



EUROPEAN CENTRAL BANK

EUROSYSTEM

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Developments in FX swap markets – MMSR perspective

BIS FX swaps workshop
Basel, 22-23 May 2017

- Is the FX swap market efficient?

Element	Behaviour	Assessment
Volume	How active is the market	?
Liquidity	Is there a local bias	?
Price	Does pricing depend on who you are and with whom you trade	?
Volatility	Is there “undue” volatility	?
Arbitrage and resilience	Does the market adapt to shocks and does it quickly restart	?

Outline of the presentation

1 Is the FX swap market active? Does it exhibit a local bias?

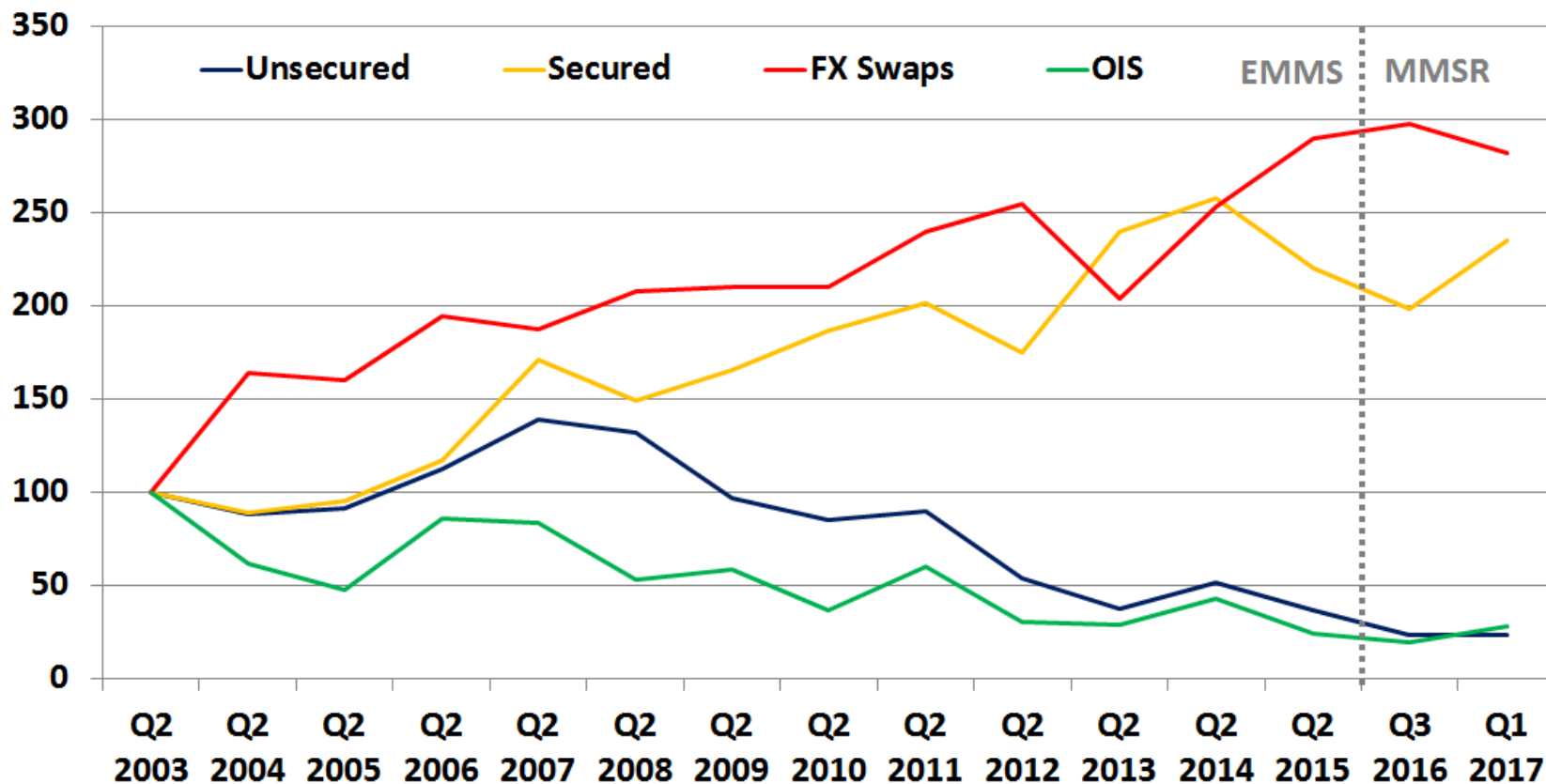
2 Is pricing segmented?

3 Was year-end dysfunctional?

Is the FX swap affected by the local bias?

- The FX swap turnover rose continuously despite the crisis

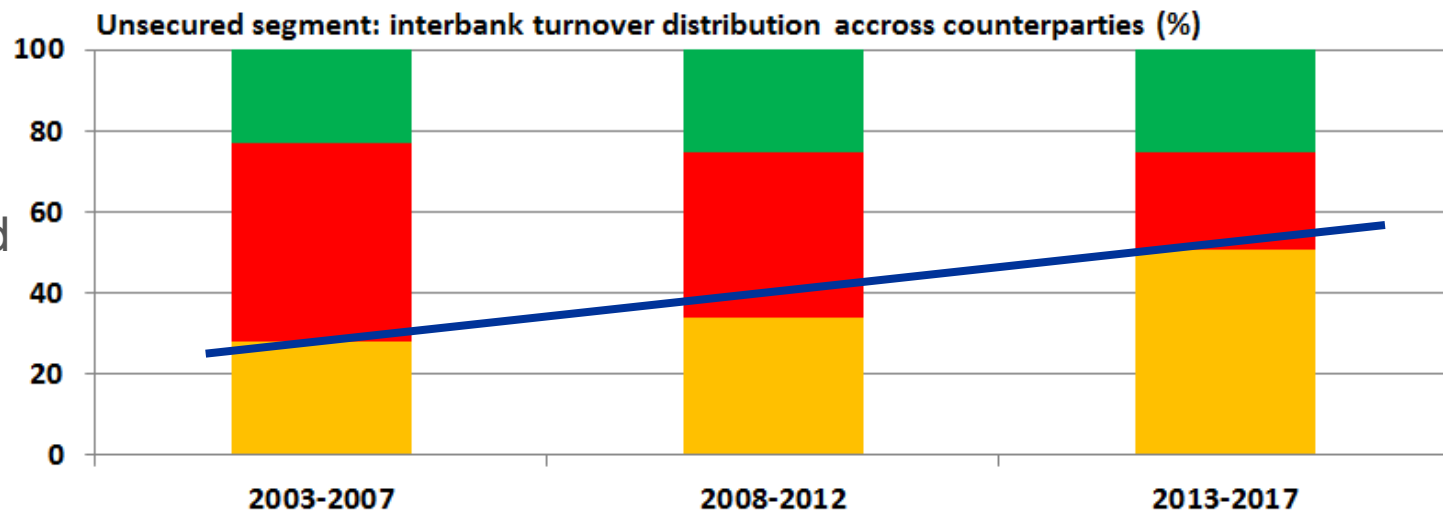
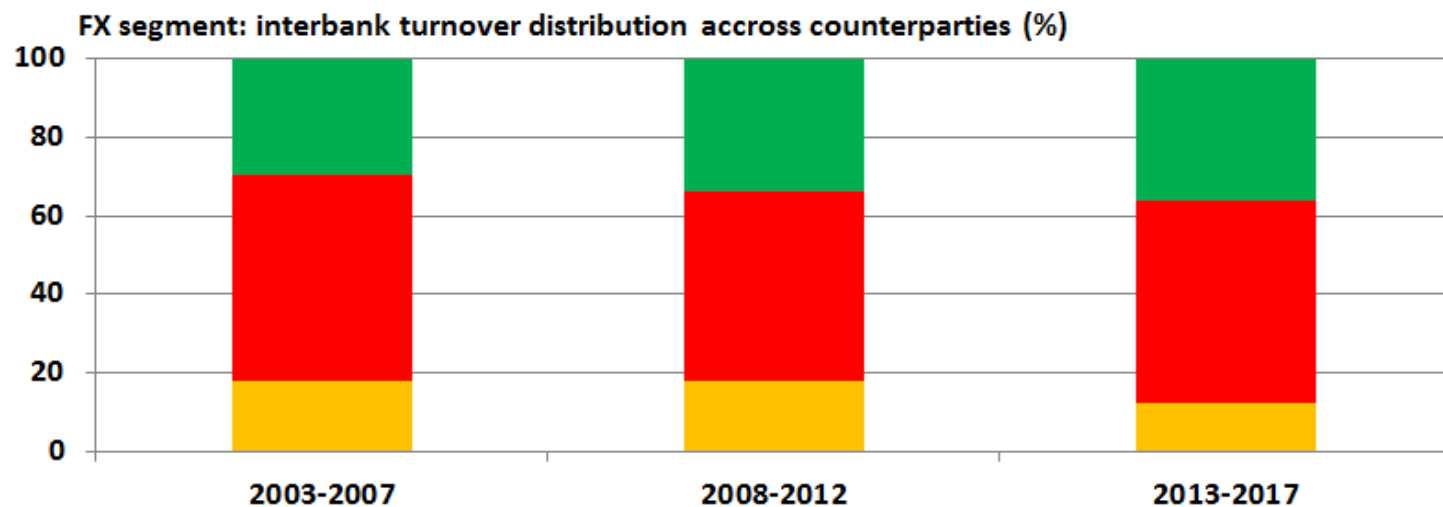
Turnover in various money market segments (index: total volume in 2003 = 100)



Source: ECB – EMMS until 2015,
MMSR from 2016 onwards, overlapping sample of 38 banks

Is the FX swap affected by the local bias?

- No local bias in contrast to unsecured market



■ Domestic

■ Cross-border euro area

■ Non-euro area

Source: ECB – EMMS until 2015, MMSR from 2016 onwards, overlapping sample of 38 banks

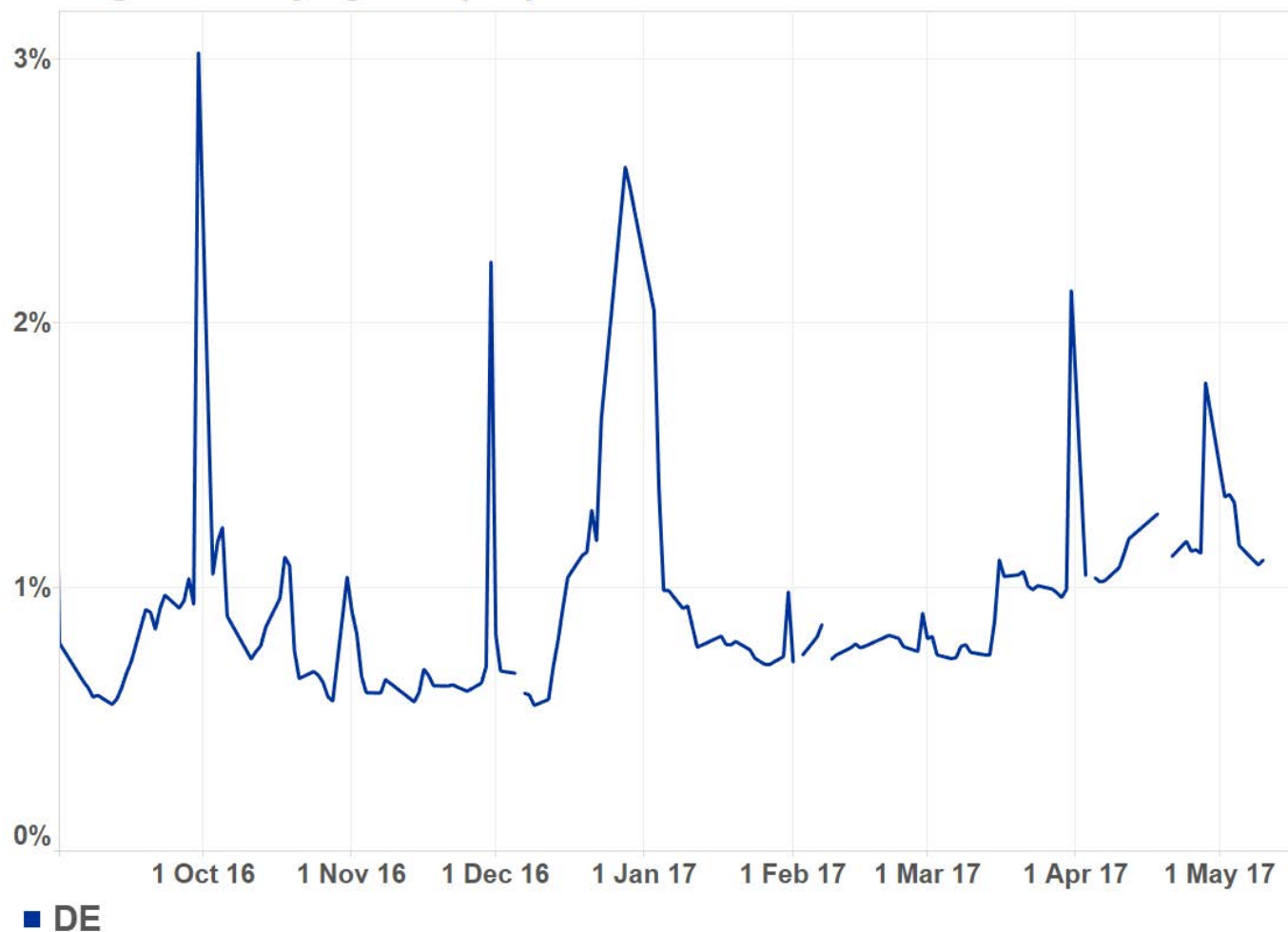
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Is pricing segmented?

- Implied USD rates: no price difference linked to the location of MMSR reporting agents

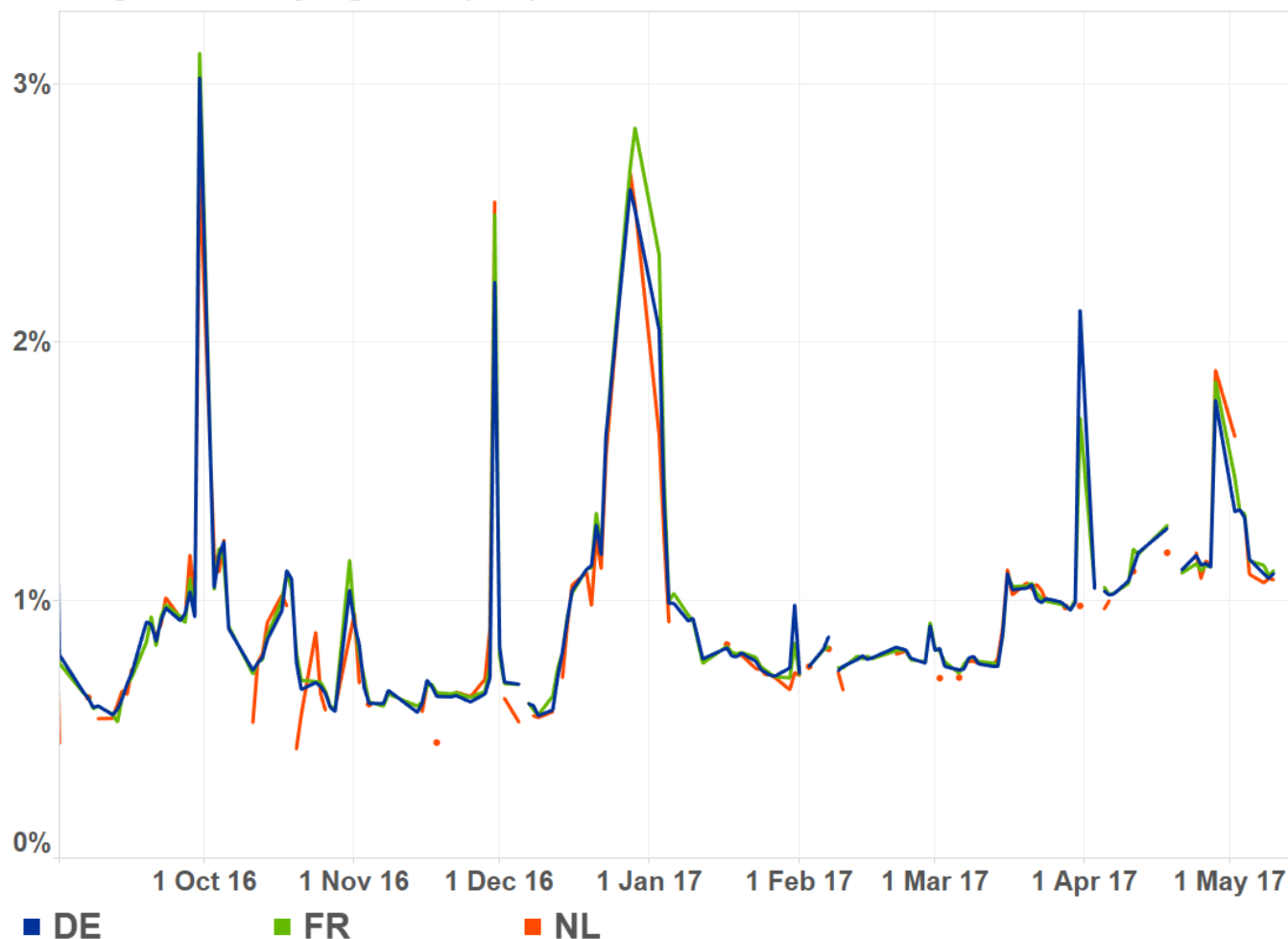
Selling EUR - Buying USD (T/N)



Is pricing segmented?

- Implied USD rates: no price difference linked to the location of MMSR reporting agents

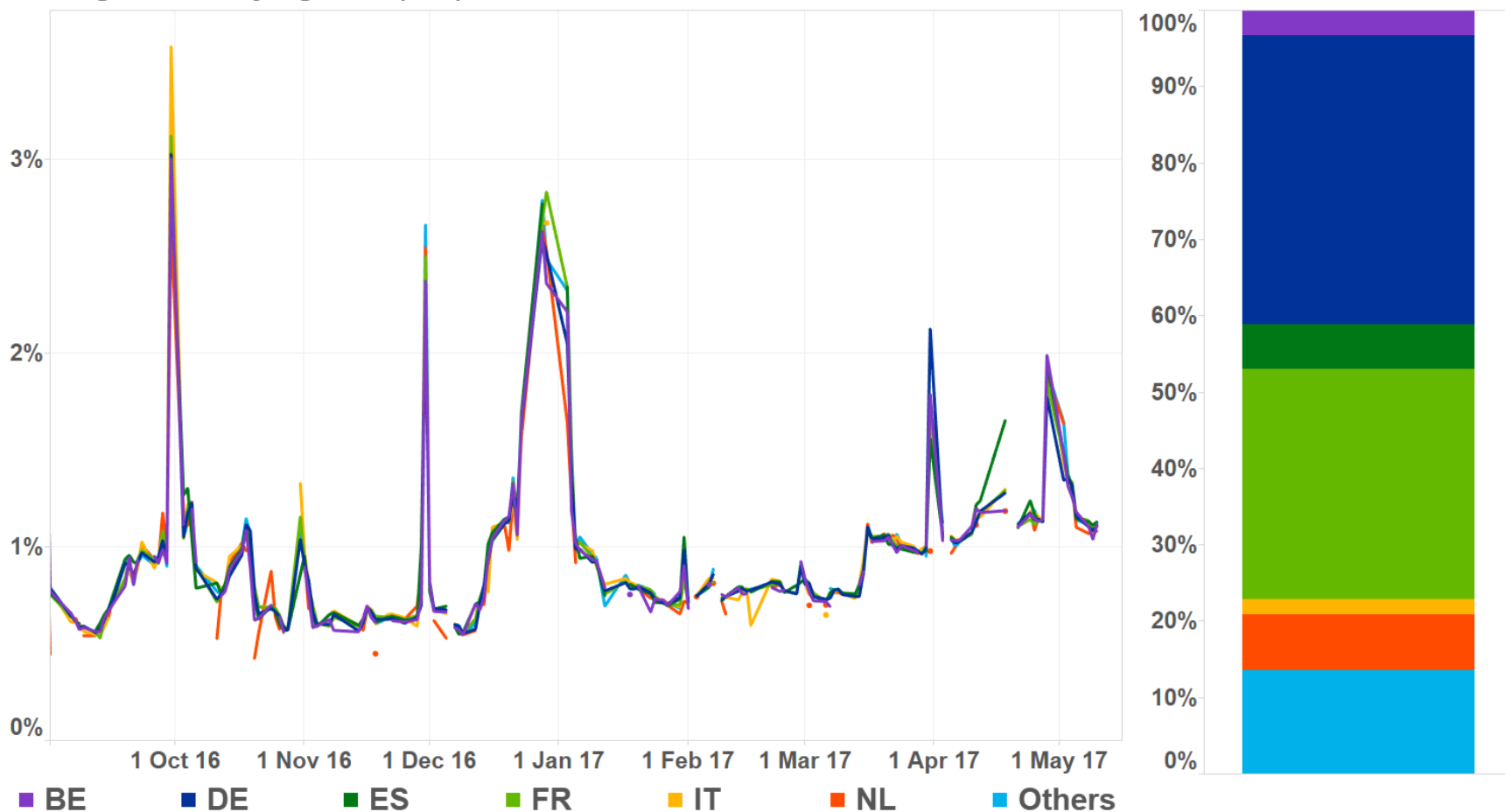
Selling EUR - Buying USD (T/N)



Is pricing segmented?

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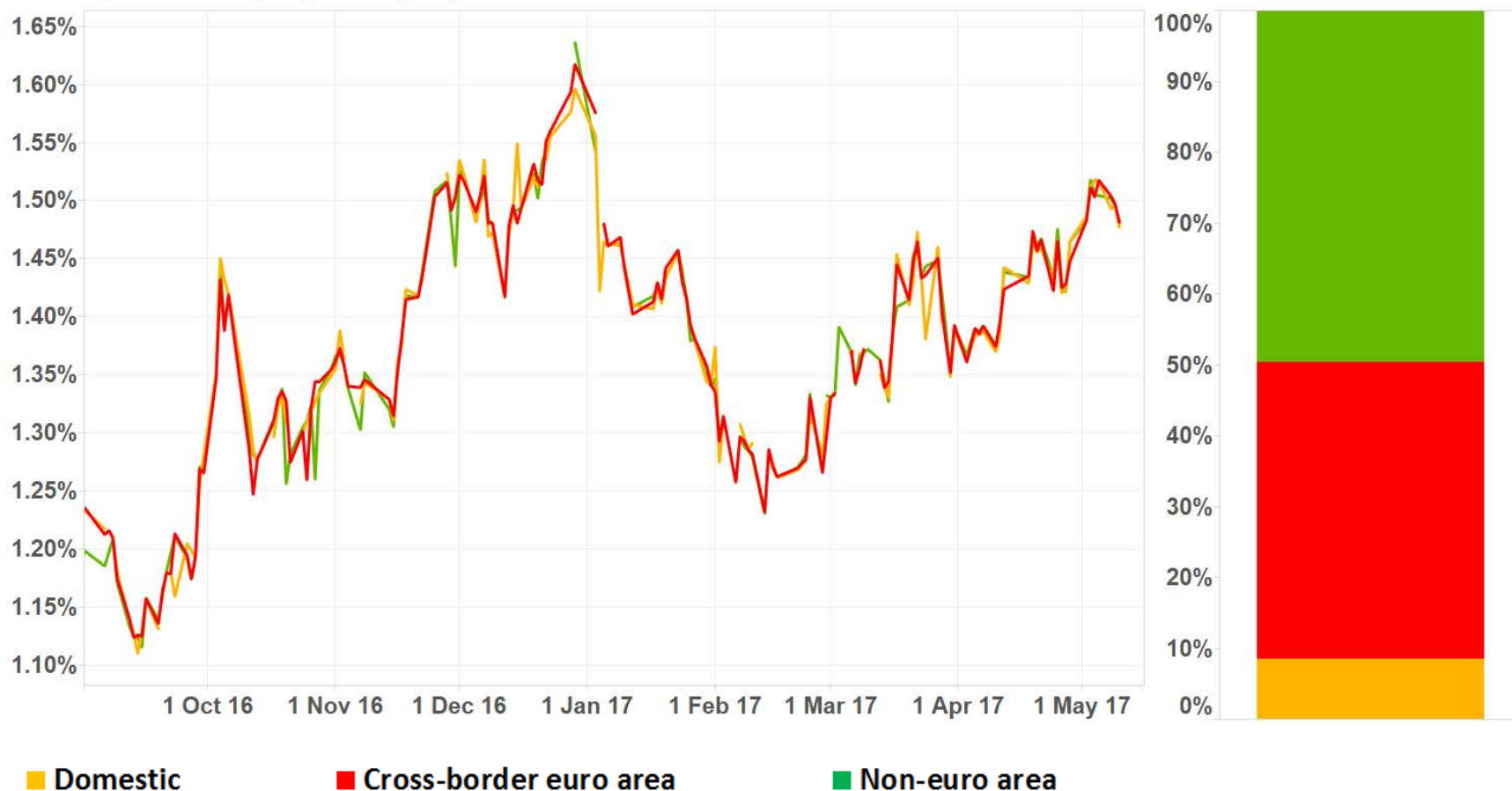
Selling EUR - Buying USD (T/N)



Is pricing segmented?

- No pricing segmentation when reporting agents trade with non-euro area counterparties

Selling EUR - Buying USD (3M)



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Was year-end dysfunctional?

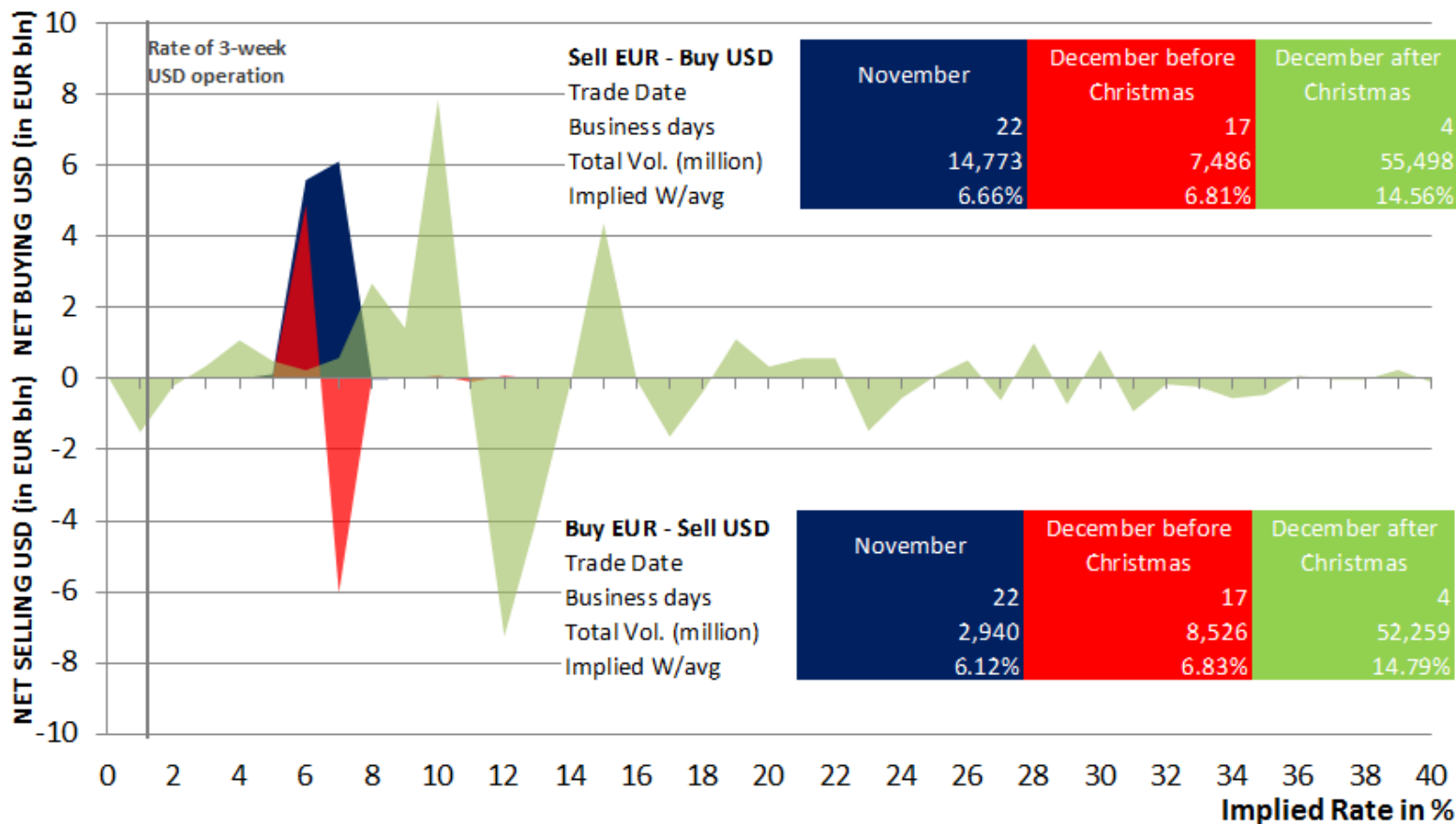
- Was pricing so extreme?
Regulations already imply that the cost of extending balance sheet over year-end is elevated

	Germany	Austria
Bank Levy	0.06%	0.11%
Return on Equity (RoE)	7.2%	7.2%
Length of year-end in days	4	4
Year-end USD O/N rate	0.55%	0.55%
Implied cost with Bank Levy	6%	10.5%
Implied cost with Leverage Ratio of 3%	20%	20%

Was year-end dysfunctional?

- Headlines: USD implied rates of 40% but on small amounts as banks have pre-funded in November, and earned the spread

FX Swap EUR vs USD Net Activity by period & rate, Settlement Date 30/12/2016, Maturity Date 03/01/2017



Source: MMSR

Was year-end dysfunctional?

- Was market so dysfunctional after all...?

(1) Implied rates not so extreme compared to cost of balance sheet lengthening implied by bank levies or leverage ratio (6% to 20%);

(2) Despite falling volumes, two-way activity remains;

(3) Institutional frictions make arbitrage less obvious: difficult to get approvals to trade around year-end once balance sheet usage is frozen;

(4) March quarter-end much smoother suggests banks adapted (comparable to secured market).

=> FX remained functional, even if volatility was observed and arbitrage limited

- Is the FX swap market efficient?

Element	Behaviour	Assessment
Volume	Stable or growing volume	●
Liquidity	No sign for local bias	●
Price	Homogenous pricing	●
Volatility	Presence of volatility on some dates	●
Arbitrage and resilience	Year end: market remained functional and is adapting to new regime	●

Annex

- Methodology

Euro money Market Survey:

- 150 banks across the EU

- Aggregated turnover and maturity information only

- Segments: unsecured, secured, FX swaps, OIS, FRAs, Interest Rate Swaps

- Since 2003, interrupted in 2015

Money Market Statistical Reporting

- 52 largest euro area banks

- Transactional data: counterparty details, rate, trade, settlement and maturity dates, collateral ISIN and amount, haircuts

- Segments: unsecured, secured, FX swaps, OIS

- No publications yet

Long time series based on 38 banks common to both data samples