Navigating Uncharted Waters: Analysis of Monetary Operations & Financial Market Developments

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Abstract

In 2014, monetary policy announcements by global central banks continued to be a driver of financial markets. Developments in the European periphery and across emerging markets also continued to be a focus for market participants but to a lesser extent than in previous years. In this article, we review 2014 and early 2015, examining the evolution of Eurosystem liquidity provision and the subsequent impact on excess liquidity. The article also analyses the main changes to the Eurosystem’s operational framework over this period, including the introduction of the Targeted Longer Term Refinancing Operations (TLTROs), the Asset Backed Securities Purchase Programme (ABSPP), the Covered Bond Purchase Programme (CBPP3), and the Public Sector Purchase Programme (PSPP). The article reports on the continued improvements in money markets over the review period. Finally, we examine the on-going improvement in the Irish sovereign’s access to debt markets before briefly analysing changes in TARGET2 balances over 2014.

1 The authors would like to acknowledge, with thanks, the input of John Rowe and the helpful comments and suggestions of Thomas Brophy, William Molloy, and other colleagues in the Financial Markets Division of the Central Bank of Ireland.

Over the course of 2014, global financial markets were heavily influenced by the accommodative monetary policy environment created by many of the major global central banks, which was a driver of risk appetite. The accommodative environment saw many asset classes record highs over the year, amid generally low volatility, although some volatility measures did spike on a number of occasions, largely reflecting periods of heightened geopolitical risk. In Europe, market sentiment towards peripheral countries in the euro area continued to improve during the year, with significant tightening in spreads relative to the core countries, while euro area banks’ reliance on Eurosystem liquidity provision eased. As the year progressed, however, a decrease in euro area Consumer Price Index (CPI) inflation readings increased fears of a possible move into deflationary territory, which, allied with low growth readings, increased expectations that the ECB would take further policy action.

The decision by the Federal Reserve (the Fed) to begin tapering its asset purchase programme from February 2014 was also a key driver of financial markets, although fears that emerging markets would experience a large selloff were not generally realised. The Fed continued to reduce its asset purchases by $10 billion-$15 billion per month until purchases were halted in late October 2014, after accumulating a total of $4.5 trillion in assets. At its December meeting, the Federal Open Markets Committee (FOMC) pledged to be ‘patient’ in raising interest rates in the U.S., dropping its previous promise to keep rates at their current level for a ‘considerable time’. The Bank of Japan (BoJ) announced the expansion of its asset purchase programme in October, committing to purchases of ¥80 trillion of bonds per year, up from ¥60-¥70 trillion announced at the start of the programme in April 2013.

Looking to specific asset classes, the on-going improvements in euro area bond markets continued from 2013, with European peripheral countries becoming more resilient to shocks and less prone to contagion effects. Peripheral spreads tightened to Germany over the year, continuing a theme established in mid-2012 following ECB President Draghi’s pledge to do “whatever it takes” to preserve the euro. Equity markets were generally stronger in 2014, with European and Asian bourses benefiting from continued policy accommodation from central banks, while U.S. stocks were supported by strong data releases and positive earnings surprises. Commodity prices were affected by movements in the dollar over the year, in addition to geopolitical issues in a number of areas, which had an effect on both supply and demand. Oil prices fell in late 2014 and early 2015, despite geopolitical tensions, with concerns of oversupply weighing on prices. Gold prices were little changed over the year, although some fluctuations occurred, generally during times of increased risk aversion.

Focusing on money markets, movements in the euro area were driven by policy rate cuts by the ECB, and developments in liquidity provision during the year. Unsecured rates in the euro area increased early in 2014, with EONIA reaching its highest fixing (0.359%) since March 2012 (excluding month-end fixings), as excess liquidity fell below €125 billion in mid-January, its lowest level in over two years. The declining level of excess liquidity was predominantly driven by lower participation by banks in Eurosystem operations following the year-end period and continued repayments of 3-year Longer Term Refinancing Operations (LTROs). Over the first half of the year, the EONIA fixing generally remained below the Main Refinancing Operation (MRO) rate (0.25%), but edged closer on average to that rate as the year progressed. However, following the announcement of a series of accommodative ECB policy measures in June 2014, including reductions on all the key policy rates and the introduction of TLTROs, EONIA fixings began to move towards zero. They eventually moved below this rate following further policy easing at the September ECB Governing
Council meeting, where they have largely remained since. Secured money market rates have largely mirrored the movements in the unsecured market, with General Collateral or GC (a range of assets which are accepted widely within the repo market as collateral) pooling rates pricing in negative territory for much of the second half of 2014.

Despite these accommodative measures from the ECB, monthly CPI inflation readings within the euro area remained low in the latter half of the year and this began to impact upon longer term inflation expectations. Medium term inflation expectations (as reflected by the 5year/5year forward breakeven inflation rate) fell below 2%, eventually reaching a low of 1.48% in mid-January 2015. ECB President Draghi subsequently stated that the Governing Council would if necessary, and within its mandate, use further asset purchase programmes to keep medium term expectations of inflation from declining further. The ECB cut each of its key policy rates at the following Council meeting in September, and announced the ABS and CBPP3 purchase programmes at the same meeting. Euro area bond yields fell significantly following these measures, although medium term inflation expectations also continued to decline. In January 2015, the ECB launched the Public Sector Purchase Programme (PSPP) as part of the Expanded Asset Purchase Programme (EAPP), which also encompassed the existing purchase programmes (ABS and CBPP3). Under this expanded programme, the combined monthly purchases of public and private sector securities will amount to €60 billion per month, and will be carried out until end-September 2016, or until a sustained upward adjustment is seen in the path of inflation which is consistent with the aim of achieving inflation rates below, but close to, 2% over the medium term within the euro area.

A number of other global central banks eased policy in early 2015, with the Riksbank cutting its repo rate into negative territory for the first time, while the Danish Central Bank cut rates in four successive weeks over January and February. The Swiss National Bank (SNB) decided to remove its exchange rate cap to the euro on 15 January, leading to a sharp rise in the value of the Swiss franc. However, the euro has appreciated in recent weeks rising from a low of CHF0.99 on 15 January to CHF1.06 on 13 February 2015. This move was accompanied by a cut in the interest rate on certain sight deposit account balances to -0.75%.

Turning to domestic matters, market sentiment towards Ireland continued to improve during 2014, with both the sovereign and domestic banks able to access debt markets throughout the year as yields declined, underpinned by strong economic data and credit rating upgrades. Domestic bank credit ratings also benefitted from the improved sentiment towards the sovereign, with Bank of Ireland and AIB receiving deposit rating and outlook upgrades during 2014. Demand for Irish sovereign bonds was strong during the year, and in December repayments totalling €9 billion, covering repayments due to June 2019 were made. In December 2014, the NTMA announced that it would seek to repay the first tranche of Ireland’s IMF loan facility early, and in December repayments totalling €9 billion, covering repayments due to June 2019 were made. In December 2014, the NTMA announced that it would issue €12-€15 billion of long term debt in 2015, €8 billion of which has been issued to date in Q1 2015.

In Section 2 of this paper, we give an overview of the ECB’s key monetary policy decisions over 2014 and Q1 2015. Section 3 looks at overall trends in Eurosystem lending and the use of the Eurosystem’s standing facilities, while Section 4 discusses money market developments over the same period. In Section 5, we examine developments in Ireland with regard to Eurosystem liquidity provision as well as the sovereign and domestic banks’ access to debt markets. Section 6 reviews movements in TARGET2 balances over 2014, while Section 7 concludes the paper.
2. ECB’s Key Policy Decisions in 2014 & Q1 2015

Deflationary pressures, monetary policy announcements by central banks and the implementation of non-standard measures by the ECB were the major focus for market participants in 2014.

In the euro area, inflation (as defined by the headline CPI rate) fell to 0.50% year-on-year in May 2014, below the ECB target rate of below but close to 2%, driving up market participants’ expectations for further monetary easing by the ECB in mid-2014. Subsequently, the ECB introduced a series of measures over the remainder of the year in order to increase inflation and stimulate lending to the real economy. These included the introduction of negative deposit facility rates, reductions in the main refinancing interest rate, the suspension of fine-tuning liquidity absorbing operations and the introduction of TLTROs to increase lending to non-financial corporations.

In addition, the Eurosystem commenced purchases of covered bonds in October 2014 and asset backed securities in November 2014 in an effort to further enhance the functioning of the monetary policy transmission mechanism and to support the provision of credit to the economy. The CPI inflation rate declined further over the remainder of 2014 and early 2015, reaching a low of -0.60% in January 2015 amid falling oil prices, prompting the ECB to announce details of the EAPP in early 2015. See Box 1 below which summarises some of the statements and decisions made by the ECB throughout 2014 and early 2015.

Box 1: Summary of ECB Decisions

On 24 January 2014, the Governing Council, in cooperation with the Bank of England, the Bank of Japan and the Swiss National Bank, decided to gradually reduce the provision of US dollar liquidity-providing operations. The decision was made in view of the considerable improvement in US dollar funding conditions. Operations with a maturity of three months were continued until April 2014 while the Governing Council decided to continue 7-day US dollar liquidity providing operations until further notice, as announced on 17 June 2014.

On 6 February 2014, President Draghi confirmed at the press conference following the February Governing Council meeting that the accommodative stance of monetary policy would be maintained for as long as necessary and that either an unwarranted tightening of short-term money markets or a worsening of the medium term outlook for inflation could prompt the ECB to reduce interest rates further.

On 3 April 2014, President Draghi noted that the Governing Council was unanimous in its commitment to using unconventional instruments within its mandate to cope effectively with risks of a too prolonged period of low inflation.

On 5 June 2014, the Governing Council announced the following interest rate decisions: a reduction of the main refinancing rate by 10bps to 0.15%, a reduction of the marginal lending facility rate by 35bps to 0.40% and a reduction of the deposit facility rate by 10bps to -0.10%. The negative deposit facility rate applies to banks’ average holdings in excess of the minimum reserve requirements and government deposits held with the Eurosystem that exceed certain thresholds.
Box 1: Summary of ECB Decisions

The following measures were also announced on 5 June 2014:

- the suspension of the weekly fine-tuning operation which sterilised the liquidity injected under the Securities Markets Programme (SMP),
- the cessation of the Eurosystem’s refinancing operations with a maturity of one maintenance period,
- the extension of Fixed Rate Full Allotment for as long as necessary, and at least until the end of the reserve maintenance period ending in December 2016,
- the introduction of a series of TLTROs aimed at improving bank lending to the euro area non-financial private sector,
- the extension of eligibility criteria for additional assets under the additional credit claims framework until September 2018,
- the commencement of preparatory work related to outright purchases in the ABS market to enhance the functioning of the monetary policy transmission.

On 5 July 2014, the Governing Council decided on a new cycle for monetary policy meetings, commencing in January 2015, and to also extend the reserve maintenance periods from four/five weeks to six/seven weeks to match the longer time between meetings. Non-monetary policy meetings will continue to be held at least once per month. The Governing Council also announced its intention to publish accounts of its monetary policy discussions from January 2015 onwards.

On 29 July 2014, the Governing Council adopted measures relating to TLTROs, which set out the conditions for participating and other operational aspects, including the calculation of borrowing allowances and bank-specific lending benchmarks. The design of these aspects was aimed at incentivising increased lending to the real economy.

On 4 September 2014, the ECB introduced further non-standard measures designed to strengthen the impetus of the accommodative stance of policy. These measures related to the purchase of a broad portfolio of euro-denominated covered bonds issued by MFIs domiciled in the euro area under the CBPP3 and the purchase of a broad portfolio of simple and transparent asset-backed securities with underlying assets consisting of claims against the euro area non-financial sector. The ECB subsequently announced the operational details of the two programmes in October 2014. The duration of the programmes is two years and both commenced in the fourth quarter of 2014. The eligibility principles established under the Eurosystem collateral framework apply to asset purchases under the programmes.

On 22 January 2015, the ECB announced the operational details of its EAPP\(^3\), involving the large-scale purchase of government securities. The combined monthly purchases of public and private sector securities will amount to €60 billion and are intended to be carried out until at least September 2016 and in any case until the Governing Council sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term. The purchases of securities will be based on NCBs’ individual capital key. There will also be limits on holdings of individual bonds and overall issuer limit relating to bonds in the 2 to 30 year purchase window. The Governing Council also adopted measures related to the TLTROs, which included the elimination of the 10 basis point spread over the main refinancing rate for TLTROs conducted between March 2015 and June 2016.

On 4 February 2015, the Governing Council decided to lift the waiver which had permitted marketable debt instruments issued or guaranteed by Greece but did not fulfil minimum credit rating requirements to be used as collateral in Eurosystem operations. The decision was based on the fact that the Governing Council considered that it was not possible to assume a successful conclusion of the review of the Greek EU/IMF programme.

Over the course of 2014, repayments of existing Eurosystem borrowings together with accommodative ECB measures impacted on the level of excess liquidity within the system. This is further illustrated in Chart 1. Excess liquidity arises within the Eurosystem when the supply of liquidity, which is provided via the Eurosystem’s monetary policy instruments, exceeds the demand for liquidity, leading to a surplus of liquidity in the banking system. In this situation, the excess will likely end up being deposited with the Eurosystem via deposit facility usage or on the banks’ minimum reserves account.

Continuing the trend of 2013, banks continued to repay 3-year LTRO borrowings in 2014 (as illustrated in Chart 1), reflecting the lower demand by banks for precautionary liquidity buffers due to on-going deleveraging and improved access to market funding. Overall, liquidity provided through Eurosystem operations decreased by €122.6 billion over the year, from €752 billion on 31 December 2013 to €629.4 billion on 31 December 2014. Average weekly repayments in Early Repayment Operations (EROs) in 2014 amounted to €5.8 billion, compared with €5.4 billion in 2013, with the largest repayments by counterparties that had increased their market based funding. Some counterparties also switched 3-year LTRO borrowings into other Eurosystem funding such as MRO or 3-month LTRO borrowings in order to facilitate more flexible liquidity management, while others switched into the TLTRO borrowings later in the year due to the longer maturity and favourable cost of this operation. As of 6 March 2015, Eurosystem lending stood at circa €471 billion.

The on-going repayment of 3-year LTRO borrowings changed the composition of the Eurosystem’s liquidity provision over the course of the year. As of 1 January 2014, LTRO borrowings accounted for 77.5% of Eurosystem borrowings. As counterparties throughout the Eurosystem repaid 3-year LTRO borrowings through the EROs, some
switched into the TLTROs and others switched into the MRO and 3-month LTRO in advance of the maturity of 3-year LTRO borrowings. At 31 December 2014, TLTRO borrowings accounted for 36.7% of total borrowings while 3-year LTRO borrowings accounted for circa 37.5% of total borrowings. Use of the US dollar operations declined significantly over the year as funding conditions improved, declining from €259 million on 1 January 2014 to €20 million on 18 September. Since this date, there have been no bidders in weekly US dollar operations. Chart 2 illustrates the decline in the overall level of Eurosystem borrowings in recent years, largely owing to 3-year LTRO repayments, while Chart 3 illustrates the rising proportion of borrowings through the MRO in the second half of 2014 and early 2015 (currently at circa 30%).

3.1: 3-Year Longer Term Refinancing Operations (LTROs)

On 1 January 2014, there was €544.4 billion outstanding in Eurosystem 3-year LTRO borrowings and this decreased to circa €210 billion by 31 December 2014. Over the course of 2014, a total of circa €143.4 billion was repaid from the first LTRO (circa 30.7% of the total amount borrowed), while €191 billion was repaid from the second LTRO (circa 36.2% of the total amount borrowed). Overall, circa 76.6% of the total 3-year borrowings were repaid as at 31 December 2014, with both 3-year LTROs maturing in the first quarter of 2015.

The reduction in precautionary buffers and the positive reputational or signalling effects associated with reducing long-term Eurosystem borrowings were cited as reasons for early repayment of 3-year borrowings throughout 2012 and 2013. In 2014, market participants also referenced a wish to avoid the placement of liquidity buffers on deposit at negative rates as a reason for accelerating 3-year LTRO repayments.

3.2: Weekly SMP Liquidity Absorbing Operation

On 5 June, the ECB announced the suspension of the weekly SMP liquidity absorbing operation or “fine-tuning” operation, thereby increasing the level of excess liquidity in the system. This decision was taken against a background of weak credit dynamics and low inflation. This operation was originally introduced to facilitate the absorption of the additional liquidity added through the SMP. Following bond maturities and revaluations, the size of the outstanding SMP portfolio stood at €149.4 billion at year end*.
The Eurosystem was unable to absorb the intended weekly amount in 11 of the 23 weekly SMP liquidity absorbing operations which took place in 2014. The last operation took place on 10 June. The increase in the level of excess liquidity as a result of the suspension proved to be temporary, however, with excess liquidity initially increasing by €38.5 billion to €160 billion but decreasing to its previous level within 21 days amid further repayments of 3-year LTRO borrowings and an increase in liquidity draining autonomous factors\(^5\).

### 3.3 Targeted Long Term Refinancing Operations (TLTROs)

In order to ensure that improved conditions in money market funding transmits to the real economy, and to support bank lending to households (excluding loans to households for house purchase) and non-financial corporations, the ECB introduced a series of TLTROs which mature in September 2018. The operations enable counterparties to initially borrow up to 7% of the total amount of their loans to the euro area non-financial private sector (excluding loans to households for house purchase) that were outstanding as at 30 April 2014 at a cost of 0.15%. Two TLTROs were conducted in September and December with €82.6 billion allotted in the first TLTRO and €129.8 billion allotted in the second TLTRO (a total allotment of €212.4 billion). The estimated initial allowance for banks to borrow in the first two TLTROs amounted to circa €400 billion. Some counterparties in Spain and Italy capitalised on the positive reputational effects of TLTRO participation by announcing the introduction of new SME lending programmes.

In January 2015, the ECB decided to waive the 10bps spread above the MRO rate, reducing the rate on the TLTRO to 0.05% for the remaining TLTROs. However, it remains to be seen what the impact of this will be on the demand for funding and to what extent participation in the TLTROs substitutes for participation in other regular Eurosystem operations.

On a quarterly basis, from March 2015 to June 2016, all counterparties will be entitled to borrow up to three times the amount of their net lending to the euro area non-financial private sector (excluding loans to households for house purchase) over a specific period in excess of a specified benchmark. Those counterparties that have not met their benchmark for the volume of their net lending to the real economy will be required to pay back some or all of the borrowings in September 2016, while counterparties will be entitled to make voluntary early repayments starting 24 months after each operation.

### 3.4: USD funding developments

In response to stressed funding market conditions for US dollars in the euro area, the ECB reintroduced 84-day US dollar (USD) operations in September 2011, alongside the existing 7-day operations. Participation in USD operations was high in the months following its introduction and the first half of 2012, and peaked at approximately $90 billion (approx. €67 billion) in February 2012.

In the latter half of 2012 and throughout 2013, borrowing in USD operations declined in line with a reduction in US dollar funding pressures for European banks. Borrowing in USD operations stood at $259 million (approx. €190mn) by end 2013. In light of the reduced usage of this operation, the ECB announced on 24 January 2014 that the 84-day operations would cease in April 2014. This decision takes into account the fact that six major central banks (Bank of Canada, Bank of England, Bank of Japan, European Central Bank, Federal Reserve, and Swiss National Bank) announced in October 2013 that existing temporary bilateral liquidity swap arrangements were being converted to standing arrangements.

Following the cessation of the 84-day operations in April, outstanding US dollar funding declined to €300 million to €174 million in May 2014, and declined gradually to
zero in September 2014. One-week US dollar liquidity-providing operations will continue until further notice.

3.5: Fulfilment of Minimum Reserve Requirements

During 2014, the majority of counterparties maintained the practice of “frontloading” reserve balances at the beginning of each maintenance period, by initially holding reserves above the minimum requirement and then reducing the surplus towards the end of the maintenance period. Reserve requirements increased slightly over the year, from €103.2 billion at end 2013 to €106.2 billion at end 2014.

On average, reserve account balances held in 2014 were €203.8 billion, a significant decrease from 2013, which averaged €310.9 billion. Current account holdings in excess of minimum reserve requirements averaged €100.0 billion for the year, down from €220.3 billion in 2013. The decline in excess reserves reflects lower Eurosystem borrowings and reduced money market fragmentation.

3.6: Standing Facilities: Deposit Facility

Daily recourse to the overnight deposit facility declined significantly throughout the year with usage averaging €30.7 billion per day in 2014, down from a daily average of €100.2 billion in 2013, which may be attributable to the two successive reductions to the deposit facility rate to -0.10% and -0.20% in June and September combined with the less stressed conditions in markets.

3.7: Standing Facilities: Marginal Lending Facility

Use of the marginal lending facility averaged at €0.2 billion in 2014, down from €0.5 billion in 2013. The highest amount borrowed on any single day was €5.4 billion on 31 March, which may be attributable to tighter liquidity conditions over banks’ reporting periods. During the year, the marginal lending facility rate was reduced twice, from 0.75% to 0.40% on 5 June and from 0.40% to 0.30% on 4 September.

Chart 4 illustrates the deposit facility usage and the trend in declining excess liquidity since the allotment of the 3-year LTROs in December 2011 and February 2012, owing mainly to the repayment of these borrowings from early 2013.
Box 2: ECB Covered Bond and ABS Purchase Programmes

In September 2014, the ECB announced two new purchase programmes, the ABSPP and the third CBPP. The announcement noted that the two programmes will last for at least two years and are intended to enhance transmission of monetary policy, support provision of credit to the euro area economy and, as a result, provide further monetary policy accommodation. An increase in the size of the Eurosystem balance sheet would also naturally result from the programmes.

CBPP3 began on 20 October 2014, with purchases by 6 March 2015 standing at €48.7 billion, €32.2 billion (80% of the total) on the secondary market and €8.06 billion (20% of the total) on the primary market. ABSPP began on 21 November 2014, with purchases at 6 March 2015 standing at €3 billion.

In the covered bond market, spread tightening has been evident from both core and peripheral issuers, with the latter in particular benefitting, albeit with most of the effect coming following the announcement of the programmes. CBPP3 has led to increased demand for this asset class, leading to continued yield compression into 2015. ABS markets have also witnessed significant spread tightening albeit with lower volumes.

EAPP Purchase Programme

On 22 January 2015, the ECB announced the operational details of its EAPP which involves the large-scale purchase of government securities. The combined monthly purchases of public and private sector securities will amount to €60 billion and are intended to be carried out until at least September 2016 and in any case until the Governing Council sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term. The purchases of securities will be based on NCBs’ individual capital key. There will also be limits on holdings of individual bonds and overall issuer limit relating to bonds in the 2 to 30 year purchase window. As part of the EAPP, on 9 March the Eurosystem began buying sovereign bonds in addition to its existing purchase programmes in order to address the risks of a prolonged period of low inflation. Since purchases began sovereign bond yields and spreads in the euro area have tightened to record lows, with yields in some countries falling to negative levels, while the euro/dollar exchange rate has depreciated from $1.16 on 21 January to $1.05 on 13 March 2015.

4. Money Market Developments

Euro area short-term money market rates increased in the first half of 2014 before subsequently stabilising following the ECB’s accommodative policy decisions later in the year. The increase was largely due to a decline in excess liquidity, which fell below €125 billion in mid-January, its lowest level in over two years, amid a steady decline in Eurosystem borrowings in late 2013 and early 2014. At the January 2014 Governing Council meeting, President Draghi indicated that monetary policy would be eased in the event of two contingencies; “an unwarranted tightening of money market conditions or a deterioration in the outlook for inflation.”

EONIA reached its highest level (0.359%) since March 2012 on 20 January 2014 (excluding month-end fixings), and continued to gravitate on average towards the prevailing MRO rate of 0.25% as the year progressed, spiking well above this level at month-end periods. During this period, the EONIA forward curve remained inverted, with shorter dated forward rates fixing above longer-term forward rates, as market participants speculated on the likelihood of further ECB monetary policy accommodation.
In the second quarter of 2014, excess liquidity started to move down towards €100 billion, a level that has commonly been associated with causing upward pressure on money market rates. In April and May 2014, excess liquidity declined to below the €100 billion threshold, resulting in both EONIA and many GC pooling rates increasing above the MRO rate. In May 2014, the Governing Council gave a strong signal that action would be taken at the next meeting and on 5 June, the ECB reduced the main refinancing rate from 0.25% to 0.15% and the marginal lending facility rate from 0.75% to 0.40%. The rate on the deposit facility was brought into negative territory for the first time, declining by 10bps to -0.10% and the combined actions effectively reinstated a symmetric corridor system. The negative deposit rate also applied to government deposits held with the Eurosystem and this fluctuated as some national treasuries attempted to invest their excess liquidity in the market.

The accommodative measures announced by the ECB in June 2014 resulted in a decline in EONIA fixings to close to 0.00%, eventually fixing in negative territory following the announcement of further monetary policy easing at the September Governing Council meeting. In particular, the effects of the additional liquidity and reduced policy rates on the EONIA rate were evident, with the rate decreasing from an average of 0.21% up to 5 June 2014 to an average of 0.01% over the remainder of 2014, while the average EONIA rate in 2013 was 0.09%. The EONIA rate moved into negative territory for the first time on 28 August, reaching a new low of -8.5bps on 24 September 2014.

Shorter-dated Euribor fixings also fell on the introduction of the negative deposit facility with 3-month Euribor falling to 18.5bps, a significant decline from a rate of 43bps in early January. The lower policy rates were also transmitted to longer maturities and yields on euro area money market instruments, in particular Euribor future contracts saw interest rate fixings decline by up to 10bps in maturities up to 1 year.

EONIA volumes averaged circa €27.4 billion in 2014, compared to circa €20.8 billion during 2013. The number of participants in the EONIA panel is unchanged from 2013 at 35 participants; however increased legal and financial risks perceived by banks participating in Euribor and EONIA panels appears to have impacted on other euro area benchmark rates. In particular, the EONIA swap index reference rate was discontinued as of 1 July 2014 due to a critical number of panel withdrawals and the Eurepo index was also discontinued from 2 January 2015 due to a considerable decline in panel size.

The accommodative policy stance maintained by the ECB in the second half of 2014 was perceived to have had a positive effect in easing money market fragmentation in the secured market, with GC pooling volumes on the Eurex platform increasing 3% year-on-year, with the number of transactions rising by 42% over the same period. Secured money market rates reacted to the introduction of the negative deposit facility in a more pronounced way than unsecured rates, reaching negative levels within the first two weeks of the June policy announcement. GC repo rates of different euro area countries also converged further over the year as sentiment improved. German 1-week GC rates averaged 6.5bps over the year, compared to circa 3.1bps in 2013, while the Spanish and Italian 1-week GC spreads to Germany were on average 7bps and 8bps over the year, tightening on average by 2bps compared to 2013.

Interest rate dispersion in the euro area money markets declined in 2014, as market access and market conditions improved for banks that had previously experienced difficulties. The most pronounced decline in dispersion occurred in the overnight secured market, with rate dispersion declining to pre-crisis levels. Although rate dispersion in the unsecured market has still not declined to pre-crisis...

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6 Eurex is a derivatives exchange, based in Germany that offers products covering a number of asset classes.
levels, EONIA trading volumes increased by c. 32% overall in 2014, suggesting an improved functioning of money markets.

The evolution of both secured and unsecured money market rates in 2015 will likely be influenced by the commencement of the EAPP and the additional TLTRO allotments which are scheduled to take place over the course of 2015, leading to higher levels of excess liquidity. Market expectations are for EONIA to move towards -10bps to -20bps in the latter half of the year as the liquidity surplus increases as a result of the Eurosystem’s purchase programmes.

5. Ireland Overview

Eurosystem liquidity provision to Irish domiciled counterparties decreased from circa €39 billion at 2013 year-end, to €20.7 billion at the end of 2014, a decline of circa €18 billion (47%). There was a decline in Eurosystem borrowings both for domestic banks (from €27.9 billion to €12.6 billion) and for subsidiaries and branches of foreign banks (from €11.2 billion to €8.1 billion).

Over the course of 2014, a combination of increased deposit flows, deleveraging, redemption of NAMA bond holdings, and continued access to international funding markets has allowed the Irish domestic banks to reduce dependence on central bank funding.

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<th>Table 1: Irish Sovereign Credit Rating</th>
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5.1: Ireland’s debt market activity in 2014 and early 2015

In January 2014, following the Moody’s upgrade to Baa3, Ireland regained investment-grade status across all three major ratings agencies for the first time since July 2011. The positive sentiment was further strengthened in May when Moody’s again raised their rating on Ireland to Baa1, reflecting the confidence in Ireland’s recovery. Since then, market analysts have noted that there has been increased demand for Irish sovereign debt from Asian and Middle Eastern investors. Table 1 outlines the upgrades and current Irish sovereign rating across all four major agencies.

The NTMA successfully tapped the bond market throughout 2014 and surpassed its intended issuance amount of between €6-€8 billion in 2014, raising a total of €11.75 billion in bond market funding with a weighted average interest rate of 2.84%.7

In January 2014, the NTMA issued its first government bond following the exit from the EU/IMF Programme in December 2013. There was strong investor demand for the new 10-year benchmark bond, with €3.75 billion raised through a syndicated sale. The majority of issuance was sold overseas (83%) while interest reportedly came from a broad range of international investors. The NTMA also raised €4.25 billion through a series of auctions of this bond during 2014.
In addition to the issuance of bonds, the NTMA held regular 3-month T-bill auctions, and in November 2014 extended the term to also include 6-month bill auctions. Demand remained strong for all auctions and the yield at issuance generally decreased during the period.

Irish bond yields performed well across the curve in 2014. Of note, the 10-year bond yield was 1.25% at the end of 2014 compared to 3.51% in January 2014, a decline of 226 basis points, while the spread over the equivalent German bund narrowed to 71 basis points at year end from 158 basis points in January 2014. The convergence also continued with ‘semi-core’ European countries and the spread over the equivalent Belgian 10-year bond fell to 42 basis points from 96 basis points at the beginning of 2014. To date €12.5 billion or over 50% of Ireland’s €22.5 billion IMF loan facility has been repaid in two tranches in December (€9 billion) and February 2015 (€3.5 billion) through new issuance and existing cash balances. The NTMA expect to re-finance a total of €18 billion of this facility and further repayments will be announced over the course of the year.

On 7 January 2015, the NTMA raised €4 billion via a syndicated sale of a new benchmark bond maturing in March 2022. The yield on this bond was 0.867% and 85% of the issuance was taken by overseas investors. In another syndicated sale on 3 February 2015 the NTMA raised €4 billion from the sale of a new 30-year benchmark bond. The yield on the bond maturing in 2045 was 2.088% and 95% of the issue was taken up by overseas investors. On 12 February 2015 the NTMA raised €500 million via the sale of the benchmark 15-year bond at a yield of 1.563%. With the completion of this auction the NTMA have to date raised €8.5 billion of the planned €12-€15 billion issuance for 2015, including funds to refinance the early repayment of the IMF loan facility.

Irish sovereign bonds continued to rally in early 2015 amid strong economic data and ahead of the beginning of the ECB’s EAPP, with the 10-year benchmark bond falling below 1% for the first time in late February 2015. This compares to an all-time high of 14.08% reached in July 2011.

5.2: Irish Bank Bonds and Other Debt Issuance

Over the course of 2014 and into early 2015, Irish banks demonstrated improvements in bond market access, through both secured and unsecured issuance to an international investor base at progressively lower yields. The bond issuances were generally well subscribed given the improved outlook for the banking sector. Reflecting improvements in sovereign funding conditions, market access for the Irish banks also improved, with AIB and BOI issuing debt totalling €1 billion and €3 billion respectively in 2014.

On 11 March 2014, BOI raised €750 million through a 5-year covered bond secured against its mortgage book, with a yield of circa 1.82%. This issuance was circa three times oversubscribed. On 30 April, BOI issued a €750 million 3-year senior unsecured bond at a yield of 2.07%.

On 19 March 2014, AIB issued a €500mn 7-year Irish mortgage covered bond at a yield of circa 2.33%. This was the longest dated ACS bond issued by AIB since 2007. In January 2015, AIB issued a €750 million 7-year covered bond secured against its mortgage book, with a yield of 0.75%, a reduction compared to that achieved in March 2014.
Navigating Uncharted Waters

The decline in covered bond yields can also be attributed to the on-going purchases under the CBPP3. Further details of this non-standard measure are outlined in Box 2 of Section 2.

6. TARGET2 balances

TARGET2 (T2) is the payment system of the euro area that is operated by the central banks of the Eurosystem. All payments are settled in central bank money (that is to say they are booked on the accounts that banks hold with their central bank) and are settled in real time. The payments are primarily between banks and ancillary systems (e.g. security settlement systems, central counterparties, retail payment systems) as well as payments as part of Eurosystem operations such as open market operations (OMOs).

The T2 balances of national central banks (NCBs) reflect cross-border euro transfers. When an NCB has a T2 claim, it implies that there has been an inflow of euro funds to that country’s banking system, whereas a T2 liability balance implies that an outflow has taken place. The settlement of such cross-border transfers between banks in the euro area in T2 thus results in intra-Eurosystem balances (which are netted off with the ECB). As a result, some NCBs have a T2 claim (asset) and others a T2 liability vis-à-vis the ECB.

6.1: The main changes in T2 balances in 2014

T2 balances decreased over the year with a general flow of funds back from the core euro area countries to the periphery, which had amassed increasing T2 liabilities from 2010 to 2012. T2 balances first started to decline in late 2012 and this trend continued in 2013 as euro area tensions eased somewhat following the announcement of Outright Monetary Transactions in August 2012. T2 balances continued to narrow at a steady pace in 2014, highlighting a gradual reduction in fragmentation which has been observed across euro area markets (see Chart 5).

The most notable changes to T2 balances in 2014 were on the balance sheets of the Bundesbank and the Central Bank of Ireland. Over the course of the year the German T2 asset decreased by €49 billion to €461 billion and the Dutch asset fell by €27 billion to €19 billion. Meanwhile, the Irish T2 liability fell by €32 billion to €23 billion, the Spanish T2 liability fell by €24 billion to €190 billion, while the Italian liability also fell by €20 billion to €209 billion. Of note, Ireland’s T2 liability has now fallen by circa 84% from the end of 2010, when it stood at €145 billion.

The €32 billion reduction in Ireland’s T2 liability in 2014 results from a number of different factors, the two most significant of which are the increase in the Irish sovereign’s and domestic banks’ access to international markets when issuing new debt, and the on-going deleveraging process, which has included sales of assets to non-domestic investors (which has also resulted in accelerated NAMA bond redemptions). As outlined earlier in this article, these factors
have also facilitated a reduction in Eurosystem borrowings by Irish counterparties over 2014 (of c. €18 billion).

7. Conclusion

In 2014, monetary policy decisions by key central banks continued to be a driver of financial markets. In the euro area, the accommodative policy environment created by the ECB tended to support asset prices, while fragmentation in money markets eased to an extent, and counterparties’ recourse to Eurosystem borrowings generally fell over the period. Despite this relative easing in fragmentation within the euro area itself, the latter half of the year was primarily defined by low inflation readings. This led the ECB to announce further policy measures, the foremost of which was the EAPP. The impact of this programme, and other policy decisions, is likely to impact markets in the euro area throughout 2015, while the respective policy stances of other major central banks will also be watched by market participants, along with other factors such as political and geopolitical risk.
Annex 1: Glossary of Terms

Asset Backed Securities Purchase Programme (ABSPP) is part of a larger package of measures which aims to support the transmission of monetary policy to the real economy. The ABSPP will help banks to diversify funding sources and stimulate the issuance of new securities. Indeed, ABS can help banks in several ways to fulfil their main role: providing credit to the real economy. For instance, securitising loans and selling them can provide banks with the necessary funds to provide new lending to the real economy. This will further ease funding and credit conditions and help the transmission of monetary policy.

Autonomous Factors: Autonomous factors are normally outside the control of the Eurosystem and are defined as the items in the consolidated balance sheet of the Eurosystem, apart from monetary policy operations, that provide or withdraw liquidity from the system. The most notable autonomous factors are banknotes in circulation; government deposits deposited with the Eurosystem; and net foreign assets.

Covered Bond Purchase Programme (CBPP3) is the third programme to purchase covered bonds. Together with the ABSPP and with the series of targeted longer-term refinancing operations to be conducted until June 2016, these asset purchases will have a sizeable impact on the ECB’s balance sheet. These measures will enhance the functioning of the monetary policy transmission mechanism, support financing conditions in the euro area, facilitate credit provision to the real economy and generate positive spillovers to other markets.

EONIA (Euro Overnight Index Average) is a market index computed as the weighted average of overnight unsecured lending transactions undertaken by a representative panel of banks.

Under the Expanded Asset Purchase Programme (EAPP) the ECB will purchase bonds issued by euro area central governments, agencies and European institutions. The programme encompasses the ABSPP and CBPP3 with combined monthly asset purchases amounting to €60 billion. Purchases are intended to be carried out until at least September 2016 and in any case until the Governing Council sees a sustained adjustment in the path of inflation that is consistent with its aim of achieving inflation rates below, but close to, 2% over the medium term.

EURIBOR (Euro Interbank Offered Rate) the rate at which interbank term deposits are offered by one prime bank to another prime bank. This is often the reference rate for maturities of one, two and three weeks, and for maturities of one to twelve months.

Excess liquidity arises when the supply of liquidity (as provided via the Eurosystem’s monetary policy instruments), exceeds the demand for liquidity (as dictated by minimum reserve requirements and autonomous factors outside the direct control of individual NCBs), there is said to be excess liquidity in the banking system. In this situation, the excess will likely end up being deposited with the Eurosystem via deposit facility usage or the current account balance.

Excess Reserves: Current account holdings in excess of the average minimum reserve requirements.

GC Pooling Rate: collateral or GC is the range of assets that are accepted, at any particular moment, as collateral in the repo market by the majority of market intermediaries and at a very similar repo rate - the GC repo or pooling rate.

Liquidity Provided: The net amount of liquidity provided by the Eurosystem through its monetary policy instruments.

Liquidity Shortage: This is determined by the minimum reserve requirements and autonomous factors outside the direct control of individual NCBs.
Maintenance period (MP): The period over which compliance with reserve requirements is calculated. The MP begins on the settlement day of the first MRO following the policy meeting of the Governing Council.

Minimum reserves are determined on the basis of the institutions’ average daily reserve holdings (calculated on the basis of certain balance sheet liabilities) over a maintenance period. Each bank in the Eurosystem is required to maintain a balance with their respective NCB. The required reserve holdings are remunerated at a level corresponding to the average interest rate over the maintenance period of the MROs of the Eurosystem.

Open Market Operations (OMO’s) include Main Refinancing Operations, Longer-Term Refinancing Operations, Fine-Tuning Operations, structural operations and the Early Repayment Operations, as defined below.

(i) Main refinancing operations (MRO) are regular liquidity-providing reverse transactions with a frequency and maturity of one week. The MRO rate is currently 0.05%.

(ii) Longer-Term Refinancing Operations (LTRO) are liquidity-providing reverse transactions that are regularly conducted with a monthly frequency and a maturity of three months. Longer-Term Refinancing Operations are conducted at irregular intervals or with other maturities, e.g. the length of one maintenance period, six months, twelve months or thirty-six months are also possible. The ECB conducted two 36-month operations; the first in December 2011 and the second February 2012, the terms of these operations gave counterparties the opportunity to repay any part of the amount they were allotted after one year. From early 2013, the ECB conducted Early Repayment Operations (ERO) allowing banks to repay some or all of their borrowings from two 36-month LTROs before the stated maturity date of the LTRO. Until the maturity of these operations in early 2015, the ECB conducted weekly EROs (one for the each of the two 36-month LTROs) at the discretion of the Governing Council. In June 2014, the ECB announced the Targeted Longer Term Refinancing Operation (TLTRO), designed to support bank lending to the euro-area non-financial sector through a series of eight targeted longer-term refinancing operations with a maturity of up to four years and an early repayment option.

(iii) Fine-Tuning Operations (FTO) can be executed on an ad hoc basis to manage the liquidity situation in the market and to steer interest rates. In particular, they aim to smooth the effects on interest rates caused by unexpected liquidity fluctuations. Fine-Tuning Operations are primarily executed as reverse transactions, but may also take the form of outright transactions, foreign exchange swaps and collection of fixed-term deposits. Between May 2010 and June 2014, a weekly FTO was held to absorb the liquidity provided through the Securities Markets Programme (SMP).

(iv) Structural operations are executed by the Eurosystem mainly in order to adjust the structural liquidity position of the financial sector vis-à-vis the Eurosystem. They can be carried out through reverse transactions, outright transactions and the issuance of debt certificates.

Standing facilities aim to provide and absorb overnight liquidity, signal the general monetary policy stance and bound overnight market interest rates. Two standing facilities, which are administered in a decentralised manner by the NCBs, are available to eligible counterparties on their own initiative:

(i) Marginal Lending Facility (MLF): Counterparties can use the MLF to obtain overnight liquidity from the NCBs against eligible assets. The interest rate on the MLF is currently 0.30% (25bps above the MRO rate) and normally provides a ceiling for the overnight market interest rate.

(ii) Deposit Facility (DF): Counterparties can use the deposit facility to make overnight deposits with the NCBs. The interest rate on the deposit facility is currently -0.20% (25bps
below the MRO rate) and normally provides a floor for the overnight market interest rate.

**Variable rate allotment:** In normal circumstances, the Eurosystem, when conducting its OMOs, assesses the total liquidity need of the banking sector and, in competitive tenders, allots this amount. Usually these tenders are conducted as variable rate tenders, meaning that banks pay the interest rate that they offer when they make their bids.

The Eurosystem may also execute its tenders in the form of **fixed rate tenders**, where the interest rate is specified in advance and banks bid the amount of money they wish to transact at the fixed interest rate.

In exceptional circumstances, the ECB may decide in advance to allot the full amount of liquidity that banks request, i.e. to accommodate all bids, at a fixed interest rate (known as **fixed rate full allotment**).