

The Shifting Environment in the Global FX Market:

The “Futurization” of FX

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A Quantitative Perspective of a Changing FX Market: *Oliver Wyman's Report on FX Capital Efficiencies*

FX Portfolio Economics Comparison conducted by Oliver Wyman and commissioned by CME Group

The analysis shows that FX futures are a capital-efficient way to trade versus FX forwards and swaps in the evolving derivatives marketplace, providing 40-70%* savings vs. the three other principle trading models studied

The analysis is based on multiple scenarios, comparing bi-lateral OTC (with and without initial margin) and centrally cleared FX trading models**

The cost benefits of futures models can be quantified across a number of sample portfolios:

- **Short-dated developed market trade:** cost of futures model lowest at ~60% of bilateral without initial margin, due to capital efficiencies
- **Mixed FX portfolio:** significant additional cost benefits of multilateral netting for cleared OTC and futures model – futures at ~30% of the costs associated with bilateral without initial margin
- **Medium-dated developed market trade:** futures trades ~45% of the cost of bilateral without initial margin, as longer dated trades result in more significant CVA VaR capital charge for bilateral trades
- **Short-dated emerging market trade:** conservative initial margin requirements lead to higher economic costs for clearing and futures

* For those entities subject to Basel III requirements

** Based on assumptions employed in the analysis

What's Changing: *OTC FX Derivatives are Going through a Global Regulatory Filter*

1

Basel III

Improved coverage of counterparty credit risk (CCR)

- Introduction of CVA
- Refined treatment of CCP exposures
- Introduction of leverage ratio



Drives capital requirements

2

BCBS/ IOSCO

Margin requirements for non-centrally cleared OTC derivatives

- More stringent rules for margin calculation and segregation
 - Subject to an exposure threshold



Drives initial margin requirements

3

CPSS/ IOSCO

Common principles for CCPs

- Guiding principles to structure CCP risk management
- Stress-test (Cover 1/2) to size default fund



Drives default fund requirements

4

Dodd-Frank/EMIR

Mandatory central clearing for standardized OTC derivatives

- Reporting of all derivatives to trade repositories
- Improved risk management



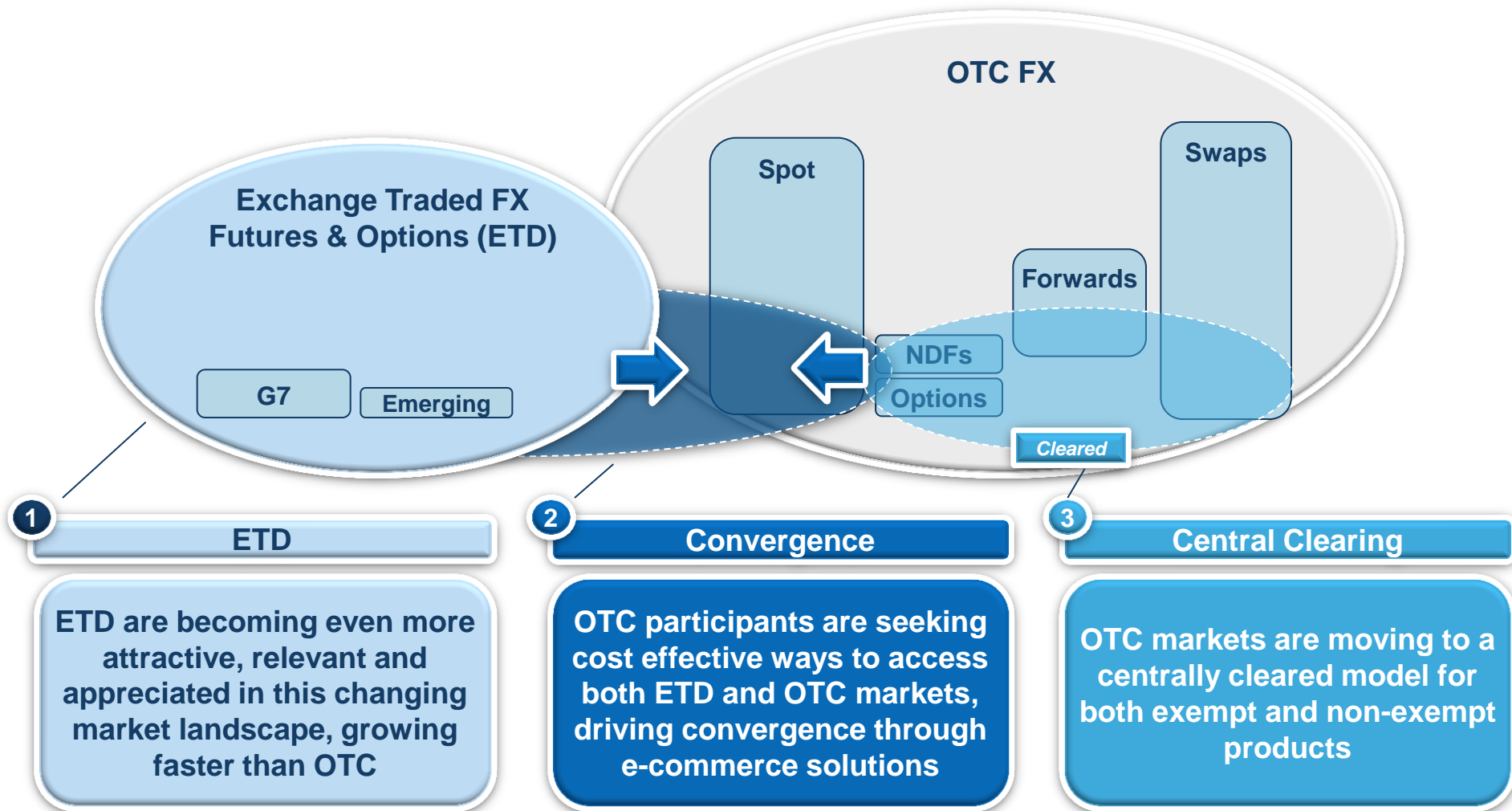
Drives central clearing requirements

Cost Drivers Vary Significantly across FX Models: *Bilateral vs. Cleared vs. On-Exchange*

Cost driver		Bilateral OTC FX derivatives, no initial margin	Bilateral OTC FX derivatives, with initial margin	Centrally cleared OTC FX derivatives	Exchange-traded FX derivatives
Margin requirement	Variation margin	✓	✓	✓	✓
	Initial margin	✗	✓	✓	✓
	Margin period of risk (MPOR) for initial margin	n/a	10 days	~ 5 days, CCP dependent	1–2+ days, depending on exchange
Exposure	Bilateral exposure	✓	✓	✗	✗
	CCP exposure	✗	✗	✓	✓
	MPOR for capital	10+ days	10+ days	5 days	5 days
	CVA VaR	✓	✓	✗	✗
	Default fund contribution	✗	✗	✓	✓
Costs	Capital costs	High	Low	Low	Low
	Funding costs	Low	High	Medium	Low - Medium
	CVA	High	Medium	No	No

Relatively high costs
 Relatively low costs
 No/low costs

The Global FX Market Structure: *Already Shifting...*



CME Group's FX Value Proposition

- **Maximum capital efficiencies through unparalleled mix of products and services (Futures, Options & OTC FX Clearing)**
- **Cost of capital rules (Basel III, D-F, EMIR) to favor Futures**
- **The proven security of the premier global in CME Group's Clearing House**
- **Largest open-access global FX liquidity pool**
- **Highly diversified and growing base of participants**
- **Fast, anonymous, unbiased electronic execution**
 - FIFO market with all-to-all matching order book, and no "Last-Look" functionality
- **Flexibility of execution to fit needs**
 - Electronic on Globex, Voice brokered on Floor, or Bilateral via Blocks & EFPs

Optimize your Capital & Operational Efficiencies and Mitigate your Counterparty Risk with CME FX Futures

CME Group's FX Futures: *A Basic Primer*

Born in 1972 with the creation of IMM Futures

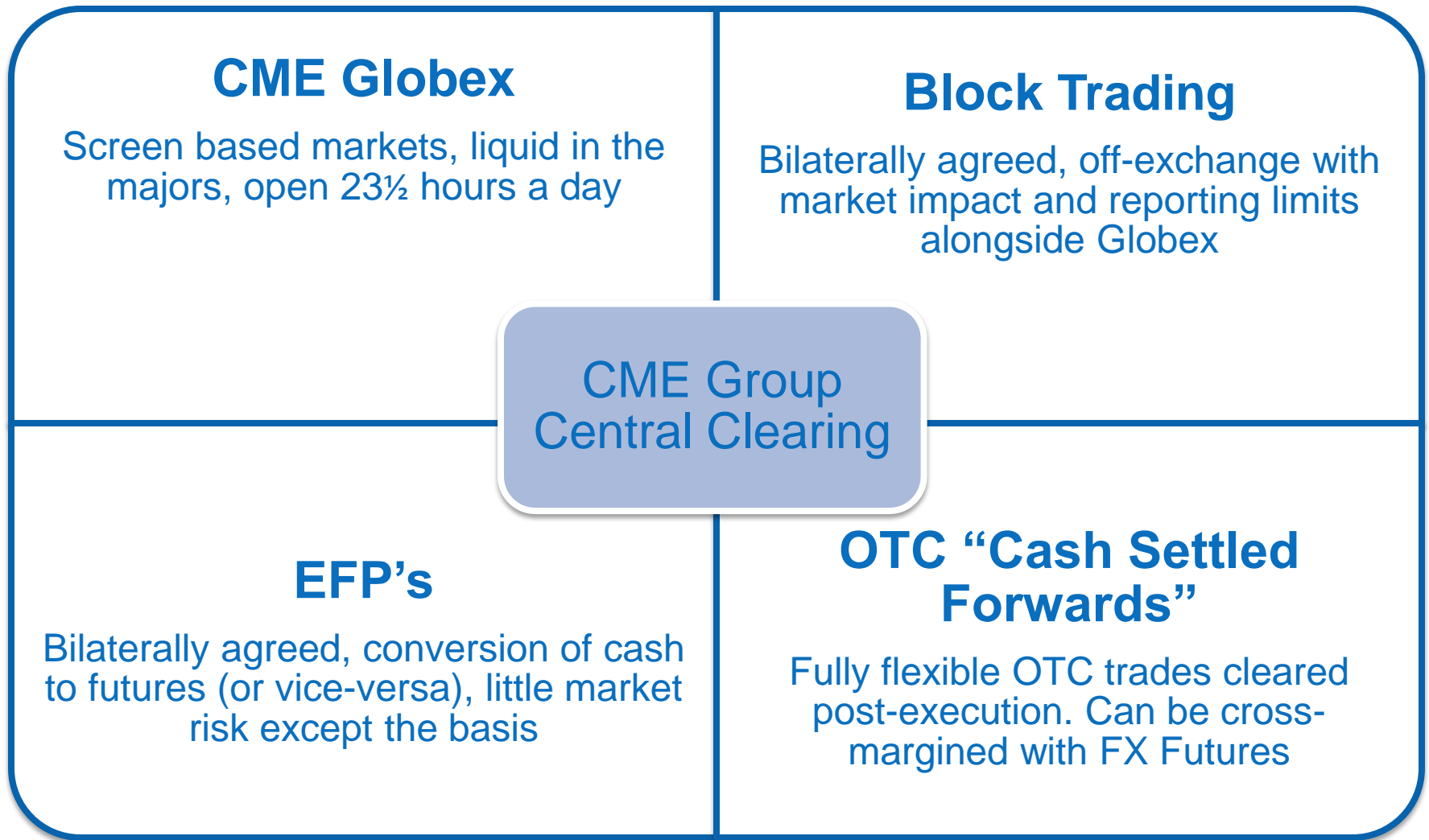
- Developed by Le Melamed, then-Chairman of CME
- FX Futures were the world's first financial futures contracts and opened the door to an entirely new world of financial innovation with the likes of Treasury Futures, Equity Futures and Eurodollars

CME Group is now the world's largest regulated FX market, and has now surpassed the largest FX Cash market (*ICAP's EBS platform*)

- 73 FX Futures currency pairs on 22 currencies
- Includes all Majors and a full suite Emerging Markets complex including the entire BRIC complex
- Traded 23½ hours a day with Globex distribution in 185 countries
- Centrally Cleared via CME Group Clearing

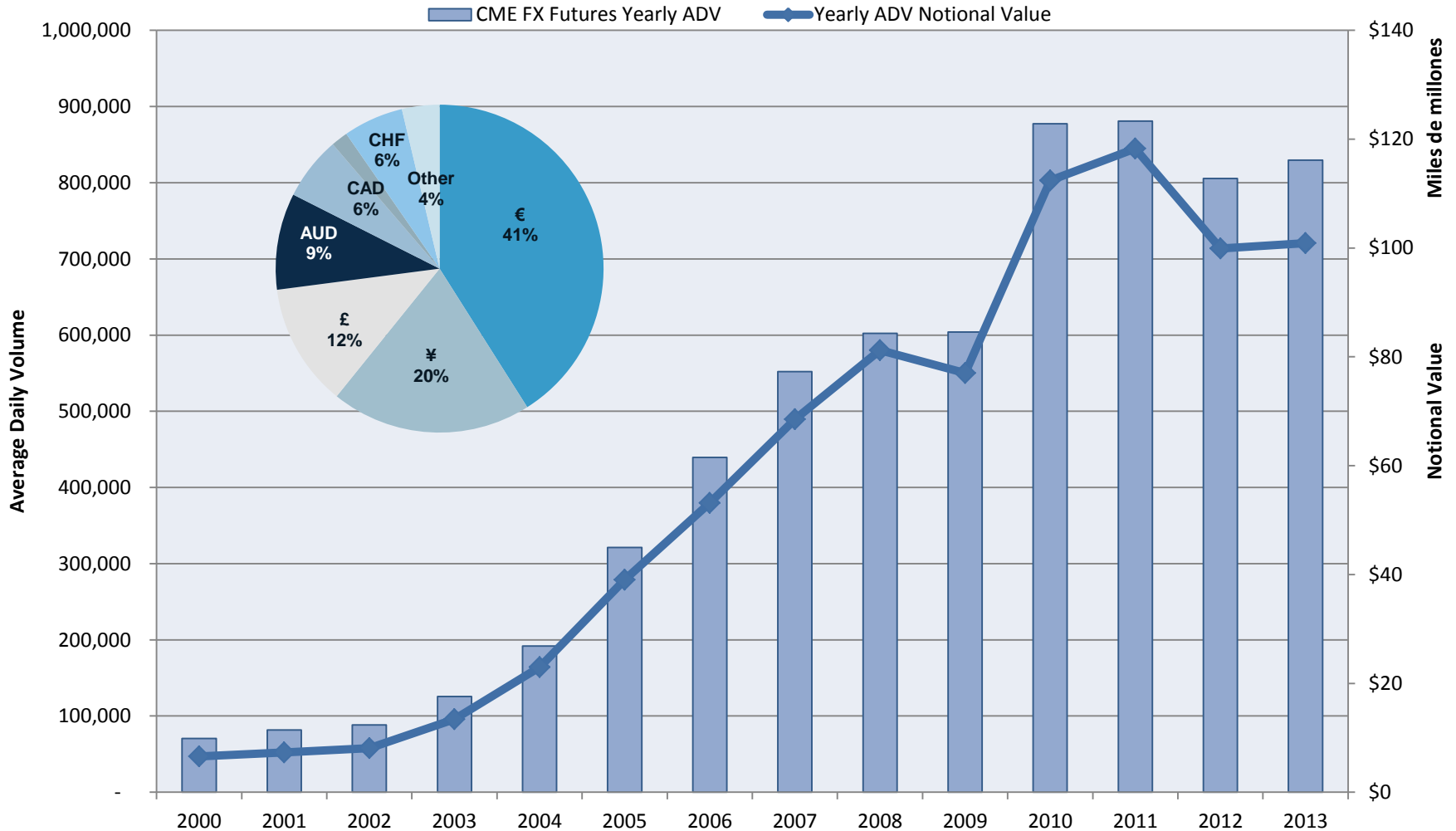
CME Group will now be launching a brand-new, UK-based regulated exchange, CME Europe, with clearing provided by our UK-based clearing House, CME CE

Flexible Execution Choices at CME Group: A Basic Overview



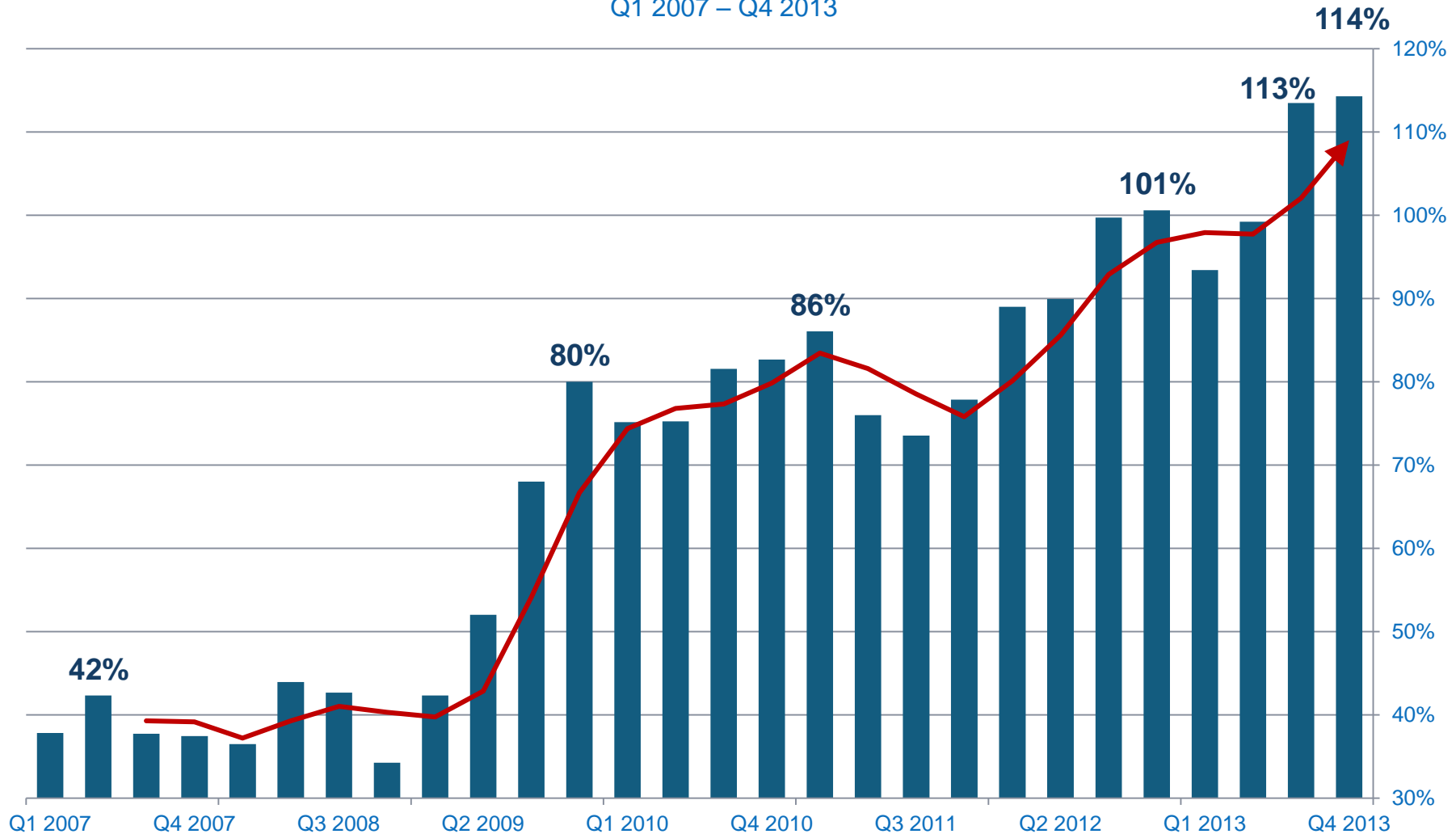
CME Group's FX Futures Franchise: *Consistently Strong Growth*

CME FX Futures Average Daily Volume and Notional Value



CME Group's FX Futures: *Significant Outperformance vs the OTC FX Market*

CME ADV as a % of EBS
Q1 2007 – Q4 2013



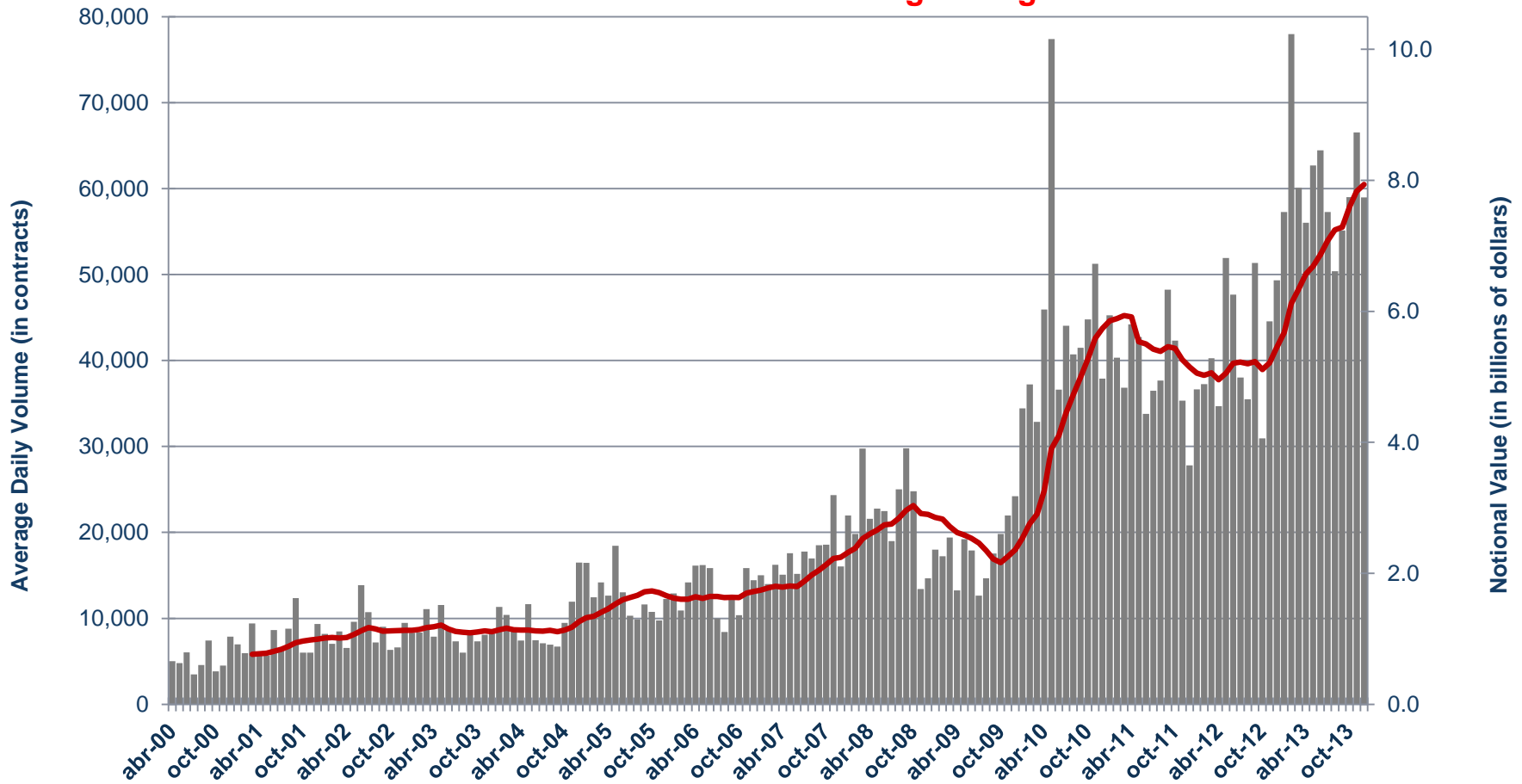
CME Group's FX Options Franchise: *A Broad and Diverse Offering*

- **31 FX Options currency pairs listed**
- **90% electronically traded on Globex**
- **European & American Style**
 - 2pm Chicago cut (99% volume)
 - 10am NY cut (1% of volume)
 - Auto-exercised against a VWAP Fixing of underlying FX Futures
- **Naked Options**
 - Discretionary delta hedge
 - Futures or spot can be used
- **Premium Quoted in USD Pips**
- **Market Makers in top currency pairs**
 - EUR, JPY, GBP, AUD, CAD, CHF
 - Starting support of MXN and BRL

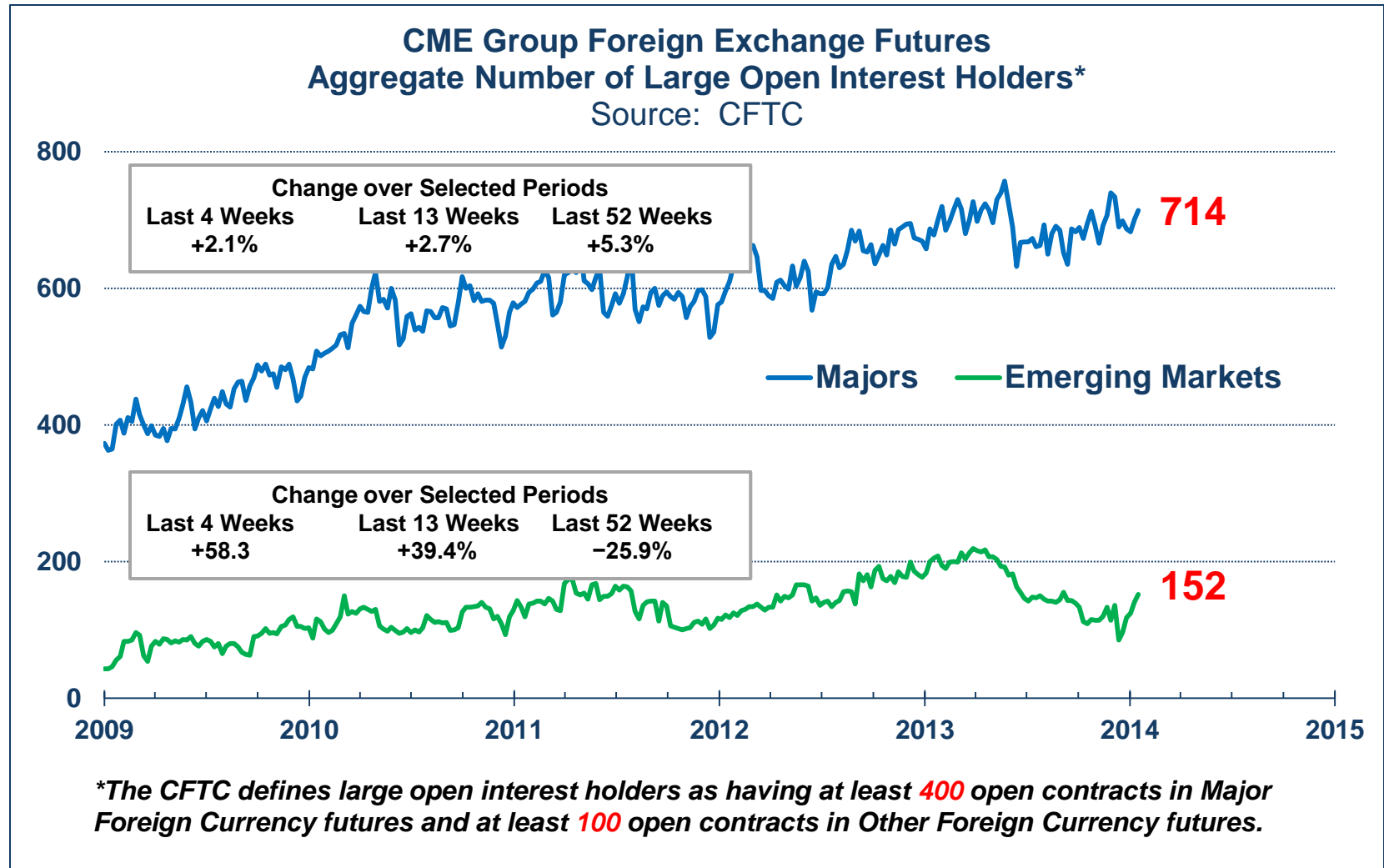
CME Group's FX Options: *A Thriving Franchise*

2013 ADV of **60,000** contracts or **\$8.2 billion** in notional terms, **+46%** YOY

CME FX Options Average Daily Volume and Notional Value
with 12 month moving average



CME Group's FX User Base: *Diversified & Growing*



CME Group FX: *The FX Market's Most Diverse Client Base*

Hedge Funds – Allows anonymity by executing via CLOB or via ex-pit transactions

Prop shops – Execute trades without having to worry about potential barriers to entry encountered in the OTC market. Small amount of documentation to enter largest cleared FX pool in the world. MM incentives keep transaction costs low.

Banks – Use CME FX to manage forward risk in rates, FX or options. Access to world's largest cleared FX liquidity pool. Meaningful margin efficiencies between multiple products traded.

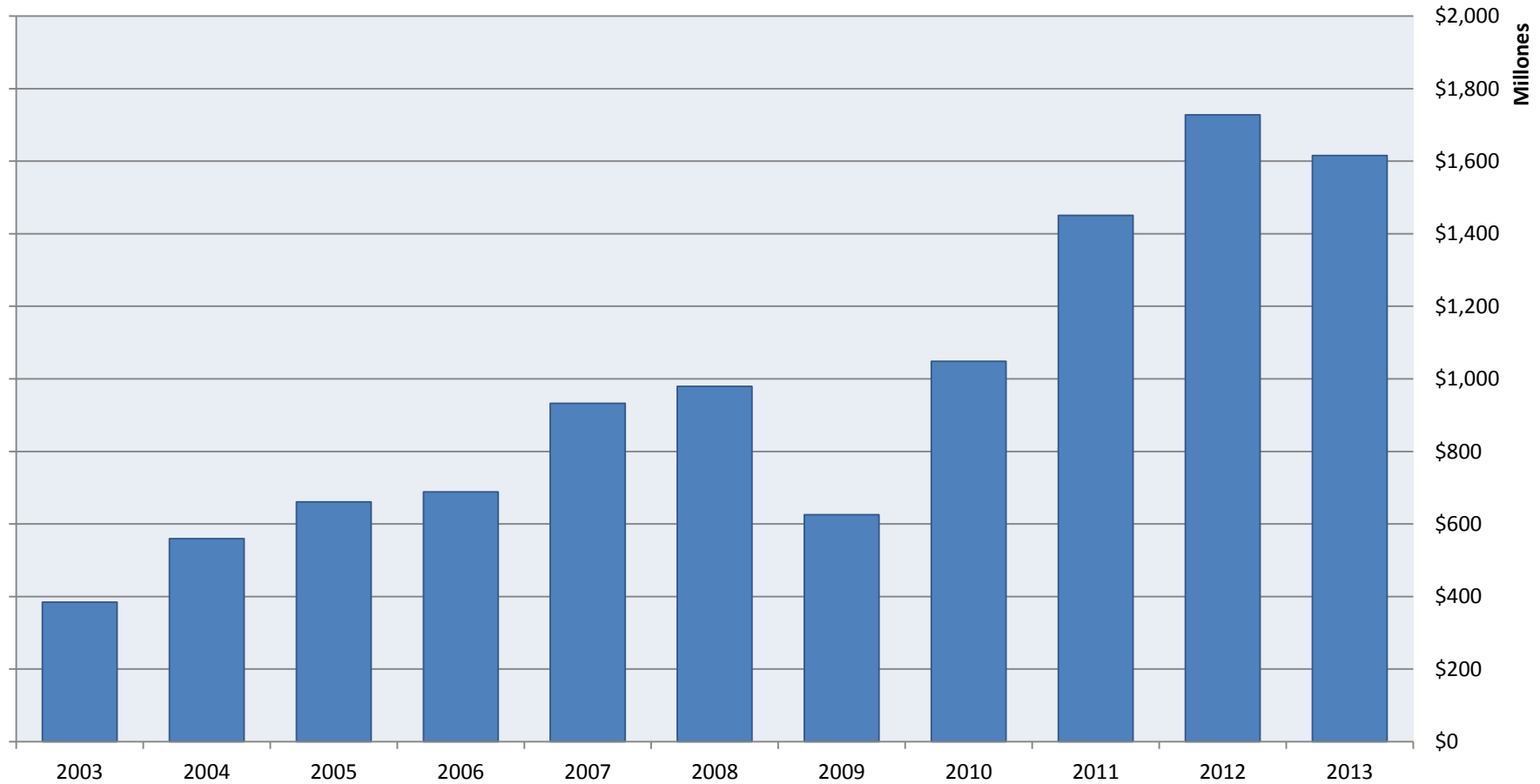
Asset Managers – Allows access to hedge FX risk in portfolios or take speculative positions with the products being centrally cleared and regulated.

Retail – Smaller size contracts with our E-Micro product suite

Corporate Treasury desks – Can hedge against currency fluctuations for both payables and receivables via options or futures

Product Focus: *Growth of Mexican Peso Futures*

CME Mexican Peso Futures Average Daily Notional Value



View MXN quotes on CME E-equivalents

CME Group E-equivalents

Time: 08:45:05 AM CDT Total eFX Volume: 662,028 Total eFX Notional(USD): 83,827.19M

Futures Offer

25	75275
190	75300
198	75325
320	75350
312	75375
1045	753418

Mexican Peso (MXN/USD)

Volume 6,748 Contract Size 500,000 Mexican pesos
 High 75350 Inverse Quote Conversion
 Low 74950 Notional 3,374.00M
 Last 75250 Notional(USD) 253.89M

25 75275 75250 25

0.929 13.4553 13.4599 0.929

Forward points = -955.00

Futures Bid

75250	25
75225	194
75200	190
75175	318
75150	305
751834	1032

Forward points for the June Futures contract for trade date 03/13/2014

Currency	Bid	Offer
Euro FX	-1.25	-.75
J Yen	-5.10	-4.60
B Pound	-11.70	-11.20
Canadian\$	24.60	25.10
Swiss Franc	-6.60	-6.10
Aussie\$	-56.60	-56.10
M Peso	930.00	980.00
NewZ\$	-63.40	-62.90

*When entering forward points, you must enter the Inverse sign (+ or -) of what is displayed above.

[Click here](#) to contact us about CME eFX products

Futures Offer

5	9745
176	9746
168	9747
199	9748
175	9749
723	97475

Japanese Yen (JPY/USD)

Contract Size 12,500,000 Japanese Yen
 Low 9726 Notional 352,225.00M
 Last 9745 Notional(USD) 3,432.43M

5 9745

0.609 102.57 102.58 5.727

Forward Points = 4.85

Futures Bid

9744	47
9743	151
9742	159
9741	160
9740	186
97416	703

Annotations:

- Live Futures quote & #contracts (points to 75250 and 25 in MXN/USD)
- Quantity in US\$ millions (points to 25 in JPY/USD)
- Price in pesos per dollars (points to 75275 in MXN/USD)
- Forward points between Spot and Futures (points to -955.00 in MXN/USD)

See our real-time, streaming market data in Futures and Spot terms at: www.cmegroup.com/equivalents

A New UK Venue for FX Futures: *CME Europe Ltd*

- **London-based**, FCA supervised RIE (subject to approval), positioned in Europe's most important financial centre
- **Wholly owned subsidiary of CME Group** with a dedicated Board of Directors and Management Team
- **Initially launching with 30 FX futures** and will become a multi-asset class exchange phased in over time
- **Guided by the strategic imperatives of efficiency & simplicity**
 - Using CME Globex, the world's leading electronic trading system, as its trading platform
 - CME ClearPort will be used to enter block & EFP trades, amongst others, to bring them under the rules of the exchange and for clearing
 - Clearing services are provided by CME Clearing Europe, a Bank of England recognised and supervised London-based clearing house
- **Launch anticipated on April 27, 2014**

To find out more, please contact CME Group's global FX team at: fxteam@cmegroup.com

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