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Greetings, John.

BBA's recent consultative paper ("Understanding the construction and operation of BBA Libor – Strengthening for the future", 10 June 2008) deftly consolidates and organizes the currents of controversy that have engulfed Libor since mid-2007. The Association's Foreign Exchange and Money Market Committee, whose view the paper presents, show commendable generosity, broad-mindedness, and patience in their consideration of the flaws in the Libor mechanism that its critics allege. So far as any of these flaws might indeed be genuine, the paper offers thoughtful and workable proposals to rectify them.

On a few points the consultative paper proposes courses of action that differ from what CME Group has recommended to BBA (correspondence, Frederick Sturm, Director, CME Group, to John Ewan, Director, BBA, 6 May 2008). The following remarks touch upon these differences, as well as noting those points on which BBA and CME Group concur.

Our comments are organized under seven headings. The first spells out the fundamental distinction between BBA's preferred approach to reform of the Libor mechanism and CME Group's. Thereafter we offer brief remarks on each of the five subject areas that the consultative paper identifies in its discussion of "Strengthening for the Future" –

- Composition of BBA Libor Panels
- Timing of the Quote
- Use of Median Rather than Trimmed Mean
- Anonymising the Rates
- Clarifications to the Definition of Libor

The concluding section identifies ways in which a promotional/educational outreach program on behalf of Libor might clarify what it is and how it functions. Throughout, references to the consultative paper appear in **bold-face type**.



(1) Enforcement versus motivation

(1a) BBA and CME Group share a deeply held interest in keeping the Libor mechanism strong and robust. How to achieve this goal marks the central distinction between measures that CME Group has recommended to BBA and those that BBA have proposed --

BBA's preferred approach is to buttress the current Libor survey with intensified surveillance of the process, closer scrutiny of Contributor Panelists' responses, and, if necessary, disciplinary sanctions against Contributor Panelists whose survey responses are judged to be fictive, disorderly, or potentially disruptive.

CME Group's recommendation is to revise the Libor survey so that it inherently motivates Contributor Panelists to participate in orderly fashion, while keeping the scope of any such revisions sufficiently incremental to preserve the continuity of the Libor mechanism.

(1b) This distinction is exemplified by the wording of the Libor survey instrument --

BBA's proposal upholds and defends the status quo, in which a "Contributor Panel Bank will contribute the rate at which it could borrow funds, were it to do so by asking for and then accepting interbank offers..."

CME Group's recommendation is that BBA should revert to the wording it used prior to 1998, whereby each Contributor Panelist would contribute the rate at which it perceives that one hypothetical "prime bank" would offer to lend to another hypothetical prime bank.

(1c) The virtues of BBA's proposed approach are its directness and its obvious definitional continuity with the past. Its chief liability is that, as with any enforcement mechanism, it must have teeth. It will succeed only if BBA and the Association's FX&MM Committee rise to its challenges:

(1c.i) Credibility

Above all, BBA must demonstrate that it can and will commit adequate resources -- manpower, money, and material -- to the oversight apparatus at the center of their proposal.

(1c.ii) Rigor

The FX&MM Committee must be willing to wield the authority that would be entrusted to them under the proposed surveillance scheme. They must establish a fair and transparent procedure for hearing and evaluating both accusations of misconduct and the defenses of parties accused. When circumstances require it of them, the Committee must be capable of meting out punishment promptly, consistently, and equitably.

(1c.iii) Flexibility of procedure

BBA must, at the same time, invest their proposed oversight mechanism with sufficient flexibility to grant Contributor Panelists the benefit of the doubt. Crucially, Contributor Panelists should be capable of making their daily survey responses under stressed or unusual conditions -- eg, thinly traded or dormant markets -- without fear of accusation that they are somehow "away from the market."



(1c.iv) Flexibility of definition

(See Section (6) "Clarifications to the Definition of BBA Libor", concerning the need for both precision and flexibility in the definition of the Contributor Panelist's "perceived cost of funds.")

(1d) CME Group's recommended approach features several advantages:

(1d.i) Avoiding confrontation over creditworthiness

By rewording the daily survey to ask "At what rate could prime banks borrow from each other..." rather than "At what rate can your bank borrow...", it lessens the risk that a Contributor Panelist might inadvertently disclose or signal financial distress.

(1d.ii) Robustness and continuity

By enabling Contributor Panelists to answer in the hypothetical, instead of in terms of specifics, it facilitates day-to-day continuity and consistency. On any given day, a Contributor Panelist may be unable to say precisely where others will offer to her, but she can always say where one hypothetical prime bank might plausibly offer to another. By contrast, as Section (1c.iii) notes, the current Libor survey instrument poses a risk of discontinuity, due to non-response or ill-posed response, in sparsely traded tenors or in thin markets.

(1d.iii) Conceptual clarity

If revised as CME Group suggests, the Libor survey instrument would adhere more closely to users' intuitive understanding of Libor as a barometer of generalized, perceived fair value among interbank interest rates.

(1d.iv) Familiarity

The survey scheme advocated by CME Group is known to perform well, and it is already well understood by market participants who are familiar with, eg, the European Banking Federation's daily Euribor® survey and fix.

(1d.v) Lower administrative cost. Less risk to credibility.

There would be little or no need for BBA to undertake surveillance of its Contributor Panelists, were it to rephrase the Libor survey instrument as CME Group suggests while continuing to publish individual Contributor Panelists' survey responses.

On the other side of the ledger, CME Group's preferred approach would have to overcome at least two potential challenges. One is that it requires a clear and functional definition of the concept of "prime bank."

The other is that market participants might regard this modification to the daily Libor survey – or any change, no matter how slight -- as an unwanted discontinuity. Let us grant that no one suffered any disruption or inconvenience when BBA rephrased its survey instrument in 1998 (in the opposite direction from what CME Group now espouses). A decade on, however, one must acknowledge that market practitioners – especially those who deal in Libor-reference interest rate derivatives – may be more sensitive to, and less tolerant of, the potential impacts of any such change in benchmarking procedures.



(2) Composition of BBA Libor Panels

Increasing the size of Libor Contributor Panels would be beneficial, certainly for the four major Libor currencies (euro, sterling, US dollar, and yen).

This is not because a greater number of Contributor Panelists would make the Libor fix more accurate. Rather, by granting more institutions an active role in the Libor mechanism, BBA would take an important step toward building consensus, ensuring credibility, and dispelling suspicion. At least three ramifications follow:

(2a) Recruitment

Executive Summary, page 1, paragraph 4 observes that "there have...been no new applications from banks over the last 12 months who are not currently on the [candidate] selection lists." Given this, BBA might consider actively soliciting applications for places either on Contributor Panels or on the corresponding candidate selection lists. It is understood that the criteria guiding any such recruitment effort must incline toward banks that "trade in significant amounts in...London" in the corresponding currencies.

(2b) Diversity

Given that the chief goal in enlarging the Contributor Panels would be to broaden the base of industry support for the Libor mechanism, one objective of such a recruitment program should be to achieve an ample but reasonable share of currency-native banks within each Contributor Panel (eg, London branches of US banks for the US Dollar Panel, London branches of Japanese banks for the Yen Panel).

(2c) Trade-off between Contributor Panel size and BBA Libor governance

Section 13.4 asserts that "the membership of the [FX&MM] Committee is being widened to include noncontributing banks in Europe and the USA..." We presume that any such expansion of the Committee would extend only to those noncontributing institutions that are deemed by current Committee members to be suitably qualified to judge the veracity of Contributor Panelists' daily survey responses. If so, then a more direct, simple, and productive measure might be to add these "suitably qualified" institutions to the pertinent Contributor Panels.

(3) Timing of the Quote

(3a) Time of day

Section 9.1 puts the case for maintaining 11am GMT as the appropriate hour for the daily Libor fix. Because this is a key element of the standardization that warrants Libor's status as an interest rate benchmark, we agree that it should stand unchanged.

(3b) Adding a US time-zone fix for US Dollar Libor

Section 9.4.i contemplates the addition of a second and distinct US Dollar BBA Libor fix at, say, 11am Eastern Time (ie, coincident with ISDAFIX). *We strongly encourage BBA to pursue this.*



Presuming that market participants actively seek an added financial benchmark of this sort, it is fair to anticipate that someone – either BBA, or another industry association, or an ad hoc band of market participants – will fill the void. A 'BBA Libor US' benchmark would possess the obvious virtue of methodological and procedural consistency with 'BBA Libor'. A benchmark sponsored and implemented by someone other than BBA (eg, the ICAP New York Funding Rate) might not.

If implemented properly, this addition to the BBA Libor family would not "lead to market confusion," nor would it necessitate that "all outstanding deals linked to BBA Libor" must "be revisited to define which time should be used as the benchmark." In terms of the **Annex to ISDA Definitions**, for example, the current family of "USD-LIBOR-xxx" references, reflecting market conditions as of 11am GMT, would unambiguously retain their status as "BBA Libor." The **Annex** could be amended to accommodate a hypothetical second family of "BBA Libor US" references -- say, "USD-LIBOR-US-xxx" -- reflecting London interbank market conditions as of 11am ET. Important to note is that to accomplish this "properly" would require close cooperation between BBA and ISDA.

(3c) Adding a Eurozone-zone fix for US Dollar Libor

Section 9.4.ii (with **Exec Summary**, p2, item 1) solicits advice regarding the addition of a distinct "US Dollar index that seeks to capture European US Dollar trading." *We recommend against this addition.*

Referring to members of the US Dollar Libor Contributor Panel, **Section 8.2** correctly asserts that "these banks are not 'European', 'British', or 'American'; they are global institutions." If so, then no constructive purpose would be served by the creation of a parallel Libor fix, with Contributor Panelists confined to institutions that are domiciled, eg, only in the Eurozone, or only in Eurozone plus UK. Worse, by formalizing an alternative Libor measure on the basis of regional segregation, this might have the undesirable effect of balkanizing the interbank placement market.

(4) Use of Median Rather than Trimmed Mean

(4a) **Section 10.1** notes that "the effect of moving to a median is less than 1 basis point in major currencies and less than 2 in smaller currencies." On this basis, "the FX&MM Committee therefore recommend no change to the current trimmed mean methodology."

For precisely the same reason, *we would encourage BBA to replace its current trimmed mean estimator with the median.* As the FX&MM Committee rightly acknowledge, this change would be unobtrusive, in that its adoption would be unlikely to introduce significant discontinuities into time series of Libor data.

(4b) At the same time, it would strengthen the integrity of the Libor mechanism in at least two ways:

(4b.i) Robustness against market disruption

The distribution of daily Libor survey responses frequently departs from the ideal of the Gaussian bell curve. In such cases the median tends to be a more robust estimator of distributional location than the arithmetic average, trimmed or otherwise.


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(4b.ii) Robustness against attempted wrongdoing

In the unlikely and unwelcome event that Contributor Panelists were to attempt to influence the outcome of a Libor fix, their objective would be harder to attain with a median estimator than with an arithmetic average (trimmed or otherwise). As a practical matter, any conspiracy would have to comprise at least half of the Contributor Panel before it could exert any direct impact upon the median. By contrast, only a quarter of the Contributor Panel would suffice for a conspiracy to influence the outcome of the Libor fix as currently computed. In this sense, the adoption of the median estimator would abet BBA's proposed surveillance and enforcement apparatus.

(5) Anonymising the Rates

In its discussion of "anonymising Contributor Panelists' daily survey responses," **Section 11.1** characterizes this as "a retrograde step." *We wholeheartedly agree.*

(6) Clarifications to the Definition of BBA Libor

Section 12.2 elucidates the definition of Libor. Among other points, it declares that "the rate which each [Contributor Panelist] submits must be formed from that [Panelist's] perception of its cost of funds in the interbank market." Given this, *the code of best practices that Section 13.3.7 proposes should, inter alia, set clear guidelines regarding how a Contributor Panelist shall arrive at its "perception of its cost of funds."* These guidelines should be clear, consistent, and workable not just under orderly market conditions but also in market conditions that are disrupted, congested, or dormant.

(7) Clarifications to the Function of BBA Libor

(7a) Market benchmark versus market rate

To make most effective use of the Libor benchmark, market participants must approach it in the right spirit and with appropriate expectations. In this vein, **Section 2.2** observes that "Libor is a benchmark. However, some entities appear to have made the assumption that Libor is a rate at which all could borrow." In fact, apart from the most placid market conditions, it is seldom the case that "all could borrow" at Libor (except in the trivial sense that any individual institution may borrow at offered rates quoted as "Libor plus" or "Libor minus"). *This point warrants hard emphasis, not merely in the procedures for the daily Libor fixing but also in any educational outreach program such as Section 13.1.e proposes*

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(7b) Impact of "the current diminished credit capacity of the market."

Libor's users should have a clear understanding of how the benchmark mechanism functions in all market conditions, either placid or strained. *This too deserves emphasis in any educational or promotional effort on behalf of Libor.*

(7b.i) On this theme, **Section 5.1** usefully establishes that the market's "diminished credit capacity" manifests itself in unusually wide dispersion among the survey responses submitted by Contributor Panelists on any given day for any given tenor.

(7b.ii) Worth adding is that, when seen from the vantage of any individual Contributor Panelist, diminished market credit capacity is likely to manifest itself in unusually wide dispersion among the offered rates at which the individual Panelist might borrow in reasonable size, on any given day at any given tenor. One would expect to encounter dispersion of this type whenever there is uncertainty – and legitimate difference of opinion – about the creditworthiness of any one market participant among other market participants who must choose whether or not to lend to it.

Dispersion of this type might answer, at least in part, the frequent accusation that Contributor Panelists habitually submit false or biased responses to the daily Libor survey. A Contributor Panelist who can borrow "in reasonable market size" at any one of a wide range of offered rates commits no falsehood if she bases her response to the daily Libor survey upon the lowest of these (or the highest, or any other arbitrary selection from among them).

My coworkers and I hope these remarks are helpful. We are deeply obliged to the British Bankers' Association for soliciting them. As always, John, we would welcome an opportunity to discuss them with you, should you or your colleagues have any questions about them.

Sincerely yours,

/s/ Frederick Sturm, Director

cc: Ross, Winkler, Barker, Mueller, Hammond