

# OTC Financial Reform & CME Group Offerings

# Dodd Frank Financial Reform

December 2013

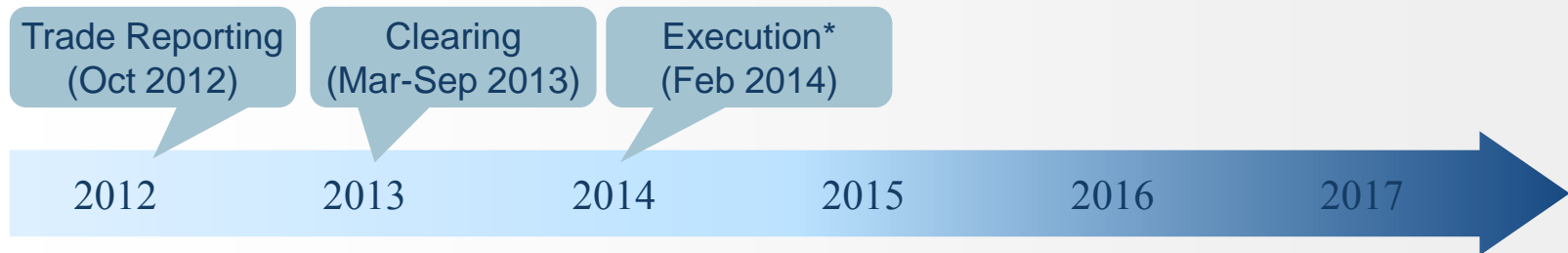
# U.S. Response to Financial Crises

**Dodd-Frank Wall Street Reform and Consumer Protection Act (Dodd-Frank Act '10 ) comprehensive reform of OTC market**

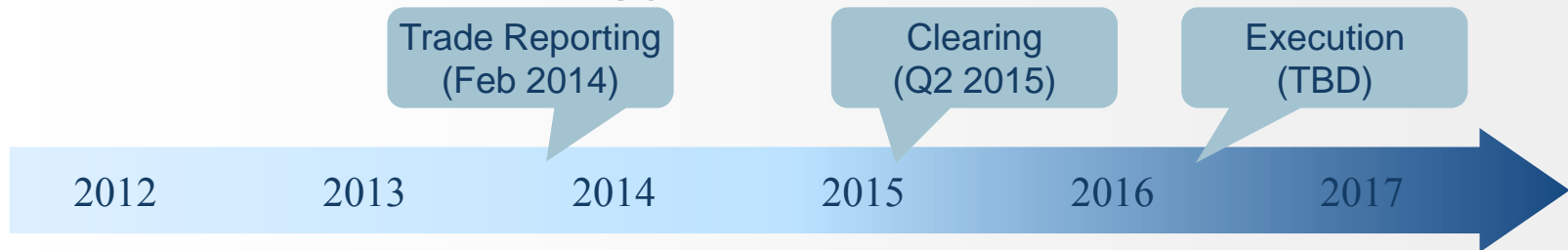
- 1. Clearing--certain swaps are required to be cleared at a CFTC regulated derivatives clearing organization (DCO)**
- 2. Swap Dealer Oversight--requires registration of Swap Dealer and Major Swap Participants**
- 3. Price Transparency--requires swap transactions to be reported to a Swap Data Repositories (SDR) and trading to be transacted on Swap Execution Facilities (SEFs)**

# Timeline of Marketplace Changes

While Dodd-Frank has recently been implemented in the US...



Similar regulation has been approved in the EU and is scheduled to be implemented over the coming years...

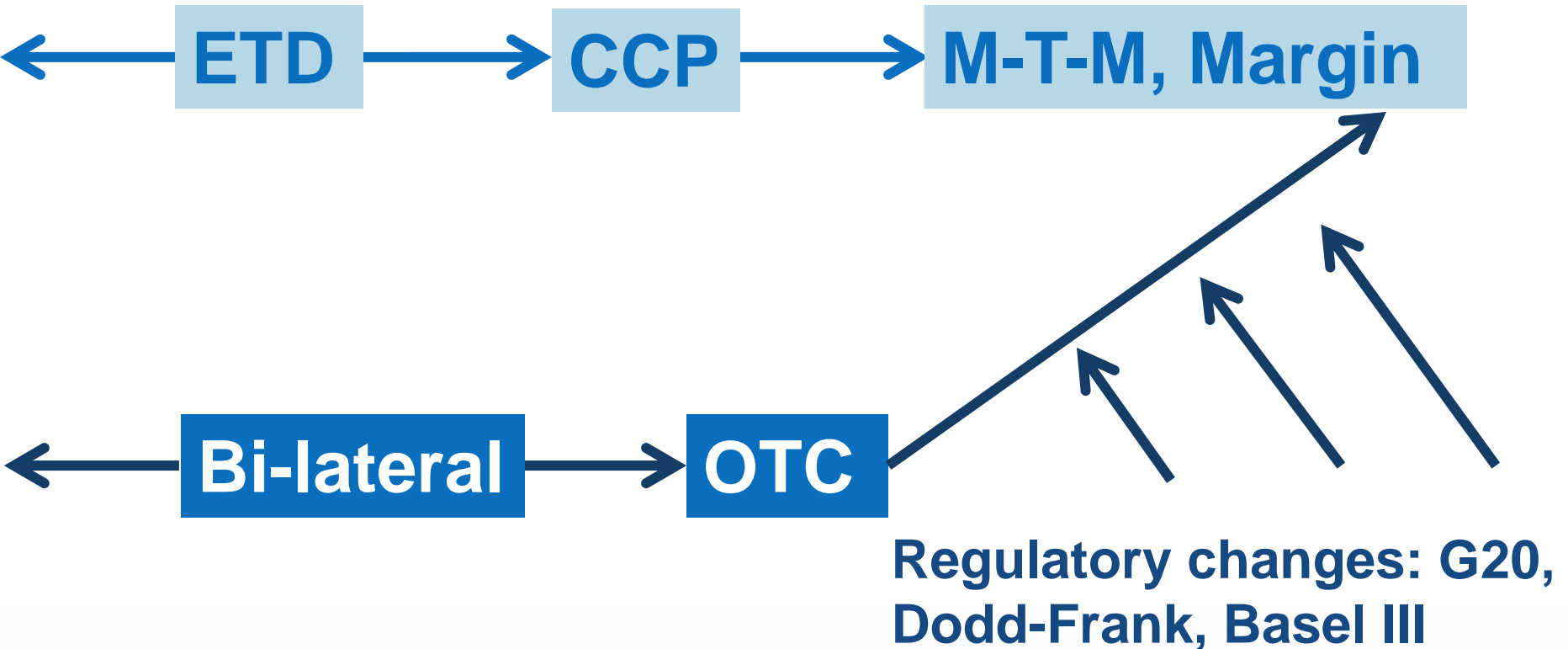


European regulators are concerned about the timing of the SEF requirement in the US, and its potential impact on European trading venues

Note: \* Starting with Interest Rates and Credit

Source: CME Group Government Affairs

# Financial market reform is redefining the marketplace



# CME Response to the Financial Crisis

**The Dodd-Frank Act reinforces the core tenets of CME Group:**

- **Safety and Soundness of Central Counterparty Clearing**
- **Price and Regulatory Transparency**
- **Liquid Markets with Low Transaction Costs**
- **Market Integrity and Customer Protection**

# Cleared OTC IRS

*Security. Neutrality. Transparency.*

November 2013

# Multi-Asset Class Solution via One Clearinghouse

## Delivering Capital Efficiencies in a Capital Constrained World

- CME has worked closely with buy-side and sell-side participants to build a multi-asset class, market leading OTC Clearing Solution
- Builds on the strength of CME Group's market leading Interest Rate and FX futures and options products
- Through Q1 2013, over 75 firms have cleared trades at CME, comprising a wide array of market participants including asset managers, hedge funds, insurance companies, GSE's, and proprietary trading firms

### Portfolio Margining

- Allows margin offsets of OTC IRS against Treasury and Eurodollar Futures, with savings up to 90%
- Launched portfolio margining for house accounts in May and extended this service to customers in November
- Since the launch of this offering, market participants have seen significant risk reductions that account for margin savings of over \$1 billion
- CME CORE now offers a margin optimization feature allowing firms to run a portfolio margin savings analysis of IRS and Eurodollar and Treasury Futures

### Deliverable Swap Futures

- Deliverable Swap Futures total volume is over \$28.7 billion in notional, with open interest at \$3.7 billion in notional since December 2012 launch
- Offers capital efficiencies through futures-style margining and netting by providing margin offsets against Eurodollar and Treasury Futures
- All Open Positions are delivered into OTC Cleared IRS Swaps at expiration
- Clients have taken advantage of the flexible execution through Globex, block trades, and open outcry

### Multi-Asset Class

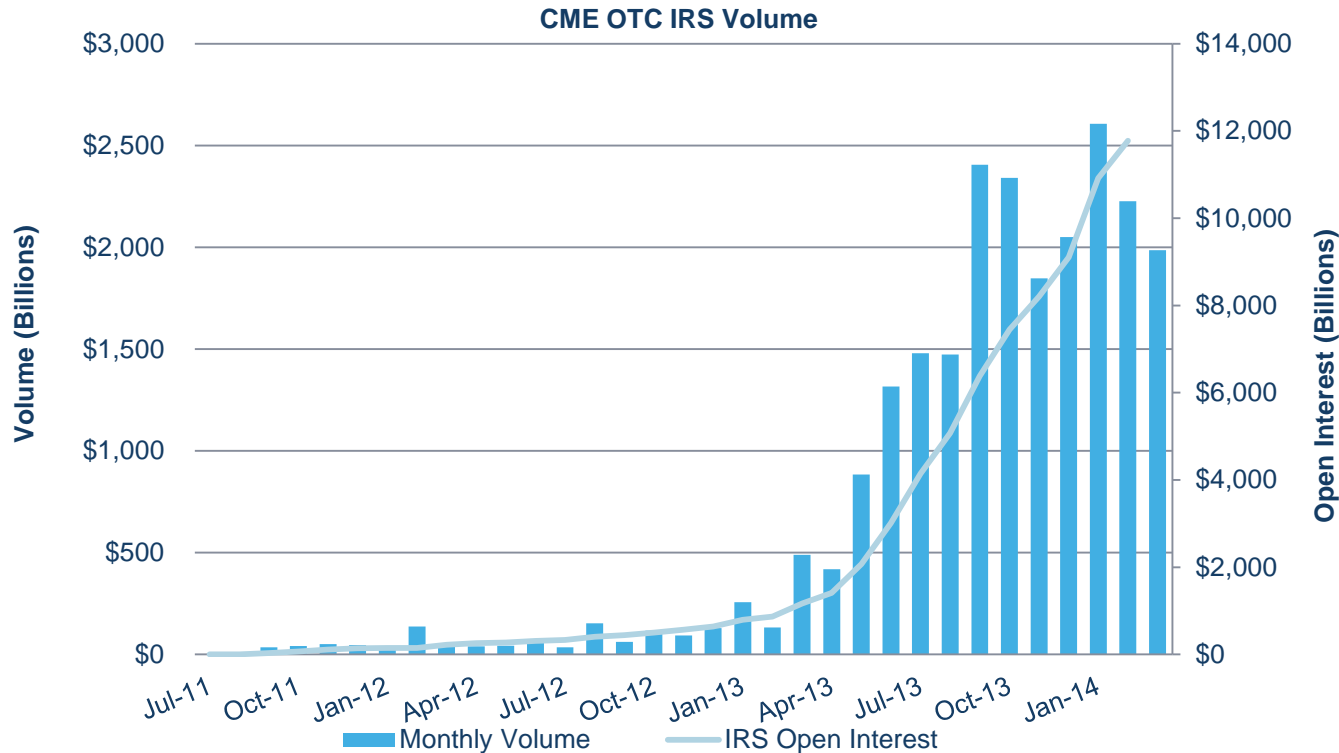
- Broadest OTC product scope available to customers with 10 IRS currencies, 56 CDX indices, and 12 FX NDFs
- Operational efficiencies of a multi-asset class solution for IRS, CDS, and FX all in one clearinghouse
- Simplicity of working with one clearinghouse instead of several as firms work to build out their infrastructure to prepare for OTC Clearing
- Over \$2.8 trillion of notional has cleared and open interest is over \$1.5 trillion

### Real-Time Clearing

- Superior technology enables real-time clearing with straight-through processing and real-time confirmation is sent once the trade is cleared
- Customers don't have to wait 15 minutes to find out if a trade has been accepted or rejected
- Negotiate, execute and submit trades through 11 affirmation platforms and SEFs
- Time lags in the clearing cycle introduces potential credit risk, and with a faster clearing cycle this risk is reduced and leads to more efficient risk management



# Solid Momentum with Strong Volume and Increasing Open Interest



- Volumes and Open Interest continue to increase
  - Since launch, we have cleared \$23 trillion
  - Record volume month in January of over \$124 billion notional volume per day
  - Adding about \$1 trillion in open interest per month, now totaling over \$12.3 trillion
  - Over 450 firms have participated in our best-in-class OTC offering this year.

# Cleared OTC IRS Product Scope

## 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
- NZD Fixed/Float out to 15 years- 3M FRA index
- HKD Fixed/Float out to 15 years- 3M HIBOR index
- HUF Fixed/Float out to 11 years
- CZK Fixed/Float out to 11 years
- PLN Fixed/Float out to 11 years
- ZAR Fixed/Float out to 11 years
- SGD Fixed/Float out to 15 years
- MXN Fixed/Float out to 11 years
- Zero Coupon Swaps: USD, EUR, GBP out to 50 years
- Overnight Index Swap (OIS): USD, EUR, GBP, JPY out to 30 years
- Basis Swaps: USD, EUR, GBP out to 51 years; AUD, JPY out to 31 years
- Forward Rate Agreements (FRA): USD, EUR, GBP, JPY
- Variable Notional Swaps (Amortizers)



## ADDITIONAL EXPANSIONS

- Additional Currencies: BRL
- Swaptions
- Inflation Swaps



# Portfolio Margining Overview

May 7, 2012	Sept. 21, 2012	Nov. 19, 2012	February 2013	June 2013
Portfolio Margining Available for House Accounts	CME Optimizer	Portfolio Margining Available for Customers	CME Optimizer integrated with CME CORE	Portfolio Margining Available for Deliverable Swap Futures and Cleared IRS*

## Creating Solutions for a Capital Constrained World

- CME Group has administered a range of cross-margining programs for more than 20 years
- With market leading Interest Rate products and the launch of Cleared OTC Interest Rate Swaps in 2010, CME is able to offer both customer and house accounts capital efficiencies for Cleared OTC Interest Rate Swaps and Eurodollar and Treasury Futures
- Since the launch of Portfolio Margining in May 2012, firms are already taking advantage of this service and seeing significant savings

## Unparalleled Capital Efficiencies

- The risk reduction achieved by this program has shown capital efficiencies of up to 90% for certain portfolios – figures that remain unparalleled in the industry
  - Total risk reductions now account for over **\$1 billion in initial margin savings**
- Clearing Members can reduce their own regulatory and guaranty fund capital costs by facilitating portfolio margining for clients

\*Pending regulatory approval



# Portfolio Margining Examples

Portfolio	Portfolio Details	Margin Savings		Margin Savings Details (\$M)**	
		Max*	Average*	Margined Separately	Margined Together
2Y Invoice Spread	2Y Treasury Note Futures vs Equivalent Invoice Swap	<b>79%</b>	64%	.8M	.2M
5Y Invoice Spread	5Y Treasury Note Futures vs Equivalent Invoice Swap	<b>79%</b>	68%	1.9M	.4M
10Y Invoice Spread	10Y Treasury Note Futures vs Equivalent Invoice Swap	<b>75%</b>	58%	4.9M	1.2M
30Y Invoice Spread	Treasury Bond Futures vs Equivalent Invoice Swap	<b>67%</b>	41%	6.5M	2.1M
2Y Swap vs ED Hedge	2Y IRS vs Weighted Eurodollar 2Y Strip	<b>89%</b>	72%	100K	10K
5Y Swap vs ED Hedge	5Y IRS vs Weighted Eurodollar 5Y Strip	<b>86%</b>	78%	230K	30K
10Y Swap vs ED Hedge	10Y IRS vs Weighted Eurodollar 10Y Strip	<b>85%</b>	71%	420K	60K
30Y Swap vs ED Hedge	30Y IRS vs Weighted Eurodollar 10Y Strip	<b>69%</b>	50%	890K	280K

**Maximum savings is up to 89%, based on back testing of portfolios from 2006 to 2011.**

\* Savings = [Gross Margin – Net Margin] / Gross Margin, where Gross Margin is the outright swap HVaR margin plus the futures SPAN margin (no offset benefit) and Net Margin is margining both swaps and futures in HVaR (with offset benefit).

\*\* Values are rounded to nearest hundred thousand or ten thousand Dollars. These values do not include transaction costs and are subject to change, depending on market volatility.

\*\*\* Customer Portfolio Margining is targeted for 2H 2012 pending regulatory approval.



# Deliverable Swap Futures

**December 2013**

# DSF Product Overview

## *Liquid Means of Managing Rate Exposure*

- Deliverable Swap Futures were launched in December 2012 with strong support from buy-side firms as well as the dealer community
- Quarterly IRS contracts expiring on IMM dates for key benchmark maturities (2, 5, 10 years)
- At expiration, all open positions deliver into CME Group Cleared Interest Rate Swaps
- Complements CME Group's market-leading Interest Rate Futures and Options business and Cleared OTC Swap Offering

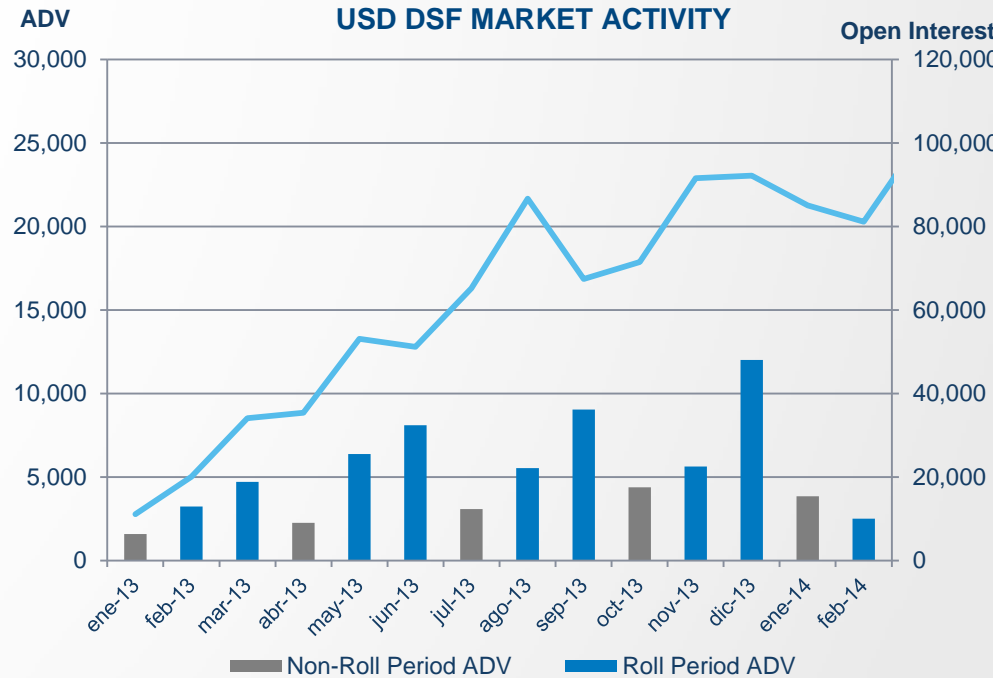


## *Capital Efficiencies Through a Standardized Product*

- Economic exposure to interest rate swaps with the simplicity, transparency and margin efficiency of a future
  - Standardized futures products offering lower margins than OTC swaps
- Flexible execution via CME Globex, Block trades, EFRPs and Open Outcry
- OTC trading advantages including:
  - Ability to block calendar spreads
  - Lower block thresholds and longer reporting times
  - No block surcharges

# USD DSF Success Spurs Euro Product Expansion

- Euro Deliverable Swap Future will launch on April 14th, 2014 for benchmark tenors (2, 5 and 10)
- Citi, Societe Generale and Nomura are among the firms that plan to serve as market makers
- Building off strong Growth in the first year of US dollar-denominated DSF
  - 2<sup>nd</sup> fastest growing IR Futures product in CME Group history
  - 1.75 million contracts cleared since launch, representing \$175 billion in notional
  - Open interest reaching a high of 114,000 contracts
  - **Record:** 37 and 50 open interest holders in the 5y and 10y USD DSF
- Driven by Client Demand for margin efficient alternatives to swaps
- Leveraging the #1 IRS clearing house in global client open interest
  - Euro swaps OI exceeding €2 trillion



# Capital Efficiencies of a Standardized Product

*CME Group offers unparalleled capital efficiencies in a capital constrained world*

**Standardized Future:** DSFs provide a means to gain exposure to the interest rate swap market with margin levels afforded to a standardized product.

## **Initial Margin Comparison\***

Below is an example showing indicative margin levels for the DSF contract and comparable OTC IRS position expressed in percentage of notional

	OTC IRS Margin	DSF Initial Margin
2 Year	0.40%	0.20%
5 Year	1.65%	1.40%
10 Year	3.10%	1.95%
30 Year	6.15%	4.00%

**Margin Offsets:** As a recognized futures contract, DSFs are currently eligible for automatic risk offsets against other futures and options inside of CME Group's liquid interest rate complex.

**Clearing Fees:** Listed futures are not typically subject to the additional funding cost frequently charged by OTC Clearing Members.

\*Note: Standardized contracts automatically net down to a small number of line items, which streamlines the operational and risk management of these products as well as the corresponding liquidation period in the event of a default.





# Flexible Execution

## Market Participants Have Choice in Execution Venue

### Centralized Order Book

- Trading is available via CME Globex and Open Outcry
- 6 Market makers committed to providing continuous on-screen liquidity.
- Market participants are able to place bids and offers in an open and transparent marketplace.

### Privately Negotiated (OTC)

- Trades can be privately negotiated off-exchange.
- Enables counterparties to leverage existing relationships via block trades.
  - Block trades must be reported with 15 minutes of execution.
  - Calendar spreads are eligible for blocks provided the sum of the legs meets the threshold.
  - No surcharge for privately-negotiated DSF trades.
  - Listed futures are not subject to CFTC SEF requirements.
- We encourage clients to contact their existing swap liquidity providers for quotes on block trades.

### Book Liquidity

Tenor	Average Bid-Ask Size	Average Bid-Ask Spread <i>(basis points equivalent)</i>
2 Year	\$70 million	0.9
5 Year	\$40 Million	0.6
10 Year	\$25 Million	0.5
30 Year	\$15 Million	0.5

### Block Liquidity\*

Tenor	Minimum Block Threshold	Indicative Bid-Ask Spread <i>(basis points equivalent)</i>
2 Year	\$300 Million	0.6
5 Year	\$150 Million	0.5
10 Year	\$100 Million	0.4
30 Year	\$50 Million	0.4

\*Based on feedback from a subset of liquidity providers under normal market conditions.

# Interest Rate Tool & Research Available

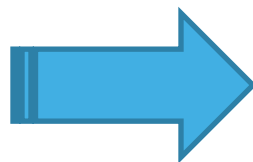
*High Correlation between DSF prices and their OTC IRS Equivalents*

## **DSFs are an Excellent Alternative to OTC Swaps**

- **Price Correlation Research:** Highlights the strong correlation between DSF prices and corresponding par spot-starting OTC interest rate swap rates  
<http://www.cmegroup.com/trading/interest-rates/files/dsf-correlations.pdf>
- **Convert Price to Yield:** DSFs are traded on a price-basis, which can be readily translated into an implied par rate using the fixed coupon and PV01

### **DSF Analytics Tool**

- Allows you to view the relationship between the DSF's price, rate, and risk to its respective corresponding OTC Spot and Forward Swap
- The implied rate provides an excellent approximation of the implied forward rate of the DSF contract



CME Ticker	Bloomberg Ticker	DSF Pricing					Timestamp
		Price	Coupon	PV01	NPV	Implied Rate	
T1UH4 2Y	CTPH4	100'170	0.750%	\$20.00	\$531.25	0.4844%	1:15:01 PM CT 2/04/2014
F1UH4 5Y	CFPH4	101'220	2.000%	\$48.87	\$1,687.50	1.6547%	1:15:01 PM CT 2/04/2014
N1UH4 10Y	CNPH4	103'312	3.250%	\$91.12	\$3,976.56	2.8136%	1:15:01 PM CT 2/04/2014
B1UH4 30Y	CBPH4	102'210	3.750%	\$195.97	\$2,656.25	3.6145%	1:15:01 PM CT 2/04/2014
T1UM4 2Y	CTPM4	-	0.750%	-	-	-	-
F1UM4 5Y	CFPM4	100'185	2.000%	\$48.64	\$578.12	1.8811%	7:45:01 AM CT 2/01/2014
N1UM4 10Y	CNPM4	-	3.000%	-	-	-	-
B1UM4 30Y	CBPM4	-	3.750%	-	-	-	-

*Implied Rate (bps) = DSF Contract Fixed Coupon (bps) – (NPV / PV01)*

Quotes and analytics are updated every 15 minutes.



# **CME Futures and Options use by OTC Participants**

**December 2013**

# Treasury Futures use by OTC participants

- ✓ ***Outright Treasury Futures*** as capital efficient and standard alternative to OTC swaps for portfolio duration management
- ✓ ***Invoice spreads*** (OTC swap vs. Treasury Futures EFR) as capital efficient alternative to traditional swap spreads
- ✓ ***DSF-Treasury Futures inter-commodity spreads*** as a pure futures spread alternative to traditional swap spreads

# Eurodollar Futures Use by OTC Participants

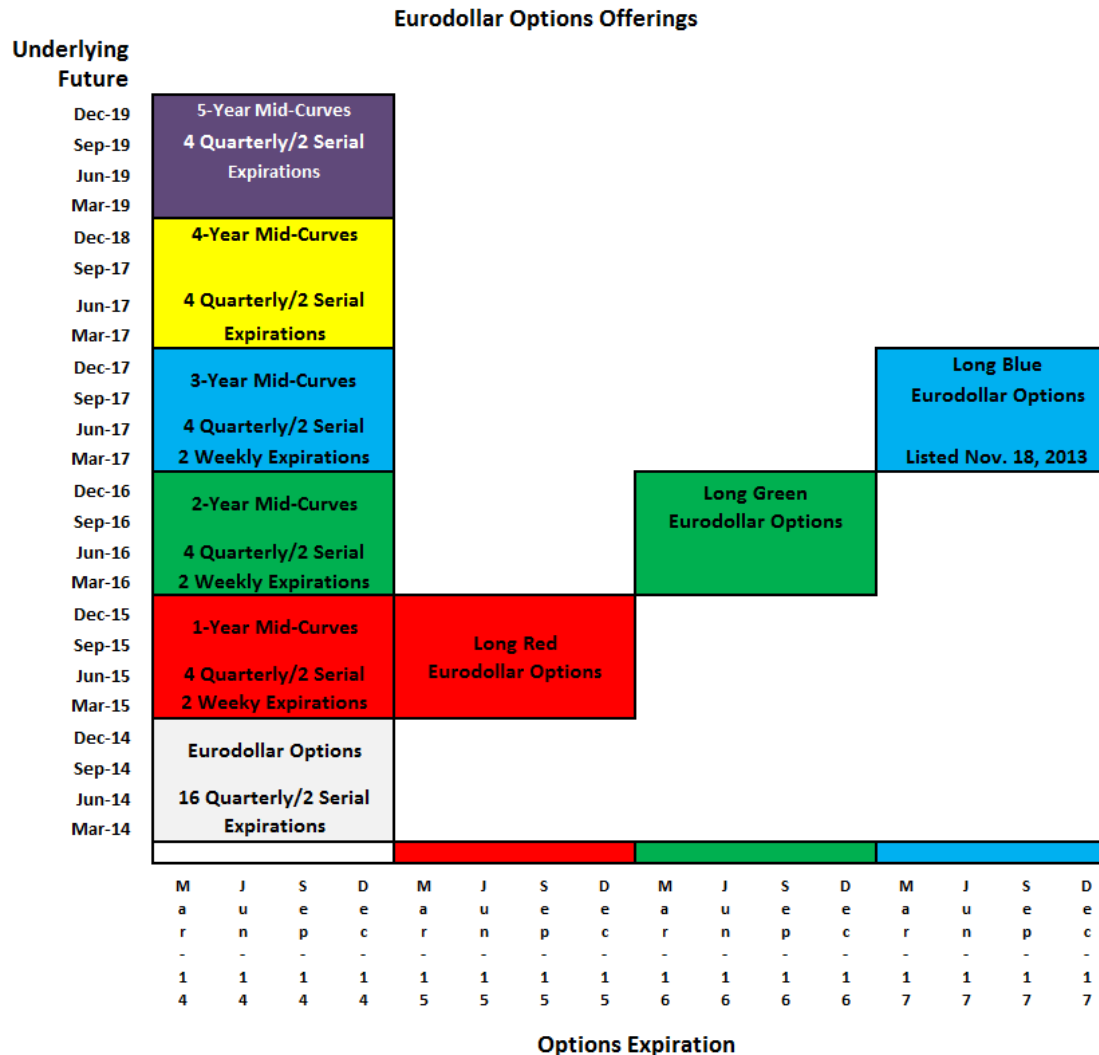
- ✓ *Listed packs and bundles* as a liquid alternative to shorter dated OTC swaps and forward rate agreements
- ✓ *Duration weighted Eurodollar strips* as a tailored means of replicating swap risk (CME Eurodollar strip vs. swap tool shown below)

Define OTC Swap Details		OTC Swap		vs.		CME ED Futures E-equivalents			
Notional (Millions)	100	Indicative Rate	0.6895			Implied Rate	0.6832		
Currency	USD	DV01	\$ 29,641			DV01	\$ 29,650		
Valuation Date	12/04/2013	<b>CME ED Futures E-equivalents Construction</b>		<b>Portfolio (spot start only)</b>					
Effective Date	12/06/2013	Ticker	B/S	Qty	Bid	Top of Book	Volume	Implied Yield, %	Convexity Bias, %
Maturity Date	12/06/2016	EDZ3	Sell	113	99.760	0	0	0.240	0.00000
U.S. Treasury Issue (TED)		EDH4	Sell	100	99.745	17404	0	0.255	0.00000
Fixed (Pay/Rec)	Pay	EDM4	Sell	100	99.730	120	0	0.270	0.00000
Coupon %	0.6895	EDU4	Sell	99	99.695	3449	0	0.305	0.00000
Day Count	30/360	EDZ4	Sell	99	99.650	514	0	0.350	0.00000
Frequency	Semi	EDH5	Sell	99	99.665	782	0	0.435	0.00000
Float (Pay/Rec)	Rec	EDM5	Sell	99	99.445	80	0	0.555	0.00000
Index	US-3M Libor	EDU5	Sell	99	99.280	142	0	0.720	0.00000
Latest Index Fix	0.24185	EDZ5	Sell	99	99.065	234	0	0.935	0.00000
Stub Rate	0.17465	EDH6	Sell	99	98.815	35	0	1.185	0.00000
Day Count	Act/360	EDM6	Sell	98	98.535	240	0	1.465	0.00000
<b>Define CME ED Futures E-equivalents</b>		EDU6	Sell	82	98.255	0	0	1.745	0.00000
NPV, Points	0.0	EDZ6	Sell	0	97.965	0	0	2.035	0.00000
Stub	Long First Contract	EDH7	Sell	0	97.670	20	0	2.330	0.00000
Forecast	US-3M Libor	EDM7	Sell	0	97.350	1	0	2.650	0.01902
Discount	LIBOR	EDU7	Sell	0	97.130	31	0	2.870	0.00000
		EDZ7	Sell	0	96.820	0	0	3.180	0.00604
		EDH8	Sell	0	96.650	0	0	3.350	0.01868



# Eurodollar options use by Swaption traders

- ✓ *Expanded suite of Eurodollar options* gain traction providing expanded ability to trade longer dated options expiries



# Disclaimer

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.

All references to options refer to options on futures.

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