Deutsche Bank
Global Markets

FX Derivatives – Changes to Market Structure in the Recent Past and Near Future

David Wayne, January 2012

Passion to Perform

Factors Driving the FX Derivatives Market.

- Trends in client flow.
- Market participants and risk tolerance.
- Evolution of liquidity access and the roles of participants.
- Advances in pricing and risk analytics.
- The predicted impact of regulation.

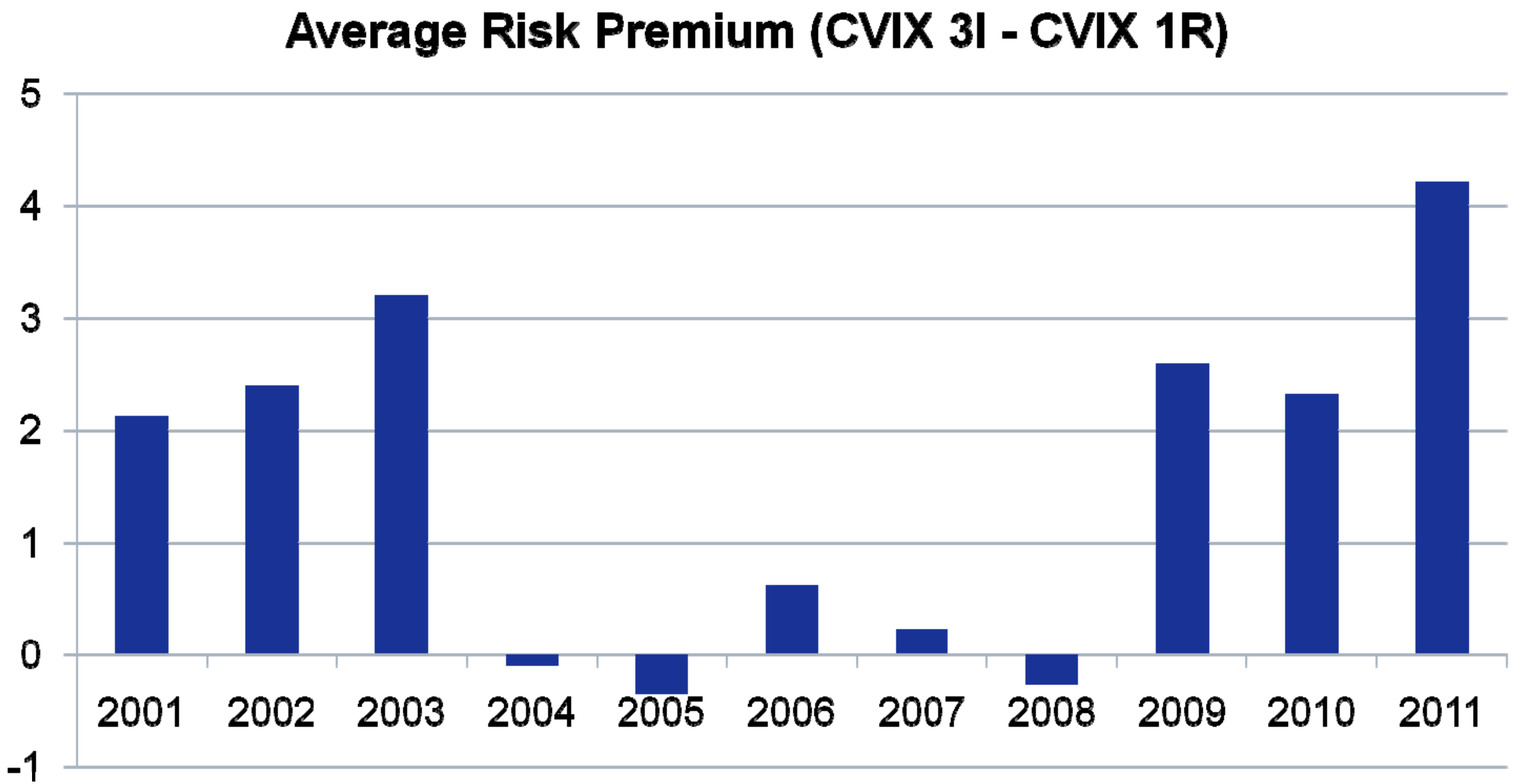
CVIX – A Measure of FX Volatility

$$\text{CVIX} = \sum_{i=1}^{9} w_i vol_i$$

Currency Crosses and Weights In CVIX

EURUSD	35.90%
USDJPY	21.79%
GBPUSD	17.95%
USDCHF	5.13%
USDCAD	5.13%
AUDUSD	6.41%
EURJPY	3.85%
EURGBP	2.56%
EURCHF	1.28%

Risk Premium in FX Derivatives Returned Post Crisis



Why has the Risk Premium Returned?

• Uncertain economic environment.

• Fewer clients selling volatility. Corporate clients are largely buyers of options for hedging purposes.

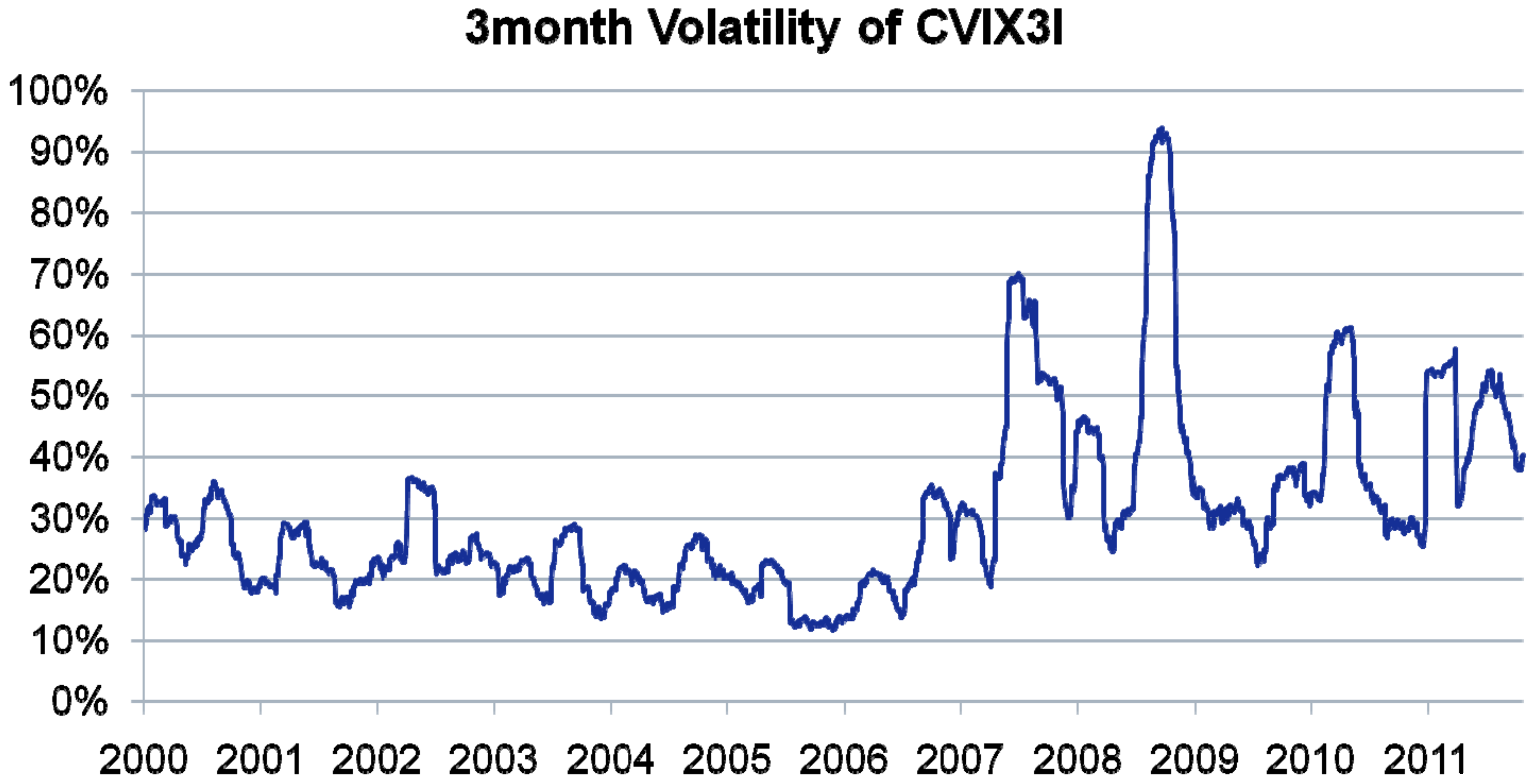
• Risk attitude of market makers. (‘puttability’, capped payoffs and client suitability).

• PRDC products drove out the risk premium over a period of years. These markets are now largely about risk management.

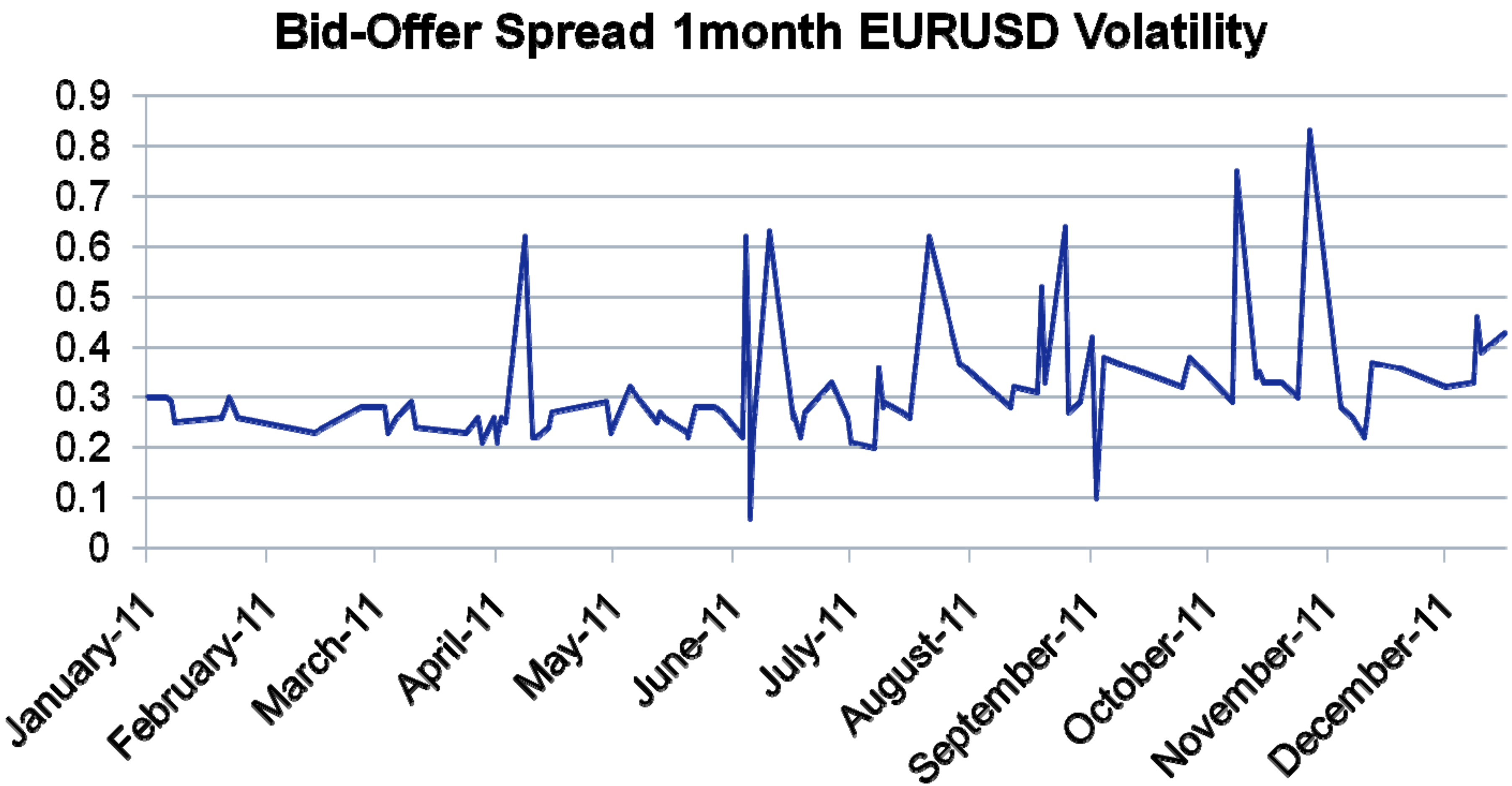
• Hedge fund flows have increased.

• This leads to higher volatility of volatility.

Volatility of Volatility Remains Elevated.



Volatility of Liquidity Remains High.



Changes to the Interdealer Market.

- Actively managing and pricing liquidity is vital.
- Decline in IDB volumes as more risk is hedged internally and in the direct market.
- More sophisticated models at the larger banks mean less need to clear contract specific risk.
- Less barrier option business in the brokers due to improved risk management analytics and higher levels of implied volatility.
- Increase in volume on single bank platforms.
- Hybrid clients – both market maker and customer.

Moving Towards a More Electronic Market.

- Prospective regulation has focussed attention on electronic information and execution.
- Currently little electronic liquidity is available to market makers, but a large amount is available to clients via single bank platforms.
- RFQ with inter-dealer brokers is increasing.

- Multi bank platforms are in their infancy.
  - IDBs
  - RFQ based models
  - Multi to Multi limit order book style platforms

In Summary

• The risk profile of clients and market makers will continue to shape the market.

• Risk premium, which was squeezed out in the years before 2008, has returned and is likely to remain.

•The price of liquidity is volatile.

• Prospective regulation is accelerating the move towards a more electronic market.