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The Eurosystem's asset purchase programme, including reinvestment

13th ECB Central Banking Seminar
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EUROPEAN CENTRAL BANK
EUROSYSTEM

Overview

1	APP Overview
2	APP operational goals
3	Implementation of reinvestments
4	Conclusion



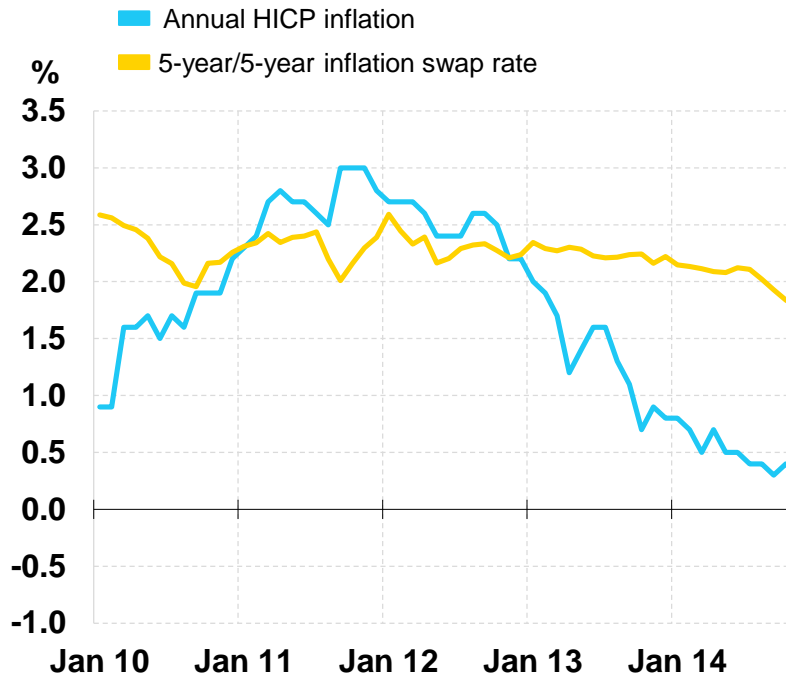
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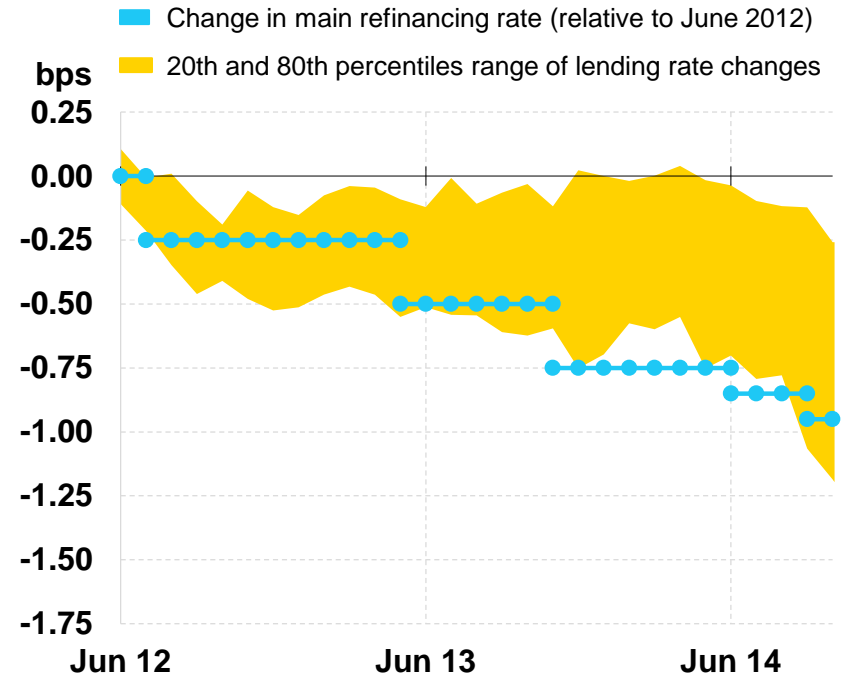
The APP: why was it needed?

Declines in both actual and expected euro area inflation



Source: Thomson Reuters, SDW, and ECB calculations. Last observation: 15 October 2014.

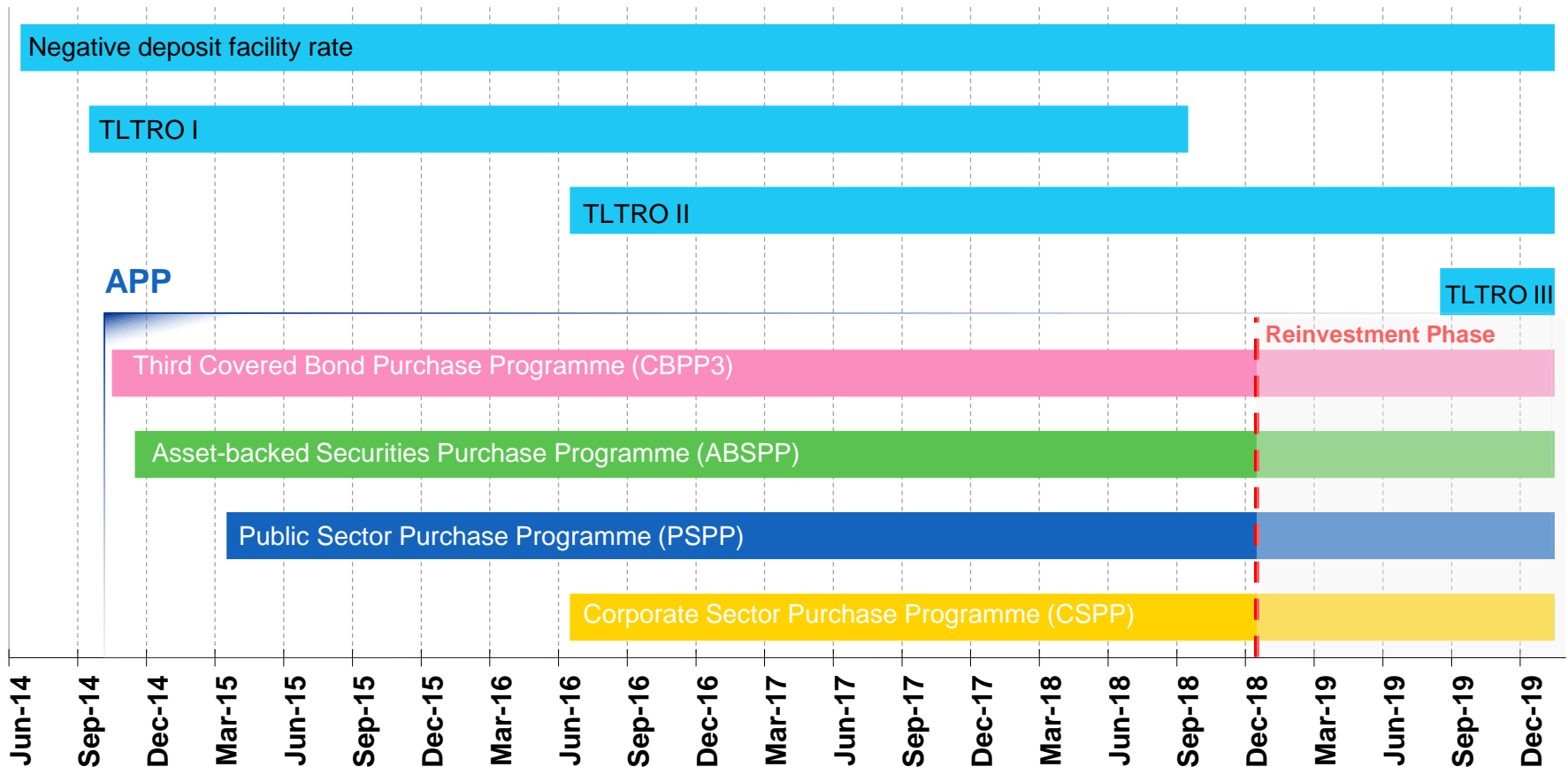
Impaired pass-through to lending rates



Source: ECB calculations. Last observation: 15 October 2014.
Notes: Lending rates refer to euro area monetary financial institutions' lending rates on loans of up to EUR 1 mn to non-financial corporations.

The APP: how did it happen?

The APP in context - an abridged timeline of non-standard measures



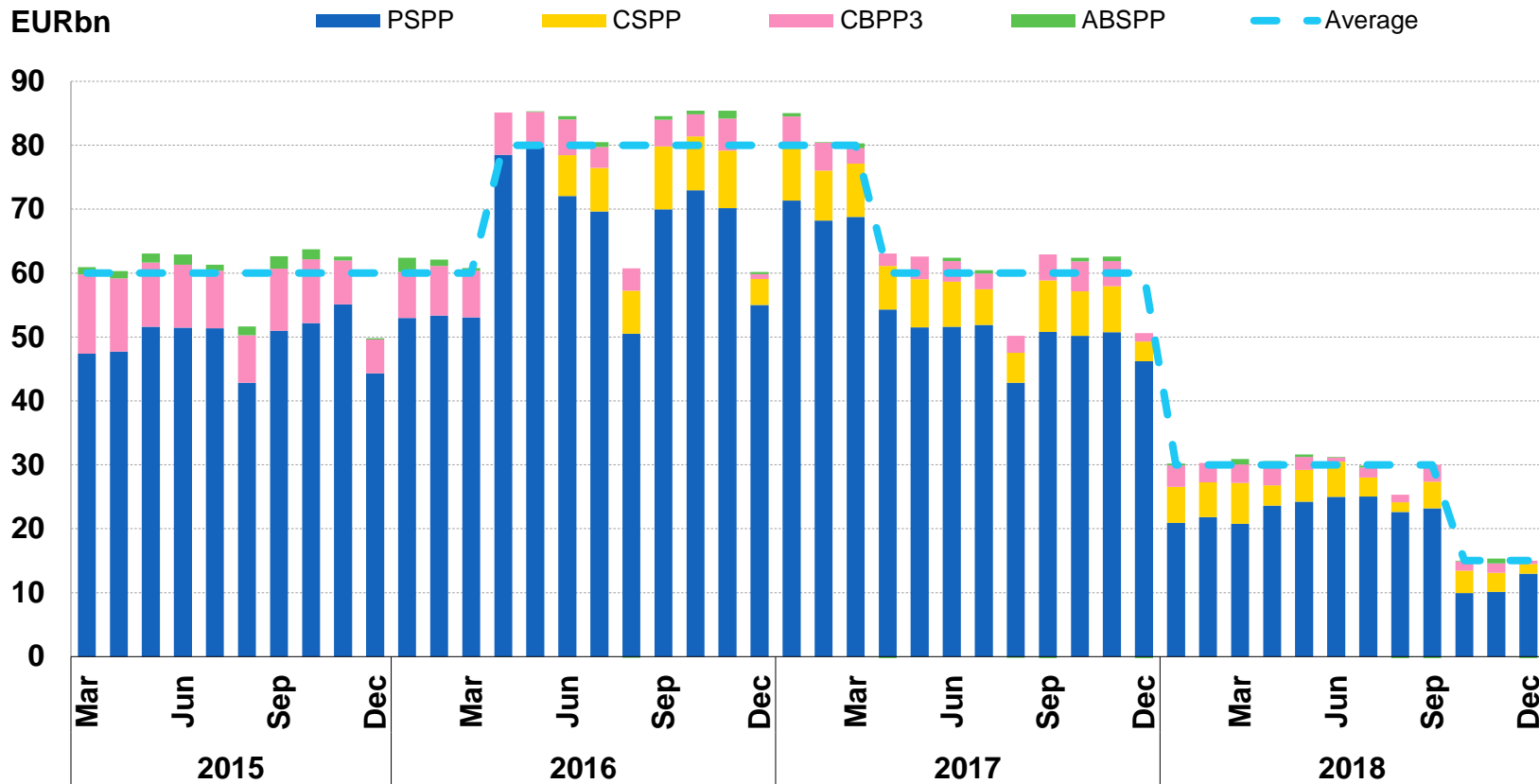
Source: ECB

The APP: which asset classes?

	PSPP	ABSPP	CBPP3	CSPP
Eligible Universe	Mon. pol. eligible government, agency and EU supra bonds	Mon. pol. eligible ABS (subject to Due Diligence assessment)	Mon. pol. eligible CBs	Non-financial and financial corporate securities (excluding unsecured bank bonds)
Min. rating	CQS3			
Maturity	1 — 30 years	All		6 months — 30 years
Purchases	Secondary market	Primary & Secondary Market		
Implementation	NCBs and ECB	6 NCBs	NCBs and ECB	6 NCBs
Income/Loss Share	20%	Yes		

How much APP?

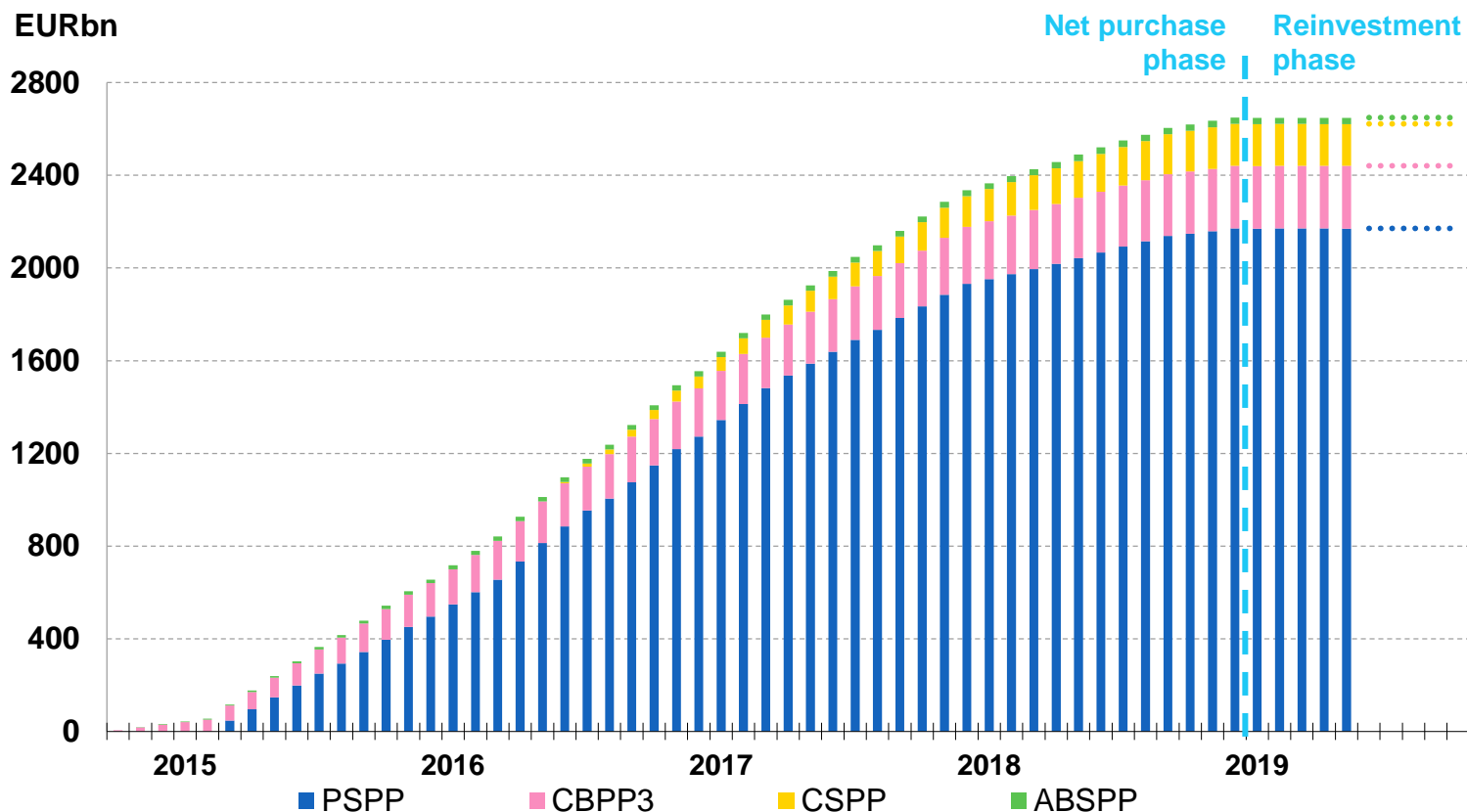
4 recalibrations of APP net purchases from 2015 to 2018



Source: ECB
Last observation: 31 December 2018.

How much APP?

APP cumulative net purchases by programme

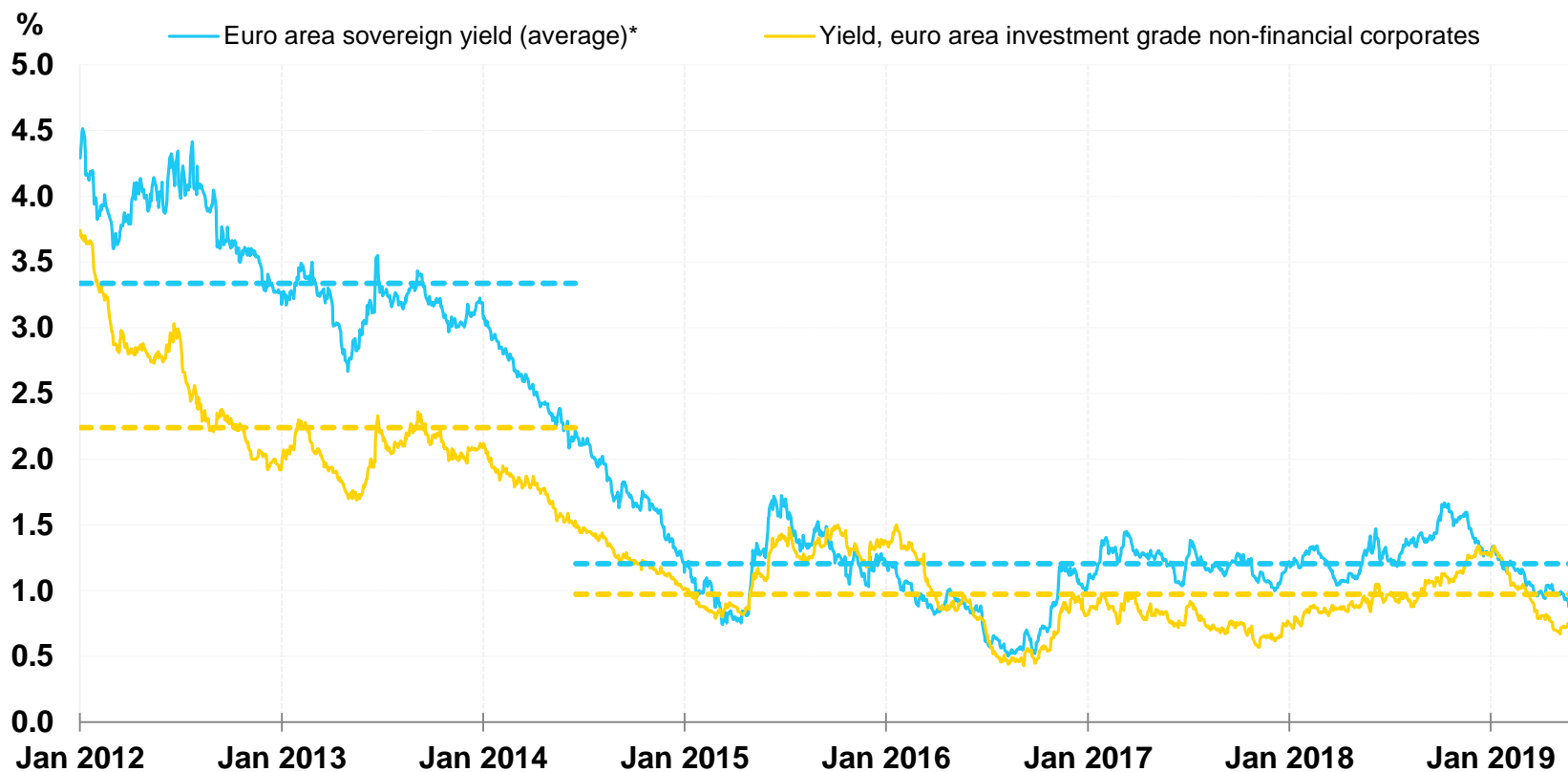


Source: ECB

Last observation: 31 May 2019.

What was the impact of the APP?

Significant decline in sovereign and corporate bond yields in the euro area

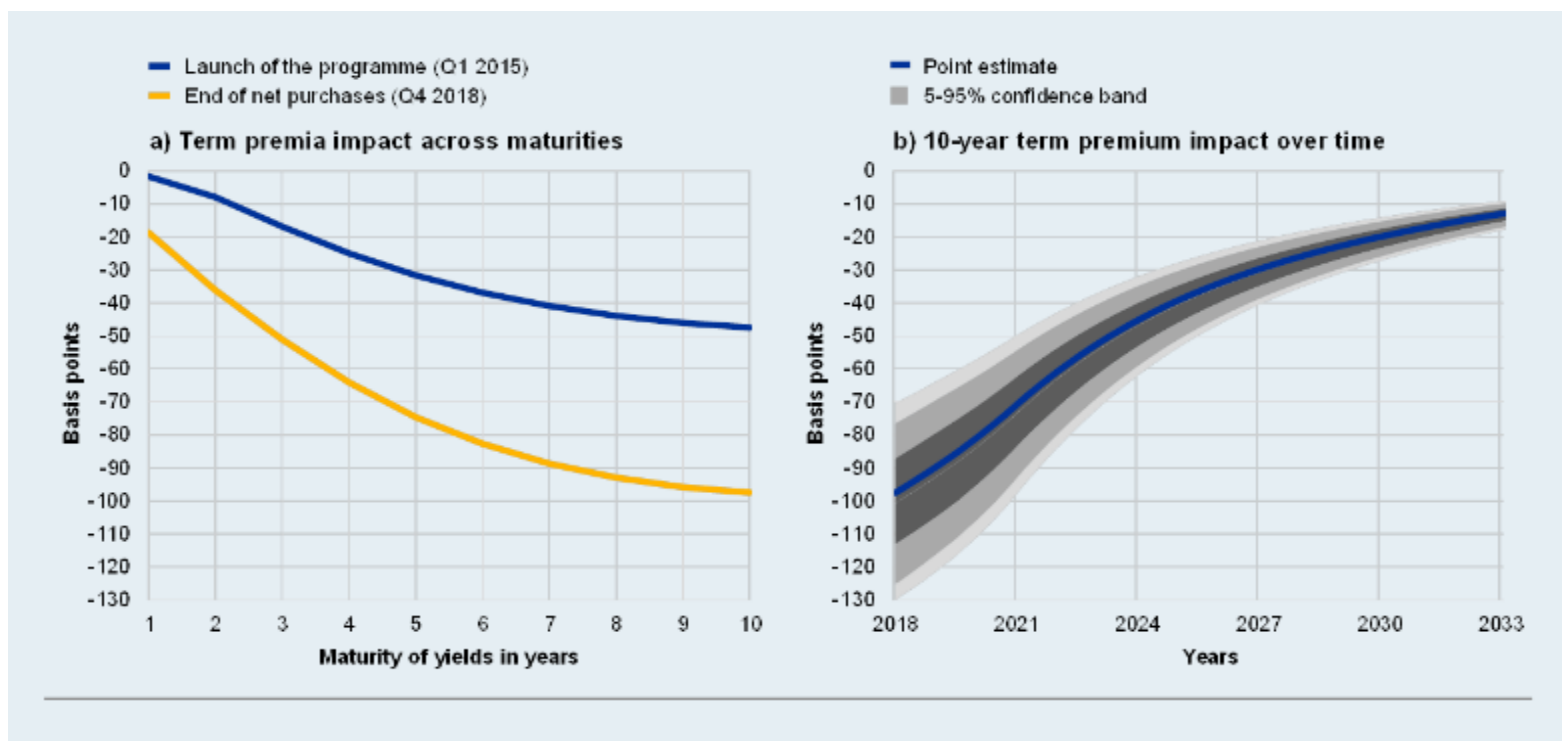


Source: Markit iBoxx, Bloomberg, and ECB calculations. Last observation: 5 June 2019.

* Euro area sovereign yield calculated as average yield of Germany, Italy, Spain and France.

What was the impact of the APP?

Significant decline in estimated term premium on euro area sovereign yields

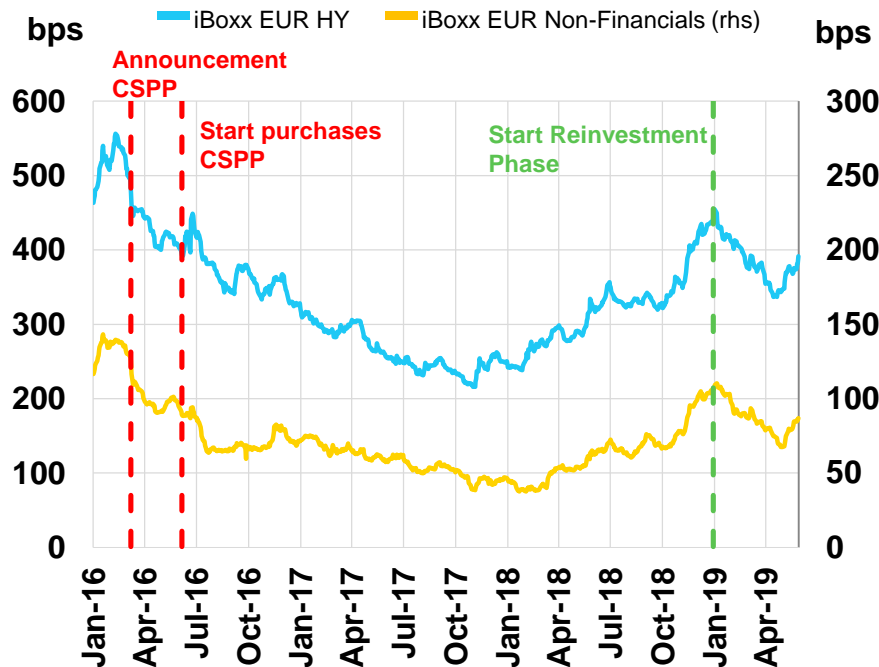


Source: Based on Eser, Lemke, Nyholm, Radde and Vladu (2019).

Notes: The left panel shows by how much the term premium component of sovereign euro area yields with maturities of one year to ten years are estimated to be compressed due to the APP, at the time of the launch of the APP (Q1 2015), as well as at the end of the net purchase phase in December 2018. The right panel shows point estimates of the ten-year yield term premia compression over time. The confidence band reflects parameter uncertainty around these point estimates, constructed using bootstrap/Monte Carlo resampling techniques. Euro area yields are proxied by the GDP-weighted zero-coupon yields of the four largest euro area jurisdictions.

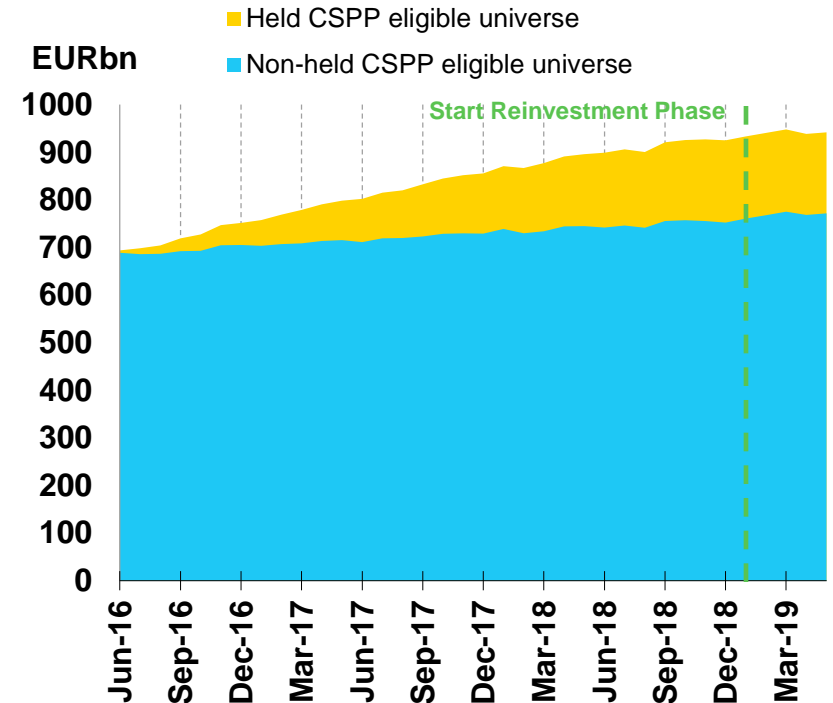
CSPP Impact

Corporate bond spreads in EUR denominated investment grade vs high yield sector



Source: iBoxx. Last observation: 31 May 2019.

Evolution of CSPP-eligible universe and holdings

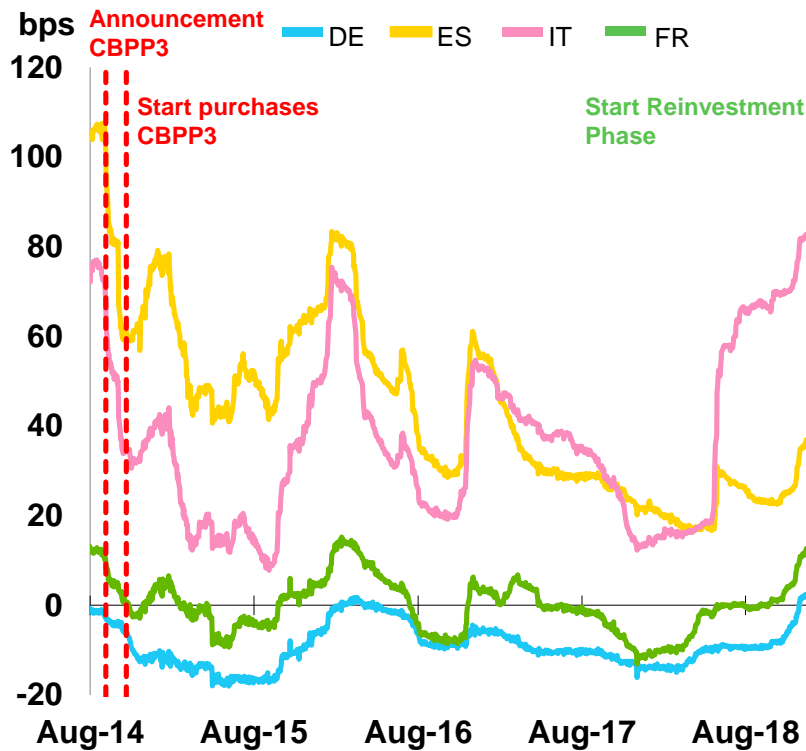


Source: iBoxx. Last observation: 31 May 2019.

- Positive impact via direct pass-through, with positive spill overs to non-eligible fixed income securities

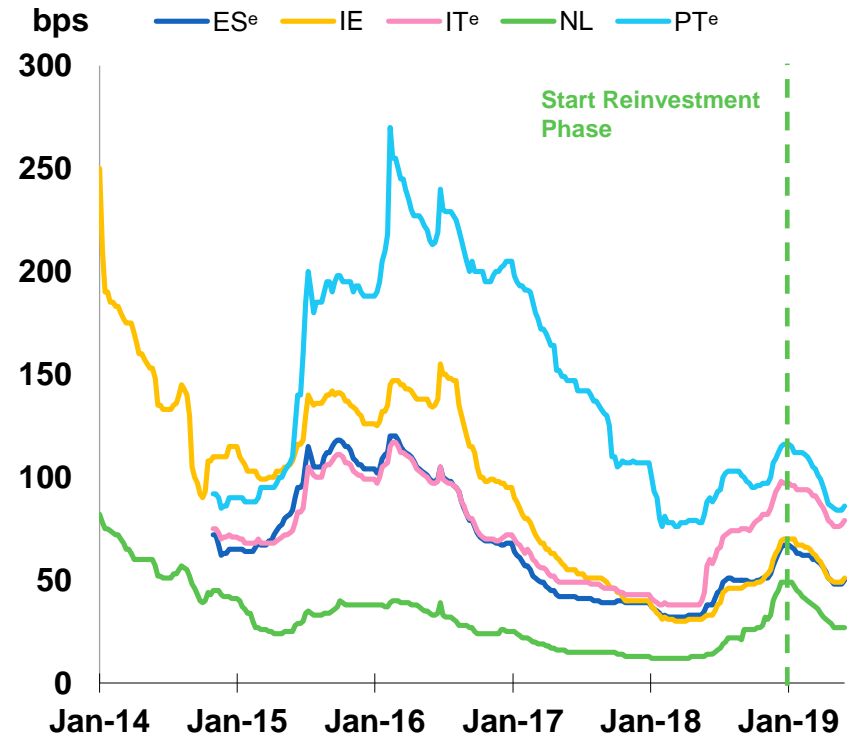
CBPP3 and ABSPP impact

Covered bond asset swap spreads, per selected jurisdiction



Source: iBoxx indices. Last observation: 31 May 2019.

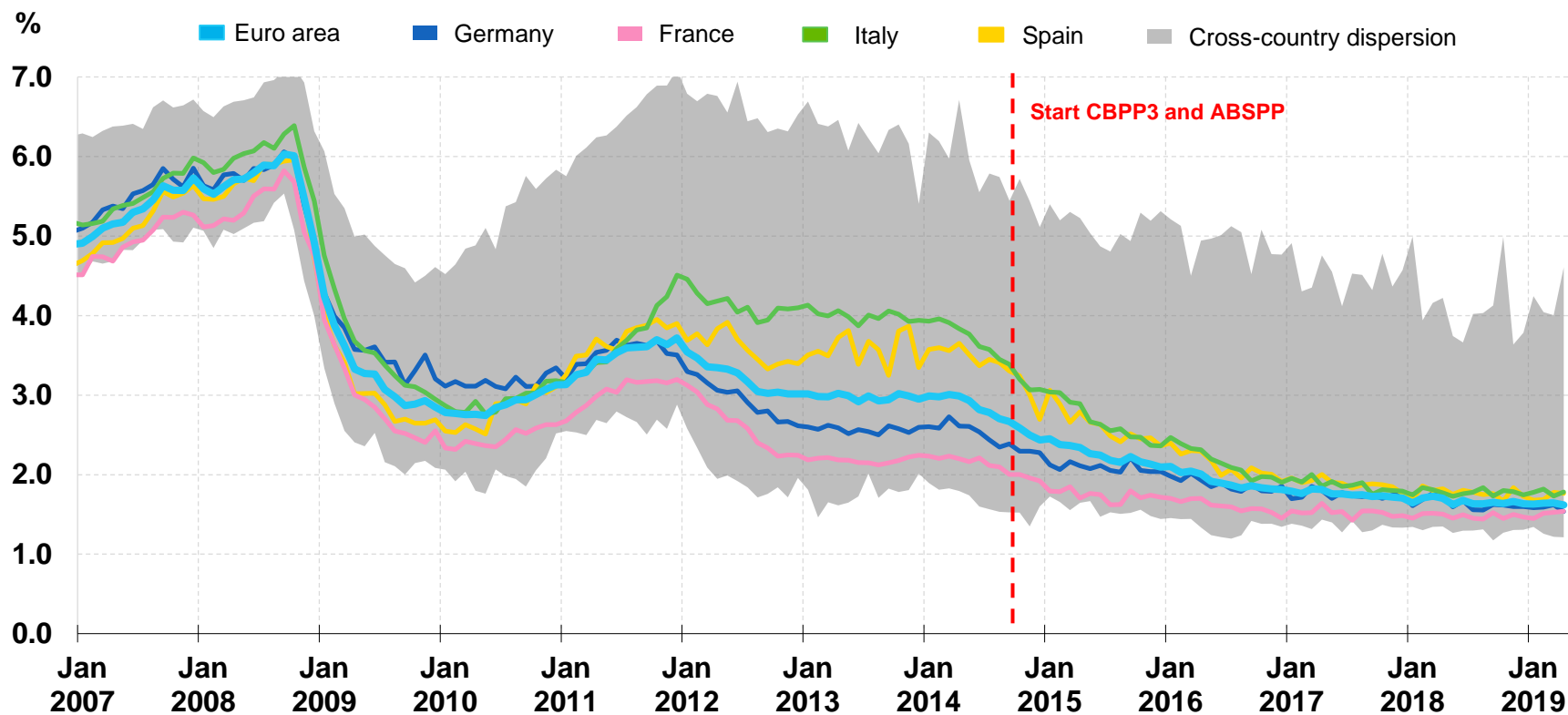
Spreads of AAA-rated* floating rate RMBS with 5-7 years maturity (bps)



Source: JPM Indices. Note: WAL at issuance 5-7 years, AAA rated (ECB coll. Eligible labelled ^e). Most spreads over 3-month Euribor. Last observation 31 May 2019.

Impact on lending rates

Broad-based decline in bank lending rates to companies

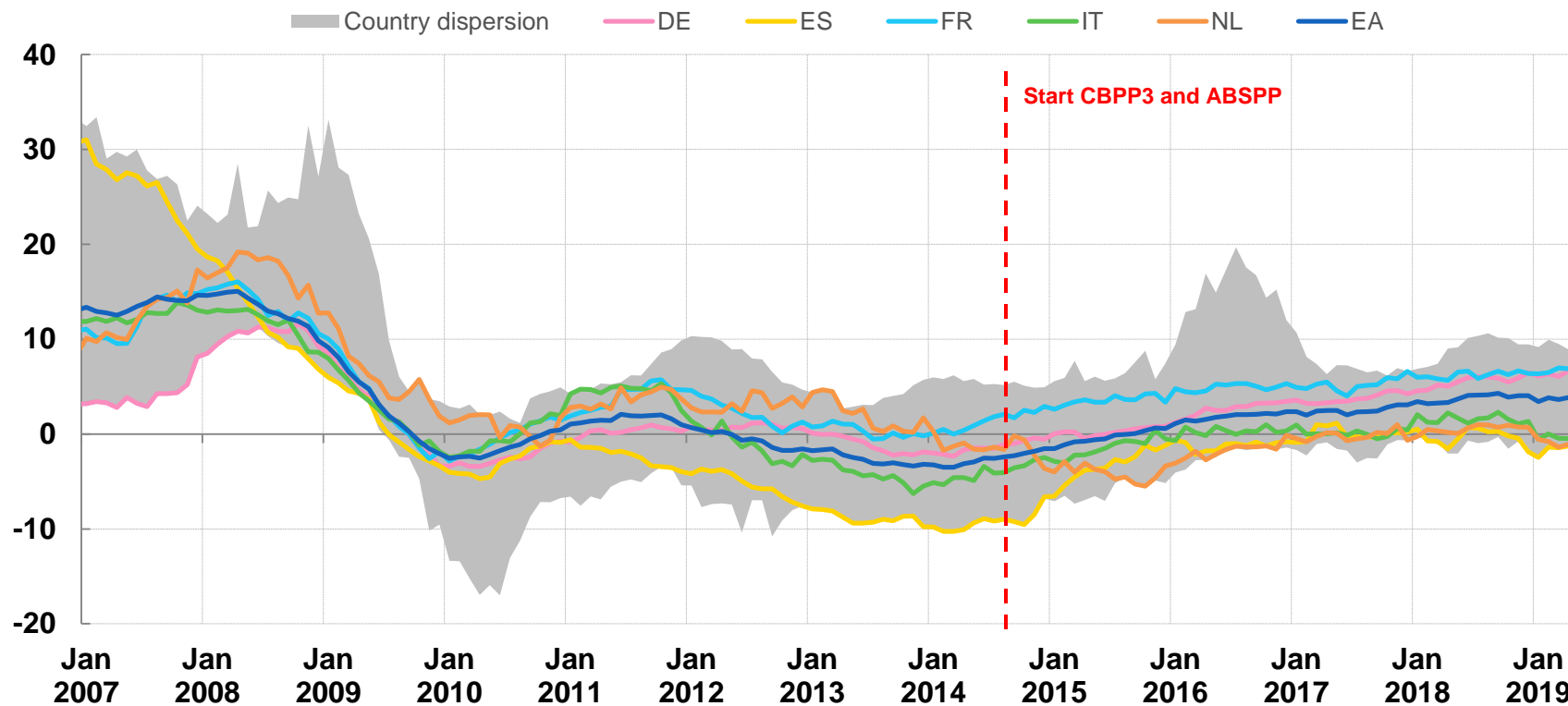


Source: ECB calculations. Last observation: 30 April 2019.

Notes: The indicator for the total cost of lending refers to non-financial corporations and is calculated by aggregating short and long-term rates using a 24-month moving average of new business volumes. The cross-country dispersion displays the min and max range over a fixed sample

Impact on loan growth

Loan growth to companies gradually strengthening

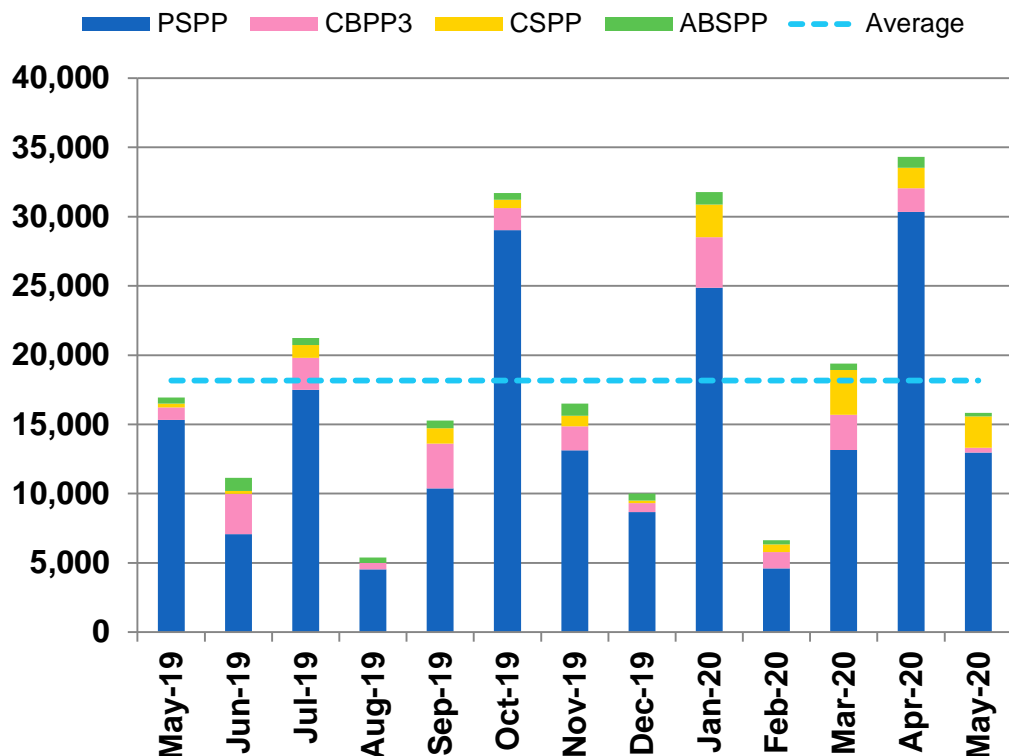


Source: ECB calculations. Last observation: 30 April 2019

Notes: Adjusted for sales, securitisation and cash pooling activities. The country dispersion is calculated as min/max over a fixed sample of 12 euro area countries.

Now: reinvestment of APP stock and forward guidance

Expected redemptions until May 2020



- The Governing Council intends to continue reinvesting, **in full**, the principal payments from maturing securities purchased under the asset purchase programme **for an extended period of time past the date when it starts raising the key ECB interest rates**, and in any case for as long as necessary to maintain favourable liquidity conditions and an ample degree of monetary accommodation.
- Cumulative net purchases under each constituent programme will be maintained at their respective levels as at the end of December 2018

Source: ECB. Last observation: 31 May 2019.



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Operational implementation reflects the specificity of the euro area

CB	Jurisdictions	Assets purchased	Purchase methods
BoE	UK	<ul style="list-style-type: none"> Government bonds Corporate bonds 	<ul style="list-style-type: none"> Reverse auctions
Fed	US	<ul style="list-style-type: none"> Treasury securities Agency mortgage-backed securities Agency debt securities 	<ul style="list-style-type: none"> Reverse auctions
BOJ	JP	<ul style="list-style-type: none"> Short-term government bonds Long-term government bonds Corporate bonds Commercial paper Real estate investment trusts Equity ETFs (exchange traded funds) 	<ul style="list-style-type: none"> Reverse auctions
Eurosystem (20 central banks)	AT, BE, CY, DE, EE, ES, FI, FR, GR, IE, IT, LT, LU, LV, MT, NL, PT, SI, SK	<ul style="list-style-type: none"> Central government bonds Agency bonds Regional and local government bonds EU supranational bonds Corporate bonds Asset-backed securities Covered bonds 	<ul style="list-style-type: none"> <u>Bilateral</u>: Electronic platforms and voice <u>Reverse auctions</u>: PSPP: BdF, DNB, Lietuvos Bankas, Bundesbank <u>Bids wanted in competition</u>: ABSPP

Key operational goals

1

Provide necessary monetary accommodation

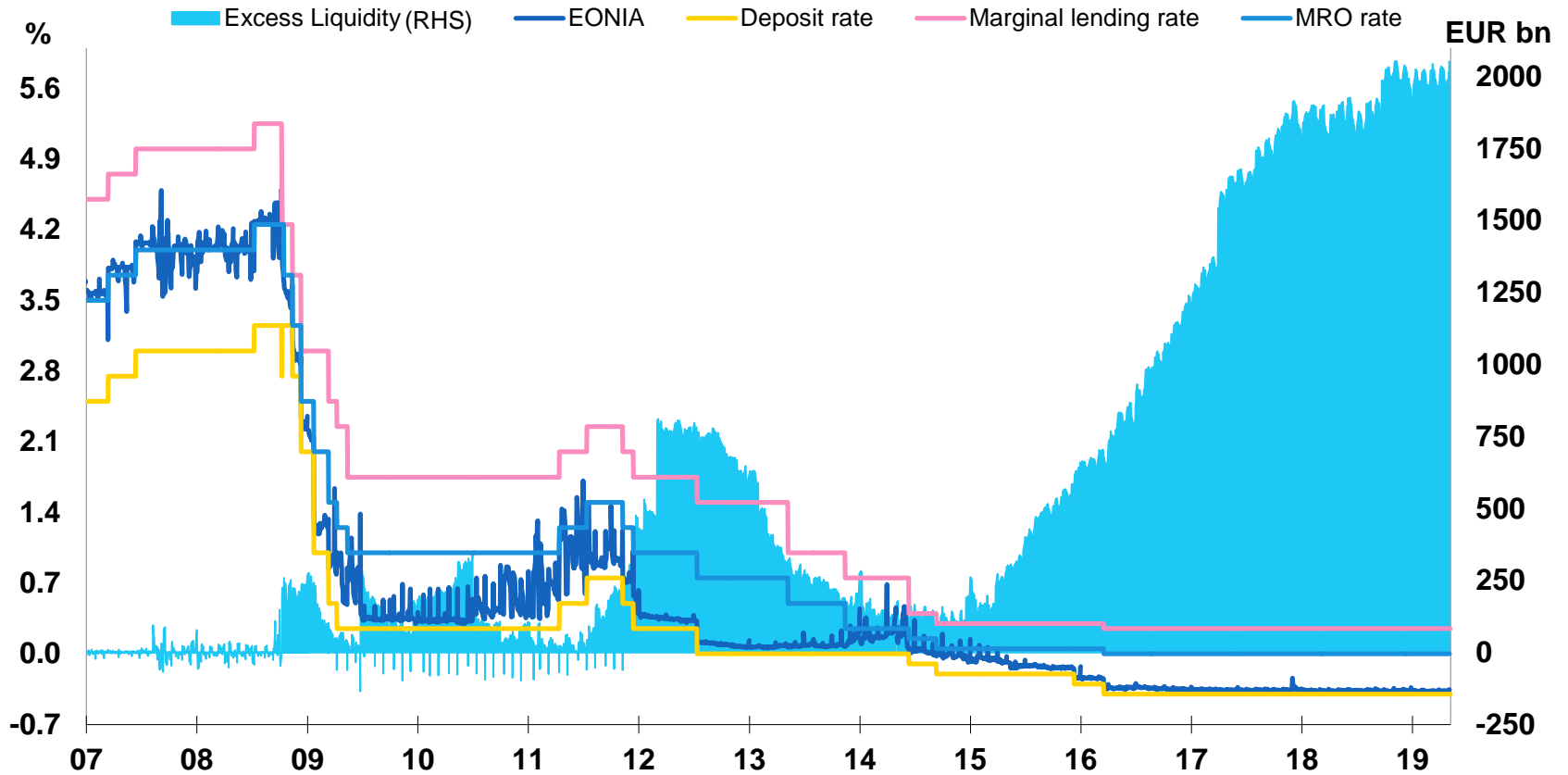
2

Ensure market neutrality in APP implementation, in particular:

- preserve the price discovery mechanism
- limit distortions in market liquidity

7 asset classes, 19 individual jurisdictions, by 20 Central Banks

Provide necessary monetary accommodation



Source: ECB. Last observation: 03 May 2019.

A balancing act: to impact prices, but not relative pricing and price discovery

Rule-based approach...

- Ex ante communication on the operational parameters
- Clear and observable monthly APP targets
- Regular purchases
- Market benchmark (private programmes)
- ECB capital key (PSPP)

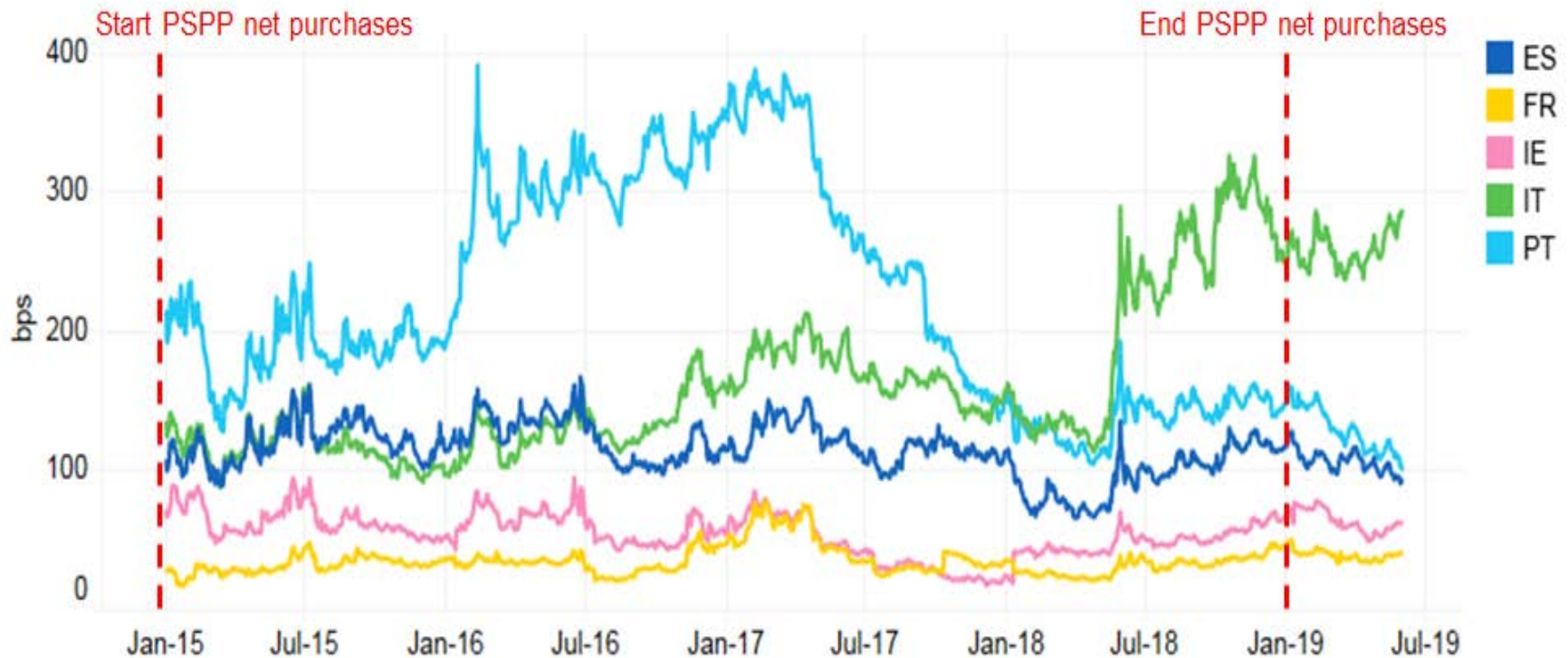
...with some flexibility

- Monthly totals: not daily
- Adjusting for:
 - Seasonal liquidity
 - Local conditions
 - Local conventions
 - Market moving events
 - CTD contracts
- 350+ counterparties
- PSPP acted as a buffer to ensure fulfilment of overall monthly purchase targets
- Securities lending

Regular disclosure on APP purchases and holdings

PSPP: Preserve the price discovery mechanism

Spreads versus 10-year German government bonds since the beginning of PSPP

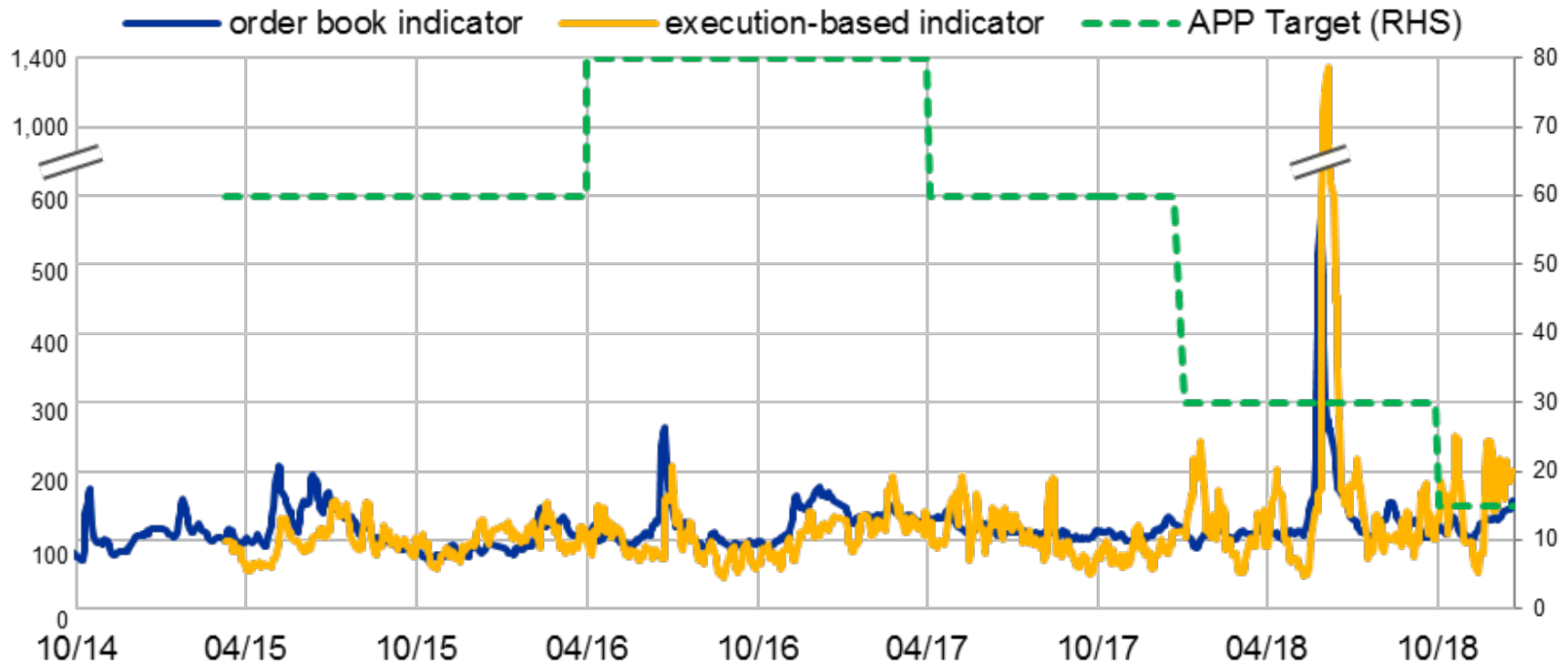


Source: ECB calculations. Last observation: 5 June 2019.

Note: 10-year euro area government bond spreads against Germany. All selected bonds are benchmark.

PSPP: Limit distortions in market liquidity

Liquidity indicators suggest orderly market conditions

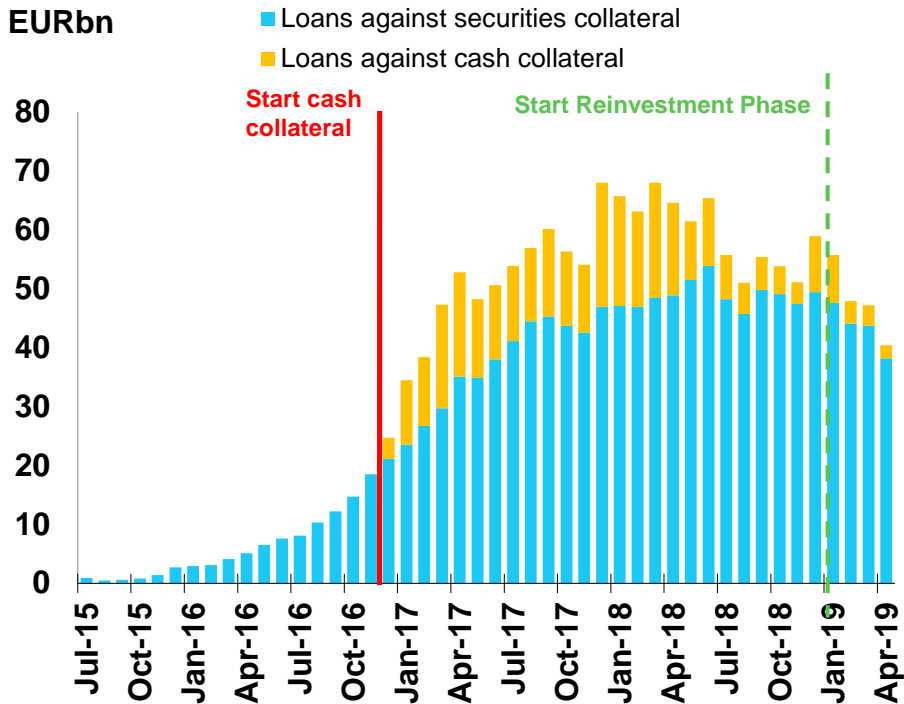


Source: Bloomberg, EuroMTS Ltd and ECB calculations

Notes: An increase (decrease) in the indicators implies a deterioration (improvement) in the liquidity situation. The chart shows the five-day moving average of the indicators. The order book indicator is a euro area-wide GDP-weighted average of ten-year sovereign bonds and the execution-based indicator is a volume-weighted average for sovereign bonds traded under the PSPP. They are normalised to 100 on 9 March 2015, when purchases under the PSPP began. Last observation: 21 December 2018. Values above 600 are scaled down by a factor of 4.

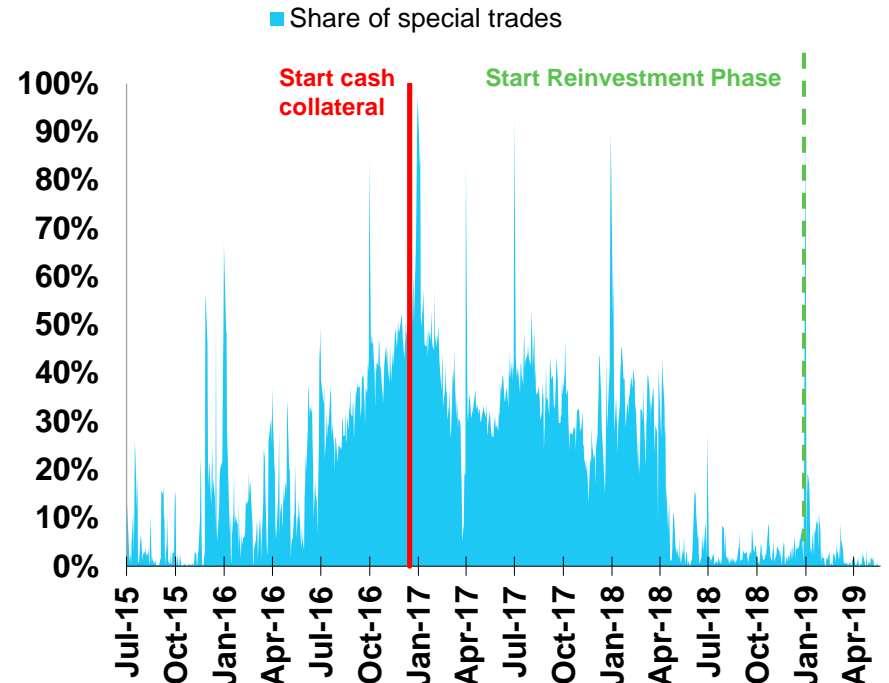
Lending against cash collateral facilitates bond and repo market functioning

APP Securities lent out by type of collateral



Source: ECB
Note: Amounts are in market value terms
Last observation: 31 April 2019.

Repo market developments for German government bonds

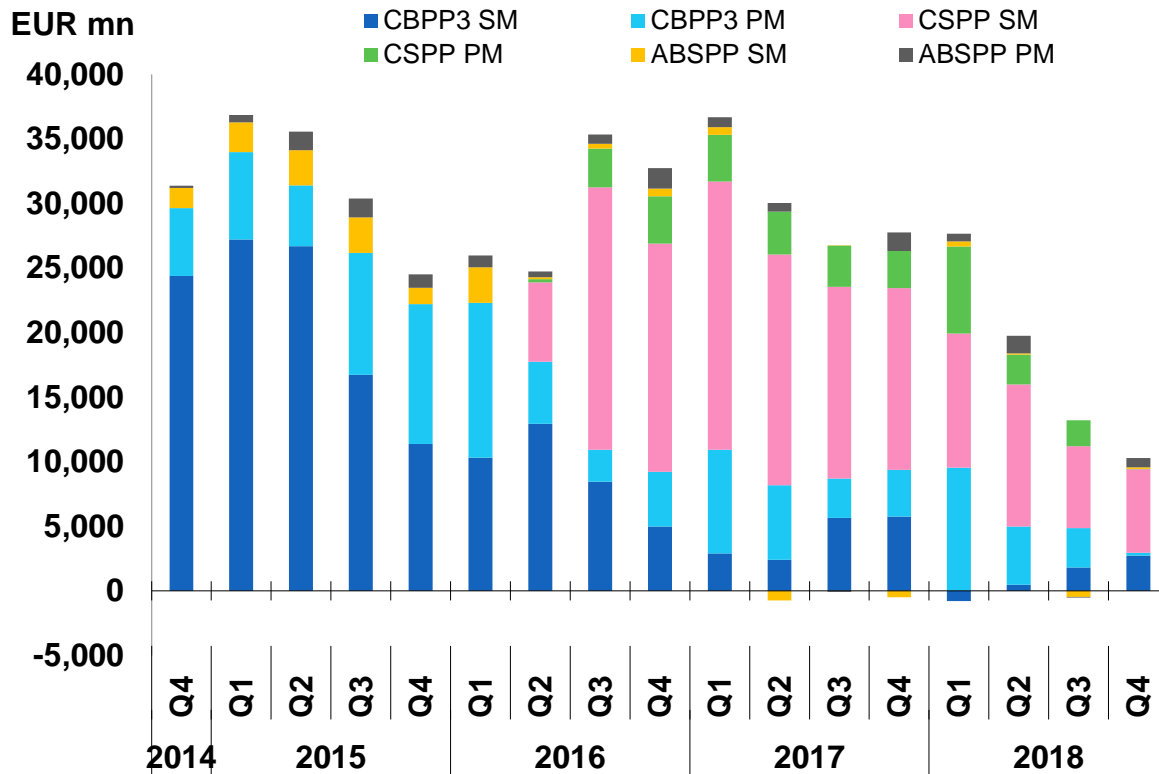


Source: ECB calculations, NEX Data and MTS Markets. Last observation: 31 April 2019. Note: Special trades are defined as those trades priced at least 25 basis points lower than the cheapest specific German bond on a given day. They are expressed as a share of the total volume on any given day.



Private sector programmes: Preserve market liquidity

Purchases broken down by primary and secondary market (EUR m) for the net purchase phase



- During the net purchase phase, purchases under the private sector programmes were conducted alongside other market participants in both the primary and secondary markets.
- The shares varied over time as a reflection of issuance patterns and secondary market liquidity.

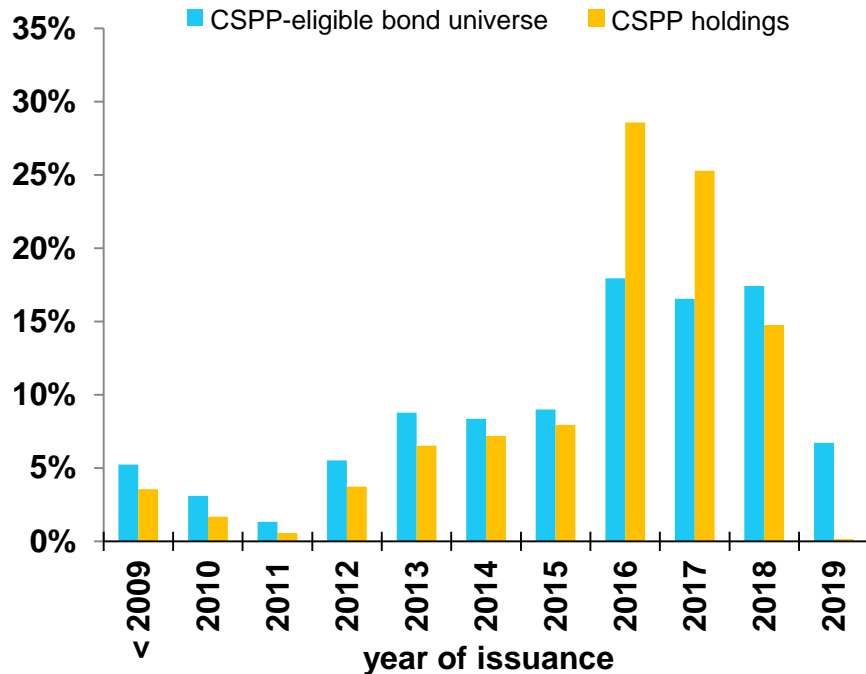
Source: ECB. Last observation: 31 December 2018.

Notes: Purchases approximated from change in holdings. Negative values for a subcategory indicate that redemptions were greater than gross purchases for that period.



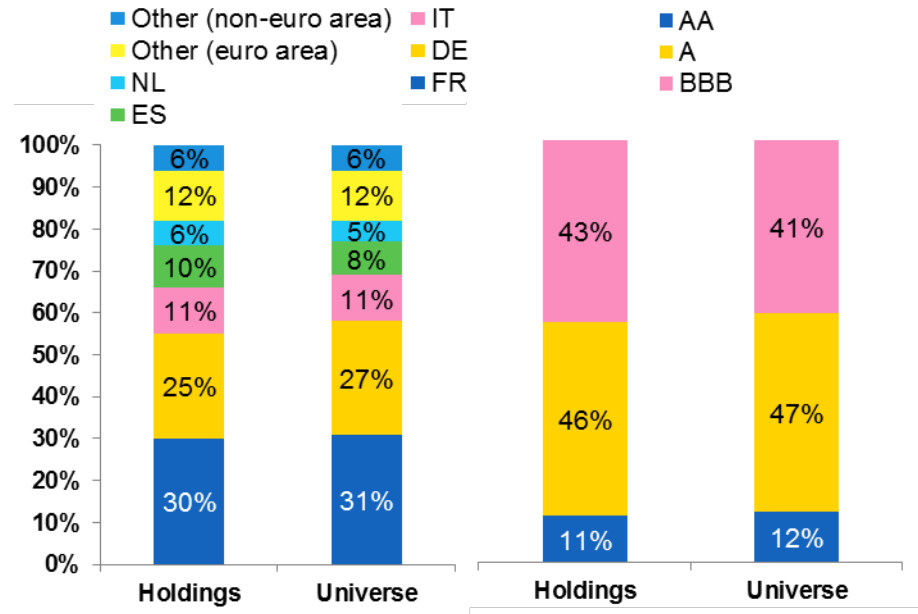
CSPP: Reactive to liquidity conditions to ensure market neutrality

CSPP holdings according to the year of issuance of the bonds



Source: ECB, Bloomberg. Distribution based on nominal amounts. Last observation: 31 May 2019.

Country and rating classification of CSPP holdings and CSPP-eligible bond universe

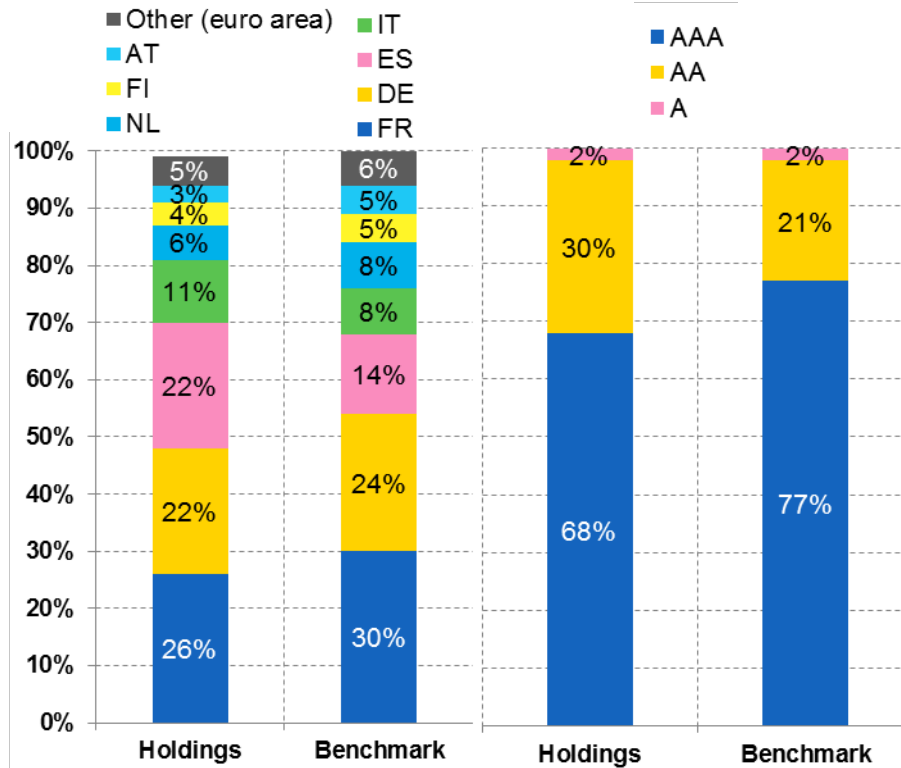


Source: ECB. Note: CSPP holdings as of end of Q1 2019. CSPP holdings with a remaining maturity below 6 months are excluded. The numbers may not sum to 100% due to rounding. The eligible CSPP bond universe contains all bonds that are currently eligible for the CSPP.

- Purchases guided by market capitalisation
- To guarantee smooth implementation, there is continuous communication on market conditions

CBPP3: Enhanced transparency and market neutrality

Country and rating classification of CBPP3 holdings and CBPP3-eligible benchmark



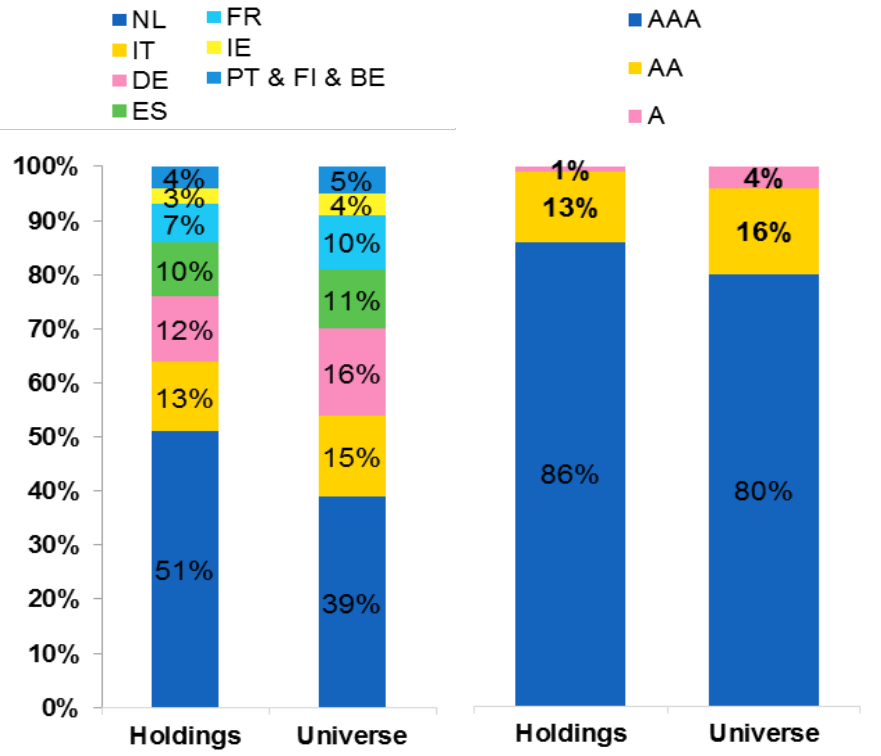
Source: ECB. Note: CBPP3 holdings and benchmark as of end of Q1 2019. The numbers may not sum to 100% due to rounding. Distribution based on nominal amounts.

- Transparency has played a central role in the APP
- Regular disclosure of information on APP purchases and holdings was recently complemented by additional information on CBPP3 and ABSPP
- CBPP3 purchases were broadly oriented towards a market capitalisation-based benchmark
- CBPP3 benchmark weights attached to certain covered bond categories decreased over time
- CBPP3 benchmark updated regularly so as to guide future purchases



ABSPP: Enhanced transparency and market neutrality

Country and rating classification of ABSPP holdings and ABSPP-eligible benchmark



- ABSPP portfolio composition reflects market capitalisation and market liquidity.
- Gross ABSPP purchases were more broadly distributed across jurisdictions than the holdings indicate, reflecting the prevalence of different asset types in each country.

Source: ECB. Note: ABSPP holdings and universe as of end of Q1 2019. The numbers may not sum to 100% due to rounding. Distribution based on nominal amounts.



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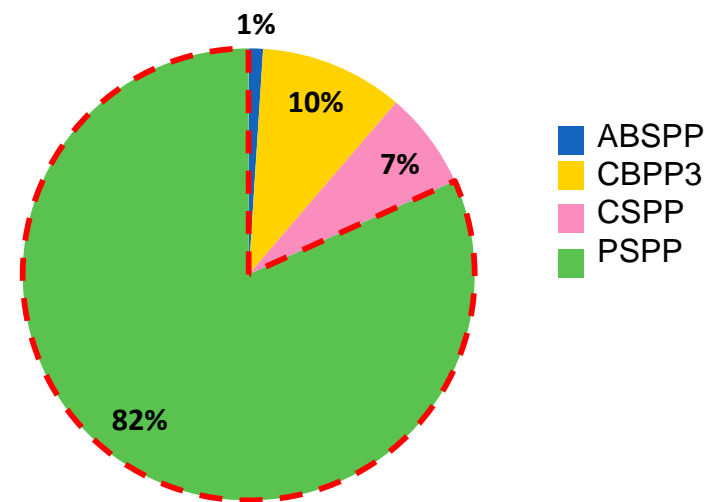
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PSPP represents more than 80% of total APP holdings

Holdings at amortised cost (EUR billion)*	
ABSPP	26
CBPP3	262
CSPP	178
PSPP	2,093
Total APP	2,559

Last observation: 31 May 2019

APP holdings breakdown (%)

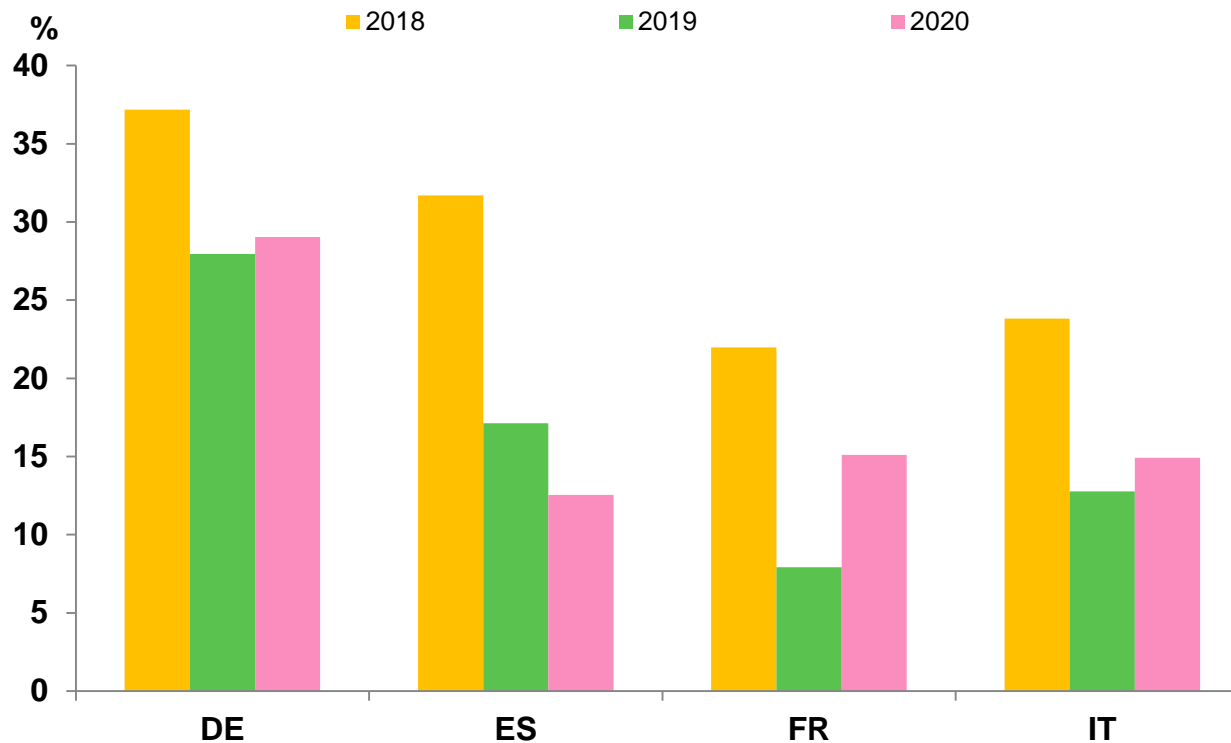


PSPP: technical parameters for reinvestment phase

- The allocation across eligible jurisdictions will **continue to be guided by the ECB's capital key**, now taking the appropriate stock perspective.
- Any **adjustment to the portfolio allocation across jurisdictions will be gradual**.
- The **principle of market neutrality via smooth and flexible implementation continues**.
- **Reinvestment of principal redemptions will be distributed over the year to allow for a regular and balanced market presence**.

Reinvestments will continue to absorb a significant share of issuance

Gross PSCP purchases as a share of planned gross issuance



Source: ECB

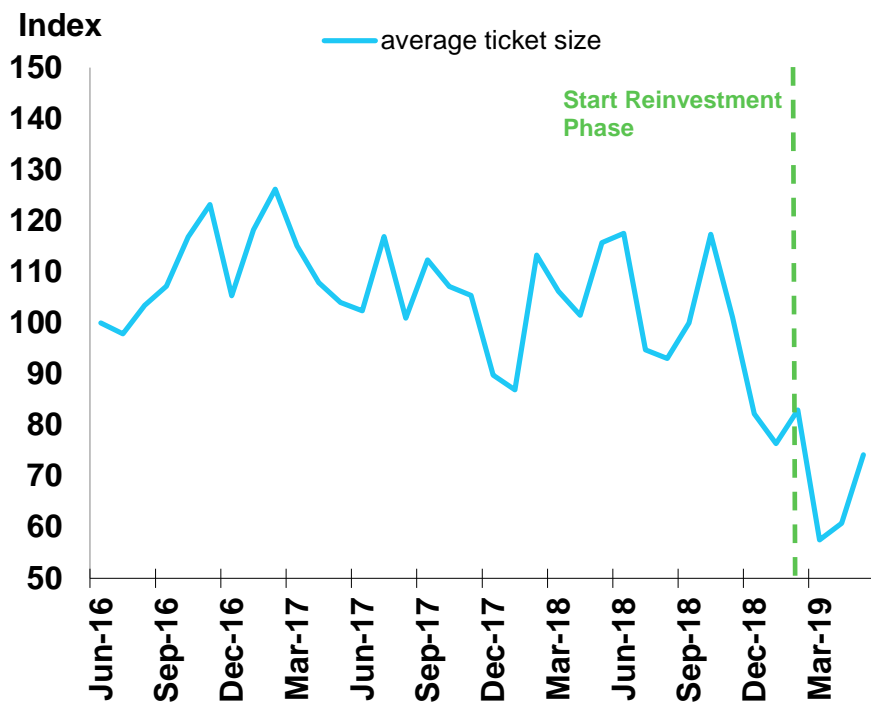
Note: refers to central government only.

Private sector programmes: Technical parameters for reinvestment phase

- Aim to **maintain the size of its cumulative net purchases under each constituent programme** of the APP at their respective levels as at the end of December 2018
- **Limited temporary deviations in the overall size and composition** of the APP may occur for operational reasons
- **Market capitalisation will continue to be the guiding principle for reinvestment purchases**
- Will the Eurosystem continue to buy in the **primary market** in the reinvestment phase? Clarified in the Q&As of the individual programmes.
 - CSPP primary market participation is permitted but not currently foreseen
 - CBPP3 purchases of securities in the primary market continues to be permitted as necessary
 - ABSPP remains active in both the primary and secondary ABS markets during the reinvestment phase

Private sector programmes: CSPP transition to the reinvestment phase

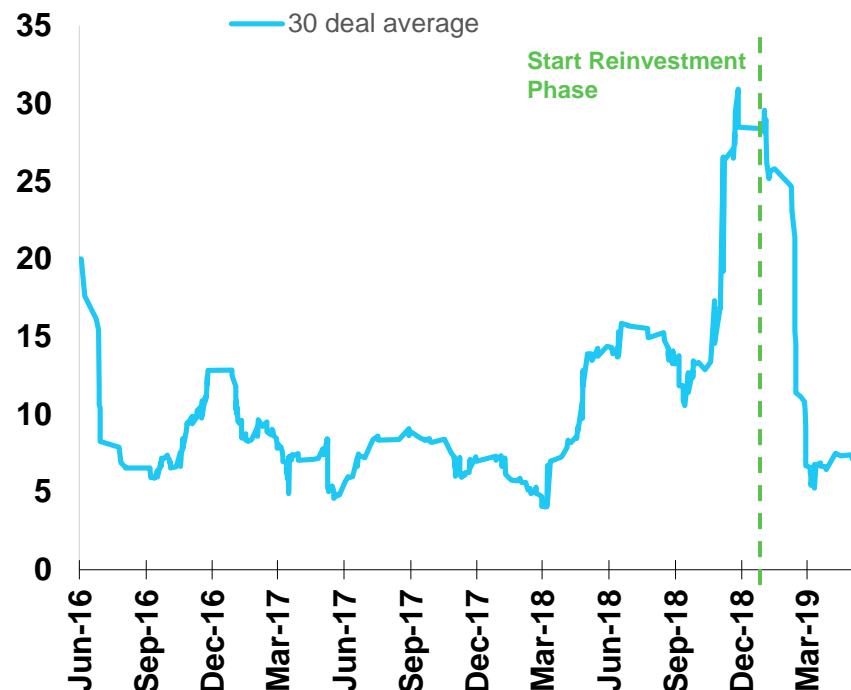
Evolution of the average CSPP trade size



Source: ECB. Note: Index: June 2016 = 100. Last observation: 31 May 2019.

New Issuance Premium (NIP)

(bps; 30 deal moving average weighted by issue size)



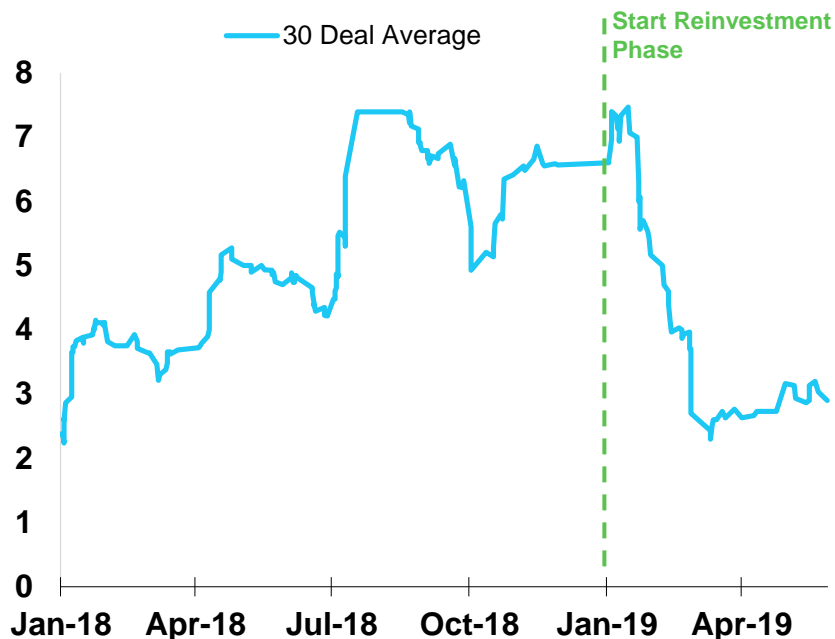
Source: Eurosystem, Bloomberg. Note: New Issuance Premium for CSPP eligible issuances. Latest observation: 21 May 2019.

- Reduced CSPP presence in 2019 does not seem to have major impact in corporate bond market

Private sector programmes: CBPP3 transition to the reinvestment phase

New Issuance Premium (NIP)

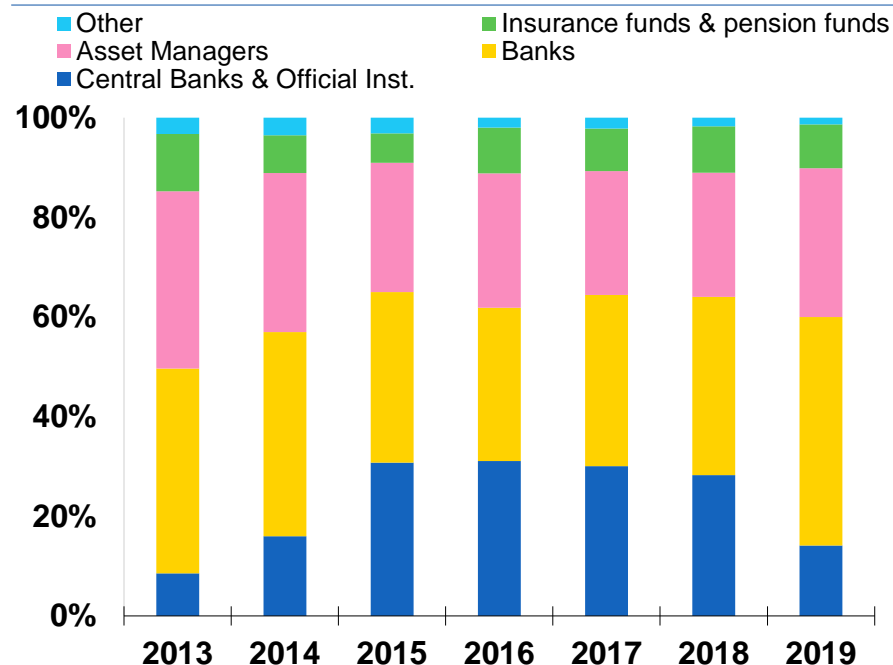
(bps; 30 deal moving average weighted by issue size)



Source: Eurosystem, Bloomberg. Note: New Issuance Premium for CBPP3 eligible issuances. Last observation: 31 May 2019.

Covered Bond Primary Market Breakdown

(%; breakdown of primary market deals by investor type)



Source: ECB calculations. Note: Figures are for EUR benchmarks so they include non-eligible deals. Central banks include sovereign/official institutions. Last observation: 31 May 2019.

- The drop in central bank allocations in primary markets in 2019 has not left a void. Banks took up a larger share of supply in the primary market, keeping NIP low and relatively stable.



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Conclusion

- **APP size and pace adequate to achieve monetary policy accommodation...**

...while **preserving the price discovery mechanism and market liquidity;**
- **Operational flexibility allows adjustment to local market specificities,** supporting a market neutral implementation;
- **Monetary policy accommodation continues in the reinvestment phase,** with the same implementation objectives.



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Thank you

for your attention!