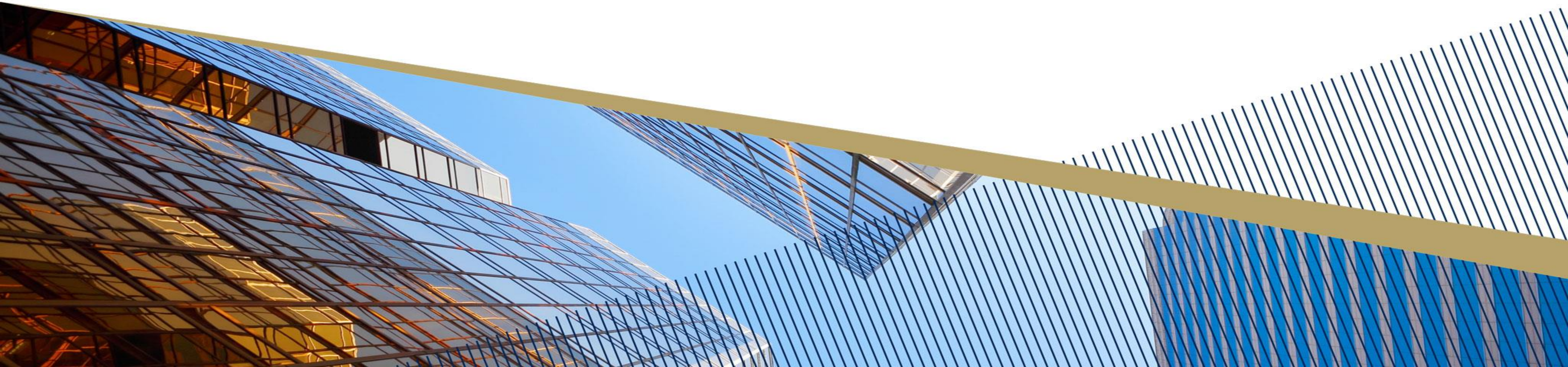
International Capital Market Association

ICMA



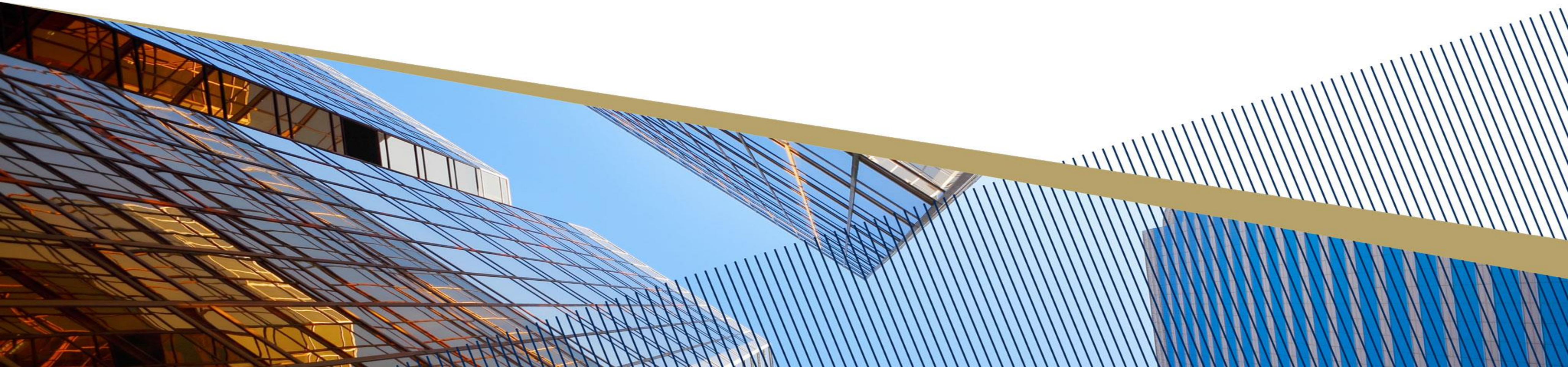
ICMA

International Capital Market Association

ICMA European Repo and Collateral Council - General Meeting

De-mystifying Repo: Impacts on Financial Stability and the Real Economy

14 November 2017, Brussels



Welcome Remarks

Godfried De Vidts

Chairman

ICMA ERCC

The financial crisis – the role of repo

How did problems in the subprime mortgages cause a systemic event? Our answer is that there was a run in the repo market.

Gary B. Gorton and Andrew Metrick (2012): "Securitized Banking and the Run on Repo", Journal of Financial Economics

The crisis came when crashing housing prices raised doubts about securitisations and when chains of inside liquidity created by repos with re-hypothecation and re-use of the same securities collapsed with rising haircuts and resulting illiquid markets.

Vítor Constâncio, Vice-President of the ECB, at the second ECB Macroprudential Policy and Research Conference, Frankfurt am Main, 11 May 2017

If the repo market wouldn´t have grown as it did, the crisis that followed the demise of Lehman Brothers would have been, at least in Europe, even more damaging or the burden on the ECB to attenuate its effects would have been even heavier.

Francesco Papadia, former Director General, Market Operations, ECB, at the 'Future of the European Repo Market' conference, London, 11 June 2013

The regulatory discrepancy

Belief no 1: Collateral is good

Regulation defines and requires ‘good quality’ collateral for:

- ❑ Secured lending and borrowing
- ❑ Margining centrally cleared transactions
- ❑ Margining non-cleared derivate transactions

The regulatory discrepancy

Belief no 2: Repo is bad

The repo and securities lending markets are a source of:

- Excessive leverage
- Procyclicality
- Interconnectedness

If only there was a market for collateral….

Some participants sit on collateral and do nothing with it

Some participants are long cash but need collateral

Sovereign Wealth Funds

Insurance Funds

Investment Banks

Central Banks

Corporate Treasuries

Money Market Funds

Asset Managers

Pension funds

Commercial Banks

Hedge Funds

Some participants have the wrong kind of collateral

Some participants are long collateral but need cash

Wait, there is!

Some participants sit on collateral and do nothing with it

Some participants are long cash but need collateral

Sovereign Wealth Funds

Insurance Funds

Investment Banks

Central Banks

Corporate Treasuries

Repo Market

Money Market Funds

Asset Managers

Pension funds

Commercial Banks

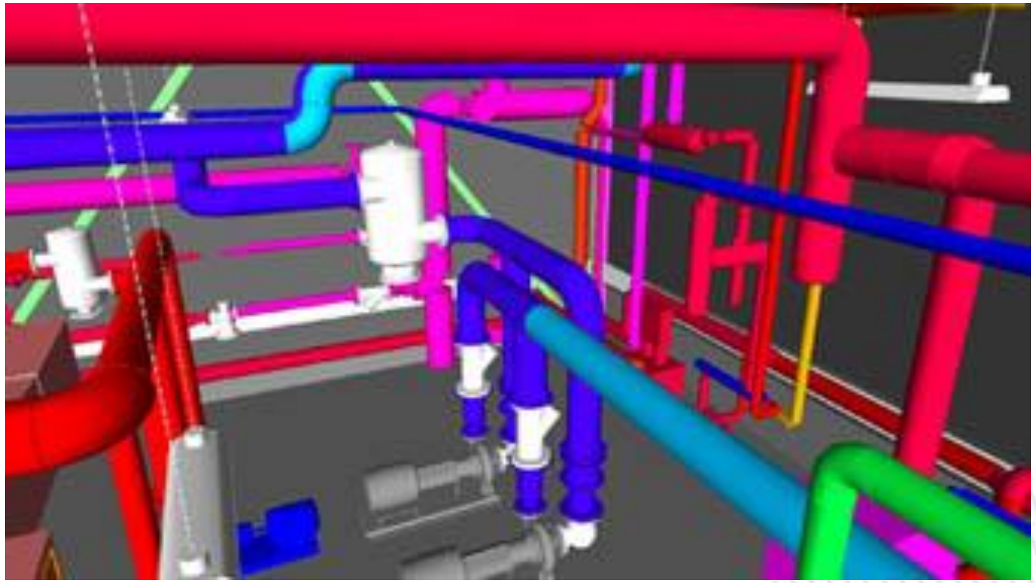
Hedge Funds

Some participants have the wrong kind of collateral

Some participants are long collateral but need cash

Collateral fluidity

Collateral Demand ≡ Available collateral supply x Collateral fluidity



The repo market is the ‘pump’ that sources, prices, and mobilizes collateral through the financial system.

If we want efficient and resilient markets underpinned by collateral, then we need a vibrant and liquid repo market. You can’t have one without the other.

Tilting at windmills…

Monetary Policy and Repo Market in the Euro Area

ICMA European Repo and Collateral Council General Meeting

Mahmood Pradhan

Deputy Director

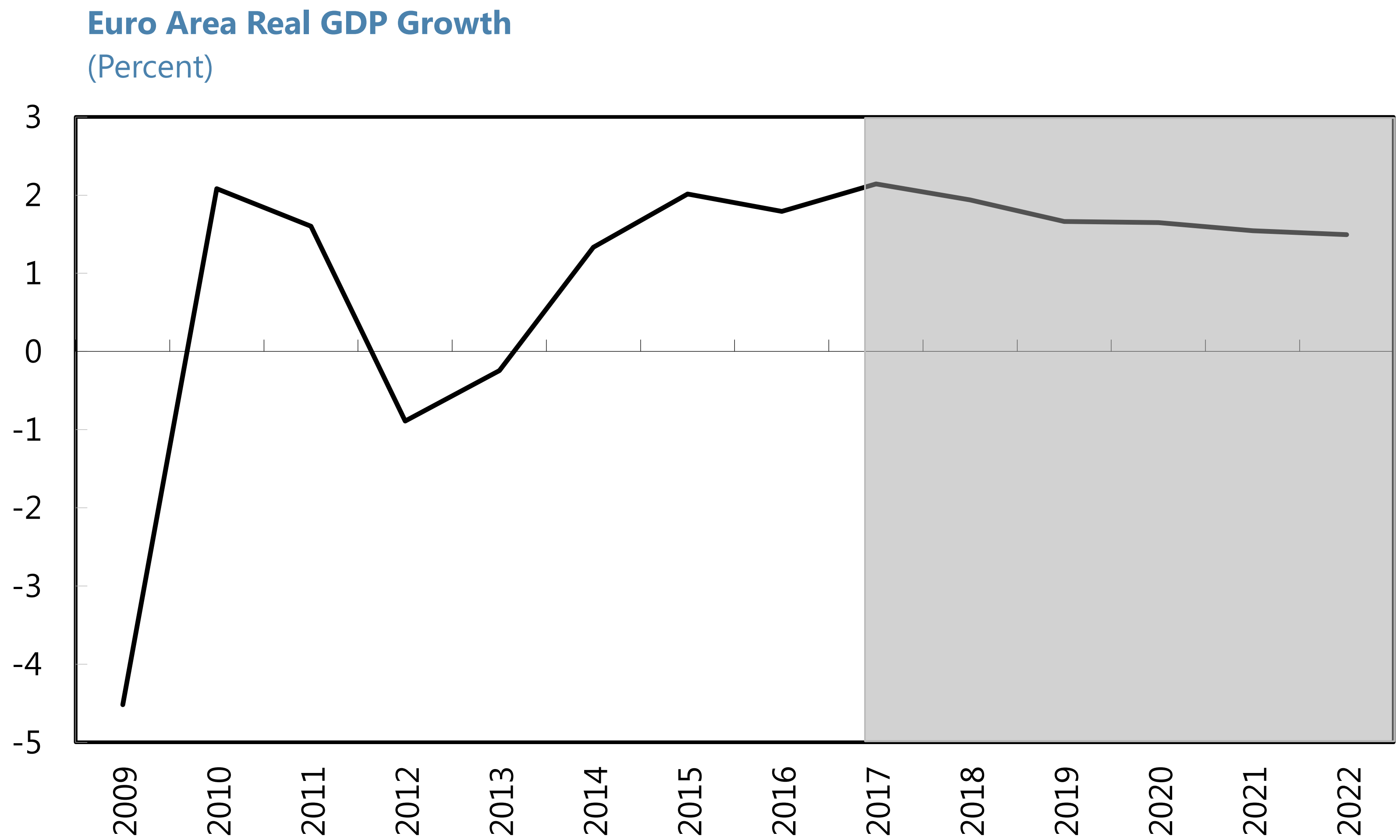
European Department, International Monetary Fund (IMF)

Brussels/Belgium

14 November 2017

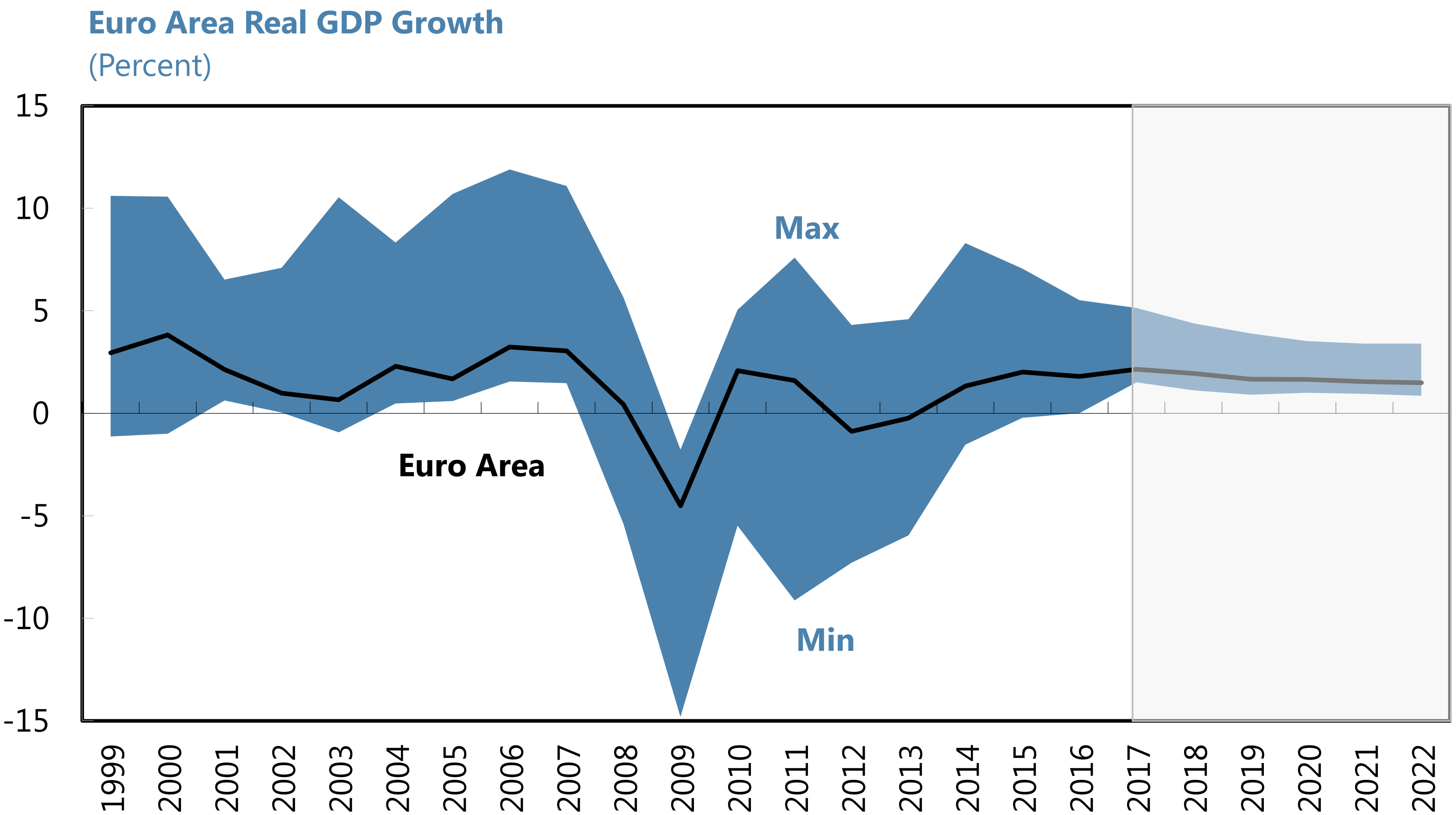
Disclaimer: The views expressed in this presentation are those of the presenter and do not necessarily represent those of the IMF or IMF policy. Any errors are those of the presenter.

Euro Area: a strong recovery



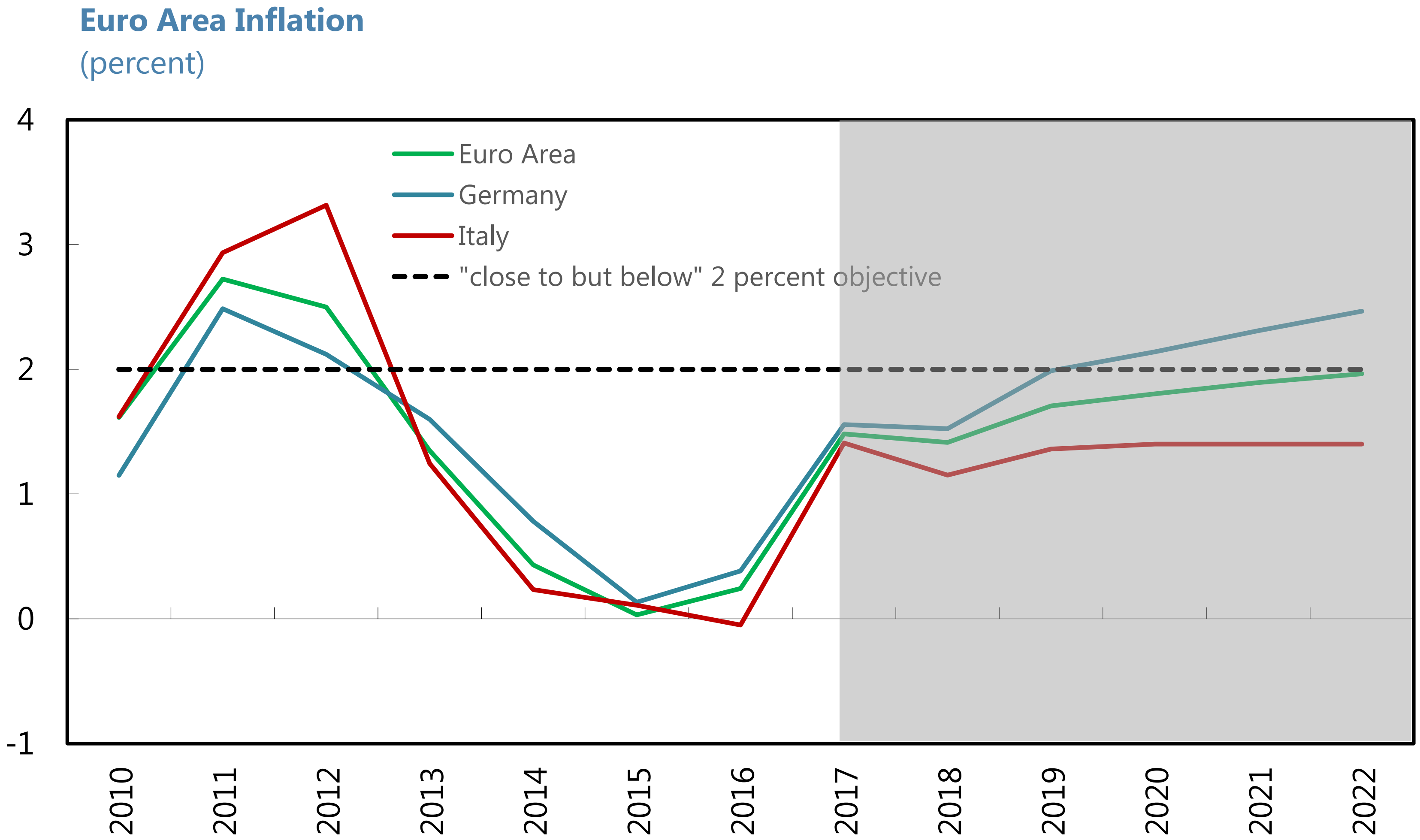
Source: World Economic Outlook (October 2017).

All countries growing: lowest dispersion since inception



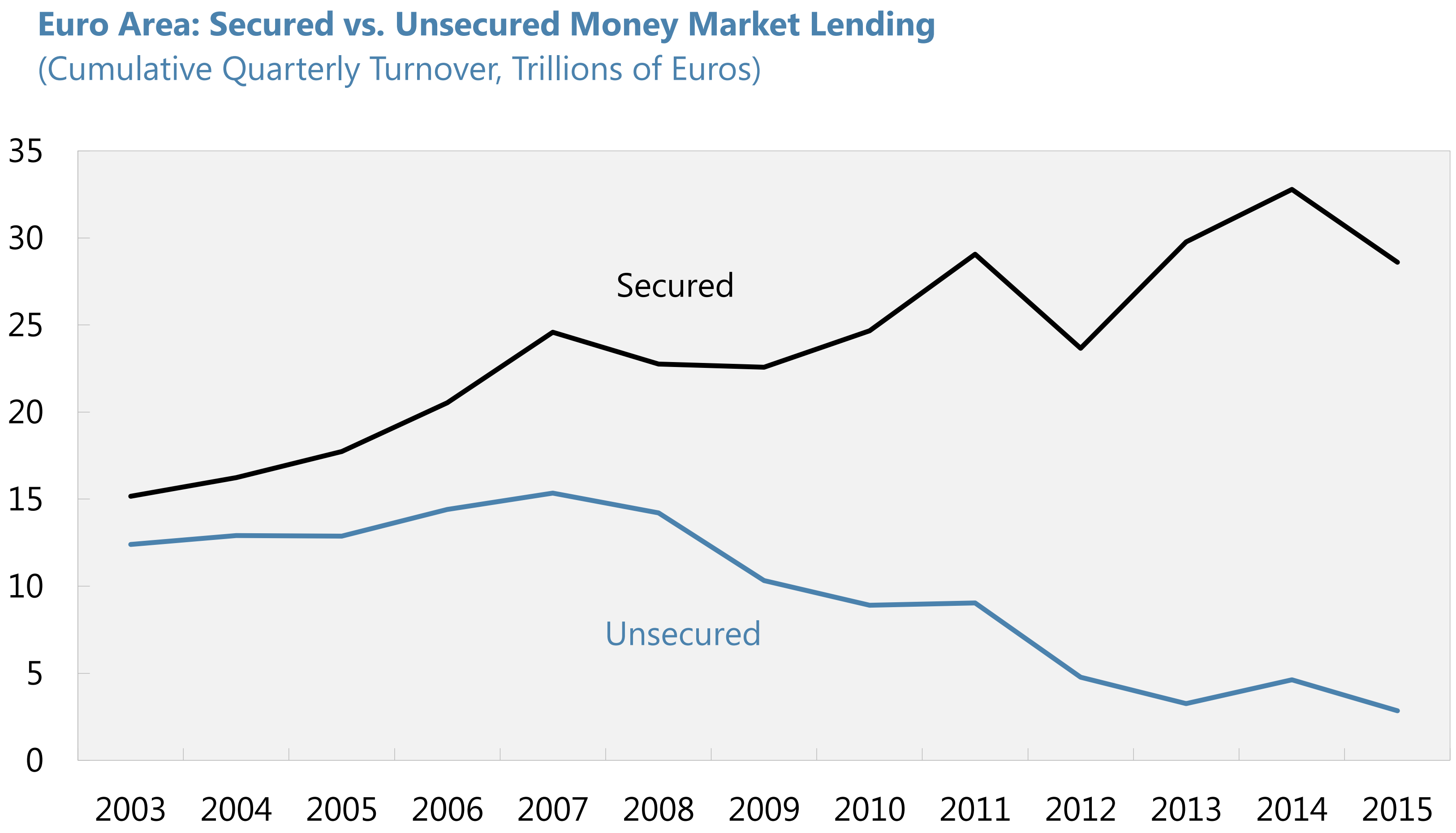
Source: World Economic Outlook (October 2017).
Note: includes all 19 countries. Ireland growth rate in 2015 is excluded.

ECB price stability objective: widening dispersion



Source: World Economic Outlook (October 2017).

Money markets dominated by secured lending

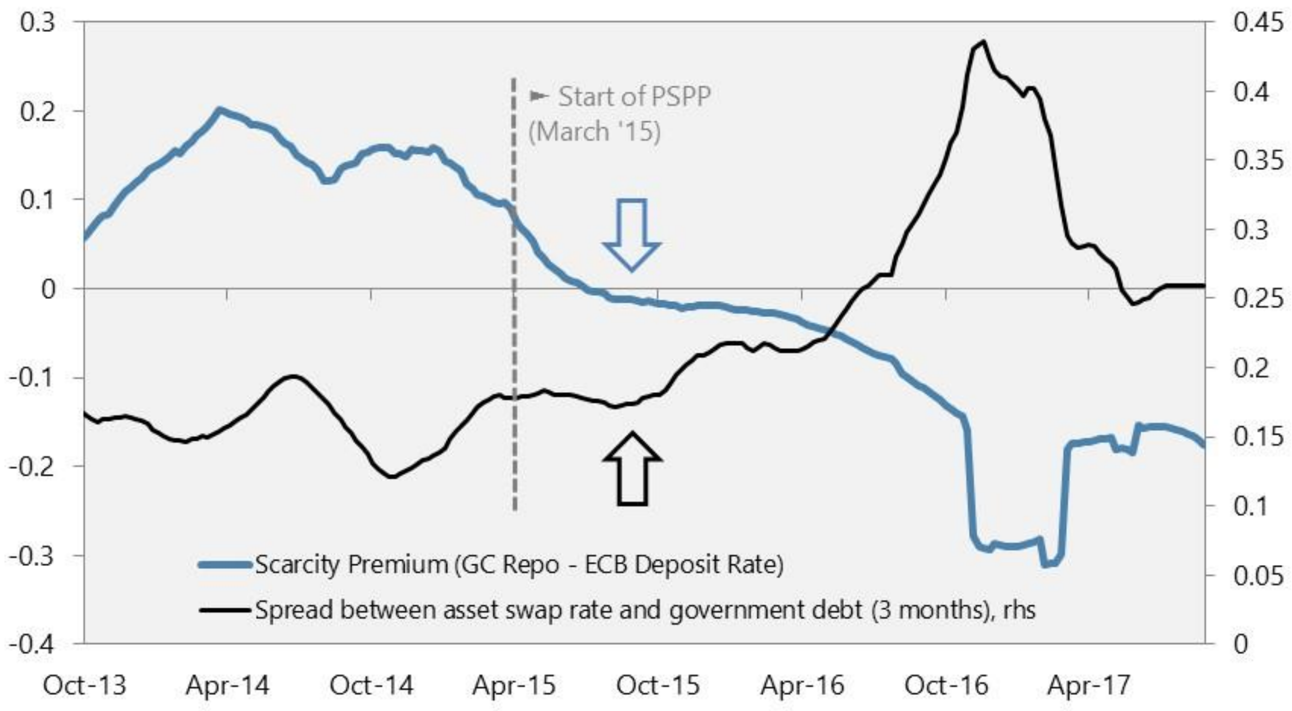


Source: ECB - Money Market Survey.

Collateral scarcity may become a challenge …

Scarcity premium due to lower collateral availability (esp. for non-banks but also CCPs) and <u>persistent arbitrage opportunities</u> as banks have limited balance sheet capacity (e.g., lower basis trading)

Euro Area: "Scarcity Premium"—GC Repo Rate vs. ECB Deposit Rate
(Percent, 20-day centered moving average)

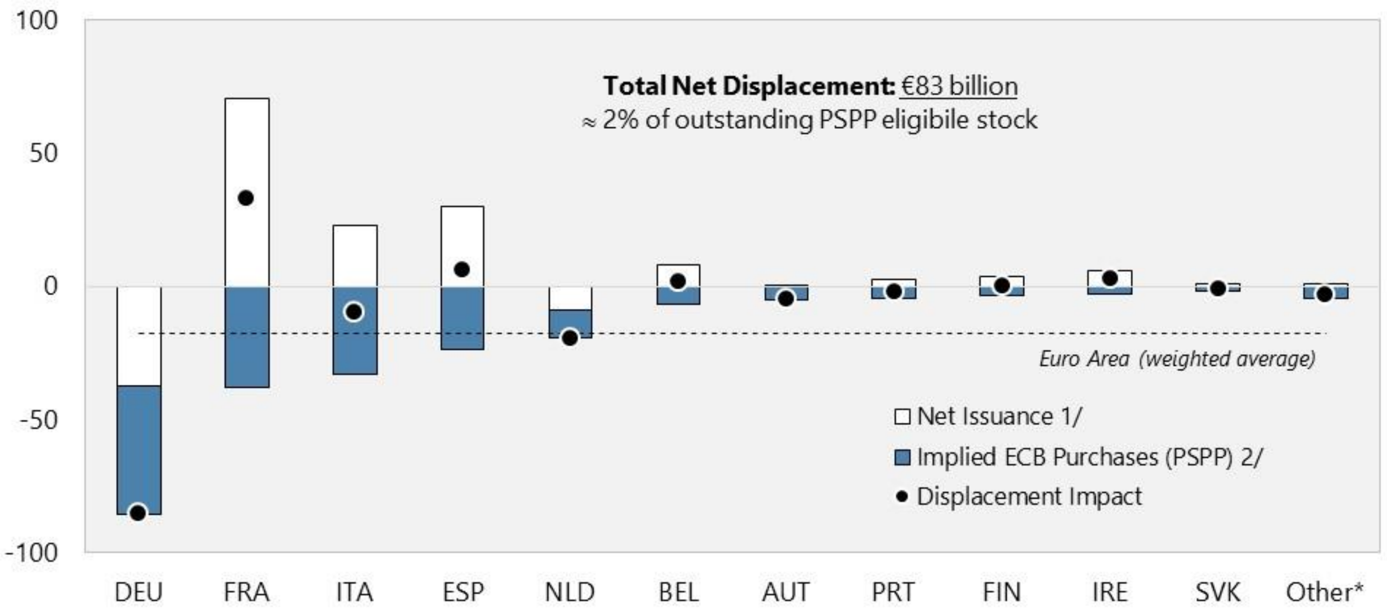


Source: Bloomberg L.P. and IMF staff calculations. Note: PSPP=public sector purchase program; 1/ composite of German, French and Italian GC repo.

Collateral: lower ECB asset purchases next year but still very significant

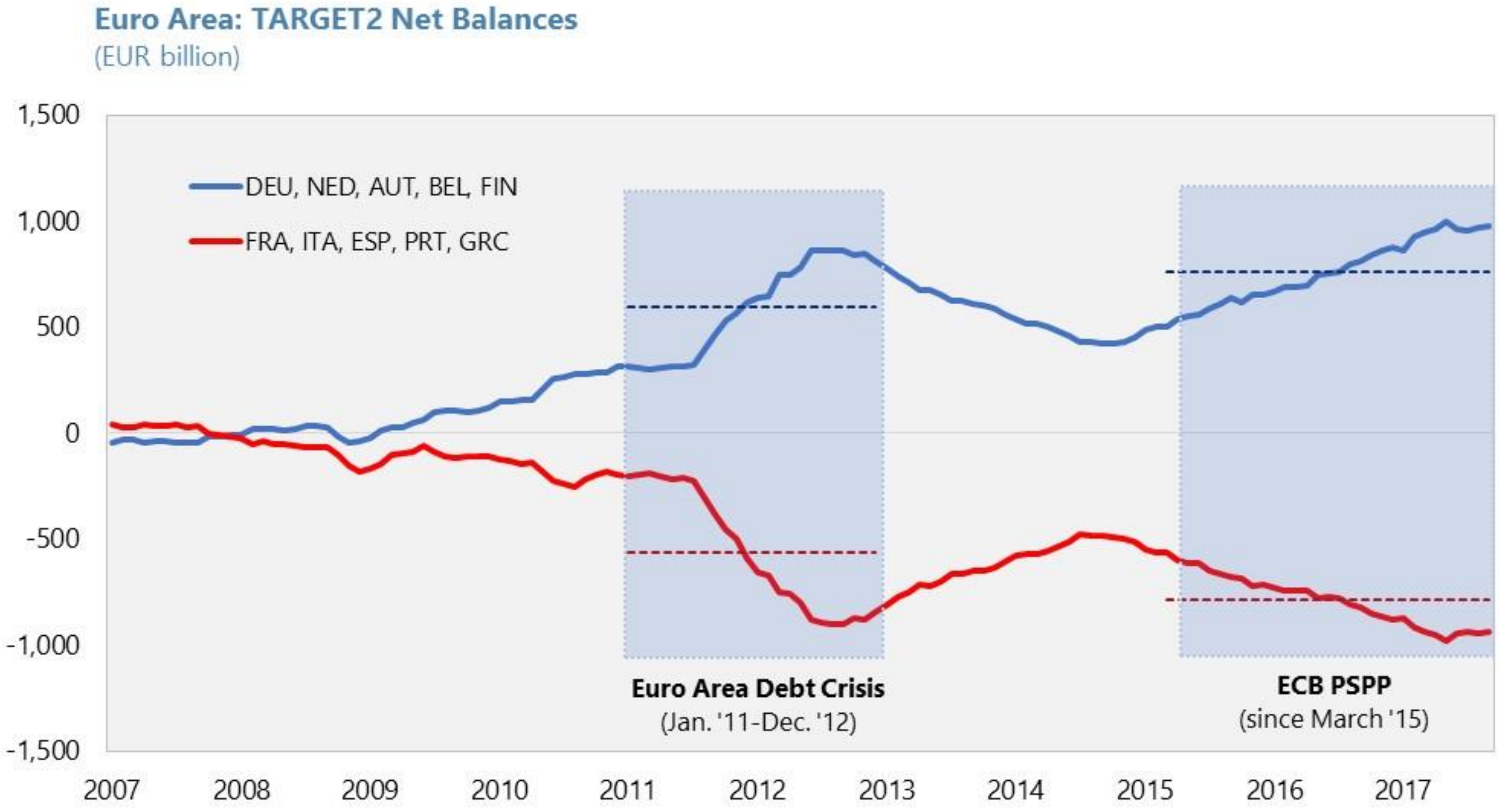
PSPP expected to displace ≈€470 billion of government debt in 2017 but less next year (≈€83billion) amid positive net debt issuance

Euro Area: Expected Displacement of Outstanding Government Bond Market (2018)
(EUR billion)



Source: Bloomberg L.P., Dealogic, ECB, and IMF staff calculations. Note: *=Cyprus, Estonia, Lithuania, Luxembourg, Latvia, Malta, and Slovenia; 1/ excluded coupon payment; 2/ includes redemptions but excludes purchases of securities from Greece due to collateral restrictions and purchasing limits; purchases based on pro-rated ECB capital key in market value terms, converted to nominal amounts; assumed breakdown of PSPP purchases - 73.5% PSPP (govt. bonds, agency, sub-national), of which 8% are Eurosystem purchases of supranational debt securities.

Collateral: Target 2 imbalances widening again

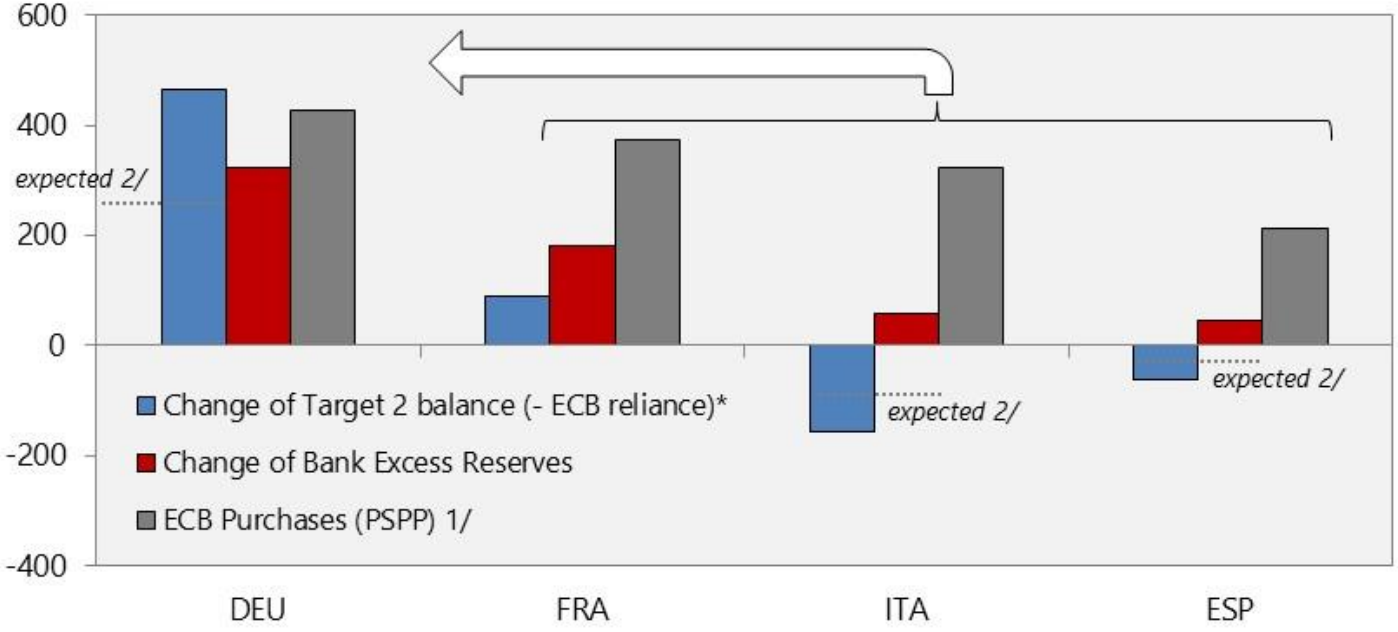


Source: Bloomberg L.P., ECB, and IMF staff calculations.

Collateral: ECB asset purchases contributing to Target 2 imbalances?

This puts a premium on the efficient movement of collateral (via repo markets) to help reduce fragmentation by reversing cross-border flows of (excess) liquidity.

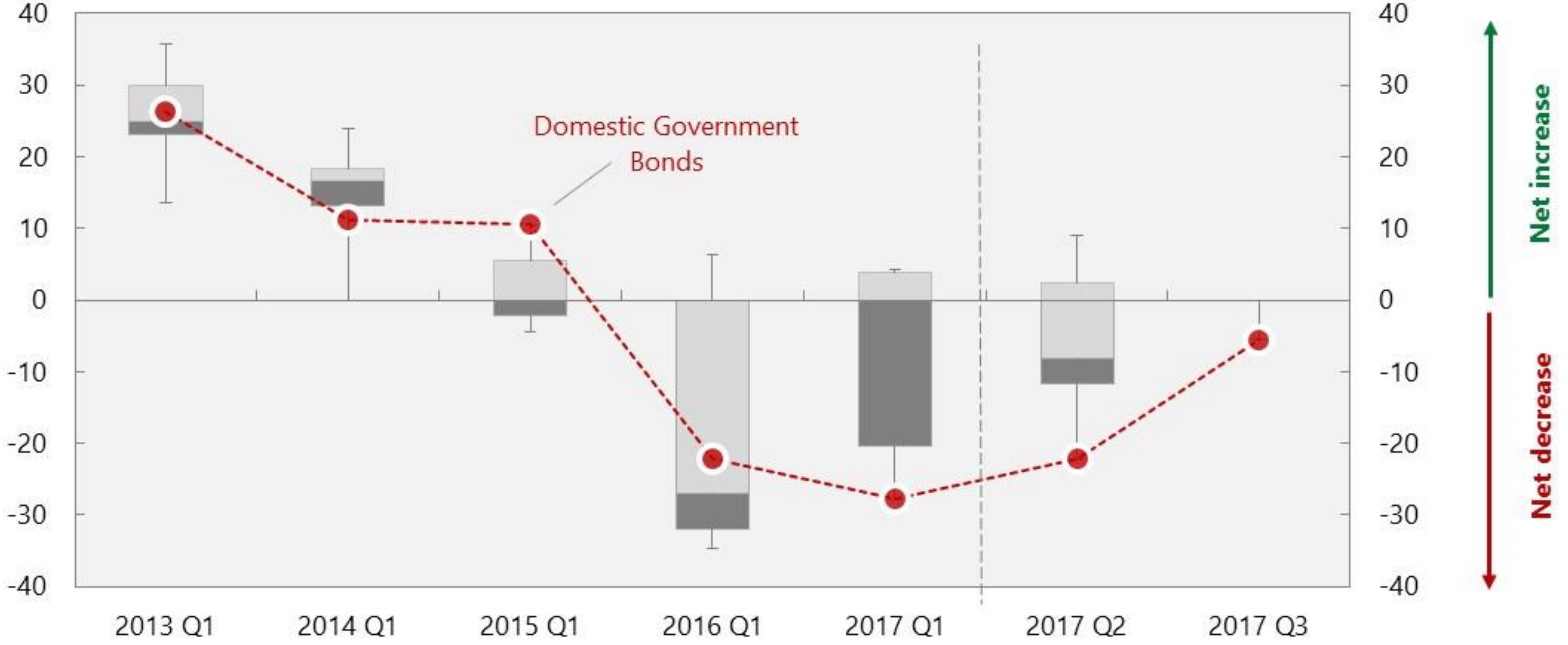
Euro Area: Rising Financial Fragmentation, Jan. 2015-Sept. 2017
(absolute change, EUR billion)



Source: Bloomberg L.P., ECB, Haver, NCBs, and IMF staff calculations. Note: */The use of ECB liquidity reduces the Target 2 balance and is subtracted; 1/ public sector purchase program (PSPP); 2/ expected based on changes in balance of payments after accounting for general "leakage" from Target 2 due to non-euro area trade and portfolio flows.

Market Functioning: liquidity and collateral flows improving

ECB SESFOD Survey: Changes in the Liquidity and Functioning of Euro Area Collateral Markets
(Percentage change over the preceding three months) 1/



Source: ECB Survey on credit terms and conditions in euro-denominated securities financing and over-the-counter (OTC) derivatives markets (SESFOD) and IMF staff calculations. Note: 1/ boxplots include the mean (black dot), the 25th and 75th percentiles (grey box, with the change of shade indicating the median), and the maximum and minimum (whiskers). Out of 10 collateral types included in the survey, the following are considered here: domestic government bonds, high-quality and other government/sub-national/supra-national bonds, high-quality financial corporate bonds, high-quality non-financial corporate bonds, and covered bonds.

Considerations for well-functioning repo market through wider collateral availability

- Negative repo rates are not a new phenomenon ($\rightarrow$ specials), and NIRP/QE have not caused material market disruptions.
- But some aspects of Eurosystem securities lending and infrastructure raise issues:
  - Develop common active securities lending solution for all (or most) NCBs (esp. for those weakly integrated in custodial network through central securities depositories (CSDs))
  - Harmonized modalities (e.g., pricing, haircuts, eligibility) and higher limits on lending per issue
  - Resolve interoperability challenges of trading platforms (CCP/tri-party repo): integrated securities settlement under T2S for “central bank money” not available for “commercial bank money”
- Dysfunctional repo market would result in:
  - Less efficient cash markets
  - Limited market access by non-banks for hedging, and
  - Difficulties for eventual monetary policy normalization

Panel 1: Macro-financial Linkages of Repo Markets and Financial Stability Implications

Moderator: **Andreas Jobst**, Adviser to the Managing Director and CFO, World Bank

Panellists:

Peter Grasmann, E1 Unit Head, Directorate E, DG FISMA, European Commission

Steffen Kern, Head of Risk Analysis and Economics Department, ESMA

Michael Manna, Head of Fixed Income Financing Trading Europe, Barclays

Alberto Gallo, Head of Macro Strategies, Algebris

The Algebris View | Volatility, Fragility and Repo Markets

ICMA Conference, November 2017

Alberto Gallo, CFA

Portfolio Manager, Algebris Macro Credit Fund (UCITS), Head of Macro Strategies

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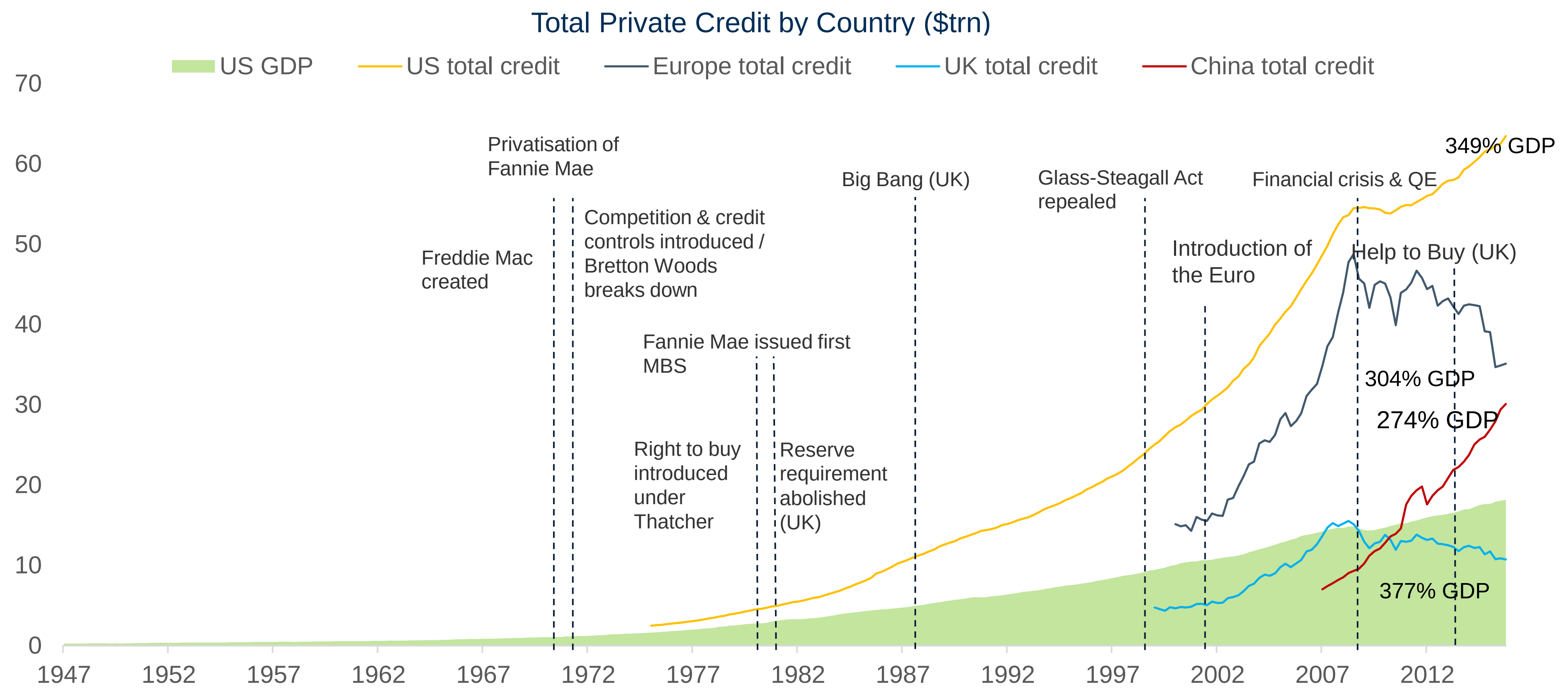
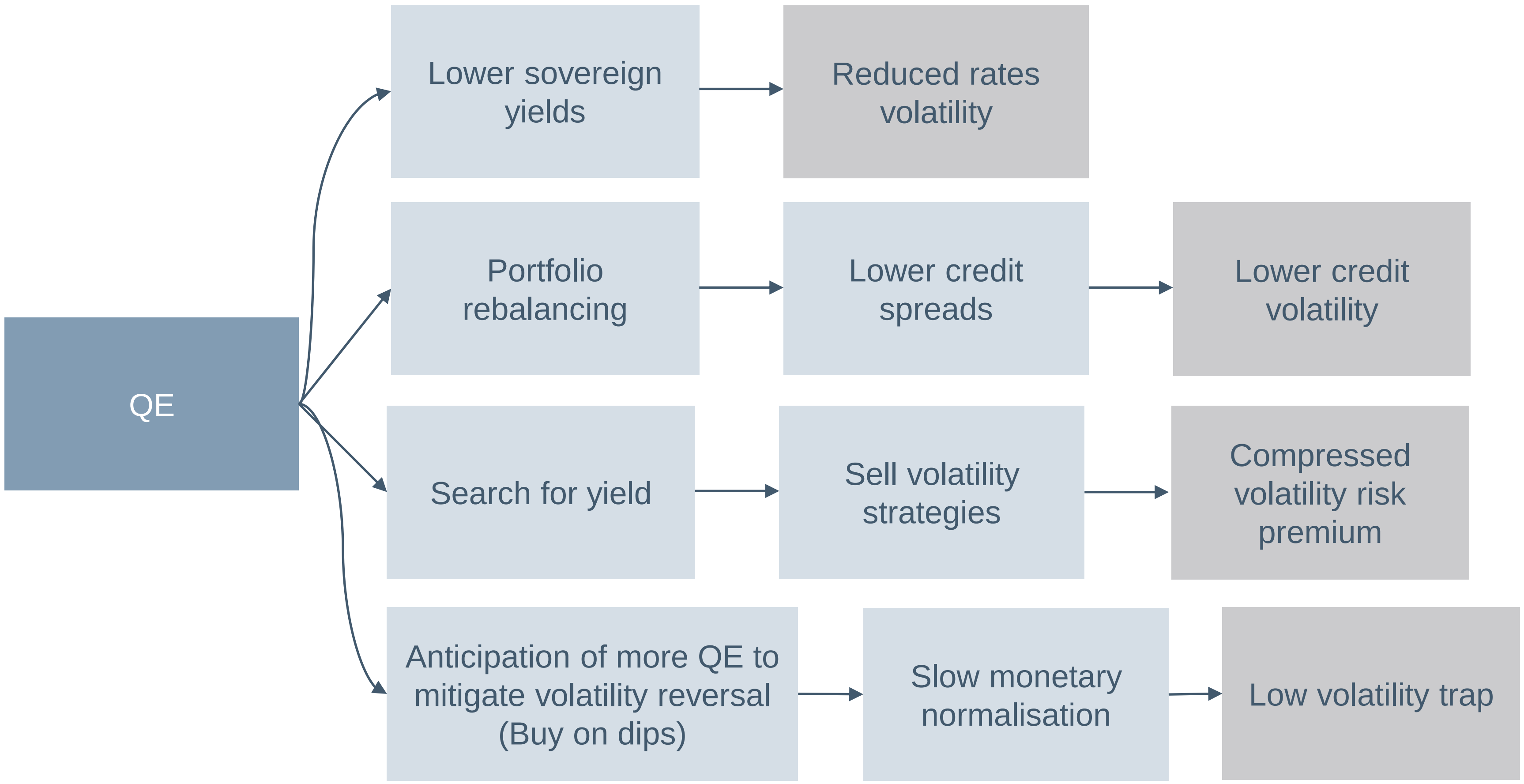
A New Equilibrium in Monetary Policy
Credit Supercycle: How Did We Get Here?



Source: Federal Reserve, European Central Bank, Bloomberg, FRED, PBoC. Private credit calculated as the sum of household loans, corporate loans and bonds and bank debt

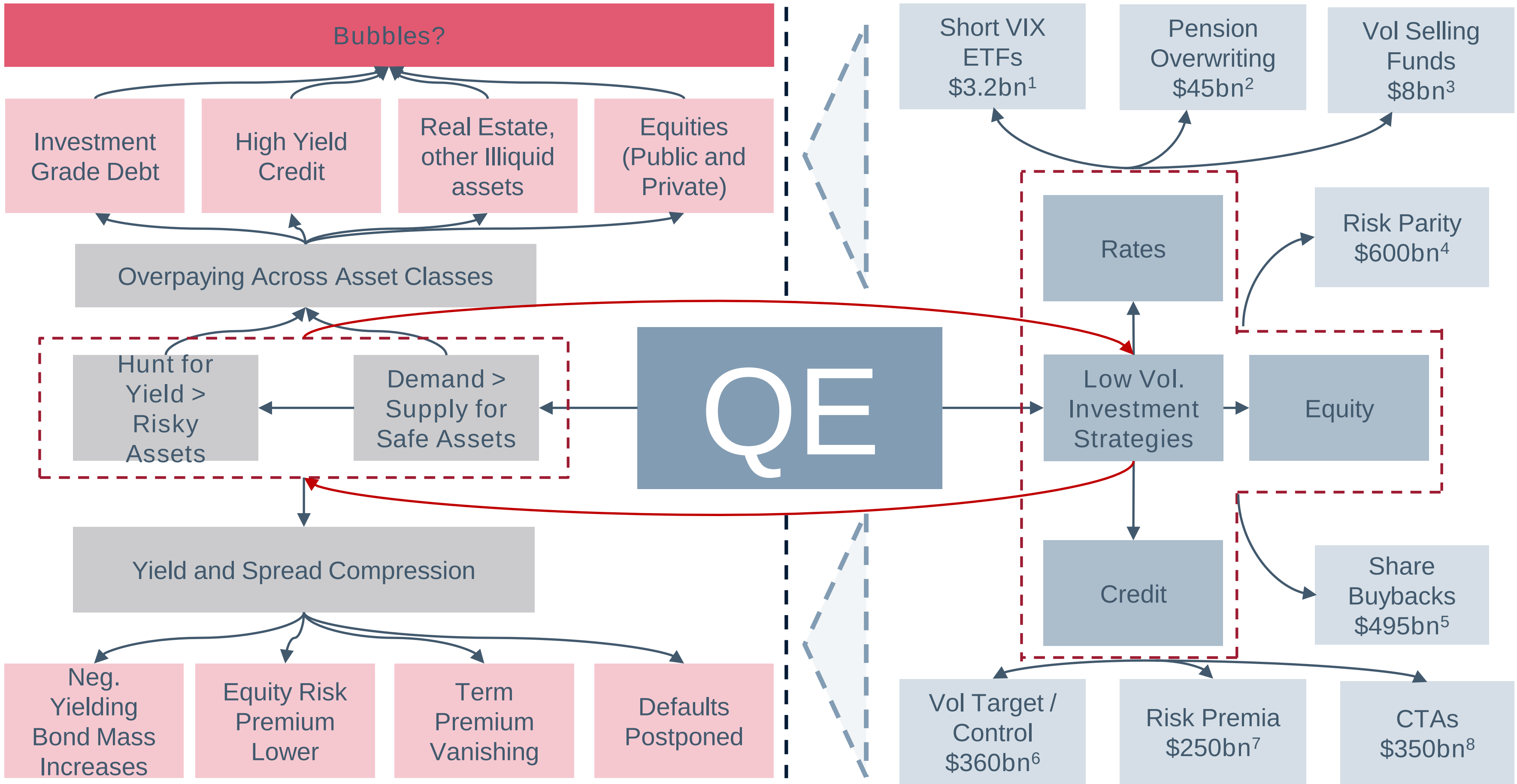
Low Volatility and Asset Bubbles
From QE to Markets

How Loose Monetary Policy Has Reduced Risk Premia and Volatility



Source: Algebris (UK) Limited

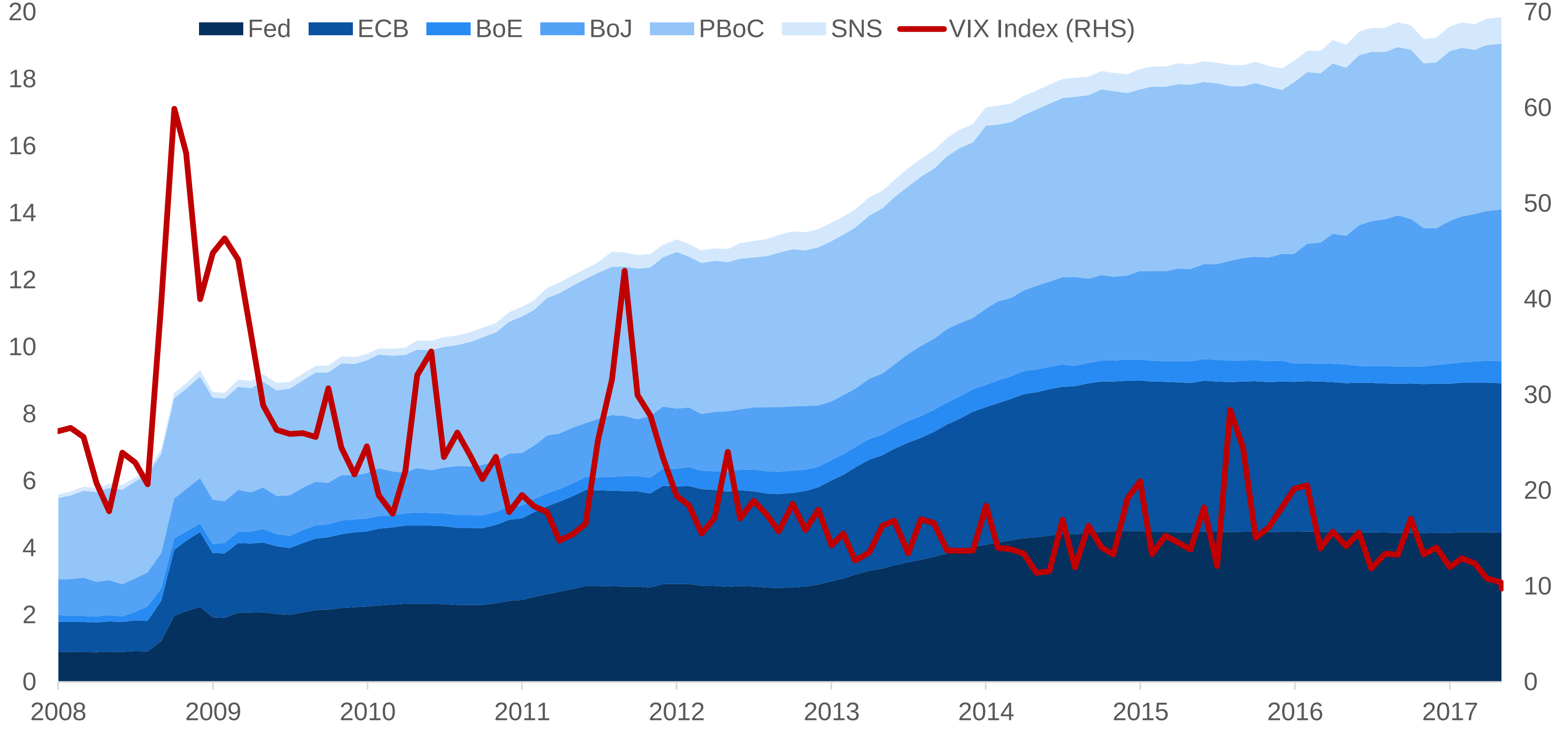
Low Volatility and Asset Bubbles
How Investment Strategies Have Implicitly or Explicitly Benefited from QE



Source: Algebris (UK) Limited. [1] $3.2 billion in short-volatility strategies estimated from Bloomberg data. [2] $45 billion in pension short volatility overwriting programs estimated as of 2017 in Deutsche Bank's 2017 Tail Risk Monitor. [3] $8 billion exposure from option writing funds estimate from Macro Risk Advisers derivatives research by Pravit Chintawongvanich (April 7, 2017). [4] $400-600 billion estimate as of 2016 from Financial Times article by Makan and Wiggles (October 14, 2016) "Little Known Trading Strategy Exacerbates Market Turmoil".
[5] $495 billion 2017 S&P 500 share buybacks estimate in Goldman Sachs "US Weekly Kickstart" (October 27, 2017) by David Kostin. [6] $360 billion exposure in Volatility Control Funds/Variable Annuity Funds exposure estimate based on J.P. Morgan Cross Asset Derivatives Research Team research note (August 27, 2015) by Marko Kolanovic and Bram Kaplan. [7] $250 billion exposure in Low Vol Risk Premia strategies estimated by Research Affiliates' Rob Arnott based on 2017 interview in Grant's Interest Rate Observer.
[8] $350 billion AUM in Trend Following strategies/CTA based on J.P. Morgan Cross Asset Derivatives Research Team research note (August 27, 2015) by Marko Kolanovic and Bram Kaplan.

Low Volatility and Asset Bubbles
Global QE Has Dampened Volatility

Central bank balance sheet size, $tn vs VIX Index



Source: Algebris (UK) Limited, Bloomberg

Low Volatility and Asset Bubbles
Is Real World Uncertainty Rising?

Global Economic Policy Uncertainty

G10 Economic Surprises Volatility

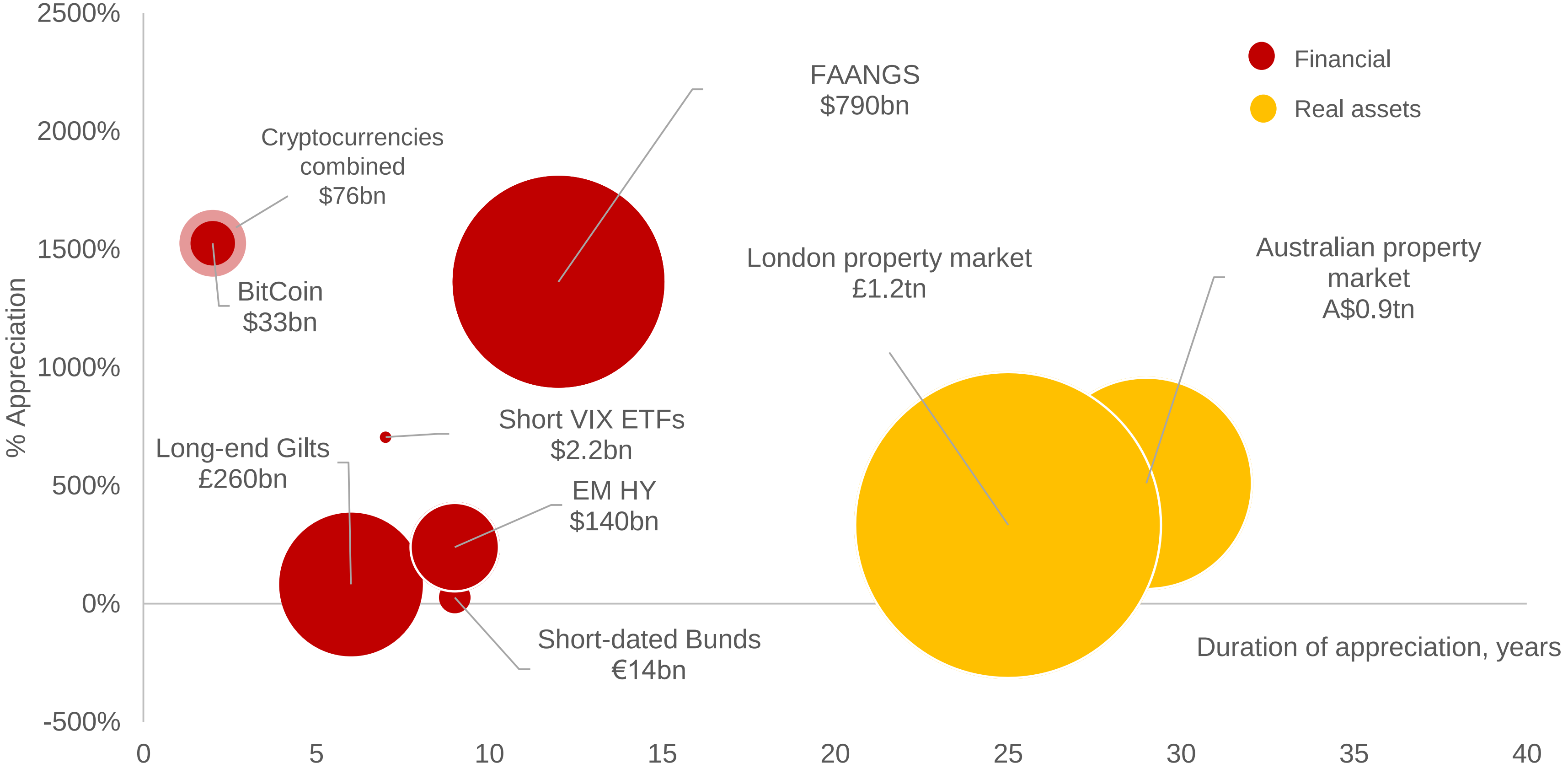
S&P Earnings Surprises Volatility

US HY Default Rate

Source: Algebris (UK) Limited, Bloomberg, BAML Indices. *G10 Economic Surprises Volatility calculated as annualised standard deviation of Citi G10 Economic Surprises Index; S&P Earnings Surprises Volatility calculated as annualised standard deviation of the sum of positive and negative surprises in S&P earnings.

Low Volatility and Asset Bubbles
The Bubble Galaxy

Bubble Size = Potential Loss From a Crash*



Source: Algebris (UK) Limited, Bloomberg, BAML Indices, OECD, Savills, UK Gov. *Assumptions for potential loss from a crash: -60% decline for BitCoin/cryptocurrencies, as happened in 2013; -20% decline for London and Australian property market, as happened during the US housing market crash; for FAANGS, assuming their PE ratios converge to the market average; for short-dated Bunds, assuming a return to positive yield from around -60bp now; for long-end Gilts, assuming a catch-up with inflation and a 200bp widening in yield; for EM HY, assuming a 15% decline; for short VIX ETFs, assuming a -70% decline.

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Introduction to Algebris
Investment Expertise

Financial Equity

- Launch: Oct 2006
- Strategy: Primarily financial stocks with a global remit. The aim is to generate attractive risk-adjusted returns, primarily through fundamental analysis
- AUM: EUR 0.6bn

Financial Credit

- Launch: Jan 2009
- Strategy: Senior and subordinated credit (e.g. CoCo and hybrid securities) of banks and insurance companies globally. The aim is to capture a high current income and generate modest capital appreciation
- AUM: EUR 7.0bn

Private Debt (NPL)

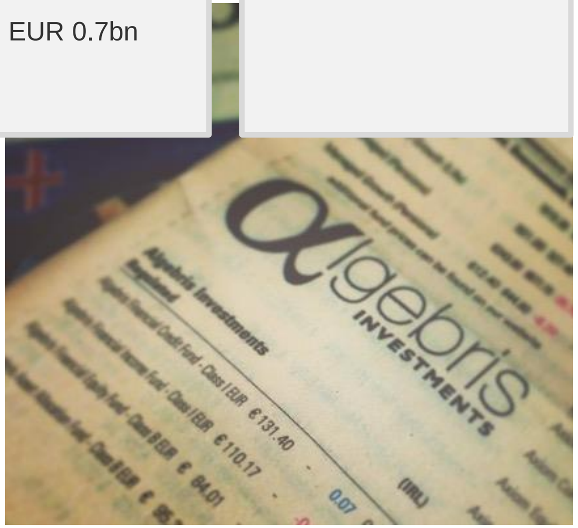
- Launch: Oct 2014
- Strategy: Non performing loans in Italy, targeting first lien mortgage NPL portfolios secured by real estate assets
- AUM: EUR 1.3bn*

Macro Credit

- Launch: Jul 2016
- Strategy: Focus on sovereign, financial and corporate debt (including hybrid instruments). Exposures are tactically managed and globally unconstrained
- AUM: EUR 0.7bn

Italian Securities

- Launch: Oct 2017
- Strategy: Primarily securities of listed Italian companies, focusing on small and mid capitalisation companies



*Private debt indicates committed capital to closed-end funds.
Data as of 30.09.2017

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Panel 2: Post-crisis Regulatory Reforms and the Functioning of Repo Markets

Moderator: **Natasha de Teran**, Head of Corporate Affairs, SWIFT

Panellists:

Benedict Roth, Senior Technical Specialist, Prudential Policy, Bank of England

Greg Markouizos, Global Head of Fixed Income Finance & Collateral Management, Citigroup

Richard Comotto, Senior Visiting Fellow, ICMA Centre

Richard Hochreutiner, Director, Head Global Collateral, SwissRe

Presentation: Asset purchases, financial regulation and repo market activity

Benoît Cœuré
Member of the Executive Board
European Central Bank

Speech and slides can be found here

Closing Remarks

Godfried De Vidts

Chairman

ICMA ERCC

Next ICMA ERCC General Meeting:

March 2018 (date tbc), hosted by BNY Mellon in London

Regular ICMA courses and workshops on Repo:

- ICMA Workshop: **GMRA Masterclass – a clause-by-clause analysis & Annex I negotiation**
  Next workshop: 20-21 November 2017 in London
- ICMA Seminar: **The ICMA Guide to Best Practice in the European Repo Market**
  Next seminar: 27 November 2017 in London
- ICMA course: **Securities Lending & Borrowing - Operational Challenges**
  Next course: 11-12 December 2017 in London
- ICMA Workshop: **Repo and securities lending under the GMRA and GMSLA**
  Next workshop: 7-9 March 2018 in London
- ICMA course: **Collateral Management**
  Next course: 9-10 April 2018 in London
- Annual ICMA Workshop: **Professional Repo and Collateral Management**
  Next workshop: Q1 2018 (date tbd)