Markets

2.1 In the particularly benign conditions for credit markets over the last decade, insufficient attention may have been paid by certain parties to funding liquidity risk and counterparty risk. In this context, funding liquidity risk is the chance that a lender may be unable to raise funds as expected as liabilities fall due. Counterparty risk is the chance that the party who borrowed the money may not be able to repay as agreed.

2.2 LIBOR is a benchmark. However some entities appear to have made the assumption that LIBOR is a rate at which all could borrow. The current stresses in the credit markets, as a consequence of the global liquidity crisis, have impacted banks and other lending institutions. Furthermore, the net flows of funds which were from cash rich institutions such as money market funds and mutual funds have been impacted significantly. Not surprisingly, in the very different circumstances that prevail today, the benchmark nature of LIBOR has again become much more apparent.

2.3 Since its inception in 1985, BBA LIBOR has enjoyed a reputation for accuracy. However, just as the credit crunch has led to stress in the markets, and the breakdown of longstanding correlations in the pricing of assets, as a barometer of these markets, it has also been stressed.

2.4 This has led to discussion of some of the BBA LIBOR currency fixes - particularly the Dollar fix - within the financial community. This proper discussion has overflowed into commentary in the media, and the

BBA believes that it needs to correct a number of misunderstandings and misperceptions.

3. What is BBA LIBOR and how is it set?

3.1 BBA LIBOR is set for 10 different currencies at 11am London time each day. The BBA conducts an annual survey of those banks willing to participate, to determine which banks are active in the London market in the relevant currencies and in reasonable amounts. From this survey a panel of banks is created (see section 8 below and appendix 1). However, it is not uncommon for there to be a well known bank which has a significant presence in its own country but is not active in the relevant currency in the London market and so is not on that panel.

3.2 The processes are overseen by an Independent Committee, the Foreign Exchange & Money Market Committee. ("FX & MM")

3.3 The data compilation is undertaken by Reuters, on behalf of the BBA. For each currency and maturity, contributor banks submit to Reuters the rate at which a contributing bank believes it could borrow funds should it wish to do so, by asking for and then accepting inter bank offers in a reasonable market size just prior to the fix time, which is 11am London time. Submitted rates are trimmed to screen out high or low rates and then the average calculated. The trimming process removes outlying data as well as preventing any individual bank from attempting to influence the rates.

3.4 The 10 currencies are Australian Dollars, Canadian Dollars, Danish Krone, Euro, New Zealand Dollars, UK Pounds Sterling, Swedish Krona, Swiss Francs, US Dollars, Yen. The 4 currencies in which there is most interest are Sterling, US Dollars, Euro and Japanese Yen.

4. Review of LIBOR

4.1 All financial indices, rates, correlations and rules are currently subject to scrutiny in current market conditions and BBA LIBOR is no different in that respect. As a result the review addresses the current practices and procedures, has examined the external commentary, and has strengthened the ongoing dialogue with interested parties in the public and private sectors. A review of this nature is comprehensive, in order to reinforce the validity of BBA LIBOR.

4.2 A wide range of stakeholders have been consulted and their views contributed to this review. These include: banks both on the contributor panels and non contributing banks; several brokers; major derivative exchanges; other financial trade associations; hedge funds; money market funds and other asset managers; and other interested parties in the public sector. Stakeholders have emphasised the following points:

- **That extensive care must be taken in considering any changes as BBA LIBOR now supports a swap market estimated at $350tn and a loan market estimated at $10tn.**
- **Any changes must take into account the effect on these markets, which may extend to contracts stretching for decades into the future.**
- **Although current discussions centre on US Dollar**

LIBOR, the methodology of the rates should be transferable, therefore any change to the calculation of one currency should be considered in the wider context of the suite of 10 BBA LIBOR currency calculations and particularly the 4 principal currencies of Dollar, Sterling, Euro and Yen.

4.3 It is the intention to continue to discuss the outcome of the review with all stakeholders for their further comment.

5. What is US Dollar LIBOR?

5.1 US Dollar LIBOR is regarded as a benchmark rate at which non-domestic Dollars can be borrowed and there are 16 contributor banks as set out in appendix 1. The dispersion of rates input by each bank is reflective of the credit conditions facing each bank on a daily basis. For several years therefore the spread between the highest and lowest has been tight as the credit environment was benign. An increase in dispersion rates has occurred since August 2007 as a consequence both of the greater credit costs in the bank market since the start of the credit crunch and the lack of liquidity.

5.2 If a non-contributing bank cannot borrow at BBA LIBOR that does not mean the rates are inaccurate as:-

- Liquidity and credit premia have risen very significantly since August 2007; and
- The selection process will inevitably pick those banks with the best credit ratings.
- The current diminished credit capacity of the market may mean that liquidity providers are unwilling to lend

5.3 It is thus not surprising that some institutions will not be able to access funds at the dollar LIBOR rate in the current extremely risk averse market conditions at the US Dollar LIBOR rate.

6. Comparing US Dollar LIBOR with other indicators

6.1 There are differences between US Dollar LIBOR and other indices such as the Overnight Index Swap (OIS) rate or the Fed Term Auction Facility rate (TAF) auction as they are measuring different things using different methods.

6.2 **The OIS** is a short-term interest rate swap where one side pays an overnight rate, compounded over the tenor of the swap while the other side pays a fixed rated. The Fed Effective Rate is the benchmark for OIS and is a domestic overnight rate. The gap between Libor and an OIS swap of the same tenor is often viewed as a measure of short-term risk premia -the bigger the gap, the greater the perceived risk.

6.3 It should be noted that an OIS is not a cash instrument; it is a derivative that settles against the overnight interest rate. As such, OIS rates contain no premia for liquidity and credit risk, which are currently significant factors in the cost of borrowing cash for longer than overnight. LIBOR, as a cash rate does reflect these factors.

6.4 **The TAF** allows financial institutions to make bids for term borrowing from the Fed, with maturities typically of 28 days. The Board of Governors sets the auction amount and the minimum bid allowed for the interest rate, which is set equal to the OIS rate corresponding to the term of the loan. The interest rate on the loans is determined in a single-price auction and is reported as the "TAF" rate. The TAF is a rate for secured cash, unlike BBA LIBOR which is for unsecured funds.

6.5 Each TAF auction:

- Has a finite amount of funds;
- Is open to a very wide pool of potential takers;
- Therefore the market where necessary will pay up for access to the facility.

6.6 **Euro Dollar Deposit -** During 2008, 3 month US Dollar LIBOR has consistently been within the range of traded Euro Dollar deposit levels as measured by Bloomberg's Euro Dollar deposit composite. This tracks levels over the markets 24 hour trading day. (This indicates that the LIBOR rate is a good match with trading data.)

6.7 **H15** is the yield in the three month Euro Dollar deposit rate published daily by the Fed. The Fed's measure of USD Euro Dollar rates is based on the yield observed within the Euro Dollar deposit market and the H15 values had tended to be at the high end of the traded range. LIBOR however, has oscillated between the high end and low end as market conditions have shifted and the panel represents a collection of banks with better than average funding.

6.8 **Other issues** worthy of mention are that:

- Credit crunch effects have ebbed and flowed on several occasions during the past months which in turn impacts the LIBOR fix as it does other indicators;
- The banks who contribute to Dollar LIBOR have been impacted in various ways including significant credit losses
- That the contributing banks remain highly rated by Moody's, S&P and Fitch.

6.9 These issues relating directly to the current environment will inevitably result in a volatility that is today more than that experienced in benign conditions.

6.10 When examining the rates at which banks will lend to each other, it is worth noting that in general, a bank will lend to any bank with which they have agreed a line of credit. If there is no agreed line of credit, banks may not lend to each other at that rate or any other rate.

7. Cost of Funds – Effect of Foreign Exchange Arbitrage on BBA LIBOR

7.1 It must be remembered that LIBOR is a pure cash fixing. It is not derived from derivative strip fixings or FX swap rates. In illiquid and difficult markets aberrations will occur which, under more normal market circumstances, would be arbitraged out. Because of the illiquidity of markets and the wide range of credits bidding for actual funds of differing amounts in different currencies, market forces have not acted as they technically should in a purist, off balance sheet trading environment.

7.2 FX swaps are used extensively by banks to fund positions in currencies where they may not have a natural underlying source of funds. For example a European bank may have a predominantly US Dollar denominated securities portfolio but have a main funding currency of Euros derived from its customer base.

7.3 LIBOR is fixed at where contributor banks perceive that they can raise funds for the nominated currencies for the period quoted at or around 11.00 am. The rate is set on a currency by currency basis, and without reference to each other. This is particularly pertinent when one considers the potentially distorting effect of the forward foreign exchange markets. In the current environment it appears possible to raise US Dollars at LIBOR flat and swap these into Euros at considerably less than the Euro LIBOR equivalent. Conversely, of course, a bank that is looking to raise US Dollars by selling Euros will find the costs of these funds extremely expensive. The argument is sometimes made that the US Dollar fixing MUST be too low, otherwise there is apparent arbitrage.

7.4 This is in fact not correct. It is simply that the market is no longer offering a cost free arbitrage between the FX swap and cash transactions. Many banks may have ample access to Euros or other non-US Dollar cash liquidity, but have limited access to natural US Dollar cash liquidity, combined with a high demand for term US Dollar funding for their US Dollar assets. With cash markets being significantly less liquid and more tiered at the current time, many such banks are finding that their direct US Dollar interbank market access is far more limited, so they are often only able to source US Dollar funding via the FX swap. At the same time, with the general pressure on banks' balance sheets at the moment, many US Dollar rich institutions are not only reluctant to lend term US Dollar interbank cash and are also far less likely to swap US Dollar into other currencies in order to take advantage of an arbitrage opportunity. Together these structural market factors are creating a large imbalance of supply and demand in the FX swap and cash markets, with arbitrage actions to counter this imbalance only being brought into play when the margins are far larger than had historically been the case in more benign times.

7.5 It is these market dynamics that have removed the historic risk free arbitrage between US Dollar LIBOR and US Dollar funding sourced via another currency using the FX swap. Many banks are seeking US Dollars, as this is the currency in which many assets held globally are denominated. The demand for Dollars has increased, and that means there is currently a premium for Dollars in the FX markets.

7.6 Cash is priced at the rate that it is perceived to be available in its natural currency at the quoting time. The contributing banks are continuing to fix LIBOR at the rate their cash desks perceive they can raise cash in the specified currency. The 16 names in the US Dollar LIBOR panel are all internationally known and generally have the best access to wholesale market funds at the time of the fixing in the market and hence will be able to source US Dollar cash at lower levels than some other banks.

STRENGTHENING FOR THE FUTURE

8. The Composition of

BBA LIBOR Panels

8.1 Currently, the contributing panels for each currency for which BBA LIBOR offers a rate consist of 8, 12 or 16 banks (please see Appendix I).

8.2 Addressing the US Dollar panel in particular:

- It already consists of many of the largest banks in both Europe and the USA.
- These banks are not "European" "British" or "American": they are all global institutions.
- The three largest banks in the USA are already panel members.
- HSBC and Royal Bank of Scotland are in the top 10 largest banks in the US.
- Many of the US Dollar panel hold American banking licences and are quoted on the New York Stock Exchange.

8.3 **It is important to note that any bank may volunteer to join the BBA LIBOR panel for any currency**. In order to apply, banks must submit in confidence the total of their interbank lending activity and swap activity carried out in London. It is clear that the activity must be London based for US Dollars, as US Dollar LIBOR is the rate for Euro Dollars not US domestic trading and London is the largest centre for trading in this instrument. Increasing the number of contributing banks on the US Dollar LIBOR panel by the addition of more banks either from continental Europe or the USA is possible provided those banks trade in significant amounts in US Dollars in London. The sixteen banks currently on the panel represent a substantial majority of the transaction volumes in the London market reported to the BBA. The BBA is not aware of any sizeable players in the London market that do not contribute to the BBA LIBOR panels. The rates therefore capture the overwhelming majority of such trading and the effect of widening the panel may not be that significant.

8.4 Care and clarity is also required in the addition of any banks to any of the BBA LIBOR panels because BBA LIBOR is designed to represent a benchmark funding cost which may not be available to all institutions. It would not be beneficial for the markets for a benchmark to include banks that did not undertake a significant volume of trading in London because this could have the effect of distorting the benchmark and reducing its credibility.

8.5 It is true that the cost of US Dollars changes over the day, changing as each financial centre opens and deepens the pool of liquidity. However US Dollar LIBOR is not and never has been a domestic funding rate. A rate that showed the cost of US Dollars traded in New York could be materially different, and a rate that included a mix of both London and New York trading could therefore be construed as an inappropriate benchmark that would not be replicable, as the choice of where to deal is between discrete locations with different characteristics.

8.6 Prior to the credit crunch, credit was priced cheaply – supply exceeded demand. However at the moment this is not the case and the effect is clearly visible in LIBOR as a measure of the markets.

8.7 Differences between London Euro Dollar rate and domestic US Dollar rates are **a reflection of existing market conditions, not necessarily a distortion in benchmarks.**

9. Timing of the Quote

9.1 BBA LIBOR is fixed at 11.00 am London time. This represents the most convenient time for users worldwide, given that the fixing is for 10 currencies globally and therefore cannot happen at a time when all markets are open. It also gives institutions operating in Europe and the USA, who make up the majority of the global financial system, time to clear and settle any trades linked to the rates before the close of business in Europe.

9.2 Although it is possible to have multiple fixings for each currency, or even a continuous real time rate for each currency, different fixing times for each currency would mean that the rates are not comparable as market moving events would occur between the setting of BBA LIBOR for one currency and another.

- Offering multiple fixings at different times within each currency would lead to market confusion, and all outstanding deals linked to BBA LIBOR would need to be re-visited to define which time should be used as the benchmark. The complexity and expense of such an operation is clearly evident.
- A real time BBA LIBOR calculated 24 hours a day would theoretically be the most accurate measure of the markets, but as a benchmark this methodology suffers from the same critical drawback as multiple fixings at different times for each currency. A single snapshot time or close point would still have to be chosen for all deals linked to BBA LIBOR.

9.3 The consensus view from all stakeholders in the rates is that there must be one fixing for all currencies at one point each day. It is also vitally important to the derivatives market that the fixings all take place on the same basis and that includes timing.

9.4 **However the BBA will be seeking market views on the creation of two additional Dollar benchmark fixes.**

i) Whether there should be an additional second US Dollar fix after the US market opens and;

ii) Whether there is a desire to create an additional US Dollar index that seeks to capture European US Dollar trading.

10. Use of a Median Rather than a Trimmed Mean

10.1 Currently rates are created by ranking the contributors, discarding the top and bottom quartiles and then averaging the 2 central quartiles. It is therefore difficult to influence the rates as any submitted rate that is far enough away from the average to move the fixing materially will be discarded. Analysis indicates that the effect of moving to a median is less than 1 basis point in major currencies and less than 2 in smaller currencies. The FX & MM Committee therefore recommended no change to the current trimmed mean methodology.

11. Anonymising the

Rates

11.1 It has been suggested that the transparency of LIBOR may be resulting in contributors exhibiting "herd" behaviour, as in the current strained market, which is characterised by funding costs out of line with the market, invites speculation and rumour mongering in the media. A solution to this might be to anonymise contributions, by ceasing to publish the underlying inputs from contributing banks freeing them to publish a rate without fear of this attracting attention. The majority of the market participants contacted by the BBA and the FX & MM Committee believe this would be a retrograde step. Relevant authorities have also expressed support for transparency and the strength and popularity of BBA LIBOR stem from its fundamental transparency and accountability.

11.2 **However the BBA will explore options for avoiding stigma whilst maintaining transparency.**

12. Clarifications to the definition of BBA LIBOR

12.1 There is confusion amongst market commentators about what BBA LIBOR is for, and how it is constructed. This is a serious issue and, therefore, the need to clarify the definition is evident both for users and observers in order that they understand fully the information that is being presented.

12.2 Currently the definition is **"the rate at which an individual Contributor Panel bank could borrow funds, were it to do so by asking for and then accepting inter-bank offers in reasonable market size, just prior to 11.00 London time."** This definition is amplified as follows:-

- The rate at which each bank submits must be formed from that bank's perception of its cost of funds in the interbank market.
- Panel banks are asked for their own rates, rather than the rate at which a hypothetical bank could borrow, which is the definition used by some other fixes.
- Until 1998 BBA LIBOR used such a methodology, referring to the rate at which a "prime banks" lent to one another. The reason for changing this is that it is not possible to define what a prime bank is and all other definitions using unnamed subjects will suffer from this same problem
- The fixings must represent rates formed in London and not elsewhere.
- They must also be for the currency concerned, not the cost of producing one currency by borrowing in another currency and accessing the required currency via the foreign exchange markets. (As is stated earlier in the section on foreign exchange arbitrage and BBA LIBOR rates.)
- The rates must be submitted by members of staff at a bank with primary responsibility for management of a bank's cash, rather than a bank's derivative book.

12.3 One area in the BBA LIBOR description that is not specifically defined is "Reasonable Market Size". This is intentional, as reasonable market size will vary according to prevailing liquidity and credit conditions as well as between currencies and even quoting banks. In the current conditions, this could change weekly or even daily. Specific figures could be written into the instructions to contributing banks, but this could lead to confusion and uncertainty and might even impair liquidity further. From our discussions to date, it would appear that reasonable market size is a concept that is understood by all market participants.

12.4 **However, the BBA seeks further comments on this point.**

12.5 The definition includes the expression "funds". Hitherto, this expression has never been explained. The BBA and the FX & MM Committee, in response to requests, now wish to clarify what the definition of "funds" covers. That is, that the definition of funds is: unsecured interbank cash or cash raised through primary issuance of interbank Certificates of Deposit.

13. Strengthening the governance of BBA LIBOR

(i) Objectives of the Strengthening Exercise

13.1 The BBA believes that the objectives/principles for a strengthened governance framework include:

(a) A need for enhanced transparency and accountability;

(b) More clarity over the scrutiny mechanism;

(c) Greater market participation in the processes and oversight of BBA LIBOR;

(d) Reinforced market confidence in BBA LIBOR as a credible benchmark; and

(e) Improving the BBA's educational outreach on BBA LIBOR

The BBA invites comments on this initial list.

13.2 The BBA has discussed with the FX & MM Committee and other interested parties (including our legal counsel) on how these objectives could be met. The first steps, on how the BBA and the Committee intend to proceed, are as follows:

(ii) Scrutiny mechanism for BBA LIBOR

13.3 In revising the scrutiny mechanism for BBA LIBOR, The BBA believes that the following key aspects are essential and are being implemented forthwith:

1. Banks' inputs into the BBA LIBOR process will be actively monitored every day and discrepancies within rates will be flagged. Discrepancies will include inputs that fluctuate, alter rapidly without any obvious external cause, or are not consistent with their market activity in the relevant period.
2. Where discrepancies are identified, these will be brought to the attention of the FX & MM Committee for their consideration.
3. All members of this committee will be experienced market practitioners
4. If the members of the Committee cannot satisfy themselves that any given rate is realistic, the submitting bank in question will be invited to explain the reason for the rate they posted including third party independent analysis if required.
5. A bank that is unable to offer a justification for their rates at any

point will be given a warning and repeat offences will lead to replacement of the bank on the currency panel in question.

6. The Committee will meet at least monthly at which it will receive a full report on these and any other issues brought to its attention by the LIBOR manager. This will include assessment of commentary in the market and from all stakeholders.
7. The Committee will develop best practice for bank reporting standards and adherence to these standards.

This list may be by no means exhaustive, and the BBA would welcome comments on whether there might be other aspects to take into account.

(iii) Membership of the FX & MM Committee

13.4 The BBA also suggests that the composition of the Committee needs to be reviewed, and that certain aspects such as method or appointment and term of office could benefit from further clarity. Members of the Committee are currently from contributing banks, and believe their independent stance and ability to provide detailed scrutiny of the rates would be strengthened by widening the membership of the Committee. The Committee will ensure ongoing dialogue with relevant central banks, and other interested groups and organisations. The BBA suggests that this could be initiated with immediate effect.

The membership of the Committee is being widened to include non-contributing banks in Europe and the USA and the BBA would welcome comments on this.

(iv) Expansion of Contributing Panels.

13.5 The BBA believes that the current currency panels are a good representation of transactional activity in the London markets. The first criterion for panel membership is an application to be considered for inclusion in one or more of the panels. The BBA has not had any new applications for banks from banks wishing to be considered for addition to the panels in the last year. Notwithstanding this, the BBA believes that the issue of whether the full range of institutions is being captured should be explored once again.

The BBA will therefore actively commence discussions with a number of other major banks for the purpose of establishing whether their business qualifies for inclusion on a panel and whether the panel sizes should be increased.

13.6 The BBA will commence this immediately, but this is necessarily a process that will take a certain amount of time. The BBA will keep the markets fully abreast of progress and will seek the views of all interested parties in the public and private sectors. The BBA, FX & MM Committee and contributors are all determined to reinforce the validity and credibility of LIBOR.

(v) Ongoing dialogue regarding BBA LIBOR

13.7 It is clear that BBA LIBOR is not perfectly understood by market participants and observers, and that the BBA could do more to educate markets and other interlocutors including the media. The BBA has contacted all contributors to ensure that their submissions to the rate setting process are fully compliant with the procedures as laid out by the FX & MM Committee. The BBA will also hold meetings with all interested market participants in respect of the content of this paper and seek their views.

13.8 **Mindful of the widespread use of LIBOR, in terms of significant numbers of contracts around the world being linked to BBA LIBOR in its current form, the BBA intends to proceed carefully. There will be no knee jerk change and no alterations without clear rationale.**

14. Conclusion

14.1 BBA LIBOR is calculated and fixed by Reuters under contract from the BBA, and under the guidance of the Foreign Exchange and Money Markets Committee. This paper represents the view of this Committee. Comments from market participants and users of the rates are welcome, and should be directed to John Ewan, LIBOR Director at the BBA and the Secretary to the Committee, within four weeks of the date of release of this paper.

14.2 Upon receipt of comments, the BBA will inform the market of the results of the consultation and establish a timetable for the implementation of outstanding issues.

British Bankers' Association

10 June 2008

APPENDIX I – Contributor Panel Banks

AUSTRALIAN DOLLAR (AUD) – 8 BANKS

Barclays Bank plc
Commonwealth Bank of Australia
Deutsche Bank AG
HBOS
Lloyds TSB Bank plc
National Australia Bank Ltd
The Royal Bank of Scotland Group
UBS AG

CANADIAN DOLLAR (CAD) – 12 BANKS

Bank of Montreal
Barclays Bank plc
Canadian Imperial Bank of Commerce
Deutsche Bank AG
HSBC
HBOS
JP Morgan Chase
Lloyds TSB Bank plc
National Bank of Canada
Rabobank
Royal Bank of Canada
The Royal Bank of Scotland Group

SWISS FRANC (CHF) – 12 BANKS

Barclays Bank plc
Bank of Tokyo – Mitsubishi UFJ
Citibank NA
Credit Suisse
Deutsche Bank AG
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Société Générale
The Royal Bank of Scotland Group
UBS AG
West LB AG

DANISH KRONE (DKK) – 8 BANKS

Barclays Bank plc
Deutsche Bank AG
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Rabobank
The Royal Bank of Scotland Group

UBS AG

EURO (EUR) – 16 BANKS

Bank of America
Barclays Bank plc
Bank of Tokyo – Mitsubishi UFJ
Citibank NA
Credit Suisse
Deutsche Bank AG
HBOS
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Rabobank
Royal Bank of Canada
Société Générale
The Royal Bank of Scotland Group
UBS AG
West LB AG

STERLING (GBP) – 16 BANKS

Abbey National plc
Bank of America
Bank of Tokyo – Mitsubishi UFJ
BNP Paribas
Barclays Bank plc
Citibank NA
Deutsche Bank AG
HBOS
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Rabobank
Royal Bank of Canada
The Royal Bank of Scotland Group
UBS AG
West LB AG

JAPANESE YEN (JPY) – 16 BANKS

Bank of America
Bank of Tokyo – Mitsubishi UFJ
Barclays Bank plc
Citibank NA
Deutsche Bank AG
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Mizuho Corporate Bank
Rabobank
Société Générale
Sumitomo Mitsui Banking Corporation Europe Ltd (SMBCE)

The Norinchukin Bank
The Royal Bank of Scotland Group
UBS AG
West LB AG

NEW ZEALAND DOLLAR (NZD) – 8 BANKS

Commonwealth Bank of Australia
Barclays Bank plc
Deutsche Bank AG
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
National Australia Bank
The Royal Bank of Scotland Group

SWEDISH KRONA (SEK) – 8 BANKS

Barclays Bank
Deutsche Bank
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Rabobank
The Royal Bank of Scotland Group
UBS

US DOLLAR (USD) – 16 BANKS

Bank of America
Bank of Tokyo – Mitsubishi UFJ
Barclays Bank plc
Citibank NA
Credit Suisse
Deutsche Bank AG
HBOS
HSBC
JP Morgan Chase
Lloyds TSB Bank plc
Rabobank
Royal Bank of Canada
The Norinchukin Bank
The Royal Bank of Scotland Group
UBS AG
West LB AG