

DIRECTORATE GENERAL FOR INTERNAL POLICIES
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

The current state of financial (dis)integration in the euro area

IN-DEPTH ANALYSIS

Abstract

The sovereign bond crisis which started in 2010 caused a major disruption in euro area financial markets. The rise of credit risk led banks from the “core” of the euro area to stop lending to the euro-area “periphery”. Only the huge liquidity support by the ECB through its unconventional monetary policy measures alleviated divergent financing conditions across euro area Member States. But the fragmentation of euro-area financial markets has not disappeared, and financial fragmentation still continues to divide the euro area. This is the case despite progress on the European Banking Union project and the ECB’s (conventional and unconventional) monetary policy. Against this background, this note assesses the implications and risks stemming from persistent fragmentation of euro area financial markets for the transmission of monetary policy. Secondly, it discusses some of the policy options available (to the ECB) which may reduce this fragmentation.

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AUTHOR

Corrado MACCHIARELLI (London School of Economics)
Panagiotis KOUTROUMPIS (Queen Mary University of London)

RESPONSIBLE ADMINISTRATOR

Dario PATERNOSTER

EDITORIAL ASSISTANT

Irene VERNACOTOLA

LINGUISTIC VERSIONS

Original: EN

ABOUT THE EDITOR

Policy departments provide in-house and external expertise to support EP committees and other parliamentary bodies in shaping legislation and exercising democratic scrutiny over EU internal policies.

To contact the Policy Department or to subscribe to its newsletter please write to:

Policy Department A: Economic and Scientific Policy
European Parliament
B-1047 Brussels
E-mail: poldep-economy-science@europarl.europa.eu

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EXECUTIVE SUMMARY

While there have been positive developments in financial integration in the Eurozone since the crisis, there are some indications of financial markets not being completely at ease, particularly in some market segments. After the Outright Monetary Transactions (OMT) and Banking Union announcements, financial integration is resuming, albeit it now remains well below pre-crisis levels. The Asset Purchase Programme (APP) has generally granted a continuation of this (positive) trend. The Governing Council's recent decision to keep rates on hold (Deposit Facility = -0.4%, Main Refinancing Operations = 0.0%) in September does not exclude the possibility that more policy accommodation is on the way, as the March package of stimulus has still not been fully implemented. In our view, the latter decision does not necessarily reflect optimism, but rather a "wait and see" position.

Money market

- The euro area LIBOR-overnight interest rate (OIS) spread suggests there was an upward pressure in the spread in early 2016 due to a change in investors' sentiment regarding banks' long-term profitability, with an ensuing increasing pressure in the interbank market. From March 2016, the spread narrowed down, which could be interpreted as a sign of easing.
- 1 and 12 month Euribor rates have now returned (almost) to their pre-crisis levels. At the same time, the overnight rate remains still higher than pre-crisis levels, pointing to money market fragmentation, particularly in some countries.
- Looking at the spread on overnight repos in some selected countries, one can notice that differentials have started to narrow after the period 2011-2012. However, investors' search for yields, in an environment characterized by safe assets' scarcity, low or negative interest rates, might be the reason for convergence in money market rates.
- ECB's Quantitative Easing (QE) purchases and long-term refinancing operations contributed to increasing the amount of money available to banks and circulating in the economy. However, the excess reserves of credit institutions in the euro area increased sharply over the period April 2015 to July 2016, accentuating the likelihood of interbank trading volumes falling.
- The reoccurrence of TARGET2 imbalances suggests moreover the APP is creating a situation where the extra liquidity available in the economy is not absorbed evenly but it gets deposited at banks in euro area countries enjoying the highest rating (e.g., Germany, and to a lesser extent, the Netherlands, Finland, and Luxembourg)

Bond market

- The persistent difference in liquidity and default risks in some peripheral euro area countries (Portugal and Greece in particular) against German bunds could well reflect structural factors and may not necessarily be surprising at this stage, in the lack of country-specific structural reforms restoring fundamentals.
- The holdings by euro area Monetary Financial Institutions (MFI) of domestic government and corporate bonds remain at high levels compared to pre-crisis (60%). This suggests MFIs, particularly in the "core" of the Eurozone, are moving in the direction of an increasing bias towards "home" government and corporate bonds.
- The observed "home bias" on the market of government papers may be a problem because it increases the feedback loop between sovereigns and banks; a dimension that current governance reforms, such as the European Banking Union, are trying to break.

Equity market

- Countervailing factors such as the uncertainty around the future sustainability and prospects of the Greek economy, turmoil in emerging markets such as in China, general concerns about the world economic outlook, as well as the loosening of the US monetary policy, and an uncertain outlook regarding a UK withdrawal from the EU, made equity markets continue to fall through 2016.
- This overall highlights the limited (for now) expected effectiveness of the ECB's QE in sustaining the euro area recovery, despite a reduced fragmentation in this market.

Banks

- Banks' profitability faced serious challenges from early 2016.
- The figures for MFI lending rates to SMEs show that there are signs that credit conditions are easing generally. Overall, however, there is still a high divergence in retail rates in lending in Portugal and Greece, thus having an impact on the real economy and the extent of economic recovery in these countries.
- Large variations in the pass-through of the reduction in the policy interest rate suggest some problems in the transmission of monetary policy, and may reflect banks' specific factors such as capitalization.

Policy recommendations

- Although significant measures have been taken towards the limitation of solvency issues and moral hazards, with the establishment of the first steps of the Banking Union, the profitability of the banks does not seem to be substantially affected by these developments as it continued to largely decrease. This is because the current "incomplete" approach to a Banking Union would not help reduce the observed "home bias" in the bond market segment, nor it destroys the "deadly embrace" between sovereign and banks debt that characterized the sovereign debt crisis.
- One way to reduce the observed home bias would be through regulation, in particular, setting incentives on risk weight on the banks holding of different euro area bonds.
- Alternatively, this could be achieved by fully transitioning to a Banking Union. It will thus be important to accelerate the Banking Union or anyway leave as little uncertainty as possible during the transition.
- On top of the Banking Union, another reform acting in the direction of strengthening and incentivising private risk sharing mechanisms through credit and capital markets would be the Capital Markets Union, as proposed by the Five Presidents' Report. The latter is expected to reduce fragmentation, enabling "safe" platforms for risk sharing.
- The ECB could take further actions to support access to liquidity by weak banks with a targeted review of existing collateral policies, including lower haircuts on certain assets.
- The ECB should continue, together with its asset purchases, Targeted Longer-Term Refinancing Operations (TLTROs) contingent on the provision of new lending to SMEs, directly supporting credit to this sector and improving the quality of banks' assets. For this to prove effective, the costs to access the scheme must be less than alternative funding costs. Given funding costs are falling quite slowly in the periphery, lower haircuts (discussed above) could be considered at the same time.
- QE would give countries a window of opportunity to do the necessary investment and reforms, but it could not as a substitute for them. Given the little fiscal space left in many "vulnerable" economies, however, this should happen within a joint monetary-fiscal stimulus, where – in recognizing the existing asymmetries – the ECB's support could create the needed room for reforms.

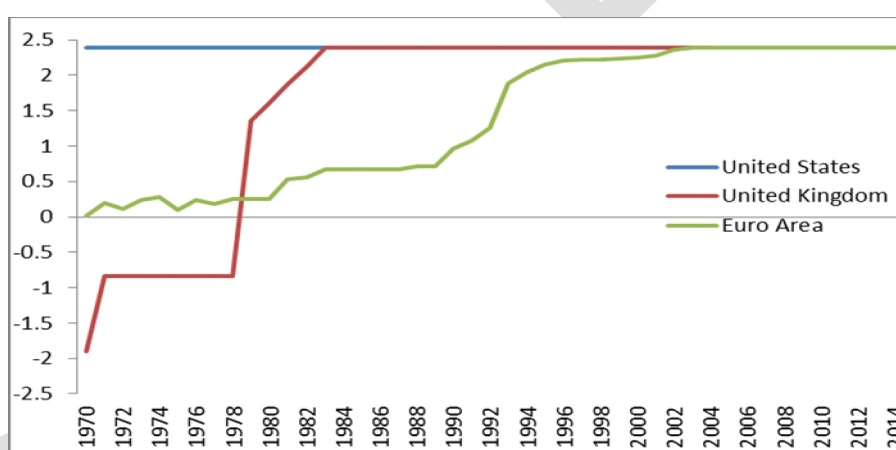
1. INTRODUCTION

The imperfect institutional framework characterizing the Eurozone (De Grauwe, 2016) and markets re-pricing of risk, which came with the start of the crisis, reversed the trend towards financial integration started with the euro introduction, triggering a process of financial crumbling, which became particularly evident in some market segments (de Sola Perea and Van Nieuwenhuyze, 2014).

Despite the degree of inflation (and macroeconomic) integration of euro area countries has increased since the euro introduction up until recently (Karanasos *et al.* (2016)), real rates are diverging. Yet, **the Single Market has undoubtedly become more open and integrated**. One example of this was the creation of the Single Euro Payments Area (SEPA), that has helped to reduce the cost of moving money between euro area countries by 90 % since 2001 (European Commission, 2006). Financial integration has thus been incremental – this is well captured by the Chinn-Ito (2008) index. The index (Figure 1) measures the degree of capital controls or other restrictions on international transactions. The figure shows how the Single Market and its institutional underpinning have clearly had a positive impact on financial market integration, with a level of financial openness in the euro area which is now comparable to that of the United States or the UK (see Figure's footnote for technical details).¹

Figure 1: Financial openness *de jure*

(Chinn-Ito Index)



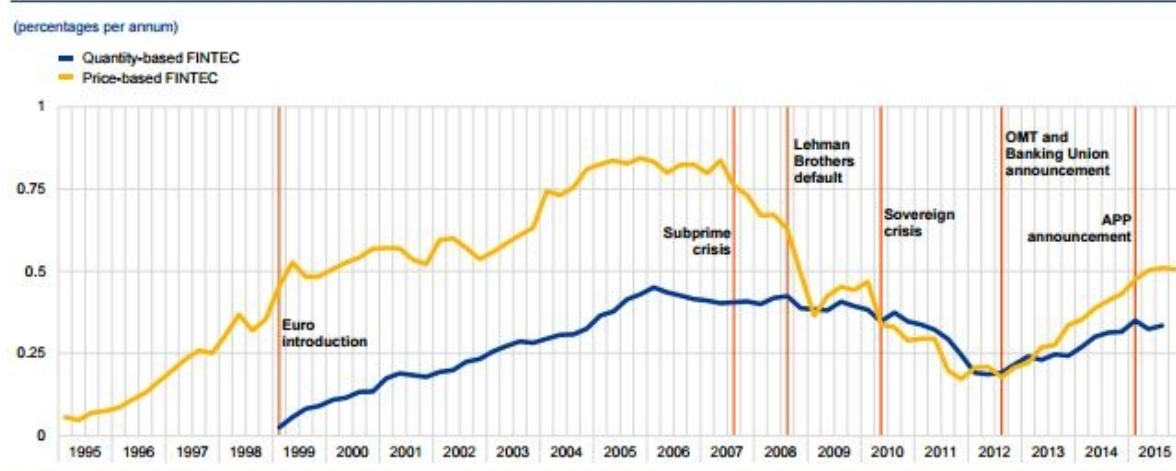
Source: Chinn and Ito (2008; 2016). **Note:** The index spans between -2.5 (no financial openness) and 2.5 (full openness). Euro area figures are GNP-per-capita weighted series for Austria, Belgium, France, Germany, Italy, the Netherlands, Finland, Greece, Ireland, Portugal and Spain. For the euro area as a whole, the number is 2.38 after 2002.

However, the fact that the euro area has benefited from legal and institutional measures to facilitate financial integration does not necessarily mean that markets are *actually* integrated. Many other variables play a role, including risk perception, counter-party risk, asymmetry of information, habits' formation etc. In this respect, it is useful to discern between ***de jure*** (or integration from a legal point of view, i.e. in the removal or reduction of the existing barriers) from ***de facto*** integration (or integration in practice). The former can be seen as a necessary - but non-sufficient - condition for the latter (de Sola Perea and Van Nieuwenhuyze, 2014). *De facto* measures of financial integration can be divided into *quantity-based* indicators – which measure the stock of cross-border financial assets and liabilities and international capital flows – as well as *price-based* indicators – which measure integration on the basis of comparable risk-adjusted interest rates on different markets. Over the last decade, financial integration in the euro area has increased considerably also *de facto*, at least until the crisis.

¹ Country specific measures such as capital controls in Greece are likely to act in the opposite direction.

Looking at a synthetic priced and quantity-based indicators developed by the ECB and the European Commission like SYNFIN (Synthetic Indicator of Financial Integration; see Figure 2) one can notice how convergence in both prices and volumes has been sloping upwards since 1999. However, since 2007 the volumes of international capital flows reveal how financial integration in the euro area has declined. This was largely due to an international slowdown in (gross) capital flows which, together with the deteriorating macroeconomic fundamentals, should be seen against the backdrop of a general re-pricing of risks by the financial system worldwide, including the effect of new regulation (i.e. Basel III) (de Sola Perea and Van Nieuwenhuyze, 2014). Price indicators confirm the weakening of *de facto* financial integration observed on the basis of capital flows. Since the outbreak of the financial crisis, the yields on financial products have in fact diverged strongly, causing this aggregate index to drop even more substantially.

Figure 2: Price-based and Quantity-based Financial Integration Composites



Source: ECB (2015)

The recent historical agreement on a Banking Union for Europe together with the OMT announcement (which are to be seen as measures of *de jure* integration) has ensured a reversal of this trend. From Figure 2, one can see indeed how, **after the OMT and Banking Union announcements, financial integration is resuming, albeit it now remains well below pre-crisis levels**. Despite this ECB's commitment to do "whatever it takes" and the ensuing rounds of asset purchases by the Eurosystem since 2015, financial fragmentation is still dividing the Eurozone, with liquidity flowing unevenly through euro area economies; one example among all being the reoccurrence of "core-periphery" TARGET2 imbalances (discussed in Section 2.1), revealing some worrisome supply side effects after QE.

Against this backdrop, in the following section, we will first review the evidence of financial market integration *de facto* in the euro area based on four markets (money, bond, equity, banks). Here, we will discuss the implications and risks stemming from persistent fragmentation of euro area financial markets for the transmission of monetary policy. In section 3, we briefly look at recent steps in financial openness *de jure* (focusing on the Banking Union in particular) and how these may be expected to affect the state of financial integration in the euro area going ahead. In the last subsection (section 3.2) we discuss some policy instruments available to the ECB in order to possibly reduce fragmentation.

2. THE CURRENT STATE OF FINANCIAL MARKET (DIS)INTEGRATION IN THE EURO AREA

2.1. Money market

In March 2016, the ECB cut its deposit facility from -0.30% to -0.40% (see Figure 3) and decreased the Main Refinancing Operations rate (providing the bulk of liquidity to the banking system) to 0.0%. It also expanded its Asset Purchase Programme (APP) and launched a corporate sector purchase programme (CSPP) (for a discussion see Gerba and Macchiarelli, 2016). During the last September meeting, the Governing Council has nevertheless decided to leave both interest rates unchanged, as well as not to extend the size and duration of its monthly asset purchases.

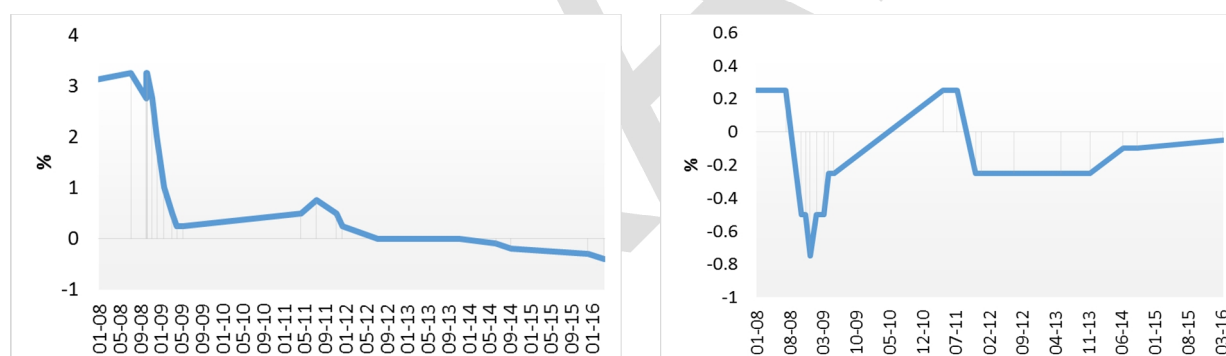
This decision does not necessarily reflect optimism in the euro area's economic growth and inflation forecasts – which, on the contrary, have remained “broadly unchanged” or went up by a little for the current year and were revised slightly downward for the next year. The Governing Council's decision rather denotes a “wait and see” approach. In addition, this decision does not exclude anyway the possibility that more policy accommodation is on the way, as the March package of stimulus has still not been fully used. Another possible reason for the ECB's reluctance to accommodate the economy further at this stage may be the related tantalizing question of scarcity of eligible papers for the APP, or the fact the expected negative effects of the UK referendum on the euro area economy are modest or yet to materialise.

Figure 3: ECB's key interest rates

(percent)

(a) Deposit Facility rate

(b) Main Refinancing Operations rate



Source: ECB data

Figure 4: LIBOR spreads to OIS (3-months)

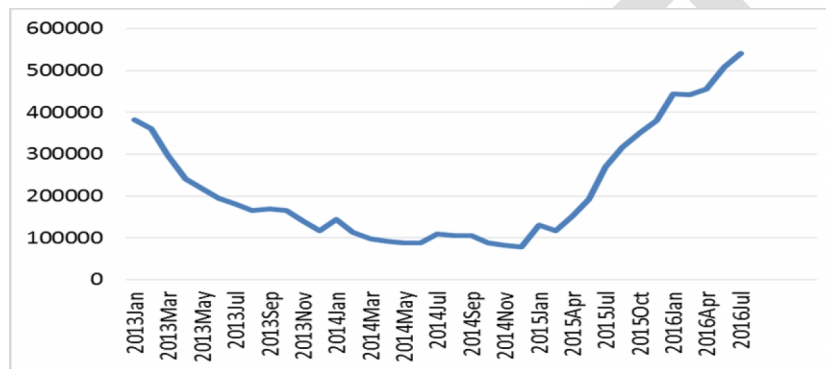


Source: Bloomberg data

At the international level, the ECB's "wait and see" position contrasts with the position of the Fed, which has started to normalise its monetary policy stance. The difference in the US and the euro area LIBOR (London Interbank Offered Rate)-overnight interest rate (OIS) spread, typically understood as a measure of the health of the banking system, is quite telling. In Figure 4, the US (and the UK) LIBOR-OIS spread is significantly higher than the Euribor spread over the OIS. The euro area money markets during 2015 were characterized by abundant liquidity, partly because of the ECB's expanded APP which included corporate debt as well. Nevertheless, **in early 2016, there was an upward pressure in the spread due to a change in investors' sentiment regarding banks' long-term profitability** (see Section 2.4 below), **with an ensuing increasing pressure in the interbank market**. From March 2016, the spread narrowed down, which could be interpreted as a sign of easing.

Figure 5: Excess reserves of credit institutions in the euro area

(Millions of EUR)



Source: ECB data

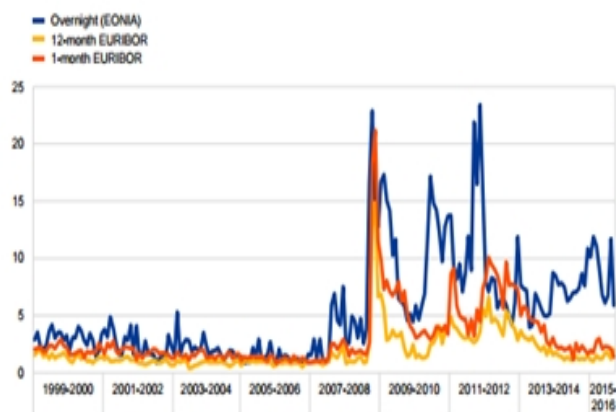
As Gerba and Macchiarelli (2015) have reminded, with the ECB keeping its interest rate on the deposit facility at -0.40% banks will not have incentives to place excess cash at the central bank. On the other hand, ECB's QE purchases and long-term refinancing operations are contributing to increase the amount of money available to banks and circulating in the economy. From Figure 5, one can notice how the **excess reserves of credit institutions in the euro area increased sharply over the period April 2015 to July 2016, accentuating the likelihood of interbank trading volumes falling** (encompassing cross-border flows; see ECB, 2016d). With the exemption of targeted longer-term refinancing operations, i.e. TLTROs, this increase in liquidity now primarily derives from the APP and not from the standard Eurosystem liquidity operations. As a result, the Eurosystem constitutes the principal driver of the rise in liquidity itself.

Price-Based Indicators

Looking at the price dispersion of the unsecured interbank lending rates of euro area countries across different maturities – namely overnight rates (EONIA), 1-month and 12 month Euribor rates – one can notice that, during the financial crunch and the ensuing sovereign debt crisis, the unsecured interbank lending rates soared (Figure 6). Nevertheless, already as of 2012 EONIA and Euribor rates started to drop. Potential reasons being this easing could be less financial market pressure and greater market access of banks. Particularly, the **1 and 12 month Euribor rates have now returned (almost) to their pre-crisis levels. At the same time, the overnight rate remains still higher than pre-crisis levels**, even though with a downward sloping tendency more recently. This is overall a positive development, suggesting that credit and liquidity conditions have improved and uncertainty declined since the APP. Overall, however, a higher (than pre-crisis) overnight rate may still be **pointing to money market fragmentation, particularly in some countries**.

Figure 6: Interquartile range of euro area countries' average unsecured lending rates

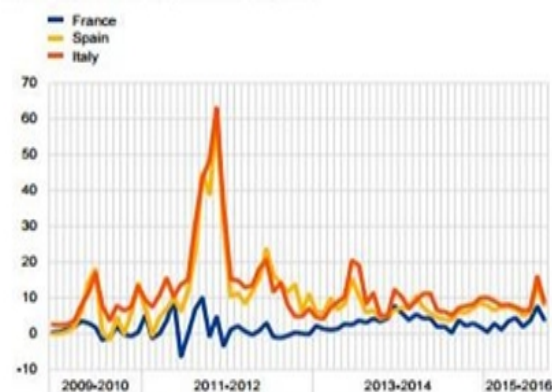
(Average per maintenance period, basis points)



Source: ECB (2016d)

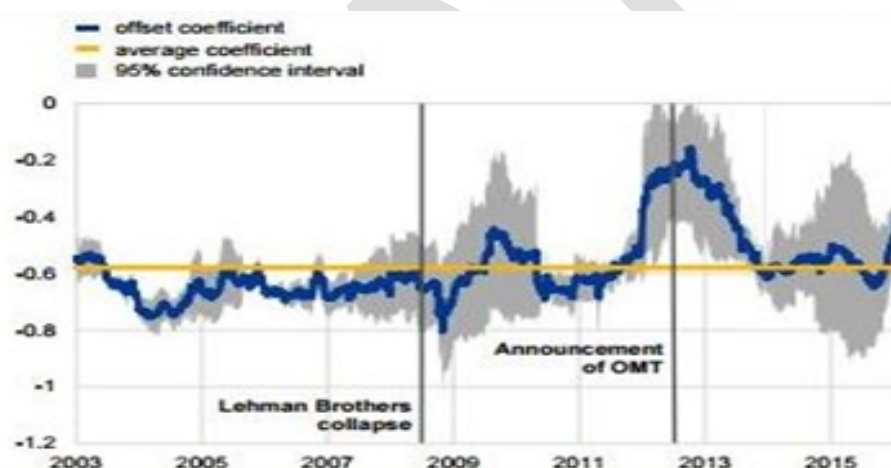
Figure 7: Spread on overnight repos vs. Germany

(Average per maintenance period, basis points)



Source: ECB (2016)

Figure 8: Offset coefficient for domestic liquidity shocks



Source: Veyrune *et al.* (2014). **Note:** The closer is the coefficient to 1 (in absolute value) the more integrated the interbank money markets are.

Another dimension to consider is that of repo spreads and the quantity of repo papers. In the current environment, the policy stance has driven the EONIA below zero, consequently driving short-term rates on repos deeper into negative territory as well. Negative repo rates imply the buyer pays interest on the money it is lending, therefore a seller could well decide to fail, and still receive the repo rate. As stressed by Ferrari *et al.* (2016), while the resulting incentives to fail are lessened by the existing penalties, all such penalties could be compensated by a negative enough interest payment from buyer to seller, overall creating **a situation of low responsiveness to fundamentals on the repo market** (Ferrari *et al.*, 2016).

Looking at the spread on overnight repos of France, Spain, and Italy against repos based on the German *bund* (Figure 7), one can notice that differentials have started to narrow after the period 2011-2012. While the use of Italian and Spanish bonds as collateral is still associated with higher risks (compared, e.g., to French bonds), **investors' search for yields, in an environment characterized by safe assets' scarcity, low or negative**

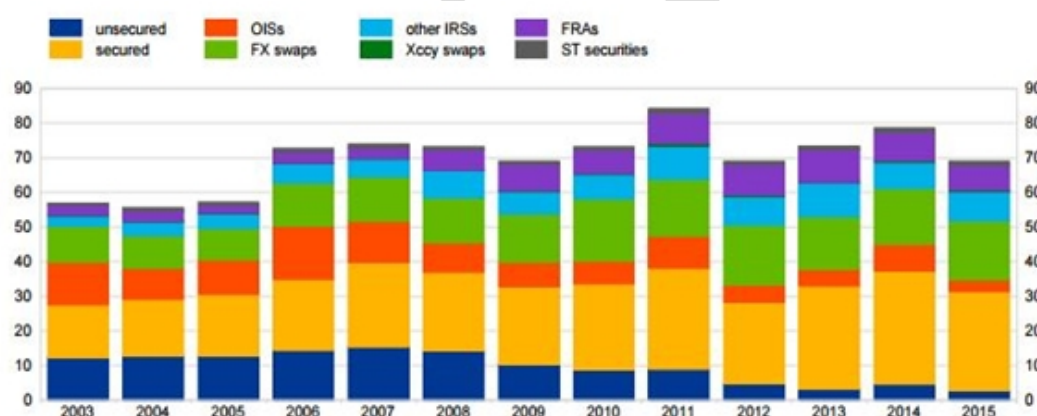
interest rates, might be the reason for convergence in money market rates (see also ECB, 2015).

Interestingly, ECB's staff estimates on the extent of absorption of liquidity shocks in euro area countries (for a technical discussion see Veyrune *et al.*, 2014), show that, over the period 2003 to 2015, on average, every €1 of domestic liquidity contraction was offset by a €0.58 inflow from the rest of the Eurosystem - i.e. an average "offset coefficient" of -0.58. The ECB's figures make clear how the announcement of the Outright Monetary Transactions (OMTs) came during a period in which cross-country flows were at their minimum (this measure hit -0.2). The OMT's announcement has clearly reversed this trend (see also Altavilla *et al.*, 2014). However, since late 2015 the "offset coefficient" has started increasing again; possibly due to TLTRO allocations that accentuated carry trade opportunities and home bias in MFIs' bond holdings (see Section 2.2, Horváth *et al.*, 2015; Valiante, 2015), on top of the Eurosystem asset purchases affecting bank reserves and cross-border flows, as discussed.

Quantity-Based Indicators

Focusing on quantity-based indicators, a declining turnover in most of the money market sectors can be observed in 2015, reversing the trend of the previous two years. This decline was clearly visible in the secured and unsecured market as well as in the derivatives markets (Figure 9).

Figure 9: Cumulative quarterly turnover in the euro money market
(Trillions of EUR)



Source: ECB (2016)

Other Indicators

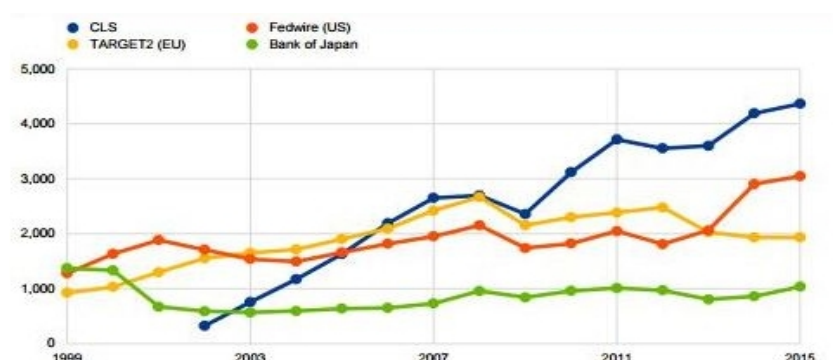
Looking at the average daily turnover settled by the major large-value payment systems around the world (namely CLS, TARGET2, Fedwire and BOJNET)² **after 2012 TARGET2 was the only system whose turnover decreased**, with a drop of 2% for the period 2014-15 only (Figure 10). Since much of the EU money market integration (after 1999) is attributable to the establishment of the TARGET system, the close monitoring of TARGET2 performance and imbalances could assist the ECB in adopting targeted measures.

It is interesting to note that such **TARGET2 imbalances have in fact resumed more recently**. It is well known that TARGET2 imbalances rose substantially during the sovereign debt crisis. However, as pointed out by De Nederlandsche Bank (2016), these imbalances recently may be well indicative of a persistent fragmentation within the euro area's financial markets as well as uneven liquidity allocation.

² CLS and BOJNET stand for Continuous Linked Settlement and for Bank of Japan Financial Network System respectively. TARGET2 stands for Trans-European Automated Real-time Gross settlement Express Transfer system.

Figure 10: Average daily turnover settled by the major large-valued payment systems

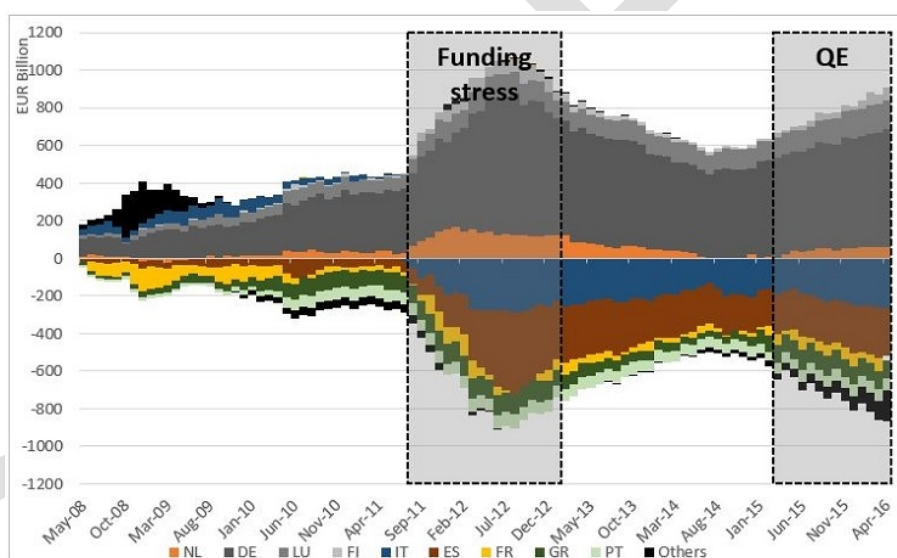
(Billions of EUR)



Source: TARGET Annual Report 2015, ECB (2016d)

Figure 11: TARGET2 balances since 2008

(Billions of EUR)



Source: De Nederlandsche Bank (2016)

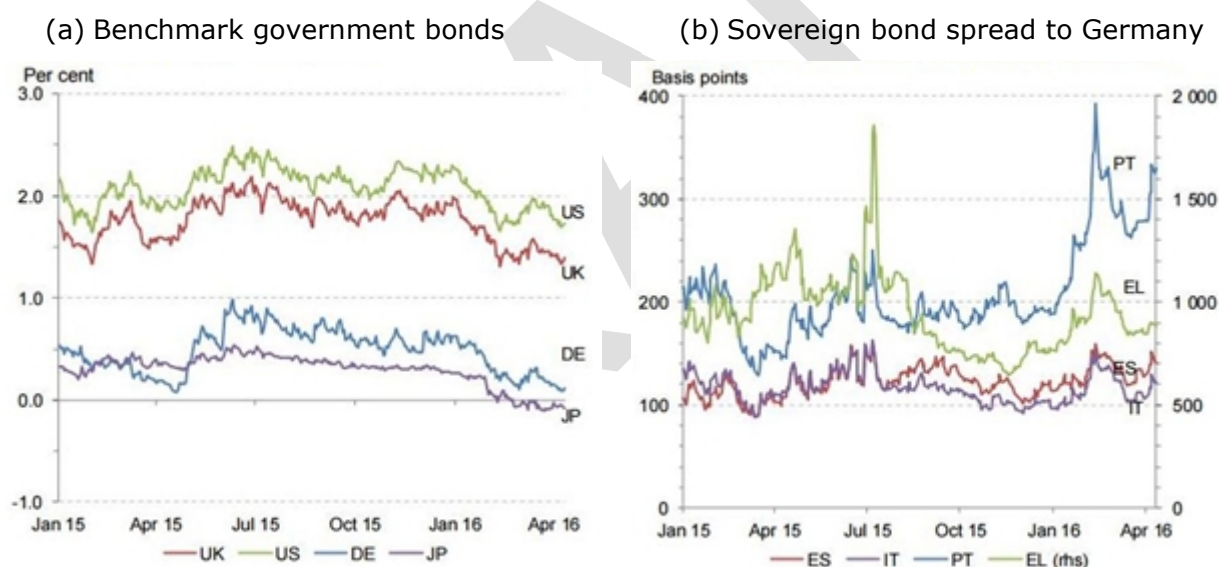
Particularly, **the Eurosystem purchases of bonds from institutional investors through banks under the APP is creating a situation where the extra liquidity available in the economy is not absorbed evenly but it gets deposited at banks in euro area countries enjoying the highest rating, i.e. the "core"** (see also De Nederlandsche Bank, 2016). This is not surprising given that risk perceptions within the euro area have not yet completely normalized, as many of the institutional investors selling under QE prefer to hold deposits indeed. As a result, **APP purchases undertaken by NCBs of peripheral countries are leading to additional bank deposits in countries like Germany, and to a lesser extent, the Netherlands, Finland, and Luxemburg**, as evidenced from Figure 11. Rising TARGET2 imbalances are thus currently reflecting an uneven distribution of liquidity created by QE across the euro area. In a well-functioning monetary union, the liquidity created by QE should more or less be absorbed proportionally by the banking system of each member state, thereby not leading to any imbalances. Here, the current build-up of TARGET imbalances does show that risk perceptions and fragmentation have not yet disappeared, mainly with regard to specific euro area countries.

2.2. Bond market

The introduction of the single currency played an important role in the degree of integration of the European government bond markets (see also Abad *et al.*, 2009). However, as the sovereign debt crisis has shown, the euro has made member states more vulnerable to idiosyncratic and EMU-specific risk factors, at least until 2010. **The persistent difference in liquidity and default risks in some peripheral euro area countries (Portugal and Greece in particular) against German *bunds* could well reflect structural factors** (see also Dewachter *et al.*, 2015) and may not necessarily be surprising at this stage (Buti and van den Noord, 2009), in the lack of country-specific structural reforms restoring fundamentals.

While at the height of the 2010 sovereign crisis only a few countries (among them Greece and Ireland) were severely affected, in 2012 almost all non-AAA-rated euro area countries suffered from financial distress, mainly as the result of international risk aversion and contagion (see Manganelli and Wolswijk, 2009). As reminded in a previous note (Gerba and Macchiarelli, 2015), the OMT announcement during the second half of 2012 has laid down a stepping stone for an important improvement in bond markets' conditions. This has been followed by the positive "signalling" effect of the APP (see Altavilla *et al.*, 2015; Andrade *et al.*, 2016). Following these developments, the euro area bond markets result to be somehow stabilised, compared to the levels observed during the sovereign crisis, displaying a certain degree of convergence, which is – nevertheless – still higher than what observed pre-crisis.

Figure 12: Government bonds (10-year maturity)



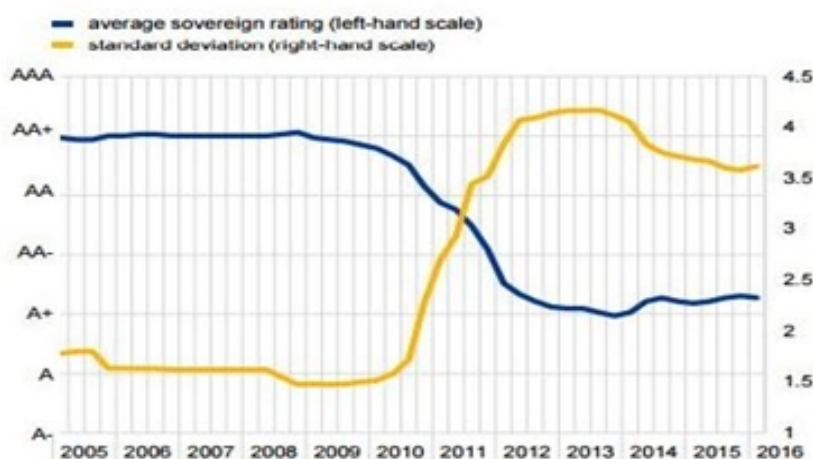
Source: ECB (2016a)

The last available data for 2016 particularly show that most of the bond spreads have remained relatively steady. However, some high peaks can be observed towards the end of the sample, especially in Greece, due to some country-specific factors, such as the Greek referendum and the implementation of the capital controls during the summer of 2015, and Portugal. Spreads have widened also as the result of the benchmark 10-year government bond for Germany being particularly low, e.g., compared to the US and the UK, as the result of *flight-to-safety* effects, as well as the Eurosystem's hovering of *bunds* through QE (Figure 12). As Gerba and Macchiarelli (2016) highlight, this newly emerging fragmentation is not a 10-year maturity issue only but it is emerging for bonds at 2-year maturity as well in those countries. In addition, yields around the globe fell to all-time lows recently as the result of the outcome of the UK referendum.

Price-Based Indicators

The dispersion of sovereign bond yields (measured as the standard deviation of selected euro area countries) over the period 2015-2016 appears to be lower than what observed during the first half of 2011-2014 (Figure 9), but still higher than what observed pre-crisis. Persistent differences in bond yields premia might well indicate bonds' market fragmentation, which might be due to liquidity risk, induced by differences within the euro area sovereign bond markets, as well as the markets' pricing-in of different fiscal and macroeconomic outlook for euro area countries. The figure also displays the average sovereign debt rating falling in the euro area. This seems to have moved in the opposite direction of sovereign bonds dispersion: as the average sovereign rating (blue line) fell significantly in 2008 (from AA+ to approximately A+) the standard deviation increased. The most recent drop in dispersion after 2014-15 is however not accompanied by a rating improvement in Figure 13, rather reflecting the effect of narrowing of bond spreads due to the APP.

Figure 13: Sovereign debt ratings' development and dispersion in the euro area



Source: ECB (2016)

Quantity-Based Indicators

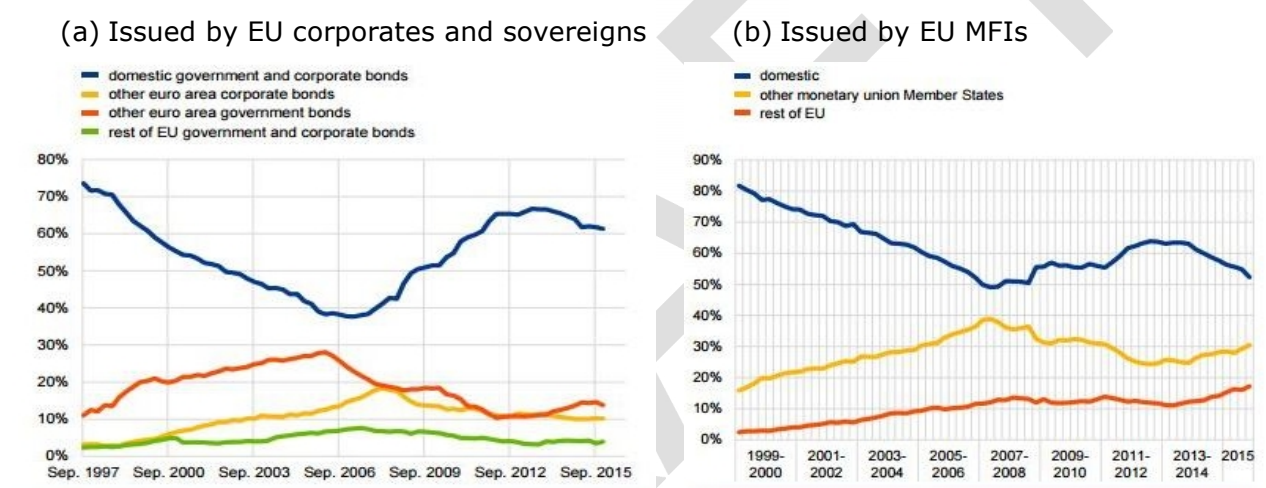
Another way to examine the level of integration of the sovereign bond markets is to consider volumes. Accordingly, **the holdings by euro area Monetary Financial Institutions (MFIs) of debt securities issued by EU corporate and sovereigns has shrunk since 2012. Still, MFIs holdings on domestic government and corporate bonds remain at high levels compared to pre-crisis (60%; left-hand panel, blue line).** Instead, the share of holdings by euro area MFIs of debt securities issued by MFIs of (other) monetary union Member States (see Figure 14, yellow line) remains 10 p.p. below the pre-crisis value. By contrast, the share of holdings of debt securities issued by domestic and other monetary union MFIs was just above the pre-crisis levels. Overall, this implies that the most affected segment is that of government bonds issued by euro area member states, in the sense that **MFIs seem to move in the direction of an increasing bias towards "home" government and corporate bonds.** The downward shift in the yield curve as the result of QE may help explain this phenomenon, as bond yields have now been forced down, whereas underlying structural weaknesses, both at the euro area level and country-specific, have not been fully addressed.

The share of foreign government bonds in the total bond holdings of the banks in relation to the euro area thus seems to suggest that the integration on this market is now back to the level prevailing *before* 1999, broadly comparable with the levels observed during the third stage of the EMU launch (see also de Sola Perea and Van Nieuwenhuyze, 2014).

The observed “home bias” on the market of government papers may be a problem because it increases the feedback loop between sovereigns and banks; a dimension that current governance reforms, such as the European Banking Union, are trying to break. This home bias may have consequences for the monetary transmission process in the euro area, being mainly a non ‘GIIPs countries’ phenomenon, thus making MFIs based in “core” countries heavily dependent on country-specific fundamentals. In this respect, the existing evidence suggests that banks with a sovereign debt portfolio biased towards domestic debt are valued more highly in the stock market if both the bank and the sovereign are deemed weak. This is consistent with a behaviour of weak banks located in a weak country voluntarily increasing their sovereign debt home bias in an effort to shift risk and increase bank valuation (Horváth *et al.*, 2015). This is however not what it is being observed in practice in the euro area, with “home bias” being more present in the “core”, with an overall tendency of flying to-safety (Horváth *et al.*, 2015; see also Gerba and Macchiarelli, 2016). Tendency of portfolio rebalancing towards bonds in the “core” may be the result of low growth expectations and persistently low rates.

Figure 14: Holdings by euro area MFIs of debt securities

(Percentage of total holdings, excluding the Eurosystem)

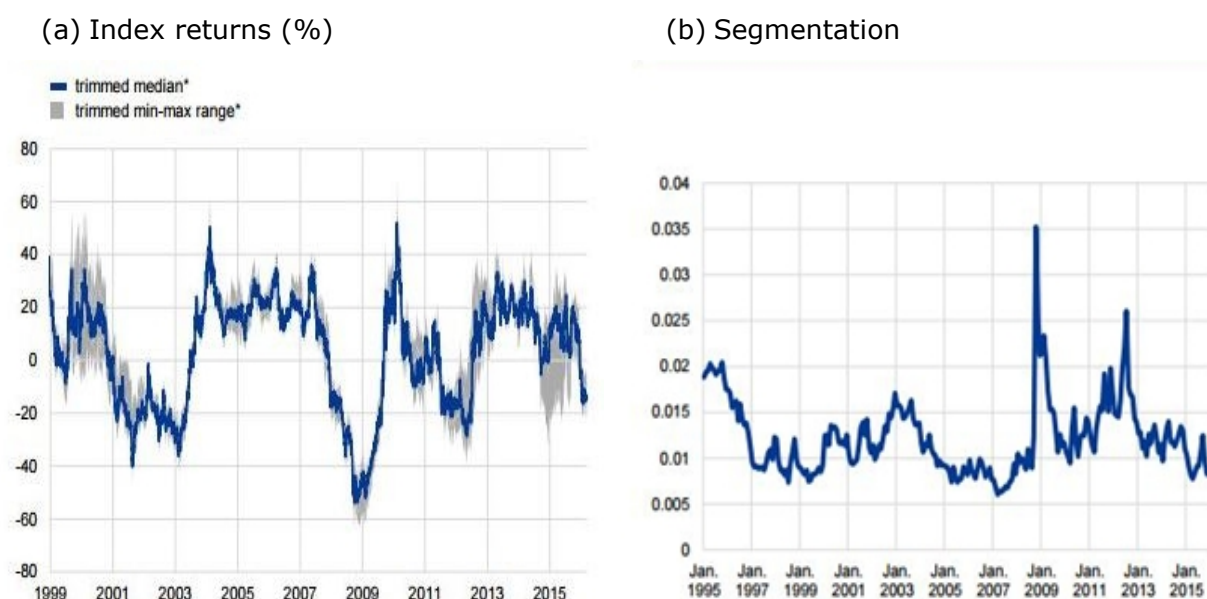


Source: ECB (2016)

2.3. Equity market

Equity markets in the euro area displayed a dynamic rise over the last quarter. Among other reasons, the increase was partially justified by the ECB’s announcement of an expanded large-scale QE programme beginning last March. **However, countervailing factors** such as the uncertainty around the future sustainability and prospects of the Greek economy, turmoil in emerging markets such as in China, general concerns about the world economic outlook, as well as the loosening of the US monetary policy, and the UK vote to leave the EU, **made equity markets continue to fall through 2016, overall highlighting the limited (for now) expected effectiveness of the ECB’s QE in sustaining the euro area recovery.** According to the ECB’s account on the 20-21 of July (see ECB, 2016a), broad stock markets fell on the 24 of June 2016, following the UK referendum’s outcome, albeit recovering their position fairly rapidly.³ The banking shares and bond spreads followed a similar pattern. The effect of a UK withdrawal from the EU on equity markets can be hardly evaluated for now, as markets reactions will largely depend on the extent to which EU-UK negotiations will evolve.

³ Apart from the indices for the UK domestic and corporates and European banks.

Figure 15: Equity market in the euro area

Source: ECB (2016b)

Price-Based Indicators

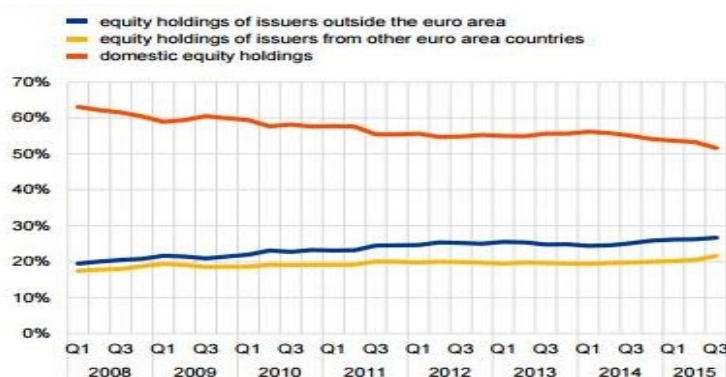
Similarly to bond markets, equity markets enjoyed high levels of convergence in the past (see Figure 15 and ECB, 2011). With the outbreak of the financial crisis, the volatility of equity markets increased, starting to display a significant level of heterogeneity as well. This trend was largely restored after the ECB's OMT announcement in September 2012. Figure 15 (right panel) displays the equity market segmentation in the euro area.⁴ **The level of fragmentation in the euro area in January 2016 was** at the same level as the one observed in January 2005 and 2007 respectively, and in any case **far below the high levels of the 2009 and 2012 periods**. Segmentation has thus continued to fall under the push of the APP.

At the moment, **however, the factors mentioned above, together with the global uncertainty relating to the UK vote to leave the EU, as well as the actual state of the euro area economy** – both economic and financial – seems to **have suppressed any further returns on the euro area equity market throughout 2016**, as these markets have indeed continued to fall.

⁴ According to ECB (2016b) the index measures the average cross-country deviation in sectorial equity valuation levels.

Figure 16: Holding by euro area investors of equities (all sectors)

(Percentage of total holdings)



Source: ECB (2016c)

Quantity-Based Indicators

The percentage of holdings by the euro area investors of equities issued outside and inside the euro area countries started to increase slightly from the early 2015 period. By contrast, domestic equity holdings decreased slightly from around 65% in early 2008 to approximately 52% during the third quarter of 2015 (Figure 16). For the moment, portfolio rebalancing effects are thus not strong.

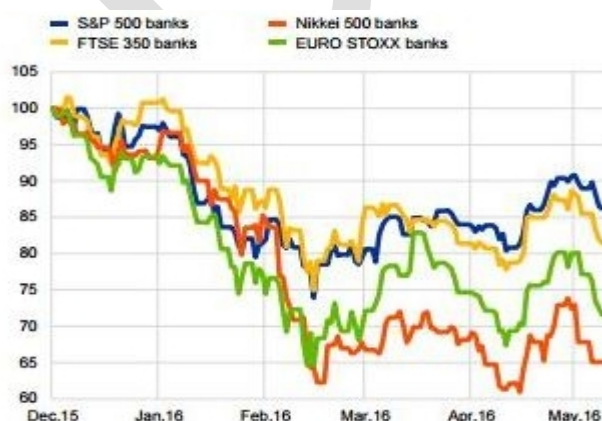
2.4 Banks

Since the global financial crisis of 2008, the euro area banking markets were tested strongly. From Figure 17 below, **banks' profitability faced serious challenges from early 2016. In particular, the EURO STOXX banks underperformed their UK and US peers since last December.** The same trend prevailed in the banks' price-to-book ratios (see Figure 17), where the euro area banks went well below those in the US and, to a lesser extent, in the UK. Potential reasons for a decline of market confidence in the euro area's banking sector are the slow economic recovery outlook, low-interest rates, the prevailing low yield curve conditions, a large amount of unsettled non-performing assets in some euro area countries (see also Gerba and Macchiarelli, 2016), as well as structural challenges of the banking system itself.

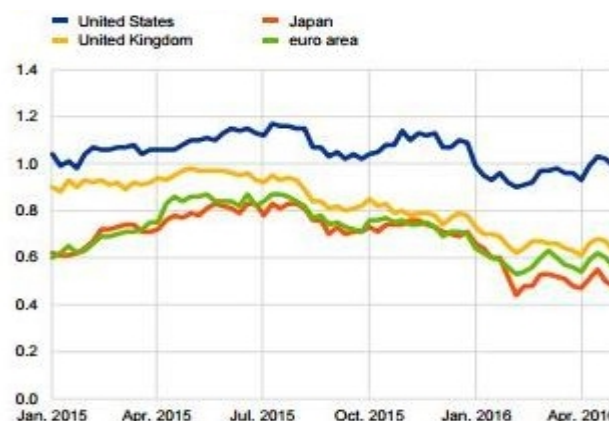
Figure 17: Euro area banks

(Last obs. 13 May 2016)

(a) Equity indices (daily data)



(b) Price-to-book ratios (weekly data)



Source: ECB (2016c)

In addition, the UK leave vote has negatively weighted on the forecasts regarding euro area banks' profitability. More specifically, being many large European banks in London, and given the uncertainty surrounding negotiations, the euro area banks' profitability will risk being at its lowest during the years 2016 and 2017 (see also ECB, 2016b; 2016c).

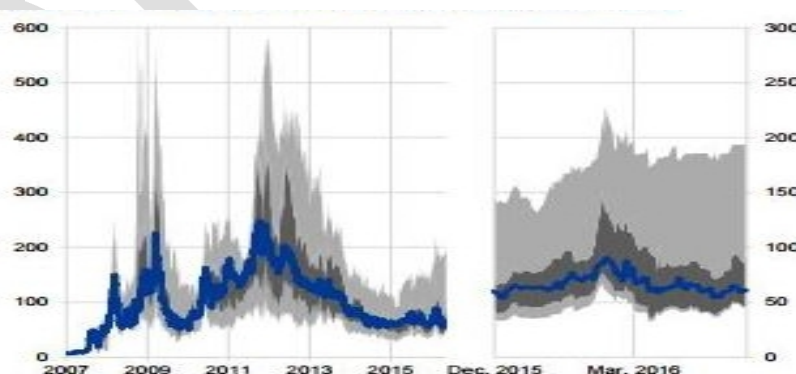
On the upside, the reported increase in the price of sovereign bonds through the APP led to a higher valuation of the assets on banks' balance sheets, thus providing them with a form of capital relief (Andrade *et al.*, 2016). Such a capital relief mechanism appears to have dominated the countervailing effects on banks' margins of the flattening of the yield curve.

In order to assess the extent to which the ensuing reduction in bank leverage can lead to an expansion in lending and support economic recovery, we shall consider price conditions on the retail banking market. **The figures for MFI lending rates to small and medium enterprises show that there are signs that credit conditions are easing overall** (see also Andrade *et al.*, 2016). Lower lending rates for corporates and households (not reported here), also as the result of the aforementioned balance-sheet effect of the euro area government bond yields, suggest indeed a lower fragmentation of the euro area banking system. Overall, however, there is still a high divergence in retail rates in lending in Portugal and Greece, thus having an impact on the real economy and the extent of economic recovery in these countries. **Such large variations in the pass-through of the reduction in the policy interest rate suggest some problems in the transmission of monetary policy.** One reason among all has to do with banks' capital. As suggested in a note by Goldman Sachs Global Investment Research, better-capitalised banks are less likely to incur in losses from new lending, thereby supporting the transmission of the monetary policy stimuli via credit accessibility. At odd in the overall picture of lending rates coming down are Greece and Portugal, where interest rates paid by small businesses haven't declined at all – on the contrary, they increased in 2016.

In this regard, it would be crucial for the ECB to act concomitantly with regulation, as we shall discuss in the next section (see also Gerba and Macchiarelli, 2015). Another issue may lie in the current approach to resolution in the European Banking Union's design. These and other concerns about euro area bank profitability seem aligned with the increased volatility in credit default swaps (CDS) signalling indeed increased probabilities of credit risk in the near future (Figure 18).

Figure 18: CDS spread for a sample of large euro area insurers

(Last obs. 13 May 2016, basis points, senior debt, 5-year maturity)



Source: ECB (2016b)

3. CRISIS, CRISIS-MANAGEMENT, AND AVAILABLE INSTRUMENTS

3.1. The expected effect of Banking Union

There are two important steps in the European governance framework that are likely to affect financial integration in the future. The first is the agreement on a Banking Union for Europe, the second is the idea of a European capital market union. In this section, we focus on the former.⁵

It is well known that the idea of the Banking Union (BU) covers a preventive stage (i. Regulation and Supervision) and a crisis management stage (ii. Resolution and iii. Safety Nets). Albeit we will not discuss the whole details of the Banking Union here (for a discussion see European Commission, 2012; IMF, 2013b; Macchiarelli, 2016), the reason for considering the BU in this context is that it introduces, for the first time, an integrated approach in supervision and resolution of European banks, having important consequences for financial integration itself.

Although significant measures have been taken in this respect towards the limitation of solvency issues and moral hazards, with the establishment of the first steps of the Banking Union, the Single Supervisory Mechanism (SSM) and a Single Resolution Board in particular, **the profitability of the banks does not seem to be substantially affected as it continued to largely decrease** (see the previous section). Chiefly this is because the current stall in the agreement on resolution (i.e. the second element of the Single Resolution Mechanism, the Single Resolution Fund) and safety nets are negatively weighting on the future of European banks, leaving the so-called sovereign-banks “deadly embrace” intact. A common fiscal approach could reduce the pressure of financial fragmentation and it is thus worrisome that the resolution and safety-nets elements of the Banking Union, including a euro-area wide deposit insurance scheme for bank deposits, have been sidelined during the early stages of the negotiations, or are not likely to be implemented before 2024 –e.g., the Single Resolution Fund. **The current approach to an “incomplete” union** (Posner and Véron, 2014) **would thus not help reduce the observed “home bias” in the bond market segment** (see also Valiante, 2015), **rather leading to further uncertainty, domestic risk shifting and possibly further financial instability.** This is true particularly since the decision-making process for resolving a bank remains, within the current BU framework, quite cumbersome – and the resolution funds national (until 2024).

A second - not less important - problem with the current approach to the BU is that it minimizes the importance of cross-border externalities of bank failures across the EU. For instance, the UK’s vote to stay out of the EU will leave both the EU and the UK in uncharted waters, given the large presence of important European banks in London (Macchiarelli, 2016). This will create a challenge going ahead, particularly on the issue of giving guarantees to or resulting banks which are of systemic importance in both economic regions.

Certainly, the current bail-in provisions, together with the novel ECB’s role in banking supervision are likely to help continue bringing down financial fragmentation. However, particular attention should be given to a fragility-prone system that an “incomplete” BU creates. All in all, the BU is a positive development in addressing fragmentation of the euro area financial system. It remains unclear how swift and successful the Banking Union process will be (some comments are warranted in the next subsection).

⁵ For a comprehensive discussion see the European Commission’s “European Financial Stability and Integration Review (EFSIR): A focus on Capital Markets Union” of April 2016. Available at: http://ec.europa.eu/finance/financial-analysis/docs/efsir/160425-efsir-2016_en.pdf

3.2. Policy recommendations

Despite the ECB recently increasing its provision on forward guidance, markets have not fully normalized, lending to the real economy has not fully recovered, and a “core-periphery” divide in both risk perception and lending patterns is emerging. In addition, banks in “core” countries heavily relying on domestic sovereign debt may affect risk perceptions of the euro area as a whole.

A possible set of exceptional measures for financial intermediaries should be considered, imposing **regulations on domestic sovereign exposures on bank balance sheets**, foremost reducing the “home bias”. Corsetti *et al.* (2015), for instance, recently proposed that banks should only be allowed to apply the zero risk weight to government debt if they hold sovereign bonds of different countries in proportion to, e.g., each country’s national GDP. This would help reduce banks’ incentive to bring about a sovereign debt home bias, even if a general incentive to over-rely on national sovereign debt would remain (Horváth *et al.*, 2015).

The scope for using regulation and supervision to pressure banks to reduce their home bias could also be reduced by transferring bank regulatory and supervisory powers to the European level. An important step in this direction (and given the absence of full mutualisation of APP purchases) would be the full establishment of a European Resolution Fund and European deposit scheme. **It will thus be important to accelerate the process to a complete Banking Union or anyway leave as little uncertainty as possible during its transition.** This would tackle (even if partially) one of the most urgent legacy problems at the euro area level: the lack of fiscal mutualisation (see also De Grauwe, 2016). Alternatively, a federal sovereign-debt restructuring mechanism could also be conceived, but the latter would clearly be beyond the ECB’s will (for a comprehensive discussion see Fuest and Peichl, 2012).

SSM/ECB’s **coordination with national regulators and supervisors will also be necessary.** Macro-prudential policy, as we described in an earlier note, are crucial in order to maintain excessive risks from building up, and from avoiding a (possible) systemic crisis. The ECB/SSM or national supervisors should not be afraid of triggering these policies if indicators show that speculation is overtaking the markets. To the same token, given the existing imbalances within the euro area, and country-specific issues on banks’ capitalization possibly present in some countries, it would be crucial for the ECB to act concomitantly with national regulators and coordinate with micro-prudential policies (see also Gerba and Macchiarelli, 2015). Several studies, e.g. Klomp and de Haan (2015) more recently, examined the bank regulation and financial stability link in developing countries, suggesting that stricter bank regulation and supervision decrease banking risk. Measures normally used in the literature for assessing banking risk are the number of NPLs, the Z-score - defined as the number of standard deviations by which bank returns have to fall to exhaust bank equity - or the volatility of return on assets. These type of measures could be useful in assessing and measuring euro area banking risk (especially the risk of smaller banks) and in coordinating national and super-national policies.

On top of Banking Union, another reform acting in the direction of strengthening and incentivising private risk sharing mechanisms through credit and capital markets would be the Capital Markets Union, as proposed by the Five Presidents’ Report. The latter would reduce fragmentation, enabling “safe” platforms for risk sharing.

As suggested by IMF (2013a), **the ECB could take further action to support flows of liquidity to weak banks with a targeted review of existing collateral policies**, including to lower haircuts on certain assets. The Eurosystem’s APP, together with regulatory requirements encouraging banks to hold high-quality collateral, have led to a situation where liquidity chases few assets, requiring more and more MFIs to optimise their collateral use and recycle high-quality collateral (Ferrari *et al.*, 2016). Ferrari *et al.* find in particular that ECB’s public sector purchase programme (PSPP) has had a significant - albeit marginal - impact on sovereign collateral scarcity premia. The latter effect has been

offset by the beginning of the ECB securities lending programme, making the securities purchased under the PSPP available for securities lending in a decentralised manner by the Eurosystem. A directed review of existing collateral policies could thus be an integral part of the option of liquidity provision, particularly given the pressures on system collateral and the strains of banks' balance sheets in some euro area countries.

As Gerba and Macchiarelli (2015) have reminded, **temporary measures for financial intermediaries aimed at incentivizing banks to remain on the European capital markets, releasing some of the bond supply, and engaging in private lending could also be adopted.** Examples of such measures could be to temporarily expand the list of eligible European assets for Tier I or II capital, to temporarily relax the liquidity requirements in order to allow intermediaries to go more into illiquid European alternatives and release some of their (more liquid) bonds, or to provide a State guarantee for investments into national corporate/private bonds.

The ECB should continue, together with its asset purchases, TLTROs contingent on the provision of new lending to SMEs, directly supporting credit to this sector and improving the quality of banks' assets. For this to prove effective, the costs to access the scheme must be less than alternative funding costs. Given the funding costs are falling quite slowly, particularly in the "periphery", lower haircuts (discussed above) could be considered at the same time (see also IMF, 2013a).

Finally, despite an increased financial integration in both price and quantities overall, it is still unclear what the driving factors behind the observed improvements really are. It remains of paramount importance to reduce the underlying financial risks in the economy, not only through a broader supervisory and banking framework but also through macroeconomic policy coordination. Through the APP, the ECB's role should be understood as instrumental to boost confidence. By removing market pressure, **QE would give indeed countries a window of opportunity to do the necessary investment and reforms to spur and rebalance growth, but it could not act as a substitute for structural restructurings;** a vision endorsed by IMF (2016a), as well as the French Central Bank governor and the ECB Executive Board's Peter Praet, among others. IMF (2016a), suggests, in particular, to give special importance to structural reforms, encouraging at the same time investment and growth, and enhancing fiscal governance. **Given the little fiscal space left in many "vulnerable" countries, however, this should happen within a joint monetary-fiscal stimulus, where – recognizing the existing asymmetries – the ECB's support could create the needed room for reforms** (see also Gerba and Macchiarelli, 2016).

CONCLUSIONS

After the OMT and Banking Union announcements, financial integration is resuming after the crisis, albeit it now remains well below pre-crisis levels. The APP has generally granted a continuation of this (positive) trend. Despite these positive developments, there are some indications of financial markets not being completely at ease, particularly in some market segments. The analysis presented here shows that one of the most impelling questions has to do with a “core-periphery” divide materializing (i) in the extent of liquidity deposits, “home bias” at the core of the Eurozone, and banks’ lending rates. Further, equity markets continuing to fall through 2016 highlight the limited (for now) expected effectiveness of the ECB’s QE in sustaining the euro area recovery, against European and global countervailing factors, despite a reduced fragmentation achieved in this market. In the last section, we discuss some of the policy measures that may assist in reducing this fragmentation. All in all, beyond monetary policy specific measures (e.g. lower haircuts on collateral of weak banks) the euro area should speed up the process of mutualization, including the transition to a complete Banking Union, and recognize the disparities existing within, by enabling “peripheral” countries to find the fiscal and political space they need in order to implement reforms.

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