

## FX PRODUCTS

# FX VolContracts — Realized Volatility Futures

## A direct way to trade FX volatility.

CME Group 1-month and 3-month FX Realized Volatility futures, called FX VolContracts, provide a straightforward means for market participants to buy or sell FX volatility in major currency pairs. EUR/USD 1-month and 3-month contracts are now available for trading. AUD/USD, CAD/USD, CHF/USD, GBP/USD, JPY/USD Realized Volatility futures will launch later in 2011.

### The first futures contracts that offer direct trading of FX volatility

FX VolContracts are valued and settled against realized volatility, or actual historic volatility, calculated in arrears using past prices over a given time period. That means FX VolContracts allow participants to buy or sell FX volatility without the complexity of managing standard options positions and without the necessity of forming a strong directional view on the underlying—essentially changing that process to a simple decision of going long or short volatility itself.

### How the contracts will work

FX VolContracts will be cash-settled to either a 1- or 3-month historical or “realized” volatility calculated by reference to daily price movements in major CME currency futures. The realized volatility calculation is based on a simple standard deviation formula.

The contracts are valued at \$1,000 times the computed realized volatility for the specific time period. They are quoted as an annualized standard deviation in minimum increments of 0.01% (i.e. One may quote the contract as 12.52; 12.53; 12.54; 12.55; 12.56; etc.).

If the contract is quoted at 12.52, this implies a nominal contract value of \$12,520 (= \$1,000 x 12.52). If the contract value fluctuates by one minimum price increment of 0.01 (i.e., from 12.52 to 12.53), this implies a fluctuation increase of \$10.00 in the contract value. These contracts will be listed on CME Globex.

### Realized Volatility vs. Implied Volatility

Realized volatility is a measure of actual price volatility, based on past prices over a given time period. It is sometimes called historical volatility or historical deviation. Realized volatility stands in contrast to implied volatility, which is based on expectations of future price movement and is used as a forward-looking measure, derived from underlying options prices.

Now Trading:  
EUR/USD 1-month  
and 3-month Realized  
Volatility Futures

FX VolContracts fees waived  
until December 31, 2011

### Benefits

- Transparent and replicable calculation methodology
- Constant volatility exposure without strike management implications
- Lower risk profile and margin requirement than equivalent Variance-based products
- Efficient cash-settled process

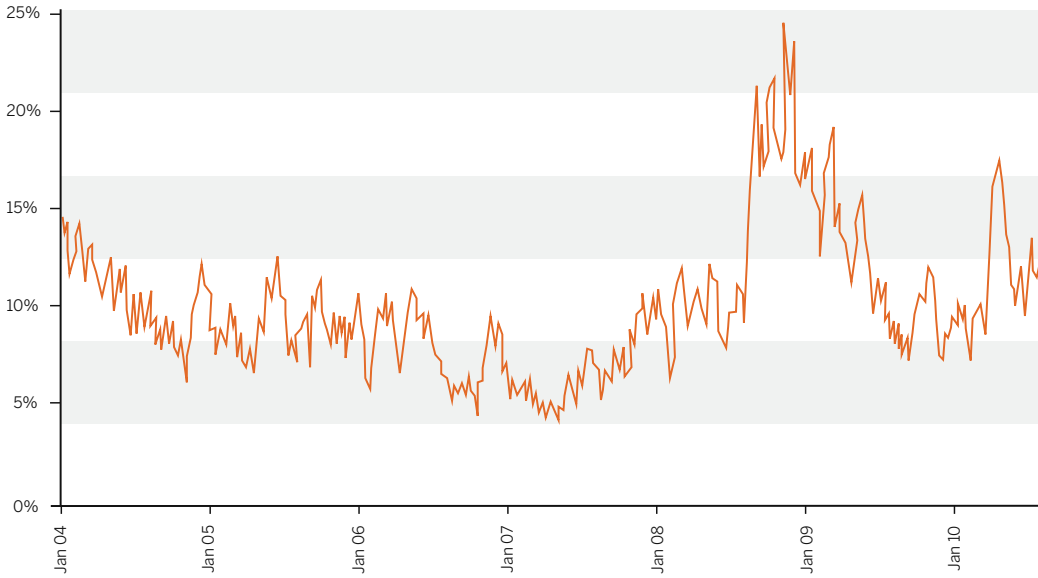
### Strategies

- Speculate or hedge against changes in volatility resulting from macro or micro economic events
- Arbitrage realized volatility against implied volatility by trading FX VolContracts against options positions
- Add FX VolContracts to underlying futures strategies, such as carry, to enhance return profiles

# EUR/USD AND JPY/USD REALIZED VOLATILITY

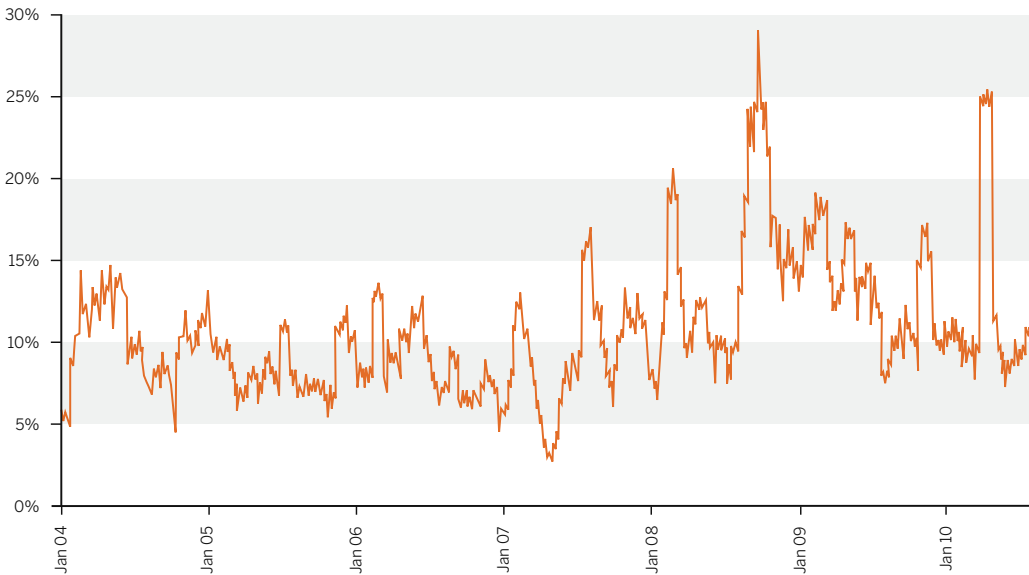
## EUR/USD 1-MONTH REALIZED VOLATILITY

(JAN 2004-NOV 2010)



## JPY/USD 1-MONTH REALIZED VOLATILITY

(JAN 2004-NOV 2010)



# CONTRACT SPECIFICATIONS

	1-MONTH FX VOLCONTRACTS™	3-MONTH FX VOLCONTRACTS™
Realized Volatility	<p>1-month realized volatility calculated as annualized standard deviation of log returns (day-to-day) of daily settlement prices as follows.</p> $RV = 100 \cdot \sqrt{\left(\frac{252}{N}\right) \sum_{t=1}^N \left(\ln \frac{P_t}{P_{t-1}}\right)^2}$ <p>Where <math>P_t</math> is daily futures settlement price on day <math>t</math> and <math>N</math> is number of business days in 1-month calculation period where period commences on first business day after second Friday immediately preceding third Wednesday of first calendar month preceding named contract month; and, terminates on second Friday preceding third Wednesday of contract month. Days where futures settlements are unavailable do not contribute to calculation. Result is multiplied by 100, thus, 20% (0.20) volatility expressed as 20.00; 10% (0.10) volatility expressed as 10.00.</p>	<p>3-month realized volatility calculated as annualized standard deviation of log returns of daily settlement prices as follows.</p> $RV = 100 \cdot \sqrt{\left(\frac{252}{N}\right) \sum_{t=1}^N \left(\ln \frac{P_t}{P_{t-1}}\right)^2}$ <p>Where <math>P_t</math> is daily futures settlement price on day <math>t</math> and <math>N</math> is number of business days in 3-month calculation period where period commences on first business day after second Friday immediately preceding third Wednesday of third calendar month preceding named contract month; and, terminates on second Friday preceding third Wednesday of contract month. Days where futures settlements are unavailable do not contribute to calculation. Result is multiplied by 100, thus, 20% (0.20) volatility expressed as 20.00; 10% (0.10) volatility expressed as 10.00.</p>
Underlying Price Series	Based on daily futures settlement price for serial or quarterly futures contract including Euro, Japanese yen, British pound, Swiss franc, Canadian dollar and Australian dollar futures.	Based on daily futures settlement price for quarterly futures contract including Euro, Japanese yen, British pound, Swiss franc, Canadian dollar and Australian dollar futures.
Contract Size	\$1,000 times 1-Month Realized Volatility (e.g., volatility moves from 20% to 25%, nominal contract value fluctuates from \$20,000 to \$25,000, or \$5,000).	\$1,000 times 3-Month Realized Volatility (e.g., volatility moves from 20% to 25%, nominal contract value fluctuates from \$20,000 to \$25,000, or \$5,000).
Tick Size	Minimum price fluctuation or "tick" of 0.01 (= \$10.00 per contract) for outright; "half-tick" of 0.005 (= \$5.00 per contract) for calendar spreads.	
Contract Months	First three contracts in consecutive calendar month cycle, e.g., January, February, March, such that two serial months (January, February, April, May, July, August, October, November) plus 1 March quarterly cycle month (March, June, September, December) are listed for trading.	First 3 contracts in March quarterly cycle of March, June, September and December.
Final Settlement	Cash settled to 1-Month Realized Volatility (RV) as calculated above.	Cash settled to 3-Month Realized Volatility (RV) as calculated above.
Ticker Symbols	<b>CME Globex:</b> AUD/USD – 16A                      EUR/USD – 16E <b>NOW TRADING</b> CAD/USD – 16C                      GBP/USD – 16B CHF/USD – 16S                      JPY/USD – 16J	<b>CME Globex:</b> AUD/USD – 36A                      EUR/USD – 36E <b>NOW TRADING</b> CAD/USD – 36C                      GBP/USD – 36B CHF/USD – 36S                      JPY/USD – 36J
Last Trading Day	Trading ceases at 2:00 p.m. (Central Time) on second Friday immediately preceding third Wednesday of contract month and concurrently with calculation of final CME currency fixing price.	
Position Accountability	5,000 contracts	
Price Limits	None	
Trading Hours	Offered only on CME Globex electronic trading platform on Sundays through Fridays from 5:00 p.m. CT to 4:00 p.m. CT next day. On Friday, close at 4:00 p.m. CT with reopening Sunday at 5:00 p.m. CT.	

The contracts in this piece are listed with and subject to the rules and regulations of CME.

To view free real-time quotes on FX VolContracts, visit [www.cmegroup.com/datasuite](http://www.cmegroup.com/datasuite).

For more information on FX VolContracts, visit [www.cmegroup.com/fxvolcontracts](http://www.cmegroup.com/fxvolcontracts) or contact a member of the FX team:

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