

**Streaming
Support and
Operations
Policies and
Procedures**



FXSpotStream LLC Streaming Support and Operations Policies and Procedures

I. Introduction

FXSpotStream LLC (the “Company” or “FSS”) provides a multibank Spot FX, FX Forwards, Swaps, NDF, NDS, and Spot and Swaps Precious Metals price aggregation service (the “Service”). These Support and Operations Policies and Procedures (the “Operating Procedures”) form a part of the legal agreement(s) entered into by and between the Company and its users and liquidity providers. In the event of any inconsistencies between these Operating Procedures and the legal agreement(s) the terms of the legal agreement(s) shall control.

II. Support Hours and Contacts

FSS provides a support help desk which is available from 7am Auckland on Monday until 5pm NYT on Friday.

The email address for FSS support is:

- support@fxspotstream.com

The local support phone numbers for the FSS support desk are as follows:

- Tokyo : +81 3 6863 5370 / +81 3 4520 9264
- London : +44 (0) 20 3318 5020 / +44 (0) 20 3608 3081
- New York : +1 646 381 2035 / +1 646 616 7549

A local Tokyo support desk is also available for Japanese speaking clients. The Tokyo local support desk is staffed with individuals who are fluent in Japanese.

All support staff can be reached by using the above contact numbers.

Note that any ticket raised between the service closing Friday and opening on Sunday, unless an urgent production matter, will be reviewed on Sunday during trading hours.

III. Trading Hours of Operation

The FSS Service will be open for trading commencing every Monday at 7am Auckland and will close for trading on Friday at 5pm New York.

IV. Daily LP Maintenance

Please note, as stated above, the FSS Service does not have daily maintenance during the week. Each LP, however, has their own specific schedule for daily maintenance. Please see the below list for time frames on how long each LP goes down for daily maintenance at 5pm New York:

| Streaming Session Schedule | | | |
|-------------------------------|-----------|---|--|
| LP | Service | Sunday | Daily |
| Bank of America Merrill Lynch | Streaming | Starts at 3:00PM NYT | Maintenance at 5PM-5:05PM NYT and closed 5:00PM on Friday |
| Bank of Tokyo-Mitsubishi | Streaming | Starts at 3:00PM NYT | Maintenance at 5PM-5:20PM NYT and closed 5:00PM on Friday |
| BNP Paribas | Streaming | Starts at 3:00PM NYT | Maintenance at 5PM-5:02PM NYT and closed 5:00pm on Friday |
| Citigroup | Streaming | Starts at 3:00PM NYT | Maintenance at 5PM-5:02PM NYT and closed 5:00PM on Friday |
| Commerzbank | Streaming | Up from 5:05PM NYT Sunday -> 5PM NYT Friday | |
| Credit Suisse | Streaming | Up from 4:59PM NYT Sunday -> 4:55PM NYT on Friday | |
| Goldman Sachs | Streaming | Starts at 3:00PM NYT | Maintenance at 5:00PM - 5:02PM NYT and closed 5:00PM on Friday |
| HSBC | Streaming | Starts at 5:00PM NYT | Maintenance at 5PM-5:02PM and closed 5:00PM on Friday |
| JP Morgan | Streaming | Starts at 3:00PM NYT | Maintenance at 5PM-5:06PM NYT and closed 05:00PM on Friday |
| Morgan Stanley | Streaming | Up from 3PM NYT Sunday - 5PM NYT Friday | |
| Standard Chartered Bank | Streaming | Starts at 05:55PM NYT | Maintenance at 5PM-5:05PM NYT and closed 5:00 PM on Friday |
| State Street | Streaming | Starts at 5:30pm NYT | Maintenance at 5:00-5:30PM NYT and closed 5:00PM on Friday |
| UBS | Streaming | Starts at 3:00PM NYT | Maintenance at 5PM-5:02PM and closed 5:00PM on Friday |

V. Service Maintenance

The Company shall use reasonable efforts to operate and maintain the Service during the trading hours of operation and promptly notify users and liquidity providers of any difficulties experienced by users and/or liquidity providers with respect to their access to or use of the Service. The Company in its sole discretion shall determine the need for and conduct any maintenance of the Service. To the extent practicable the Company shall notify users and liquidity providers in advance of any maintenance required of the Service. The Company does not have a standing maintenance window during the trading hours of operation.

VI. Client Connectivity

Clients have multiple options to connect the Service:

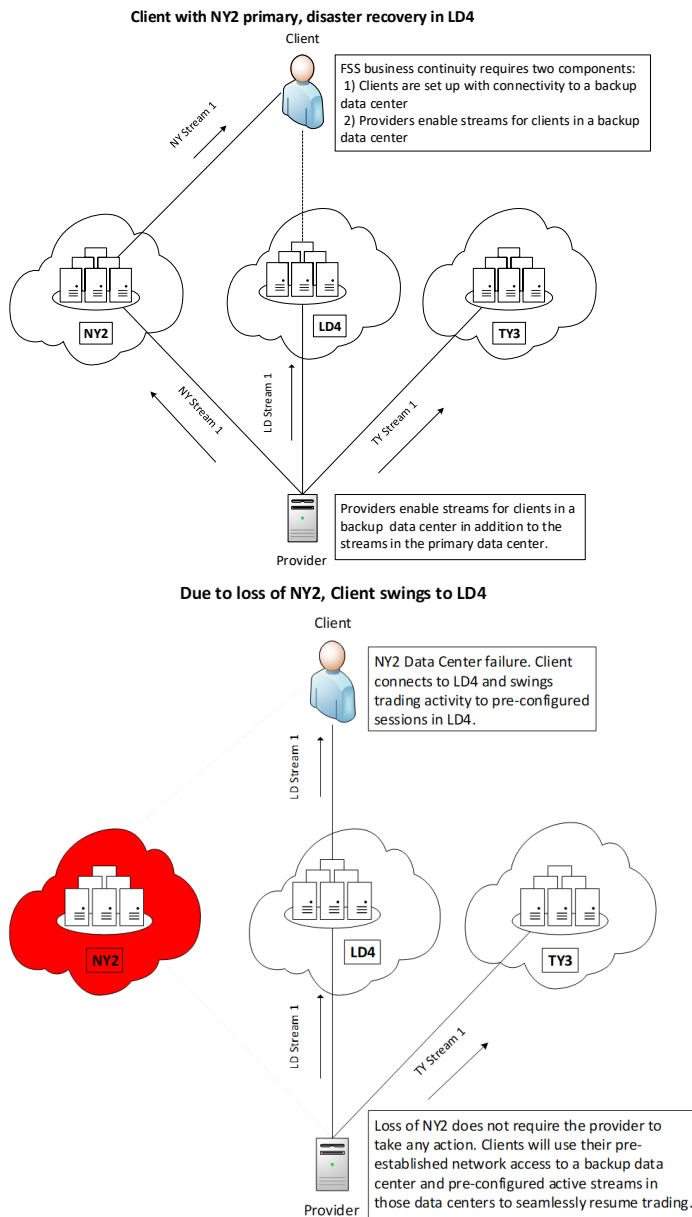
- Xconnect: Available in Equinix Datacenters, clients can choose between 1g or 10g Xconnects and are able to use Single Mode Fiber (SMF) or Multi-Mode Fiber (MMF)
- Extranet: Clients can establish a connection via TNS or BT Radianz
- VPN – Clients can connect using a secured tunnel via the internet. VPN connections with Microsoft Server devices are not supported
- Public Internet (NY2 Only) – Connections over Public Internet must be secured using SSL/TLS version 1.2 or better. SSL v1 and v2 are not supported. Clients can use a self-signed certificate and FSS does not have a restriction on key length

For client connections FSS can only accept public IPs. If needed, FSS can allocate a private IP to the client for non-Public Internet connections.

VII. Disaster Recovery

FXSpotStream offers clients the ability for its clients to connect to multiple co-los for the purposes of disaster recover. During the client onboarding process, clients using FIX will have the option of creating a secondary connection to a separate colocation from their primary connection which will remain active once the client goes live. In the event a co-locator is lost, clients using FIX connections will have the ability to move their trading to this secondary connection to maintain business continuity. The secondary connection however, should not be used for active trading except in the event of a DR event. The client will be responsible for maintaining the secondary connection.

The DR procedure is depicted below:



Additionally, in the event that FSS email becomes unavailable, the entire business and support team can be reached by emailing: clientservices@liquiditymatchllc.com

VIII. FIX Session Sequence Number Reset Window

FIX implementation supports sequence number processing which is used to ensure message delivery and is used for message recovery purposes. FSS will reset this sequence number to zero once per week at the end of the weekly trading session (e.g., after 5pm New York Friday).

IX. User Profile

The FSS Service provides a mechanism for a liquidity provider (“LP”) to approve and configure a user for trading with the liquidity provider. During the configuration phase, the liquidity provider sets up an appropriate trading profile for each user which determines the eligible currency or precious metal pairs, execution sizes, aggregation rules and price streams associated with the user. FSS does not set up the user profile and assumes no responsibility for any errors in the configuration of the profile by the liquidity provider

X. Order Types

FXSpotStream supports fill-or-kill, IOC/Partials, VWAP, Limit and “slippage”, orders.

- Fill-or-kill orders allows for an order to be filled in its entirety or not at all
- IOC/Partial orders allow for a partial and immediate fill of less than the entire quoted notional amount
- VWAP allows a client to aggress on multiple quotes by only sending 1 order message to the bank, with a VWAP calculated price
- Limit Orders allow a client to set a limit on the order which will be filled when an LP’s quote meets that limit or better. FSS supports both aggressive and passive limit orders. For aggressive Limit Orders both FOK and IOC orders are allowed, however, typically when using aggressive Limit Orders, Clients using IOC orders receive better fill rates
- Slippage allows a client to set a worse price acceptable to the client to be filled at by the bank if the original price on the quote is not available. When adding slippage on the price originally quoted, the client is informing the bank(s) that it is authorizing the bank to fill the order at a worse price as specified by the client versus having the bank reject the order. Before sending an order with slippage, clients should speak directly to the bank to understand and agree on how orders with slippage are handled by the bank. FSS is not involved in any way in the determination of the price at which an order is filled by the bank

Please find below the order types supported by each LP:

- Order Types

| ORDER TYPES | | | | |
|-------------|-----|-----|----------|------|
| LP's | FOK | IOC | Slippage | VWAP |
| BAML | Yes | | Yes | |
| BNP | Yes | | | Yes |
| BTMU | Yes | | | |
| CITI | Yes | | | Yes |
| COBA | Yes | | | Yes |
| CS | Yes | | | Yes |
| GS | Yes | | | |
| HSBC | Yes | | Yes | Yes |
| JPMC | Yes | | | Yes |
| MS | Yes | Yes | Yes | Yes |
| SCB | Yes | | | |
| STS | Yes | Yes | | Yes |
| UBS | Yes | Yes | | Yes |

- Limit Orders

| LIMIT ORDERS | | | |
|--------------|-------|-----------|--------|
| LP's | LIMIT | DMA (LMT) | MARKET |
| BAML | Yes | | Yes |
| BNP | Yes | | Yes |
| BTMU | Yes | | Yes |
| CITI | Yes | | Yes |
| COBA | Yes | | Yes |
| CS | Yes | | Yes |
| GS | Yes | | Yes |
| HSBC | Yes | | Yes |
| JPMC | Yes | Yes | Yes |
| MS | Yes | | Yes |
| SCB | Yes | | Yes |
| STS | Yes | | Yes |
| UBS | Yes | | Yes |

XI. Aggregation Rules (Spot and Forward FX Streaming)

Users interact bilaterally with one or more liquidity providers based on one of two aggregation rules configured by the liquidity provider:

- Option 1 – Best bid/ask for full
- Option 2 – Fully disclosed, depth of book

XII. Forwards/Swaps RFS Rules

All content and rules in this document apply to Forward/ Swap RFS trading unless explicitly mentioned. In addition, below are specific rules concerning the RFS service:

- Quote Request:
 - Following a quote request, the LP will start streaming prices for such quote request and absent any action the quote request will be cancelled after 2 minutes
 - If an order is placed, the same timeout rules apply as detailed in section XIV below
 - Once an order is placed with a specific LP, streams from all other LPs on the same RFS will be cancelled immediately
- A mid-price will only be sent to a client if it is provided by the LP
- UTI:
 - If a client provides a UTI on the order, FSS will pass this value on to the LP
 - In the event that a UTI is not provided, FSS will generate its own UTI to send to the LP. The LP, however, will be able to reject the FSS generated UTI and generate its own UTI to share with the client and FSS

XIII. NDF/NDS

FSS supports NDF (non-deliverable forwards) and NDS (non-deliverable swaps) currently out of the New York co-lo site, only. NDFs and NDSs are available for all of our streaming liquidity options (eg. Passthrough, Full Amount, Limit Orders, etc.), as well as RFS and in our GUI. Outside of the additional fields required for NDFs (e.g., fixing date), the underlying functionality of the liquidity options remain unchanged.

FSS does not take a position on or assume responsibility for fixing source information expected, requested or required by the LP or the client. The client should always discuss in advance of sending an order to a given LP and agree with the LP what the 'default' fixing source to be used will be. Agreeing on the fixing source in advance will ensure agreement on the terms of the transaction and will also avoid any issues in the downstream booking process. For those LPs that do support dynamic selection of fixing sources for workflow supported on FSS, please refer to the ROE for details on how to select the reference desired. In all events, FSS merely transmits prices and orders between the parties and any trading or booking questions or issues should take place directly between the client and LP. FXSpotStream assumes no responsibility for the fixing source or any errors or disagreements between the client and LP related to the fixing source.

XIV. Order Timeouts/Trading Notifications

FSS shall use reasonable efforts to monitor pending orders from a client to a liquidity provider and send notifications as applicable. If an order placed by a client has not been acknowledged by a liquidity provider within 4 seconds the Service **WILL CANCEL THE ORDER** and generate a cancel on the execution report to the client, with a reason "Order Timeout". This will prompt an email notification to be sent to both the liquidity provider and the client to notify them of the time out and subsequent cancellation of the order.

If following the order time out, the liquidity provider sends to FSS an order cancellation or reject in the execution report, FSS will suppress this message from being sent to the client to prevent duplication.

To the extent that following the 4 second order time out the liquidity provider sends FSS an order filled execution report, FSS will perform two actions:

- Suppress this execution report from being sent to the client (as the client knows the deal as a timed out trade that has been cancelled)
- Send an email notification to the liquidity provider and client to inform the liquidity provider that a fill execution report was received for a timed out trade that the client knows as cancelled

In this scenario we also recommend the LP to monitor any STP/post-trade feeds to ensure there are no issues or discrepancies.

It is the responsibility of the client and liquidity provider to at all times independently monitor all trading conducted or attempted to be conducted through the Service. If the client and liquidity provider disagree with any action taken by FSS, it is the responsibility of the client and liquidity provider to immediately contact each other to address the status of the order and to notify FSS regarding any mutually agreed changes to the status of the order.

Clients and liquidity providers who use the Service agree to abide by FSS' stated policy and protocol. Irrespective of cancellations or notifications generated by the Service, the liquidity provider and client acknowledge and agree that any order transmitted by the Service from the client will be deemed cancelled if not acknowledged by the liquidity provider in 4 seconds

whether or not FSS sends or does not a send a cancelation due to a technical or other reason. Further, the liquidity provider and client acknowledge that an order once cancelled will be deemed cancelled even if the liquidity provider subsequently attempts to fill the previously cancelled order.

FSS does not take a view on whether an order should be accepted, cancelled, or rejected and is not and will at no time be a party to any transaction between the client and liquidity provider. FSS shall use reasonable efforts to address order timeouts in accordance with the above stated protocol.

In addition to the order timeout condition (detailed above), FSS will issue an email notification in the event that a bank sends FSS an execution report that results in one of the following conditions or contains an unsupported execution type:

- Order over-fill
- Order under-fill
- Unexpected execution type (i.e., other than a fill, reject or cancel)

Again, upon this email notification it is the responsibility of the client and bank to immediately contact each other to address the order/trade in question. Details of the order/trade will be included in the body of the email generated by FSS.

XV. Order Management

The user is responsible for managing all orders sent via FSS irrespective of the order type. All orders are active and may be acted on by the applicable liquidity provider until they are executed or cancelled. If the user's connection terminates or disconnects with active orders still pending, the user is still responsible for honoring the orders placed via FSS should they be executed on by the liquidity provider.

If an event occurs in which the user is unable to manage orders placed via FSS because of technical or other issues and the user would like those orders to be cancelled or removed, it is the responsibility of the user to contact the liquidity provider or FSS, as applicable, regarding the problem and the associated pending orders. FSS has functionality to cancel any limit orders resting on FSS on a disconnection, but the user remains responsible for all orders, irrespective of the order type, placed on the Service unless and until such orders are actually cancelled by the Service or by the user.

FSS will not take any action with respect to any pending orders that have not been acknowledged. It is the responsibility of the user and liquidity provider to resolve all trading matters and pending orders.

It is the responsibility of the user and liquidity provider to at all times independently monitor all trading conducted or attempted to be conducted through the Service.

XVI. Order Validations

- **Stale Orders:**

If an order sent by the client is received by the service significantly later, FSS will mark the order as stale and reject the order. The Transact Time tag (#60) on the New Order Single is checked against the time when FSS receives the order. If the difference is more than 60 seconds, the order is rejected with an appropriate reason sent back to the client.

The check is based on the assumption that the client is using a UTC (GMT) Time Stamp in the Transact Time tag (#60) as specified in our ROE. If that is not the case, the client should change the time in this tag to be expressed in UTC to prevent the orders from being rejected.

- **Max Orders during a certain time:**

The FSS service enforces a limit of max number of orders allowed during a certain amount of time. This number will be configurable. When the circuit breaker kicks in, the system will reject all incoming client's orders and disconnect the client's trading session.

FSS Support will manually notify the client when this happens and check with them if the problem has been fixed. Once the problem is resolved, support will manually mount the session and enable trading on the disconnected session.

The limit will be set to a max of 500 orders in 5 secs.

XVII. Liquidity Provider and User Contact Details

During the course of the onboarding process FSS will request and gather contact details of the user and liquidity provider. FSS will use the contact details to generate email communications and to otherwise contact the user and liquidity provider. Communications include, but are not limited to, status changes during the on boarding process, order submission timeout notifications and other important communications related to the Service. The user and liquidity provider must ensure that the contact details provided are accurate and promptly notify FSS of any changes to the contact details provided.

Schedule A to these Operating Procedures contains the current support telephone and email contacts of the FSS liquidity providers ("Liquidity Provider Contacts"). Users should ensure that they maintain their own current list of contact emails and telephone numbers supplied to the user by each liquidity provider.

XVIII. Slow Consumer Detection

For the protection of our clients and the overall FSS environment, FSS monitors a client's ability to consume and process market data snapshots sent by the Service to the client. The monitoring is performed at the "socket" level where a client connects to the FSS network. If a client is slow to process market data snapshots being transmitted by FSS to the client, FSS will disconnect the client from the FSS network. The disconnection will occur when the Service cannot push data over the socket for a period of 4 seconds.

Once FSS disconnects a client from the Service, the client is able to reconnect the session immediately and resubscribe.

The slow consumer monitoring occurs at the session level. Thus, only a session that is subject to the slow consumer detection will be impacted. If a client has multiple sessions and only one of those sessions is detected as a slow consumer, only THAT session is disconnected.

XIX. LP Product Support

Below are the products supported by each Liquidity Provider over FSS. Please note these are subject to change based on changes made by the Liquidity Providers.

The Service will accept limit orders on Fridays up until 16:59:00 NYT. Any orders received after this time will be rejected by the Service.

- Forwards

| FORWARDS | | |
|----------|---------|---------|
| LP's | FWD ESP | FWD RFS |
| BAML | Yes | Yes |
| BNP | Yes | Yes |
| BTMU | No | No |
| CITI | Yes | Yes |
| COBA | No | Yes |
| CS | No | Yes |
| GS | Yes | Yes |
| HSBC | Yes | Yes |
| JPM | Yes | Yes |
| MS | Yes | Yes |
| SCB * | Yes | Yes |
| STS | No | Yes |
| UBS | Yes | Yes |

*SCB Certified for FWD ESP, but not for the GUI

- Swaps

| SWAPS | |
|-------|-----|
| LP's | RFS |
| BAML | Yes |
| BNP | Yes |
| BTMU | No |
| CITI | Yes |
| COBA | Yes |
| CS | Yes |
| GS | Yes |
| HSBC | Yes |
| JPM | Yes |
| MS | Yes |
| SCB | Yes |
| STS | Yes |
| UBS | Yes |

- Precious Metals

| PRECIOUS METALS | | |
|-----------------|---------------|---------------|
| LP's | ESP | RFS |
| BAML | No | No |
| BNP | Yes (Only NY) | Yes (Only NY) |
| BTMU | No | No |
| CITI | Yes | Yes |
| COBA | No | No |
| CS | Yes | Yes |
| GS | Yes | Yes |
| HSBC | Yes | Yes |
| JPM | Yes | Yes |
| MS | Yes | Yes |
| SCB | Yes | Yes |
| STS | No | No |
| UBS | Yes | Yes |

- Limit Orders

| Limit ORDERS | | | |
|--------------|-------|-----------|--------|
| LP's | LIMIT | DMA (LMT) | MARKET |
| BAML | Yes | | Yes |
| BNP | Yes | | Yes |
| BTMU | Yes | | Yes |
| CITI | Yes | | Yes |
| COBA | Yes | | Yes |
| CS | Yes | | Yes |
| GS | Yes | | Yes |
| HSBC | Yes | | Yes |
| JPMC | Yes | Yes | Yes |
| MS | Yes | | Yes |
| SCB | Yes | | Yes |
| STS | Yes | | Yes |
| UBS | Yes | | Yes |

- NDFs

| NDF's | | | | | | |
|--------|-----|---------|---------|---------|---------------|---------------|
| LP's | ESP | RFS NDF | RFS NDS | GUI ESP | GUI RFS - NDF | GUI RFS - NDS |
| BAML* | No | Yes | Yes | No | Yes | Yes |
| BNP | Yes | Yes | Yes | Yes | Yes | Yes |
| BTMU | No | | | | | |
| CITI** | Yes | Yes | No | Yes | Yes | No |
| COBA | No | Yes | No**** | | | |
| CS*** | Yes | Yes | No | Yes | Yes | No |
| GS | Yes | Yes | Yes | Yes | Yes | Yes |
| HSBC | Yes | Yes | Yes | Yes | Yes | Yes |
| JPMC | Yes | Yes | Yes | Yes | Yes | Yes |
| MS | Yes | Yes | Yes | Yes | Yes | Yes |
| SCB | Yes | Yes | Yes | Yes | Yes | Yes |
| STS *+ | Yes | Yes | Yes | No**** | | |
| UBS | Yes | Yes | No | Yes | Yes | No |

*FSS is certified and live with BAML for ESP, requests will be considered on a client by client basis

** FSS is certified with CITI, requests will be considered on a client by client basis

*** For ESP CS supports 1M Asian NDFs only. Latam supported on RFS (local hours only). RUB NDFs not supported

**** FSS cannot support NDFs on our GUI if the LP requires a fixing date to be sent on the subscription

*+ STS: ESP NDF is supported but only for 1M

XX. FSS Territories

The user may access the FSS Service from any of the jurisdictions listed below:

| Jurisdiction | SpotFX/PM | Forwards/Swaps | NDF/NDS | PM Swaps |
|--------------------------------------|-----------|----------------|---------|----------|
| Australia | ✓ | ✓ | ✓ | |
| Belgium | ✓ | ✓ | ✓ | |
| Canada | ✓ | ✓ | ✓ | ✓ |
| Cayman Islands | ✓ | | | |
| China | ✓ | ✓ | ✓ | ✓ |
| Cyprus | ✓ | ✓ | ✓ | ✓ |
| Denmark | ✓ | FWDs, only | | |
| Dubai International Financial Centre | ✓ | | | |
| France | ✓ | ✓ | ✓ | ✓ |
| Hong Kong | ✓ | ✓ | ✓ | |
| Ireland | ✓ | ✓ | | |
| Israel | ✓ | ✓ | ✓ | ✓ |
| Italy | ✓ | ✓ | ✓ | |
| Japan | ✓ | ✓ | ✓ | |
| Kuwait | ✓ | ✓ | ✓ | ✓ |
| Liechtenstein | ✓ | ✓ | ✓ | ✓ |
| Malta | ✓ | ✓ | ✓ | |
| Mexico | ✓ | ✓ | | |
| Netherlands | ✓ | ✓ | ✓ | ✓ |
| Norway | ✓ | ✓ | ✓ | ✓ |
| Poland | ✓ | ✓ | ✓ | ✓ |
| Russia | ✓ | ✓ | ✓ | ✓ |
| Singapore | ✓ | ✓ | ✓ | ✓ |
| South Africa | ✓ | ✓ | ✓ | ✓ |
| South Korea | ✓ | ✓ | ✓ | ✓ |
| Spain | ✓ | ✓ | ✓ | |
| Sweden | ✓ | ✓ | ✓ | ✓ |
| Switzerland | ✓ | ✓ | ✓ | ✓ |
| Turkey | ✓ | ✓ | | |
| United Arab Emirates | ✓ | | | |
| United Kingdom | ✓ | ✓ | ✓ | ✓ |
| United States | ✓ | ✓ | ✓ | ✓ |

SCHEDULE A

| Bank of America Merrill Lynch | | |
|---|--|--|
| Support Group | Phone Number | Email Address |
| eFX Client Services Team* | Americas: +1 855-290-5502 EMEA: +44 808-234-0295 Japan**: 0120 959 974 Singapore**: 800-1206150 Taiwan: 00801-13-6465 Hong Kong: +852-800-963-304 Australia: 1800-134328 China: 4001-202336 India: 00800001-6743 Korea: 00798-14-800-9131 Malaysia: 1-800-816393 | Efx.csg@baml.com eficc.cc@baml.com |
| * available 24 hours ** local toll free only | | |

| Bank of Tokyo-Mitsubishi | | |
|-------------------------------------|-----------------|------------------------|
| Support Group | Phone Number | Email Address |
| Foreign Exchange Trading Department | +81-3-6268-1340 | btmutky_efx_PF@mufg.jp |

| BNP Paribas | | |
|---|--|---------------------------------------|
| Support Group | Phone Number | Email Address |
| Cortex Client Serviced - PROD Issues and Trade Support Global | Americas: +1 212 841 3838 EMEA: +44 207 595 8886 APAC: +65 6210 1828 | cortex.client.services@bnpparibas.com |

| Citigroup | | |
|---|--|---|
| Support Group | Phone Number | Email Address |
| CitiFX Helpdesk | +1 212 723 3500 +44 207 500 1832 +65 67868000 | eteam@citi.com fifx.support@citi.com |
| FX Trading, Sales and Technology - Global | +1 212 723 3037 +81 362709188 | efxsales@citi.com |

| Commerzbank | | |
|---|---------------------|----------------------------|
| Support Group | Phone Number | Email Address |
| Production and Technology Support Issues - Global | +44 207 47 54500 | esupport@commerzbank.com |
| FIX Support Issues - Global | +44 20 7475 5542 | FIXSupport@commerzbank.com |

| Credit Suisse | | |
|-----------------------------------|---|--|
| Support Group | Phone Number | Email Address |
| EFX Support | Singapore: +65 6212 3313 London: +44 207 883 2213 NY: +1 212 538 4339 | list.efx-support@credit-suisse.com |
| EFX business contact/Trade issues | NY - 212-538-1404 London - 44-(20)7-883-7697 Asia - 65-6212-4399 | list.gfx-efx-bus-mgt@credit-suisse.com |

| Goldman Sachs | | |
|--|---------------------|---|
| Support Group | Phone Number | Email Address |
| Production and Technology Support Issues Americas | +1 212 902 5050 | ficc-smm-tech@gs.com |
| Production and Technology Support Issues EMEA | +44 207 552 5050 | ficc-smm-tech@gs.com |
| Production and Technology Support Issues Tokyo | +813 6437 4833 | ficc-smm-tech@gs.com |
| Production and Technology Support Issues Hong Kong | +852 2978 7435 | ficc-smm-tech@gs.com |
| FX eSales New York | +1 212 902 7334 | gs-efx-global@gs.com |
| FX eSales London | +44 207 051 1514 | gs-efx-global@gs.com |
| FX eSales Tokyo | +81 3 6437 9555 | gs-efx-global@gs.com |
| FX eSales Hong Kong | +85 2 2978 2258 | gs-efx-global@gs.com |
| eFX Operations New York | +1 212 902 7318 | ficc-fx-quickops@gs.com |
| eFX Operations London | +44 207 774 6296 | ficc-fx-quickops@gs.com |
| eFX Operations Tokyo | +81 3 6437 8070 | ficc-fx-quickops@gs.com |
| eFX Operations Hong Kong | +81 3 6437 8070 | ficc-fx-quickops@gs.com |
| Commodities eSales New York | +1 212 902 6365 | gs-ecommod@gs.com |
| Commodities eSales London | +44 207 051 3802 | gs-ecommod@gs.com |
| Commodities eSales Hong Kong | +852 2978 1520 | gs-ecommod@gs.com |
| Commodities Operations New York | +1 212 902 5050 | jaron-commid-except@gs.com |
| Commodities Operations London | +44 207 552 3129 | jaron-commid-except@gs.com |
| Commodities Operations Hong Kong | +81 3 6437 4833 | jaron-commid-except@gs.com ficc-mo-sg@gs.com |

| HSBC | | |
|--|----------------------|--|
| Support Group | Phone Number | Email Address |
| Any Issue – Hours: 24 hours a day 6 days a week | | |
| Production Support Issues - EMEA | +44 (0) 207 991 1342 | gfx.eclientservices.global@hsbc.com ; erisk.quant.group@hsbcib.com |
| Production Support Issues - Americas | +1 212 525 3048 | gfx.eclientservices.global@hsbc.com ; erisk.quant.group@hsbcib.com |
| Production Support Issues - Asia Pac | +852 3071 4888 | gfx.eclientservices.global@hsbc.com ; erisk.quant.group@hsbcib.com |
| Production Support Issues – Toll Free | 00800 8090 8000 | GFX.eClientServices.global@hsbc.com erisk.quant.group@hsbcib.com |
| Onboarding | | |
| Onboarding - HK | +861 392 501 0146 | globalefxsales@hsbc.com ; efxsalesemea@hsbc.com |
| Production & Fix Support – Hours: Local office hours only | | |
| FIX SUPPORT - HK | +861 392 501 0146 | fix.support@hsbcib.com |
| UAT Support | | |
| UAT Support | | fxclientonboarding@hsbc.com.hk fxclientonboarding@hsbc.com.hk |

The following is a link to disclosure that HSBC has asked FSS to make available to HSBC's clients using the Service: <http://www.hsbcnet.com/dodd-frank-ebc>.

FSS is providing this link as a courtesy to HSBC, and the fact that FSS is providing such link should not be interpreted to imply or suggest that FSS is in any manner subject to the rules and regulations described therein. FSS makes no representations or warranties concerning, and has no responsibility for, the content of such disclosure, including without limitation the accuracy thereof, and FSS has no responsibility to keep such disclosure updated. In the event such disclosure conflicts with the provisions of a client's User Agreement with FSS or a Liquidity Provider Agreement between a Liquidity Provider and FSS, the terms of such User Agreement or Liquidity Provider Agreement, as the case may be, shall control.

| JP Morgan | | |
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