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NOTE FOR RECORD

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# MARKET CONTACTS' VIEWS ON THE IMPACT OF ECB QE ON STERLING RATES

**Main Message:** **ECB QE appears to have had some impact on sterling rates – long-dated gilt yields have followed the broad trend in bunds and recent official data show significant inflows from overseas investors into the gilt market. But contacts suggest other factors – including propensities for slow changes in strategic asset allocations; constraints around some investors' ability to move into non-euro assets; the cost of FX hedging for those that can; and recent market volatility increasing demand for cash – have so far acted to reduce the spillovers.**

**Key Points:**

- The May *Inflation Report* assumed the ECB's QE would depress long-term gilt yields over the forecast by around 40-80bps. Following the start of ECB asset purchases on 9 March, bund yields fell about 40bps to a trough in April. They have since risen about 70bps. Gilt yields have *broadly* followed that trend.
- Looking back, many of our contacts say that the fall in bund yields after the beginning of ECB QE, and subsequent fall in US Treasury and gilt yields, went too far. But they also think gilts have been moved by idiosyncratic factors – including better UK economic data and, at the time of our calls, reduced Greece concerns.
- Official data on flows in the gilt market show a persistent inflow of foreign investment until the end of May. MI suggests that foreign gilt purchases have continued through June. But contacts downplay the data, and think that a number of factors have suppressed portfolio reallocation into gilts. These include the cost of FX hedging; market volatility; rigid investment mandates (which can take up to six months to change); and the fact that some investors are unwilling or unable to diversify out of euros (banks, for example, are encouraged to match high-quality liquid asset buffers to the currency of their expected outflows).
- This suggests there could be more reallocation to come – something which may be exacerbated by an expected reduction in the free float of euro area government debt, as the ECB continues to buy assets, and if net issuance of euro area sovereign debt turns negative.
- At the short end, contacts note that the rise in the ERI (driven by appreciation against the euro) could affect the monetary policy normalisation strategy. The sterling ERI is up by 4.2% since the May *Inflation Report*.

**A. What are the channels through which ECB QE affects sterling rates?**[1]

1 Key to these asset pricing channels is a link from euro sovereign bond yields to sterling market interest rates, through channels such as portfolio rebalancing. The portfolio balance channel of QE operates when the assets that are being purchased by the central bank and the money that investors receive in return are imperfect substitutes. In this case, investors seek to re-allocate their cash balances into other substitute assets, bidding up their prices in turn until relative prices have fully adjusted. Investors might therefore be rebalancing portfolios by selling euro-denominated assets, as yields are depressed by ECB asset purchases, in favour of higher-yielding sterling-denominated assets.[2]

2 ECB QE might also impact sterling rates via the currency. Other things equal, sterling strength puts downward pressure on the outlook for UK CPI and therefore on the sterling yield curve. In addition, the strong US dollar has contributed to lower oil prices, which have also been highly correlated with government bond yields. This has been linked to fears about persistent deflation outcomes growing as the oil price fell, before coming off from around January – with both the oil price and longer-term forward inflation swap rates increasing since then.

**B. What happened to government bond yields around the commencement of ECB QE?**

3 Bank staff estimated that the ECB's QE programme impacted on a range of UK asset prices, including government bond yields, equity prices, corporate bonds, and the exchange rate (see ). In part as a consequence of these asset price channels, and over and above the direct trade effects from an improved euro area outlook, the May *Inflation Report* forecast assumed the impact of the ECB's programme would be positive for UK GDP ( ). At the time of the May *Inflation Report*, staff in MA estimated that it had depressed *long-term* UK government bond yields by around 40-80bps.[3]

4 Bond yields across Germany, UK and US have moved in a wide range over the course of 2015 (**Chart 1**). At the 10-year point, yields are now around 45bps higher than at the start of the year in Germany, and 40bps and 35bps higher in the UK and US. But they fell sharply in the period immediately after the start of asset purchases and have risen up to 70bps from their lows reached in April. The majority of this note is focused on the impact of ECB QE on long term bond yields.

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[1] For a fuller discussion of the channels through which ECB QE might impact UK GDP and inflation see How do changes in foreign monetary policy spill over to the UK.

[2] Irrespective of the relative *level* of rates, ECB QE might be expected to spillover to sterling rates because of 'relative value trading'. Because of the high historic correlations between gilt, bunds and US Treasuries, traders will often hedge for a few hours or days exposures in one asset with another, on the basis that the yields are likely to change in a similar way over short periods.

[3] Those estimates were based on analysis from two approaches: summing up changes in UK 10-year term premium estimates during the period from end-June 2014 to end-April 2015, excluding moves that were judged to be cause by factors other than ECB QE (resulting in around an 80bps contribution of ECB QE to the fall in UK long rates); and using news flow analysis to estimate empirically the contribution of news about ECB QE to falls in yields (resulting in estimates of around a 20-60bps fall in rates due to QE, with 40bps being the central case. See ). All of these estimates are necessarily uncertain, and so in the central case equal weight was placed on the two approaches for an impact of ECB QE on UK long rates of around -60bps.

5 At the short end of the yield curve, the direct impact of QE has been less pronounced. While the ECB will not purchase bonds with maturities of less than two years, the purchases have increased reserves and contributed liquidity to cash markets – the front of the euro area curve flat out to two years. Sterling rates are broadly unchanged at the short end, with the 1-year rate, 1 year forward 6bps higher than at the start of ECB QE. There is not an explicit assumption in the May *Inflation Report* forecast about the impact of ECB QE on sterling short rates. The forecast includes a boost to the UK domestic outlook from ECB QE which pushes up on the profile for UK inflation. And, offsetting that, ECB QE is estimated to have depressed the euro against sterling, and so lowers the profile for import prices. The net of these two effects is estimated to be broadly neutral for inflation at Year 3, so the path of expected rates might not be much affected by ECB QE. That said, in recent months there has been evidence to suggest that term premia may be weighing on even short-maturity UK interest rates (see and ).

6 ECB asset purchases are also seen as pushing down on the euro. Sterling has appreciated 5.5% against the euro since the asset purchase programme was announced - with trade-weighted sterling reaching post-Lehman highs. The US dollar has also appreciated 1.0% against the euro (**Chart 2**).

**Chart 1: 10-year bund, US Treasury and gilt yields**

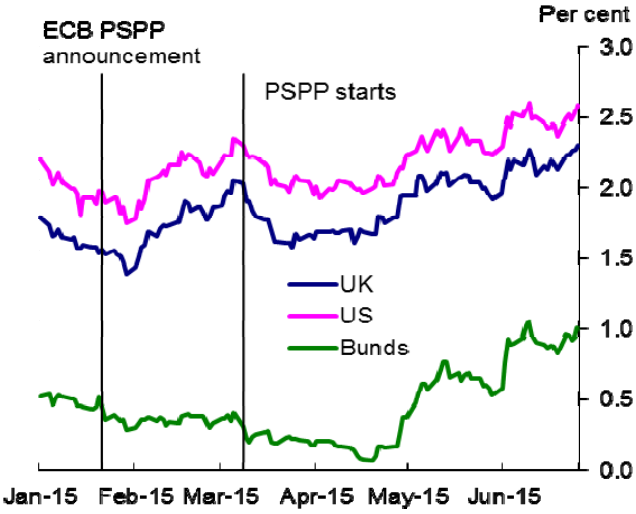
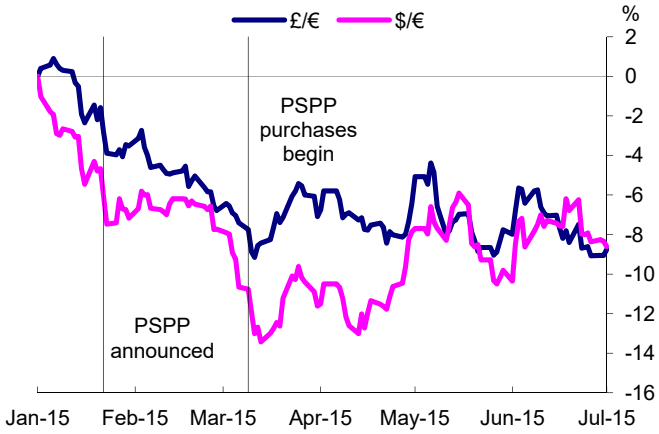



**Chart 2: Cumulative changes in euro exchange rates over 2015**




**D. To what extent has ECB QE driven government bond yields?**

7 In terms of what drove the fall and subsequent rise in *bund* yields, market intelligence emphasises: the difficulty in price discovery in a market with a large price-indiscriminate buyer; the opaque nature of the ECB's asset purchases; and uncertainty about the impact of the ECB's threshold of not purchasing bonds with a yield of less than -20bps (see ). Another exacerbating factor may have been a reduction in the ability of banks to make markets and warehouse risk. More generally, contacts have said regulatory-driven balance sheet constraints increase volatility in fixed income markets. And, reflecting this point, one contact noted that regardless of the operational design,

they believed any asset purchase programme involving a substantial reallocation of assets was more likely to cause volatility than in previous years.

8 In contrast to our conversations in March and April, recently contacts have said they are more comfortable with the process and impact of the asset purchases. Contacts have noted that dealers are now used to dealing with queries from multiple euro area central banks on a semi-regular basis, and managing their bond inventories around better-anticipated purchases based on the central banks' revealed preferences.[4]

**Chart 3: Change in 10-year government bond yields around the start of QE programmes**

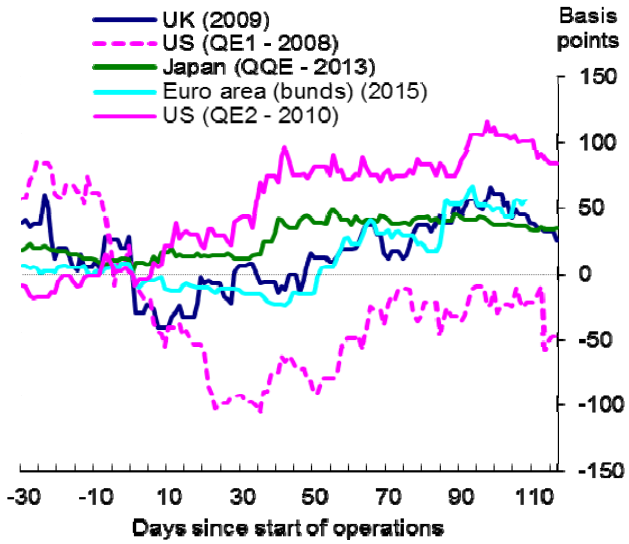
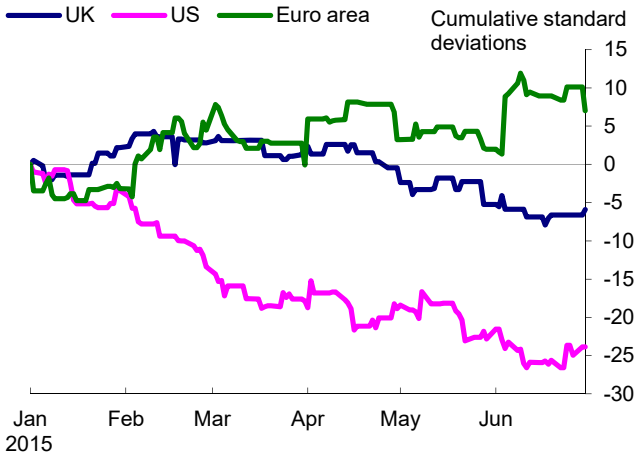



**Chart 4: Economic surprise indices (with data weighted by importance)**




See for details.

9 Looking back, many of our contacts say that the fall in bund yields after the beginning of ECB QE, and subsequent fall in US Treasury and gilt yields, went too far. They describe the change in bund yields as typical of QE exuberance. And, having been uncomfortable when bund yields fell towards zero, they believe rates have risen back towards their fundamental levels. Indeed, ECB QE now looks not dissimilar to the experience of previous asset purchase schemes – albeit with each QE programme being conducted in a very different economic and financial environment (**Chart 3**).

10 Despite the appearance of following bund yields closely on a day-to-day basis contacts suggest other factors also played an important role in driving UK and US rates. First, the data and outlook weakened relative to expectations in the US (reflecting poor weather) and, to a lesser extent the UK, through Q1 before subsequently improving (**Chart 4**). And, second, up until last week, contacts had been reporting that the rise in UK yields through June had been supported by an improvement in the outlook for Greek debt negotiations. Consistent with non-QE news playing a role, the correlation

[4] Unlike the Bank, the ECB does not conduct reverse auctions for bonds or publish which bonds it is looking to purchase. Instead, purchases are conducted by the NCB on a bilateral basis – after agreement with the ECB. The bonds are purchased after obtaining quotes from three different dealers via electronic and voice trading platforms.

between UK and German rates has remained relatively low since the start of ECB asset purchases and only recently started to pick up (**Chart 5**). By comparison, the correlation between sterling and US rates has remained stronger.

**Chart 5: 60-day rolling window regression coefficients of UK 10y yields on US and German yields**

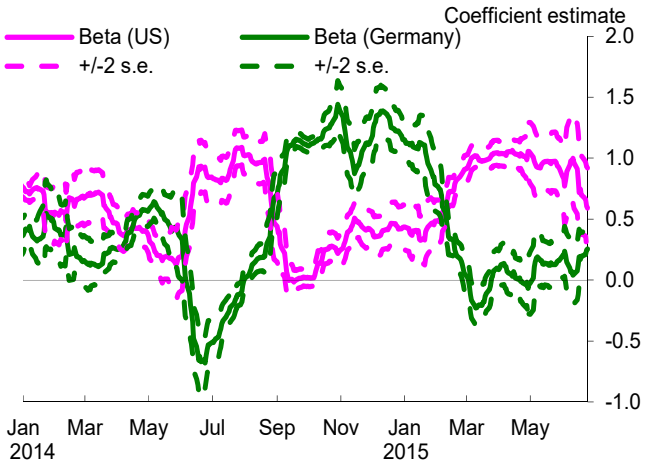
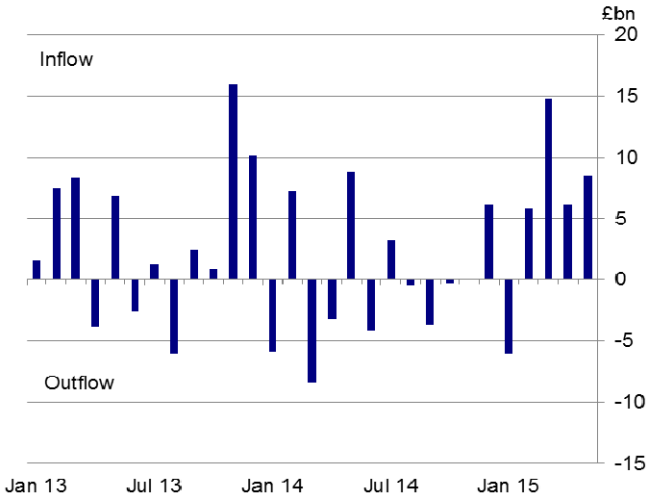



**Chart 6: Monthly changes in non-residents' holdings of gilts**




**E. What flows into gilts have we seen?**

11 The most recent data show that overseas investors were significant net purchasers of gilts during the four months from February to May. And, since the start of the ECB asset purchases in March, the gilt market has experienced cumulative net inflows of £30bn from overseas investors (**Chart 6**). Each months' flow is not unusual, but cumulatively this represents the strongest quarter of inflows from overseas investors since the end of 2011.

12 Our GEMM contacts downplay the data. They have suggested that they have seen *some* large central banks and sovereign wealth funds (SWFs) 'passively reallocating' – i.e. reinvesting maturing bonds, but not selling holdings to buy non-euro debt. For example, contacts have said that as bunds held in those central bank and SWF portfolios have matured, negative yields (which extend to four years currently, but did stretch close to ten years at points in April) meant that some could not reinvest in Germany. And this may have been exacerbated by negative net issuance of bunds over the first half off 2015. Some were unable to take further credit or duration risk and therefore had to look to other government bonds such as gilts to avoid negative yields.

13 Our contacts have drawn out a number of reasons flows had not been stronger:

a) *Investment decisions take time* – almost unanimously, contacts have stressed that it could take up to six months for many investment boards to approve changes to global asset allocations. Reallocating into another currency was seen as a larger 'strategic' decision,

particularly for those that did not have multi-currency benchmarks. Pension funds in particular were very slow to update or change their asset allocations. As a result, contacts thought that we may not see some investors able to switch their portfolios until as late as 2016.

b) *Many investors cannot reallocate from euros into sterling* – a significant proportion of potential sellers of euro government bonds to the ECB are restricted by regulatory costs and their mandates in their ability to switch the currency of their portfolios. For example, banks are encouraged to hold their high-quality liquid assets in the currency of the potential outflows that it supports. And liability driven investors (especially German insurance companies who have large negative duration positions) need to hold long-dated bonds for liability-hedging purposes (duration and currency mismatches incur capital charges under Solvency II ).

c) *Gilts do not look favourable on fully-hedged basis* – **Chart 7** shows that once interest rate and currency risks are hedged, gilts do not look very attractive against the US and most European sovereigns.[5] This is most true at the very short end, and in particular overnight maturity, which is explained in Annex 1. In part the attractiveness of euro yields reflects recent sell off, which has pushed up more on bund yields and other highly-rated sovereign euro area debt. We have to be careful including the cost of hedging. Bank treasuries and other short-term investors, such as hedge funds, will typically look to hedge both of these risks. But contacts say that long-term investors still focus on the absolute yield pick-up, and an underlying view on a currency, and then purchase on an unhedged basis with a view to holding for some time.

d) *Market volatility deters inflows* – contacts have noted that various 'risk events' have either delayed or deterred investors reallocating their portfolios. The uncertainty in the lead up to the UK General Election in May had encouraged investors to await the outcome before making decisions to buy gilts. More recently, contacts have highlighted Greek uncertainty and high market volatility as factors that are deterring changes in investment strategy (as opposed to Greek concerns prompting a change in strategy). In particular, Citi said to us intraday volatility is now comparable to the crisis, with intraday moves in gilt yields of up to 20bps (**Chart 8**). Contacts have suggested that ECB QE has exposed the lack of depth in fixed income markets.

[5] For more detail on the relative attractiveness of gilts on a fully-hedged basis, and an introduction to the cross currency basis, see .

**Chart 7: Yield pickup relative to gilts when hedged for interest rate and currency risk**

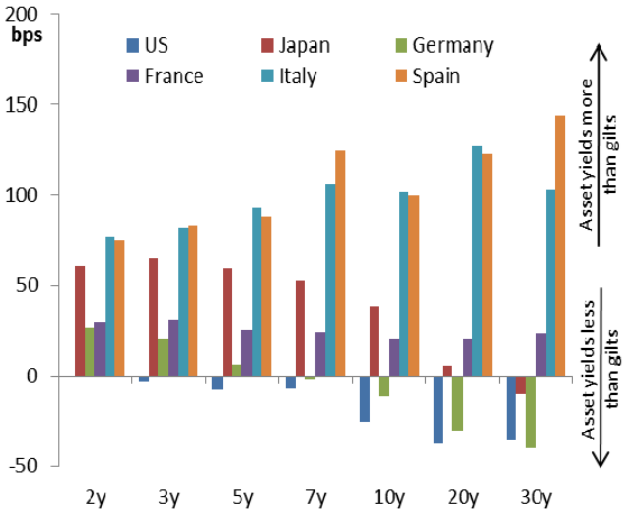
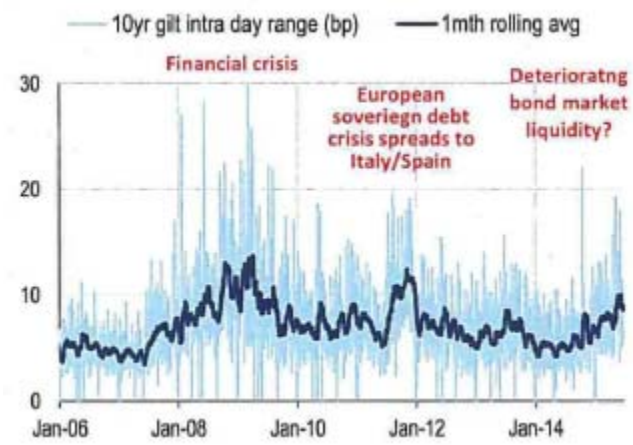



**Chart 8: 10-year gilt intraday volatility**




Source: Citi.

**F. What do we expect going forward?**

14 Contacts find it difficult to reach a view on the eventual impact of ECB QE on sterling rates. It probably starts by trying to understand the impact of ECB QE on *euro area* yields, where there is now a little more consensus on how bund yields will develop. The dispersion of economists' Consensus forecasts for 10-year bund yields ticked down in the latest survey, for instance (although it remains elevated).

15 Less uncertainty reflects a better understanding of how the ECB is conducting its purchases and greater comfort with the level of yields. But contacts also note that there remains a great deal of uncertainty over developments in Greece and the success of the policy in supporting demand in the euro area.

16 At the longer end, contacts expect that the steady flow into gilts will continue. ECB QE will further reduce the free float of euro area government debt; contacts expect that investors will be forced increasingly to reallocate their portfolios towards other sovereign securities. This will be exacerbated by negative net issuance of bunds, which is expected to continue over the summer. And net issuance of government debt in the rest of the euro area, which is also expected to fall from being slightly positive to being negative over the next few months.

17 Decision making will also reflect how attractive gilts are relative to other euro area assets, the scope for funds to move into sterling assets, and volatility. Most think that a reallocation is likely to occur only gradually over the next year as it is often a lengthy and infrequent process for many investor groups to change their investment mandates. But even a gradual reallocation would be expected to push down on sterling rates.

18 At the shorter end of the yield curve, despite the shift up in sterling yields and building expectation of the MPC raising Bank Rate next spring, there remains some concern that ECB QE will make UK monetary policy difficult. This reflects the exchange rate channel. Most expect the euro to continue to weaken as the ECB's purchases are fulfilled – putting upward pressure on sterling, and downward pressure on UK inflation and implying lower sterling rates. Taking that to its extreme, some contacts said that it would be difficult for the MPC to raise Bank Rate at all while the ECB was conducting asset purchases because of the likely appreciation of sterling. Several have noted that the current sterling ERI (around 92.5) is significantly above the May *Inflation Report's* projection for the average ERI over the next three years (around 90).

Monetary Analysis and Markets Directorates
MFAD and SMD
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## Annex: The impact of ECB QE on SONIA

ECB QE appears to have also affected sterling unsecured overnight rates. In early 2015, as the market started to price in ECB QE with more conviction, international banks increased their borrowing in the SONIA market as it became a more attractive funding source on an FX-swap basis.

The SONIA fixing became "bi-modal", with one set of borrowers paying below the SONIA fixing (around 40-45bps) and another set paying above the SONIA fixing and above Bank Rate (48-53bps). Our MI indicates that the latter group was using the SONIA and FX forward markets to borrow cash in sterling and swap into euro, finding it cheaper than borrowing in euro outright. Some placed the cash at the ECB and made a small turn.

Although this impact was on the overnight rates, by pushing up on the SONIA fixing it appeared to put a small upward influence on short-dated SONIA swaps down the curve – to the extent that dealers believed the effect would persist.

However, since EONIA rates fell in May, the relative "arbitrage" between sterling and euro markets has largely been eliminated – dropping from 18-20bps to around 2-4bps. For more detail see