NORGES BANK
INVESTMENT MANAGEMENT

European Commission

Date: 29.03.2019

RE: Targeted consultation on the euro and market liquidity in foreign exchange markets

Norges Bank Investment Management ("NBIM") appreciates the initiative by the European Commission ("Commission") to open the consultation on the functioning of foreign exchange (FX) markets and the role of euro. As an active participant primarily in global FX spot markets we would like to take this opportunity to share with the Commission our broad views on efficient trading in these markets. NBIM is the investment management division of the Norwegian Central Bank ("Norges Bank") and is responsible for investing the Government Pension Fund Global.

NBIM is a globally diversified investment manager with assets valued at NOK 8,256 billion at the end of 2018. We have a vested interest in having a regulatory environment that yields well-functioning markets in financial instruments that allow the efficient allocation of capital and risk and facilitate long-term growth.

NBIM view on the functioning of global FX markets

The global FX markets are the most liquid in the world with an estimated daily turnover of USD 5,067 billion in 2016, of which USD 1,652 billion in the spot market.[1] They are critical to the functioning of the global economy as they enable cross-border, international transactions and are used in portfolio and liquidity management. Contrary to modern equity markets, their market structure has historically been decentralised and opaque. This feature makes finding a counterparty difficult and costly, especially for less liquid contracts. Intermediation by dealer-banks who bring together buying and selling interests, typically using a bilateral and principal model, can speed up the search for counterparties. Hence, the role of dealers in liquidity provision in FX markets is critical.

However, intermediation also gives rise to information asymmetries and practices that do not necessarily contribute to well-functioning markets. In a recent paper, we identified three such practices: the last look practice, the lack of adequate risk controls and liabilities for the

[1] See 'Triennial Central Bank Survey', Bank for International Settlement, September 2016. Hereafter BIS (2016).

POSTAL ADDRESS
P.O. Boks 0179 Sentrum,
NO-0107 Oslo

OFFICE ADDRESS
Bankplassen 2,
Oslo, Norway

Tel. +47 24 07 30 00
Fax +47 24 07 30 01
Web www.nbim.no

Registration of Business Enterprises
NO 937 884 117 MVA

algorithms that execute trades and the lack of pre- and post-trade transparency.[2] In particular, the last look gives liquidity providers the option to reject orders receiving from clients, even after a client has agreed to the price, introducing uncertainty in execution.[3] This is in contrast to practices in other markets, for example equity markets, where quotes are generally firm.

Unlike other financial markets, FX markets have been largely out of scope of post-crisis regulation. Instead, the FX community developed a set of global principles, the FX Global Code ("Code"), aiming at promoting effective and transparent trading and resilient infrastructure in FX markets. NBIM is committed to the Code and has aligned its internal practices with the Code's applicable principles. We support improvements in market structure that could strengthen global FX markets. We would welcome a discussion in the FX community about the extent to which FX market participants have adjusted their practices in support of the FX Global Code and more generally the impact of the Code on FX markets efficient trading and market liquidity to date.

Role of euro in foreign exchange markets

The role of a currency in global FX markets is a function of a wide range of factors, including the size and liquidity of underlying asset markets, its share of global payments, and its share in holdings of foreign exchange reserves. The euro already plays an important role in FX markets, as it is the second largest with a market share of about 31% of the global FX market in 2016 (BIS, 2016). As noted in the Commission's consultation paper, it is the second most widely used currency in terms of share of global payments and global holdings of foreign exchange reserves. From our experience in trading in the FX sport market, market liquidity in the Euro segment is at adequate levels, the cost of trading is typically higher in euros compared to US dollars, but lower compared to other major currencies.

The practice of "triangulation"(trading via the US dollar) is widespread in FX trading, especially when involving illiquid currencies. In a frictionless trading environment, for example where the currency pairs involving the US dollar are sufficiently liquid, the effect of triangulation on prices and trading costs is expected to be limited. Broker fees, latency costs, bid-ask costs, and execution risk could give rise to deviations between the price of a currency pair (e.g., EUR/GBP) and the synthetic price via triangulation (e.g., via EUR/USD and GBP/USD).[4] Hence, when natural liquidity exists (i.e., clients with matching buying and selling interests) for currency pairs that do not involve the US dollar, circumventing triangulation could be beneficial.

---

[2] See "Managing information asymmetries in foreign exchange markets", Norges Bank Investment Management, Asset Manager Perspective, 02/2017 for an overview of FX markets market structure.
[3] See "The Role of Last Look in Foreign Exchange Markets", Asset Manager Perspectives, Norges Bank Investment Management, 03/2015.
[4] Academic papers that document such price deviations (i.e., triangular arbitrage) include Chaboud, Alain P., et al. "*Rise of the machines: Algorithmic trading in the foreign exchange market.*" The Journal of Finance 69, no. 5 (2014): 2045-2084.; Foucault, T., Kozhan, R. and Tham, W.W., 2016. *"Toxic arbitrage."* The Review of Financial Studies, 30(4), pp.1053-1094; Kozhan, Roman, and Wing Wah Tham. "*Execution risk in high-frequency arbitrage.*" Management Science 58, no. 11 (2012): 2131-2149;

We would welcome research in this area to identify currency pairs that involve the euro but not the US dollar with sufficient natural liquidity.

Conclusion

We welcome the interest of the Commission in understanding the functioning of foreign exchange markets. NBIM supports regulation that advances well-functioning markets in financial instruments and ensures efficient trading and sufficient natural market liquidity. We appreciate your willingness to consider our perspective, and we remain at your disposal should you wish to discuss these matters further.

Yours sincerely,

Emil R. Framnes
Global Head of Trading, NBIM

Yazid M. Sharaiha
Global Head of Systematic Strategies, NBIM