



3400 Hillview Avenue, Bldg 4
Palo Alto, CA 94304
United States

www.integral.com

August 12, 2014

Mr. Guy Debelle, Co-Chair
Mr. Paul Fisher, Co-Chair
Foreign Exchange Benchmark Group
Financial Stability Board
fsb@bis.org

RE: Foreign Exchange Benchmarks Consultative Document

Dear Sirs:

Integral Development Corp. welcomes the industry-wide discussion regarding the ways in which construction of foreign exchange fixing methodology may be improved, and appreciates the opportunity to contribute feedback on this topic to the FSB Plenary working group.

This is an especially important topic since FX fixings are a key input for published indices in international bond and equity markets, which in turn are widely used by asset managers and “implicit in many investment mandates” (as observed by FSB). Thus, Integral believes that a discussion exploring the ways in which the mechanism design for FX fixings may be improved should also include consideration of how such fixings may be utilised by index providers and market participants.

It is our opinion that an improved mechanism design for FX fixings should include 1) a new methodology for determining fixing rates, 2) the inclusion of the new fixings by index providers in the construction of their indices, and 3) a new methodology for executing orders during the fixing times.

Any changes to the current fixing methodology should help achieve a fixing rate with the following characteristics: transparency, replicability, and resilience against manipulation attempts. As detailed below, Integral believes that a combination of a significantly longer fixing window, use of time weighting and use of widely-sourced committed quotes will deliver these characteristics. Furthermore, the adoption by index providers of new fixings resulting from such changes will ensure that asset managers and market participants benefit from these improvements. Finally, the creation of an industry utility to net fixing orders and execute residuals appropriately will go a long way towards resolving current concerns about trading during FX fixings.

a. Benchmark calculation

1. **The group recommends the fixing window be widened from its current width of one minute. It seeks feedback from market participants as to the appropriate width of the window. Many buy-side contacts have suggested that a longer fixing window would allow the market ‘greater time to digest the flow of fixing related trades’.**

... The group’s view is that the ideal width of the window should strike a balance between reducing incentives for manipulation while at the same time still ensuring the fix is fit for purpose by generating a replicable market price.

Integral agrees that the current 60-second fixing window is inadequate to accommodate and absorb the increased flow expected during fixings. Furthermore, the 60-second window is not sufficient to practically reduce chances of manipulation.

To address this, Integral believes that the fixing window should be widened to 30 minutes, that is, 15 minutes before and 15 minutes after the fixing timestamp. This longer window should reduce trader impact on the fix, since trading activity will be distributed across 30 minutes rather than a 60-second period in time.

Widening the fixing window to 30 minutes also makes the fixing less susceptible to manipulations due to the higher costs associated with influencing the market over a longer period of time.

2. **The group seeks feedback from market participants as to whether there is a need for alternative benchmark calculations such as a volume weighted or time weighted benchmark price calculated over longer time periods up to and including 24 hours.**

Integral believes it is appropriate to consider alternative fixing calculations. For example, we suggest that widening the fixing window to 30 minutes can effectually reduce incentives for manipulation, as well as accommodate the increased flow expected during fixing times. Additionally Integral believes any FX fixing, including the 4 pm London fix, will be greatly improved with use of a time weighted price calculation, for the reasons described below.

The current methodology contains some drawbacks. For example, the FSB acknowledges that even for extremely liquid currency pairs such as EUR/USD, there may often be less than 60 transactions recorded during each fixing window. Additionally, there may be many more bid than offer transactions, or vice versa, so that one direction is more represented by actual transactions than the other direction which is more “inferred”. Furthermore, at present, only one median bid and median offer are selected from within the fixing window. Thus, the fixing rate is derived from a bid and offer that are likely to have dissimilar timestamps, up to 60 seconds apart.

For these reasons, it’s implausible for market participants (both investors and dealers) to achieve the fixing rate through execution strategies.

With this in mind, Integral highly recommends that a time weighted average price (TWAP) methodology be used to calculate the fix, for the TWAP to be calculated over a wider fixing window of 30 minutes rather than 60 seconds, and finally, for the TWAP to be calculated from midrates from

each second of the fixing window. Market participants benefit from a longer window for fixing related activities, and market conditions would presumably be less volatile as a result of distribution over a wider time period. In addition, investors looking to achieve the fixing rate would benefit from such a methodology which is more replicable by execution strategies.

3. The group proposes that WM investigate the feasibility of receiving price feeds and transactions data from a broader range of sources to further increase its coverage of the FX market during the fixing window, and should regularly assess its coverage as market structure continues to evolve.

... The more data sources that are utilised, the more representative and resilient the fix will be.

Integral encourages market participants to consider using a broader range of data sources to calculate the fix.

The current methodology is meant to capture 61 snapshots of ‘most recent’ bid (offer) trade prices, and then derive a mirror set of ‘inferred’ offer (bid) prices. Thus, half of all data used to calculate the fixing are in fact ‘inferred’. Moreover, the FSB acknowledges that even for very liquid currency pairs such as EUR/USD, there are often not enough transactions to reach a full set of 61 snapshots.

In their 2013 paper, Rosa M. Abrantes-Metz and David S. Evans address this issue¹ and suggest using “committed quotes” in lieu of transaction data:

If a transaction-based approach is not feasible for a particular market, it is worth considering whether ... a substitute benchmark may be developed if it is not already available. If there is no substitute available and if the benchmark is to be used for a significant notional amount, then the second-best option, a committed quote system, should be implemented.

A committed quote system is described in Abrantes-Metz & Evans ((2012a) and (2012b)) for LIBOR. Under this system the participants agree to transact at (or “near”) their quotes if they transact at all. It is important to note that the participants are not obliged to transact, they only agree they will not transact “far” from their quotes. (Abrantes-Metz, Evans 5)

Therefore, Integral believes that it would be beneficial to consider committed quotes as a more robust and practical alternative to transaction data. For example, the Integral FX Benchmark (www.fxbenchmark.com) uses hundreds of committed bid and offer quotes to calculate the midrate for each second. Integral also tests the “commitment” of these quotes by comparing them to transaction data, a form of “verification and screening mechanism” that Abrantes-Metz and Evans also recommend in their paper. The methodology supporting Integral FX Benchmark was developed as a result of close collaboration with Stanford University.

¹ Abrantes-Metz, R. and D. Evans, “Enhancing Financial Benchmarks: Comments on the OICU-IOSCO Consultation Report on Financial Benchmarks”, February 10, 2013, available at SSRN: <http://ssrn.com/abstract=2216209>

A TWAP calculation may then be applied to the aforementioned midrates from each second, across a 30-minute window. Integral believes that a fixing calculated as a TWAP of midrates will more accurately represent market pricing than a fixing calculated as one midrate from “single snapshots taken at illiquid points in time”, as noted by the FSB. Furthermore, using committed quotes increases the replicability of the fixing rate, which is important for investors to choose the appropriate strategy for executing their residual amount. Investors looking to achieve the fixing rate in their execution strategy should find that replicating a TWAP over a 30-minute window is more feasible than replicating the current fixing methodology. Finally, the fixing itself would benefit from increased resilience, but without sacrificing transparency or expediency.

c. Market infrastructure

- 6. The group supports the development of industry-led initiatives to create independent netting and execution facilities. However, it also is interested in seeking feedback from market participants on the development of a global/central utility for order-matching to facilitate fixing orders from any market participants.**

As part of the mechanism design changes to address current concerns about executing at the fix, Integral would support the creation of a central utility, run by an independent service provider to facilitate fixing orders. Netting opportunities help reduce both transaction cost and information cost for investors, by allowing them to net anonymously at a midrate while reducing the size that must be ultimately executed at market. Trades would clear via a central clearer or a group of clearing counterparties, who should be fairly compensated for their services.

Participants of the central utility can allow the utility to execute the residual balances in a way that replicates the fixing rate. Thus, as previously discussed, a fixing methodology which is transparent, replicable, and resilient to manipulation attempts will be important for investors to choose the appropriate strategy for executing their residual amounts.

d. Behaviour of Market Participants

- 7. The group recommends that fixing transactions be priced in a manner that is transparent and is consistent with the risk borne in accepting such transactions. This may occur via applying a bid-offer spread, as is typical in FX transactions, or through a clearly communicated and documented fee structure such as a direct fee or contractually agreed price.**

Dealers provide a service to execute each fixing order at a midrate to be determined in the future. One can thus regard fixing orders as a transfer of risk from the investor to the dealer. Integral

endorses fair and transparent compensation for dealers who agree to bear this risk and perform this service as agents for their customers.

14. The group recommends that index providers in other markets should review whether the foreign exchange fixes used in their calculation of indexes are fit for purpose.

Many bond and equity indices that use FX fixings as inputs are "implicit in many investment mandates". Thus, it is not uncommon for asset managers to execute FX fixing orders at the midrates to minimise the tracking error of their portfolios resulting from foreign exchange transactions. Index providers should review which FX fixing rates are being used in the construction of these indices, and consider whether there are alternative fixing methodologies that may better achieve the goals of being transparent, replicable and more resilient to manipulation attempts.

15. ... Asset managers should also reflect the importance of selecting a reference rate that is consistent with the relevant use of that rate as they conduct such due diligence.

Integral believes that index providers and asset managers should consider fixing times that are consistent with the trading hours of local bond and equity markets. This will reduce the discrepancy between the timing of local asset markets and the FX fix, as well as leverage natural liquidity when the local markets are open.

Please let us know if you would like us to provide any further information.

Yours sincerely,



Vikas Srivastava

Managing Director, Business Development

Integral Development Corp.