



Design and impact of LSAPs

ECB Bond Market Contact Group

27 January 2014

Key themes

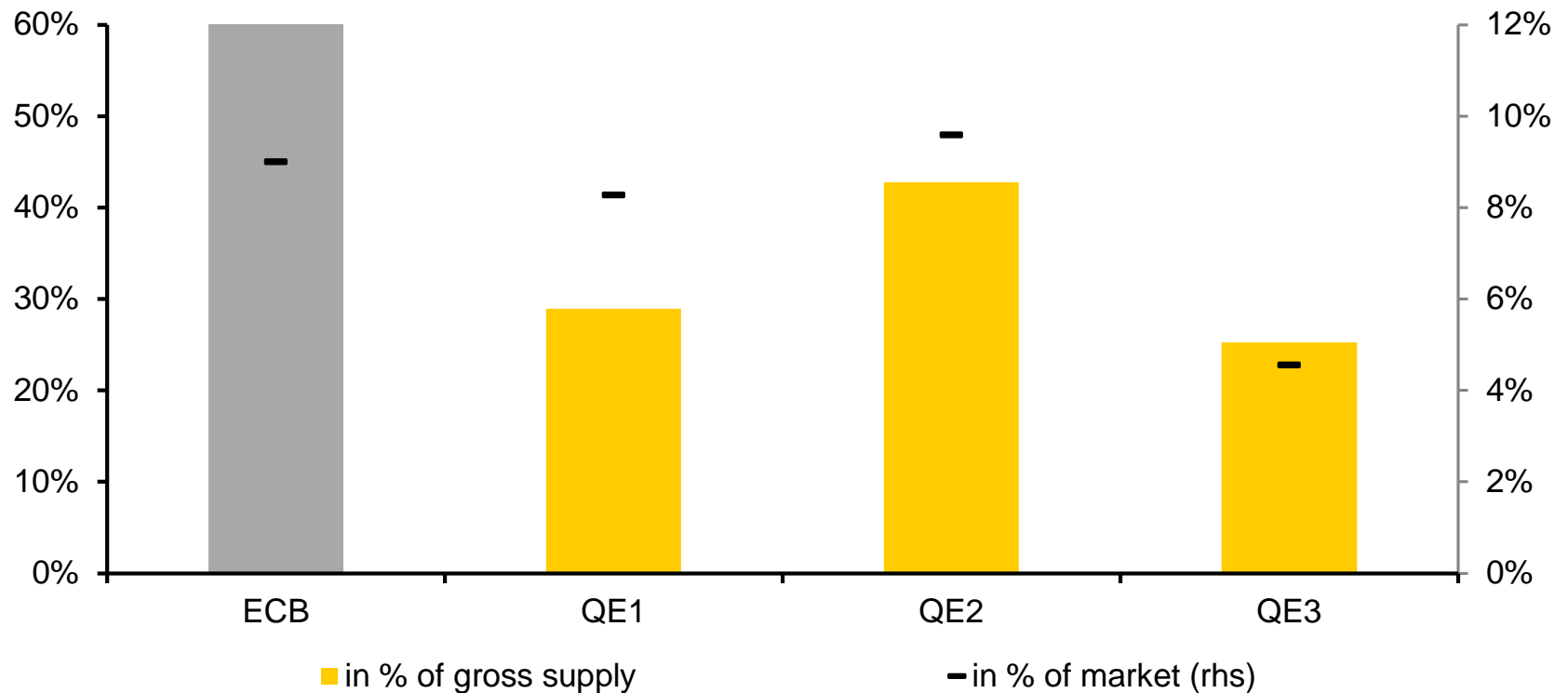
- (1) Putting numbers into perspective and lessons learned from other Large Scale Asset Purchase Programmes
- (2) Specific issues relating to the calibration of a Large Scale Asset Purchase Programme in the euro area

Appendix: Nominal yields, inflation breakevens and real yields during different QE-phases in the US, the UK and Japan

Putting volumes into a bond market perspective

Fed

ECB and Fed* QE volumes relative to gross issuance and outstanding market, annual averages assuming ECB purchases of €50bn per month



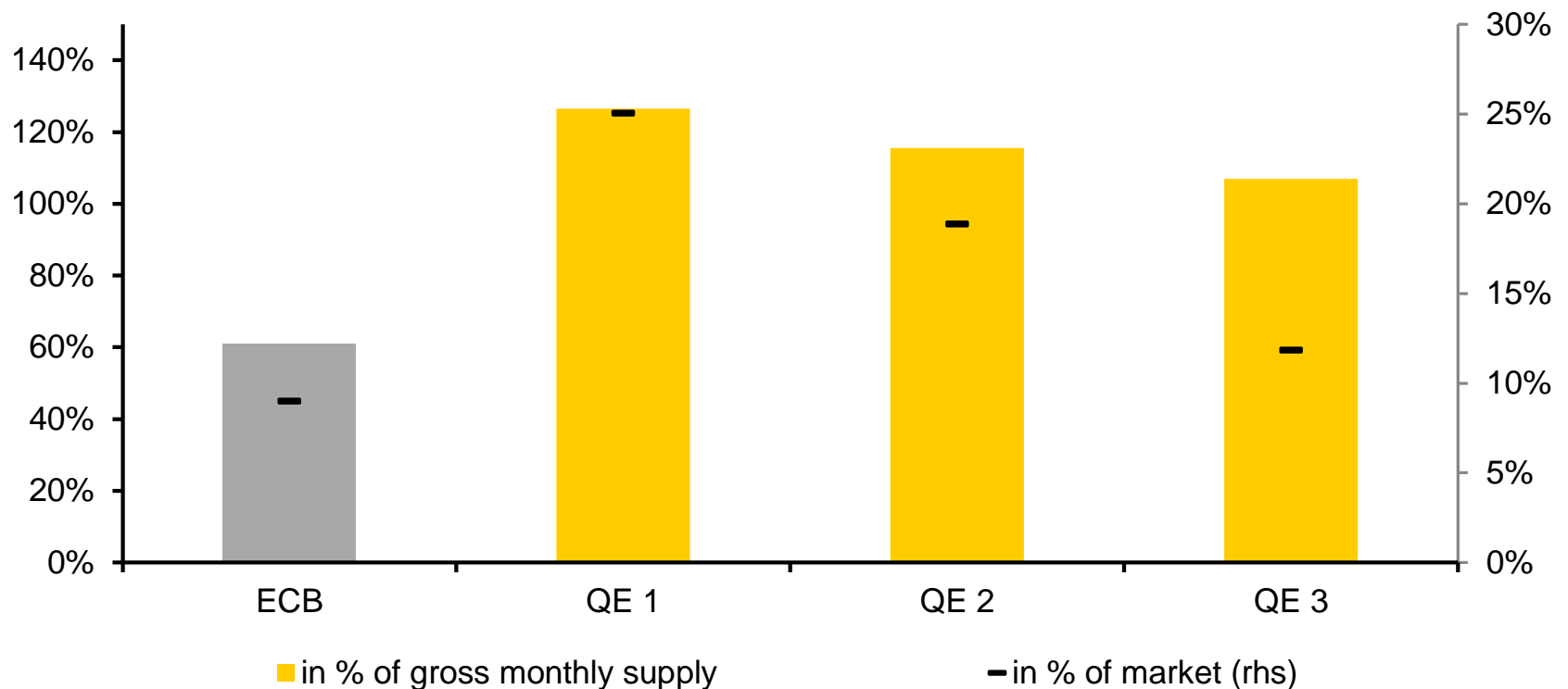
*QE1: Mar09-Oct09, QE2: Nov10-Jun11, QE3: Jan-13-Oct14

Source: ECB, Fed, SIFMA, Commerzbank Research

Putting volumes into a bond market perspective

BoE

ECB and BoE* QE volumes relative to gross issuance and outstanding market, annual averages assuming ECB purchases of €50bn per month

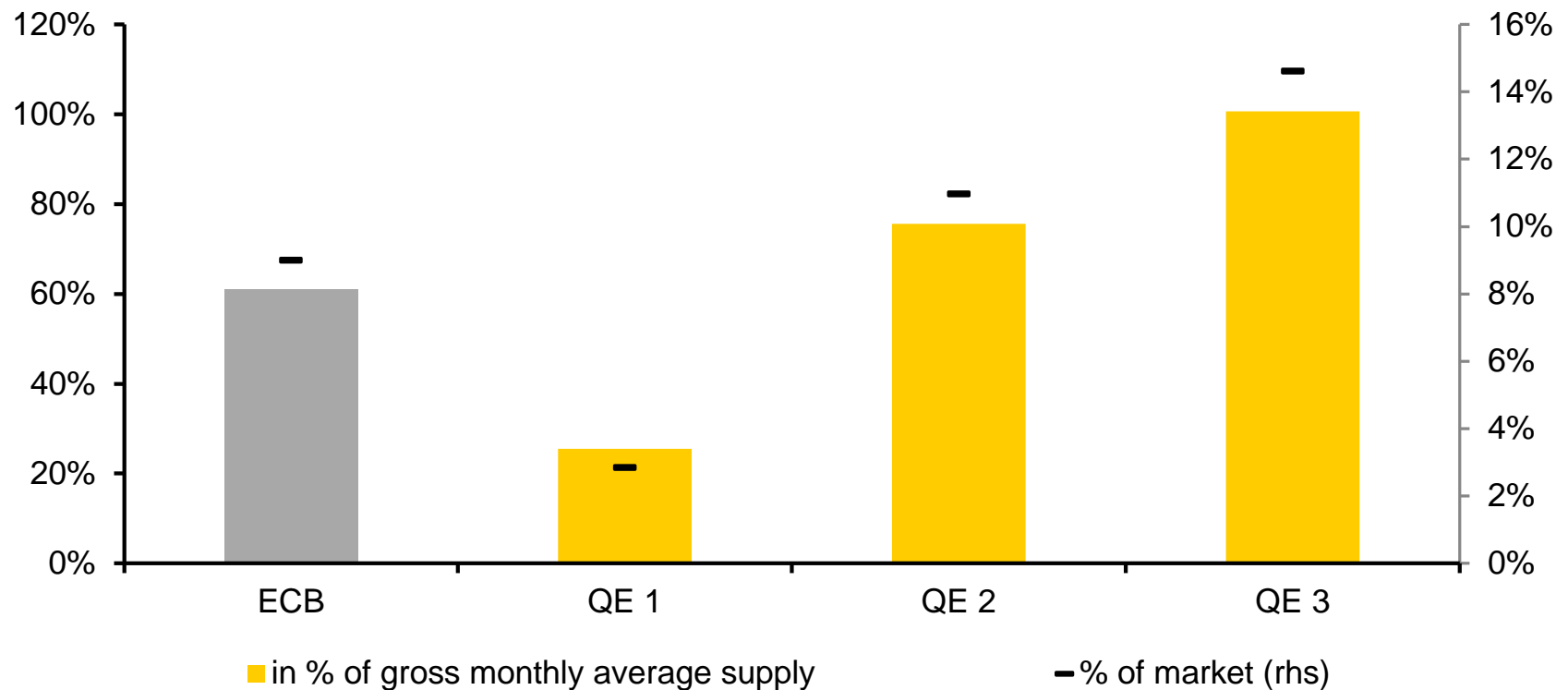


* QE1: Mar09-Jan10, QE2: Oct11-Mar12, QE3: Jul12-Nov12
 Source: ECB, BoJ, UK DMO, Commerzbank Research

Putting volumes into a bond market perspective

BoJ

ECB and BoJ* QE volumes relative to gross issuance and outstanding market, annual averages assuming ECB purchases of €50bn per month

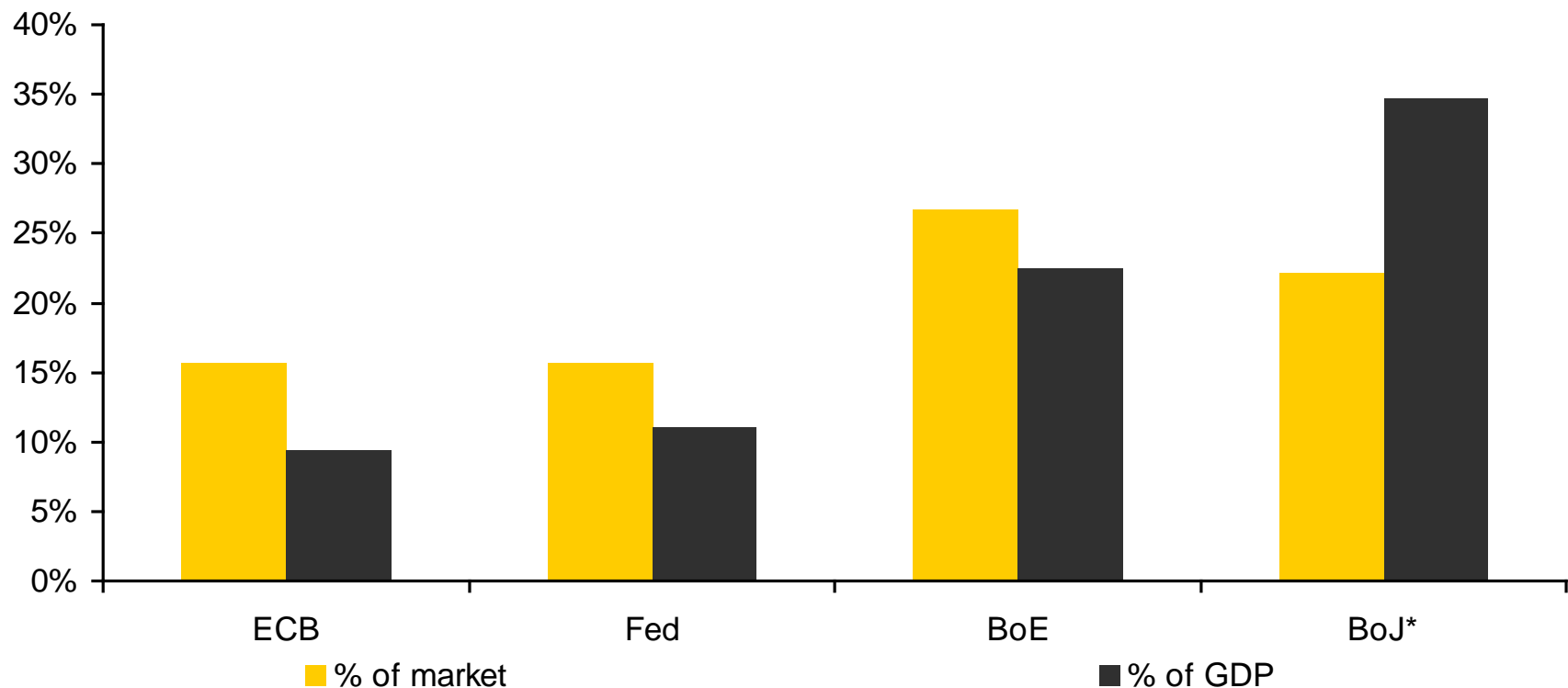


* QE1: Mar09-Apr13, QE2: Apr13-Oct14, QE3: Oct14-today

Source: ECB, BoJ, JP MoF, Commerzbank Research

Total purchases relative to market size and GDP

Total government bond purchases (monetary policy portfolios) in relation to outstanding market and GDP. ECB shares assume €950bn portfolio.



* BoJ as of January 2015 (relations for Fed and BoE at termination of the programmes)
 Source: ECB, Fed, Sifma, BoE, UK DMO, BoJ, JP MoF, Bloomberg, Commerzbank Research

Lessons learned from LSAPs

- › **Fed** purchased a total of US\$1,935bn in US Treasuries during Q1-3. The QE portfolio thus comprises some 16% of the outstanding US Treasury market (19% when including legacy SOMA). **BoE** purchased a total of £375bn in UK Gilts since 2009. The QE portfolio thus comprises some 27% of the outstanding UK Gilt market. **BoJ** purchased a total of ¥168trn of JGBs since 2009. The QE portfolio thus comprises some 22% of the outstanding JGB market.
- › If the **ECB** were to buy €600bn (€50bn per month for one year) in sovereigns it would end up holding some 10% of the outstanding euro area government bond market.
- › ECB WP1587 finds that buying 0.1% of the outstanding market under the **SMP** lowered 5y yields by 7bp in Greece, by about 3bp in Italy and Spain, by 1.5bp in Portugal and by less than 0.5bp in Ireland. Interestingly, the study argues that the effects are lasting (long-run effect to be $\frac{3}{4}$ of immediate effect).
- › Studies about the **yield impact** from the programmes vary widely. A study by D'Amico and King* finds that the Fed's QE1 lowered UST yields by about 30bp across the curve. Using the same approach, Meaning and Zhu** find that Fed QE2 lowered yields by 21bp and BoE QE1 lowered yields by 27bp. The yield impact thus appears broadly similar. Adjusting for the size of the programmes, Williams*** finds that a US\$600bn programme lowered yields by 14-40bp in different studies. Compared to the outstanding market size, however, Fed QE was much more effective.
- › A negative impact on bond market **liquidity** (measured by turnover) could not be found (see BMCG presentations by Carlos Egea and Campbell Gilbert at April 2014 meeting).

* D'Amico and King (2010): Flow and stock effects of large-scale treasury purchases

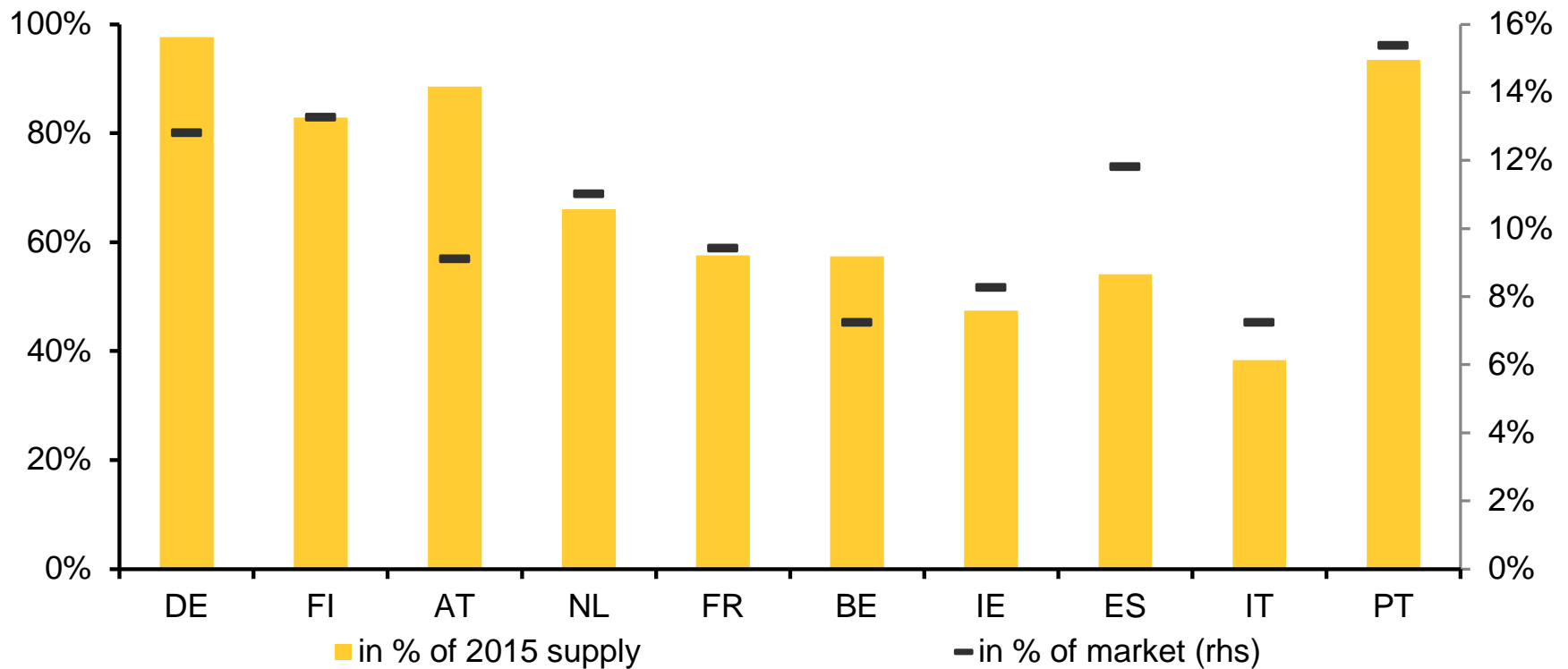
** Meaning and Zhu (2011): The impact of recent central bank asset purchase programmes

***Williams (2011): Unconventional monetary policy: lessons from the past three years

Putting volumes into a bond market perspective

Euro area countries

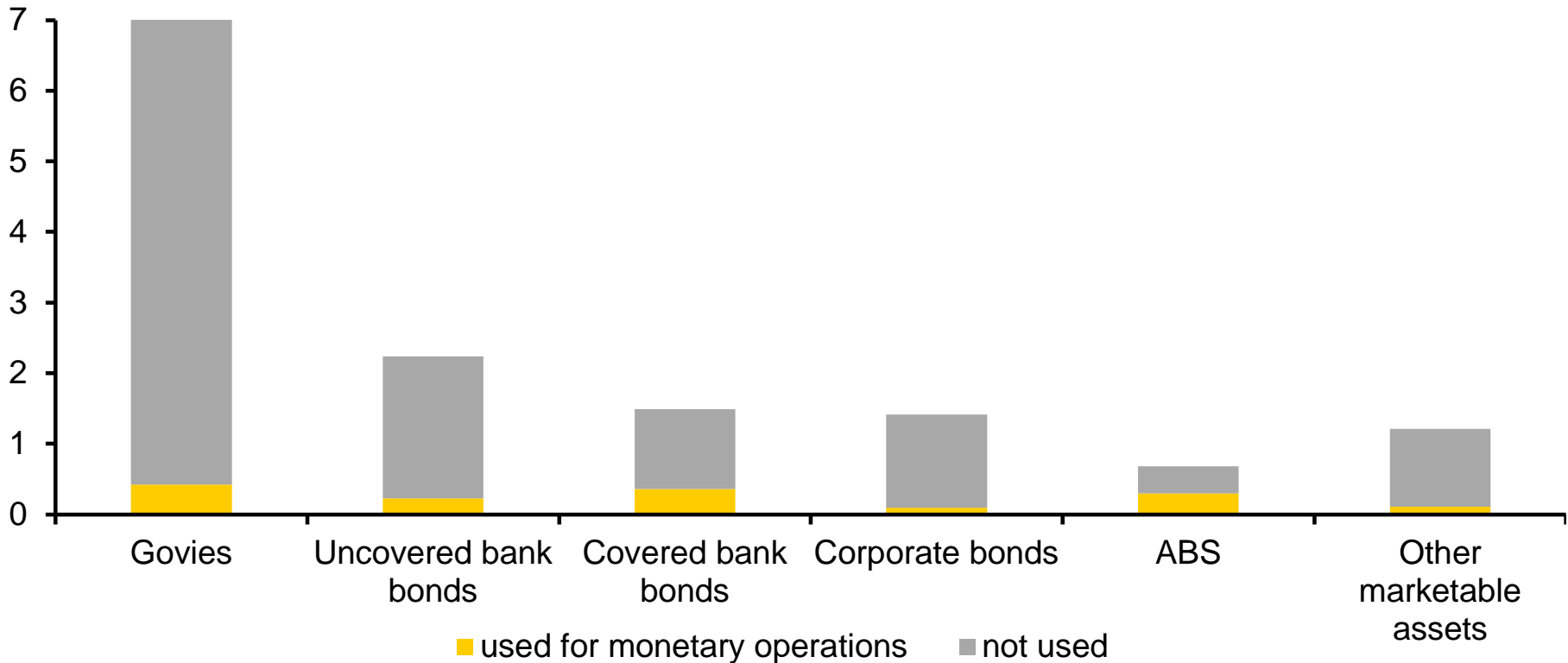
ECB QE volumes relative to gross government bond issuance and outstanding market, annual averages assuming ECB purchases of €50bn per month



Source: Finance Agencies, Bloomberg, Commerzbank Research

ECB eligible assets for monetary policy operations

ECB eligible marketable assets in €trn (Q2 2014), €15tr in total



Source: ECB, Commerzbank Research

Calibration of the ECB Expanded Asset Purchase Programme (EAPP)

- **Timing:** Purchases to begin in March, intended to last until September 2016 and “in any case” until a sustained adjustment in the inflation path is achieved.
- **Volume:** €60bn/month (total of all asset purchases). The additional purchases on top of the existing CBPP3 and ABSPP should be around €50bn/month. This translates into €1,140bn of total asset purchases until September 2016 (some €950bn of additional purchases).
- **Assets:** Central government bonds, agencies and international or supranational institutions located in the euro area.
- **Country split:** Purchases in government bonds and agencies to be divided according to ECB capital key.
- **Risk split:** 80% of the additional purchases will be held by National Central Banks (NCBs) at their own risk, 20% of the purchases will be subject to loss-sharing, comprising the portfolio of European institutions (12% of additional purchases) and an ECB portfolio of government bonds and agencies (8% of additional purchases).
- **Volume limitations:** 25% issue limit, 33% aggregate holding limit (issuer limit). Limits apply to total of additional purchases plus existing SMP portfolio.
- **Country limitations:** Program countries will be excluded during their program reviews (Greece)
- **Maturities:** 2-30y
- **Seniority:** Eurosystem supposed to accept pari passu treatment.
- **Securities lending:** Yes.
- **Inflation-linked debt, floaters:** Eligible.
- **Reporting:** Weekly reporting of the aggregate monetary policy portfolios, detailed monthly reporting by issuer residence and weighted average maturity.

Questions for discussion

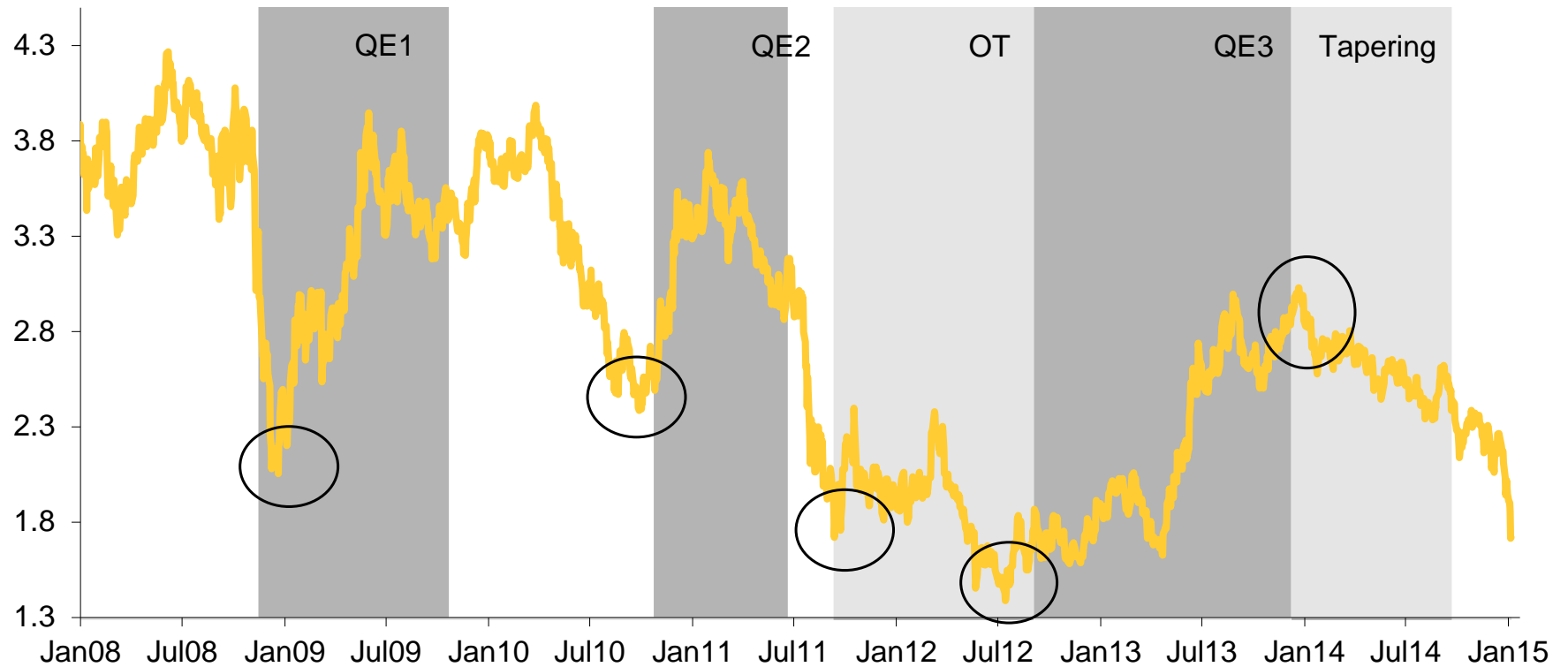
1. **Country/maturity split:** Which guidelines does the Eurosystem apply when deciding which duration to buy in each country (index weights, liquidity, valuations, others)?
 2. **Seniority:** How can investors be sure that the ECB will accept pari passu treatment under restructuring (was not the case in Greece and is still subject to a legal debate under the OMT)?
 3. **CAC bonds:** Should CAC bonds trade different to non-CAC bonds?
 4. **SSAs:** Is the list of “certain agencies” and “certain international or supranational institutions” identical with the ECB lists of recognised agencies and supranational issuers?
 5. **Capital key:** Is this a hard restriction or an orientation? What happens if the ECB is unable to achieve the volume target in a specific country?
 6. **Securities lending:** Will all NCBs participate, and on which terms?
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Appendix

Nominal yields, inflation breakevens and real yields during different QE-phases in the US, the UK and Japan

US: Nominal yield

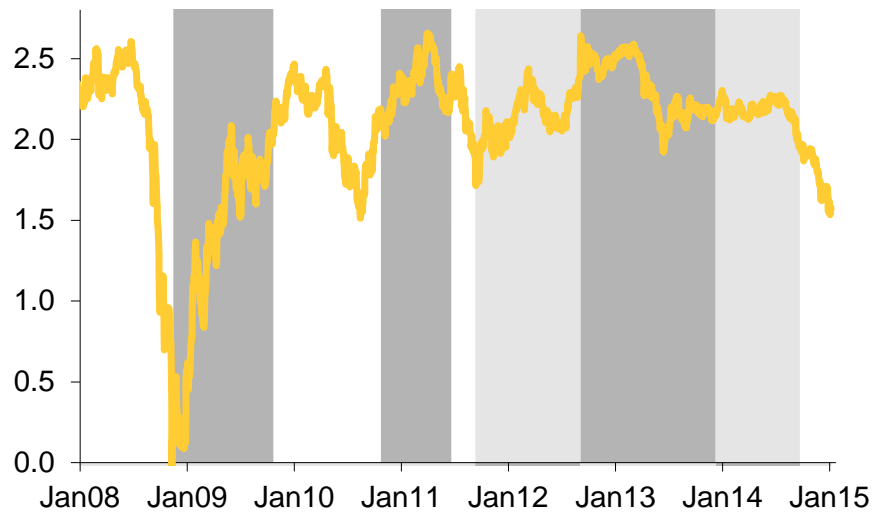
10y nominal US Treasury yield in %



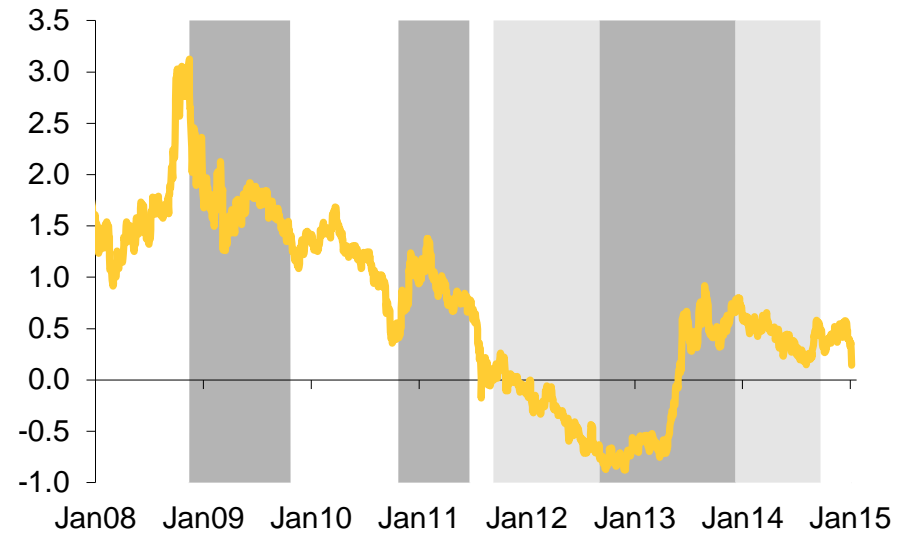
Source: Bloomberg, Commerzbank Research

US: Inflation and real yield

10y TIPS inflation breakeven in %



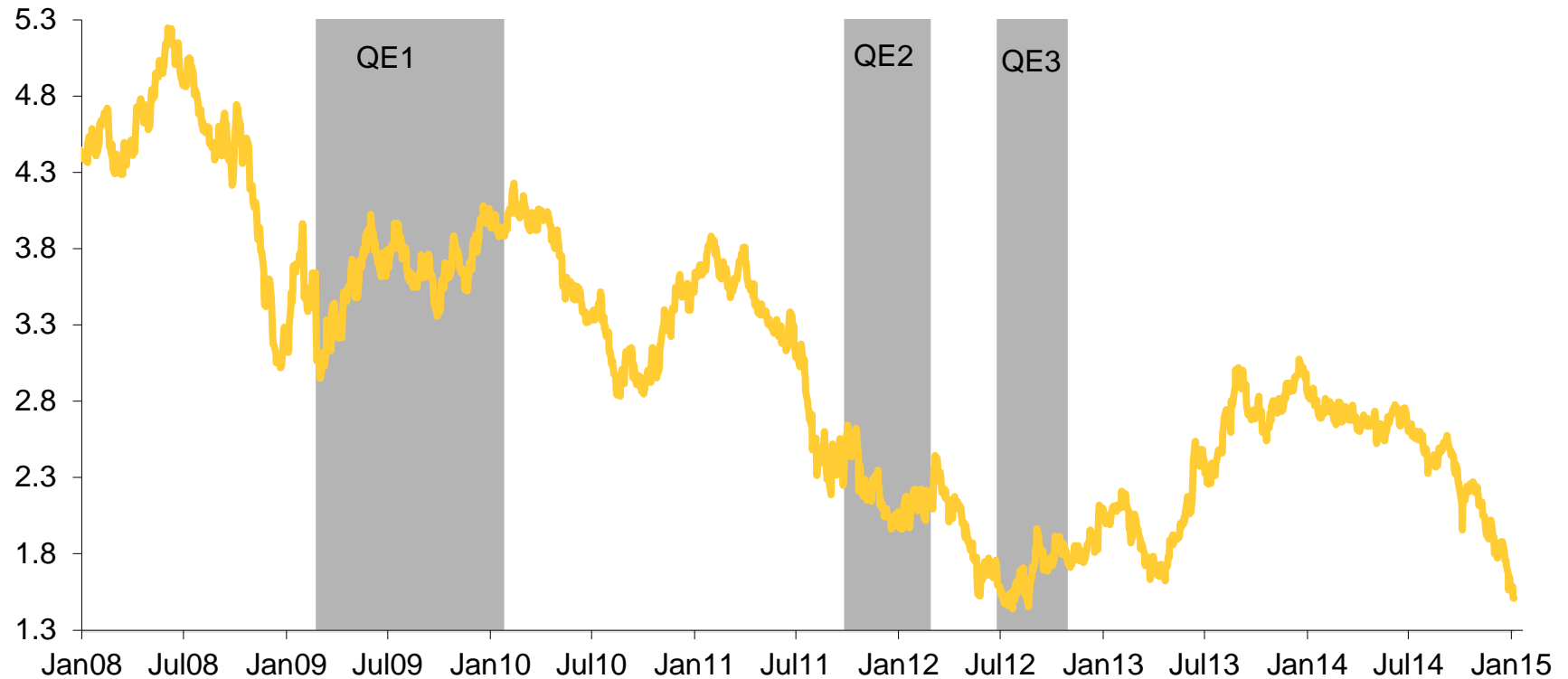
10y TIPS real yield in %



Source: Bloomberg, Commerzbank Research

UK: Nominal yield

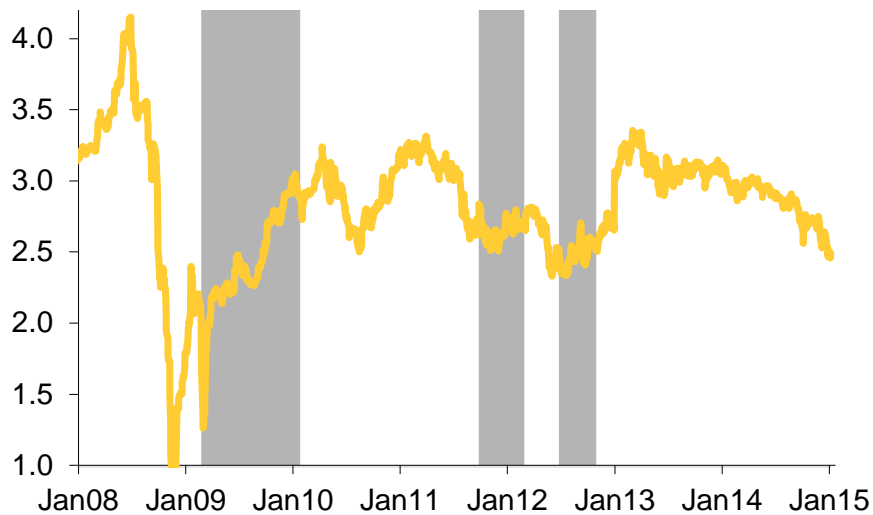
10y nominal UK Gilt yield in %



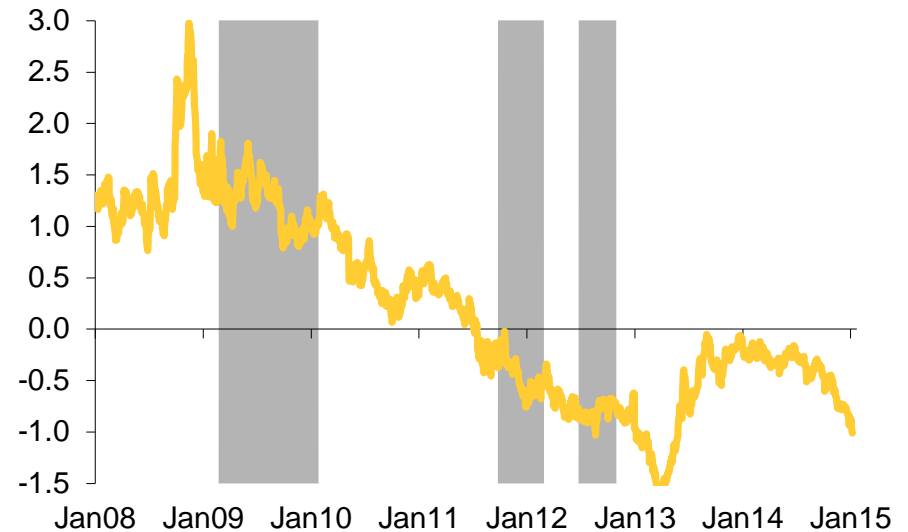
Source: Bloomberg, Commerzbank Research

UK: Inflation and real yield

10y UK Gilt inflation breakeven in %



10y UK Gilt real yield in %



Source: Bloomberg, Commerzbank Research

Japan: Nominal yield

10y nominal JGB yield in %



Source: Bloomberg, Commerzbank Research

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DLZ - Gebäude 2, Händlerhaus Mainzer Landstraße 153 60327 Frankfurt	PO BOX 52715 30 Gresham Street London, EC2P 2XY	2 World Financial Center, 31st floor New York, NY 10020-1050	71 Robinson Road, #12-01 Singapore 068895	29/F, Two IFC 8 Finance Street Central Hong Kong
Tel: + 49 69 136 21200	Tel: + 44 207 623 8000	Tel: + 1 212 703 4000	Tel: +65 631 10000	Tel: +852 3988 0988