

# FINANCIAL MARKET FRAGMENTATION IN THE EURO AREA: STATE OF PLAY

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## EXECUTIVE SUMMARY

This paper provides a summary account of financial market integration in the Eurozone. It looks at the aggregate level as well as in the interbank, sovereign debt, corporate debt and retail markets. We describe the following process:

- After the inception of the euro, there was a period of increasing financial integration and augmented cross-border positions from the core to the periphery. The 2008 crisis and the subsequent sovereign bond crisis in the euro area then resulted in a quick reversal of capital flows from the periphery to the core.
- This sharp reversal of capital flows from distressed countries to the core had its origin in a quick re-nationalization of bank cross-border exposures. As investors perceived a higher risk in several countries, yield spreads widened accordingly. After the ECB announcement of the OMT in 2012 there was a gradual and often fragile decline of financial market fragmentation across all markets since 2012.
- Today we are in an intermediate situation, where we see signs of continuing convergence in some markets, while divergence persists in others.

During the crisis, the most important interest rate and credit channels of monetary policy were impeded. Given that European Financial Markets are more reliant on bank based financial funding than direct market funding, the result of these differences was a difference in lending rates for banks as well as corporate actors across the Euro Area. As a consequence, financing conditions varied across the EA with some pro-cyclical implications in certain regions.

In the discussion about financial market fragmentation, the following main aspects call for specific attention.

- The euro-area is particularly prone to deleveraging due to foreign risk exposure and denomination risks. This is mainly due to the absence of a European risk-sharing mechanism, which could prevent the bank/sovereign nexus.
- Partial guarantees can mitigate this nexus, but as long as there is no real risk-sharing (e.g. via a common deposit insurance mechanism and/or common resolution funding and/or common backstop), default risk in both banks and sovereigns can give rise to self-fulfilling speculative attacks.

In order to deal with the risks linked to financial market fragmentation, we call for a continuing risk reduction on the national level in order to enhance the banking union project. Further risk reduction is a necessary condition for further risk sharing on the European level. As long as national insurance schemes are tied to the solvency of their governments, banking crises have still the potential to threaten governments. To counter capital flight to safe havens, we present proposals for risk sharing among European deposit insurances such as a re-insurance mechanism or even well-designed lending arrangement between national schemes.

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## LIST OF ABBREVIATIONS

CDS	Credit Default Swap	ESM	European Stability Mechanism
DGS	Deposit Guarantee Schemes	EU	European Union
EA	Euro Area	EURIBOR	Euro Interbank Offered Rate
EC	European Commission	MFI	Monetary financial institutions
ECB	European Central Bank	OMT	Outright Monetary Transactions
EDIS	European deposit insurance scheme	SRF	Single Resolution Fund
EMU	European Monetary Union	SRM	Single Resolution Mechanism
EONIA	Euro Over Night Index Average		

## INTRODUCTION

While some level of economic heterogeneity, such as diverging GDP or inflation, is deemed to be normal in a currency area, financial fragmentation can pose more fundamental problems. Indeed, if economic agents in a monetary union do not have the same kind of access to credit this can hamper central banks effectiveness in conducting an appropriate monetary policy. In the Euro Area (EA) financial fragmentation can lead to an unequal transmission of the European Central Bank's (ECB) monetary policy (Cœuré, 2014; Ehrmann, M., and Fratzscher, M., 2015). Uneven credit flows can also increase the risk of perpetuating divergences inside the monetary union, and thus lead to a possible aggravation of crises for banks, governments and the real sector in the context of a sudden reversal of flows and/or deleveraging processes. While ECB President Draghi recently stated that *“while in the previous time we had observed fragmentation and we had observed very subdued credit developments, nowadays we can safely say that fragmentation is over”* (ECB Press conference, 8 September 2016, see Draghi M. 2016), the empirical evidence supporting this statement is not univocal.

This paper presents some evidence of fragmentation, assesses the implications and risks resulting from persistent fragmentation of EA financial markets and discusses possible policy options. It is structured as follows. The second section presents a diagnosis of financial integration and disintegration in the EA. The third section discusses the relevant factors for financial fragmentation and a discussion of policy solutions follows in the fourth section.

## 1. Diagnosis

” INTEGRATION IS SUPPOSED TO BE ACHIEVED WHEN ALL ECONOMIC AGENTS FACE IDENTICAL RULES AND HAVE EQUAL ACCESS TO FINANCIAL INSTRUMENTS OR SERVICES”

Financial fragmentation is generally defined as a disintegration process. Integration in EA financial markets is supposed to be achieved when all economic agents face identical rules and have equal access to financial instruments or services in these markets (Baele, L., et al., 2004). As an example, on the corporate bond market financial fragmentation would be defined as the differences in spreads between two securities, otherwise similar in terms of their risk characteristics (Horny, G., et al., 2016).

This section reviews the timeframe and main lessons from the EA crisis and considers four important markets (interbank, sovereign bond, corporate debt and retail markets). It assesses the development of financial fragmentation between periphery and core countries of the EMU.

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**BOX 1 ► Why does Financial Fragmentation Matter for Monetary Policy?**

Compared to the United States, European Financial Markets are more reliant on bank based financial funding (Bijlsma, M. J., et al., 2013) and, consequently, credit provision is particularly important for EMU financial markets. Financial fragmentation therefore poses a particular problem as it hinders credit provision according to actual risk characteristics and adds up risk premia resulting in unequal access to credit depending on national financial conditions. Monetary policy changes aim either at stimulating or at easing of the economy and the policy rate choices made by the central bank are impacting economic conditions through a multitude of different channels.

In particular, the high stress linked to sovereign markets in peripheral countries has impeded the traditional interest rate channel\* of monetary policy, while high stress on interbank markets has impaired the credit channel\*\* (Laeven, L. et al., 2013).

The results have been different lending rates for banks as well as corporate actors. However, given that the ECB cannot carry out regional monetary policy in the single currency area, its monetary policy choices have been necessarily pro-cyclical in some countries of the EA. Some countries would have needed more monetary stimulus but receive enough and vice versa. As investors shy away from risk in peripheral countries, banks in the periphery have to offer higher deposit rates to attract funds (see also Figure 3). Without the necessary capital buffers, credit risk remains high due to a consistently bleak economic outlook leading to high lending rates despite low policy rates (Laeven, L. et al., 2013). Thus, monetary policy risks becoming ineffective in some countries, as the main transmission channels risk of losing their efficiency on the aggregate level.

\* The Interest-rate channel is the traditional link between the interest rate, savings and investment. It works through short-term interest rates that affect the cost of capital and overall spending.

\*\* The credit channel works via an effect on bank's balance sheets. By lowering the interest rate, credit supply is stimulated as banks shift around their balance sheets.

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## 1.1. Overview

From the introduction of the Euro in January 1999 onwards, the European Economic and Monetary Union (EMU), driven by the interbank and sovereign bond markets, seemed to be on track and headed towards continuing financial integration. Figure 1 shows the development of two composite indicators for measuring financial integration developed by the ECB. A higher value indicates higher levels of financial integration. Both the price- and quantity based indicator show a three-phase development starting with the introduction of the euro.

Until the start of the subprime crisis in the United States, financial integration increased. This came alongside increased foreign exposure, particularly from the core to the periphery.

The succession of crises from the burst of the housing bubble in early 2006 and the subsequent spill-over to the banking system with the Lehman Brothers collapse in September 2008 to the start of the EA sovereign debt crisis in early 2010 was accompanied by a phase of financial fragmentation. Financial integration sharply receded and reached its lowest point in July 2012. Battistini *et al.* (2013), find that, when systemic risk increases, all banks tend to increase the home bias of their portfolios, therefore reducing foreign exposure. The sovereign bond crisis in the EA caused a sharp disruption in euro area financial markets eventually leading to a sharp reversal of capital flows from distressed countries to the core. Furthermore, there was a powerful process of re-nationalization of bank cross-border exposures that also took place. As investors perceived a higher risk during "bad times", because of bank vulnerabilities and the possible need for a government rescue (which would subsequently increase public debt and sovereign risk) yield spreads widened accordingly (Gerlach *et al.*, 2010, De Grauwe and Ji, 2013)<sup>1</sup>. This phenomenon is called the bank-sovereign nexus.

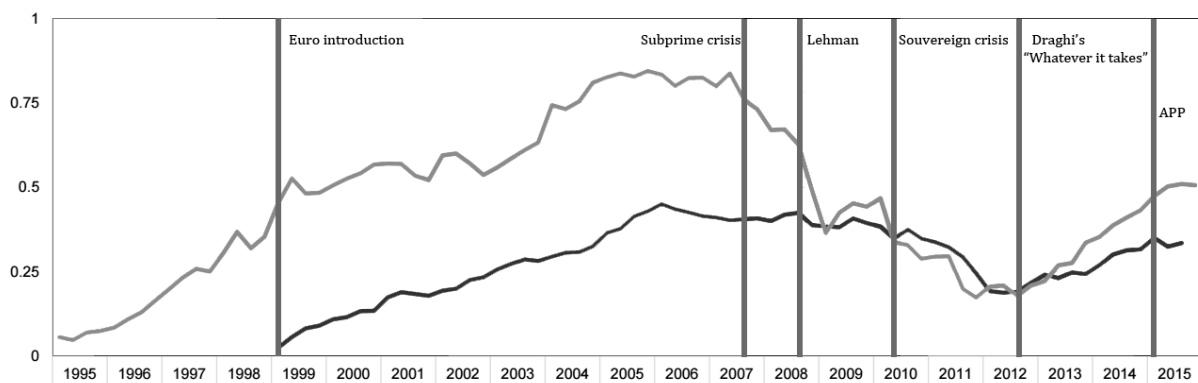
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1. Sovereign exposure goes beyond the debt variable as it also depends largely on national legislation such as foreclosure regulations, for instance.

To break this doom loop and halt financial market fragmentation, the ECB took several measures, but ultimately decided to repair the monetary transmission mechanism. On July 26, 2012, ECB President Draghi announced to do “whatever it takes” paved the way for the outright monetary transaction programme OMT.<sup>2</sup> This has led to gradual receding of fragmentation across all markets since 2012. Today we are in an intermediate situation, where we see signs for continuing convergence in some markets, while divergence persists in others.

Figure 1 shows financial integration on the basis of the ECB’s composite indicator of different markets. While this indicator might hide that integration was uneven among countries, it still very well illustrates the key dynamics. Before the crisis, Baele, L., *et al.* (2004) analysed price and yield differences and examined the response of asset prices in individual countries to common factors. They found money markets to be the most integrated, followed by government bond markets, corporate bond markets and equity markets. They only observed relatively high price differentials in the banking/credit markets. While disparities among markets remained relatively low or even receded during the pre-crisis phase, the phases during the crisis and post-crisis phases markets were characterized by continuing and increasing heterogeneity. 2012 is a major date in the financial integration process as the crisis trend starts to reverse.

**FIGURE 1** ▶ Price-based and quantity-based Financial Integration Composites (FINTECs) - (Financial integration indicator)



Note: The price- and quantity-based FINTEC indicators cover money, bond, equity and banking markets. The basis for the calculation of price- and quantity based indicators are price dispersion and cross-border holdings respectively. Higher values signal a higher level of financial integration. For more information on the methodology used see European Central Bank (2016).

Source: ECB

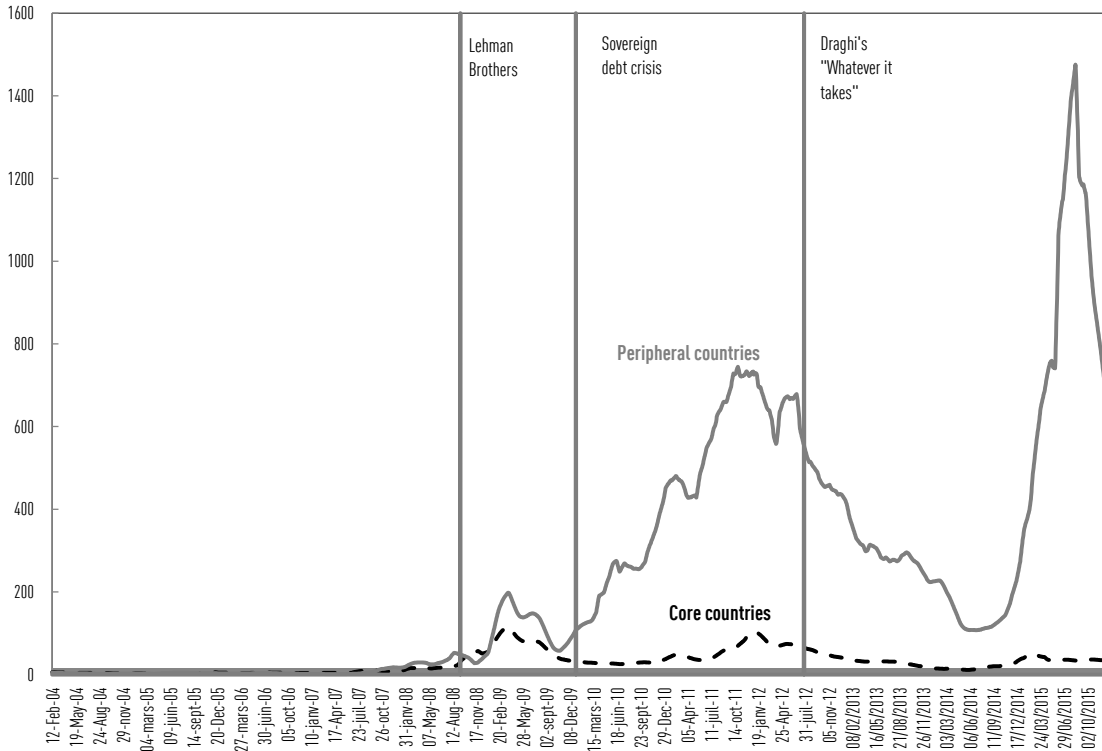
## 1.2. Interbank markets

”FRAGMENTATION APPEARED FIRST IN THIS VERY SECTOR AND THEN SPREAD TO THE SOVEREIGN MARKETS”

When zooming in on the interbank market, we can confirm this three-phase development identified at the aggregate level. The banking sector is of particular interest, as according to Abascal M. *et al.* (2013) fragmentation appeared first in this very sector and then spread to the sovereign markets. During the pre-crisis phase secured and unsecured lending rates to banks aligned among EA countries, and there was little differentiation of bank Credit Default Swaps (CDS) spreads across countries. Figure 2 shows this development. The standard deviation of banks’ Credit Default Swap (CDS) premia, was still very low during this phase. However, it led, in particular, to a rapid growth of banks’ foreign exposures, especially from the core to the periphery, building up large external imbalances. The latter would become a key challenge during the sovereign debt crisis. There is clear divergence between the periphery and the core starting in the beginning of 2010, and a second peak in June 2015 around the time of the Greek Referendum.

2. Although the details of the OMT programme were only announced on September 6, 2012, the idea to address excessive sovereign risk premia was announced in Draghi’s “Whatever it takes”-speech on July 26, 2012. We follow the argument of Al-Eyd, M. A. *et al.* (2013) that markets began to price in the potential for ECB measures already in July and take July 26, 2012 as the de facto introductory date of OMT.

**FIGURE 2** ▶ Standard deviation of banks' CDS premia by country group (Basis points)



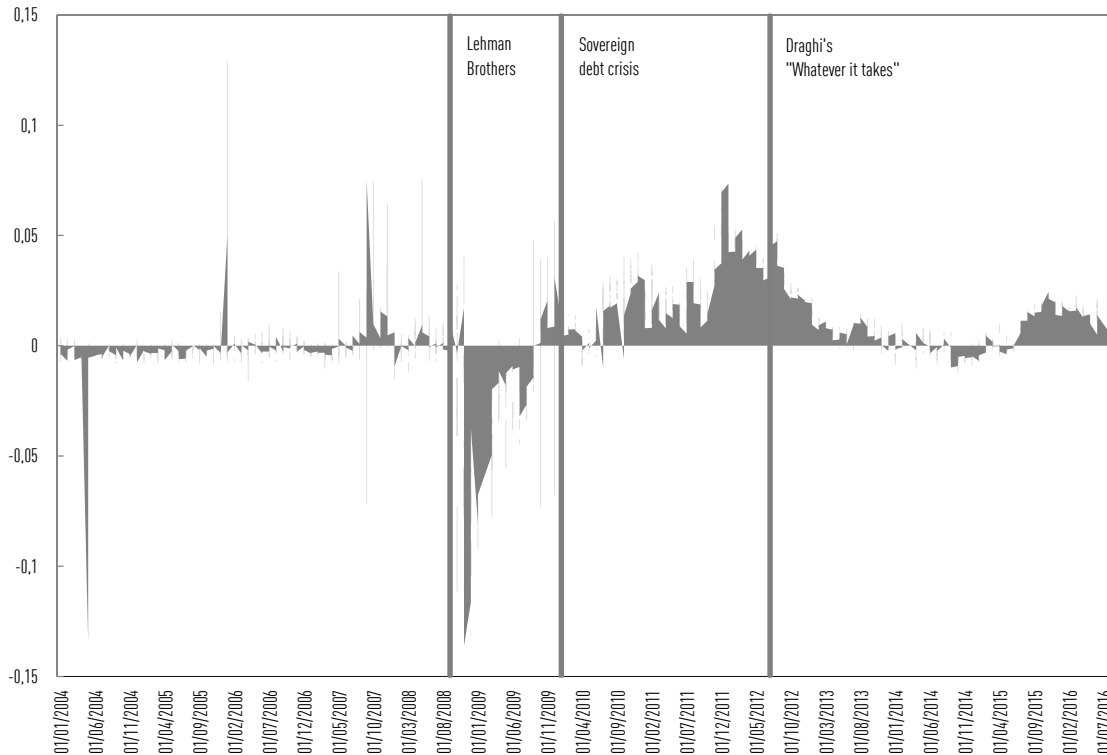
Note: Core countries: Austria, Belgium, Germany, France and the Netherlands. Peripheral countries: Spain, Greece, Ireland, Italy and Portugal.

Source: Authors based on ECB

Figure 3 assesses this development from a different angle. It shows a decomposition of the EURIBOR panel banks according to bank nationality. Next to EONIOA, EURIBOR is the main interest rate defining interbank lending and retail market conditions, as many lending and deposit conditions for small private agents depend on EURIBOR. By computing the difference between peripheral countries and core countries in the panel, we assess the risk premium that banks assign to each other. Thus, a positive value indicates that periphery banks offer higher interest rates compared to the core. The higher the amplitude, the bigger the interest rate divergence in between core and periphery banks in the EURIBOR panel.

Given that EURIBOR only takes into account prime banks, the cross-country dispersion is relatively small (European Central Bank, 2016). However, there is a clear indication for an additional risk-premium for core-country banks after Lehman Brothers, while at the beginning of 2010, periphery country banks have to pay higher interest rates for their own refinancing. Given the implications for retail loans, the development during the sovereign debt crisis from 2010-2012 is particularly worrying as it means that credit conditions before the ECB intervention varied greatly between the periphery and the core.

**FIGURE 3** ▶ Difference (periphery – core) in average yields offered on the interbank market for 3-month loans, representative country banks in the EURIBOR panel. (In percentage point difference)



Note: Core countries: Austria, Belgium, Germany, Finland, France and the Netherlands. Peripheral countries: Spain, Greece, Ireland, Italy and Portugal.  
 Reading: If positive, periphery banks offer higher yields (e.g. represent a higher risk) to another bank of the EURIBOR panel.

Source: Author calculations, based on European Money Markets Institute

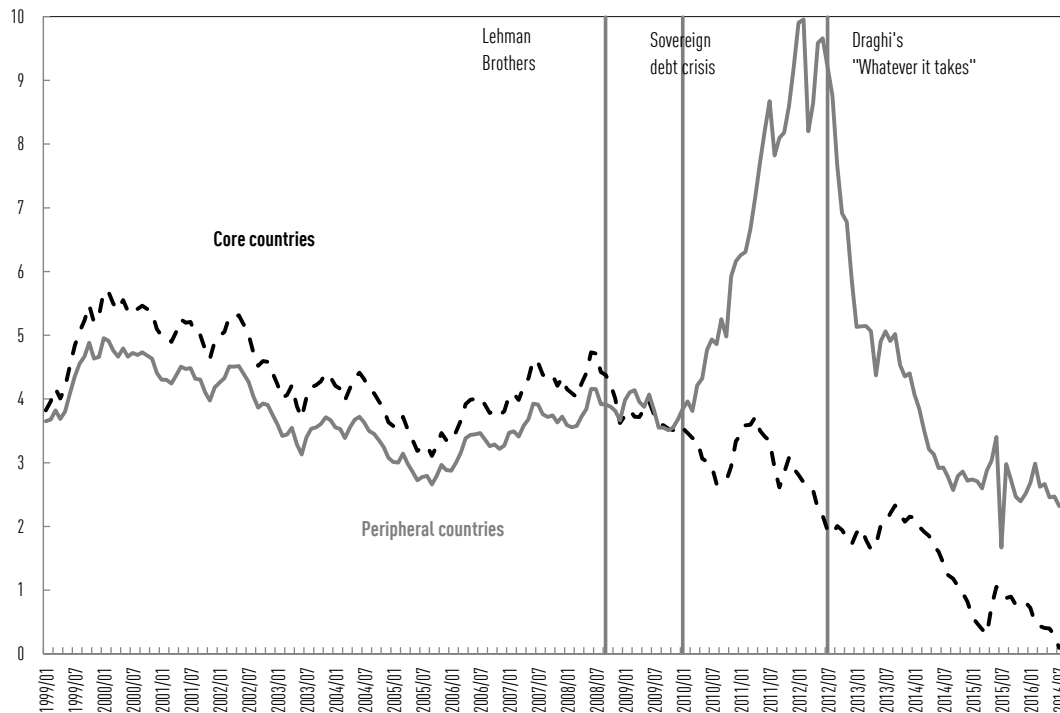
### 1.3. Sovereign markets

On the sovereign bond market the pre-crisis integration process manifested itself through low spreads across countries and a high degree of co-movement between all euro area countries (Ehrmann, M., and Fratzscher, M., 2015). The first signs of fragmentation appeared in 2010.

Figure 4 depicts the average interest rate paid on a 10-year bond on the sovereign bond market for core and periphery countries. In line with the literature there is clear co-movement of interest rates before January 1, 2010. If at all, the Lehman Brothers bankruptcy seemed to have a positive effect on the convergence of interest rates. However, starting in 2010, fragmentation became evident, peaking shortly before Draghi's announcement of this measure in mid-July 2012. The effectiveness of OMT on the sovereign bond market is clearly visible. Having said this, even though the OMT considerably dampened peripheral countries' interest rates, there still is a consistent gap between the periphery and core in yields averaging 1.9 percentage points.

3. For the list of banks contributing to the panel see <http://www.emmi-benchmarks.eu/euribor-org/panel-banks.html>

**FIGURE 4** ▶ Average yields on 10-year sovereign bonds (In percent, denominated in Euro)



Note: Core countries: Austria, Belgium, Germany, Finland, France and the Netherlands. Peripheral countries: Spain, Greece, Ireland, Italy and Portugal.

Source: Authors based on ECB

## 1.4. Corporate bond markets

The corporate bond market was no exception during the pre-crisis years and experienced comparable developments. Horny, G., et al. (2016) analyse corporate market fragmentation by taking the German bund as a reference. Fragmentation appeared at the height of the euro area sovereign crisis in 2011 and 2012 and became particularly apparent for Spain and Italy. It immediately declined after the announcement of OMT but while it has gradually receded since then, in June 2015, corporate bonds issued in Italy and Spain still had yields around 50 basis points higher than their German or French counterparts.

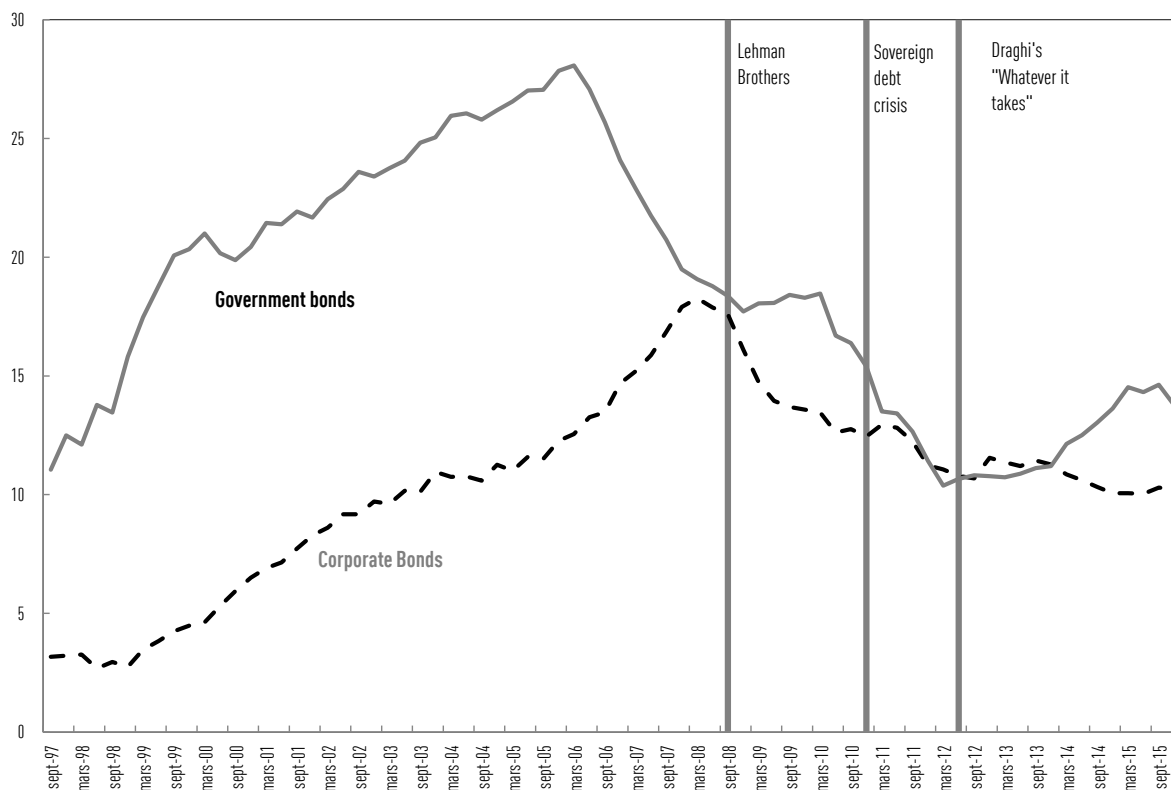
”FROM 2010-12 ITALIAN, SPANISH AND PORTUGUESE FIRMS PAID AN ADDITIONAL PREMIUM, WHILE GERMAN FIRMS RECEIVED A DISCOUNT ON THEIR CORPORATE DEBT”

De Santis, R. A. (2016) argues that fragmentation in the corporate debt market rose sharply after the Lehman bankruptcy in 2008 and again after 2010. Pianeselli, D., et al. (2014) estimate risk premia of non-financial long-term corporate bonds from 2005-2012. Their findings confirm that the financial crisis increased the costs of funding for all corporate bonds, but the successive sovereign debt crisis created an additional fragmentation between German firms and their peripheral counterparts. That latter study estimates that from 2010-12 Italian, Spanish and Portuguese firms paid an additional premium of between 70 and 120 basis points on average, while German firms received a discount of 40 basis points on their corporate debt.

Gilchrist, S. et al. (2014) build a spread index for EA banks and non-financial corporate issuers showing that since 2010, credit spreads for both financial and non-financial firms increasingly reflect national rather than euro area financial conditions. This is in line with the literature, which acknowledges the sovereign-bank loop during “bad times”.



**FIGURE 5** ▶ Share of MFI cross-border holdings of debt securities issued by euro area and EU corporates and sovereigns (In percentage, other Euro area, domestic excluded)



Source: Authors based on ECB

Figure 5 exemplifies this movement by showing the percentage of cross-border holding in debt securities in non-domestic markets. We see a sharp decline of the part of cross-border debt security holdings both for sovereign and corporate bonds, which accelerated during the Lehman Bankruptcy in 2008. From 2008-2011 the share of MFI cross-border holdings of debt securities dropped by nearly 10 percentage points, exemplifying the increased home-bias due to the successive crises.

## 1.5. Retail markets

During the pre-crisis period the good conditions on the sovereign and interbank markets translated into converging interest rates among EA countries on the retail markets, e.g. deposit and lending rates provided to smaller private entities (Laeven, L. et al., 2013).

However, during the crisis-phase frictions appeared. Al-Eyd, M. A. et al. (2013) look at the interest rates on retail markets and find that credit is more expensive in the hardest hit economies and leads to continuing fragmentation even after the improved financial conditions provided for by OMT.

Thus, the worsening of conditions on the distinctive financial markets finally translated into unequal access to credit not only for sovereigns, banks and corporates but also small lenders.

## 2. Why did this happen?

The previous section laid out a diagnosis of financial fragmentation in the EA. When taking a step back and assessing the developments of financial fragmentation the pattern becomes clear. Starting with a period of increased financial integration and augmented cross-border positions, notably from the core to the periphery, the 2008 crisis and the subsequent EA crisis resulted in a quick reversal of capital flows from the periphery to the core. Especially banks were keen on reducing risk exposure, as suddenly the risk of default was perceived as high. The decomposition into national banking system risks resulted in a higher likelihood of adverse developments triggering large aggregate losses. Adding to that the bank-sovereign nexus, this home bias led to financial fragmentation in several markets. Only the intervention of the ECB in July 2012 and the successive OMT programme brought this process to a halt. However, financial market conditions, whether on the sovereign debt market or the interbank market, have still not reached pre-crisis levels. The deleveraging process and risk reduction that started after the Lehman Brothers crash in 2008, and the resulting financial fragmentation can be explained by both structural and cyclical forces (Laeven, L. et al., 2013). This section summarizes the scarce literature available on the factors at the origin of financial market fragmentation.

### 2.1. Deleveraging and risk reduction

Given the increased interconnectedness of EA banks and the growing engagement of core banks in periphery countries, a worsening of economic conditions had strong effects on banks' asset positions. Banks had to reassess counterparty risks, which increased their funding costs, particularly for periphery countries (Al-Eyd, M. A. et al., 2013; Laeven, L. et al., 2013; Abascal M. et al., 2013).

This repricing of risks in between core and periphery countries depended largely on country-specific factors. Banking sector openness became a key variable (Abascal M. et al., 2013), as the outward moving capital flows were particularly strong in peripheral countries characterized by a high degree of foreign exposure.

Thus, this process led to capital flight from potentially exposed countries to the core. The underlying reason for deleveraging and risk reduction can be found in the so-called bank-sovereign nexus.

### 2.2. The bank-sovereign nexus

EMU entered the crisis as a single currency union without a meaningful supranational risk-sharing mechanism. This institutional setting resulted in cyclical factors affecting EMU member countries differently – without any buffers absorbing those differences. A homogenous exogenous shock hitting the entire single monetary area thus could trigger heterogeneous reactions among EA countries financial markets.

During the height of the sovereign bond crisis the assessment of default risks on debt obligation varied greatly among EA countries. As described by Lane (2012) this gave rise to self-fulfilling speculative attacks. Increase in default risk perceptions pushed investors to demand higher yields, which in turn made default more likely.

”A EUROPEAN RISK-SHARING MECHANISM WOULD LOWER THIS DEFAULT RISK FACTOR AND INTRODUCE AN ADDITIONAL SAFETY NET”

A European risk-sharing mechanism would deal with this heterogeneity by lowering this default risk factor and introducing an additional safety net<sup>4</sup>. While the EA has a common currency, regulation remained a national responsibility. Thus, it was up to individual government to bear the risks of a banking crisis, including the direct fiscal costs resulting from recapitalization and the indirect fiscal costs stemming from lower GDP and tax reve-

4. As all mutualisations of risk, this can pose significant problems of moral hazard, e.g. free riders might profit from an implicit bailout guarantee. We fully recognize this challenge but can't enter into the discussion on how to prevent moral hazard.

nues (Lane, 2012). Additionally to these broader implicit guarantees, e.g. bailouts, banks are also linked to sovereign markets via deposit insurance and resolution funding. Sovereigns, in return, are linked to banks via sovereign debt portfolios. Furthermore, the bank-sovereign nexus is exacerbated by other factors, such as ownership and corporate governance, supervisory characteristics, entry barriers, tax and regulatory privileges, and other similar phenomena. Overall, if some EU countries had so much difficulty to borrow, this was clearly due to the bank-sovereign nexus. Some sovereign markets became illiquid and there were massive moves in spreads as default probabilities increased.

To illustrate the problems linked to the absence of a European risk sharing mechanism we consider the “credit spread puzzle” on the corporate bond market, which describes the fact that spreads on corporate bonds tend to be much wider than the expected default losses. In fact, less than 50% of the variation in corporate bond credit spreads, e.g. the difference between yields on corporate debt and government bonds, can be attributed to the financial health of the issuer (Gilchrist S., et al., 2012; Elton et al. (2001). As described by Gilchrist S. (2012) the literature has shown that the “variation in spreads appears to reflect a kind of liquidity premium, tax treatment of corporates, and most importantly, a default-risk factor capturing compensation demanded by investors”. Numerous authors have tried to estimate this “excess bond premium” and find that it provides a useful indicator for credit-supply conditions (Gilchrist, S., et al. 2014, Gilchrist et al., 2012, Bleaney et al., 2012). Via the financial accelerator mechanism<sup>5</sup>, e.g. the credit channel of monetary policy transmission (see Box 1), an increase in the excess bond premium causes a drop in asset prices and a contraction in economic activity as credit conditions worsen. As the variation in corporate bonds depends heavily on this factor, credit conditions worsened in distressed countries relatively to the core<sup>6</sup>. Thus, the sovereign debt crisis created an additional fragmentation between peripheral firms and their counterparts in the core.

Against this background, it can easily be understood why the creation of the European Banking Union was a response to the bank-sovereign nexus.

### 3. Policy: towards further integration

”THERE ARE TWO  
OPTIONS FOR EU  
POLICYMAKERS TO DECIDE  
UPON: FURTHER INTEGRATION  
OR MAINTAINING  
THE STATUS QUO”

Financial fragmentation as experienced during the height of the sovereign bond crisis is a sign for an incomplete monetary union. Given the current situation, there are two options for EU policymakers to decide upon: further integration or maintaining the status quo.

Further integration, notably through a completion of the banking union, seems currently to be the chosen path. The European sovereign debt crisis revealed that the EMU is still a largely incomplete project, which was not prepared to weather a global financial crisis.

Accordingly, the Five Presidents’ Report published in July 2015 argued that completing the banking union represents one of the most immediate steps for “Completing Europe’s economic and monetary union” project (Juncker, J.C., et al., 2015). The Banking Union project involves some form of fiscal backing (backing of the central bank’s equity capital by fiscal policy), a mutualisation of banking risks via a Common Deposit Insurance scheme, and an instrument to decrease the bank and sovereign linkages. While the first two pillars have already been achieved by the establishment of the Single Supervisory Mechanism (SSM) and the Single Resolution Mechanism (SRM), the common European Deposit Insurance Scheme (EDIS) is yet to be established.

5. The financial accelerator mechanism has been described by Bernanke and Gertler (1989), Kiyotaki and Moore (1997), Bernanke, Gertler, and Gilchrist (1999), and others.

6. In addition, government bond yields increased excessively in peripheral countries (see Figure 2).

The current European Commission (EC) proposal for EDIS includes three phases<sup>7</sup>. Phase 1 will start as a re-insurance approach, where national Deposit Guarantee Schemes (DGS) only have access to EDIS funds once they have exhausted all their own resources. In this manner, the EC hopes to weaken the sovereign-bank link. Phase 2 will start in 2020, when no prior exhaustion of national funds will be required anymore before EDIS funds can be accessed. EDIS will start by contributing a 20% risk level and will increase over a four-year period. Phase 3 starts after this period in 2024, when EDIS will assume a 100% risk share, meaning that national DGS will be fully insured on the European level. As the Single Resolution Fund (SRF) will be fully phased in by this time, the EC's goal is to have a full-fledged banking union in place by 2024.

However, there are still a lot of choices to be made. One of the main goals to prevent future systemic crisis and financial market fragmentation has to be the diversification of bank exposures. In this regard diversification requirements for sovereign exposures are currently in discussion. However, there are diverging views between the measures that might be applied (risk weights or concentration limits).

We consider the general approach to complete banking union to go in the right direction. However, the proposals look to narrow in scope and too disconnected from the wider debate on deepening monetary union and the role of the ESM. Enderlein H. et al. (2016) present a broad set of reform proposals for risk-sharing but conditioned upon continued risk reduction on the national level and in the broader context of reforming EMU. Further risk reduction indeed looks like a necessary condition for further risk sharing on the European level. This process of risk reduction has already started and is well under way.

Once this problem addressed, there can be various solutions to deal with the challenge of national deposit schemes. The problem is straightforward: if deposit insurance schemes in fiscally weaker euro-area countries are less reliable, banks from those countries face higher funding costs, e.g., via higher interest rates to their depositors. Furthermore, in times of crisis, savers are more likely to transfer their money to safe havens, which can reinforce capital flight. The banking union needs to address this challenge. But EDIS is only one solution. Possible alternative solutions include a re-insurance mechanism or even well-designed lending arrangements between national schemes. It could even be considered to enhance the ESM and create channels within the Mechanism allowing to link and buffer national deposit insurance schemes so as to improve risk-sharing.

Finally, the SRM needs to be enhanced by a common fiscal backstop. Taking the recapitalisation costs of the previous crisis as a yardstick, the final capacity for the SRF of EUR 55 billion as currently envisaged would be exhausted relatively quickly. In such an event the doom loop between banks and sovereigns described above would loom again. Again, a role could be given to an enhanced ESM, as suggested by Enderlein H. et al. (2016) on this task, building on its instrument for direct bank recapitalisation. Depending on the design of such an ESM-based backstop for the resolution fund, it could even incorporate the tasks of a common deposit insurance.

” COMPLETING BANKING UNION IS ONE OF THE KEY CHALLENGES TO ADDRESS FUTURE FRAGMENTATION RISKS”

In sum: financial integration has again increased since 2012, but is not yet at an entirely satisfactory level. It is too early to say financial fragmentation is over. All actors in EMU should continue work on risk-reduction so as to pave the way for further risk-sharing and sovereignty-sharing. Completing banking union is one of the key challenges to address future fragmentation risks. In the current banking union set-up, the Euro could still be too vulnerable to survive a major next crisis.

7. For a summary see the press release available at [http://europa.eu/rapid/press-release\\_IP-15-6152\\_en.htm](http://europa.eu/rapid/press-release_IP-15-6152_en.htm)

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