CME FX Link - Spot FX Basis Spreads at CME Group

CME FX Link is the first ever central limit order book for trading spreads between OTC FX Spot and CME FX Futures, seamlessly connecting the two markets

- Enables electronic trading of an OTC Spot FX transaction and a CME Group FX futures contract via a single spread trade on CME Group's liquid and transparent Globex platform

- Traded as the differential between FX Futures and OTC Spot FX, resulting in simultaneous execution of a FX Futures contract and an OTC Spot FX transaction

- Central prime broker intermediates OTC Spot FX transactions resulting from the spread, allowing participants to leverage existing OTC FX interbank credit relationships and prime brokerage network

- Initial scope includes spreads between OTC Spot FX and the front three expiry months of the following currency pairs:
EUR/USD, GBP/USD, AUD/USD, NZD/USD, USD/JPY, USD/CAD, USD/CHF & USD/MXN

CME FX Link enables market participants to efficiently realize the capital, margin and operational benefits of CME FX Futures

- ✓ Access the deep liquidity and firm pricing offered in CME Group's marketplace

- ✓ Efficiently establish and hold forward exposures via capital and margin advantaged CME FX Futures

- ✓ Better manage and optimize margin and credit lines across CME FX Futures and OTC Spot FX transactions

Product Scope

Eligible Currencies

AUD/USD, EUR/USD, GBP/USD, NZD/USD, USD/CAD*, USD/CHF*, USD/JPY*, and USD/MXN*

*CCY pairs quoted inversely to futures.

Basis Spread Quotation

Quoted and traded as the difference between futures and spot as represented with both legs in OTC price convention

Basis Spread Construction

The buyer of the spread buys CME FX futures and sells OTC Spot FX, while the seller sells CME FX futures and buys OTC Spot FX.

For FX futures currency pairs that are quoted inverse to OTC FX convention*, the buyer of the spread sells FX futures and sells OTC FX spot and vice versa for a seller of spreads in the above listed pairs.

*Inverse Pairs: JPY/USD, CAD/USD, MXN/USD, CHF/USD

Minimum Order Quantity

AUD/USD, EUR/USD, GBP/USD, NZD/USD, USD/CAD, USD/CHF, and USD/JPY = 5 spreads; USD/MXN = 15 spreads

Trading Venue/Hours

CME Globex: Sunday – Friday, 5:00 p.m. - 4:00 p.m. Chicago Time (CT), with a 60-minute break each day beginning at 5:00 p.m. (4:00 p.m. CT).

Spread Listing Schedule

Spreads vs. front three FX futures expiration months. New spreads added 10 business days prior to the last trade date of an expiring CME FX Futures.

Currency Pair	AUD/USD	EUR/USD	GBP/USD	NZD/USD	USD/CAD	USD/CHF	USD/JPY	USD/MXN
Spread Minimum Price Increment	0.00001	0.00001	0.00001	0.00001	0.00001	0.00001	0.001	0.0005
Spread Notional (per leg)	100,000 AUD	125,000 EUR	62,500 GBP	100,000 NZD	100,000 CAD	125,000 CHF	12,500,000 JPY	500,000 MXN

Spot Leg Specs

Spot Leg Specifications

Currency Pairing	Value Date	Minimum Price Increment*	Spot Notional Per One Spread**
AUD/USD	T+2	0.00001 (0.1 pip)	100,000 AUD
EUR/USD	T+2	0.00001 (0.1 pip)	125,000 EUR
GBP/USD	T+2	0.00001 (0.1 pip)	62,500 GBP
NZD/USD	T+2	0.00001 (0.1 pip)	100,000 NZD
USD/CAD	T+1	0.000001 (0.01 pip)	100,000 CAD
USD/CHF	T+2	0.000001 (0.01 pip)	125,000 CHF
USD/JPY	T+2	0.0001 (0.01 pip)	12,500,000 JPY
USD/MXN	T+2	0.00001 (0.1 pip)	500,000 MXN

Settled Bilaterally via physical delivery on value date

* The minimum price increment ("MPI") of a spot FX transaction is separate and distinct from and is not necessarily a reflection of the MPI of a spot FX basis trade, which the Exchange shall determine.

** The spot notional per one spread for the USD/CAD, USD/CHF, USD/JPY, and USD/MXN currency pairings shall be defined in terms of the quote, or term, currency of each pairing rather than the base currency since the CME pricing and notional convention for related CME FX futures contracts is inverted from the over-the-counter ("OTC") convention.

Futures Leg Specs

Futures Leg Specifications***

Product Code	Contract Size	Futures Quotation	Tick
6A	100,000 AUD	USD per AUD	0.0001 (10.00 USD)
6E	125,000 EUR	USD per EUR	0.00005 (6.25 USD)
6B	62,500 GBP	USD per GBP	0.0001 (6.25 USD)
6N	100,000 NZD	USD per NZD	0.0001 (10.00 USD)
6C	100,000 CAD	USD per CAD	0.00005 (5.00 USD)
6S	125,000 CHF	USD per CHF	0.0001 (12.50 USD)
6J	12,500,000 JPY	USD per JPY	0.0000005 (6.25 USD)
6M	500,000 MXN	USD per MXN	0.00001 (5.00 USD)

Cleared via CME Clearing

*** Full product specifications for existing CME FX futures contracts are available on www.cmegroup.com/fx and in CME's Rulebook.

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Spot FX Basis Spread Details & Workflow

Basis Spread Quotation

- Quoted and traded as the difference between futures and spot as represented with both legs in OTC price convention

Basis Spread Construction

- Buyer of spread buys CME FX Futures and sells OTC Spot FX, seller sells CME FX Futures and buys OTC Spot FX

- For FX future currency pairs that are quoted inverse to OTC FX convention*. Buyer of spread *sells* FX futures and *sells* OTC FX spot and vice versa for a seller of spreads in the above listed pairs
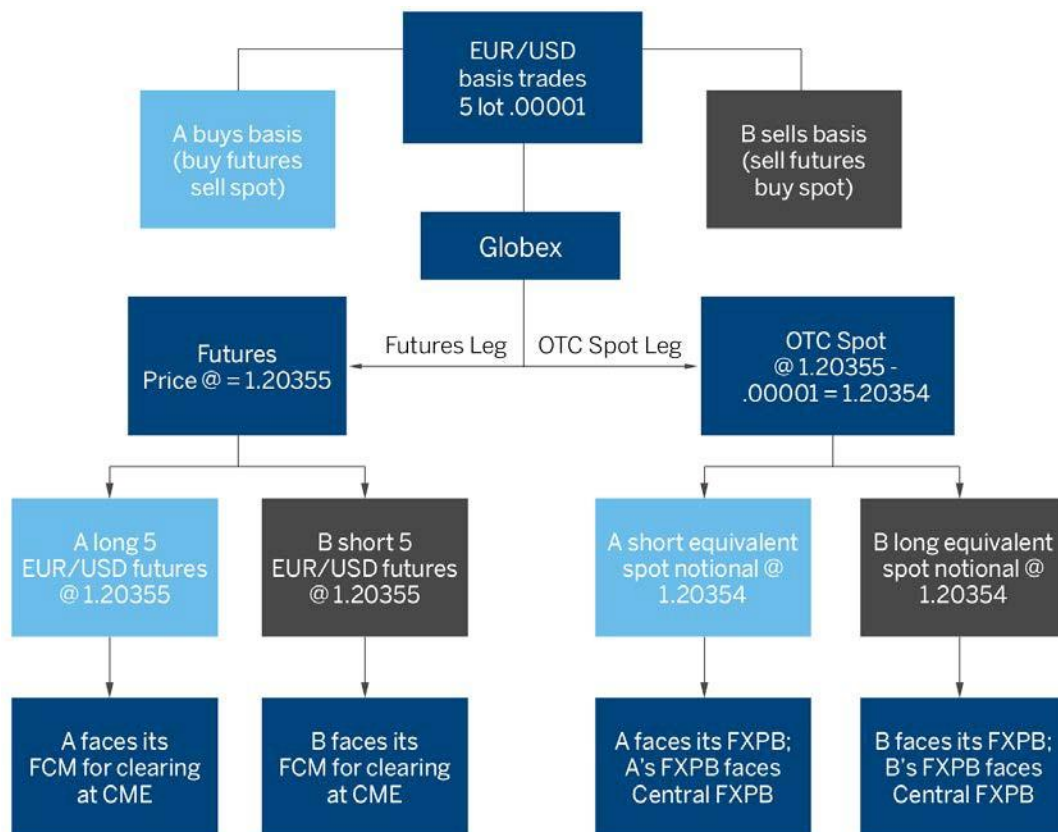
Basis Spread Leg Pricing

- Futures leg price = last Globex Price

- OTC Spot FX leg price = Futures leg price - Traded Basis Spread

Basis Spread Transactions

- Basis spread results in simultaneous execution of FX Futures cleared by CME Clearing, and OTC Spot FX subject to existing OTC FX enabled via central intermediation by the Central FXPB (see details on next slide)

*Inverse Pairs: JPY/USD, CAD/USD, MXN/USD, CHF/USD

CME FX Link Trade Workflow

EUR/USD basis trades 5 lot .00001

A buys basis (buy futures sell spot)

B sells basis (sell futures buy spot)

Globex

Futures Leg | OTC Spot Leg

Futures Price @ = 1.20355

OTC Spot @ 1.20355 - .00001 = 1.20354

A long 5 EUR/USD futures @1.20355

B short 5 EUR/USD futures @1.20355

A short equivalent spot notional @ 1.20354

B long equivalent spot notional @ 1.20354

A faces its FCM for clearing at CME

B faces its FCM for clearing at CME

A faces its FXPB; A's FXPB faces Central FXPB

B faces its FXPB; B's FXPB faces Central FXPB

Credit Intermediation Model Detail for OTC Spot FX Leg

- A commonly used central intermediation credit model will apply to the OTC Spot FX transactions resulting from the Spot FX basis spreads, supporting centralized, anonymous matching

- A leading FX Prime Broker (FXPB) will serve as a "Central FXPB" to enable this model by intermediating the OTC Spot FX transactions resulting from the Spot FX basis spreads

- The Central FXPB extends credit limits for OTC Spot FX transactions to other PBs or counterparties. These limits are set via CME Globex credit controls

- PBs can then allocate credit limits via CME Globex credit controls to enable trading by their FXPB customers for entering into OTC Spot FX transactions via the spread functionality

- When an OTC Spot FX transaction occurs as a result of a trade in the FX basis spread, each trading firm enters an OTC Spot FX transaction with its FXPB, while each FXPB enters a equal and offsetting transaction with the Central FXPB.

- This supports anonymous trading of the spreads and leaves the FXPBs and the Central FXPB with transactions that have fully offsetting risk

Intermediation of OTC Spot FX Transaction Resulting From the CME FX Link Spread

Spot FX match resulting from CME FX Link On Globex

Trading Firm 1 **BUY** FX Spot — BUY / SELL

Trading Firm 2 **SELL** FX Spot — SELL / BUY

Central FXPB — SELL / BUY

Prime Broker 1 — $ € / BUY

Prime Broker 2 — $ € / SELL

Operational and Messaging Details

1 **Credit Limit Checking**

- Credit checks are applied to CME FX Link spreads on a pre-trade basis – orders independently pass credit checks on each leg before entering the market
- Existing FCM Globex credit limits checked for FX futures leg
- Prime Broker and Central FXPB spot FX credit limits checked for spot leg

2 **Trade Execution Messaging**

- Leg prices for the spread and FX futures are available on fill and market data messages
- The spot FX transaction details will be available via post trade messages

3 **Clearing and Intermediation**

- CME FX Futures are cleared at CME via the trading firm's FCM
- Spot FX trades are intermediated through the Central FXPB, and where applicable a trading firm's FXPB, and settled bilaterally between those parties

4 **Post-Trading Messaging**

- CME FX Futures confirmations are routed to the customer's FCM and made available via CME STP
- FX Spot trade executions are routed to the customer's FXPB and made available via CME STP

Onboarding

FCM

- No new FCM set up is required to enable trading of FX futures via CME FX Link.

    - *Trading firms utilize existing Executing Firms and Accounts for trading*

    - *All FX Futures traded via CME FX Link are existing FX Futures contracts*

    - *FX Futures traded via FX link draw on existing Globex credit limits*

    - *FCM has no involvement with spot FX leg of CME FX Link Spreads*

Trading Firm (End User)

- Trading firms with or establishing credit lines for trading the spot FX leg of CME FX Link spreads via a prime broker are "End Users"

- End Users can trade CME FX Link spreads via their existing Futures Executing Firms and Accounts

- End User's Prime Broker must allocate credit limits for the End User to trade the OTC spot FX leg of CME FX Link spreads via Account Manager

  - *End User communicates to the Prime Broker the accounts and executing firms* to be utilized by the End User for trading of CME FX Link spreads – this enables pre-trade checking of the OTC spot FX credit limits in parallel to existing futures limit checks*

- End user can consume the OTC spot FX trade messages via their prime broker, or CME messaging (STP)

*Note: Prime Broker will not see which FCM the accounts or executing firms are associated with

Trading Firm (Direct Participant)

- Trading firms that utilize a direct credit line from the Central FXPB for trading the spot FX leg of CME FX Link spreads are "Direct Participants"

- Direct Participants can trade CME FX Link spreads via their existing Futures Executing Firms and Accounts

- The Central FXPB must allocate credit limits for the Direct Participant to trade the OTC spot FX leg of CME FX Link spreads via Account Manager

  - *Direct Participant communicates to the Central FXPB the accounts and executing firms* to be utilized by the Direct Participant for trading of CME FX Link spreads – this enables pre-trade checking of the OTC spot FX credit limits in parallel to existing futures limit checks*

- Direct Participant can consume the OTC spot FX trade messages via the Central FXPB, or CME messaging (STP)

*Note: Prime Broker will not see which FCM the accounts or executing firms are associated with

Prime Broker (Permitted User)

- Prime Brokers that are extended credit from the Central FXPB to allocate credit to End Users for trading of spot FX via CME FX Link spreads are "Permitted Users"

- Permitted Users must be authorized by the Central FXPB – CME will be notified

- Permitted User then registers for cmegroup.com logins and signs up for CME Account Manager access to set up and allocate credit lines to their customers (End Users)

    - *End User identifies to the Permitted User the accounts and executing firms* to be utilized by the End User for trading of CME FX Link Spreads – this enables pre-trade checking of the OTC spot FX credit limits in parallel to existing futures limit checks*

- Permitted User can consume the OTC Spot FX trade messages via CME messaging, or via Traiana

*Note: Prime Broker will not see which FCM the accounts or executing firms are associated with

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Spot FX Credit Management (via Account Manager)

Account Manager will enable setting, administrating and viewing daily net settlement credit limits by product to monitor utilization, suspend new order entry and setup alerts

Function	Central FXPB	Prime Broker	End User / Direct Participant
Set enforceable OTC Spot FX limits (Max Short and Long)	✓ Prime Broker or Direct Participant Level	✓ End User Level or by Account (Optional)	✓ Account (Optional)
Monitor and configure threshold based alerts for enforced OTC Spot FX limits	✓ Prime Broker or Direct Participant Level	✓ End User Level or by Account (Optional)	✓ Account (Optional)
View of exposure across all OTC Spot FX products	✓ Prime Broker or Direct Participant Level	✓ End User Level	
Suspend order entry	✓ Prime Broker or Direct Participant Level	✓ End User Level	

The latest information can always be found at cmegroup.com/fxlink or fxteam@cmegroup.com

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