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TO:

Basel Committee on Banking Supervision
Bank for International Settlements
CH-4002 Basel
Switzerland

20 June, 2018

Re: Revisions to the Minimum Capital Requirements for Market Risk - Consultative Document

Dear Members of the Basel Committee on Banking Supervision,

The Global Foreign Exchange Division (“GFXD”) of the Global Financial Markets Association welcomes the opportunity to provide comments to the BCBS on its consultation paper published in March 2018 (the “CP”) on “Revisions to the minimum capital requirements for market risk”.

The GFXD was formed in co-operation with the Association for Financial Markets in Europe (AFME), the Securities Industry and Financial Markets Association (SIFMA) and the Asia Securities Industry and Financial Markets Association (ASIFMA). Our members comprise 25¹ global foreign exchange market participants collectively representing approximately 80%² of the FX inter-dealer market. The GFXD and its members are committed to ensuring a robust, open and fair marketplace and welcome the opportunity for continued dialogue with global regulators.

¹ Bank of America Merrill Lynch, Bank of New York Mellon, Barclays, BNP Paribas, Citigroup, Crédit Agricole, Credit Suisse, Deutsche Bank, Goldman Sachs, HSBC, JP Morgan, Lloyds Bank, Mizuho, Morgan Stanley, MUFG Bank, Natwest Markets, Nomura, Royal Bank of Canada, Scotiabank, Société Générale, Standard Chartered Bank, State Street, UBS, Wells Fargo and Westpac.

² According to Euromoney league tables.

The FX market is the world's largest and most liquid financial market, and effective and efficient exchange of currencies underpins the world's financial system.³ Sovereign entities, central banks and other government-sponsored entities rely on the FX market being well-functioning and liquid, and corporations and investors regularly participate in the market for important operational needs: to reduce risk by hedging currency exposures; to convert their returns from international investments into domestic currencies; and to make cross-border investments and raise funding outside home markets.

Many of the current legislative and regulatory reforms have had, and will continue to have, a significant impact upon the operation of the global FX market, and the potential consequences of reforms should therefore be carefully evaluated before they are implemented.

We previously wrote to the BCBS Secretariat in January 2017 and again in January 2018 to raise several concerns identified by our members in relation to the impact of the “Fundamental Review of the ‘Trading Book’ Rules (“FRTB”) on the foreign exchange (FX) market, particularly in Emerging Markets (“EM”). We are pleased to see several of our concerns positively addressed in the CP and provide comments in this regard and on several other issues below.

EXECUTIVE SUMMARY

We support many of the revisions being proposed in the CP and commend the BCBS for taking into consideration the industry's concerns in accommodating targeted revisions to the FRTB standards.

As mentioned, we especially welcome the fact that the BCBS has positively addressed in the CP several of GFSD's previously outlined FX concerns:

- **Allowing for triangulation logic in the list of liquid currency pairs.**
- **Reduction of the Sensitivities Based Approach (SBA) risk weights.**
- **Clarifying the definition of FX risk weights/shocks.**
- **Addressing the capital discontinuity/jump scenario.**

³ As reported by the Bank for International Settlements in their “Triennial Central Bank Survey: Foreign Exchange Turnover in April 2016 (the “2016 BIS FX Survey”),’ trading in FX markets averaged \$5.1 trillion per day in April 2016, with over 77% of FX activity executed by market participants across five global jurisdictions. 2016 BIS FX Survey, available at <http://www.bis.org/publ/rpfx16.htm>.

Nevertheless, there remain several conceptual issues which we wish to highlight which we believe may continue to disproportionately impact FX:

- Revisions to treatment of cross-currency basis risk.
- Positive gamma/delta-curvature disconnect.
- Treatment of closely correlated currencies.
- Double counting of FX curvature risk.
- NMRFs for FX risk factors.

1. STANDARDISED APPROACH (SA)

We support the CP's revisions to the standardised approach, which include allowance for FX triangulation, recalibrated risk weights for FX, clarification of FX shocks and addressing the capital discontinuity/jump scenario.

Revisions to the treatment of liquid FX pairs (CP references Section 1.1; Annex A.5, paras 120 (a) and 181(k))

The proposed revisions to the minimum capital requirements for market risk allow for FX triangulation to determine liquid FX pairs not explicitly listed in the original Accord Text. The example cited in the CP is that of EUR/BRL which, though not listed as liquid in the Accord Text, should be treated as liquid given the FX pairs USD/BRL and USD/EUR are in the liquid list.

GFXD Comment: In line with the points we have made previously, that triangulation improves the rule requirements' risk sensitivity and is merely reflective of how the FX market typically functions and will result in correctly aligning the capital with economic risk, we strongly support the allowance of FX triangulation under the FRTB.

We agree with the CP's proposed modifications to paragraphs 120(a) and 181(k), and also agree with maintaining the discretionary reduction by dividing by square root of 2 for the specified currency pairs and first order crosses. We continue to believe there is no added risk

by allowing FX triangulation and are very grateful to the BCBS and its constituents for the receptiveness shown to our ongoing position in this regard.

Revisions to risk weights (CP references Section 1.4; Annex A.6, para 120)

The CP incorporates a recalibration of the risk weights for FX risk classes (a 25-50% reduction) based on higher than expected impact data in the previous specification of risk weights, providing that a unique relative risk weight equal to [15-22%] applies to all the FX sensitivities or risk exposures.

GFXD Comment: We are very grateful for the CP's reduction of the SBA risk weights, however wish to provide some further comment on the recalibration for FX. As we previously mentioned in our January 2018 letter, the SA risk weights as currently calibrated (30% and approximately 21.2%) are equivalent to an annualized volatility of 45%. They can also be thought of as the hypothetical market wide shock that is being capitalized for a simultaneous 30% move in the exchange rate for non-liquid currency pairs (and approximately 21.2% move in the exchange rate of liquid currency pairs), with an assumed correlation of 60%.

The industry has performed studies which suggest that the hypothetical shocks that the risk weights equate to are too severe given the historical context. This also results in SA capital being significantly higher than Internal Models Approach ("IMA") capital.

The study, detailed in Appendix A hereto, was performed on the 35 most liquid currencies and based on conservative assumptions. The worst average market-wide move across the 35 currencies was 13%. On one occasion, when 4 out of 35 currencies moved simultaneously by more than 30%, the average market-wide move was 7.9%. Therefore, in the worst market-wide stress moves (since 1990), 29 (80%) of the top 35 currencies moved less than the minimum risk weight of approximately 21.2% - this is true even after considering intraday highs and lows.

The Accord Text's current capital requirement is equivalent to using each currency's worst standalone depreciation move since 1990 (weakening vs. USD) as its risk weight. It results in a capital requirement of \$175mm for an aggregate \$1bn long FX delta on the 35 currencies. If 15% risk weights were applied instead, the capital requirement would be \$83mm. Even if a more conservative 20% were applied, the capital requirement would be \$117mm.

GFXD Recommendation: We recommend that the final recalibration for risk weights applied to all FX exposures is reduced to 15% (i.e., the lower end of the CP proposal) while maintaining the discretionary reduction by dividing by square root of 2 for the specified currency pairs and first order crosses.

Revisions to FX risk factors and curvature risk capital requirement (CP reference Annex A.3, para 121)

GFXD Comment: We support the CP's clarification of FX risk factors as, "units of other currency" per unit of "reporting currency." In our January 2018 letter, we highlighted that the original Accord Text only defined FX risk factors as, "all exchange rates between the currency in which an instrument is denominated and the reporting currency" but did not specify whether the risk weight reflects a shock to REPORTING per LOCAL or LOCAL per REPORTING. This ambiguity could have led to different yet illogical outcomes for large shocks to a currency pair depending on how the pair is defined. By providing a clear definition for FX risk factors, the CP has effectively helped to mitigate this ambiguity.

Revisions to capital requirements for non-linear instruments - Cliff effects/capital discontinuity (CP reference Section 1.3, bullet 2, p. 3)

The CP proposes modifying the formula used to calculate aggregate curvature risk capital requirements by applying a zero floor to the part which causes the cliff effect.

GFXD Comment: We support the application of zero floor. When curvature gains/long gamma/long convexity are increased, it can trigger the alternative calculation which results in a discontinuous and sharp increase in capital requirements. This capital increase is inconsistent with the risk reduction resulting from the addition of curvature gains. By flooring curvature capital at zero, the revised curvature methodology has removed a part of the disconnect between the risk and capital changes.

Revisions to treatment of cross-currency basis risk

The CP continues to reference the General Interest Rate Risk ("GIRR") Delta Capital requirement that cross-currency basis be considered in addition to sensitivity to interest rate risk for the same instrument, leading to instruments sensitive of cross-currency basis risk being subjected to two outright risk charges.

GFXD Comment: As previously highlighted in our January 2018 letter, [Appendix B](#) hereto illustrates the adverse impact of the current treatment of cross-currency basis risk using a hypothetical hedged \$100mm notional 5-year bond position. As can be seen from those examples, the capital requirement for a bond hedged using an FX swap is ~50% higher than that for an unhedged bond even though the outright risk of the bond has been hedged.

While we welcome the proposed reductions in risk weights for GIRR Delta Risk factors and revised specification for the low correlation scenarios with the flooring element, as it provides relief to all market participants, the higher capitalization requirement for a hedged bond position continues to remain.

International banks operating in EM jurisdictions fund themselves using FX markets, swapping USD and EUR into local currency and managing onshore outright risk. The implications of greater capital requirements for international banks operating in EM jurisdictions potentially means increased trading costs for their clients, resulting in lesser international participation in the market, which could affect the liquidity and foreign institutional involvement in EM countries. This could also lead to a “two-tier” market and may, in the long run, reduce international participation. All of this could stem the development and integration of these markets within the global economy and, in extreme cases, cause a reversal.

GFXD Recommendation: We recommend that the BCBS review the capital methodologies and impacts, with the goal of achieving capital requirements that are more consistent with the risk profiles of positions.

Curvature: Positive gamma/delta-curvature disconnect

GFXD Comment: As raised by the Joint Trades WG, there is a disconnect between delta and curvature capital charges for portfolios with long gamma protection, resulting in a loss of hedging benefits and overcapitalization of well-hedged portfolios. The Joint Trades WG have recommended a possible simple fix for this issue: long gamma offset to delta capital charge to recognize long portfolio protection.

GFXD Recommendation: We support the Joint Trades WG’s proposal for a simple solution to overcome this disconnect:

Adjusted delta capital = $\max \{ \text{Unadjusted delta capital} - k * \text{curvature gains}, 0 \}$
where $k < 1$, is a multiplier specified by the regulators

Treatment of closely correlated currencies

In addition to the points made in our previous letters, we also wish to raise that the CP incorporates revisions to the requirements for curvature risk measurement to mitigate inconsistent results for closely related financial instruments, however, these revisions have only been proposed for credit spread, equity and commodity risk classes.

GFXD Comment: With regards to closely correlated currencies, EU Regulation No 575/2013 (CRR), Article 354 states that, “a pair of currencies is deemed to be closely correlated only if the likelihood of a loss — calculated on the basis of daily exchange-rate data for the preceding three or five years — occurring on equal and opposite positions in such currencies over the following 10 working days, which is 4% or less of the value of the matched position in question (valued in terms of the reporting currency) has a probability of at least 99%, when an observation period of three years is used, and 95%, when an observation period of five years is used.”

This definition is consistent with the CP’s reasoning for allowing bucketing for curvature risk. Furthermore, there is already a regulatory precedent for allowing lower capital requirements under the standardised approach for these currencies (of which a list⁴ is actively published by the EBA).

GFXD Recommendation: We believe that a modification to the curvature risk capital calculation should also be considered for bucketing closely correlated currencies under the FX risk class and applying the intra-bucket aggregation proposed for credit, equities and commodity risk classes. Given the nature of this bucket we would expect a correlation close to 100% to be applied for this bucket.

⁴ Available at, <http://www.eba.europa.eu/documents/10180/529426/ITS+Annex+1+updated.pdf>.

Revisions to capital requirements for non-linear instruments - Potential double-counting of FX curvature risk (CP reference Section 1.3, Box 1, p. 4)
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The CP proposes a scalar [X] to reduce the impact of curvature risk weights arising from a scenario where none of the underlying currencies of a particular FX instrument is the reporting currency of the bank and seeks additional comment and data from the industry.

GFXD Comment: The industry continues to advocate for a level playing field in FX curvature capital charges, which in the current FRTB framework would yield different results for the same economic risk purely due to a bank's base reporting currency; therefore, we welcome the recognition by BCBS of the double counting issue affecting FX curvature capital charge.

However, the BCBS's proposal in the CP (see [Appendix C](#)) does not address the issue of asymmetry in the FX capital charges and could in its current form yield unintended consequences.

GFXD Recommendation: This issue has been extensively discussed within the GFMA/ISDA/IIF "Joint Trades" Working Group. We urge that you acknowledge the issue and endorse the recommendations proposed by that group.

2. INTERNAL MODELS APPROACH (IMA)

Further to our comments regarding the standardised approach, we would also like to comment on the IMA provisions regarding non-modellable risk factors in relation to FX.

Non-modellable risk factors for FX risk factors (CP reference Section 2.2)

The CP incorporates revised requirements for the risk factor eligibility test ("RFET") which, if satisfied, would permit a bank to include a risk factor in an internal model. In the event that a given risk factor does not satisfy the RFET, it is classified as a non-modellable risk factor ("NMRF"), is to be excluded from the bank's expected shortfall model and is subject to capital requirements determined by means of a stress scenario.

GFXD Comment: The potential classification of FX derivative risk factors such as forward and volatility risk as NMRFs would lead to significant increases in capital requirements, especially for EM currencies given that capital associated with each currency's worst-case

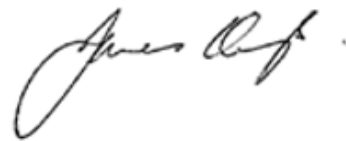
scenario is simply added up. Furthermore, individual rates requiring different risk factors will lead to double counting as each rate is stressed separately.

This classification will impact the ability of firms to offer clients the ability to hedge EM currency risks via FX derivatives as business performance is assessed against capital consumption. Given this, there could be a potential reduction in market activity which could impact the appetite for foreign investments and cause FX derivative risk factors to become even less modellable.

GFXD Recommendation: The complexities arising from NMRFs have been extensively raised by the Joint Trades WG and we support the recommendations that are being proposed by that group.

We are very grateful for the opportunity to share our views on the concerns we have raised. Please do not hesitate to contact Victoria Cumings on +1 212-313-1141, email vcumings@gfma.org should you wish to discuss any of the above.

Yours sincerely,

A handwritten signature in black ink, appearing to read 'James Kemp', with a stylized flourish at the end.

James Kemp
Managing Director
Global Foreign Exchange Division, GFMA

Appendix A

FRTB Impact on FX and EM Markets - Historical Study: Large SA FX Risk Weights

- The study is based on the 35 most liquid currencies used in the 2016 BIS FX Survey (excl BHD and BGN) and the following conservative assumptions:
 - Bloomberg FX Rates vs USD from **Jan 1990 to Feb 2017** => 7085 days. Covers all - Mexican, Asian, Russian and Financial Crises.
 - **10 Days and 20 Days moves**,* as per liquidity horizon (LH) used in IMA.
 - Intra-day **High & Low** have been used.
 - **Ranking criteria:** Average market-wide move has been defined as an **average of the absolute moves**. This would cover situations like AUD and JPY moving in opposite directions vs USD. The windows are ranked using the average market-wide moves.
- **Severity of historical moves - Findings:**
 - 15 windows with the worst average were used for the analysis.
 - 3 distinct occasions dominate the top 15 worst market-wide moves: Asian Crisis (Jan 23-27, 1998), Financial Crisis 1 (Oct 8-16, 2008) and Financial Crisis 2 (Oct 21-28, 2008).
 - The **worst average market-wide move** across 35 currencies was **13%**.
 - **On one occasion**, 4 out of 35 currencies moved simultaneously by more than **30%**. However, the average market-wide move was 7.9%.
 - On another occasion (Financial Crisis 2) affecting two days, 3 currencies moved simultaneously by more than 30%.
 - On all other occasions, fewer than 3 currencies moved simultaneously by more than 30%.
 - **A maximum of 6** out of 35 currencies moved simultaneously by more than **21.2%**.

In other words, in the worst market-wide stress moves since 1990, **29 (80%) of the top 35 currencies moved less than the minimum risk weight of ~ 21.2%**. This is true even after considering intraday highs and lows.

*** Note:** As the methodology uses *rolling* 10D & 20D moves, a single shock can affect multiple adjacent windows. So the analysis focuses on reducing adjacent windows into specific occasions to reflect the true frequency of such shocks.

Appendix B

FRTB Impact on FX and EM Markets - Cross Currency Basis Treatment in SA

Illustrative DV01					WS			GIRR Capital for 3 scenarios			
GIRR Tenor	5y Bond	Hedge: IR Swap	Hedge: FX Swap	Risk Weight	Bond	IR Swap	FX Swap	Strategy	Bond	Bond + IR Swap	Bond + FX Swap
0.25	0	0	0	2.40%	0	0	0	Residual Risk	Outright IR	Bond vs Swap Basis	Bond vs Swap Basis & XCCY Basis
0.5	-123	123	123	2.40%	-29,627	29,597	29,553	Primary user		Local Banks	International Banks
1	-423	422	421	2.25%	-95,283	95,052	94,707	Base Corr	7,176,785	1,685,201	359,349
2	-939	935	929	1.88%	-176,499	175,774	174,692	Low Corr	7,022,630	4,826,489	11,331,494
3	-2,209	2,194	2,171	1.73%	-382,146	379,540	375,666	High Corr	7,206,396	374,800	10,367,151
5	-43,494	43,063	42,425	1.50%	-6,524,069	6,459,473	6,363,777	GIRR Delta	7,206,396	4,826,489	11,331,494
10	0	0	0	1.50%	0	0	0	Capital impact of Hedging		-33%	57%
XCCY/ USD			46,070	2.25%	0	0	10,365,735				
Total DV01	-47,188	46,738	46,070	Total WS	-7,207,623	7,139,436	17,404,131				

GIRR Capital for 3 scenarios (CP with High RW)			
Strategy	Bond	Bond + IR Swap	Bond + FX Swap
Residual Risk	Outright IR	Bond vs Swap Basis	Bond vs Swap Basis & XCCY Basis
Primary user		Local Banks	International Banks
Base Corr	5,744,354	1,348,371	287,619
Low Corr	5,720,570	1,883,299	8,301,425
High Corr	5,768,039	298,985	8,293,722
GIRR Delta	5,768,039	1,883,299	8,301,425
Capital impact of Hedging		-67%	44%

GIRR Capital for 3 scenarios (CP with Low RW)			
Strategy	Bond	Bond + IR Swap	Bond + FX Swap
Residual Risk	Outright IR	Bond vs Swap Basis	Bond vs Swap Basis & XCCY Basis
Primary user		Local Banks	International Banks
Base Corr	4,297,753	1,010,810	215,212
Low Corr	4,279,791	1,411,022	6,456,151
High Corr	4,315,641	229,113	6,450,609
GIRR Delta	4,315,641	1,411,022	6,456,151
Capital impact of Hedging		-67%	50%

Appendix B-cont.

- **Treatment of cross currency basis risk:** SA GIRR Delta Capital requires that “*cross currency basis risk is considered in addition to sensitivity to interest rate risk for the same instrument*” (Paragraph 59(c)(ii)). So, instruments sensitive to cross currency basis risk are subject to **two outright risk charges**.
- **Adverse impact of the rules illustrated with a hedged Bond position:**
 - **Outright bond:** The GIRR Delta Capital for \$100mm notional 5-year bond is **\$7.2mm**.
 - **Bond hedged by local currency IR Swap:** The outright risk of the bond has been hedged using a local currency IR Swap **reducing the capital requirement by -33%**. The residual risk is the Bond vs IR swap basis risk.
 - **Bond hedged by FX Swap:** The outright risk of the bond has been hedged using a FX Swap **increasing the capital requirement by +57% (2x local bank capital)**. The residual risk is the Bond vs IR swap basis risk and cross currency basis risk.
 - **Impact of CP:**
 - ❖ For High Risk weight: The increase is +44% (4.4x local bank capital)
 - ❖ For Low Risk weight: The increase is +50% (4.6x local bank capital)

Consequences of the Framework:

- International Banks operating in Emerging Markets fund themselves using FX markets – swapping USD & EUR into local currency and managing onshore outright risk. The framework **disproportionately impacts the international banks with a larger capital requirement**.
- Increased capital requirement **could increase trading costs** for their clients resulting in lower international participation which could affect the liquidity and foreign institutional involvement in the emerging market countries.
- The sharp difference in the capital treatment between the “locals” and the “international” banks could create a **two-tier market** and may, in the long run, reduce international participation.

The three consequences could **stem the development and integration of these markets with the global economy and in extreme cases, cause a reversal**.

Appendix C

Box 1

131. For FX and equity curvature risk factors, the curvature risk weights are relative shifts ("shocks") equal to the delta risk weights. For FX curvature, where none of the underlying currencies of a particular FX instrument is the reporting currency, any resulting curvature sensitivities may be divided by a scalar [X]. If a bank opts to apply this discretion, it must do so consistently for all FX instruments where none of the underlying currencies is the reporting currency.