



EUROPEAN CENTRAL BANK

EUROSYSTEM

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# **Developments in the FX swap market – MMSR perspective**

MMCG

Milan, 13 June 2017

- Is the FX swap market efficient?

Element	Expected 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?

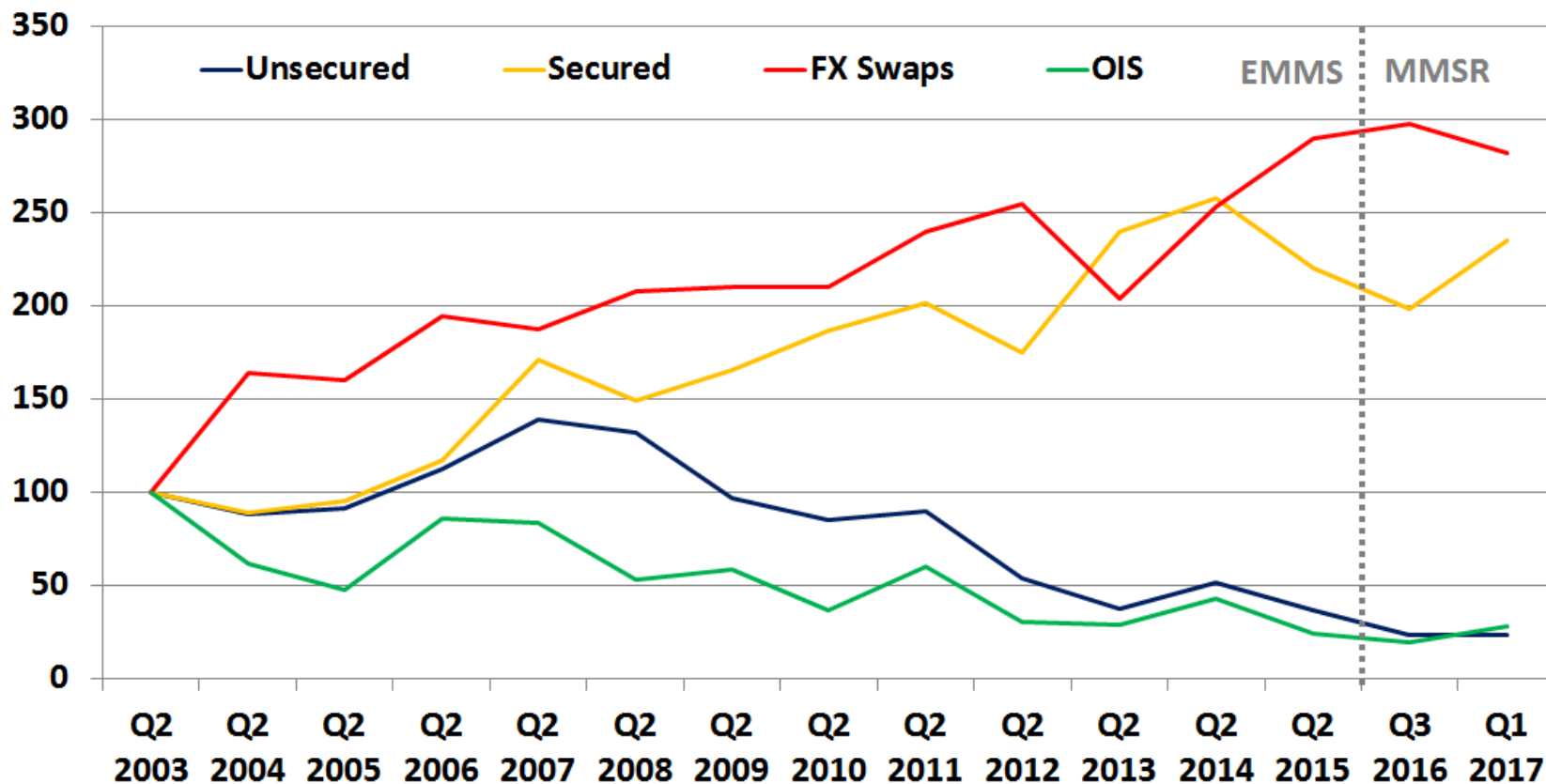
**2** Is pricing segmented?

**3** Was year-end dysfunctional?

## Is the FX swap affected by the local bias?

- The FX swap turnover rose continuously despite the crisis

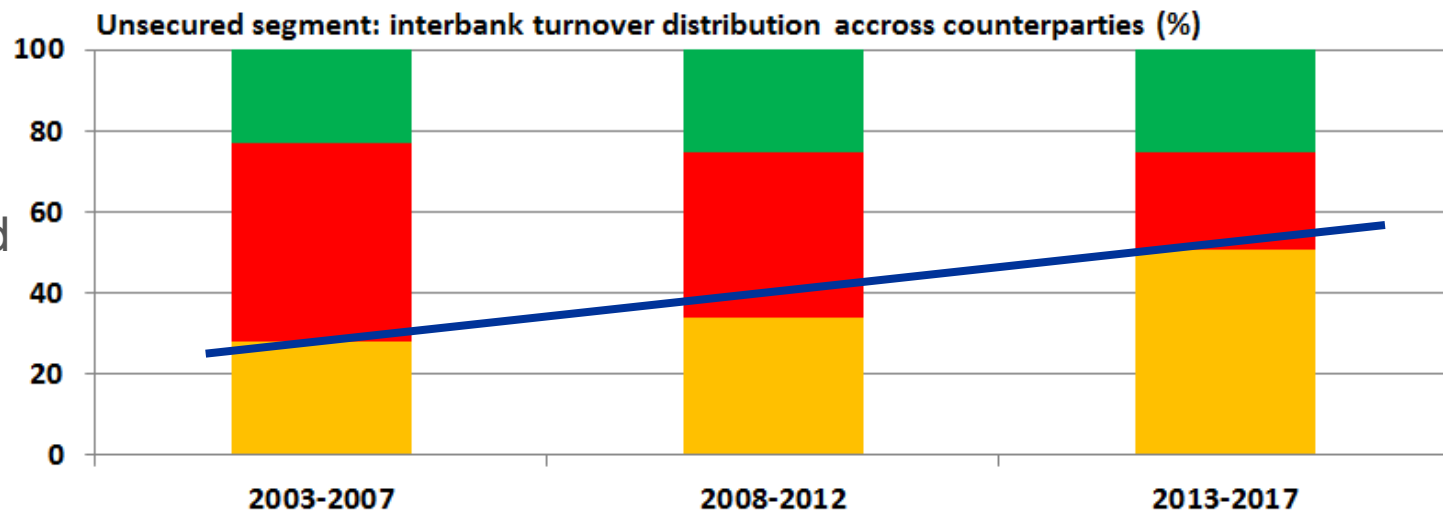
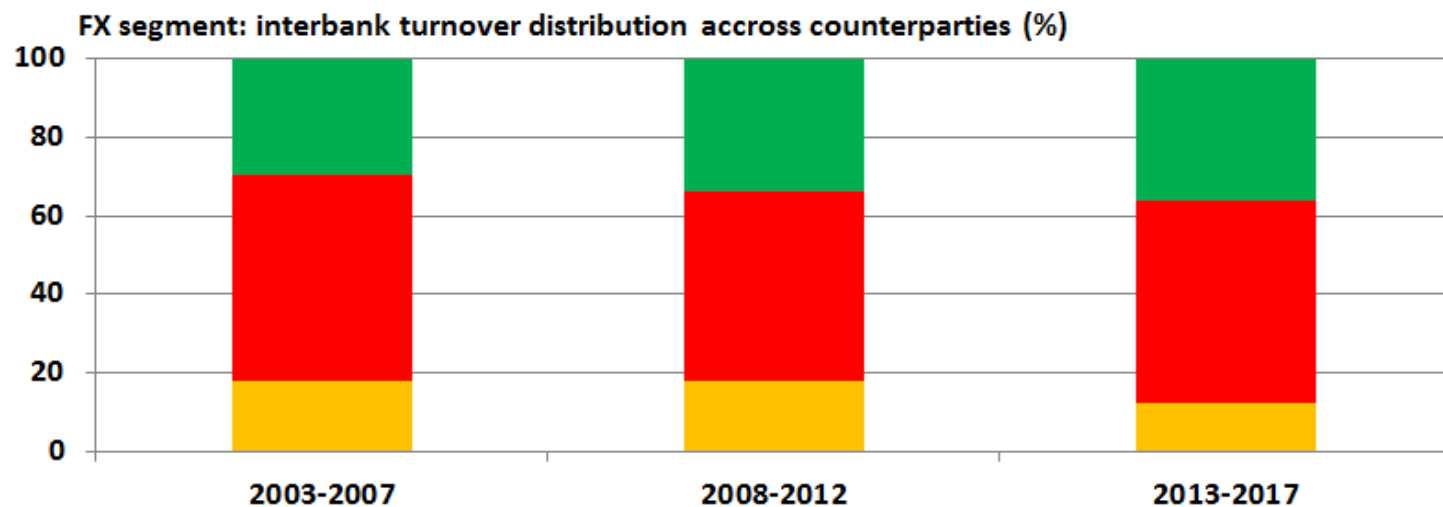
Turnover in various money market segments (index: total volume in 2003 = 100)



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

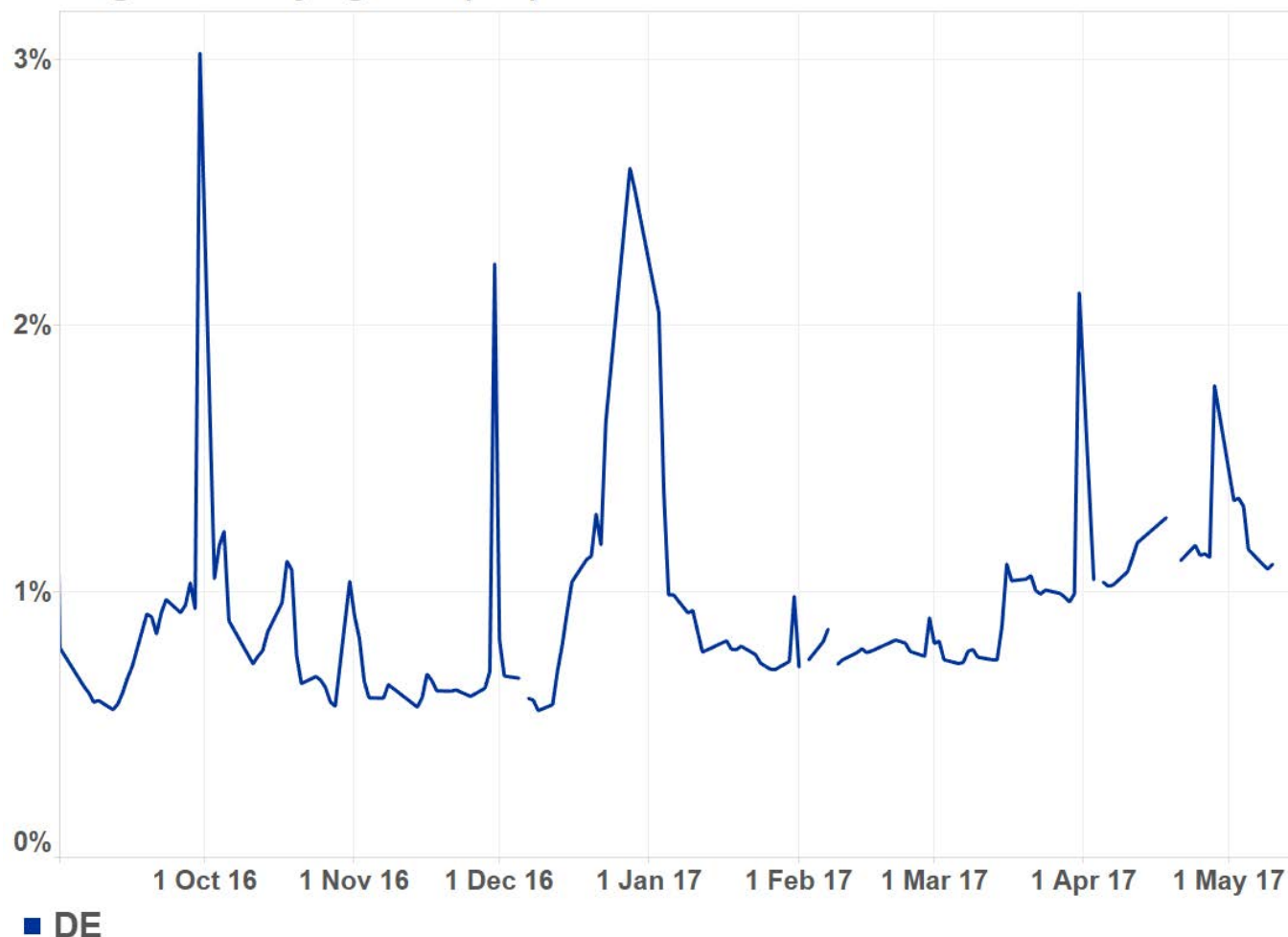
# Outline of the presentation

- 1 Is the FX swap market active? Does it exhibit a local bias?
- 2 Is pricing segmented?
- 3 Was year-end dysfunctional?

## Is pricing segmented?

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

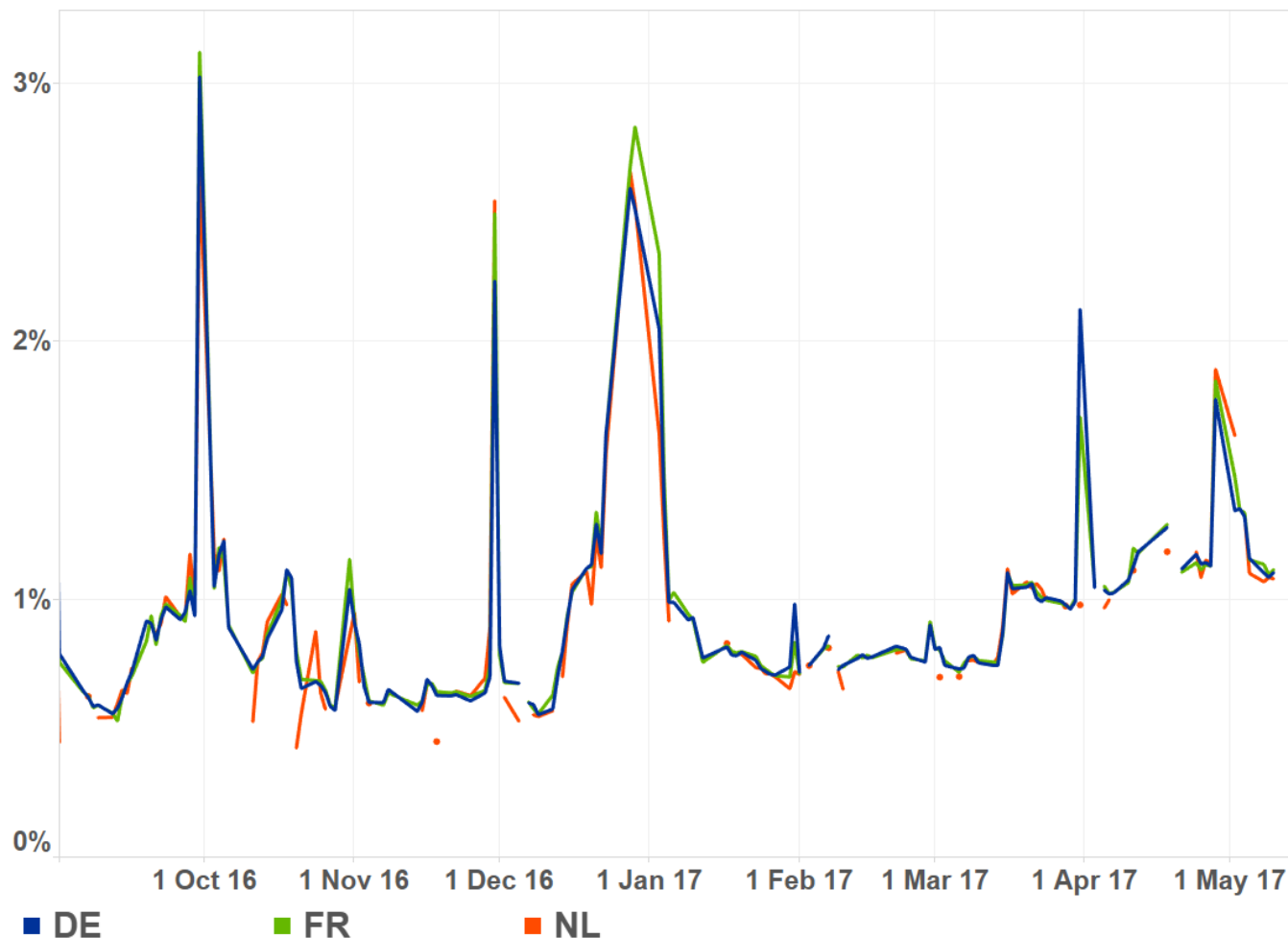
Selling EUR - Buying USD (T/N)



## Is pricing segmented?

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

Selling EUR - Buying USD (T/N)

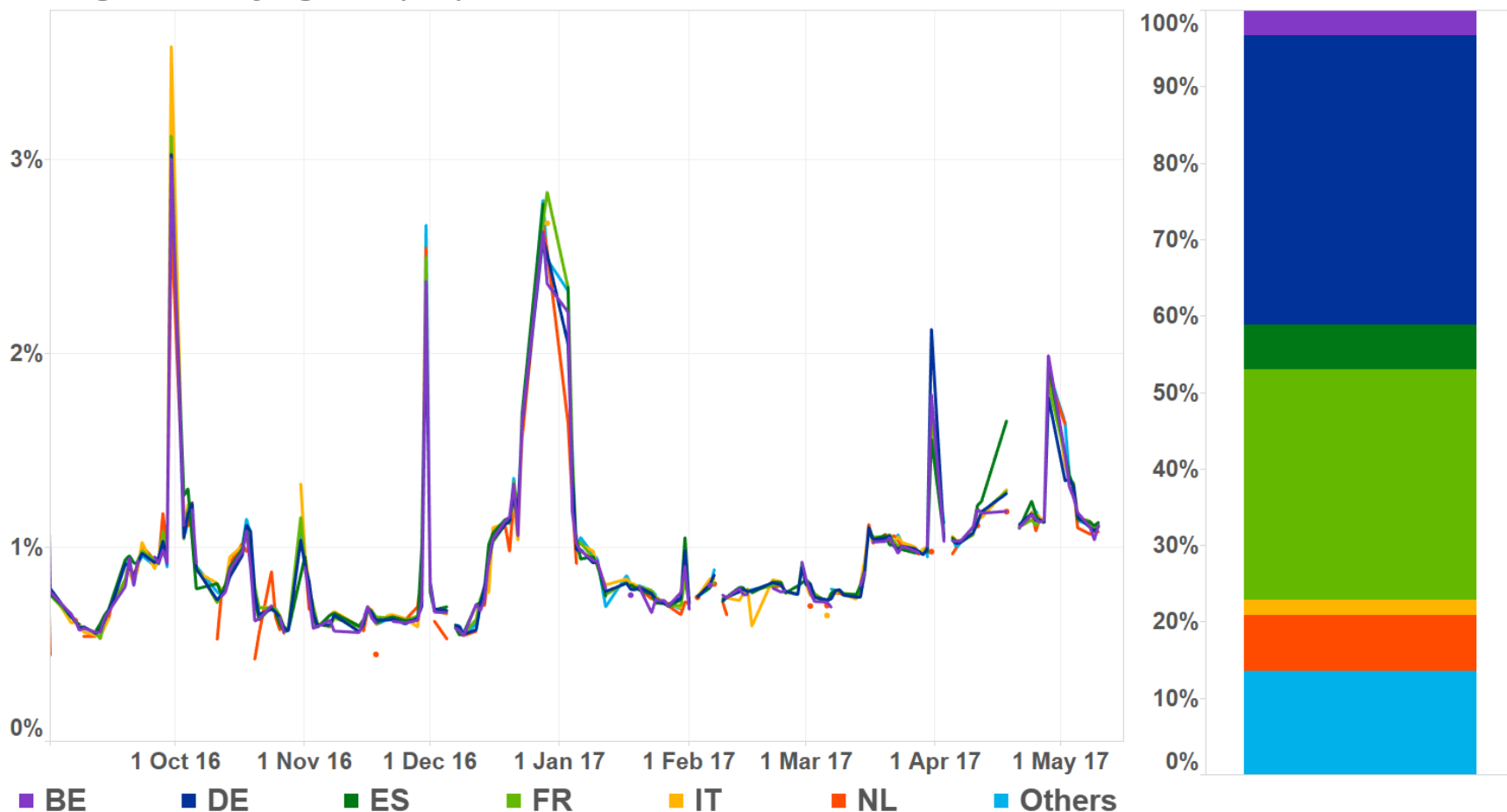




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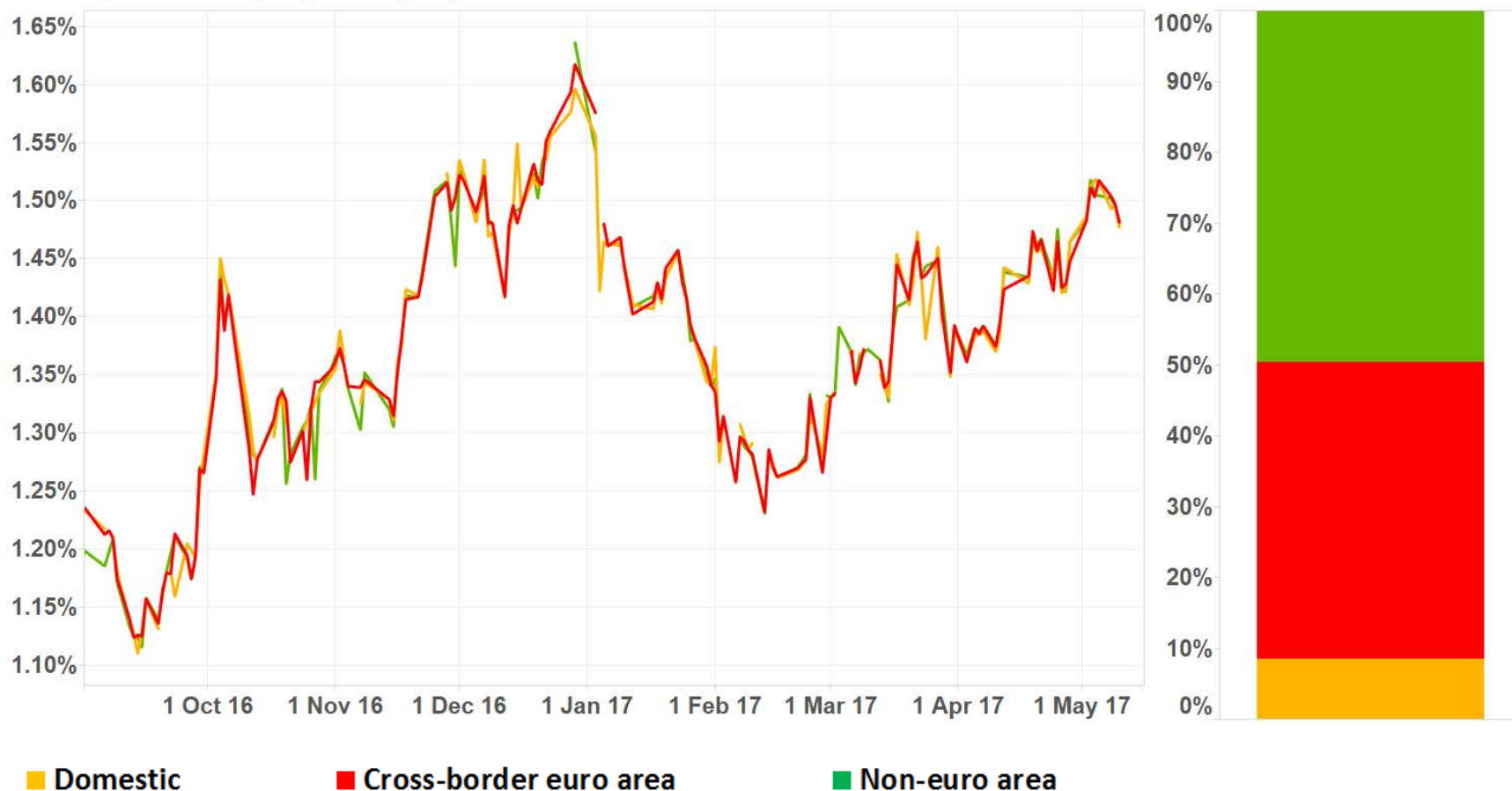
Selling EUR - Buying USD (T/N)



## 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?

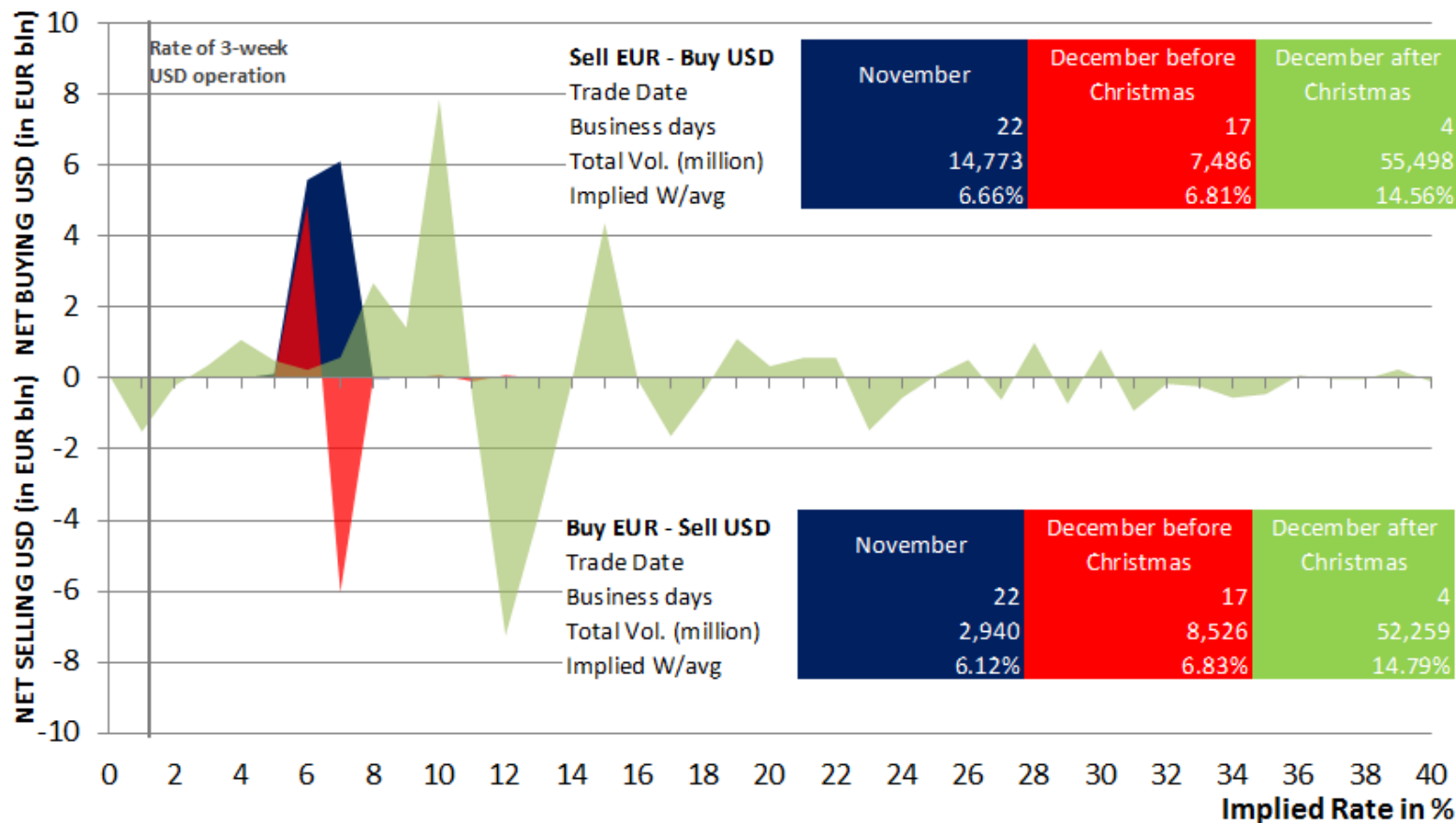
- Was pricing so extreme?  
Regulations already imply that the cost of extending balance sheet over year-end is elevated

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

# 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	Expected 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