

Electronic FX

Our eFX offering caters to clients seeking electronic pricing, algorithmic execution and access to a broad variety of trading venues, while benefiting from live and post-trade transaction cost analysis reporting.

Product Overview

Our client base is broad, with asset managers, hedge funds, private equity houses, asset owners, corporate treasurers, insurance companies, sovereign wealth funds, commodity trading advisors (CTAs) and regional banks. In 2019, we were ranked No. 1 by market share among real money clients on an aggregate and eFX basis and No. 2 for FX Swaps in the annual Euromoney FX rankings. We hold a S&P AA- credit rating as a globally systemically important bank. As one of the largest financial groups in the world, we can use our global custodial network to quote on more than 50 currencies around the world, 24 hours a day.

We are not reliant on wholesale funding for our business activities, as are some of our peers, which protects us from major global liquidity events. Our book of business is an uncorrelated source of liquidity to that of our competitors. Dynamic risk skews paired with non-correlated flows from our institutional franchise client base allows us to offset risk through high internationalization rates with minimal market impact.

We work with clients, on a consultative basis, to identify the best algorithmic execution style focused on their outcomes. We offer time-based benchmark algorithms like time-weighted average price (TWAP) and volume-weighted average price (VWAP), a passive Float algo used by client who wish to collect spread and minimize market impact, and a Sweep & Post algo used to offset risk in an efficient and aggregated manner. Each of these strategies has preset defaults for ease of use but allow clients to customize preferences to maximize desired performance. Through our algo interceptor VectorFXSM, clients can access live and post-trade TCA to further inform algo decision-making.



Top ranked *Euromoney* Liquidity Provider (No. 1 Real Money Globally, No. 1 eFX trading among real money, No. 2 for FX Swaps trading, No. 3 Hedge Funds Globally)



Uncorrelated risk skew and high rates of internationalization benefit underlying customer



A versatile suite of algorithms to suit all trading objectives combined with comprehensive live and post-trade transaction cost analysis (TCA)



Access to a broad range of trading venues with a diverse and deep liquidity pool



Product Overview (cont.)

Our eFX distribution network is vast. We offer connectivity to major platforms and vendors such as FX Connect®, Currenex®, FXall, Bloomberg, 360T, Charles River Development, Portware, BIDFX, Flextrade, EBS, Integral, Hotspot, Fastmatch, Marketfactory, Single Dealer GUI VectorFXSM and FIX API.

- Our eFX pricing is platform-agnostic
- Our eFX pricing is dynamic, allowing us to customize pricing by time, volatility spikes, trader, currency pair, etc.
- Sophisticated eFX pricing engine, global team

In today's highly-competitive market, clients are increasingly seeking to enhance their trading capabilities, with solutions that are efficient, cost-effective and offer a lower market impact. Simultaneously, clients expect deep market liquidity, comprehensive transaction reporting and versatility in terms of connectivity.

One trend that has been on rise in the last five years is the uptick in FX algo usage. BestXSM research indicates 39 percent of all spot volume in 2019 is executed via FX algos. We have a strong algo offering designed to adapt to the clients' execution style and philosophy. Our algorithms are available on a wide range of execution platforms including but not limited to FX Connect, Charles River Development, BBG, FXALL, BIDFX, Portware and direct application programming interface (API). With clients who are keen to ensure best execution, our TCA reporting solutions clearly identify performance levels against objective market benchmarks.

We provide a range of FX algorithms that can be launched with default parameters or can be

customized to offer clients maximum control and flexibility. When looking for a passive market interaction, we recommend our Float algo. The Float algos aim to capture spread and minimize market impact. When the market is moving in your favor, our Float algorithm allows clients to peg orders to price movements in the market.

For clients looking to divide an order over a specific time horizon, our time-weighted average price (TWAP) algo may be preferable. Size and slice intervals are dictated by the client's strategy parameters. Randomization reduces information leakage and reduces signaling to the external markets.

Alternatively, our volume-weighted average price (VWAP) algo allows orders to be sliced based on historical volumes and can be useful to spread an order over a period based on the liquidity profile of the currency pair being traded.

Finally, our Sweep & Post algo is ideal for those who want to engage the market and are less concerned about market impact. If any balance remains after the initial sweep up of the clients pre-determined limit, outstanding amounts can be worked in the market as synthetic iceberg orders.

Aimed to be used in tandem with Float, TWAP and Sweep & Post, our Interest Match feature allows clients to leverage our principal interest from our market-making franchise to lower market impact and reduce signaling on external trading venues through a peer-to-peer match. If liquidity is available on Interest Match, we will attempt to fill the order for the total amount at midpoint of the market. If more than one competing algos are running at the same time, the match will be completed at random.

Product Overview (cont.)

Our algo launchpad, VectorFX, was built to enhance customer experience and flexibility, which is not found on traditional execution management systems (EMS). VectorFX is a web-based platform that links into an EMS and allows for live TCA, amendments and interactions with firm market liquidity via streaming prices, which all feed back into one algo parent order.

Strength and Stability — we are a global systemically important bank with an AA- credit rating. We are not reliant on wholesale funding for our business activities, offering additional protection against major liquidity shocks.

Lower Market Impact — our substantial book of institutional clients means we can offer high rates of internalization and minimize market impact of trades. If liquidity is available through our algo Interest Match feature (a first step towards peer-to-peer matching), we will attempt to use this first.

Alignment to F2B

Clients using the Charles River Development see additional benefits through linkages to our services at the front end of the investment life cycle.

Charles River Development can streamline access to FX market liquidity to improve workflow and currency management through transparent and operationally-efficient processes while reducing exposure to third-party platforms. Charles River clients enjoy access to our principal FX services and research directly.

Consultative Approach — we work with our clients to understand why and how they want to trade. This bespoke approach ensures that we deliver the best possible outcomes for the best possible price.

Broad Connectivity — eFX distribution network is wide in breadth and diversity. We offer connectivity to a broad collection of major platforms and vendors while also pricing clients on a direct API-basis.

To learn more about eFX, e-mail:

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