EUROPEAN CENTRAL BANK
EUROSYSTEM

ECB-PUBLIC

María Encío
DG-Market Operations
Division Money Market and Liquidity

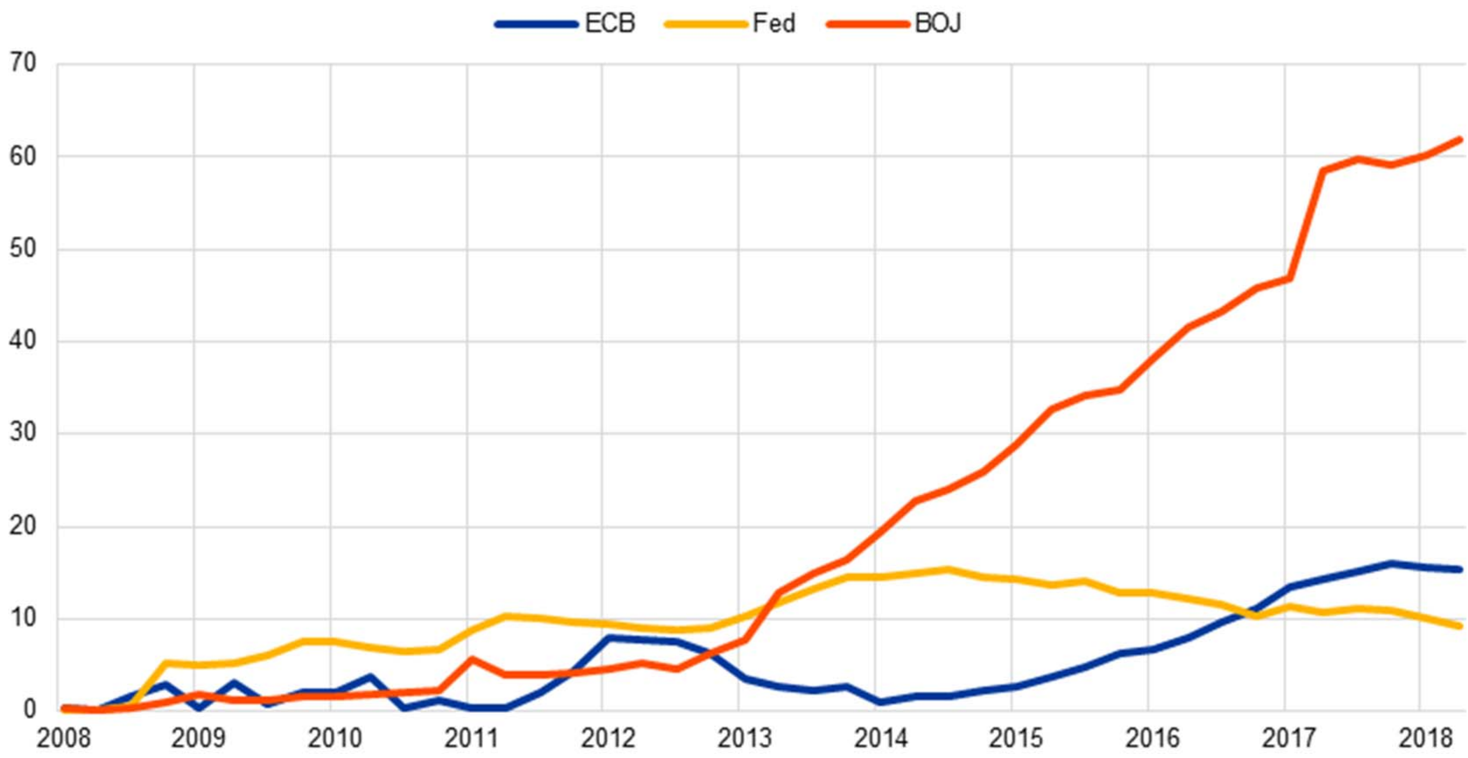
European Money Markets

Central Bank Seminar 12 July 2018 - Frankfurt

Table of contents

1.1 Excess Liquidity context

Central Bank Excess liquidity relative to GDP

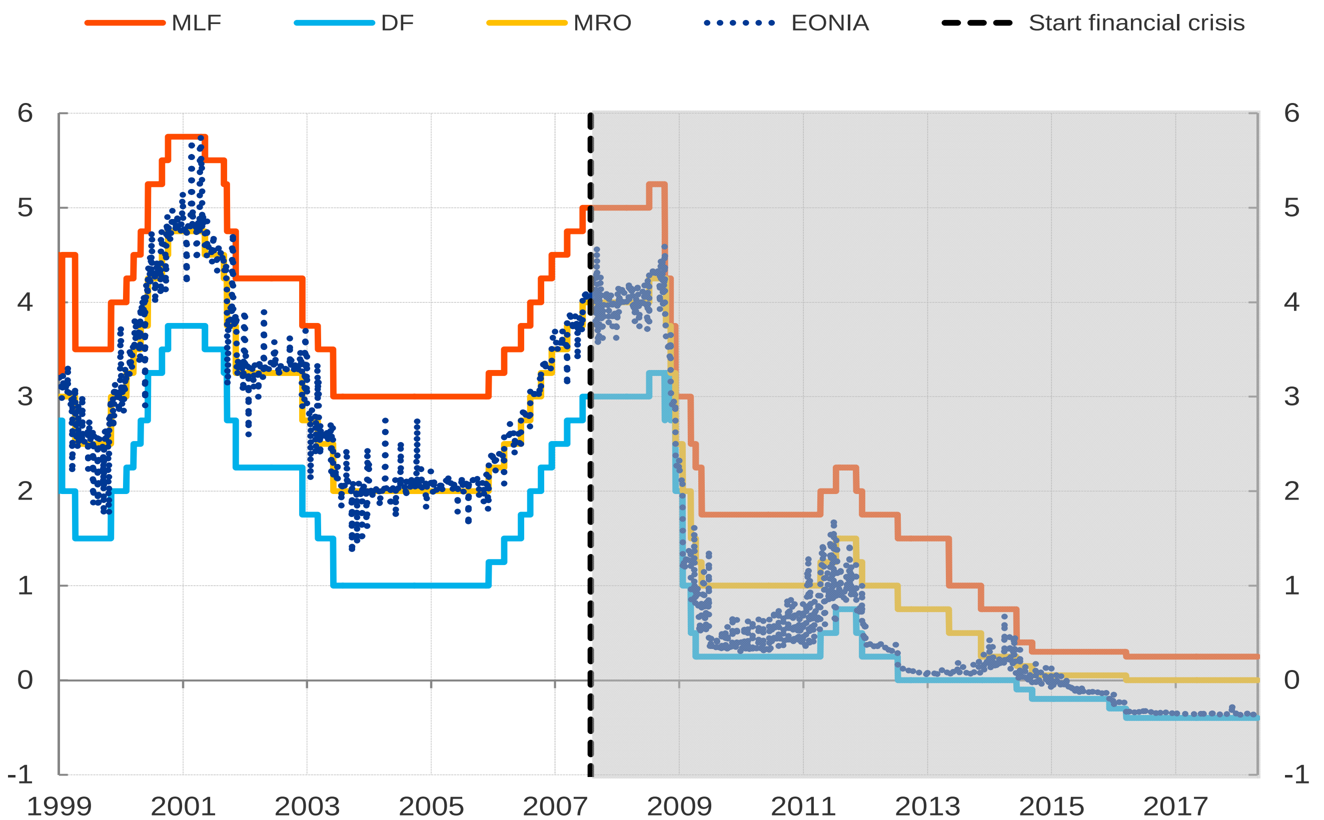


Source: ECB, Federal Reserve, BOJ, IMF

1.2. Monetary policy dimension – until recently short rates anchored within standing facility corridor and close to the deposit facility rate

ECB key interest rates and EONIA

(percentages per annum)

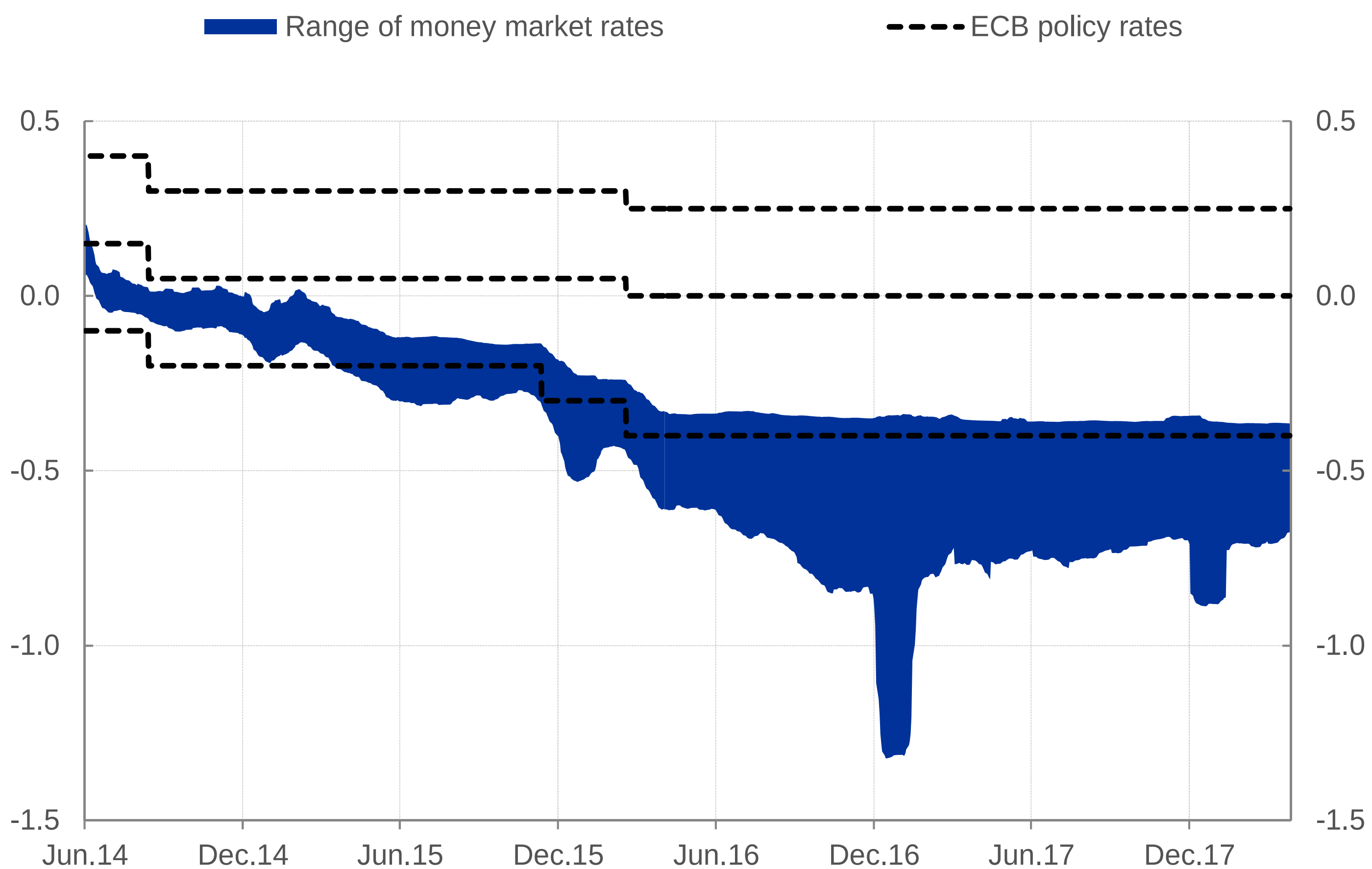


Source: ECB.
Latest observation: 29 April 2018.

1.3. but now dispersion across short-term rates (wholesale counterparties)

Developments in money market rates since June 2014

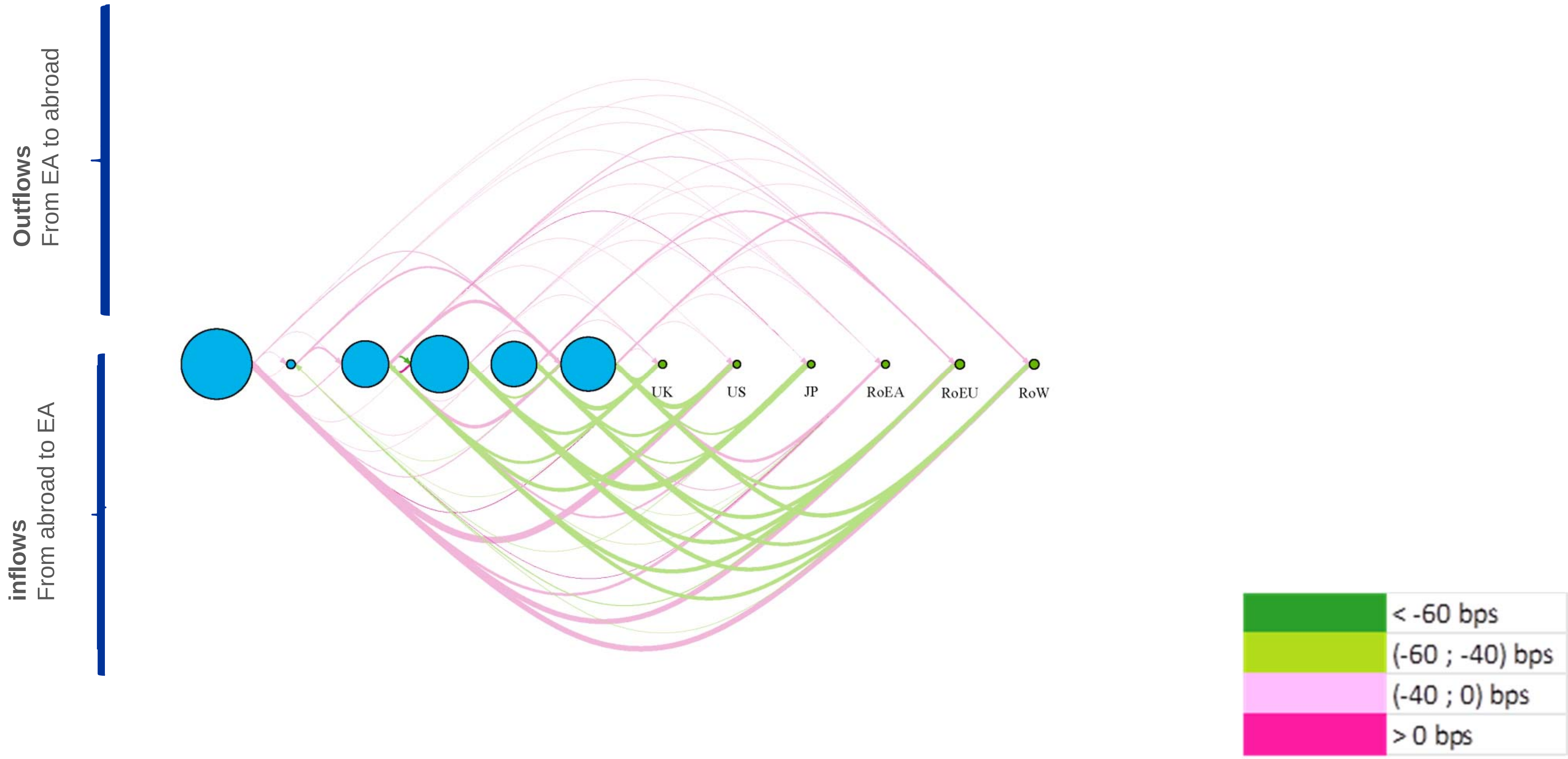
(percentages per annum)



Sources: ECB, BrokerTec, and MTS.
Notes: Minimum and maximum money market rates refer to the minimum and maximum of the 30-days moving averages of the following rates: EONIA, T2 rate, GC pooling, GC Italy, GC Germany and Special German repo rate. T2 rate refers to an unsecured O/N rate derived from TARGET 2 payments system data.
Latest observation: 23 April 2018.

In the unsecured market, having access or not to the deposit facility can have implications for transaction cost and liquidity flow dynamics

Liquidity flows in the unsecured market *(liquidity flow directions, relative volumes and pricing)*



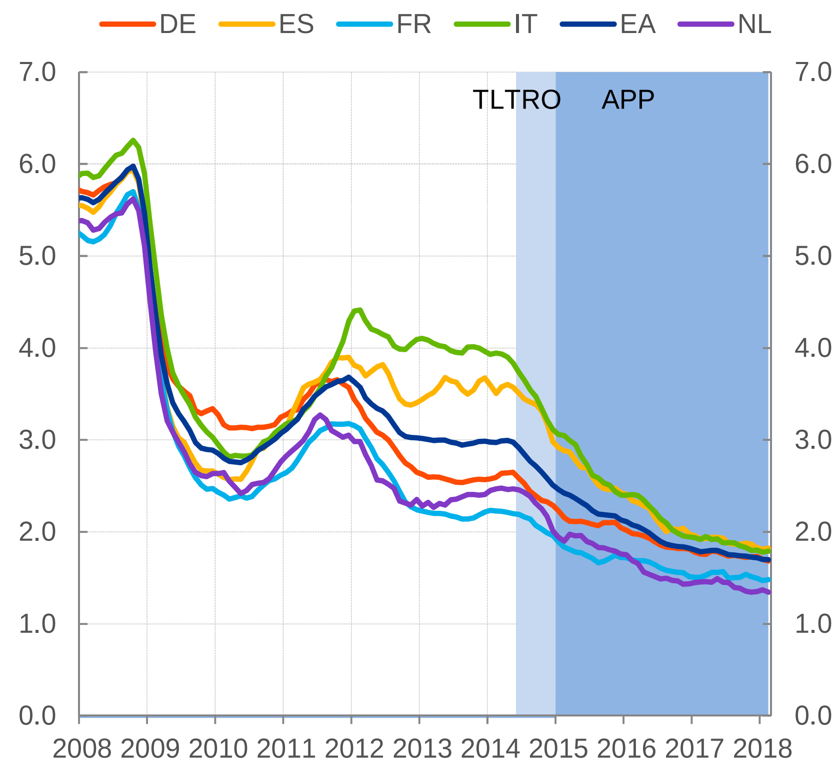
Sources: MMSR data and ECB calculations
Notes: Connections indicate from-to relationship in a clockwise manner in the 2 hemispheres, and connection thickness indicates relative volume of flows. The size of nodes (blue bubbles) indicates the volume of net inflow into Euro Area banking systems.

Geographical fragmentation: Pass-through via the bank lending channel

- **Signs of convergence** on bank lending rates
- ECB monetary policy measures **helped reducing** geographical fragmentation
- While large dispersion observed in 2012 is no longer present, banks in certain jurisdictions **still** show slightly higher funding costs than their peers with equivalent ratings in other jurisdictions even though the Single Supervision Mechanism is now fully operational.

Bank lending rates on loans for non-financial Corporations

(percentages per annum; three-month moving averages)

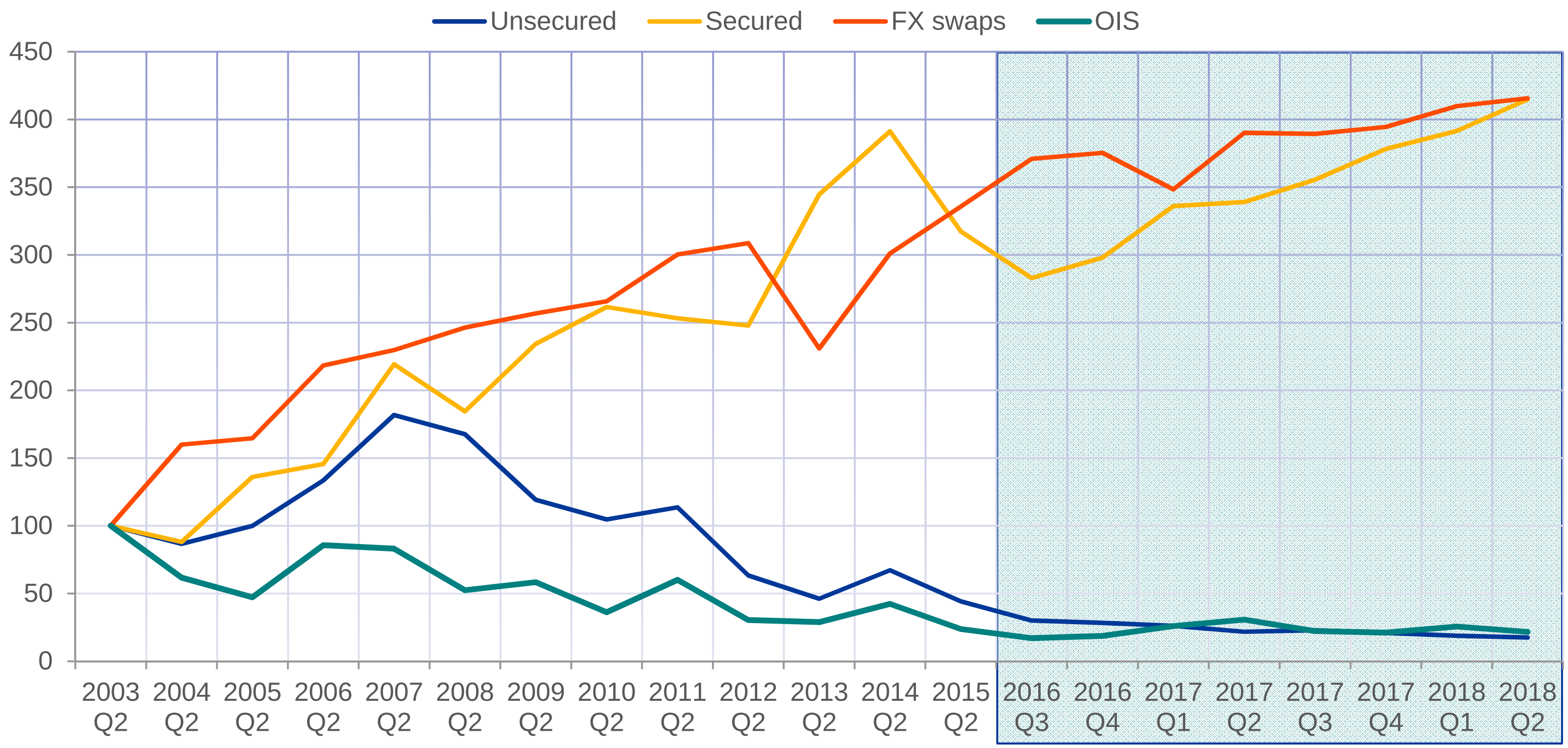


Source: ECB.
Notes: The indicator for the total cost of lending is calculated by aggregating short and long-term rates using a 24-month moving average of new business volumes.
Latest observation: February 2018.

After the financial crisis, secured and FX swaps are the only segments that are still advancing, while unsecured and OIS have shrunk in size.

Quarterly turnover based on previous Money Market Surveys (~ 2015) and MMSR data (2016 ~)

Turnover in selected money market segments
(index: total volume in 2003Q2 = 100)



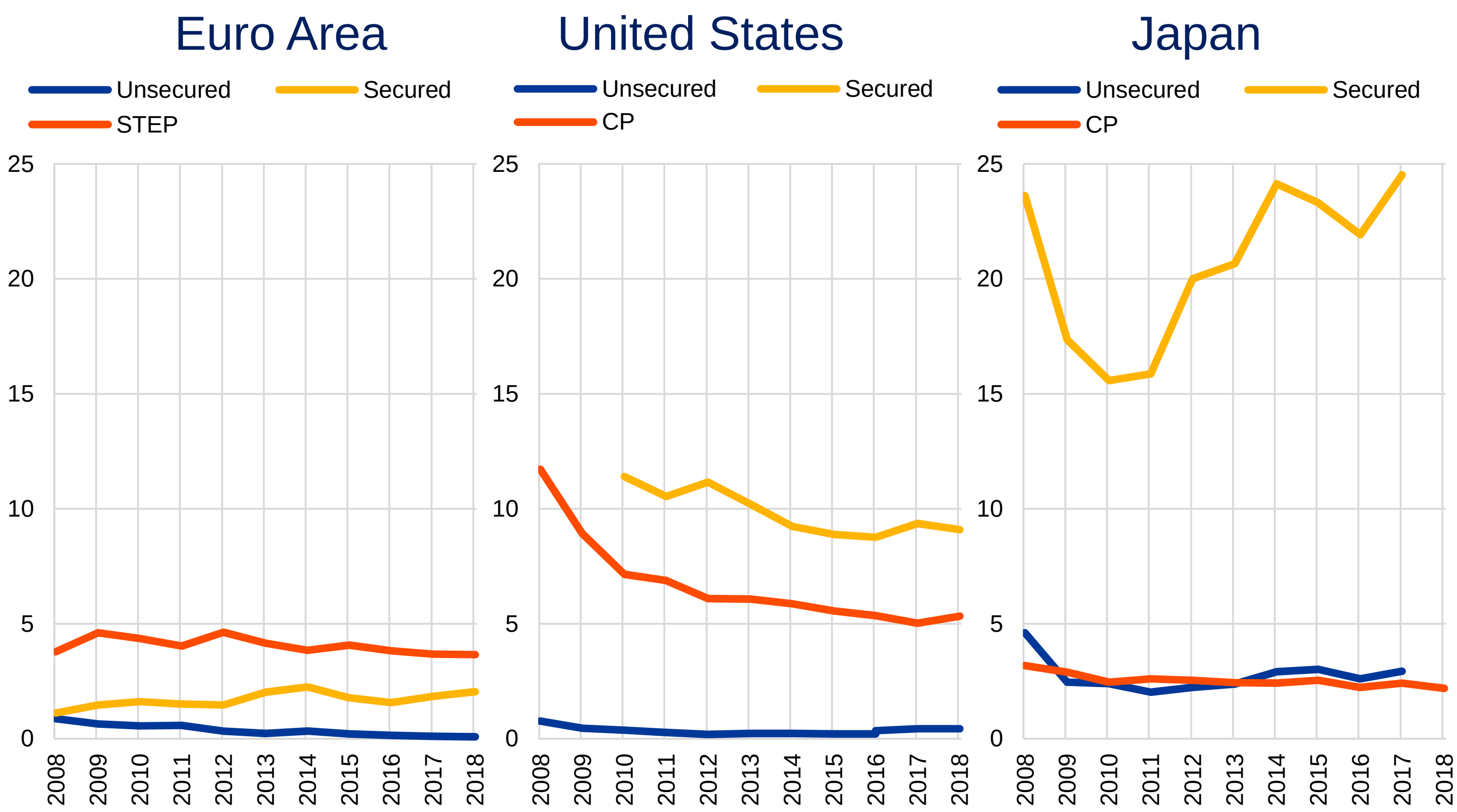
Sources: ECB – EMMS until 2015, MMSR from 2016 onwards

Note: An overlapping sample of 38 banks was used. The data refer to deposit-taking institutions and CCPs as counterparties

Euro Area comparison versus US and Japan: notable differences in terms of resilience and recovery paths by segments

Daily volumes of three money market segments in the euro area, the United States and Japan

(y-axis: Ratio to nominal GDP, percentages)

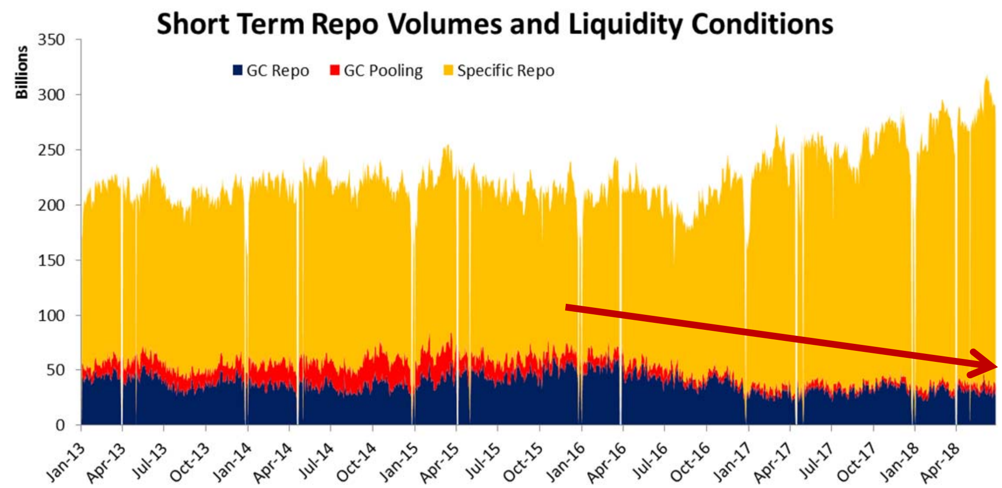


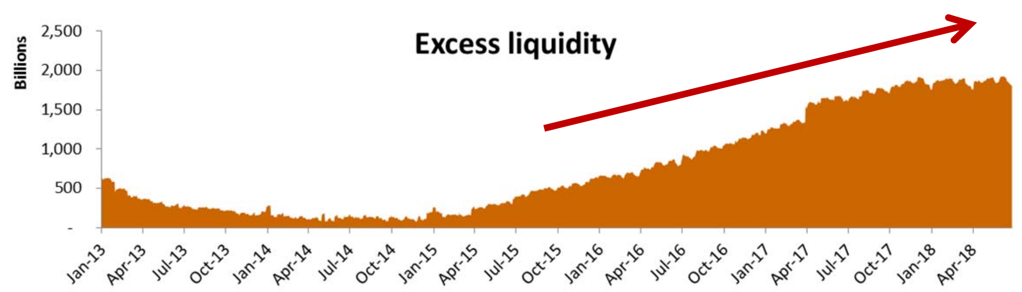
Sources: ECB, Federal Reserve System, Federal Reserve Bank of New York, and Bank of Japan.

Turnover - Increasing repo volumes used for collateral management. Excess liquidity led to declining repo volumes used for cash management

Market turnover: relative overall stability
Divergence between repo market trading volumes:

Liquidity management/General collateral or GC repo (repo transactions used to invest excess cash in a secured way or to obtain funding)
vs.
Collateral-driven or specific repo (transactions aimed at sourcing specific collateral)





Source: BrokerTec, MTS and ECB Calculation

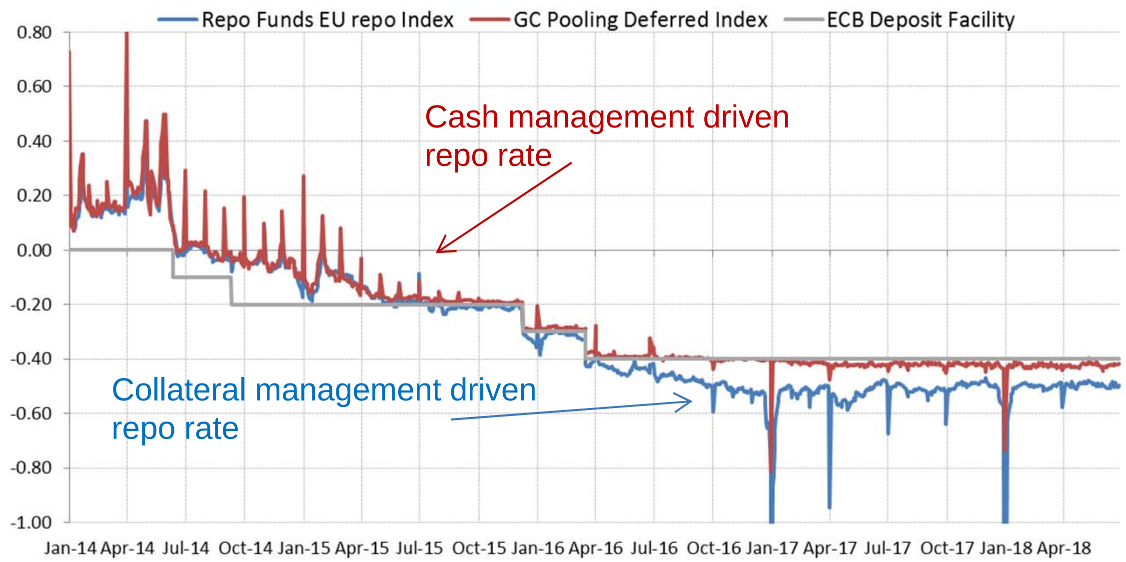
Repo rates depend on whether the operation is driven by cash or collateral

Repo rates for cash management remain anchored to the deposit facility

Wider spreads between repo rates:

Liquidity management repo rates, as a close substitute to the deposit facility vs.

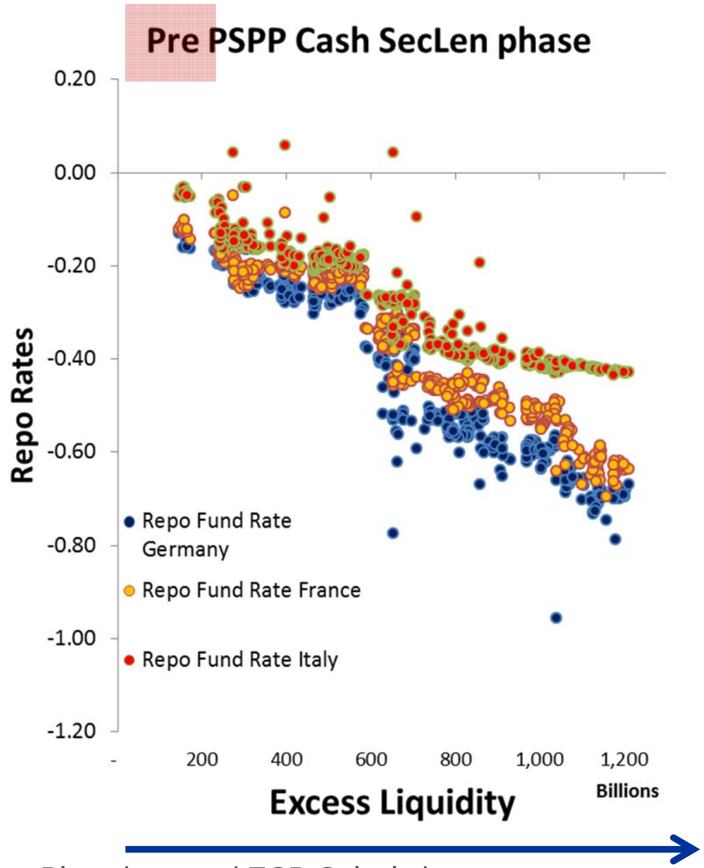
Collateral-driven repo, affected by demand and supply of collateral

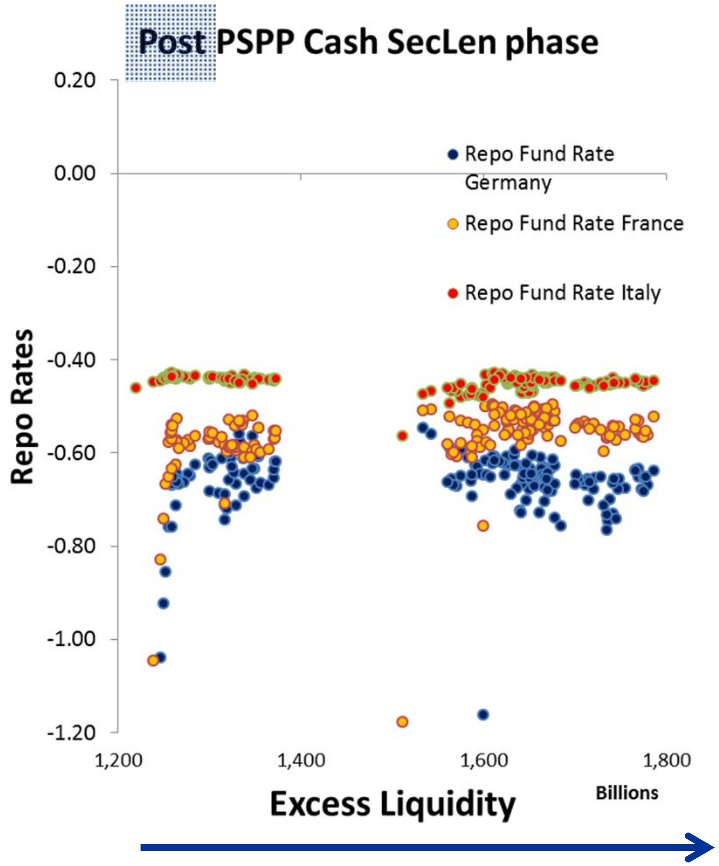


Source: BrokerTec, MTS and Stoxx

Impact of PSPP and Securities Lending facilities:

- Until end-2016: strong correlation between purchases and repo market premia. High credit quality collateral most affected reflected demand and supply factors.
- Post end-2016: Introduction of securities lending (cash-collateral option) helped to ease collateral tensions despite ongoing purchases.





Source: Bloomberg and ECB Calculation

3 - Monetary Policy normalisation: a gradual process

Press release on 14 June 2018 : Markets take-up

First, as regards non-standard monetary policy measures, the Governing Council **will** continue to make net purchases under the asset purchase programme (APP) at the current monthly pace of €30 billion until the end of September 2018. The Governing Council anticipates that, after September 2018, subject to incoming data confirming the Governing Council's medium-term inflation outlook, **the monthly pace of the net asset purchases will be reduced to €15 billion until the end of December 2018 and that net purchases will then end**.

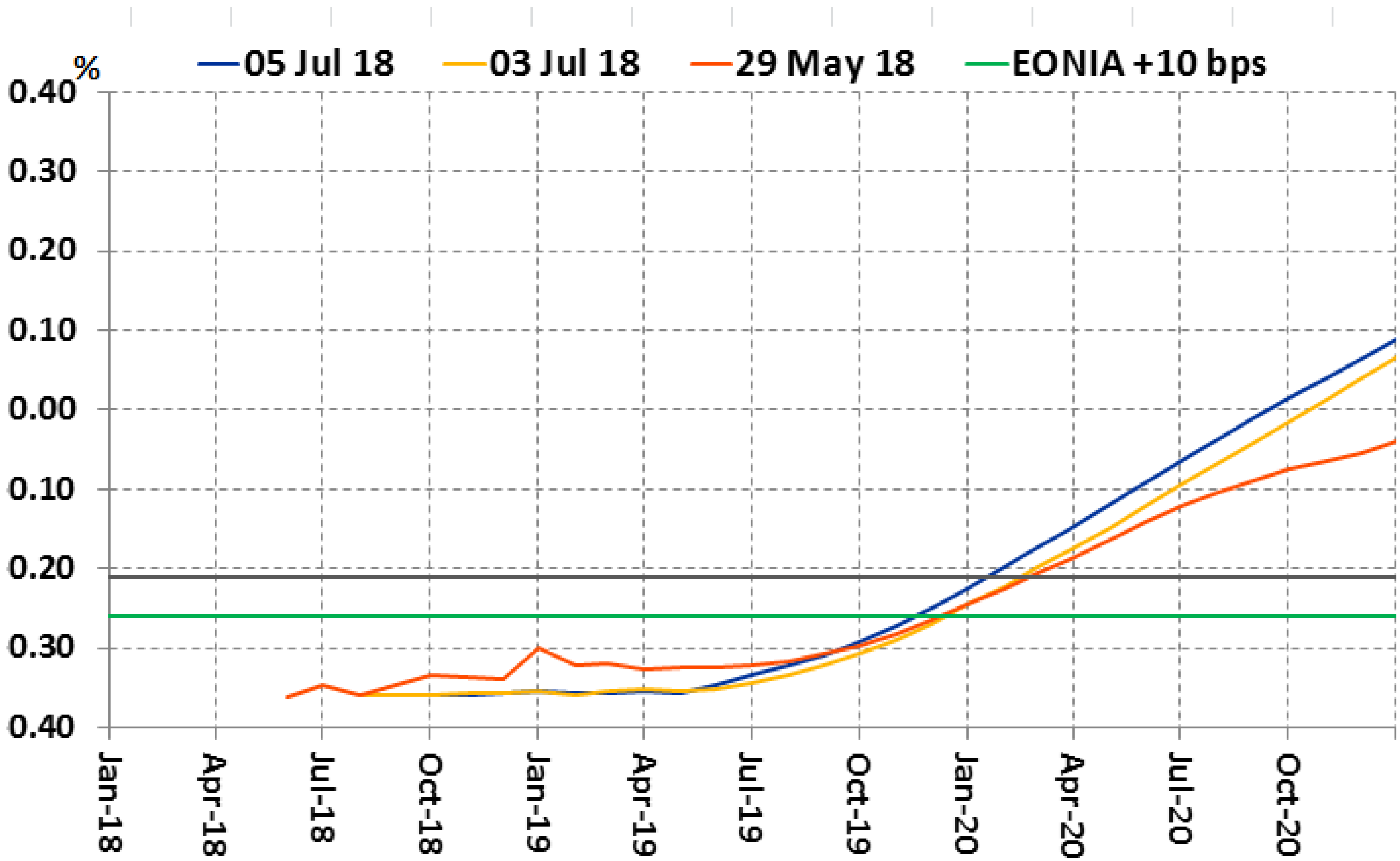
Second, the Governing Council **intends** to maintain its policy of **reinvesting the principal payments from maturing securities purchased under the APP for an extended period of time** after the end of the net asset purchases, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.

Third, the Governing Council decided that the interest rate on the main refinancing operations and the interest rates on the marginal lending facility and the deposit facility will remain unchanged at 0.00%, 0.25% and -0.40% respectively. The Governing Council **expects** t**he key ECB interest rates to remain at their present levels at least through the summer of 2019** and in any case for as long as necessary to ensure that the evolution of inflation remains aligned with the current expectations of a sustained adjustment path.

Source: Bloomberg {NSN PAD4136TTDS0}

Euro money markets react to ECB Press conference

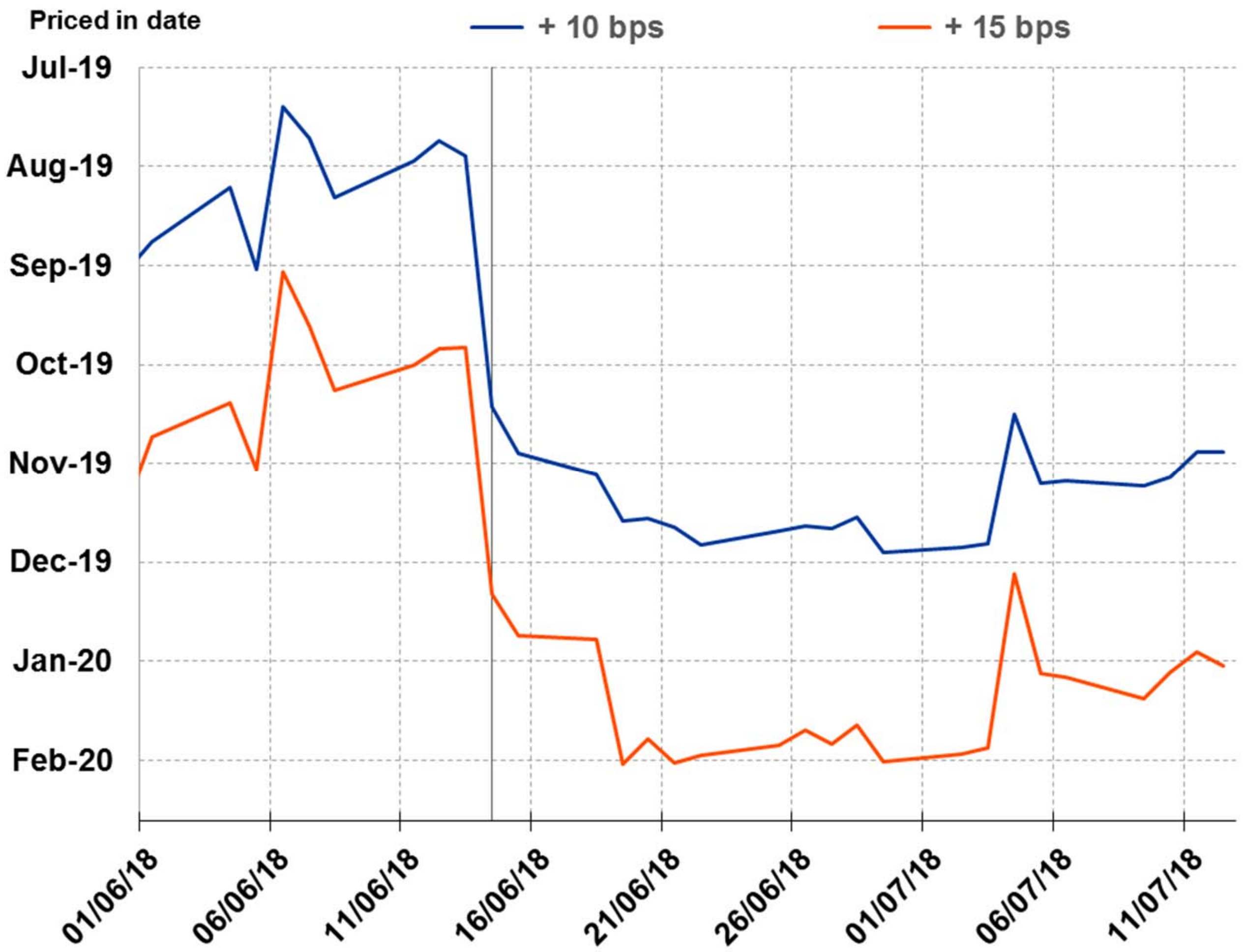
Euro OIS curve: Expectations for first DFR hike at Nov-2019



Source: Bloomberg

MP-dated EONIA forward rates remain steady

Markets remain unperturbed by debate on what "through the summer" means. 10 bps DFR hike continues priced for late 2019



Source: Bloomberg

1Y/1Y EONIA swap rate

1Y/1Y EONIA swap rate +3bps since June Gov Co. meeting

4. Summary of main findings and key messages

Main messages:

•**Better ECB understanding of how money markets evolve thanks to the Money market statistical reporting dataset (MMSR).** MMSR collects daily data on transactions conducted by the largest banks in the euro money market.

•**The bulk of the activity in the unsecured market** is outside the interbank sector, concentrated at the overnight tenor with borrowing rates bellow the DFR

•**Having access (or not) to the deposit facility** have implications for transaction cost and liquidity flow dynamics

•**Repo market continued to gain in importance** overtaking the unsecured market, as also reflected in increased focus on this market segment by major central banks

•Overall repo market turnover has increased but divergence observed between the **cash management** and **collateral driven function** in reaction to **a high amount of excess liquidity** provided by the Eurosystem

•**Introduction of securities lending (cash-collateral option)** helped to ease collateral tensions in the repo segment despite ongoing purchases

•**Market expectations (12 July 2018) for first 10 bps DFR hike** at November 2019