

# CME Group Customer Forum

Q4 2017

# Agenda

- **Globex Technology Changes**
  - **iLink/Drop Copy Secure Logon**
  - **CGW Fault Tolerance**
  - **iLink 3.0**
  - **Globex Enhancements**
  - **Self Match Prevention**
  - **Treasury Tick Reduction**
  - **30 Day Fed Funds Changes**
- Update on Risk Management
- Customer Tools & GUIs
- Product Updates
- Partner Updates
- Q&A

# CME Globex API Secure Logon

## A secure logon message to iLink and Drop Copy

- Contain the security credentials required for identity and permissions verification
- Use Keyed-Hash Message Authentication Code(HMAC) for session logon authentication

## Security credentials are validated at the Session ID level

- Security credentials consist of
  - **AccessKeyID** - used to sign logon request to iLink or Drop Copy
  - **Secret Key** - used to create HMAC signature
- Customers must change their credentials every 12 months
  - Email notification regarding the secret key expiration will be sent to registered administrators

# Request Center Enhancements

## Self-service capability to request security credentials

- If you have multiple iLink and/or drop copy sessions, the Request Center will offer customers the ability to bulk download secret keys.

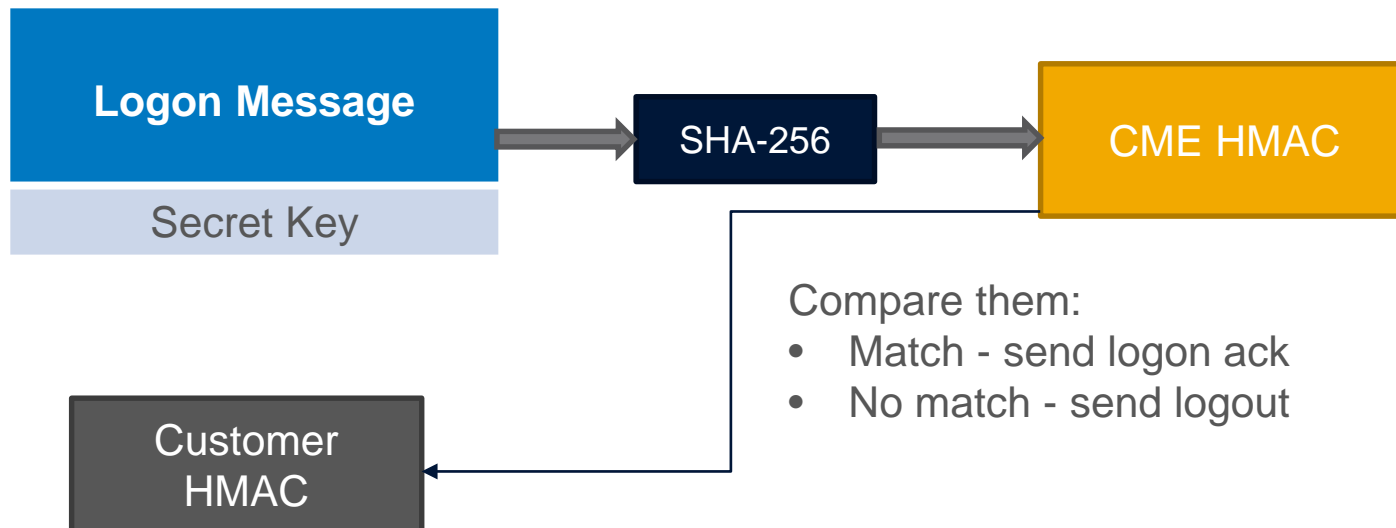
The screenshot displays the 'iLink Sessions' management interface. At the top, there are navigation tabs: 'My Requests', 'Globex Requests', 'Firm / User Registration', 'Tag 50', 'Membership', and 'Preferences'. The 'Globex Requests' tab is active. Below the navigation, there is a 'Registered Entity' dropdown menu set to 'CID02203 - CLEARING ENTITY A'. A 'Refresh' button is located in the top right corner. A 'Delete Selected' button is on the left, and a 'Manage Keys for Selected Sessions(s)' dropdown menu is open, showing options: 'Generate Keys', 'Delete Keys', and 'Download Keys'. A red arrow points to the 'Download Keys' option. To the right of the dropdown, there is a 'Create iLink Session' button and a set of export options: 'Copy', 'CSV', 'Excel', 'PDF', and 'Print'. Below this is a table with columns: 'Admin Owned', 'Market Segment Gateway', 'Primary Globex Firm', 'Secondary Globex Firm', 'Password', 'Key ID / Expiration Date', 'Primary IP', 'Secondary IP', 'Port', and 'Live Date'. The table contains one row with the following data: 'Yes', '8PR', '0A9L', 'Live', 'No', '019 - CLEARING ENTITY A', '-', '\*\*\*\*\*', '-', '11.11.4.4', '11.11.3.3', '9603', and '06 Apr 2016'. Below the table, it says '1 item selected'. At the bottom, there is another 'Delete Selected' button, a 'Manage Keys for Selected Sessions(s)' dropdown menu, and a 'Create iLink Session' button.

Admin Owned	Market Segment Gateway	Primary Globex Firm	Secondary Globex Firm	Password	Key ID / Expiration Date	Primary IP	Secondary IP	Port	Live Date			
Yes	8PR	0A9L	Live	No	019 - CLEARING ENTITY A	-	*****	-	11.11.4.4	11.11.3.3	9603	06 Apr 2016

# CME Globex API Secure Logon

## New Logon Procedure

- **Customer sends a HMAC logon message**
  - HMAC signature is generated using logon message and secret key
  - Include HMAC, Access Key ID, and hash algorithm in the logon message
- **CME Globex processes the logon message**
  - Validate the Access Key ID
  - Calculate HMAC signature and compare it with the customer HMAC



# CME Globex API Secure Logon

## Messaging Impacts:

New FIX tags will be added to the iLink and Drop Copy Logon requests:

- Tag 354-EncodedTextLen (i.e. the length of AccessKeyID )
- Tag 355-EncodedText (i.e. AccessKeyID)
- Tag 1400-EncryptedPasswordMethod (i.e. Hash Algorithm-CME-1-SHA-256)
- Tag 1401-EncryptedPasswordLength (i.e. length of HMAC signature)
- Tag 1402- EncryptedPassword (i.e. HMAC signature )

## Testing and Certification:

- Certification via AutoCert+ is required, available on 16 October 2017

## Key Events and Dates:

CME Globex API	New Release	Production
Drop Copy 4.0	Monday, 2 October 2017	Sunday, 7 January 2018
iLink CGW & MSGW	Monday, 16 October 2017	Sunday, 21 January 2018

## Migration Deadline

- iLink and Drop Copy will support both current and new logon procedures until **27 April 2018**

# Convenience Gateway Fault Tolerance

Following the successful CGW hardware upgrade, we are now changing the Fault Tolerance (FT) model our CGW architecture:

- Dedicated Primary/Backup Gateway Model
- Consistent with the MSGW-style Application Level FT

## Customer Impacts:

- CGW customers must successfully log on to the primary before attempting to log on to the backup
- CGW session connectivity/login behavior will match the current state MSGW
- CGW failover will NOT trigger a market state change:
  - Technical Pause
  - Technical Pre-Open
- No impact to Drop Copy

## Launch Timeline:

- **New Release** – 16 October 2017
- **Enforced in Production by** – 4 February 2018
- **Certification** via AutoCert+ is optional, available in mid-November

# iLink 3.0

- Still planned; timeline extended due to other priorities. Target 2019
- Improved performance and reduced variability
  - Streamlined, efficient message designs
  - Fixed message sizes, regardless of content
- Consistent message format for order entry and market data

Layer	Feature	Customer Impacts
Presentation	<b>Simple Binary Encoding (SBE)</b>	<ul style="list-style-type: none"><li>• Messages controlled by template, like market data</li><li>• If iLink changes message layout, customers must update template</li></ul>
Session	<b>New FIXP protocol</b>	<ul style="list-style-type: none"><li>• Lightweight point-to-point binary protocol</li><li>• Allows session recovery</li><li>• Based on Pantor Engineering Xmit protocol</li></ul>
Application	<b>Customer-Driven Functionality</b>	<ul style="list-style-type: none"><li>• Cancel on Behalf</li><li>• Mass Order supports multiple orders, modifies and cancels in a single message</li><li>• Spread and leg fills reported in a single iLink message</li></ul>



# CME Globex Execution Information Enhancements

- **New tag to enhance straight through processing** via a new common trade ID which traces each individual execution across CME Globex and through clearing
  - iLink tag 37711-MDTradeEntryID
  - MDP 3.0 tag 37711-MDTradeEntryID
  - CME STP and CME STP FIX MDTradeEntryID
- **Real-time trade price adjustments** reported to participating traders and the market as a whole via iLink and MDP 3.0 messages
  - Currently, trade price adjustments are only available via Clearing systems
- **Spread trade cancellation reporting** for both the spread and legs via iLink and MDP 3.0 messages
  - Currently, CME Globex sends the iLink Execution Report - Trade Cancellation message for spread legs only
- **Launch Timeline**
  - **New Release** – Available now. No certification required.
  - **Production** – Rollout 10 September – 19 November

# Self Match Prevention Enhancements

## Live on October 1

Enhancement allows iLink customers to configure Self Match Prevention (SMP) across multiple CME Globex Firm IDs within or across clearing firms

## Registration

- With this release, SMP ID registration is now strictly enforced
  - Orders and Mass Quotes submitted with unregistered Self Match Prevention IDs are **rejected**
  - Orders and Mass Quotes submitted with registered Self Match Prevention IDs for unregistered Globex Firm IDs are **rejected**
- Customers who opt to leverage SMP functionality **must register** via the Firm Administrator Dashboard (FADB) to receive an SMP ID and associate it with the appropriate CME Globex Firm IDs
  - Effective September 10, FADB was enhanced to allow new or existing SMP IDs to be associated to more than one CME Globex Firm ID
  - Updates to registration are applied in production after **16:30 CT Monday-Thursday** and **09:30 CT Sunday**

## Testing and Certification

- Testing is recommended but certification is not required with this release
- Customers must contact their Global Account Manager to set up SMP IDs for testing in the CERT and New Release environments.
- Updates to registration are applied in New Release and Cert as follows: **4:00 pm - 8:00 pm CT Monday – Thursday**

# CME Direct Self-Match Protection and Prevention

## Additional Self-Match Protection on the CME Direct Front End

### CME Direct Self-Match Protection

- Applied at the company and/or user level within CME Direct
- CME Direct evaluates each new order **before it is sent to Globex** to determine if it would match against another order for the same company or user.
- Configurable settings
  - **Nothing** - Allows all self-matching
  - **Warning** - Displays a warning for an order at risk of self-matching
    - **Note:** Warning is selected by default
  - **Error** - Displays an error and prevents the order from being sent to Globex

### Self-Match Prevention

- CME Direct also supports the native Globex Self-Match Prevention functionality with one nuance:  
**1 SMP ID stored per Company**
- Can be applied across GFID and Clearing Firms
- Will cancel the resting or aggressing order per normal Self-Match Prevention functionality

# Treasury Price Format Change Tick Reduction

Trading platforms for cash Treasury Securities have introduced trading at 1/8 of 1/32<sup>nd</sup> and 1/16 of 1/32<sup>nd</sup>. CME Group intends to ensure, where appropriate, the futures market will support the same level of precision

- Enhancements will support order entry, market data and clearing at up to **9 decimal point precision** for futures and future spreads
  - Current: 1/4 of 1/32<sup>nd</sup>, or 0.0078125
  - New: 1/8 of 1/32<sup>nd</sup>, or 0.00390625
  - New: 1/16 of 1/32<sup>nd</sup>, or 0.001953125

## System Impacts

- CME Globex iLink, MDP3, Streamlined MDP, Drop Copy and Referential Data
- Expit trade reporting via CME ClearPort and CME Direct
- Trade confirmations and clearing messaging and reports

## Timelines

- Technical specifications: Q4 2017/Q1 2018
- New Release: Q2 2018
- Target Production: 2nd half of 2018

# Fixed Income Futures Display Format

## Example of Current Trading Screen

CC	Product	+	Description	Qty	Bid	Ofr	Qty
- Treasury Futures							
ZT	2-Year U.S. Treasury Note Future	<input checked="" type="checkbox"/> <input type="checkbox"/>	Sep17	41	108'070	108'075	163
				837	108'067	108'077	603
				563	108'065	108'080	503
				104	108'062	108'082	97
				262	108'060	108'085	90

## Expectations for Going Forward

	Fractional	Decimal	Displayed
	1/8	0.125	108'071
1/4	2/8	0.250	108'072
	3/8	0.375	108'073
1/2	4/8	0.500	108'075
	5/8	0.625	108'076
3/4	6/8	0.750	108'077
	7/8	0.875	108'078
-	8/8	1.000	108'080

# 30 Day Federal Funds Futures Changes

## 30 Day Federal Funds futures and future spreads are moving to a new market data channel and a different Market Segment Gateway

- Move market data from current MDP channel 344 to new channel 348-CBOT Interest Rate Futures II for 30 Day Fed Funds futures and future spreads
  - New IPs and ports are available in the CME Globex Notice
- Move from Market Segment Gateway (MSGW) 84 to MSGW 82

### Customer Impacts:

- Connect to the new MDP 3.0 channel for 30 Day Fed Funds futures market data
- Update MSGW routing rules for 30 Day Fed Funds
- Manage the relationship between DC 4.0 sessions and corresponding IP addresses and market segments

### Launch Timeline:

- **New Release** – Available now!
  - Certification is not required
- **Production Phase In – Q4 2017/Q1 2018**
  1. Heartbeats on new MDP 3.0 channel 348
  2. Futures move to Market Segment 82 and market data published on new channel 348

# Agenda

- Globex Technology Changes
- **Update on Risk Management**
  - **In-Line Credit Control Updates**
  - **Cross Venue Risk**
  - **MiFID II Reporting**
- Customer Tools & GUIs
- Product Updates
- Partner Updates
- Q&A

# In-Line Credit Controls

Launched across all market segments in August

## **CME Globex Pre-trade Risk Management:**

- Managed through the CME Account Manager tool, a more granular type of pre-execution risk coverage than Globex Credit Controls (GC2)
- Daily maximum long & short position limits, per product, at the account level
- Limits set separately for future and option products
- No latency disadvantage - all Globex orders pass through ICC, regardless of whether the account is registered

## **Current Functionality:**

- Clearing Firm and Executing Firm Risk Admins may both register accounts & set respective limits on the same account, the most restrictive limits apply
- Excel upload feature for bulk account registration and limit setting
- Configurable email alerts & Risk Admin dashboard for monitoring
- Historical account activity reporting to facilitate Risk Admin's limit setting

## **Planned 2018 Functionality:**

- Start of Day position upload capability (optional)
- Ability to group accounts together for limit settings



# Cross Venue Risk

**Cross Venue Risk is CME's next major risk management enhancement and will include several new functions**

**Cross Venue Risk** will allow clearing firms to set a one stop, real time set of dollar based limits encompassing **both OTC and exchange traded contracts** at the account level via the CME Account Manager tool.

Account registration required by Clearing Firm or approved entity Risk Admins.

## **Functionality:**

- Dollar Value P&L Limits across Globex and ClearPort
- Credit based limits
- Net Liquidating value limits (P&L value + Credit)
- Configurable email alerts and dashboard for monitoring
- Account grouping under a single P&L limit
- Optional Start of Day positions at the account level

**\*Beta program availability in New Release by Q1 2018**

# MiFID II Reporting

It is possible for contracts traded on non-EU markets such as CME Inc., NYMEX, COMEX and CBOT to be in scope of the transaction reporting obligation if they:

- Share the same reference data details as contracts traded on the EU trading venue.
- Have an underlying that is a financial instrument or index or basket made up of financial instruments that are traded on an EU trading venue.

A list of all relevant products will be available soon on CMEs European Regulation website.

To support MiFID II reporting requirements, CME Group will provide the following:

- Reports:
  - A daily CSV report for each clearing or executing firm containing the trades for products subject to MiFID II reporting requirements, available through CME Group sFTP site or the Enterprise Reporting Portal (EREP).
  - A CSV report on products covered under MiFID requirements.
  - Sign-up for reports will be available from [cmegroup.com](http://cmegroup.com).
- User Guide and Specifications
  - Available soon.

Certification is not required.

**Production Launch: January 2018**

For more information, contact [gamemea@cmegroup.com](mailto:gamemea@cmegroup.com)

# Agenda

- Globex Technology Changes
- Update on Risk Management
- **Customer Tools & GUIs**
  - **DataMine**
  - **CME Direct**
  - **STP**
  - **Tiered Credit**
- Product Updates
- Partner Updates
- Q&A

# New DataMine Features

- **Three new data delivery mechanisms**
  - File Browser download (Available)
    - Ability to download data directly from DataMine website.
  - Query API (Q4)
    - RESTful solution to optimize download of DataMine datasets.
  - Python API (Q1 '18)
    - Ability to leverage CME Market Data with native Python tool kit.
- **New CME and Partner Exchange historical datasets available**
  - MBO FIX (Q4)
  - Volume and Open Interest (Q4)
  - IRS/OIS (Q4)
  - DME- Intraday and EOD (Q4)
  - Eris- Intraday and EOD (Q4)
- **3<sup>rd</sup> Party Datasets available soon**
  - External data relevant to CME markets. (Q1 '18)

# CME Direct – 1 October 2017 Release

## Equities-style options grid

- Quickly create an options grid based on underlying futures contracts
- Grid will automatically load all option expirations based on the underlying term order

## Vol Quoted Options Phase 2

- CME Direct will calculate the deltas, greeks and market implied premiums

## OTC Pre-Trade Allocations

- Users can allocate an OTC deal across multiple clearing accounts and clearing members

## GCC Alerting tool

- The GCC will be able to send alerts to all CME Direct users as needed

The screenshot shows the 'Quick Options Grid' window. At the top, there are filters for 'Acct' (set to '<No preference>'), 'Future' (set to 'ES: E-Mini S&P 500 Futu'), 'Expiry' (set to '1 Year'), and 'Category' (set to 'All'). Below these filters is a table with columns: Open Int, Volume, Last, QS, C..., C Bid, C Oftr, C Qty, Strike, P..., P Bid, P Oftr, P... The table lists several options with their respective dates, DTE, and strikes. A red box highlights the 'Future' dropdown menu.

Below the table is the 'Quick Options: Grid Builder' dialog box. It has tabs for 'Markets' and 'Preferences'. The 'Preferences' tab is active, showing fields for 'Tab name' (Quick Options Grid), 'Expiry' (1 Year), 'Product' (ES: E-Mini S&P 500 Future), and 'Number of strikes' (10). There is a 'Category' section with checkboxes for 'Weekly Monday', 'Weekly Wednesday', 'Weekly Friday', 'Monthly', and 'EOM'. To the right is a 'Selected Expirations' table with columns for 'Mid Strike', 'Strikes', and 'Strik...'. This table lists various option expirations with their mid strikes and strike counts.

The screenshot shows the CME Group interface. At the top, there is a navigation bar with 'CME Group', 'CME Direct', 'Excel', 'Chat', and 'Menu'. A red banner at the top right reads 'CME Direct/ClearPort OTC Deal Entry Issue'. Below the navigation bar, there are two windows. The first window is 'Futures Grid' and the second is 'Options (Calls/Puts) G...'. The 'Options' window shows a table with columns: Open..., Volume, Last, QS, C..., C Bid. The table lists 'Com Option Aug17, 22.96 days' and 'Com Future Sep17'. The second window is 'CME Global Command Center Alert' and displays a red alert message: 'CME Direct/ClearPort OTC Deal Entry Issue'. The alert text reads: 'We are aware of an issue impacting users' ability to access ClearPort & Account Manager and users' ability to place OTC deals on CME Direct and ClearPort. If you have any questions, please contact the CME Global Command Center in the U.S. at +1 800 438 8616, in Europe at +44 20 7623 4747 or in Asia at +65 6532 5010. The sender provided the following contact information: Sender's Name: CME Global Command Center, Sender's Email: gcc@cmeigroup.com, Sender's Contact Phone: 1800 438 8616. There is an 'Acknowledge' button at the bottom right of the alert window.

# CME STP

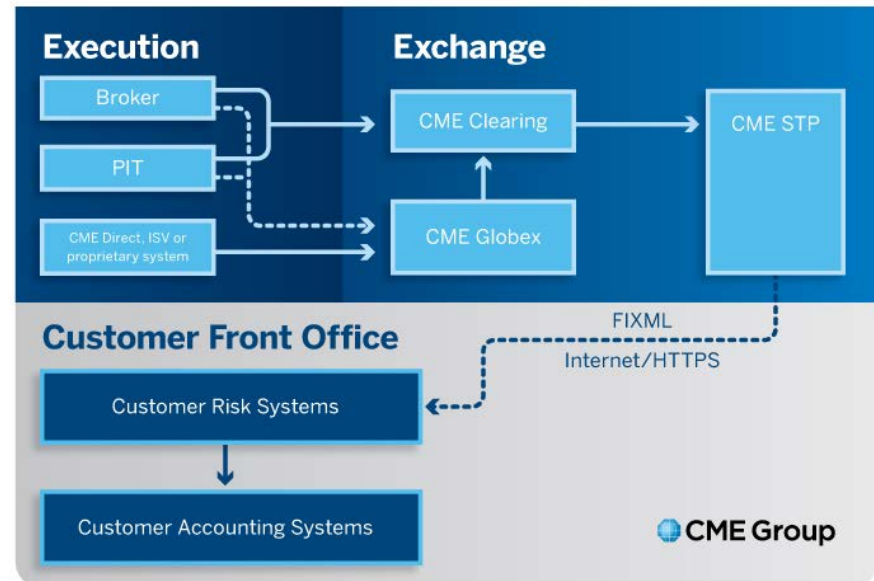
## API/UI to capture your Cleared and Brokered trades directly into your risk system

- Direct feed, at no cost, from Exchange to customers
- Customers do not have to rely on FCM for data, one source for all exchange transactions
- STP for all cleared trades regardless of venue, exchange, front-end system
- Single Sign on with CME Group Login
- Extend error checking to the Front Office – trader has ability to review STP trades in real time
- Available in FIX or FIXML format
- View trades via CME STP Trade View
- Reduces the time, cost, and risk associated with manually entry

### More Info:

[www.cmegroup.com/stp](http://www.cmegroup.com/stp)

### CME STP Workflow



# CME STP Trade View

Standalone web-based screen to view your Cleared and Brokered trades

## CME STP Trade View



**Search Trades** My Profiles Matt Demo (Default) Save Delete ⌵

Firm Type: Trading Firm Firm: HEALY\_BROTHERS\_ARBHT Trans Type: Legged Start Time: 21 Sep 2017  Include time?

[Hide Advanced Search](#) ⌵

Trade Date:  Instrument Type:  Exchange:  End Time:   Include time? Cycle Date:

Product:  Input Source:  Venue Type:  Trade ID:  Secondary Trade ID:

Client Order ID:

Max Records: 1000 Search Reset

Displaying 1 to 57 of 57 Trades | View 1000

Symbol	Product	Exchange	Instrument Type	Trade ID	Secondary Trade ID	Exec ID	Qty	Price	Trade Date	Transaction Time (CDT)	Trans Type
RPH8	Euro/British Pound Futures (RP)	CME	FUT	100002	15EA16DD4C70001D1872	4256140	51	0.8868	09/21/2017	09/20/2017 21:31:43	Outright
CLZ7	Crude Oil Futures (CL)	NYMEX	FUT	100016	15EA1700FE60004DCBA	4256152	50	51.04	09/21/2017	09/20/2017 23:46:01	Outright
CLX7	Crude Oil Futures (CL)	NYMEX	FUT	100001	15EA1700FE60004D1178	4257993	50	49.01	09/21/2017	09/21/2017 02:00:32	Outright
CLX7	Crude Oil Futures (CL)	NYMEX	FUT	100002	15EA1700FE60004D1192	4258011	50	49.01	09/21/2017	09/21/2017 02:00:59	Outright



### TRADE DETAILS

Not An Invoice

[CME STP Trade View](#)

Deal Date: 2017-09-20 21:31:43 CDT

<b>Buyer</b>	<b>Seller</b>
Firm: Healy Brothers Arbitrage	CME
<b>Broker:</b>	
Morgan Stanley Bank North America	
ANJALI SATPUTE	

### Product Details

Price: 0.8868

Cleared Details: CME CME CME 100002

FCM & Account: 600 052G07031

Security Long Name: Euro/British Pound Futures

Product Details: CME CME RP RPH8

Total Quantity: 51

# Tiered Credit (Delegated Intermediary)

Allows for an approved CME Account Manager Risk Administrator to set a Delegated Intermediary to manage their own customer accounts, creating a more simplified and streamlined approach to managing risk

## Benefits to Delegated Intermediary:

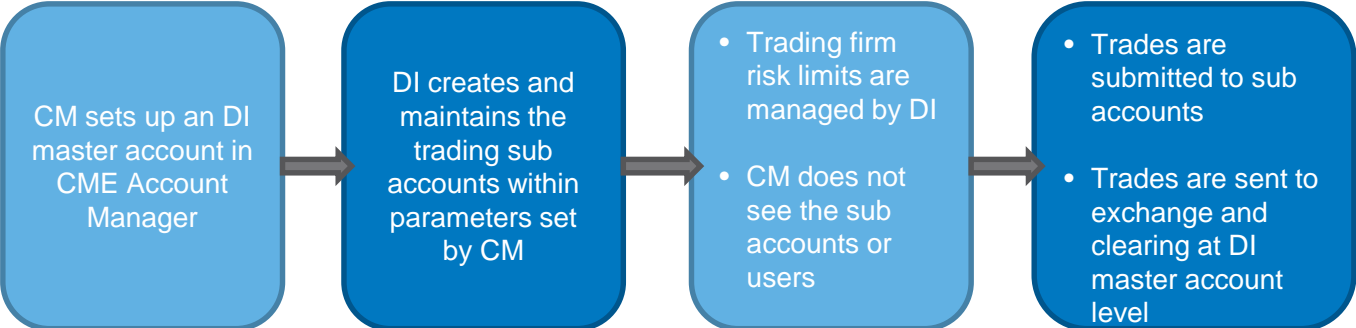
- Preserve Customer Anonymity
- Ease of Customer Onboarding
- Directly manage credit at the trading sub account level

## Benefits to CME Clearing Members:

- Simplified account and credit management
- Management of credit at the master account level, enabling Designated Intermediaries to manage credit at trading sub account level independently
- Save time, money and regulatory burden without having to onboard customers or create accounts, which is now done by Delegated Intermediary



# Delegated Intermediary (DI) Account Workflow

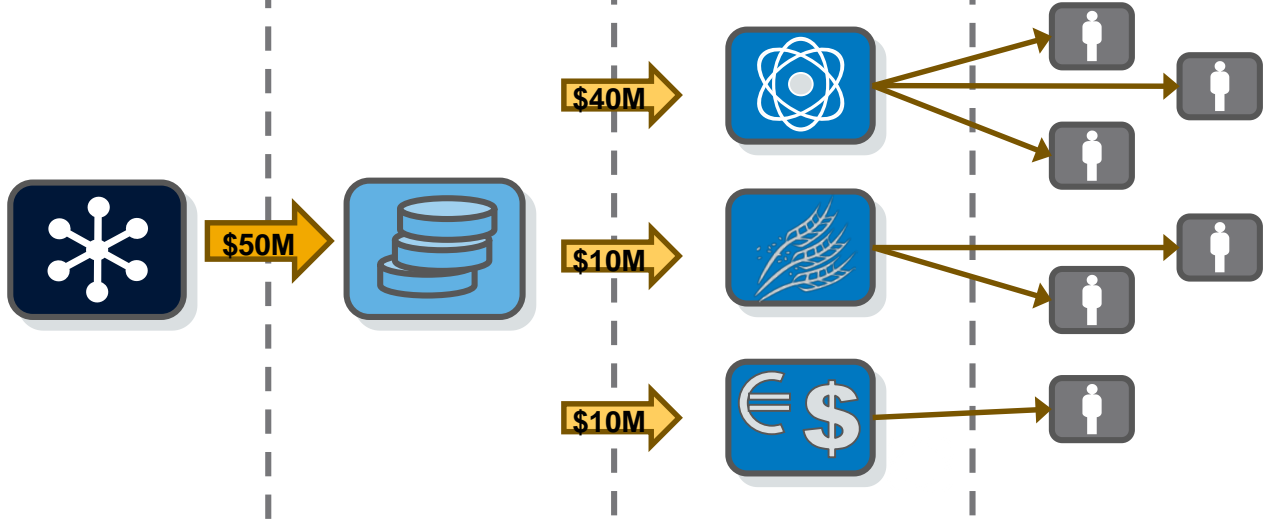


Clearing Member (CM)

Delegated Intermediary (DI)

Trading Firm

Trader



# Agenda

- Globex Technology Changes
- Update on Risk Management
- Customer Tools & GUIs
- **Product Updates**
  - **New! FX Link**
  - **Russell**
  - **Nymex WTI**
  - **Interest Rates**
- Partner Updates
- Q&A

# CME FX Link Overview

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

## Offering Overview:

- 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: EURUSD, JPYUSD, GBPUSD, CADUSD, AUDUSD, MXNUSD

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

**New Release: 16 November 2017**

**Production Launch: Q1 2018**

# FX Link 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

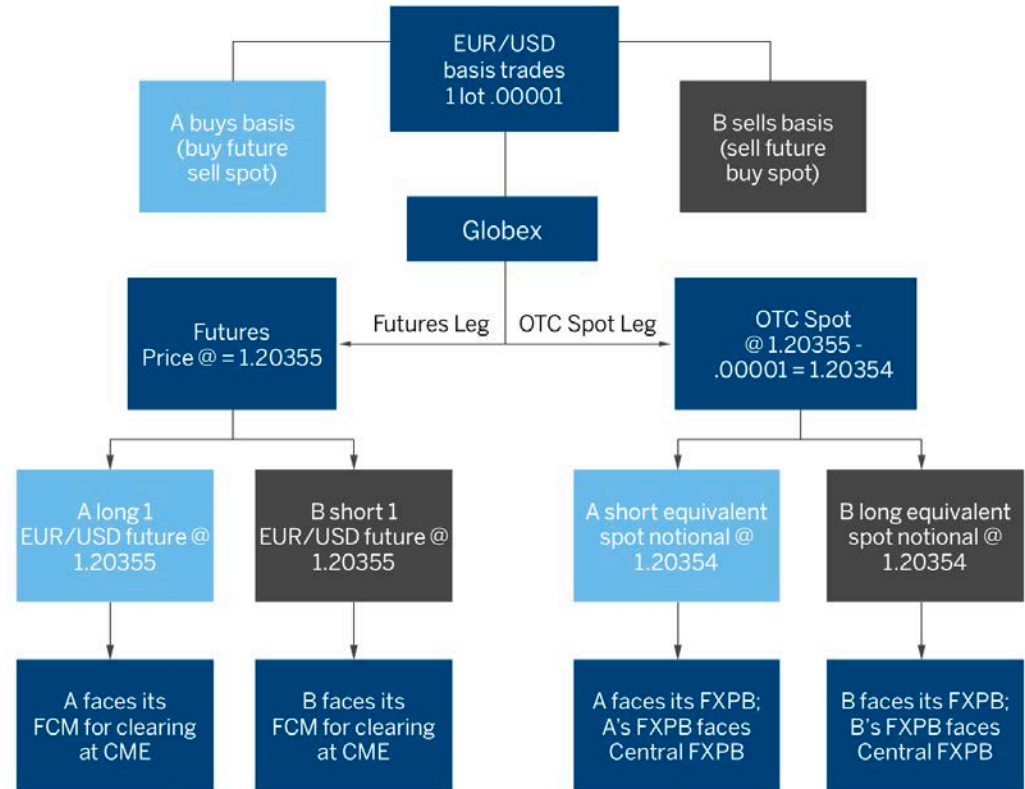
## Basis Spread Leg Pricing

- 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)

## CME FX Link Trade Workflow



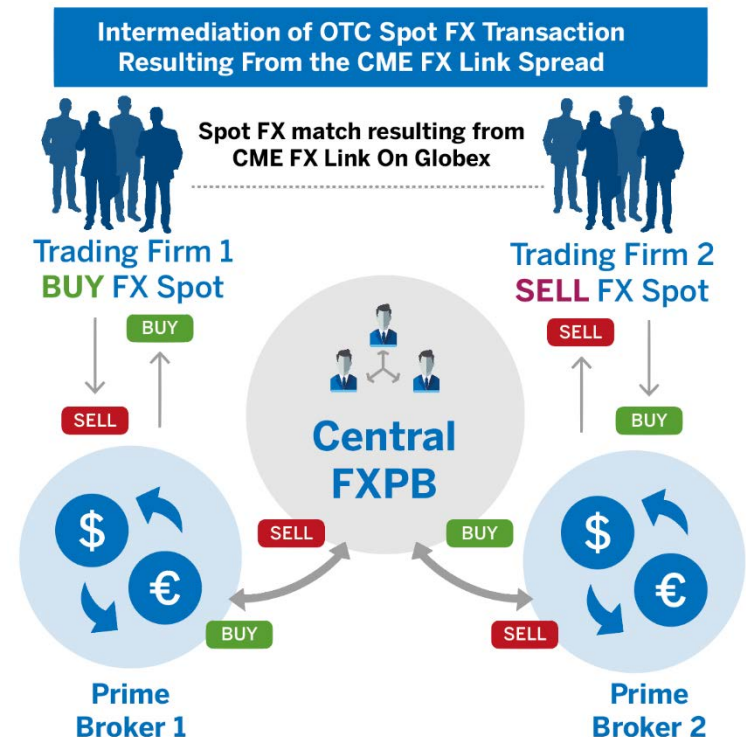
# CME FX Link Onboarding - Trading Firm (End User)

- 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
- An End User’s FCM enables trading of FX Futures through CME FX Link spreads via Schedule 6 of the Globex Connectivity Agreement, no other FCM setup is required
- End User’s Prime Broker will allocate credit limits for the End User to trade the OTC spot FX leg of CME FX Link spreads via ICC in CME Account Manager tool
  - *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*
  - *Prime Broker will not see which FCM the accounts or executing firms are associated with*
- End user can consume the OTC spot FX trade messages via their prime broker, or CME messaging (STP)

# 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 an 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



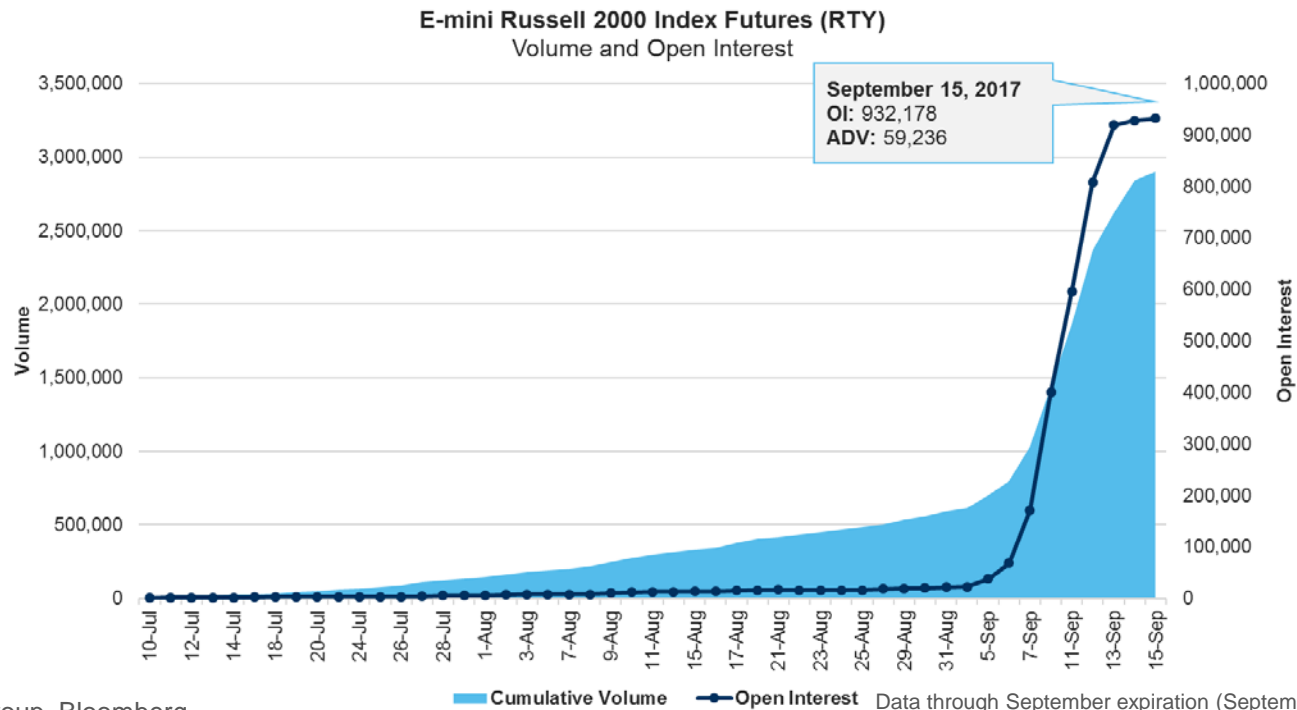
# E-mini Russell 2000® Index Futures & Options

## Small Cap, Big Opportunity

The market has spoken: CME is the destination to trade Russell 2000 Index futures.

Following the September Equity futures expiration, open interest in the December E-mini Russell 2000 Index futures contract (RTYZ7) surpassed 521K contracts, ~10x the open interest at ICE. Approximately 1 million rolls traded during the Sep-Dec roll period.

CME Group is proud to be the home of the market-leading E-mini Russell 2000 Index futures and options and offer market participants deep liquidity, margin offsets and portfolio savings.



Source: CME Group, Bloomberg

# Nymex WTI – The “new old” global benchmark

North America’s export focus is reinforcing its global oil relevance

## U.S. crude oil production proves resilient

- Up 70% from 2010 to 9.43 million bpd in July 2017
- Supply Slated for production to reach 12 mm bpd by 2025 – surpassing Saudi Arabia’s current production

## U.S. petroleum exports continue to increase, reshaping crude oil market

- Crude oil exports hit a record 1.3mm bpd the week of 26 May 2017
- Combined crude oil and petroleum exports averaging 5.6mm bpd in 2017

## WTI has reclaimed its status as the leading indicator for price discovery

- WTI reduces discount to Brent – 5% the flat price
- Exchange cleared WTI derivatives at historic highs

“Waterborne WTI” at the USGC is becoming the marginal refined crude barrel that is setting global prices



# Interest Rate Highlights

## Overall

- Futures open interest (OI) hit a record 26.1M on 29 Aug
- Record 1,952 Large Open Interest Holders (LOIH) in Rate futures on 5 Sept

## Fed Fund Futures

- OI reached a record 1.8M contracts on 1 Sept
- YTD, Fed Fund futures ADV is 210K, +62% YoY

## Eurodollars

- Options trading surpassed 40% electronic in August, a new record for electronification
- Futures OI hit 14.3M on 11 Sept, the highest level ever

## Treasuries

- Numerous OI records: Total Treasury F&O (17.7M, 24 Aug), Treasury futures (10.7M, 28 Aug), Treasury options (7.2M, 8/24), Ultra Bond (956K, 25 Aug)
- Record 1,350 Large Open Interest Holders on 22 Aug
- Treasury futures notional volume is now 86.7% of the cash Treasury market on a 52-week moving average basis through 23 Aug, an all-time high
- Record Wednesday Weekly Treasury options single day volume of 59K on 8/29 (product launched 5 June 2017)

## Ultra 10

- Record OI of 461K on 28 Aug
- Record quarterly ADV: 120K for Q3 2017 QTD, including a single day record of 464K on 25 Aug
- Avg. top of book of 147 contracts over the last 3 months, from ~90 in Q1.
- 36.3M contracts traded since 11 Jan 11 2016 launch, making it the most successful new product launch in our history

*YTD as of 9/19/17*

# Agenda

- Globex Technology Changes
- Update on Risk Management
- Customer Tools & GUIs
- Product Updates
- **Partner Updates**
- Q&A

# Partner Updates

- **CME Digital Asset Trading Platform (Royal Mint Gold)**

The Royal Mint and CME Group collaborated to create the first ever digitized gold contract; Royal Mint Gold (RMG) a cryptographically secure alternative to buying, holding or selling spot gold. The CME Group Digital Asset Trading platform will deploy and support trading of RMG in Q4 2017.

- **Dubai Mercantile Exchange**

Since April, DME has hosted multiple auctions for Iraq's National Oil Company SOMO, the Oman Ministry of Oil and Gas, and Malaysia's Petronas; the first state-owned company to sell a non-Middle East oil on the platform

- **Eris**

10 July, Eris enhanced its market data feed by offering Theoretical Updates for Book processing, New Daily Statistics, Reference Data and Expansion of Instruments

- **Minneapolis Grain Exchange (MGEX)**

Trading volume at MGEX reached record levels in spring and summer of 2017 (June ADV: 20,155), due to weather-driven volatility for their flagship Hard Red Spring Wheat product. Elevated participation rates and interest in market data remain for MGEX products listed on CME Globex.

- **Taiwan Futures Exchange (TAIFEX)**

TAIFEX began listing CME-Licensed DJIA and S&P 500 futures products on their TAIFEX platform in May 2017. Both products have similar specs as Globex-listed DJIA and S&P 500 futures contracts, however TAIFEX products are listed in TWD.

[http://www.taifex.com.tw/eng/event/SPF\\_UDF/index.asp](http://www.taifex.com.tw/eng/event/SPF_UDF/index.asp)

# Partner Updates

## Bursa Malaysia (BMD)

### Product Enhancement

#### **Butterfly and Condor Spreads added for BMD's flagship product, Crude Palm Oil Futures (FCPO)**

- Enhance market efficiency by providing traders flexibility to manage trading positions.
- Improve prices and deepen overall liquidity in associated contracts.

### Improving Rule and Regulatory Environment

- **Forward Hedge of Crude Palm Oil Futures and Options allowed by Central Bank of Malaysia**

A non-bank, non-resident market participant registered with the Central Bank is now allowed to enter into forward contracts with a licensed onshore bank or an appointed overseas office.

For full details, please refer to BMD Notice below:

[http://www.bnm.gov.my/index.php?ch=en\\_announcement&pg=en\\_announcement&ac=569&lang=en](http://www.bnm.gov.my/index.php?ch=en_announcement&pg=en_announcement&ac=569&lang=en)

- **Decoupling of Participants**

BMD has recently decoupled clearing participants from trading participants to allow for stand-alone clearing participants for cost and capital efficiency in participating BMD membership.

- **Reduction Of Minimum Negotiated Large Trade (NLT) Size For New/Illiquid Products**

In early 2017, BMD reduced the Minimum Volume Threshold (MVT) for new and illiquid futures and options products to 10 and 50 lots, respectively.

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