

OTC Clearing Readiness

April 2013

Clearing Mandate Timeline

2013	Category 1	March 11 th	<p>Category 1: Clear all swaps subject to the mandate 90 days after the final rule on mandated clearing of interest rate and credit swaps is published.</p> <ul style="list-style-type: none"> • Swap Dealers (SDs) • Security-Based SDs • Major Swap Participants • Major Security-Based Swap Participants • "Active Funds": Private Funds (as defined under the Investment Advisors Act) trading 200+ swaps per month for the preceding twelve months
	Category 2	June 10 th	<p>Category 2: Clear all swaps subject to the mandate 180 days after the final rule on mandated clearing of interest rate and credit swaps is published.</p> <ul style="list-style-type: none"> • Commodity Pools • Private Funds (who are not active funds) • Persons who are "predominately engaged in activities that are in the business of banking, or in activities that are financial in nature as defined in Section 4(k) of the Bank Holding Company Act" (except for non-third party subaccount structures)
	Category 3	September 9 th	<p>Category 3: Clear all swaps subject to the mandate 270 days after the final rule on mandated clearing of interest rate and credit swaps is published.</p> <ul style="list-style-type: none"> • All others subject to the mandate (non-commercial end users hedging commercial risk) • Pension funds • Those entities with a third-party subaccount structure <p>Note: Third-party subaccount means an account that is managed by an investment manager that (1) is independent of and unaffiliated with the account's beneficial owner or sponsor, and (2) is responsible for the documentation necessary for the account's beneficial owner to clear swaps.</p>

OTC Clearing Checklist

How to Get Ready with CME Group

Critical Items	Useful Information
<ul style="list-style-type: none"><input type="checkbox"/> Affirmation platform selection and testing<input type="checkbox"/> Account registration for OTC Clearing<input type="checkbox"/> Finalize legal documents with Clearing Members<input type="checkbox"/> Select fee program and netting style<input type="checkbox"/> Clearing Members set up Production accounts that are ready for clearing<input type="checkbox"/> Execute first cleared trade in Production<input type="checkbox"/> Execute Production trade with each counterparty	<ul style="list-style-type: none"><input type="checkbox"/> Run margin simulations with CME CORE<input type="checkbox"/> Run portfolio margining analysis through CME CORE (if applicable)<input type="checkbox"/> Set-up CME secure FTP site for direct access to reporting:<ul style="list-style-type: none"><input type="checkbox"/> Position valuation reports<input type="checkbox"/> Client account margin reports<input type="checkbox"/> IRS curve data<input type="checkbox"/> Hold deep dive meetings with CME Group subject matter experts on products, operations, and risk management<input type="checkbox"/> Evaluate back-loading alternatives (if applicable)

CME Account Registration

- In order to clear OTC IRS, CDS, and NDFs at CME, you need to register your accounts with CME
- The process has been streamlined and now only requires one file to be filled out
 - Required Information:
 - Address and User Information
 - API Relationship Form
 - Listing the Entities (only applicable if registering multiple account owners)
- Download Registration Form, including full details and instructions at www.cmegroup.com/otcregistration *(Full details and instructions are included)*

Any questions related to the ClearPort Registration process:
(including changes, additions, or deletions once complete)

Contact the Team at clearportregistration@cmegroup.com

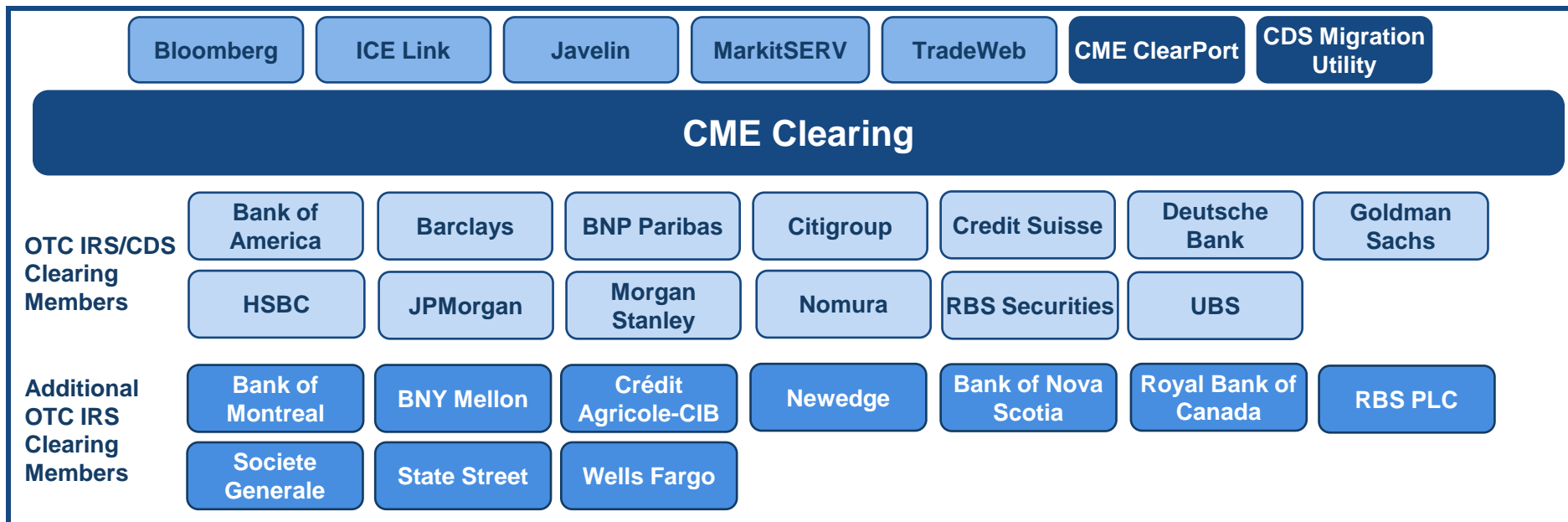
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 - Required Information:
 - API Relationship Form
 - Address and User Information
 - List of Funds (only required for Investment Advisors registering multiple funds)
- Download Registration Form, including full details and instructions at www.cmegroup.com/otcregistration *(Full details and instructions are included)*

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Platforms Connected to CME Clearing

Several market leading affirmation platforms and Swap Execution Facilities are directly connected to CME Clearing



- Negotiate, execute, and submit trades through multiple venues to CME Clearing
- Straight through processing and real-time confirmation once the trade is cleared
- Protects the confidentiality of trading relationships, while enabling customers to terminate positions with any market participant
- Operational flexibility of a multi asset class solution for IRS, CDS, FX, and Commodities via one clearinghouse

Testing: *UAT Environment Overview*

For specific test scripts contact your Clearing Member Firm

Step 1:

- Submit trades to CME Group for Clearing
 - IRS: various tenors (2,5,10,30 years)
 - CDS: index and single names with applicable tenor(s)
 - FX: one or more NDFs
- OBSERVE the following:
 - ✓UAT Accounts properly mapped to CME
 - ✓Client has the ability to select Clearing Member Firm on Affirmation Platform
 - ✓Client has the ability to submit client-driven reference ID to CCP
 - ✓Client observes both pending and cleared status
 - ✓Client sees trades on both CME and Clearing Member Firm end-of-day registers
 - ✓Valuation in line with expectations
 - ✓Initial Margin in line with expectation
 - ✓Verify Coupon Settlements
 - ✓Validate Price Alignment Interest Calculations

Testing: *UAT Environment Overview*

Step 2:

- Terminate Various Cleared Trades

- ✓ Verify Pricing on T+1 Settlement of Upfront Payments
- ✓ Confirm the Affirmation Process: Able to affirm a new trade when terminating an existing trade
- ✓ Netting Options
- ✓ Integration with Client's internal systems

Step 3:

- Repeat **Steps 1-2**, *if applicable*, with the following Variables:

- Executing Counterparties- Trade with *one counterparty* and clear with *another counterparty*
- Alternative Clearing Member Firms
- Alternative Affirmation Platforms
- Transfers
- Allocations

Testing: *Production Environment*

Steps:

- Repeat **Steps 1-3** of ***UAT Testing*** with **Production Accounts**
 - Verify Internal Systems are compatible with:
 - ✓Trade Submission
 - ✓Cash Flows
 - ✓Initial Margin
 - ✓Terminations

The Most Transparent OTC Clearing Solution

CME Group provides direct access to daily reports through a secure FTP site, which enables customers to fully integrate key OTC data into their internal systems

Position Reporting via the Trade Register

- End of day mark to market values for all IRS positions across all clearing members, including existing trades and any new trades cleared that day
- Available at 4:45pm EST, so customers and their approved administrators/custodians can complete their daily NAV reports

IRS Curve Data

- CME offers full transparency into IRS valuation, including a detailed white paper on curve construction, enabling customers to replicate our IRS valuation curve and calculate the value of their IRS positions
- The secure FTP site provides daily IRS curve data across all currencies, including curve inputs that are used to construct both the forecasting and discounting curves, and the curve outputs like daily forward rates and discount factors

Client-level Margin Files

- Clients can see the exact initial margin requirements for each account that CME is passing on to the FCMs for Cleared OTC IRS, CDS, and FX”
- Utilized to verify the margin requirements clients are being charged by their FCMs and also to help ensure their accounts are properly funded before the FCMs make their margin calls the following day

To set up a secure FTP site for your firm, please contact: CME Onboarding Group at onboarding@cmegroup.com or (312) 338-7112

IRS Reporting

Establish a secure FTP site to get access to these reports

CME Group provides direct access to daily reports through a secure FTP site, which enables customers to fully integrate key OTC data into their internal systems.

Reports	Description	Time	Available in Testing	Available in Production
Preliminary Trade Register	Includes new and open trades as well as corresponding cash flows on positions cleared prior to 4:45 p.m. EST on that day	4:45 p.m. EST		✓
End-of-Day Trade Register	Includes new and open trades as well as corresponding cash flows on positions cleared on that day	8:00 p.m. EST	✓	✓
Curve Input Report	Contains the curve inputs of the CME Swap Curve	4:30 p.m. EST	✓	✓
Discount Factor Report	Displays the daily discount factor out of 31 years	4:30 p.m. EST	✓	✓
CME Holiday Calendar	Shows the CME Holiday Calendar	3:00 p.m. EST	✓	✓
PAI Rate File	Provides the rate used to calculate PAI	1:00 p.m. EST	✓	✓
Client Margin Report	Provides an account by account breakdown of your initial margin requirements across your FCMs	10:00 p.m. EST		✓

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CDS Reporting

Establish a secure FTP site to get access to these reports

CME Group provides direct access to daily reports through a secure FTP site, which enables customers to fully integrate key OTC data into their internal systems.

Reports	Description	Time	Available in Testing	Available in Production
Product Reference File	Product specific information for products we clear	6:00 p.m. EST	✓	✓
Early Settlement Price File	Provides preliminary settlement prices	4:45 p.m. EST	✓	✓
Final Settlement Price File	Provides final settlement prices	5:00 p.m. EST	✓	✓
Client Margin Report	Provides an account by account breakdown of your initial margin requirements across your FCMs	10:00 p.m. EST		✓
CDS Position Report	CDS positions marked-to-market once a day	9:00 p.m. EST		✓

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CME CORE

Transparency through an interactive Margin Calculator

CME CORE Overview

- Interactive Margin Calculator to view initial margins and calculate portfolio margining savings
- “What if” analysis shows how margins will change as positions are added or removed from any given portfolio
- Choose from multiple upload options or manually import your portfolio
- Easily export margin results into Microsoft Excel or Adobe PDF formats

Current Product Offered in CORE

- OTC IRS (USD,GBP,EUR, AUD,JPY,CHF,CAD)
- OTC CDS
- OTC FX
- Eurodollar and Treasury Futures
- Delta Laddering
- *Coming soon: Basis Swaps, FRAs, Zero Coupons, SEK, DKK, NOK*

Margin Optimization

- CORE supports margin optimization, which calculates the ideal allocation of futures to move into an OTC account to minimize portfolio risk, and in turn, minimize IRS margin requirements.
- Portfolio margining savings of Cleared OTC IRS and Interest Rate Futures with savings up to 90%
- Calculates IRS portfolio margins for Clearing Members’ clients, as well as their own proprietary accounts

To learn more about CME CORE and gain access to this tool:
Visit www.cmegroup.com/core

Cleared OTC IRS Product Scope

CME has delivered a comprehensive global product scope that includes the 10 currencies that account for 95% of vanilla IRS market*

EXISTING PRODUCTS

- USD Fixed/Float out to 51 years- 1M, 3M and 6M LIBOR indexes
- EUR Fixed/Float out to 51 years- 1M, 3M and 6M EURIBOR indexes
- GBP Fixed/Float out to 51 years- 1M, 3M, 6M LIBOR index
- CAD Fixed/Float out to 31 years- 3M CDOR index
- JPY Fixed/Float out to 31 years- 1M, 6M LIBOR index
- CHF Fixed/Float out to 31 years- 6M LIBOR index
- AUD Fixed/Float out to 31 years- 3M, 6M BBSW index
- SEK Fixed/Float out to 31 years- 3M STIBOR index
- DKK Fixed/Float out to 31 years- 6M CIBOR index
- NOK Fixed/Float out to 31 years- 6M NIBOR index
- Zero Coupon Swaps: USD, EUR, GBP out to 50 years
- Overnight Index Swap (OIS): USD, EUR, GBP, JPY out to 5 years
- Basis Swaps: USD, EUR, GBP out to 51 years; AUD, JPY out to 31 years
- Forward Rate Agreements (FRA): USD, EUR, GBP, JPY



1H 2013 EXPANSION

May 13th

- Amortizing Swaps
- OIS out to 30 years

June 24th

- Additional Currencies: NZD, HKD, SGD,



2H 2013 EXPANSION

- Swaptions
- Additional Currencies
- Inflation Swaps



* Notional amounts outstanding received from Bank of International Settlements, December 2010

Cleared OTC CDS Product Scope

Clearing Eligible North American Products

Product	Scope	Status
CDX IG	Series 8 7 and 10 tenors	Clearing Eligible
	Series 9 – 12 5, 7, and 10 year tenors	
	Series 13 – 20 3, 5, 7, and 10 year tenors	Clearing Eligible
CDX HY	Series 11 – 20 5 year tenor	Clearing Eligible

Cleared OTC FX Product Scope

12 OTC FX Non-Deliverable Forwards

*All settlements in USD



Brazilian Real



Philippine Peso



Malaysian Ringgit



Indian Rupee



Korean Won



Chinese Renminbi Yuan



Indonesian Rupiah



Taiwan Dollar



Chilean Peso



Colombian Peso



Peruvian Sol



Russian Ruble

26 OTC FX Cash-Settled Forwards

- **USD Settlement:** EUR/USD, AUD/USD, GBP/USD, USD/CHF, USD/SEK, USD/DKK, NZD/USD, USD/NOK, USD/HKD, USD/HUF, USD/ILS, USD/MXN, USD/SGD, USD/PLN, USD/ZAR, USD/CZK, USD/TRY, USD/THB
- **Non USD, T+1 settlement currencies:** USD/CAD, EUR/GBP, EUR/AUD, EUR/CHF
- **Non USD, T+2 settlement currencies:** USD/JPY, AUD/JPY, EUR/JPY, CAD/JPY

Deliverable Swap Futures

Unique way to gain swap exposure with the benefits of standardized futures

Overview

- Created based on strong demand from financial market participants including banks, hedge funds, asset managers and insurers
- U.S. dollar-denominated quarterly contracts expiring on IMM dates for key benchmark maturities (2, 5, 10, 30 years)
- At expiration, all open positions will deliver into CME Group Cleared Interest Rate Swaps
- Complements CME Group's market-leading Interest Rate Futures and Options businesses and Cleared OTC Swap offerings

Key Benefits

- Standardized contracts with margins approximately 50% lower than cleared OTC IRS and fewer line items
- Risk offsets with our liquid Eurodollar and Treasury contracts
- Flexible execution— CME Globex, Blocks, EFPs or Open Outcry
- Trade in an OTC manner — block calendar spreads
 - No block surcharges
 - Lower thresholds
 - Longer reporting time
- Currently have 11 block providers for Deliverable Swap Futures

Product Update

- Contract launched on December 3rd, 2012
- Seen a wide range of market participants including banks, hedge funds, asset managers, and proprietary trading firms
- Successful first expiration and delivery with more than \$500 million in notional (5,081 contracts) delivered across all four tenors. 18% of Open Interest was delivered.
- Have traded over \$19.9 billion in notional contracts (199,604 contracts) and Open interest is now over \$2.9 billion (29,540 contracts) through Globex, block trades, EFPs, and the pit
- Markets remain tight, about ½ bp wide in OTC terms, matching the OTC interest rate market

Helpful Links

CME Group Resources:

- CME Group OTC Products & Services
www.cmegroup.com/otc
- OTC Account Registration
www.cmegroup.com/otcregistration
- OTC Connectivity Partners
www.cmegroup.com/otcpartners
- CORE Margin Tool
www.cmegroup.com/core

Futures trading is not suitable for all investors, and involves the risk of loss. Futures are a leveraged investment, and because only a percentage of a contract's value is required to trade, it is possible to lose more than the amount of money deposited for a futures position. Therefore, traders should only use funds that they can afford to lose without affecting their lifestyles. And only a portion of those funds should be devoted to any one trade because they cannot expect to profit on every trade.

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