

FASTMATCH, INC. OPERATING PROCEDURES

EFFECTIVE DATE: June 25, 2018

All the materials contained in this document and/or identified as operating procedures on the FastMatch website (<https://www.fastmatch.com>) constitute the operating procedures (the “Operating Procedures”) referred to in the user agreement (the “User Agreement”) or other agreement relating to the FastMatch Service (together with the User Agreement. The “Agreements”) between you and FastMatch, Inc. (“FastMatch”). These Operating Procedures are binding on you pursuant to the terms of the User Agreement in connection with your use of the electronic trading platforms (the “Service”) operated by FastMatch to execute Trades (as defined in the User Agreement). These Operating Procedures may be amended at any time by FastMatch in accordance with the terms of the User Agreement. In the event of any conflict between material contained in this document and material posted on the website, the substance of the material posted on the website shall prevail with respect to the website only and the substance of the material contained in this document shall prevail with respect to the Service (defined below) unless otherwise stated.

1. ECN Service Summary

The Service consists of an online trading platform for the transactions in spot foreign exchange and spot precious metals, currently operated by FastMatch on three separate and distinct matching engines located in New York, London and Tokyo (located at data centers NY4, LD4 and TY3, respectively) (collectively, the “Service”). Each matching engine emits its own market data, trades, and midpoint values.

2. Hours of Operation

Trading hours for the Service are from Sunday at 17:30 p.m. Eastern Time to Friday at 17:00 p.m. Eastern Time, with daily maintenance scheduled from 17:00 p.m. Eastern Time to 17:30 p.m. Eastern Time, during which time FIX sessions will be disconnected and the GUI will be inaccessible. The Service is not available on Christmas day and New Year’s Day, Eastern Time. Please see <https://www.fastmatch.com/features#trading-hours> for the exact hours of operation. References to Eastern Time are to New York City local time.

FastMatch’s support desk can be reached at +1 (212) 201-7319 or by email to ops@fastmatchfx.com from Sunday at 17:30 p.m. Eastern Time to Friday at 17:00 p.m. Eastern Time.

3. Access Methods

API Access

Users that access the Service by way of application program interface (“API”) provided by FastMatch will also need to complete certification to the API in order to receive production credentials. Users that access the Service using the API must (i) keep FastMatch fully informed at all times of the identity of each software program or system that directly or indirectly accesses the API and (ii) only provide such access to the API to those software programs and systems that have been previously approved by FastMatch in writing.

GUI Access

The FastMatch GUI is an HTML 5.0 web-based institutional front end. Users may choose to transact on the FastMatch GUI on an anonymous or fully disclosed basis. The FastMatch GUI can be easily accessed using https protocol from common browsers such as Internet Explorer, Google Chrome, or Mozilla Firefox.

4. Data Dissemination Practices

FastMatch disseminates the FastMatch platform market data via the FastMatch GUI, the Fastmatch website located at www.fastmatch.com (the “Website”), API, user download via web client portal and secure Amazon cloud. The table below shows the types of information provided via each market data distribution channel. Note that access to and use of each type of information below depends on a client’s FastMatch subscription and product usage. Clients will only have access to or use of such information in accordance with the client’s User Agreement or other agreement with FastMatch.

TYPE OF INFORMATION	GUI	WEBSITE	API	WEB CLIENT PORTAL	AMAZON CLOUD
Real Time Trades for the entire FastMatch platform		X			
Real Time Best Bid/Offer for the entire FastMatch platform		X			
Real Time Trades for each matching engine of the Service	X	X	X		
Historical Trades for the entire FastMatch platform				X	X
Real Time Best Bid/Offer for each matching engine of the Service	X	X			
Historical Best Bid/Offer for the entire FastMatch platform					X
Tradable Bid/Offer specific to a client	X		X		
Real Time Midpoint for each matching engine of the Service	X	X*	X		

Table Definitions:

Real Time Trades for the entire FastMatch platform – All trades done across all matching engines (NY4, LD4 and TY3) in anonymized form are transacted in real time (except for users engaged in disclosed trading which have requested that FastMatch suppress real time trade publication). The trade information will include symbol, size, price, and match time.

Real Time Best Bid/Offer for the entire FastMatch platform – Anonymous aggregated Best Bid/Offer from all non-order-driven liquidity providers on the platform displayed in real time for all matching engines. Providers can contact FastMatch and request to be excluded from participation in this best Bid/Offer display.

Real Time Trades for each matching engine of the Service – All trades done on a matching engine in one location (NY4, LD4 and TY3) in anonymized form are transacted in real time (except for users engaged in disclosed trading which have requested to suppress real time trade publication). The trade information will include symbol, size, price, match time, and LP confirm time (for trades executed with external liquidity providers). Both sides of the trade (buy and sell) are reported as separate trades.

Historical Trades for the entire FastMatch platform - All trades done across all matching engines (NY4, LD4 and TY3), except those users which are engaged in disclosed trading and have requested that FastMatch suppress real time trade publication. The trade information will include symbol, size, price, match time and anonymous numeric client identifier.

Real Time Best Bid/Offer for each matching engine of the Service – Anonymous aggregated Best Bid/Offer from all non-order-driven liquidity providers on the platform displayed in real time. Providers can contact FastMatch and request to be excluded from participation in this best Bid/Offer display.

Historical Best Bid/Offer for the entire FastMatch platform – Anonymous aggregated Historical Bid/Offer from all non-order-driven liquidity providers on the platform.

Tradable Bid/Offer specific to a client – Anonymous Best Bids/Offers are displayed to every client. Only quotes will be displayed that a client can trade with.

Real Time Midpoint for each matching engine of the Service – FastMatch calculates a midpoint from a real time Best Bid/Offer and publishes it in real time. If FastMatch markets are crossed, it uncrosses the market by removing the oldest crossing quotes.

*On the Website, a midpoint for only the most active pairs is provided.

Every API client receives a unique anonymous numeric client identifier of the counterparty they are trading with as well as a contra settlement bank code. Liquidity Providers receive an anonymous numeric client identifier of the counterparty before the execution of orders from FastMatch. API clients can request that their assigned unique anonymous numeric client identifier not be shared with liquidity providers. FastMatch shall accommodate such users by utilizing a generic anonymous numeric client identifier.

FX Tape™ market data is made available by separate subscription with FastMatch or an authorized redistributor. FX Tape™ market data service subscriptions are subject to the terms of the FX Tape™ Rulebook at <https://tape.fastmatch.com/#>.

5. Order Types

Please visit <https://www.fastmatch.com/features#order> for a complete description of order types supported by the Service as well as a description of the SafeMatch auction.

6. Liquidity Types

FastMatch utilizes two types of price liquidity, order driven liquidity and quote driven liquidity (quote driven liquidity is also known as “last look” liquidity). Order driven liquidity resides on the FastMatch book and is executed immediately upon arrival of the opposite side order. Quote driven “Last Look” liquidity is provided by liquidity providers and gives the liquidity provider the ability to see the order and choose to fill or reject the order, before execution. FastMatch prioritizes order driven liquidity over the quote driven liquidity at the same price. Furthermore, FastMatch’s “Flexible Matching” logic prioritizes order driven liquidity over quote driven liquidity in certain circumstances, even when the quote driven liquidity is a better price, if the execution quality of the quote driven liquidity is historically sub-optimal quality (please see more information about Flexible Matching rules at <https://www.fastmatch.com/features#matching-rules>).

FastMatch offers users a choice with regards to liquidity. By default, FastMatch users are configured to receive both order driven liquidity and quote driven liquidity. **Users can opt out from interacting with quote driven liquidity (for ALL currency pairs or for select currency pairs) by either contacting FastMatch support or via FastMatch FIX API.** However, users should note that since a majority of the FX OTC volume is executed via quote driven liquidity, opting out from such liquidity will likely result in wider spreads and less liquidity.

7. Market Protections

The Service contains a mechanism designed to protect users against excessive quoting and other errors. Each user has an overall limit, as well as per currency limit (if applicable), on how many orders per second the user can transmit to the Service. If a user exceeds that order limit, the Service will not accept any further orders from that user for the remainder of that second.

The Service also provides the following additional protections to users:

- **Cancel on Disconnect** – When a user’s connection to the Service is broken, the Service immediately and automatically cancels all active orders of that user. Users receive a ‘cancel’ confirmation messages once they have reconnected.
- **Fat Finger Check** – The Service rejects orders exceeding 300 million.
- **Pre-trade Open Position Check** - Using the Service’s CreditMatch™ application, Participating Financial Institutions (“PFI”), including those PFIs that serve as prime broker to other Service users, may manage and monitor their own

open positions with other PFIs, and the open positions their prime brokerage clients have entered into through the Service. PFIs may also use CreditMatch™ to establish and manage trading limits for themselves or their prime brokerage clients. Trading limits are based on Gross or Net Daily Settlement Limit (“DSL”) and/or Net Open Position (“NOP”). CreditMatch™ automatically transmits an email alert to the relevant PFI when open positions reach 70% of the established DSL/NOP limit, 80% of the established DSL/NOP limit, 90% of established DSL /NOP limit, and 100% of DSL /NOP limit. CreditMatch™ is configured to reject all orders that would breach 100% of either its DSL or NOP limits. The CreditMatch™ application is provided to PFIs and users upon request.

- Excessive Quoting – FastMatch will ignore quote provider quotes if they exceed predefined, configurable levels. For instance, these levels could be defaulted to 30 updates per pair for G4, and 15 updates per second for other pairs, with a total setting of 500 updates for all pairs per second per client.
- Open Order Limit – The Service will reject new orders if a user has more than 100 open orders for the same currency pair or precious metal at any given time.
- Disabling Quote Providers - FastMatch will automatically disable a quote (last look) provider and send an email if a provider takes more than the maximum allowed response time.
- Off Market Transactions - The Service is designed to prevent transactions that are off current market trading conditions. The Service will not match two orders if matching them would result in a transaction priced at greater than the pip value listed at www.fastmatch.com/listings (reviewed from time to time) from the midpoint of the bid-ask spread (the “Protective Band”) for the relevant asset class at the time the transaction is executed. Every millisecond FastMatch calculates the midpoint based on the top of the relevant book of the Service and publishes the most current midpoint. If the Service receives an order outside of the Protective Band, the price of such order will be automatically adjusted to the most aggressive side of the Protective Band for matching and sorting purposes. To provide added market integrity and facilitating fair and orderly trading, FastMatch will review transactions submitted to it pursuant to the Transaction Review Policy described below.

8. Last Look

Prices posted on the Service are clearly identified as firm or non-firm but a user can specify that it wishes to view only firm prices. Furthermore, a user can choose to exclude prices quoted by other users that have not made a publicly available Statement of Commitment to the FX Global Code by contacting FastMatch at fxglobalcode@fastmatchfx.com to make such a request.

A dealer posting non-firm prices will have a systemically-enforced maximum order review time limit of one second.

With respect to non-firm prices quoted on the Service, FastMatch does not provide access to disclosure about the particular “last look” practices of the quoting dealer that would be available from the dealer in a transaction executed over-the-counter.

Any User who has unique requests with respect to its liquidity interactions, should also contact FastMatch at fxglobalcode@fastmatchfx.com.

9. Transaction Review Policy

FastMatch may review transactions pursuant to this Transaction Review Policy.

a. Transaction Reviews Initiated By Users

A user of the Service may submit a request to FastMatch to review a transaction if (i) a user receives an execution of an order that it entered in error (e.g., in terms of price or quantity), or (ii) a user believes its transaction was off-market (i.e. outside of the Protective Band or off-market when compared to the relevant market generally). Each request will be considered on a case-by-case basis and in the sole discretion of FastMatch.

Users should submit requests to review a transaction by contacting FastMatch within 20 minutes of execution of such transaction at +1 (212) 201-7319 or support@fastmatchfx.com, and requesting that the transaction be reviewed pursuant to the Transaction Review Policy. Requests received after such time period may be reviewed depending on the facts and circumstances surrounding such request; however, FastMatch reserves the right to decline to review any request submitted more than 20 minutes after execution. Use of the Service constitutes acceptance of FastMatch's right to modify or to cancel transactions in accordance with these Operating Procedures.

b. Transaction Reviews Initiated by FastMatch

If FastMatch determines in its sole discretion that circumstances (such as a mis-matched trade or User inquiry) warrant a review of a transaction, FastMatch may initiate a review of such transaction, regardless of whether or not a user has submitted a review request. In such instances, FastMatch will notify users that a transaction will be reviewed pursuant to the Transaction Review Policy. However, FastMatch is not under any obligation to review any transaction and shall not be liable for any failure to do so.

10. Dispute Resolution

FastMatch will use its good faith efforts to contact each of the users party to a transaction subject to review by FastMatch (“Disputed Transaction”). FastMatch will review data reasonably available to it to determine where the “correct” price for an identical transaction was at the time of the Disputed Transaction. Information that FastMatch may consider includes, but is not limited to, pricing data from the Service and any similar market, oral interviews with the parties to the Disputed Transaction, and market professionals not involved in the Disputed Transaction. FastMatch will use its good faith efforts to assist the parties to the Disputed Transaction to arrive at a resolution which is reasonably acceptable to those parties and to FastMatch. Possible resolutions

include, but are not limited to, an adjustment of the rate, requesting prime broker involvement, or voiding the Disputed Transaction entirely.

In addition, for Disputed Transactions caused by the maker streaming an incorrect value date, FastMatch will suspend trading on the affected sessions to prevent multiple mis-matches. Fastmatch will enable trading in the affected session only after confirmation the correct value will be streamed going forward. Fastmatch will notify Users and their prime brokers of the issue and request confirmation the trade has been updated to the correct value.

FastMatch will use commercially reasonable efforts to preserve the anonymity of the parties to the Disputed Transaction from each other during the period in which it is attempting to assist those parties to arrive at a resolution.

In the event that after a reasonable period of time, the parties to the Disputed Transaction cannot agree on a resolution, or if FastMatch is unable to reach one or more of the parties to the Disputed Transaction during such period of time, FastMatch reserves the right to act unilaterally to void the Disputed Transaction, to modify one or more terms of the Disputed Transaction or require one party to the Disputed Transaction to make a payment to the other party.

A final determination will be made by FastMatch in its sole discretion and will generally be made as soon as reasonably possible. FastMatch will promptly provide oral notification of a determination to the parties involved in a Disputed Transaction. User agrees to abide by the terms of any Final determination made by FastMatch.

11. System Failure

In the event of a system failure, where the Service experiences a service loss, open orders will be canceled, regardless of their TIF (time in force). Orders that were filled but not yet delivered will be considered filled. Please contact FastMatch regarding any questions.

12. Bona Fide Spot Transactions

The Service permits only bona fide spot foreign exchange and bullion transactions and does not permit transactions in swaps, as defined by the CFTC. Users must have the ability to effect physical delivery with respect to transactions occurring via the Service and the transactions occurring on the Service must be settled and may not be rolled. Any netting shall only be done in accordance with a pre-negotiated netting agreement.

13. Privacy Policy

The FastMatch Privacy Policy can be found at <https://www.iubenda.com/privacy-policy/41047002/full-legal>.

14. Limitation or Termination of Access

FastMatch reserves the right to restrict or suspend access to the Service if FastMatch determines in its sole discretion that a user is in violation of the User Agreement, the Operating Procedures, the Terms of Use or applicable law or regulation.

15. Recording of Conversations

You (A) consent to the recording of telephone conversations between your Personnel and the Personnel of FastMatch, (B) agree to obtain any necessary consent of, and give any necessary notice of such recording to, you Personnel, and (C) agree, to the extent permitted by applicable law, that such recordings may be submitted in evidence in any proceedings.

For the purpose of the foregoing paragraph, "Personnel" means the party's trading, support, IT, marketing and other relevant personnel, including personnel employed by any affiliate acting on the party's behalf and any third party acting on the party's behalf.

16. Compliance

Users shall comply with U.S., E.U., and other applicable export control and sanctions laws and regulations at all times and will not be permitted to use the ECN if: (i) any of its owners, directors, workers or employees is a person whose name appears on the list of Specially Designated Nations and Blocked Persons published by the United States Department of Treasury Office of Foreign Assets Control ("OFAC") (each, an "OFAC-Listed Person"), the United Kingdom's HM Treasury Sanction List, the European Union's Consolidated Sanctions List, or any other applicable sanctions list; (ii) User or any owner or senior manager of User is a department, agency or instrumentality of, or is otherwise directly or indirectly controlled by or acting for on behalf of the government of any country that is the target of any of the several economic sanction programs administered by OFAC (31 C.F.R. Parts 501 through 598) or any OFAC-Listed Person; (iii) any of the funds used by User to perform any of its obligations constitute or will constitute funds obtained from or on behalf of any OFAC-Listed Person or any Blocked Person or any other person subject to applicable sanctions.

Each User shall at all times comply with the U.S. Foreign Corrupt Practices Act, the U.K. Bribery Act and any other anti-bribery or anti-corruption laws existing in the jurisdiction in which such User does business. Each User agrees that it will not, directly or indirectly, offer, pay, solicit, receive or condone any form of a bribe or payment of money or other thing of value to government officials, political parties or party officials, candidates for political office, any other person while knowing that all or a portion of such money or thing of value will be offered, given or promised, directly or indirectly, to any of the aforementioned persons or organizations, or any other person for the purposes of making a bribe, for the purposes of improperly influencing or obtaining an improper advantage in connection with obtaining or retaining business.

17. FX Global Code

FastMatch has made a Statement of Commitment to the FX Global Code and is hopeful that all participants on the FastMatch platform will likewise do so. There may be some participants on the FastMatch platform who are not compliant with the Code. The Statement of Commitment is posted on the FastMatch website and is also available at <https://www.nex.com/our-business/regulatory/fx-code-of-conduct> and <https://www.cls-group.com/news-insights/fx-global-code/public-register> .

18. Regulatory Obligations

FastMatch is not responsible for compliance by users with regulatory obligations applicable to swap dealers or otherwise imposed by rules of the Commodity Futures Trading Commission.