## **Developments in the Euro Area Economy**

### **Overview**

The immediate impact of the recent vote by the UK to leave the EU (Brexit) appears to have been less disruptive than many anticipated. Much of the financial market turbulence was temporary and quickly reversed. The UK economy is expected to slow down in the second half of 2016 and into 2017, although the Bank of England has already provided additional stimulus. This, and the fact that the UK accounts for less than 10 per cent of euro area exports means that the immediate spillovers to euro area have been contained. Also, the ECB's latest projections for GDP growth and inflation are little changed from June. Nonetheless, longer term uncertainty over the outcome of Brexit negotiations represents the main downside risk to euro area activity. In particular, the current climate of uncertainty might lead to a postponement of investment by businesses.

Aside from the impact of Brexit, euro area growth continues to be supported by a combination of highly accommodative monetary policy, more supportive fiscal policy, and low energy prices. The latest sentiment and survey data for the third quarter suggest that activity has stabilised after a loss of momentum in the second quarter which coincided with a decline in domestic demand. Inflation and price pressures remain weak but continue to increase, albeit gradually. However, the ability of domestic demand to continue to support the euro area's recovery will be challenged if the decline in the unemployment rate starts to taper. Furthermore, geopolitical tensions and fragilities in emerging markets could weigh on growth, even if global trade picks up. Finally, the euro area's financial system remains fragile although credit conditions appear to have eased somewhat.

## **Section 1: Growth and Inflation**

# Euro Area Growth and Inflation Developments

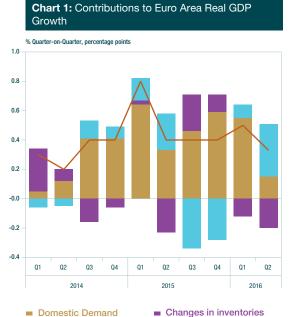
The euro area's recovery slowed during the second quarter. GDP increased by 0.3 per cent quarter-on-quarter, compared with 0.5 per cent in the first quarter, the lowest quarterly growth rate in two years (See Chart 1). A more modest pace of growth was expected after first quarter GDP growth was boosted by a number of one-off factors but the slowdown in domestic demand in the second quarter is still notable. Having driven growth throughout

much of the recovery, private consumption dampened domestic demand in the second quarter. Indeed, without an unexpectedly large increase in net exports, growth would have been even lower.

While the unemployment rate has fallen 2 percentage points since its peak in 2012, in recent months, this decline has begun to taper. Since January 2016, unemployment has declined by just 0.3 percentage points, and it has remained unchanged at 10.1 per cent since May (See Chart 2). Moreover, wage pressures remain weak. Since the first quarter of 2015, annualised growth in negotiated

Table 1:	Latest Forecasts	of euro are	ea Real GDP G	Growth and	Inflation		
•		2	016	2	017	2	018
	Date	GDP	Inflation	GDP	Inflation	GDP	Inflation
ECB	Sept 2016	1.7%	0.2%	1.6%	1.6%	1.6%	1.6%
EU	May 2016	1.6%	0.2%	1.8%	1.4%		
IMF	July 2016	1.6%		1.4%			
OECD	Sept 2016	1.5%		1.4%			

Sources: European Commission Spring Forecast 2016; ECB September 2016 Macroeconomic Projection Exercises; IMF World Economic Outlook Interim update, July 2016; OECD Interim Economic Outlook, September 2016.



#### Source: Eurostat.

Net Exports of Goods and Services

Note: Domestic Demand is calculated as the sum of the contribution of (i) Final Consumption Expenditure of General Government (ii) Households and Non Profit Institutions of Serving Households Final Consumption Expenditure and (iii) Gross Fixed Capital Formation.

- GDP Growth

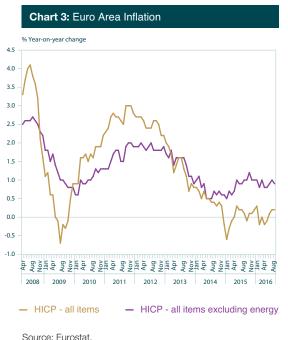
wages and in compensation per employee have averaged 1.5 per cent and 1.2 per cent, respectively. This implies that there continues to be slack in the labour market, even as the decline in the unemployment rate has slowed.

The slowdown in domestic demand growth and the low level of wage growth have contributed to ongoing muted consumer price pressures. According to Eurostat, HICP inflation was unchanged in August at 0.2 per

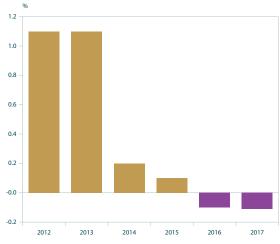


Source: Eurostat.

cent. Energy prices have generally acted as a drag on inflation in recent months, however HICP inflation excluding energy slowed to 0.9 per cent in August from 1.0 per cent in July (See Chart 3). Furthermore, producer price inflation slowed from 0.8 per cent monthon-month in June to 0.1 per cent in July, suggesting that any pass-through to consumer prices from this channel is likely to be limited.



**Chart 4:** Change in General Government Cyclically Adjusted Balance, as a Percentage of Potential GDP



 Change in General Government Cyclically Adjusted Balance as a Percentage of Potential GDP

Source: European Commission, AMECO.

### **Outlook for Growth and Inflation**

Despite the slowdown in GDP growth in the second quarter, the latest sentiment data suggest that euro area activity stabilised in the third quarter. The European Commission's Economic Sentiment Indicator decreased marginally to 103.5 in August from 104.5 in July although it remains in excess of its long run average of 100. At 52.9, the August composite PMI continued to indicate an expansion (denoted by a value in excess of 50), although it declined from 53.2 in July. Retail sales grew by 1.1 per cent in July, their strongest increase in almost two years.

In addition, the European Commission anticipates that the euro area's fiscal stance will become mildly expansionary during 2016 and will continue to be expansionary in 2017 (See Chart 4). This change is occurring because the requirement for fiscal tightening across most of the euro area has lessened, as countries

have exited Excessive Deficit Procedures (EDP). At present, only four countries – Greece, France, Spain, and Portugal – are still in EDP programmes<sup>1</sup>.

Against this background, the ECB's macroeconomic projections for September were broadly unchanged from June. GDP is still expected to grow by 1.7 per cent in 2016 before slowing marginally in 2017 to 1.6 per cent and continuing at this rate during 2018 (See Table 1). Underlying this forecast, the ECB anticipates that private consumption will pickup after its poor performance in the second quarter, and stay resilient thereafter while the ongoing recovery in investment is expected to continue. In contrast, the forecast for euro area foreign demand has been revised down, largely driven by the weaker UK outlook. Turning to unemployment, both the European Commission and the ECB expect it to stabilise at just below 10 per cent in 2017.

1 On 12 July, the European Council ruled that Spain and Portugal had failed to take effective action in response to the 2013 recommendations on the correction of their excessive deficits. Nonetheless, in August the council recommended that the fine both countries were to be liable for be cancelled and new fiscal adjustment paths were established for both countries. In Spain, the general government balance is now required to reach 2.2% of GDP by 2018. In Portugal, additional fiscal tightening of 0.25% of GDP this year is now considered sufficient to achieve a reduction in the headline deficit to 2.5% of GDP in 2016.





Source: CBI staff calculations, data extracted from Bloomberg.

Note: The chart displays 5 days moving averages and the data extends up to the 9th September. "1 year, 1 year" refers to swap rates with a maturity of 1 year beginning in 1 year; "1 years, 9 years" refers to swap rates with a maturity of 1 year beginning in 9 years; and "5 years, 5 years" refers to swap rates with a maturity of 5 years beginning in 5 years.

In terms of inflation, the ECB still expects HICP to average 0.2 per cent in 2016 before rising to 1.2 per cent and 1.6 per cent in 2017 and 2018 respectively. The fading of the strong downward drag from past declines in oil prices will boost headline inflation in the beginning of 2017. Elsewhere, import price inflation is expected to turn positive in 2017 and wage growth is expected to pick up as labour market slack decreases.

The ECB's Survey of Professional Forecasters (SPF) published in July shows that inflation expectations for 2016 were unchanged at 0.3 per cent but were revised down marginally for both 2017 and 2018 to 1.2 per cent and 1.5 per cent respectively. Longer term inflation expectations (up to 2021) were unchanged at 1.8 per cent. Market-based expectations of short-term inflation (one-year in one-year ahead inflation swap rate) declined immediately

after the Brexit vote, but have since recovered. The one-year in nine-year forward inflation swap rate - the markets' expected inflation rate (plus risk premia) between 2025 and 2026 - declined further from 1.6% at the end of June to 1.54% in September. At the same time, the five-year in five-year forward inflation swap rate - the markets' expected inflation rate (plus risk premia) between 2021 and 2016 - was unchanged at 1.30% (See Chart 5).

#### Risks to the Outlook for the Euro Area

The main risks to the euro area's outlook include uncertainty as to when Article 50 – which sets out how an EU country might voluntarily leave the union – will be invoked by the British government, the arrangements that might be reached between the EU and the UK, and the fragile state of the euro area's financial system.

Although the Bank of England has moved to stabilise the UK economy in response to some of the short-term uncertainty, the new political and economic arrangements between the UK and EU will not be known for a number of years, leading to ongoing uncertainty in the euro area. One measure of uncertainty, the VIX index of equity market volatility, increased around the time of the referendum, although it remained well below the level reached in the immediate aftermath of the financial and sovereign debt crises. In contrast, the Index of Economic Policy Uncertainty, which captures broader economic uncertainty, has surpassed the levels reached at that time.

Despite no significant downward revision to euro area growth forecasts so far, were Brexit to prove more disruptive than currently anticipated, this could prove problematic for the outlook. For instance, it is anticipated that a slowdown in the UK economy in the second half of 2016 and 2017 will be led by a weakening in investment as businesses delay their expansion plans. The immediate effect of a slowdown in investment is likely to be a reduction in demand for intermediate goods and lower levels of job creation. Even

though the UK accounts for just 10 per cent of euro area exports, any further disruption to investment decisions will tend to act as a drag on euro area growth.

In this context, some sectors in the UK have been affected more than others. So far, the impact has fallen more heavily on the property, retail and construction sectors. However, there could be greater spillovers to the euro area were the effect to spread beyond these sectors, to the wider economy. In this regard, the financial sector is of particular interest. The financial linkages between the euro area and UK economies are strong, in part reflecting the importance of the City of London to financial services across the euro area. Any restriction on capital and financial flows between both economies could slow the euro area's recovery.

All risks related to Brexit are likely to play out gradually and may not materialise for a number of years. In addition, clear progress in any future negotiations could be followed by a rebound in UK investment reversing some of the drag in the euro area.

The impact of Brexit is not the only external risk weighing on the euro area's recovery. Elsewhere, a faster than expected pace of policy normalisation in the US<sup>2</sup>; a renewed slowdown in China as it attempts to rebalance activity away from investment; and a deterioration in the outlook for emerging markets; particularly Russia, would also weigh on euro area growth. Furthermore, ongoing geopolitical tensions that could prove disruptive to global oil supplies would also hamper the euro area's recovery.

Domestically, growth is expected to occur largely through improvements in domestic demand. While a number of factors feed into domestic demand, the tapering in the unemployment rate could delay the euro area's recovery. Even though the supportive stance

of fiscal policy during 2017 is likely to impart some boost to domestic demand, government indebtedness across the euro area economies remains high. Consequently, the scope for any fiscal stimulus is limited.

The publication of the EBA stress test results in July indicated fragility in banks' balance sheets and confirmed that the euro area's banking system continues to be characterised by low profitability and a high level of non-performing loans (NPLs). Combined with efforts to raise capital due to regulatory changes (see Box A for a discussion of one aspect of regulatory change), these high levels of NPLs are likely to impede lending to the real economy.

At the same time, the accommodative stance of monetary policy aims to counteract this effect and ensure a flow of credit. Indeed, recent data suggest that credit conditions have improved for enterprises and households. The responses to the July Bank Lending Survey indicated an easing of credit standards on new loans to enterprises and households during the second quarter of 2016 (See Chart 6) and this easing in credit standards was forecast to continue into the third quarter. At the same time, loan growth to enterprises and households continues to increase. Furthermore, the responses to the latest ECB Survey on Access to Finance of Enterprises (SAFE) shows that 'access to finance' is no longer the main concern for firms and ranks behind (i) finding customers (ii) availability of skilled labour (iii) costs of production and labour (iv) competitive pressures and (v) regulation. In addition, recent research from the Central Bank of Ireland has documented how small and medium enterprises (SME) are increasingly substituting bank borrowings with retained earnings as a source of finance.3 Overall, it appears that access to credit is now less constrained and that consumer demand is now the primary concern for businesses.

<sup>2</sup> If the Federal Reserve tightened policy faster than expected in response to a much more favourable outlook for the US, this risk would be somewhat mitigated.

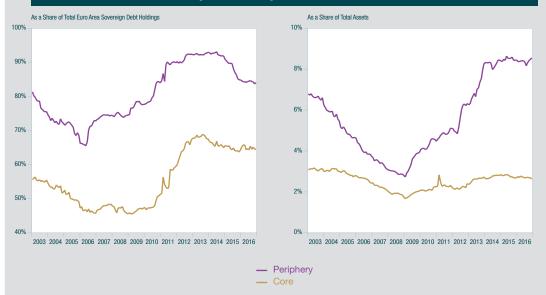
<sup>3</sup> Carroll, James; Paul Mooney and Conor O'Toole (2016): Irish SME Investment in Economic Recovery. Central Bank of Ireland, Quarterly Bulletin 2, 2016.

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Sovereign debt portfolios of euro area banks became increasingly 'home biased' during the crisis. From October 2008 to December 2013, the domestic share of bank holdings of euro area government bonds rose from 46 to 67 percent in core countries and from 75 to 93 percent in periphery countries.<sup>5</sup> This was coupled with domestic sovereign debt increasing from 3 to 8 percent as proportion of total assets held by periphery banks (Chart 1).<sup>6</sup>

The overall effect was to amplify a 'negative feedback loop' in a number of countries, whereby the health of the sovereign and the banking system became intertwined. As a result, policymakers are currently examining reforms to the banking regulation for sovereign exposures. While these measures are aimed at ensuring the resilience of the banking sector, they will undoubtedly have implications for the transmission of monetary policy. This box first briefly discusses these reforms and then turns to their potential implications for the transmission of monetary policy to bank lending in the euro area.

### Box A Chart 1: Domestic Sovereign Debt Holdings of Euro Area Banks



Source: ECB Statistical Data Warehouse.

Note: The last observation corresponds to April 2016.

### The current regulatory framework and the proposed reforms

Basel rules for financial regulation require banks both to have a capital base commensurate with the riskiness of their assets and to limit their exposure to a single borrower ('large exposure limits'). However, European regulation de facto envisages preferential conditions for euro area sovereign bond exposures,<sup>7</sup> for which banks can apply a zero risk weight regardless

- 4 Monetary Policy Division.
- 5 Greece, Ireland, Italy, Portugal and Spain are referred to as 'periphery' countries, while Austria, Belgium, Finland, France, Germany and Netherlands as 'core' countries.
- 6 To explain these dynamics, the economic literature has proposed several hypotheses, including: the use of 'moral suasion' by governments encouraging domestic banks to support public issuance when demand is low (see e.g. Uhlig 2013); a 'carry-trade' strategy followed by undercapitalised banks purchasing distressed, high-yield public debt to bet on resurrection (Acharya and Steffen 2015).
- 7 See Directive 2013/36/EU (CRD IV) and Regulation 2013/575/EU (CRR). Such preferential treatment is explained, for instance, by the key role that sovereign debt, long regarded as a "safe asset", has for the functioning of financial market and for central bank liquidity operations. For the debate surrounding the shortage of safe assets for bank operations see e.g. Brunnermeier et al. (2011).

By Giuseppe Corbisiero and Donata Faccia

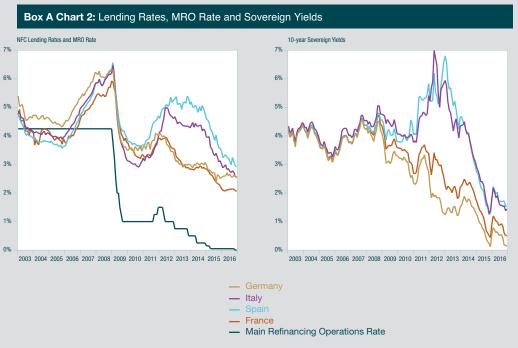
of their risk profile; sovereign holdings are also exempted from the large exposure limit. Regulatory reforms to this framework are being discussed,<sup>8</sup> including:

- 1) A non-zero weight risk regime requiring banks to hold a capital buffer against their exposure to euro area government bonds commensurate to their risk profile;
- 2) The introduction of a large exposure limit for euro area sovereign holdings.9

Other proposed measures<sup>10</sup> include (i) performing stress tests aimed at assessing the risks deriving from sovereign distress, with further EU-wide guidance to the diversification of sovereign exposures, and (ii) enhancing banks' disclosure requirements on sovereign holdings to increase market discipline on banks.

## Implications for the monetary policy transmission mechanism

During the crisis, despite significant loosening in the monetary policy stance, lending rates in periphery countries remained high and reflected developments in domestic sovereign yields more than changes in the ECB policy rate (Chart 2). As such, monetary policy could not operate as effectively as in normal times, and its transmission became least effective in countries which needed it most. In particular, excessive domestic sovereign holdings might have acted as an amplification mechanism in the transmission of sovereign stress to worsened credit conditions. Altavilla et al. (2016) show that periphery banks that were more exposed to the domestic sovereign experienced larger increases in solvency risk, sharper reductions in loans and more pronounced rises in lending rates.



Source: ECB Statistical Data Warehouse.

Note: Lending Rates: Loans to non-financial corporations up to €1 million, new business, maturity weighted. MRO Rate: ECB Main refinancing operations, fixed rate tenders. Sovereign Yields: 10-year government bond yields. The last observation in the above charts corresponds to April 2016.

- 8 See e.g. ECB (2016), ESRB (2015), and Juncker et al. (2015).
- 9 For private borrowers, the current regulation limits the bank's exposure to a single borrower within 25 percent of Tier-1 capital.
- 10 These options will not be explicitly considered hereinafter.

By Giuseppe Corbisiero and Donata Faccia

It has been accordingly argued that ending the preferential treatment for sovereigns would make banking more resilient to sovereign stress. <sup>11</sup> Indeed, if the reforms encouraged banks to increase sovereign portfolio differentiation, this would reduce the extent to which a negative feedback loop could arise between the sovereign and its domestic banking sector. From a monetary policy perspective, this might result in bank lending rates more closely reflecting the MRO rate and thus in a smoother transmission of monetary policy.

On the other hand, other channels of transmission of sovereign stress would still be operating. First, if markets generally believe that there is an implicit sovereign back-stop to the banking system, 12 and indeed there is an explicit one for deposit insurance, then sovereign stress will still be transmitted through bank funding costs. Furthermore, sovereign stress can have implications for the domestic economic outlook and thus the health of domestic banks' loan portfolios. 13

There are also short-run implications of introducing the proposed measures. Estimates¹⁴ show that the introduction of a non-zero risk weight regime would have caused a capital shortfall of €36.2 billion at end-2013, assuming unchanged exposures. Approximately 70 percent of the necessary additional capital should have been raised by banks in the periphery (Table 1). On the other hand, it is estimated that if a limit of 25 percent of Tier-1 capital was imposed, excess exposures would have amounted to €1,194 billion at end-2013. A less restrictive 50 percent limit would have still implied a selling of €857 billion of sovereign bonds overall.¹⁵

Box A Table 1: Proposed r	eforms and their quant	ity implications	
Reform	Implications	Euro area	Periphery
Non-zero risk weight regime	Bank capital shortfall	approx. €36bln	approx. €25bln
Large exposure limit	Excessive exposures	approx. €1194bln	approx. €500bln

Source: GCEE (2015) estimates based on the 2014 EBA stress test.

Forcing banks to raise additional capital would likely increase their financing costs, possibly leading to a reduction in lending. Furthermore, selling off such large quantities of periphery sovereign bonds – unless accompanied by a sufficient increase in demand from core countries, where banks would also need to partially replace domestic exposures – would likely lower their price. This could force additional losses on periphery banks and potentially trigger a new episode of sovereign stress. In this case, as the proposed reforms by themselves are unlikely to result in a full decoupling between sovereign risk and domestic banking, upward pressures on bank financing costs would likely follow, undermining the pass-through of monetary policy and worsening credit conditions.

- 11 E.g. Korte and Steffen (2014), Acharya and Steffen (2015), Altavilla et al. (2016), Andritzky et al. (2016).
- 12 Although this is limited by the Bank Recovery and Resolution Directive, which applies in the EU Member States since January 2015.
- 13 In addition, related to the 'moral suasion' hypothesis, it cannot be excluded that a regulation preventing banks to support domestic public issuance in times of sovereign stress could increase market expectations of sovereign default.
- 14 Estimates by the German Council of Economic Experts (see GCEE 2015) based on the 2014 European Banking Authority (EBA) stress test. As EBA stress test involved 77 percent of total euro-12 bank assets, the volumes in Table 1 constitute lower-bounds. Estimates are substantially unchanged using data from the 2015 EBA transparency exercise (see Andritzky et al. 2016).
- 15 More recent data would be unlikely to produce dramatically different estimates, given that domestic government bond holdings of euro area banks are currently larger on aggregate than in December 2013 (see 'Balance Sheet Items,' SDW; this despite the fact that the trend has slightly reversed most recently, also owing to the launch of the ECB Public Sector Purchase Programme).

By Giuseppe Corbisiero and Donata Faccia

#### **Conclusions**

A revision to the banking regulatory framework is proposed to break the bank-sovereign loop. It is aimed at making banking more resilient to sovereign stress; as such, the revision could make the transmission of monetary policy smoother in the periphery countries, where it was less effective during the sovereign crisis.

Although the proposed reforms have theoretical appeal, they are unlikely to result in a full decoupling between sovereign risk and domestic banking; moreover they have short-term implementation issues. The risks highlighted are particularly pronounced in the current conjuncture, but concerns might remain valid even for less turbulent times.

Achieving sound public finances throughout the euro area, as well as a financial system more integrated and resilient to shocks, might be necessary to fully prevent such risks from emerging in the transition to a new regime.

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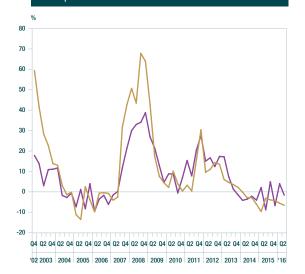
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## Monetary Policy Developments

In response to the anticipated slowdown in the UK, which appears to be largely due to the Brexit decision, the Bank of England (BoE) introduced a package of measures in August. These measures included a reduction in the bank rate to 0.25 per cent, a new 'Term Funding Scheme' to provide banks with

£100bn of external reserves, and £70 billion of bond purchases. The purchase of bonds has proven to be a challenge to the BoE so far and this may be due to the continued structural demand for high-yielding bonds from pension and insurance funds. Nonetheless, this latest package of measures represents a considerable easing in policy.

Chart 6: Net Percentage of Banks Reporting a Tightening of Credit Standards on Loans to Enterprises and Households



Enterprises

- Households: House Purchases

Source: European Central Bank, Bank Lending Survey.

Note: The series in the above chart is based on the repsonses to the euro area Bank Lending Survey and is calculated using the percentage of banks reporting a tightening of credit standards on loans to enterprises (overall) as well as loans to households (house purchases) less the percentage of banks reporting an easing of credit standards on loans to enterprises (overall) as well as loans to households (house purchases).

In its two rate-setting meetings since the Brexit referendum result, the ECB left its asset purchase programme of €80bn per month unchanged and reiterated that policy rates are expected to remain at current or lower levels long after the asset purchase programme has concluded. The account of the July monetary policy meeting (See Box B for a discussion of central bank minutes) notes that the initial purchases under the corporate sector purchase programme had proceeded smoothly, notwithstanding some reports of market scarcity. At the press conference following the September meeting, President Draghi noted that the Governing Council had tasked the relevant committees with evaluating the options to ensure a smooth implementation of the asset purchase programme.

Finally, the Federal Reserve's decision making body on interest rates - the Federal Open Market Committee (FOMC) - left their main policy rate unchanged during July. The minutes from the same meeting, alongside more recent comments by Fed Chair Yellen, have led markets to raise the probability of an increase in the Federal Funds rate later this year. In particular, the FOMC pointed to the strengthening of labour markets across the US, although they also noted the uncertainty associated with Brexit and the external vulnerabilities in some emerging market economies. Overall, most FOMC members indicate that gradual adjustments in the stance of monetary policy are likely to be appropriate.

## Box B: A Comparative Study of the ECB's accounts of monetary policy meetings and Central **Bank Minutes**

By Barra McCarthy and Rebecca Stuart

At the beginning of 2015 the Governing Council of the European Central Bank (ECB) began publishing accounts of monetary policy-setting meetings. 16 To understand how the ECB's accounts compare to the minutes of other central banks, this box presents a comparative study of the ECB's accounts and the minutes of other central banks.

Before proceeding, it is worthwhile to briefly review the reasoning and research surrounding the publication of such material.

The publication of minutes by a central bank fits within the strategy of so called 'open mouth operations', or the use of communication to influence the movement of financial markets and make central banks' monetary policy decisions more predictable, thus helping central banks achieve their objectives (Blinder et al., 2008).

The literature generally supports the view that central bank minutes contain information valuable to market participants. Minutes have been found useful in predicting movements in treasury yields (Boukas and Rosenbourg, 2006), asset price volatility (Rosa, 2013), interest rate futures (Chague et al., 2015; Jung and El-Shagi, 2015) and future monetary policy decisions (Apel and Blix Grimaldi., 2012).

16 These are referred to as 'accounts' rather than 'minutes' since full minutes are published with a 30 year lag.

## **Box B:** A Comparative Study of the ECB's accounts of monetary policy meetings and Central Bank Minutes

By Barra McCarthy and Rebecca Stuart

Turning to the comparison of minutes, our sample contains 9 national central banks<sup>17</sup> and the ECB, and collects their published minutes over the period 01.01.2015-26.08.2016. We compare across the categories of length, timeliness, attribution and dissent.<sup>18</sup> Due to the small sample size, conclusions made about the ECB's accounts relative to the sample average of minutes should be taken as provisional rather than final. The results are presented in Table 1.

Generally, one would expect the relationship between minute length and the quantity of useful information contained to be positive, though it may be subject to diminishing marginal returns. The average length of the ECB's accounts is 7,279 words. <sup>19</sup> This exceeds the sample average by approximately some 2,400 words, or nearly 50%. Of the other central banks in the sample, six publish minutes that are on average shorter than the ECB's, and three publish minutes that are longer: the Bank of Japan (8036 words), the Federal Reserve (8425 words), and the Sveriges Riksbank<sup>20</sup> (9823 words).

Policy discussion may be the most valuable part of minutes or accounts, as it contains information that was often not known to the public prior to publication. In the ECB's accounts, policy discussion has its own section, meaning they follow the same convention for structure that the majority of other central banks do in their minutes.<sup>21</sup> The percentage of the total text focusing on policy discussion is similar to the sample average (ECB: 24%; sample average 23%). However, in absolute terms the ECB's section on policy discussion is the longest in the sample.

The period between the conclusion of a monetary policy meeting and publication influences whether information contained in the minutes or accounts remains relevant to the market. There are two metrics by which the timeliness of minute publication can be judged: the delay between meeting and publication and whether the minutes are published before the next meeting.

Regarding the publication delay, at a 31 day lag on average, the ECB's publication delay is exceeded by only the Bank of Japan (36 days) and is above the sample average of 18 days. Amongst banks with the same number of policy meetings during the sample period, who would have had less pressure to publish minutes as quickly as banks with more frequent policy meetings, it remains above the average of 19 days.

However, the ECB does publish its accounts in advance of its next policy meeting. This convention is followed by all other central banks in the sample, with the exception of Japan. This ensures that information relevant to predicting future policy decisions may be used by the market.

When considering attribution in minutes, it is important to remember that, unlike other central banks, the ECB is the central bank of a currency union of 19 nations. As Gersbach and Hahn (2013) note, attributing positions to individuals in such an arrangement would likely result in greater pressure being exerted on central bank governors to adopt a more nationalistic view, whereas in the euro area monetary policy should be set for the currency union as a whole.

- 17 Kedan and Stuart (2014) show that just 24 central banks published minutes in English or Spanish in 2014. The sub-sample here includes those banks which publish minutes in English, and which are located in developed economies since these are likely to be the closest comparators. As such the sample consists of the Bank of England, Federal Reserve, Bank of Japan, Reserve Bank of Australia, Sveriges Riksbank, Central Bank of Iceland, Hungarian National Bank, Narodowy Bank Polski and the Czech National Bank.
- 18 The same categories are used in Kedan and Stuart (2014).
- 19 Extraneous material, such as lists of attendees, executive summaries and appendices, was excluded from word counts.
- 20 One anomaly in the sample was the Riksbank publishing of minutes for its extraordinary meetings in January 2016. These minutes were devoid of any actual information aside from the headings and lists of members who attended. As these outliers were the result of special circumstances, and not standard communication, they have not been included in the calculation of any figures mentioned below.
- 21 Of the ten only Hungary, the Czech Republic, Sweden (as of May 2016) and Poland do not.

## **Box B:** A Comparative Study of the ECB's accounts of monetary policy meetings and Central Bank Minutes

By Barra McCarthy and Rebecca Stuart

Thus, unsurprisingly, attribution of comments and views do not appear in the accounts of the ECB. Instead the ECB presents different positions but does not attribute them, in a similar manner to 7 other banks in the sample.<sup>22</sup>

Similarly, the ECB does not attribute votes to different participants in monetary policy meetings. Moreover, it omits the number of participants who voted for or against a proposal, rather using qualitative descriptions of how the motion was passed (e.g. unanimously, with a majority). This makes it unique among the sample; the majority of countries in the sample attribute votes to participants in policy meetings.<sup>23</sup>

This practice could also be in part due to the fact that the ECB aims to reach decisions on monetary policy by consensus<sup>24</sup> which would result in the council not needing to take a vote<sup>25</sup>. Nonetheless, there is legal provision for the Governing Council to vote on decisions. However, we do not know how often votes occur. If it is infrequently then, rather than the voting record being omitted, it may simply not exist for a specific meeting.

In conclusion, the ECB's accounts have above average length, contain much detail on policy discussion and are published before the next monetary policy meeting, although the publication delay is relatively long. The main difference between the ECB's 'accounts' and the minutes of other central banks is the omission of a record of voting behaviour, which can be attributed to some combination of the ECB's position as the central bank of a currency union and its aim to reach decisions by consensus.

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- 22 Only two central banks deviate from this policy in minute writing: Australia, which provides a generic commentary and Sweden, which attributes comments and positions to individuals.
- 23 Though not amongst all central banks, as this form of minute writing is also practiced by Guatemala and Colombia (Kedan and Stuart, 2014).
- 24 For further discussion regarding this possibility see Apel, et al., (2015).
- 25 Before September 2012 the ECB maintained that all decisions were reached by consensus (Heyo and Meon, 2013).

Box B: A Comparative Study of the ECB's accounts of monetary policy meetings and Central Bank Minutes

By Barra McCarthy and Rebecca Stuart

Categories	Euro Area	United Kingdom	United States	Japan	Sweden	Iceland	Australia	Hungary	Czech Republic	Poland	Sample Average
Length (average over sample)											
Total pages (excluding cover/end/summary)	15	10	12	21	21	7	9	ო	2	4	10
Total Word Count	7279	4808	8425	8036	9823	3439	2910	1159	1305	1954	4914
Separate section on policy discussion?	Yes	Yes	Yes	Yes	No	Yes	Yes	N	o N	N O	n/a
Policy discussion section word count	1750	1414	1680	1500	n/a	1051	532	n/a	n/a	n/a	1321
% minutes focused on discussion	24	29	20	19	n/a	31	18	n/a	n/a	n/a	23
Timelines (average over sample)											
Publication Delay	31	2	21	36	15	15	41	15	∞	16	9
Published before next meeting?	Yes, always	Yes, always	Yes, always	Yes, always	Yes, except for one occasion	Yes, always	Yes, always	Yes, always	Yes, always	Yes, always	n/a
Discussion											n/a
Names to comments?	×	×	×	×	>	×	×	×	×	×	n/a
Different positions but anonymous?	>	>	>	>	×	>	×	>	>	>	n/a
Generic commentary no specific "views"	×	×	×	×	×	×	>	×	×	×	n/a
Votes											n/a
Quantitative with names?	×	>	>	>	>	×	×	>	>	×	n/a
Quantitive anonymous?	×	×	×	×	×	>	×	×	×	×	n/a
Qualitative (e.g. majority, unanimous, etc.)?	>	×	×	×	×	×	×	×	×	×	n/a
Dissent											n/a
Explanation (explicit)?	×	>	>	>	>	>	×	>	×	×	n/a
Minutes in sample (#)	13	20	13	18	0	12	18	18	13	18	15