

Capital Markets Union: integration of Capital Markets in the European Union

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Preamble

Our report focuses on the objectives of the European Commission's initiative to develop a Capital Markets Union

Our goal with this report is to offer analysis and evidence which can be helpful to policymakers and firms alike, as they consider the near term changes proposed in the Commission's 2015 action plan for a CMU, as well as the opportunities which further policy measures could unlock.

PwC, by virtue of its work and roles within the financial services industry, has experience relevant to the debates taking place in Europe about the direction, scope, ambitions and priorities for a Capital Markets Union.

Achieving a Capital Markets Union is an ambitious initiative. In this report, we start by examining the current levels of integration of EU capital markets.

We then provide an overview of the structure of capital markets, with an analysis of the level of integration, seeking to identify the main blockages preventing further integration. We then offer observations on measures that could be (and in some cases are being) considered to ease integration.

A Capital Markets Union certainly offers the potential to foster higher levels of sustainable economic growth in the EU. We hope that our report will be useful to support the prioritisation that should be set to reach this important objective.

Brian Polk
PwC UK



Executive Summary

Capital Markets Union (CMU) is the European Commission's plan to diversify and improve access to funding of businesses in the real economy, thereby supporting higher levels of economic growth and job creation across the EU.

The CMU aims to foster stronger, sustainable economic growth by: creating deeper and more integrated capital markets in the European Union (EU); removing barriers to cross-border investments; increasing competition and reducing costs of raising capital; and improving access to financing for businesses, especially for Small and Medium-sized Enterprises (SMEs),

More efficient capital markets would improve the allocation of capital and thereby also foster economic growth. Better integrated markets and diversified funding sources would also increase economic resilience by improving the diversity of investment funding sources.

The CMU initiative also comprises various risks. Market volatility can increase systemic risks, reduce the ability of small and local players to access finance and risk the weakening of investor protections in some places through the harmonisation process.

Our report seeks to assess development and integration of EU capital markets. We start by analysing the structure and size of capital markets in Europe, highlighting potential differences with other global regions. Second, we assess the degree

of the integration of capital markets in EU countries by looking at various metrics. Third, we aim to identify barriers preventing the development of market-based finance and the integration of capital markets across the EU. Fourth, we provide a set of observations aimed at addressing the barriers identified.

To achieve a true CMU, two different but complementary approaches need to be pursued: first, the CMU should foster the development of market-based sources of financing; and second, it should promote the increased integration of capital markets by removing barriers to cross-border transactions. Our report and its recommendations maintain the distinction between these two approaches.

Market-based finance is underdeveloped in Europe

The EU is dominated by loan-based finance. More specifically, Non-financial corporations (NFCs) rely mostly on loans and have a limited role in the debt market, while EU households prefer banks when investing their assets. Loan liabilities in the EU account for 212% of EU Gross Domestic Product (GDP), assets of debt securities are worth 171% of GDP, and listed shares issued in the EU represent 60% of GDP. By contrast, in the US loans represent 147% of

GDP, debt securities 220%, and listed shares 115%.

NFCs need greater depth of capital markets. The debt market is mainly dominated by government issuance (45% of total debt securities) while NFCs' issuance of debt remains limited, representing 7.6% of total debt securities. Monetary Financial Institutions (MFIs) are seen as contributors to the depth of the loan market rather than to the debt and equity markets. NFCs' access to finance depends on their relative size. Small NFCs mostly rely on a single owner or a family and entrepreneurs, whereas larger NFCs tend to finance themselves on the capital markets using public issuance or venture capital. This shows the difficulty smaller NFCs have in diversifying their sources of funding.

Alternatives to traditional methods of financing are limited. Alternatives to bank loans and large capital markets remain limited. Private equity and venture capital are still underdeveloped despite showing signs of recovery. While crowdfunding is fast-growing, it remains a tiny market, focused mainly on the very early stages of a company's development. Private equity, venture capital, business angels and crowdfunding combined represent a mere 0.5% of GDP.

Securitisation has been in steady decline. Securitisation allows loans and other receivables to become tradable, and can therefore (indirectly) foster the financing of firms, especially SMEs. Securitisation issuance, however, has not recovered to its pre-crisis level mainly because of the misuse associated with the subprime crisis and the use of alternatives, such as covered bonds. From 2001 to 2008, the annual growth rate of securitisation issuance was at 36.1 %, but decreased by 13.4% on average every year from 2009 until 2014. That said, regulatory changes are set to boost the securitisation market by setting up regulations aimed at standardising and increasing the transparency of this type of products.

EU capital markets are heterogeneous and concentrated. Capital markets in the EU are concentrated in the largest economies: the UK, France and Germany. Reliance on capital markets for financing varies enormously from one EU country to another. For instance, the use of listed shares is a common practice in Western Europe, whereas debt securities are generally unavailable to firms in the least developed EU economies.

A Capital Markets Union could be based on a series of specialist markets, with countries/regions specialising in the finance of one (or a limited number of) industries or types of security. One issue being debated is how the capital market union will materialise from an operational point of view. One answer is that, rather than having one dominant financial centre, the capital market union could become a collection of hubs specialising in specific products and acting as a platform that would connect savers to investors from any EU country. One condition, however, is ensuring that barriers for entering into specific markets are removed in order to maintain competition among EU countries.

The integration of capital markets is already underway

We have measured the level of integration of capital markets by using two types of indicators: those based on price and those based on the economic decisions of agents. Below is a summary of our key findings.

Stock markets are showing signs of convergence. Stock market returns of EU economies are showing signs of convergence. Correlations of stock market returns for EU countries compared to returns of the benchmark country have increased over time, showing that stock markets are becoming increasingly connected to each other. However, distressed economies, such as Greece and Spain, have shown decreased integration due to idiosyncratic issues such as government insolvency. On the other side, countries such as the Czech Republic, Hungary, Slovakia, Estonia and Slovenia have shown increased convergence.

Yield convergence has eased in the euro area, but the crisis has hindered bond market convergence. Being part of the monetary union facilitates the convergence process for the bond market. However, the sovereign debt crisis has significantly slowed yield convergence in the euro area compared to the non-euro area.

Shocks and government bond yields are becoming less systemic. Overall, unlike stock markets, correlation of bond market returns for EU countries compared to Germany has decreased. Countries such as Romania, Hungary and Poland, but also those with well-established interdependencies with other EU countries, such as Luxembourg and the United Kingdom, have shown increased integration. Others, including Spain, Portugal, Italy and Greece, are showing decreased integration.

The EU loan market is highly fragmented. Europe doesn't provide equal financing costs. The interest rates applied to loans differ across countries and banks appear to maintain these

differences over time. Even when taking into account country specific risk, credit conditions remain different from one country to another. Other indicators such as the evolution of credit market conditions applied by banks to NFCs do not follow the same path across EU countries. Finally, SMEs access to finance remains particularly fragmented in that access to finance differs from one country to the other.

Increasing capital flows within the EU confirm increased integration. Integration is reflected through the internationalisation of the operations of financial institutions. Among the top banks in each country, all leading banks in the EU are headquartered in an EU country. Finally, the share of cross-border deals value is increasing over time demonstrating that EU Member States are increasingly becoming interconnected and integrated.

Financial hubs provide evidence of capital markets integration. Barriers from capital flows have been sufficiently low to allow the specialisation of countries in terms of financial services, especially regarding the investment fund industry. Some countries, such as Luxembourg and Ireland, have positioned themselves as hubs for investment.

Home biased capital markets need further attention for integration. Home biases are still present within EU capital markets. For almost two-thirds of financial institutions, assets are still invested in domestic markets. Moreover, national investment still depends mainly on household domestic savings.

Several barriers are still preventing the emergence of the Capital Markets Union

Our report identifies eight major barriers to the development of the CMU and distinguishes impediments preventing the development of market-based finance from those preventing increased integration of capital markets.

1. **The costs for firms**, especially SMEs, to enter into market-based financing solutions, such as listed stock markets, remain high. Investors' costs are also high as obtaining information on the creditworthiness of SMEs is time consuming.
2. **Households' aversion to risk and financial markets prevents market-based finance development.** In Europe, the average share of non-financial assets represents 51%. Most financial assets are allocated toward non-risky investments, such as insurance and pension products as well as currency and deposits.
3. **The cost of securitisation is high; the onward transmission of SMEs' loans is not working.** During various steps of the securitisation process, some upfront costs are generated, which can be expensive, especially when securitising SMEs' loans. Lack of transparency and weak enforcement of claims repel investors from securitised products. Finally, enforcement and insolvency frameworks vary from one EU country to the next, making it difficult for banks to pool loans across national borders.
4. **Crowdfunding is still embryonic;** it needs rules, consistency and a legal framework to grow effectively. Despite significant development within these markets, crowdfunding and microfinance are subject to legal and regulatory issues impediments. These obstacles could be, for example, vague legal status which constitute a significant market entry barrier, as well as ceilings regarding the size of possible investments. Some jurisdictions also have no or inadequate regulations, which prevents the sector from growing.
5. **Asymmetric information persists in the EU.** Asymmetric information among agents creates obstacles for integration of capital markets. One illustration of this is the lack of homogeneity of financial information regarding

SMEs. Access to financial information, especially regarding SMEs, remains a challenge.

6. **Uneven playing field regarding fiscal consideration.** The investment tax framework is not harmonised across EU countries. Differences between tax treatments in European countries create an uneven playing field and prevent integration of markets. In addition, some countries dispose of different tax regimes between residents and non-residents.
7. **Supervision and regulation are not sufficiently strong.** Integration is blocked by the lack of convergence in the National Supervisory Authorities (NSA). The European Securities and Markets Authority (ESMA) pointed out that the level of convergence of regulatory practices by NSAs is relatively low. Inconsistent regulations across countries prevent capital markets integration.
8. **The European Union is not a Monetary Union.** Exchange rate fluctuations can force investors to require a risk premium in order to hold a security denominated in that country's currency. In addition, these countries dispose of their own central banks which can lead to uncoordinated monetary policies.

Our observations

We have identified five observations that would help promote a shift towards more market-based solutions and greater integration of capital markets.

1. **Improving cross-border distribution of capital is important to expanding choice - both for investors and also companies seeking funding.** The setup of regulatory frameworks which aim to foster cross-border distribution such as UCITS (Undertakings for Collective Investment in Transferable Securities) or AIFMD (Alternative Investment Fund Managers Directive) have been successful in promoting further

integration and should be encouraged. Increased harmonisation regarding taxation on savings, dividends and other financial assets would help to develop a CMU. Harmonisation of insolvency rules could also significantly contribute to boosting foreign investments; a more realistic project might be promoting the setup of a 29th country regime for major banks.

2. **To create an effective CMU, asymmetry of information between investors and borrowers across the EU should be minimised.** This would significantly reduce investor's cost of seeking information which would then translate into better financing and investment conditions. One way for borrowers to tackle asymmetry of information is by disclosing in a standardised way information regarding their creditworthiness. On the other side, financial education could alleviate asymmetry of information for investors by helping them to understand foreign financial products and markets peculiarities.
3. **Recognising that banks play an important role in capital markets, in addition to being the main current providers of corporate finance,** care needs to be taken to understand, and thereby mitigate, initiatives which could unintentionally negatively impact the market. In terms of firms' financing, it is important to leverage banks' expertise, especially with respect to the origination and securitisation of loans. Hence, the regulator needs to be mindful of the unexpected impact of new regulations affecting the banking industry, particularly when it comes to capital requirements. Securitisation is key for the development of market-based finance and ensuring a simpler, more transparent and standardised securitisation process would significantly revive this market.

- 4. Promoting diversified sources of financing would reduce dependency on banking loans.** The promotion of alternative methods of financing is important to reduce overreliance on one specific financing method. Crowdfunding has recently appeared as an additional tool for financing small to medium-sized firms. However, crowdfunding is inconsistently regulated across Member States, which impedes the scalability of the sector. Private placement is also a promising opportunity to diversify financing methods for SMEs and should be considered by market players and regulators.
- 5. Additional work is needed** to identify the main challenges of the CMU, and to underpin the specific issues to be addressed. Identifying the main blockages preventing the integration of capital markets and the development of market-based finance is crucial in order to setup a concrete and efficient action plan. The degree of heterogeneity between member states in terms of affinity towards the EU could be problematic whenever a consensus needs to be reached at the EU level. Moreover, there is a need to define a more precise scope for the CMU by targeting specific types of SMEs and understanding the specific issues these types of firms are facing.

Introduction to the Capital Markets Union

In July 2014, Jean-Claude Juncker, during his opening statement at the European Parliament plenary session, launched the Capital Markets Union initiative. To explain its rationale, we will elaborate on the expected benefits of a European Capital Markets Union and the objectives pursued by the European Commission regarding the initiative. Within this context, our report will deliver an assessment of the current degree of market-based financing as well as of the degree of integration of capital markets. It will also address the main blockages that prevent European capital markets from being further integrated. Finally, this report will define the priorities that should be set to achieve such a union.

Why a Capital Markets Union in Europe?

According to the principle of the Treaty of Rome, capital should flow freely within the European Union. Consequently, capital markets should be fully integrated, and this should positively impact economic growth.

Integrated capital markets foster economic activity

A capital market is a market that channels funds from net savers (such as retail investors and institutional investors) to net spenders like businesses, governments and individuals. In an open economy, non-residents can also participate in this market as net savers or spenders.

When capital markets are fully integrated, assets possessing identical risk characteristics have the same price regardless of the countries in which they are traded. Indeed, if there are no barriers to financial flows, corresponding risk assets should command the same expected return, irrespective of domicile. In other words, capital markets integration implies a process of convergence in market risk and price. On the other hand, when markets are segmented, two of the same exact assets can have different expected returns because the sources of risk and their prices

may differ across markets and the country-specific risks cannot be fully diversifiable.

The integration of capital markets is fundamental to improving Europe's economy. Removing barriers to integration will enhance economic activity in the following ways:

- First, increased competition between intermediaries will narrow the margin of these intermediaries, meaning that the cost of finance will decrease for borrowers, while returns for savers will increase. This will encourage savers to provide more finance, and borrowers to obtain cheaper finance. As a result, a more efficient financial industry should raise the level of investment.
- Second, deeper and more competitive financial markets can also contribute to growth by allocating capital more efficiently. By facilitating the trading, hedging and pooling of risks, a more highly-developed financial sector would allow investors to fund profitable but risky investment opportunities that would otherwise be forgone. To the extent that more sophisticated intermediaries can distinguish good projects from bad ones, funds will go to the more profitable projects and the productivity of the economy will increase.

In the case of the European Union, especially the Eurozone, integrated capital

markets have another main advantage—increased economic resilience. According to the European Central Bank (ECB)¹:

- Improving diversification of funding will enhance cross-border risk taking and allow capital markets to play a greater role in reducing the impact of a shock in one country;
- Efficient and diversified capital markets will be allowed to have more cross-border banks that are large enough to operate across borders and diversify risks, but small enough to be rescuable.

The transmission of monetary policy will be improved as economic policies and conditions of member states become more homogenised—the more similar they are, the more suitable the single monetary policy will be for each country. Indeed, integration will imply increased competition among capital markets in Europe. This will narrow differentials across countries in various market segments (credit market, bond market, etc.). As a consequence, monetary policy stimulus will affect European markets in a much more homogenous way than it would in a fragmented market. Moreover, if integration means harmonisation of regulation, such as insolvency laws,

it would allow investors to price in a consistent way across countries. This would allow convergence in the cost of borrowing across countries, making monetary policy decisions easier to implement.

As well as its broad economic advantages, the Capital Markets Union could be subject to various risks. By increasing linkages across countries, one challenge the CMU poses is the risk of having systemic repercussions in case of adverse economic shocks together with increased volatility in the markets. This argument can however be counterbalanced as the Capital Markets Union initiative should be understood as a way for investors to diversify sources of investments across financial products and countries.

One other challenge for the CMU is its focus on SMEs. Further integration of capital markets could lead to little direct impact for SMEs in their ability to access capital markets. Indeed, the integration of capital markets could boost the development of international markets which SMEs, being mainly local players, would not be able to access. In this view, as described in our observation 4 (see page 52), local banks could play a different role in easing access to finance for SMEs through securitisation.

Eventually, greater integration and greater harmonisation could, in some cases, lead to a race to the bottom where the chosen regulation is the weaker in terms of investor protection.

The capital markets in Europe are partially integrated

One element that has actually enhanced the capital market integration is the European Monetary Union (EMU). It has increased European financial integration with the introduction of the euro, which has eliminated exchange rate risk and the costs of exchange rate transactions within the Eurozone. As a matter of fact, a number of papers have been written by economists and experts in this field who elaborate the following positive effects of the euro on Europe's capital markets (distinction is made between specific capital markets):

- In the public bond market, there are signs of increased integration as interest rate differentials have lowered.² This actually occurred prior to the introduction of the EMU, and has also been accompanied by increased demand from the side of non-EMU investors in both markets.
- In the credit market, Adams et al.³ demonstrate that considerable interest rate differentials persist, showing that the mortgage and corporate loans markets are weakly integrated. One reason for this, according to Jappelli and Marco Pagano (2008)⁴, is the heterogeneity of borrowers and the local nature of the information that lenders need.
- In the equity market, the EMU's positive impact is well-documented. Hardouvelis et al. (1999)⁵ show that integration effects between EMU stock markets started prior to the

creation of the EMU, which should not be interpreted as a consequence of worldwide market integration, but rather the result of a specific effect of the EMU. In contrast, Cappiello et al. (2008) argue that integration occurred after the introduction of the euro.⁶ A paper by Palaiodimos (2013)⁷ suggests an intermediary conclusion: the integration of this market appears to have increased strongly around the creation of the currency union. Fratzscher (2011)⁸ explains that the elimination of exchange rate volatility played a key role in this process.

If the EMU was indeed an important condition for the emergence of a pan-European capital market, it has not been a sufficient one. Numerous frictions in the form of tax systems, administrative burdens, various settlement systems and informational asymmetries continue to impede further integration. Moreover, the Eurozone is only one part of the European Union (EU), and it appears that the other EU countries have even less integrated capital markets in bonds and equities.⁹

Finally, the global financial crisis has reversed the process of integration of capital markets in Europe. Subsequent fiscal setbacks have partly neutralised this integration in both equity and bond markets, creating a far more segmented Eurozone with respect to policy planning.¹⁰

1 Coeuré B., member of the Executive Board of the ECB, Speech delivered at ILF Conference, March 2015.

2 Palaiodimos G. T., Putting the EMU integration into a new perspective: The case of capital market holdings, Bank of Greece, December 2013.

3 Adam, K. et al., Analyse, Compare, and Apply Alternative Indicators and Monitoring Methodologies to Measure the Evolution of Capital Market Integration in the European Union, CSEF, 2002.

4 Jappelli T. and Pagano M., Financial Market Integration under EMU, European Commission, Economic Papers 312, 2008.

5 Hardouvelis G., Malliaropoulos D. and Priestley R., EMU and European Stock Market Integration, The Journal of Business, Vol 79, No 1, 2006.

6 Cappiello L., Kadareja A. and Manganelli S., The impact of the euro on equity markets, ECB working paper series, No. 906, 2008.

7 Palaiodimos G. T., *ibid.*

8 Fratzscher M., Financial Market Integration in Europe: On the Effect of EMU on Stock Markets, 2001.

9 Adam K. et al., *ibid.*

10 Palaidimos G. T., *ibid.*

A Capital Markets Union to support the real economy by 2019

The credit crunch which resulted from the global financial crisis left Europe in dire need of non-bank sources of finance, and the situation has been exacerbated by Europe's fragmented capital markets. Within this context, the European Commission (EC) has announced that it will work to create a Capital Markets Union by 2019. The main goals of the Capital Markets Union are the following:

- Create a single market for capital by removing barriers to cross-border investments;
- Increase competition to reduce the cost of raising capital;
- Improve access to financing for all businesses around Europe; in particular, help small and medium enterprises (SMEs) raise finance more easily;
- Diversify the funding of the economy by matching supply to demand;
- Maximise the benefits of capital markets so they can support economic growth and job creation; and
- Help the EU to attract investments from all over the world and become more competitive.

As a result of this initiative, think tanks and European institutions have already formulated recommendations to move forward with this union, including the following:¹¹

- The more countries that participate, the greater the benefits. In this sense, the Capital Markets Union should be an EU-wide project rather than a Eurozone initiative.

- The Capital Markets Union programme is very ambitious and will be difficult to define. Therefore, it is crucial to delineate precisely the level of ambition and the specific objectives pursued.
- An appropriate form of supervision should be found. The Union should rely preferably on existing authorities, and reinforce them in order to strengthen and harmonise EU regulations.
- The development of certain market segments (e.g. securitisation, private equity) should be made first through market-led initiatives, standardisation, increased transparency (e.g. credit registers) and harmonisation.
- Policy should focus on increasing the attractiveness of capital markets both for EU investors and for investors from outside the Union.

A report to assess market-based development and integration

The ultimate objective of the European Commission in establishing a Capital Markets Union is to foster economic growth. As economic growth is mainly driven by non-financial corporations (which account for almost 65% of the growth of gross added value in the euro area¹²), support for these entities in the form of access to finance is essential.

The Capital Markets Union initiative consists of two main goals. Firstly, the EC wants to promote market-based financing which would offer non-financial corporations access to debt and equity markets and thereby reduce their reliance on banks. Secondly, the EC is pursuing integrated capital markets in which funds

can move about freely thanks to increased transparency, and harmonised regulations.

On the one hand, market-based financing can bring myriad benefits, including the following:

- More funds will be available; non-financial corporations will rely less on banks as their only source of funding.
- More competition will lower the cost of financing; the increase of alternative means of financing will create pressure towards heightened transparency and will lower the cost of financing, allowing for more investment.

On the other hand, integrated capital markets imply the following:

- More profitable projects will be funded; the possibility of investing anywhere at the same cost will drive the available funds to the more profitable investments, wherever their location.
- Economies will be more resilient; increased cross-border activities will reduce the impact of a shock in one specific country as unaffected foreign investors will continue investing in profitable projects in that country.

Within this context, our aim is to assess the extent to which capital markets in Europe are market-based and integrated, to explain the main blockages that prevent capital markets from becoming more integrated, and to suggest the priorities that should be set to improve European capital markets integration. Whenever possible, we will classify existing barriers by distinguishing between the ones related to a lack of market-based financing and those related to a lack of integration.

11 The main sources used: CEPS (Centre for European Policy Studies), ESMA (European Securities and Markets Authority), ECMI (European Centre for Minority Issues) and Bruegel (Brussels-based think tank).

12 Eurostat.

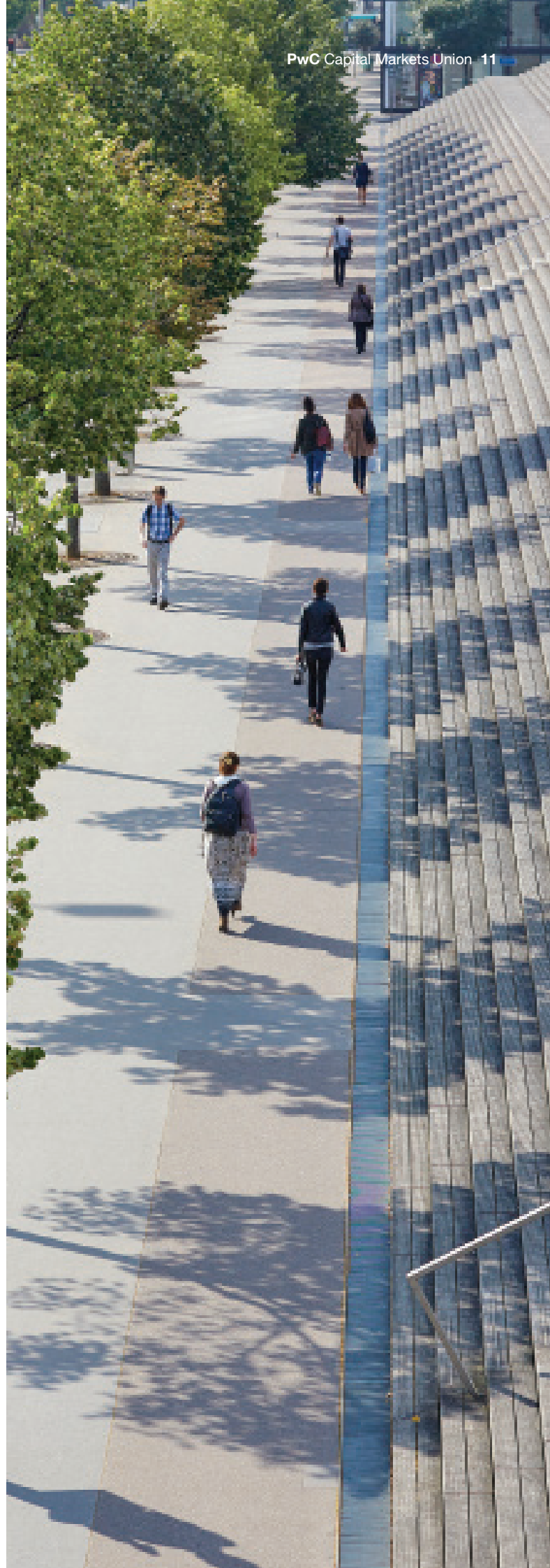
In Section 1, we will assess the extent to which capital markets in Europe are market-based by comparing the use of debt, equity and loans as means of financing and by providing key figures regarding the structure of capital markets in the European Union.

In Section 2, we will use standard indicators of integration to measure the degree of integration of capital markets in the European Union.

In Section 3, we will identify the main blockages to integration by categorising them according to those that prevent the development of market-based financing (regulations, behaviour of households and non-financial corporations), and the ones that prevent the integration of capital markets (pricing, transparency and availability of information).

In Section 4, we will outline a series of observations that would support the development of market-based finance and further integration of capital markets in the EU.

We hope that this report will provide useful insights that will help to establish capital markets that are more accessible to finance non-financial corporations (NFCs), especially SMEs.



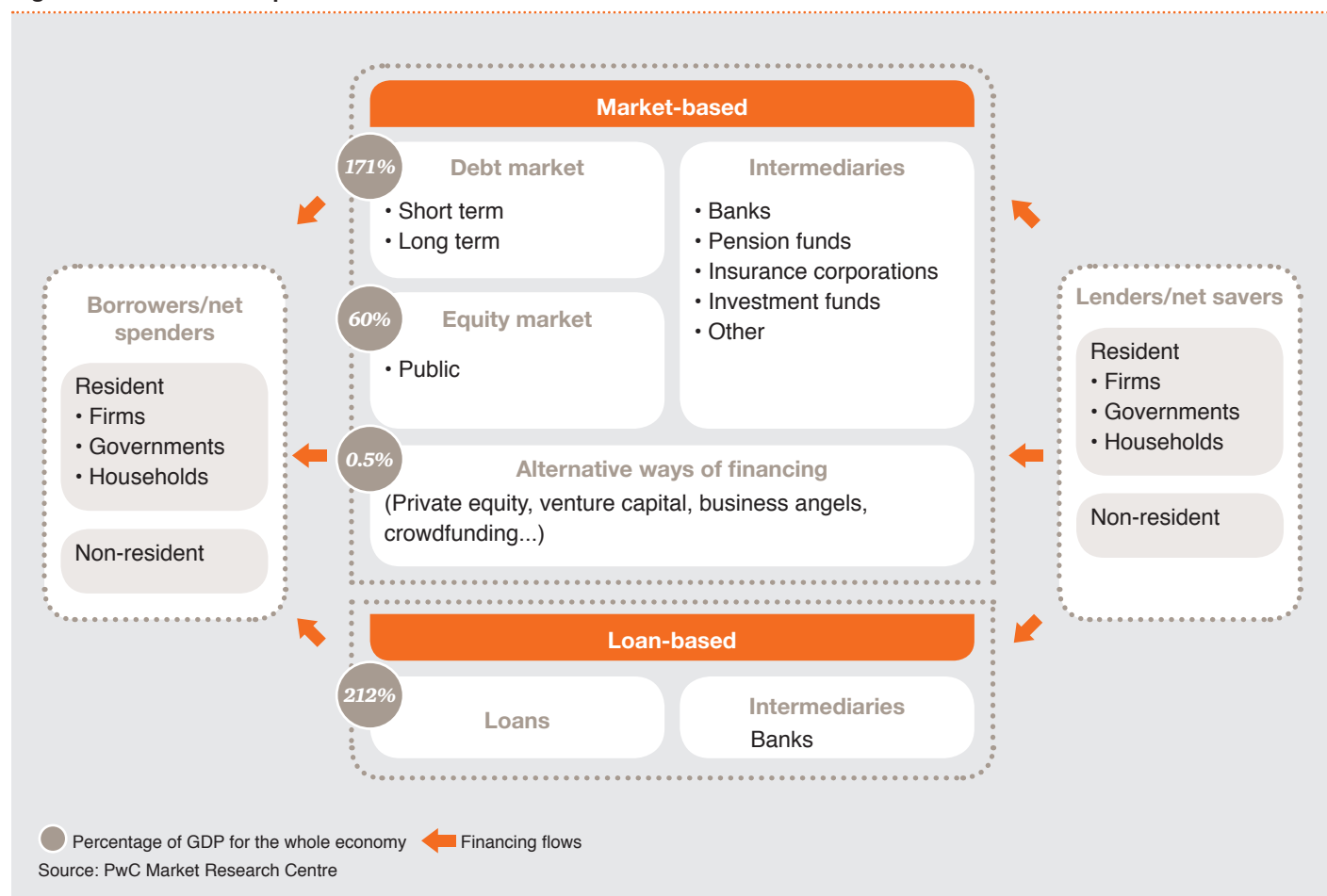
1

Market-based financing is underdeveloped

Financial markets are mainly understood as money markets and debt and equity markets. For the purposes of this report, we want to illustrate how funds can flow from savers to borrowers through the debt and equity markets, as well as through other alternative market-based financing structures such as crowdfunding and private equity. Funds can also flow through loans by using banks as intermediaries; this corresponds to loan-based financing.

Throughout this report, we define capital markets as debt, equity, and loan markets.¹³ Our structure of capital markets is illustrated in Figure 1.

Figure 1: Structure of capital markets



13 In our mapping, equity markets consist only of listed equities and debt markets include short- and long-term debt securities. Other components of money markets, which consist of cash segments and derivatives segments, have been excluded as they provide only very short-term financing. Equity is understood as public and private equity. Crowdfunding is a combination of the various instruments.

Hereafter, we examine the extent to which Europe as a whole tends to be a loan-based economy rather than a market-based economy. We compare Europe's capital market structure to other leading economies, consider the role played by non-bank actors, look at the diversity of financing alternatives and highlight the degree of heterogeneity among European countries in terms of financing.

1.1 The EU is dominated by loan-based finance

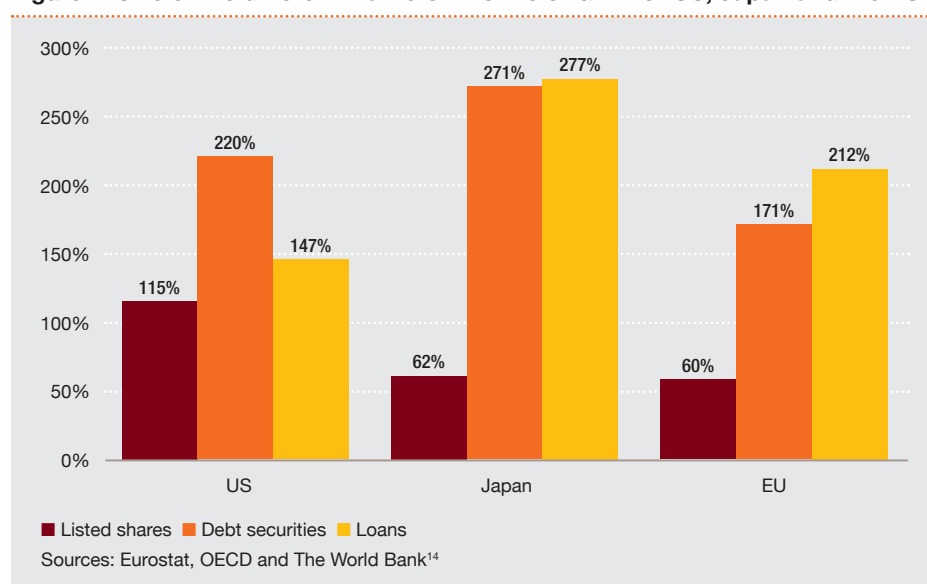
The EU is a loan-based economy. This can be seen from the size of the loan market compared to other markets. On the one hand, firms are very reliant on bank loans to finance their activities compared to other types of instruments. On the other hand, households store a significant share of their savings in bank deposits, which places bankers in a critical position to act as the major financial intermediary for channelling funds from savers to borrowers.

The loan market is the prevailing market

The importance of loan-based finance in the EU is reflected in its share of Gross Domestic Product (GDP) of the total economy with respect to other types of liabilities. Loan liabilities in the EU account for 212% of EU GDP, debt securities are worth 171% of GDP, and listed shares issued in Europe represent 60% of GDP.

Compared to other large economies, the respective shares in the US are: 147% for loans, 115% for listed shares and 220% for debt securities—which indicates an impressive debt market. Compared to Japan, the EU loans market is lower. The share of loan liabilities to GDP stands at 277%. Moreover, the share of debt securities is much more developed in

Figure 2: Size of the different markets in terms of GDP for US, Japan and the EU



Japan than it is in the EU. That said, the significant size of Japan's debt market is mainly due to the numerous measures deployed to limit deflation, including quantitative easing, since December 2012. The EU has the smallest equity market with a market capitalisation comparable to Japan's, but less than half of the US market.

In the EU, non-financial corporations rely heavily on loans

Compared to other large economies,¹⁵ the European NFCs are heavily reliant on loans. Indeed, the share of loan liabilities within total NFC financial liabilities stands at 27.9%, directly after Japan with 28.1%, as shown in Figure 3 (the split across EU countries is available in Figure 15 page 24). By contrast, NFCs in the US maintain a loan share of 12.6% of total financial liabilities – less than half that of their counterparts in the EU.

The two main categories of market-based financing (debt securities, shares and other

equity) represent 57.3% of all financing sources in the EU. This figure is around 76.5% in the US, but only 52.5% in Japan. Debt, shares and other equity are also less important in the EU than in Canada where they represent 61.7% and in Korea, where they account for 59.2%.

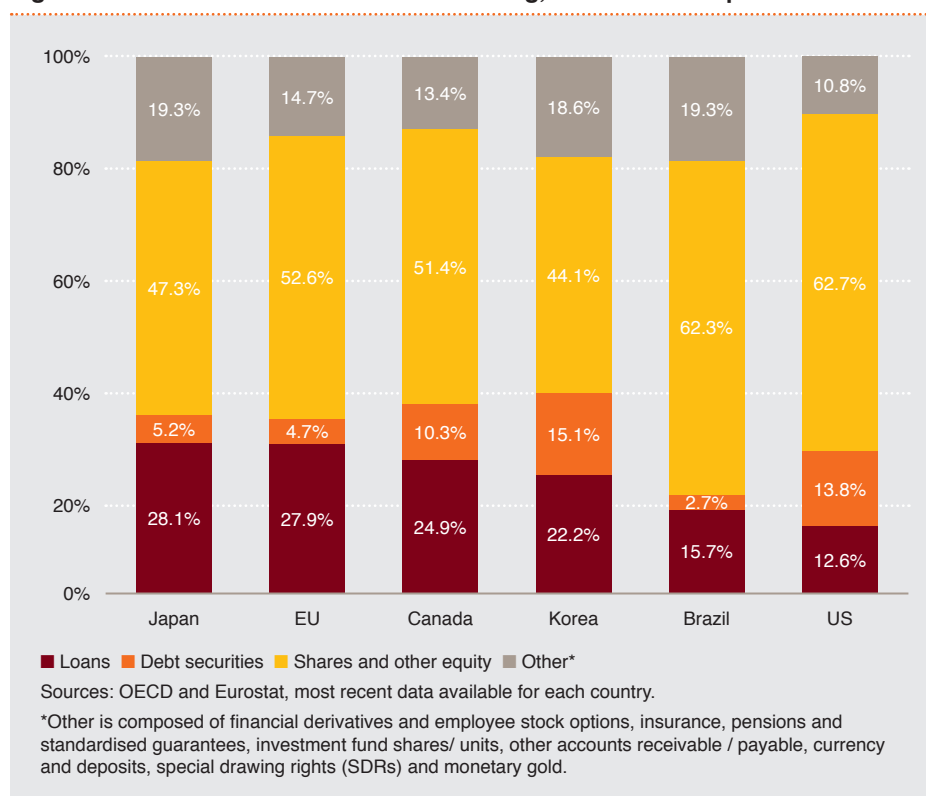
The issuance of equity shares in the EU appears to dominate, to a large extent, the share of debt securities in all the leading economies for NFCs. However, the large share of equity distorts the fact that most of the equities issued are unlisted; 24.3% are unlisted, 17.7% are listed shares, and the rest fall into the 'other equity' category.¹⁶

The major role that loans play in Japan can be explained by the country's financial system, which depends heavily on banks, with which borrowers have close relations. This model differs from the US, which relies more on market-based finance, and which is often seen as a benchmark for the development of market-based finance. The capital markets in the EU fall somewhere between these two models.

¹⁴ Data on listed shares was taken from The World Bank (2012) in order to compare countries.

¹⁵ Cross-country comparison is limited due to data availability constraints.

¹⁶ Other types of equities represent 10.6%.

Figure 3: NFCs' share of bank-based financing, worldwide comparison

Households prefer banks when investing their assets

The large role of banks is partly due to preferences of households.¹⁷ Indeed, on the savers' side, financial assets of households are significantly composed of currency and bank deposits, demonstrating how banks attract most of the funds available in the EU (the share for each EU country is given in Figure 32 in the appendix). Currency and bank deposits amount to 30.6% of total household assets in the EU, compared to 52.9% in Japan and just 12.7% in the US. This can be explained by the risk aversion of households¹⁸ as well as the cultural habit that households have of allocating their savings to banks.

Equity and investments fund shares claim a share of 23.9% of total financial assets of households in the EU, compared to 14.4% in Japan and 45.3% in the US. Insurance, pensions and standardised guarantees account for 38.3%.

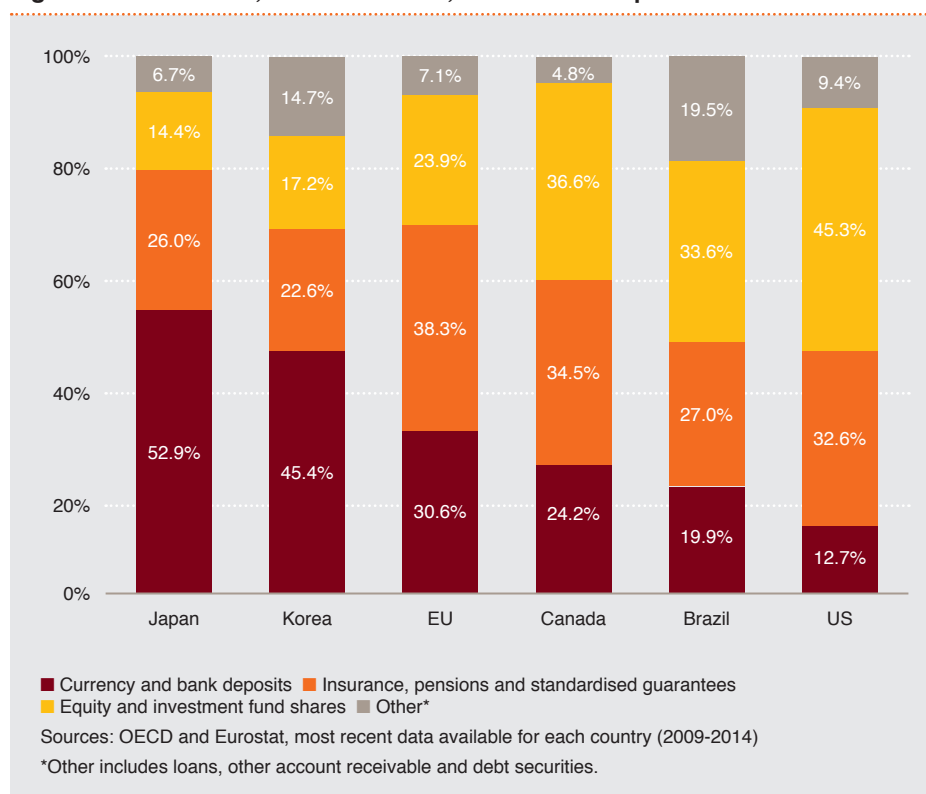
After the subprime crisis, EU household asset allocations to equity assets decreased while allocations to insurance and pension funds increased slightly. This may be explained by the fact that European governments are facing increased difficulties in financing public pension funds and other social security plans. Another explanation is that households may have shifted their investments to institutions such as insurance and pension funds after realising losses in the equity markets, given the fact that insurance and pension funds guarantee a minimum return and capital preservation. A final explanation is the fact that the losses endured in the equity markets have had a negative impact on the share of this financial asset.

The difference in the asset allocation of households across regions is also explained by various factors, such as cultural differences between the US and the EU in terms of entrepreneurial mindset. Moreover, tax treatments, financial development, and credit policy by banks (Loan to Value Ratios) have proven to explain differences in asset allocation.¹⁹

17 Eurostat defines this category as 'Households and Non-Profit Institutions Serving Households'.

18 This point will be developed in a subsequent section in this report.

19 See Christelis D. et al., Differences in Portfolios across Countries: Economic Environment versus Households Characteristics, The Review of Economics and Statistics, March 2013 and Sierminska, E. and Doorley, K., To Own or Not to Own? Household Portfolios, Demographics and Institutions in a Cross - National Perspective, IZA Discussion Paper, No 7734, November 2013.

Figure 4: Households, financial assets, worldwide comparison

1.2 There is room to increase the depth of capital markets for NFCs

NFCs do not benefit from a deep and liquid market. The main reasons are that the debt market is mainly cornered by government issuance with a liquidity which is far higher than it is for corporates. In addition, when looking at the number of players within capital markets, monetary financial institutions (MFIs) are seen as the major financial intermediaries who nurture the depth of the loan market compared to the debt and equity markets.

The debt market is dominated by government issuance

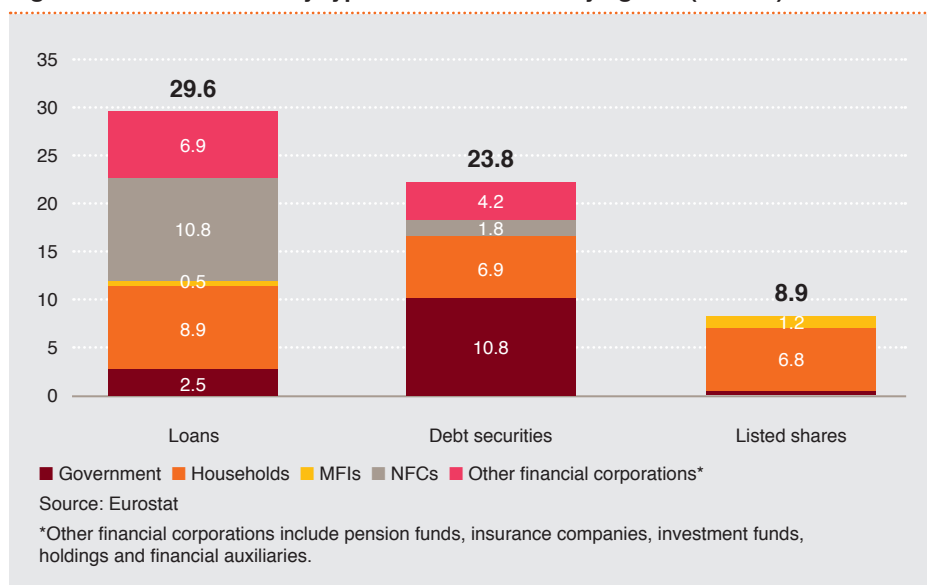
The main players issuing debt are by far governments and MFIs.²⁰ Unsurprisingly, governments issue the largest share, with EUR 10.8tn. This is due to the increasing government debt (86.8% GDP²¹) resulting from the fiscal stimulus used to counterbalance the downward effect of the subprime crisis.

MFIs are the second largest issuer of debt, with EUR 6.9tn issued. As regulated and credible institutions, they can easily finance themselves through the debt market.

20 Monetary Financial Institutions (MFIs) include central banks, resident credit institutions as defined in Community law, and other resident financial institutions that receive deposits and/or close substitutes for deposits from entities other than MFIs, as well as grant credits and/or make investments in securities for their own account (at least in economic terms). Money market funds are also classified as MFIs.

21 Eurostat, 2014.

Figure 5: Total liabilities by types of markets and by agents (EUR tn)



NFCs are minor players in this market, representing only 7.6% of debt issuance (EUR 1.8tn). This low share indicates that there is room for significant improvement with regard to NFCs’ access to the debt market. Compared to other financing methods, debt securities are more than three times lower than listed shares, which represent EUR 6.8tn. This masks the high degree of heterogeneity of NFCs in accessing the equity market, which will be considered in further detail later in this report.

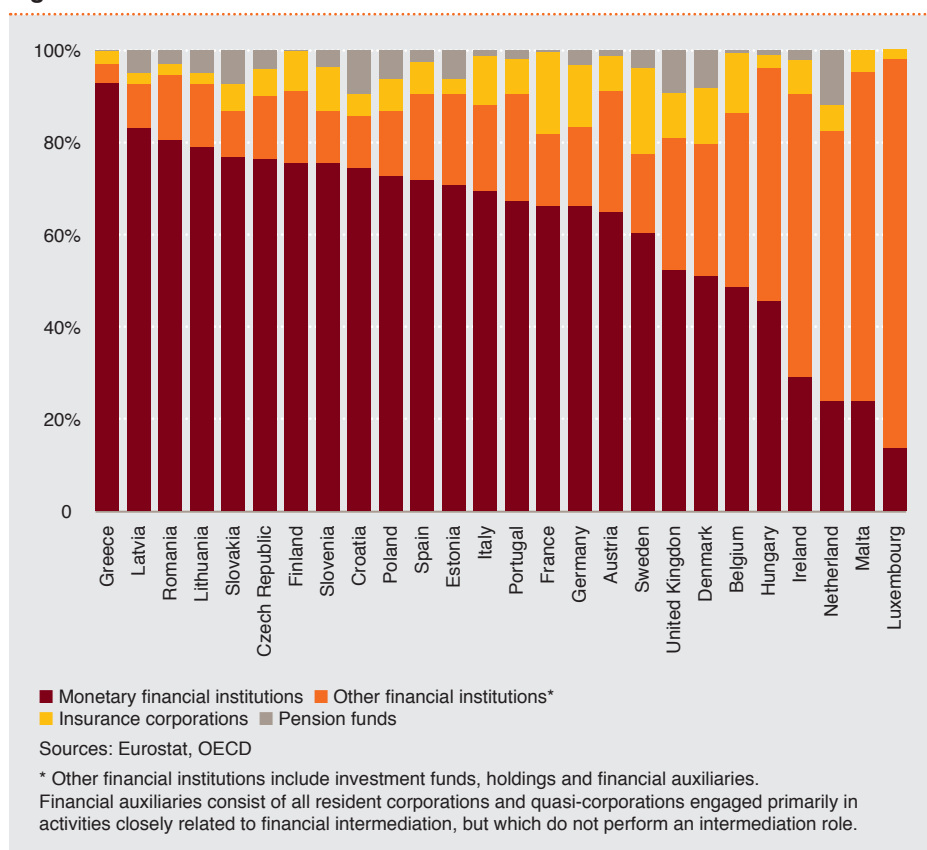
By analysing the liquidity of government and corporate bonds, previous studies²² have shown that the average monthly volume of traded government bonds is significantly higher than corporate bonds: 2,701 compared to 22 respectively as of September 2014. The same applies when comparing the liquidity of corporate bonds and equity. According to a study by TABB Group, the number of equity trades is 167 higher than debt transactions.²³

MFIs play a disproportionate role in terms of share of intermediaries

MFIs dominate the financial landscape as they hold the majority of financial institutions’ assets, with the exception of those in the Netherlands, Malta and Luxembourg (financial hubs within the EU), as illustrated in Figure 6. On average, in the EU, MFIs account for 52% of the total assets held by financial institutions. This share is 28% in the US, 36% in Canada and 61% in Japan.

This domination tends to increase the loan market at the expense of other types of markets, such as debt and equity. When looking at the financial assets of MFIs compared to other players (see Figure 7), we can see that a great proportion of their assets are invested in currency and deposits as well as loans; the smaller portion is dedicated to debt investment

Figure 6: Financial institutions’ share of assets



22 PwC, Impact of Bank Structural Reforms in Europe, report for AFME, November 2014.

23 TABB Group, MiFID II and Fixed-Income Price Transparency: Panacea or Problem?, July 2012.

and the equity market. On the flip side, other financial institutions have higher exposure to capital markets. Banks, to a certain extent, substitute capital markets by providing financing through loans and saving through deposits and other non-capital market instruments. Because EU banks proportionally hold the majority of financial assets in form of loans, currency, deposits, and other non-capital market instruments, the result is likely to be less deep capital markets than would otherwise be the case.

Figure 6 also shows the specialisation within the EU in terms of financial activity. In Luxembourg and Ireland, the high shares of other financial institutions are explained by the high volume of investment funds domiciled in these countries. The high presence of holdings in Malta and the Netherlands explains the high share of other financial institutions in these countries.

In the other countries, the limited amount of assets held by other financial institutions means that funds are not flowing to them. In order to develop market-based finance in these regions, we need to diversify the sources of funding. This is why the activity of other financial institutions is key; they could contribute more to the financing of the economy (through equity shares, debt securities, but also loans) if they were able to attract more investors.

NFCs' access to capital markets is determined by its size

Accessing finance for NFCs also depends on the size of the enterprise. ECB's latest survey on 'The Access to Finance for SMEs' showed that the percentage of SMEs that did not apply for a bank loan, fearing a possible rejection, was 6% compared to only 2% among large firms. Moreover, straightforward bank loan rejections were reported at 3% for SMEs compared to 1% for large firms. In the same survey, NFCs were asked to report on who owns the largest stake in their enterprises. Small NFCs mostly rely on a single owner or a

Figure 7: Asset allocations of financial institutions

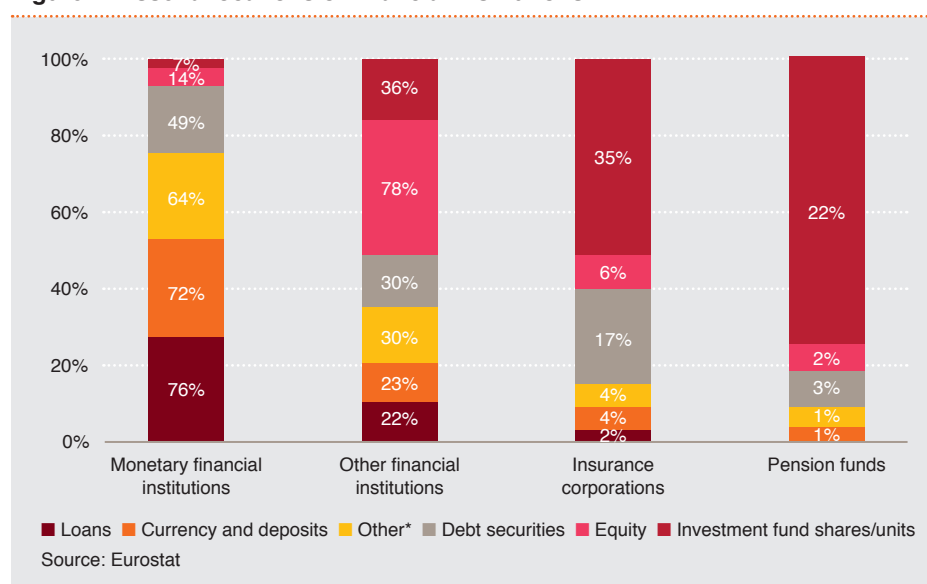
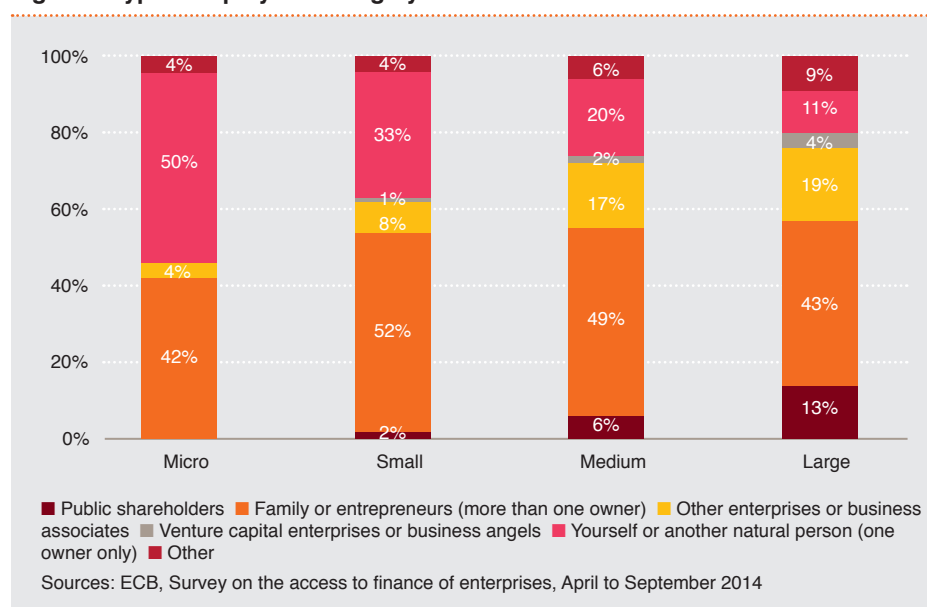


Figure 8 Type of equity financing by size of NFCs



family and entrepreneurs, whereas larger NFCs tend to finance themselves via the capital markets using public or private issuance. These results demonstrate the need for bigger firms to look for other ways to finance themselves as they grow and highlight the difficulty smaller NFCs have using external sources of funding.

Other financing sources are not accessible to every size of SME. For instance, corporate bond issuance is generally used by large companies because the issuance of bonds in large denominations makes it relatively easier to obtain credit ratings and they are less costly for investors to analyse and monitor. As for micro and small company bonds, investors are challenged by scarce liquidity, incomplete rating coverage and lack of transparency; these imperfections are inherent to SMEs that do not have a long credit history.²⁴

1.3 Lack of alternative ways of financing

In the EU, alternative means of financing, such as private equity (PE), venture capital, business angels and crowdfunding, remain limited.

Private equity is still underdeveloped

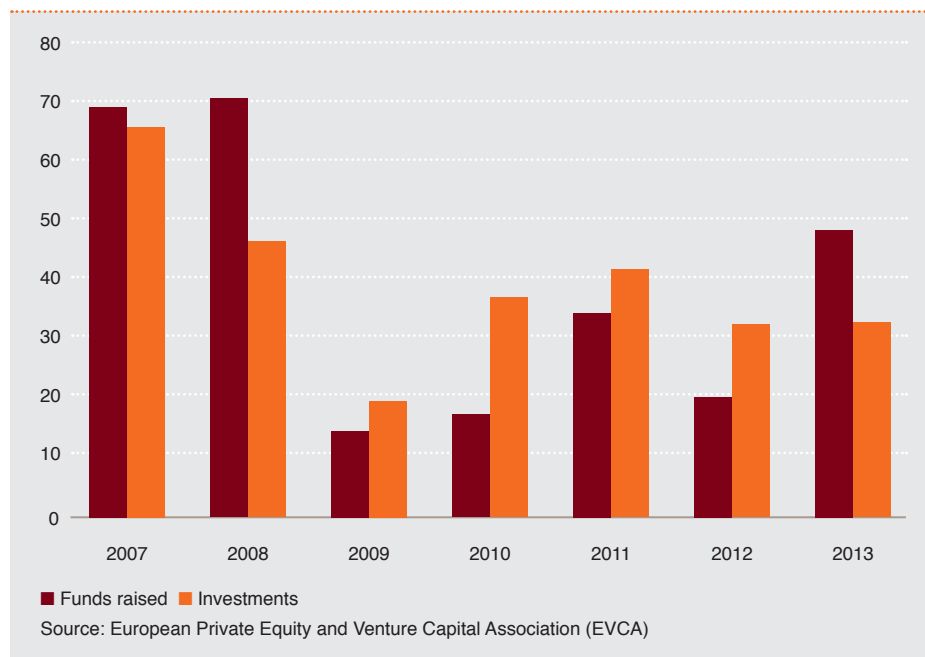
As of 2013, the share of PE investments was still very limited; it stood at 0.24% of GDP in the EU. In terms of growth, PE investments grew at 65.6% from 2009 to 2013.

The European PE market endured a bearish period in terms of fundraising amounts and investments following the subprime crisis, as illustrated in Figure 9. From 2008 to 2009, funds raised declined by 78.7% while investments declined by 57.2%.

Recently, the European PE industry showed signs of recovery despite a slowdown in 2012 and 2013. Total fundraising as of 2013 reached EUR 48.6bn while equity investments equaled EUR 33.1bn. Still, the PE market has not recovered to reach its pre-crisis level.

Private equity: a means to raise funds for companies that are not publicly traded. Companies use this instrument for various reasons: (i) development of new products and technologies, (ii) increasing working capital and strengthening balance sheets, (iii) conducting acquisitions, and (iv) solving property or management issues. An investor who makes a private equity placement leaves the invested capital for a few years while bringing support to the company's management during the investment period.²⁵

Figure 9: Evolution of private equity in the EU - fundraising and investments (EUR bn)



Compared to the EU, private equity is much more developed in the US. PE investments stood at EUR 363.6bn accounting for 3% of GDP as of 2013 and private equity fundraising reached EUR 159.5bn as of 2013, representing 1.3% of GDP. As described in Figure 10, the significant difference between the private equity sectors in Europe²⁶ and the US points to

a more general problem regarding the financing of firms between the 'entry' level (business angels) and the 'final' level (IPO). The difference between the US and Europe in terms of venture capital size is significant, be it at the early or later stage.

24 G20, SME debt financing beyond bank lending, February 2015.

25 See Credit Suisse, An Introduction to Private Equity, 2011.

26 Europe is not understood as the EU in this specific paragraph.

Business angels: are individual investors, usually with business experience, who provide capital for start-up firms. They are an important source of equity for small firms with growth potential in their early stages of development, long before they become attractive for venture capital funds.²⁷

Venture capital is still underdeveloped and shows poor signs of recovery

As of 2013, the share of venture capital investments was minor, standing at 0.02% of GDP in the EU. Since the crisis, venture capital investments and fundraising have remained sluggish. For instance, investments have declined from EUR 3.7bn in 2009 to EUR 3.1bn in 2013, a 16.2% decline. Fundraising has increased slightly from EUR 3.0bn to EUR 3.6bn.

Overall, business sentiment has not favoured investment in higher-risk/higher-reward opportunities such as venture capital, especially given the euro area crisis. Looking at investment on a country-by-country basis scaled to GDP, Ireland, Finland, Sweden and France have been the best performers, while the UK has not performed badly, particularly between 2012 and 2013.

Venture capital: a private equity strategy which consists of financing early stage, high-potential growth companies, frequently in high-tech industries, such as biotechnology or information and communications technology. Overall, venture capital, often called risk capital, has the highest risk and the highest return potential of all the categories of private equity investments.

Figure 10: Alternative financing market size in share of GDP during the early-stage development of a firm

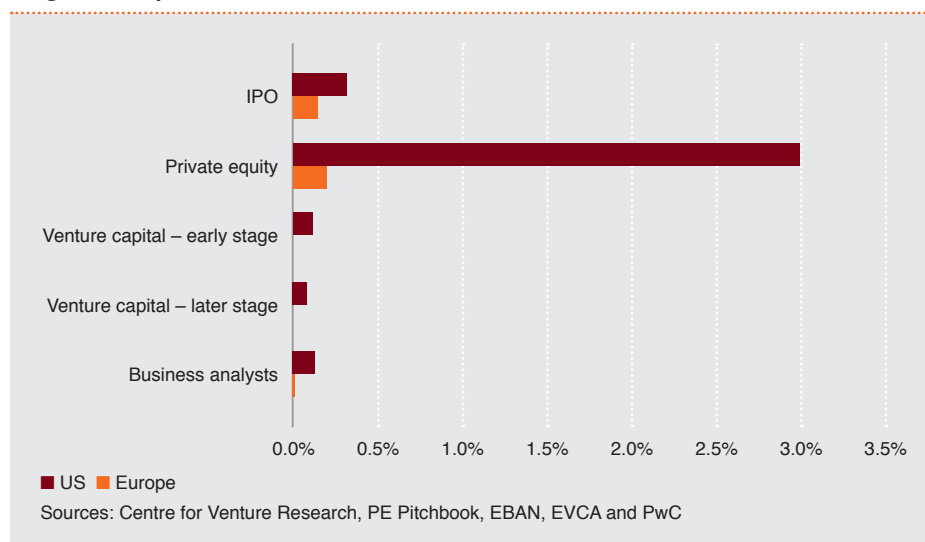
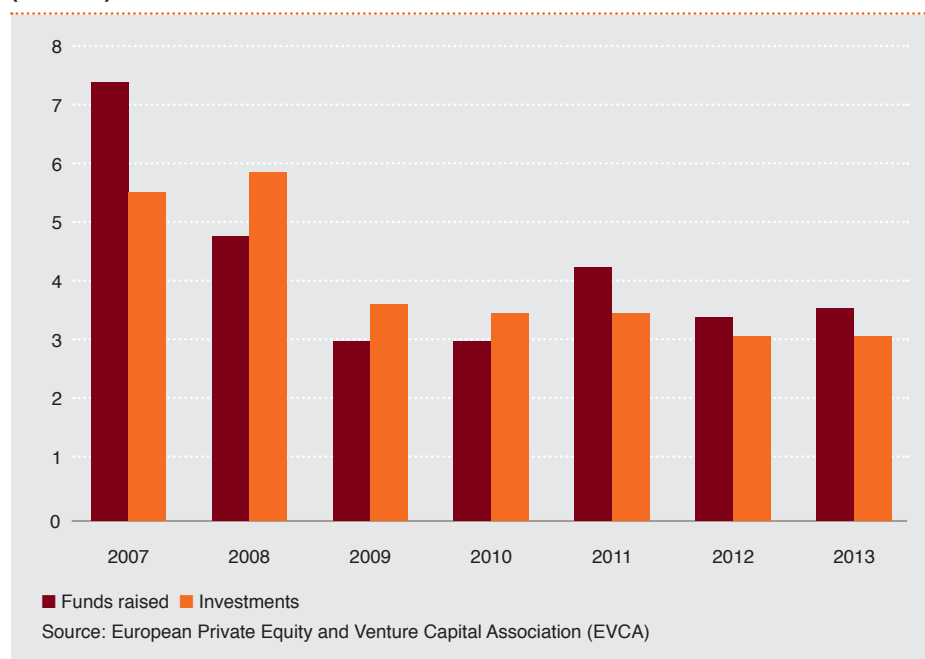


Figure 11: Evolution of venture capital in the EU - fundraising and investments (EUR bn)



Crowdfunding is still tiny but is growing rapidly

Although crowdfunding represents only a small fraction of capital markets in Europe, it is set to grow at a fast pace in the coming years. Within Europe, the sector stands at EUR 2.5bn and is expected to reach EUR 4.9bn in 2015, a 96.2% annual growth rate. Crowdfunding can be an important driver of finance for the very early stage of a company's development.

Asia and North America are seeing a significant rise of their crowdfunding sectors. In North America, crowdfunding reached EUR 7.1bn in 2014 and is expected to reach EUR 13bn by 2015, an 82.1% annual growth. Crowdfunding in Asia is expected to reach EUR 7.9 bn in 2015, compared to EUR 2.6bn as of 2014.

Crowdfunding: open calls to the wider public, typically through the internet, to finance a specific project. These calls usually state the funding needs and the purposes of the project and define a limited funding period. Crowdfunding campaigns typically collect small individual contributions from a large number of individuals. The projects usually have relatively small funding targets, although there are exceptions. Because crowdfunding is in its nascent stage of development, its various models, benefits and risks are dynamic.²⁸

There are multiple reasons for size differences in the crowdfunding sector. One of them is the regulations around crowdfunding. For instance, in the US, over 20 states have already enacted rules that allow local businesses to raise money, but the rules vary from state to state. The state-level rules have a major restriction: companies may raise money only from investors in their own states. In response to this regulation, the JOBS Act aims at enabling unaccredited investors (individuals with annual income of less than USD 200k per year or a net worth less than USD 1m) to participate in equity or debt crowdfunding at the national level - but this initiative is still in the proposal stage.

Crowdfunding has been relatively successful in the US, mainly driven by donation-based crowdfunding platforms. However with Title IV of the JOBS Act, the door will be open to all investors who want to become true owners or shareholders in a high-growth startup.

In Europe, as explained in section 3, crowdfunding is largely regulated by national laws. In practice, 28 different legal frameworks coexist in a single market, which impedes the scalability of the crowdfunding sector.

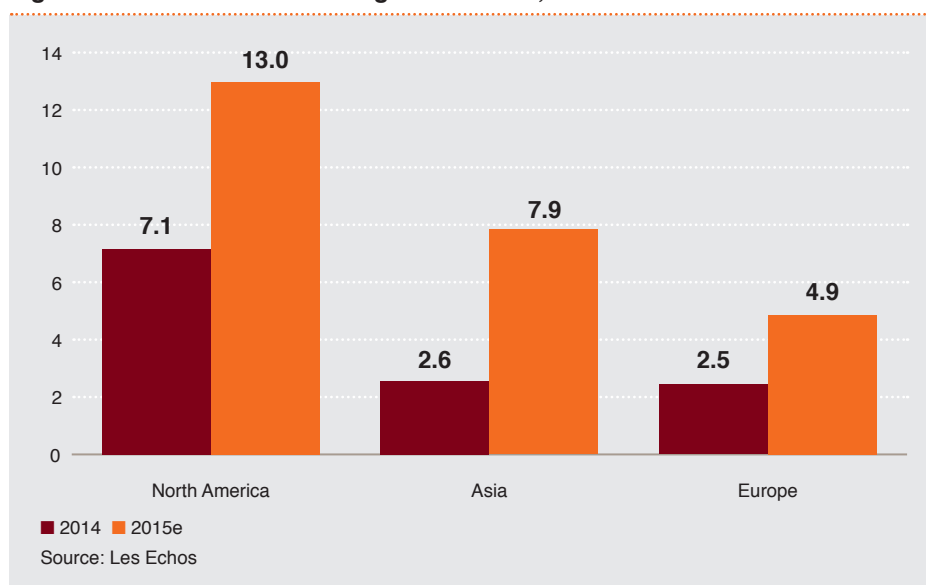
An interesting segment of crowdfunding is Market Place Lending (MPL). MPL is a subset of online lending, which connects investors with borrowers. MPL uses banks as intermediaries. Indeed, when deals are matched between investors and borrowers, banks originate notes and disburse loans to borrowers. Then they sell the securities to the MPL platform, which transfers them to the investor. In this respect, MPL plays a key role in the growth of securitisation. MPL has seen exponential growth in the past five years (123% CAGR from 2010 to 2014) and is projected to continue this

upward trajectory for the foreseeable future (51% expected CAGR for the period 2014-2020). In total, the MPL global volume is estimated to grow to USD 150-490bn by 2020.

The regulatory environment tends to be more supportive in some EU countries. For instance in the UK, which is the most mature market for MPL, the Financial Conduct Authority (FCA) provides a relatively simple landscape for marketplace lenders. In the policy statement PS14/4, the FCA presents a new regime that will apply to firms operating loan-based crowdfunding platforms. In addition, the FCA has updated the regime that applies to firms operating investment-based crowdfunding platforms or carrying out similar activities. The objective is to secure an appropriate level of protection for consumers, and promote effective competition, also in the interest of consumers.

Spain has also begun to regulate crowdfunding. In April 2015, the law for the promotion of corporate finance (LFFE) was published, requiring platforms to obtain the necessary authorisation from the National Securities Market Commission (CNMV). The CNMV will be the authority responsible for the supervision, inspection and sanction of platforms.

Figure 12: Value of crowdfunding transactions, EUR bn



1.4 Securitisation as a compromise to bank loans

Securitisation allows loans and other receivables to become tradable and can indirectly foster financing of firms, especially SMEs. Given that securitisation is one of the factors that contributed to the subprime crisis, regulators are currently working to revive the technique by promoting further transparency and standardisation.

Securitisation can increase the funds available to the economy

Securitisation is a good compromise between loan-based and market-based solutions. In fact, securitisation is a way for banks to transfer the credit risk of the loans which originate from their balance sheets to the financial markets. Thanks to securitisation, the role of market-based finance may increase. All investors can buy these securities, which are mainly loans to NFCs and households, and hence, participate in the financing of the economy. Moreover, the amount of loans can increase as banks are able to transform part of their risky and illiquid assets (loans) into tradable assets.

Securitisation: a type of structured financing in which a pool of cash generating financial assets is transferred from a so-called 'originator' to a 'Special Purpose Vehicle' (the SPV). This SPV finances the acquisition of these assets by issuing securities backed by the assets transferred and payments derived from its underlying assets. Securitisation allows for the conversion of receivables and other assets into tradable securities via SPVs.²⁹



Securitisation is only starting to recover

The securitisation market is starting to recover in Europe and constitutes an opportunity for countries to move toward a market-based economy. EU securitisation markets have been declining significantly in recent years and have suffered from the stigma associated with their misuse prior to the crisis. From 2001 to 2008, the annual growth rate of securitisation issuance was at 36.1%, but decreased by 13.4% on average every year from 2009 until 2014. That said, 2014 saw a revival of growth and volumes of securitisations and has already reached the level of the pre-crisis issuances of 2004.

Currently, the value of issuance represents EUR 287.3bn as of the end of 2014 (i.e. 2.1% of EU GDP). The recovery of the securitisation market is key to support economic growth in Europe and unlock credit markets, especially for SMEs.

Looking at the sectors that contributed to the issuance value of loans backed for securitisation, the relative sizes of Residential Mortgage Backed Securities

(RMBS) and SMEs' loans are considerable. The total value of RMBS dominated the whole securitised loan market, and it grew at 10% annually from 2004 to 2014. The top three sectors in terms of high-growth rates are SMEs, auto loans and consumer loans. Increases in SMEs, RMBS and CDOs (Collateralised Debt Obligations) have been impressive in terms of issuance values in 2014, which might indicate some positive trends in the securitised loan market.

Interestingly, aggregated issuance in the US has been reasonably strong since the crisis compared to Europe (see Figure 14). From 2008 to 2014, the annual growth rate of US securitisation issuance stood at -2% compared to -21.3% in Europe. The value of issuance in the US stands at EUR 1.2tn as of 2014, representing 8.6% of US GDP. This high value and growth is largely attributed to so-called Agency-Mortgage Back Securities (MBS). These types of MBS are issued by government-sponsored enterprises, such as Ginnie Mae, Fannie Mae and Freddie Mac.

Figure 13: Securitisation issuance in Europe (EUR bn)

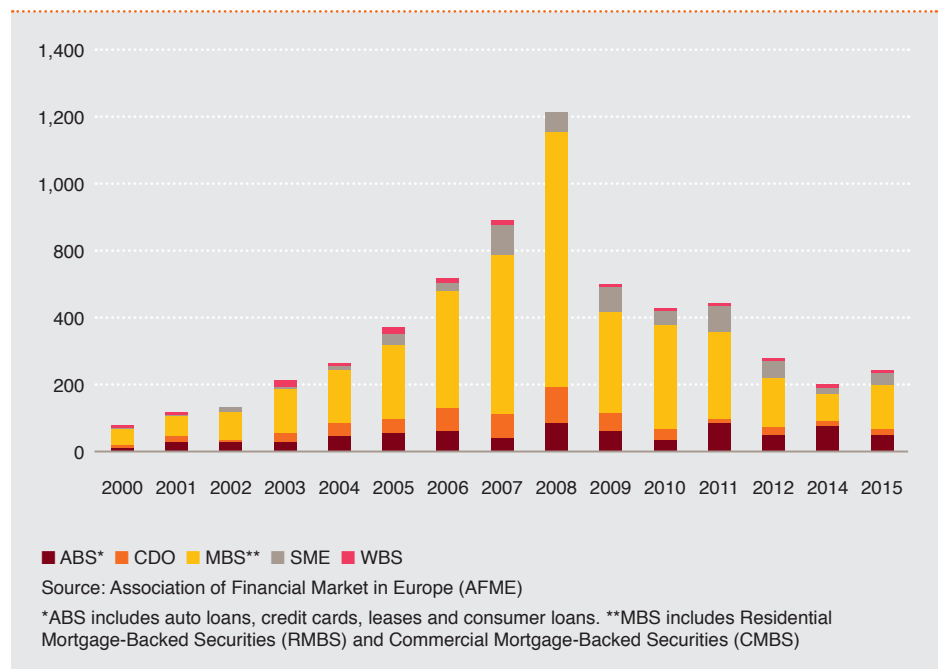
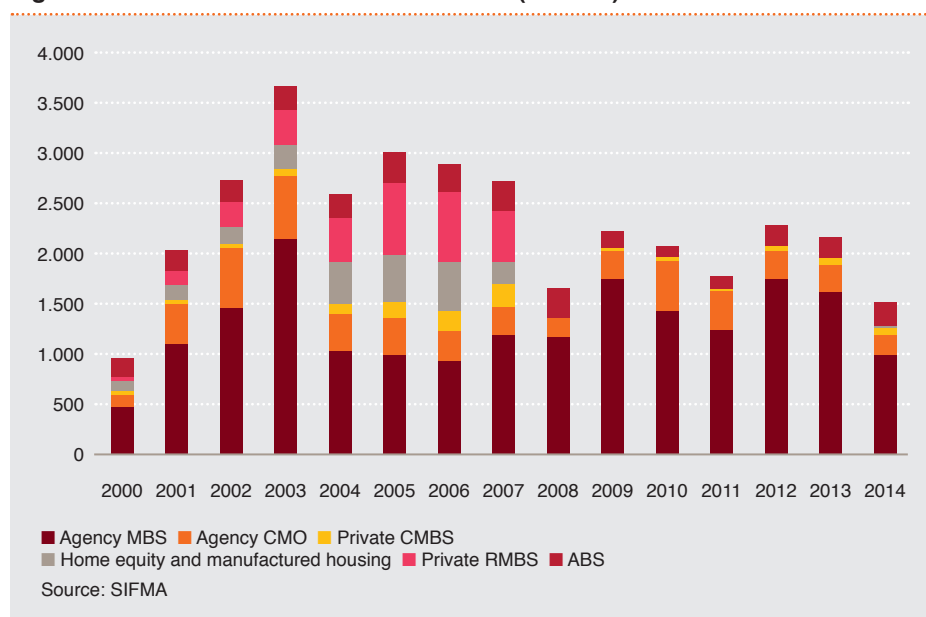


Figure 14: Securitisation issuance in the US (USD bn)

There are various reasons for the difference in the evolution of securitisation issuance between the US and the EU. The first is the US GAAP, which allows for a greater proportion of structured finance vehicles to be treated as instruments that are off banks' balance sheets. The second is the support of the US government in promoting securitisation. As explained earlier, this increase in volumes of US securitisation is attributable, in particular, to support for the RMBS market from Government Sponsored Enterprises (GSEs) such as Freddie Mac, Fannie Mae and Ginnie Mae. Finally, Europe has substituted securitisation with its covered bond market, which explains why European securitisation has been declining – this substitution has not taken place in the US. Interestingly, covered bonds require a higher degree of over-collateralisation than securitisations do. Moreover, unlike securitised assets, covered bonds are an obligation of the issuing bank, backed by a pool of assets, to provide investors with a second form of recourse in the event of the issuer's default.

However, it is worth mentioning that the quality of the underlying assets varies between Europe and the US. Most European structured finance products performed well throughout the financial crisis from a credit standpoint, with low realised default rates. According to recent analysis by Standard & Poor's, the cumulative default rate on European consumer-related securitisations, including SME Collateralised Loan Obligation (CLOs), between the start of the financial downturn in July 2007 and Q3 2013 was only 0.05%. By comparison, securitisations on US loans, including subprime loans, experienced default rates of 18.4% over the same period.³⁰

Regulatory changes may boost the securitisation market

The recent orientation of ECB in accepting securitised product as collateral for open-market operations can help support new lending, especially to SMEs, and in turn support further securitisation. In addition, regulatory pressure on capital adequacy and increased transparency

and clean balance sheets will naturally encourage banks to use securitisation as a vehicle over the long term. Currently, the European Commission is preparing the work on an EU securitisation framework with the aim of developing the market on a more sustainable basis. The framework will foster transparent and standardised securitisations which can act as an effective funding channel to the economy. This initiative will not only protect investors but also allow risk transfers to a broad set of institutional investors.

1.5 A heterogeneous and concentrated capital market

In the previous sections, we have described the EU as a loan-based economy. However, this masks a significant degree of heterogeneity among countries.

Reliance of NFCs on loans varies across countries and is not a matter of the size of the economy.

On average, in the EU the share of loans represents 27.9% of all funding sources for NFCs. That said, in five countries (the UK, Romania, Czech Republic, Lithuania and France), this share is less than 25%, as displayed in Figure 15.

The NFCs that rely to the greatest extent on MFIs (loans representing more than 35%

of funding sources) come from Slovenia, Latvia, Austria, the Netherlands, Malta, and Greece. Half of these countries are located in Southern Europe, and the rest are Baltic, Eastern, or Western countries with both small and large economies. For example, the share of loans is almost the same in Malta and the Netherlands, but the GDP per capita is EUR 17,199 in Malta and EUR 43,400 in the Netherlands.³¹ This shows that the shift towards a more market-based capital market does not depend only on the size of the economy or the country's location, which implies that the construction of the Capital Markets Union will need to go beyond geographical and economic considerations.

In France and the UK, the equity markets are developed, with listed and unlisted shares representing around 50% of their funding sources. These countries could

serve as leading markets to establish objectives for developing the equity markets in other countries. In Romania and Czech Republic, the share of loans is low but the share of 'other' is high, and can be attributed to the heavy use of trade credit accounts. This shows that the share of loans is a lower bound indicator of the importance of banks in providing financing for NFCs.

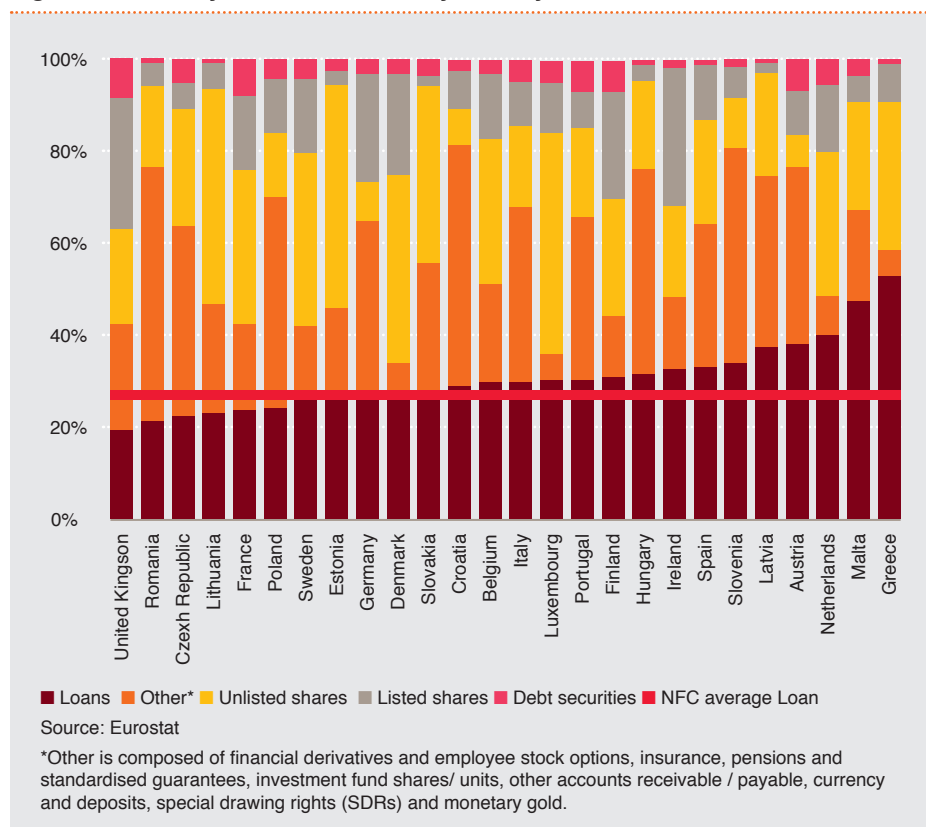
The use of listed shares is a common practice in Western Europe.

With regards to market-based funding sources, the top ten countries with the highest proportion of listed shares in their total funding sources tend to be the largest economies. The top ten countries are:

1. Ireland
2. United Kingdom
3. Germany
4. Finland
5. Denmark
6. France
7. Sweden
8. Netherlands
9. Belgium
10. Spain

This ranking shows that Western Europe has a much bigger equity market, which correlates to the size of its economy. In other words, it is likely that large economies will attract more investors, i.e. companies willing to issue shares will approach the largest economies first to procure funding. Hence, regardless of the companies' origins, if they want to get listed, they should go first to the biggest EU countries to attract more investors.

Figure 15: Liability structure of NFC by country



Debt securities are underdeveloped and are not available to the least developed economies

NFCs do not rely heavily on debt securities; in fact, they are used to a very low extent. On the low end, Romania's debt securities comprise a 0.1% share of all funding sources, while in the UK, which is at the high end of the spectrum, that share is 8.1%. The top five countries with the largest share of debt securities are the UK, France, Austria, Finland and Portugal. The bottom five are Romania, Lithuania, Latvia, Greece and Spain. A comparison of the top five and the bottom five shows that the use of debt securities is especially marginal in the least developed economies, with some exceptions such as Portugal, which belongs to the top five countries in terms of use of debt securities by NFCs.

The high level of disparity in the way NFCs secure financing shows that the capital

markets in the EU cannot be understood as a homogeneous capital market where all actors behave the same way and face the same difficulties. This is why, when integrating capital markets, the expected benefits will vary to a large extent from one country to the other.

The capital markets in the EU are concentrated in the largest economies

Capital markets are geographically concentrated in Europe. Major economies such as the UK, France, Germany, the Netherlands, Italy and Spain represent 76.5% of issued debt securities, listed equities and loans combined. On average, the UK represents 20% of all market types. The most concentrated market is the debt market where these six countries issue almost 80% of debt securities.

Given that these countries account for 76.2% of the EU's GDP, this concentration reflects the large extent of the financing

needs of major economies as well as the level of trust these countries generate from investors. This heavy concentration is also seen in the area of NFCs issuance. Indeed, the same countries account for 74.1% of NFCs issuance of debt and equity. That said, one consequence of this concentration is that the integration of the capital markets will depend mostly on these countries.

The private equity market is even more concentrated than the debt and equity markets. The most active place for private equity in terms of investment by funds is the UK, which maintains 47.0% of market share. This is followed by Germany (15.9%), France (15.6%), Sweden (4.0%), Denmark (3.8%) and Italy (3.1%). In terms of fundraising, the UK represents 68.5% of funds raised among EU countries.

Figure 16: Nationality of issuers by type of asset

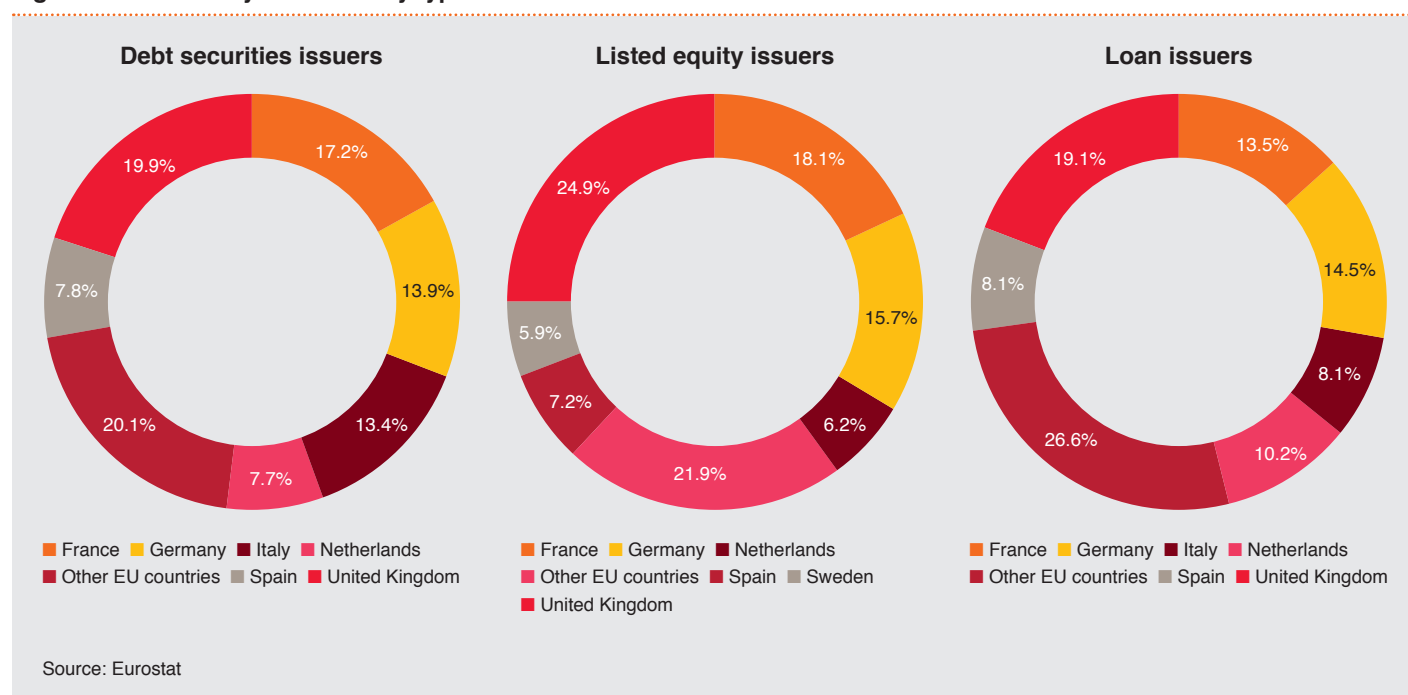


Figure 17: Investment and fundraising by private equity funds' country of domiciliation

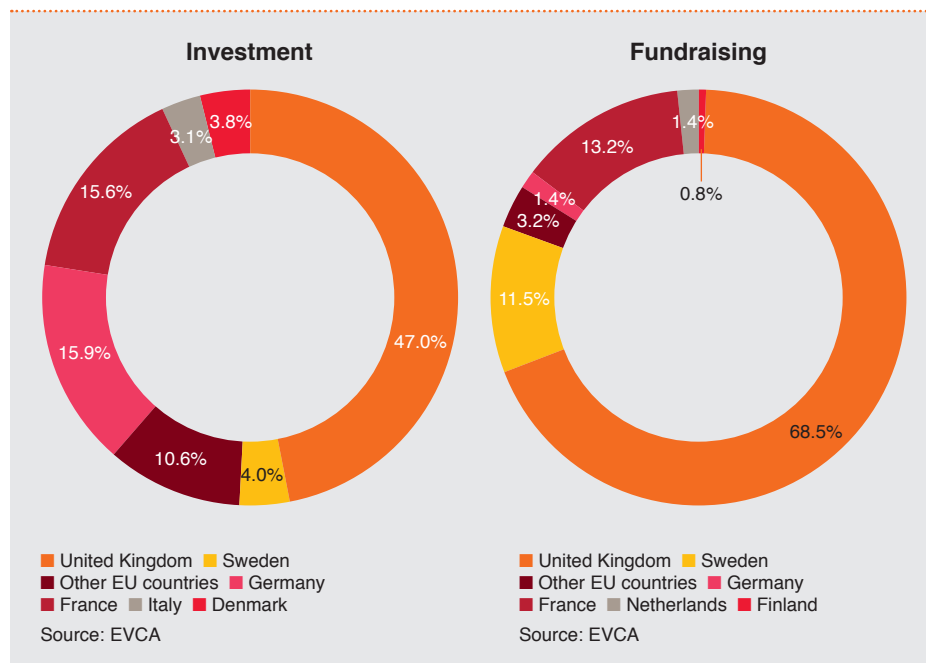
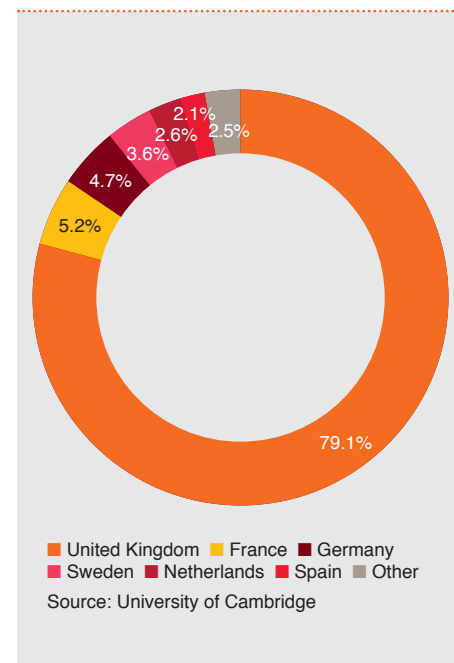


Figure 18: Share of total volume of alternative market transactions



The same concentration can be observed in alternative markets (including mainly crowdfunding, P2P lending, microfinance) which is dominated by one key player, the UK. In 2014, it represented 79.1% of the total transactions of selected European countries.³² France recorded the second highest number of transactions with a share of only 5.2% and Germany followed with a 4.7% share, as shown in Figure 18.

Overall, the EU tends to rely mainly on loan-based finance, rather than on market-based finance. Indeed, non-financial corporations rely mostly on loans and have a limited role in the debt market, while households prefer banks when investing their assets. Capital markets could be deeper and more liquid as the debt market is dominated by government issuance and MFIs play a disproportionate role in terms of share of intermediaries.

With regards to market-based financing, alternative ways of financing remain marginal and securitisation, even though it could boost the funding of NFCs, has not recovered to its pre-crisis level. Regulatory changes may boost the securitisation market, which could revive this market. The capital markets in the EU are also concentrated in the largest economies: the use of listed shares is a common practice in Western Europe, whereas the debt securities are hardly available in the least developed economies. This creates significant disparities between western and European countries in terms of access to finance for firms and access to financial products and financial innovation for investors. Finally, the heterogeneity among countries in terms of loan reliance varies significantly across countries and shows that the Capital Markets Union should bring myriad benefits of distinct importance to these countries.

³² Total of transactions for 2014 corresponds to the following countries: Estonia, Finland, Switzerland, Italy, Poland, Belgium, Czech Republic, Slovakia, the United Kingdom, France, Germany, Netherlands, Sweden and Spain.

A Capital Markets Union could materialise through country specialisation

As explained in the previous section, a Capital Markets Union will benefit the whole European Union as deeper and more competitive financial markets can contribute to growth by allocating capital more efficiently between countries.

An issue currently being debated is how the Capital Markets Union will materialise from an operational point of view. One answer is that, rather than having one dominant financial centre, the Capital Markets Union could become a collection of hubs specialising in specific products and acting as platforms that would connect savers to investors from any EU country. More specifically, countries which develop a comparative advantage in specific financial products (such as Luxembourg and Ireland for investment funds and the United Kingdom for private equity) could act as financial hubs for these specific products.³³ These platforms would accumulate technical expertise, technological infrastructure and would improve the depth and liquidity of specific product markets. Accordingly, a CMU that allows EU countries to specialise in their area of expertise would foster economic activity throughout the EU. One necessary condition for the sustainability of such a framework, however, is ensuring that barriers for entering into specific markets are removed in order to maintain competition among EU countries.

The next section will evaluate the degree of integration of capital markets in the EU and analyse the extent to which establishing a Capital Markets Union is a far-fetched objective.



33 For instance, Luxembourg holds 29% of the total AuM of EU investment funds, followed by Ireland with 15%. (EFAMA 2014). For private equity, the UK leads with a 47% share of the total investment made by EU countries (EVCA 2013). France has the highest share of investment from venture capital with 25% in 2013, followed by Germany with 21% (EVCA 2013).

2

The integration of capital markets is already underway

The integration of capital markets implies that the movement of capital is becoming easier, such that the costs of buying and selling financial assets are converging across geographical locations as long as they possess similar characteristics (risk, taxation regime, etc.). In other words, the law of one price applies.

So, in order to assess the degree of integration within the European Union, we will use mainly two sets of indicators:

- **Indicators based on prices.** We will analyse the correlation of stock market and bond market prices to assess if a process of integration is at work. We will study the degree of convergence of these markets to understand the extent to which the law of one price applies. Also, we will compare the cost of borrowing of loans across the EU.

For instance, asset prices of equivalent risks should be the same. Market prices of equivalent shares should be equal irrespective of their country of domicile. Also, borrowing should be equally costly for projects with the same risk and return. The cost of bonds and the interest rate applied to loans should be uniform from one country to the next for equivalent types of debt.

- **Indicators based on the economic decisions of agents.** We will study the internationalisation of financial intermediaries, the evolution of cross-border mergers and acquisitions, as well as the correlation in consumption behaviours across countries, and the correlation in savings and investment at the country level.

For instance, as capital movements are free, individuals can smooth their consumption by borrowing abroad, while savings will go directly to the most productive investment opportunities irrespective of their location. As a consequence, there would be little or no relation between the amount of savings generated in a country and the domestic investment in that country. In contrast, if portfolio preferences and institutional rigidities impede the flow of long-term capital among countries, increases in domestic saving would be reflected primarily in additional domestic investment. Another illustration of integration will be that financial intermediaries will be able to operate internationally and that cross-border mergers and acquisitions should increase.

2.1 Indicators based on prices

First of all, it is important to bear in mind that it is difficult, if at all possible, to identify financial products which are fully comparable in the various national financial markets.

In particular, debt securities issued by governments typically provide the basis for measuring “risk free” long-term interest rates in a given currency.

However, a wide array of specific factors may affect government bond yields, such as sovereign default risk, the evolution of debt over time, the depth and liquidity of the secondary market for government bonds, and the tax regime applicable to capital gains and interest receipts. These difficulties become even more challenging when considering financial instruments issued by the private sector, such as equities.

2.1.1 Stock markets are showing signs of convergence

In this section, we analyse whether integration is taking place within stock markets. In the process of verifying integration, we compare the returns of stock markets of all EU countries to stock market returns for a benchmark country. We call the indicator excess return and have selected Germany, the biggest economy, as the benchmark.

The underlying assumption behind this methodology is twofold. First, a perfectly integrated market would imply the absence of profitable arbitrage. In other words, it would be impossible for investors to lock in higher returns in one country compared to another. Hence, excess returns should converge to zero over time.

Excess return: the difference between the stock market return (for the stock market)/government bond yield (for the bond market) of a given country and the stock market return /government bond yield of a benchmark country.

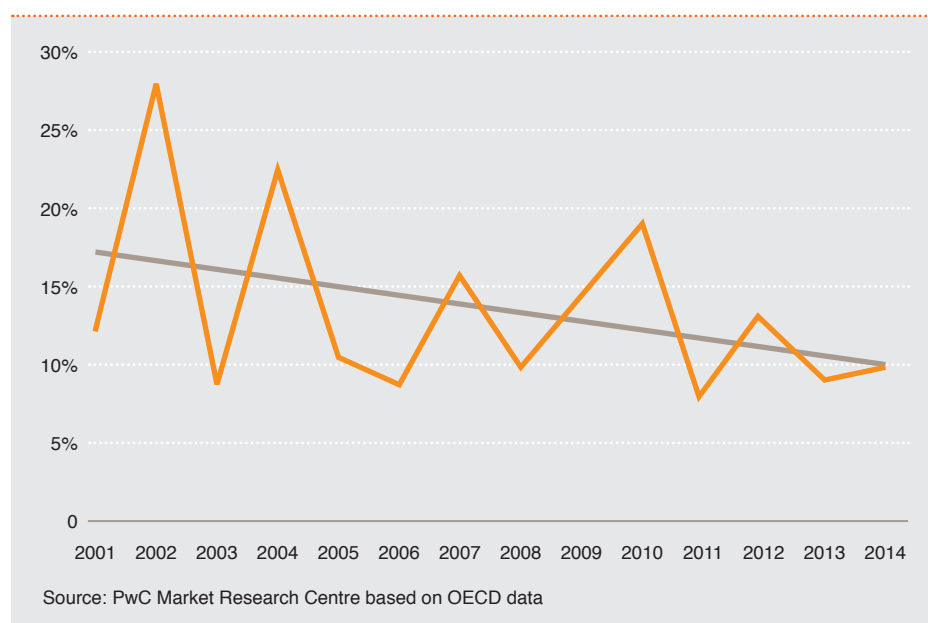
Second, integrated stock markets should respond to shocks in a similar way. For instance, if countries are heavily connected to each other, a shock, be it external or internal³⁴, should propagate across all countries given the high level of economic and financial interdependence among them. Hence, the higher the correlation of returns from one country to another, the more integrated their stock markets are.

One advantage of defining excess return in such a way is that it will isolate specific factors affecting the country. This implies that global factors, such as a global downturn, would be taken into account as the benchmark country will be affected by the same factor.

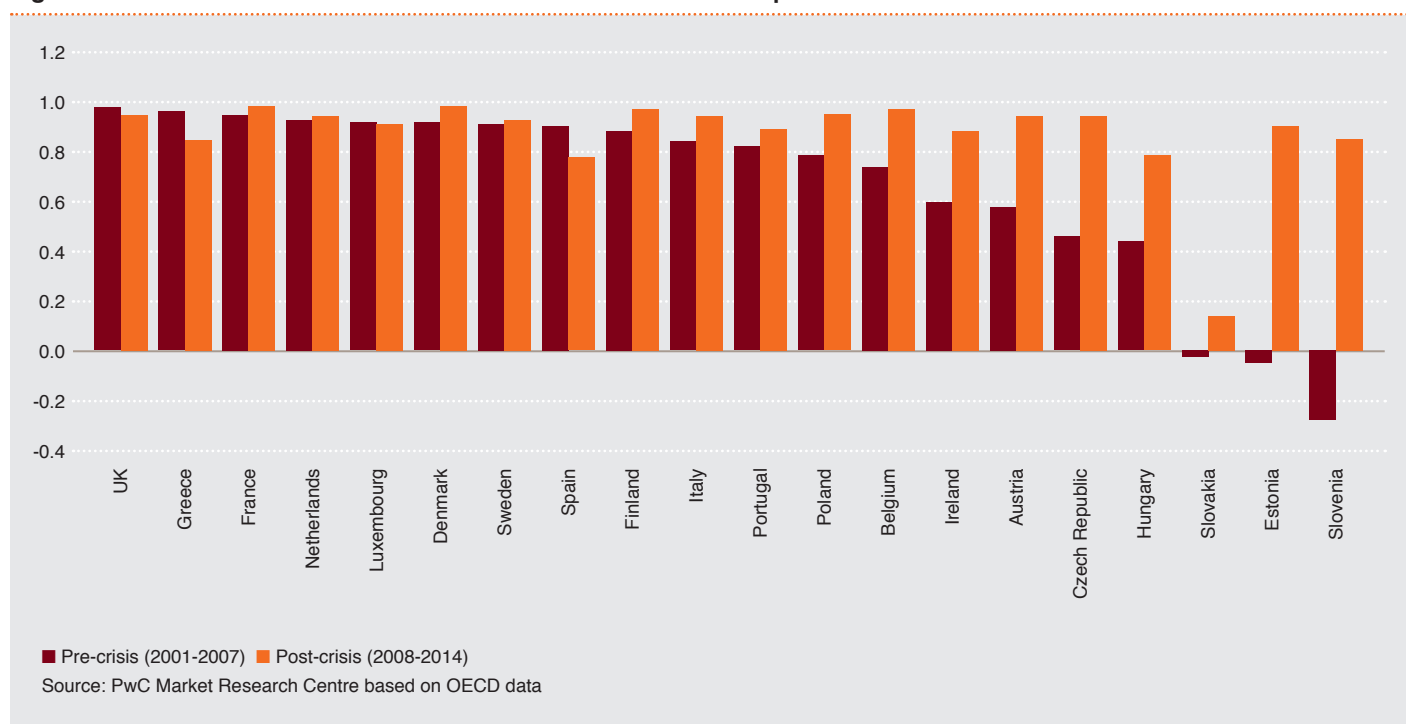
Convergence in the EU stock markets has almost been achieved

Stock market returns of EU economies are slightly converging to German returns. Indeed, as described in Figure 19, differentials are showing a downward trend, which demonstrates the absence of arbitrage over time. The convergence is even truer for Baltic countries such as Hungary, Slovakia, Estonia and Slovenia, among others (see Figure 37 in the appendix for more detailed information on excess returns by country). Some countries, however, have shown less convergence to German returns. But these are particular cases, such as Greece and Portugal.

Figure 19: Evolution of average absolute stock market excess returns in EU countries from 2001 to 2014



34 We define external shock as shock beyond EU countries (for instance, a shock in US). Internal shocks are shocks within the EU.

Figure 20: Correlation of stock market returns of EU countries compared to German stock market returns


Stock market shocks are propagating in the EU

Correlations of stock market returns for EU countries compared to returns of the benchmark country have increased over time, showing that stock markets are becoming increasingly connected to each other. On average, the correlation of returns was 0.7 from 2001 to 2007 and 0.9 from 2008 to 2014. Finland, Poland, Belgium, Ireland and Austria have shown significant integration. Other countries, namely the Czech Republic, Hungary, Slovakia, Estonia and Slovenia, have also shown increased integration. As shown in Figure 20, for the last two countries, correlation has shifted from negative to strongly positive, demonstrating increased integration of their stock markets.

Finally, Greece and Spain have shown decreased integration. This is due to the fact that these countries have experienced idiosyncratic issues such as government insolvency.

There are limits to this exercise. First, the selection of Germany as the benchmark country can induce bias. Indeed, as Germany is the biggest economy, it can influence stock markets of other countries in an indirect way, e.g. through economic shocks, not only through pure financial shocks. Financial shock is defined as a shock that affects the stock and bond markets, but which is not related to any shock on fundamental economic variables.

Second, the selection of one benchmark country provides an incomplete overview of financial integration. Indeed, integration in our case is measured by the correlation of one country to Germany, not from one country to another. However, on average, all countries' stock market returns have a high correlation with Germany (on average, the correlation is 0.8 for the whole period 2001-2014). This implies that stock market returns are necessarily correlated between countries. For instance, as described in Figure 33, Figure 34 and Figure 35 in the appendix, which display the correlation of returns across countries,

we can see that correlation during the post-crisis period is strong overall not only with Germany, but also between countries.³⁵

A third point is that, in contrast to the assessment of the bond convergence, we have not modelled country specific risk. Hence, we have not clustered countries according to their risk profile and assessed convergence within each risk profile. As demonstrated earlier, some countries, such as Greece and Spain, have experienced significant deviation from the German returns because country-specific risks were associated with their stock market performance. However, fragile countries can easily be identified and, therefore, will not significantly affect our conclusions.

2.1.2 The crisis has hindered bond market convergence

Integration of the bond market will be analysed using the difference between ten-year bond yields of the different EU countries compared to the same maturity yield for Germany (hereafter called excess return).³⁶

In the same vein as stock markets, a perfectly integrated market should verify, all things being equal, the same conditions as those for stock markets i.e. convergence and correlation of returns.

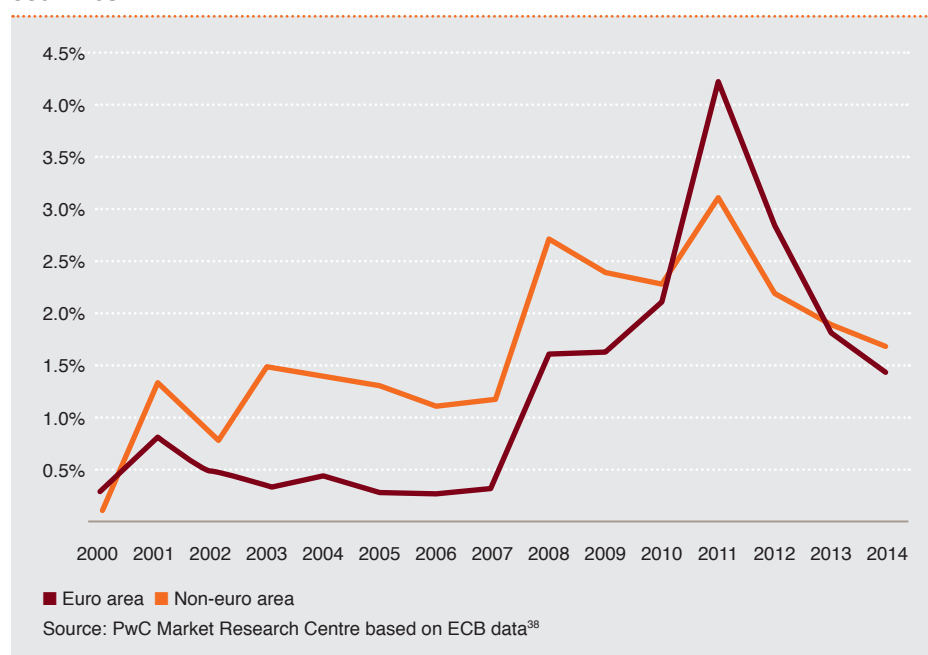
Before starting our analysis, it is important to understand that convergence of returns should take place only if countries dispose of the same level of risk, a condition that is not verifiable for EU countries, especially after the debt crises. Looking at Figure 36 in the appendix, as of 2014, the gross government debt of EU countries, an indicator of the level of risk, stood at 73.1% of GDP on average. In Greece, the government debt reached more than 170% of GDP, while government debt in Estonia represented 9.7% of GDP.

This point might, however, be challenged in the following way: independent of the level of risk, a country that belongs to the EU is not likely to be insolvent as a bailout could be provided by a supranational authority (e.g. IMF), a European institution (e.g. European Central Bank) or Member countries' funds (e.g. ESM). In this view, convergence will take place because investors will invest in risky countries pushing yields within these countries down. Disinvestment will take place in safer countries driving yields in these countries up and implicitly subsidising risky countries. Given the high level of interdependence between monetary and fiscal policies, this argument is even truer for euro area countries where the ECB will play an interventionist role³⁷ in providing liquidity directly or indirectly to the distressed economy.

Yield convergence is eased in the euro area

When comparing the euro area with the whole EU, we observe that convergence is more likely in the euro area. Indeed, in the euro area, absolute excess returns were on average around 0.40% from 2000 to 2007. This means that on average, bond yields of other euro area countries are 0.40% higher than the German bond yields. In the non-euro area, absolute excess returns during the same period were on average at 1.09%. During the post-crisis period, the average excess returns were at 2.24% for euro area countries compared to 2.31% in the non-euro area. The latter result is, however, heavily driven by Greece, and to a lesser extent, Portugal, Latvia and Cyprus.

Figure 21: Excess return in absolute value for euro area and non-euro area countries



³⁵ The sole exception during the post-crisis period is the returns from Slovakia, which are uncorrelated to other countries. Looking at the overall period (2001-2014), Slovak and Slovenia have shown less integration.

³⁶ See Abad P., Chulia H. and Gomez-Puig M., EMU and European government bond market integration, ECB Working Paper, 2009 and Kim S-J., Moshirian F. and Wu, E., Evolution of international stock and bond market integration: Influence of the European Monetary Union, Journal of Banking and Finance, 2006.

³⁷ Note that unconventional monetary policies and quantitative easing programmes have helped countries that were facing financial issues.

³⁸ Greece has been excluded from our analysis.

It is worth mentioning that some countries in the non-euro area are showing convergence with German bond yields. These countries are Sweden, Denmark, the UK and, to some extent, the Czech Republic. Hence, despite the fact that integration is eased in the euro area, the integration process is not only a matter for euro area countries.

Given their ability to control monetary policy, non-euro area countries have been more resilient during the sovereign debt crisis. As shown in Figure 21, the post-crisis period has created lower deviation from the German yield compared to euro area countries.

The 2008 crisis slowed convergence

Before the subprime crisis, yields in European countries were converging to the German yield. The crisis constituted an impediment to the convergence process of all EU countries including euro area countries. As shown in Figure 21 and Figure 38 in the appendix, excess returns are higher after the subprime crisis.

Shocks on yields are becoming less systemic

Unlike stock markets, correlation of bond market returns for EU countries compared to Germany, on average, has decreased. During the pre-crisis period, correlation on average reached 0.84 compared to 0.68 during the post-crisis period.

When conducting deeper analysis, we can observe three types of countries within the EU. The first type is characterised by increased interconnectedness of the EU countries, such as Romania, Hungary and Poland, but also those with well-established interdependencies with other EU countries such as Luxembourg and the United Kingdom. These countries have witnessed an increased correlation with German yields from 2000 to 2014.

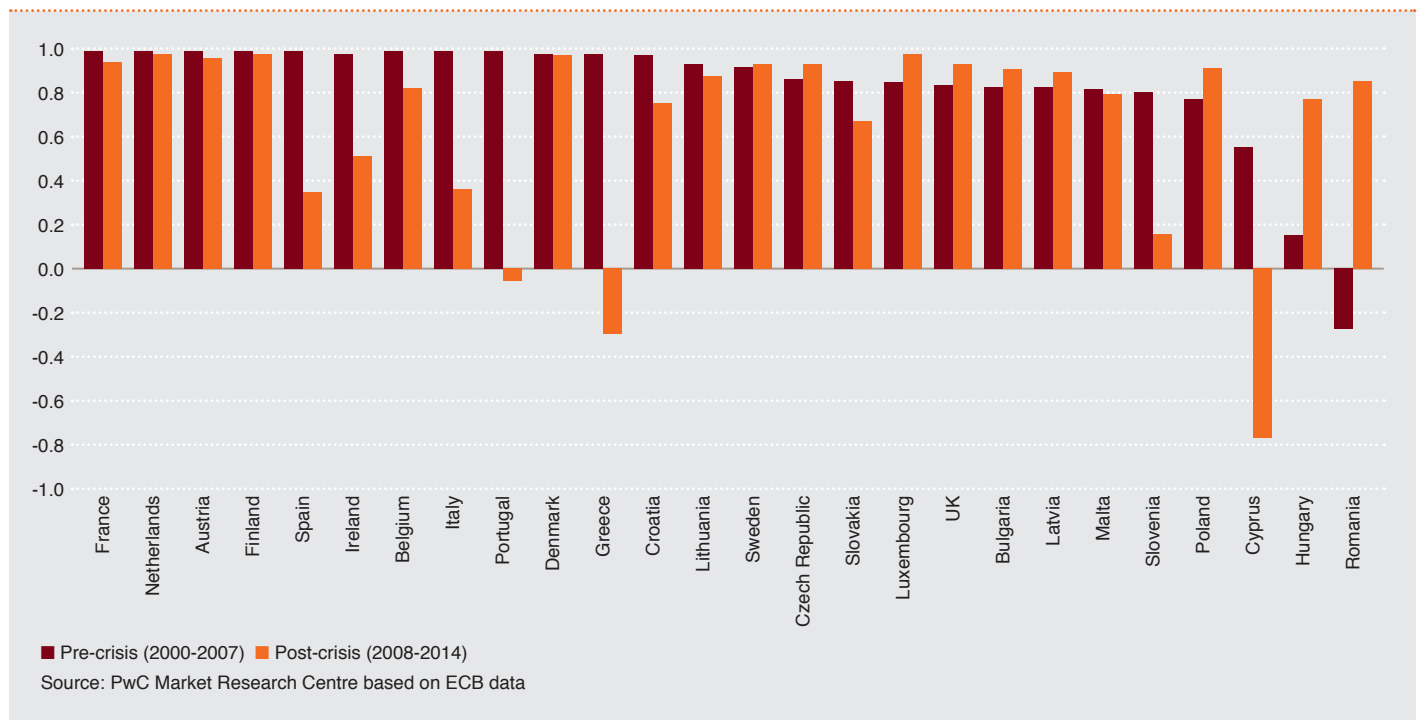
The second type includes countries that have had a lower correlation with German bond yields during the post-crisis period than during the pre-crisis. Most of these countries have significantly expanded their government debt to GDP during the post-crisis period. For instance, government

debt to GDP in France was 58.4% in 2000 compared to 95.1% in 2014. In Croatia, government debt stood at 35.1% of GDP in 2002 compared to 80.9% in 2014. Higher levels of government debt or national peculiarities could have to some extent decreased the correlation with respect to the benchmark government bond yields. These countries include the Netherlands, Finland, Denmark and France.

The third type includes those countries which experienced a severe disconnection with respect to the German yields such as Spain, Portugal, Italy and Greece. Higher levels of risk and the risk of exiting of the euro area, in some cases, could have suspended any correlation to the benchmark yields.

When comparing integration between stock and bond markets, we can see that the integration of stock markets is at a much more advanced stage than the integration of bond markets. This is specifically due to the sovereign debt crisis which has affected government bond yields in a systemic but idiosyncratic

Figure 22: Correlation of ten-year government bond yields of EU countries compared to ten-year German bond yields



way. Countries which have increased correlation over time for both the stock market returns and bond yields include some Eastern European countries, such as Czech Republic, Hungary and Poland, but also Sweden. Interestingly, most of these countries are not part of the euro area.³⁹

2.1.3 The loan market is highly fragmented

Europe does not provide equal financing costs

Integration of capital markets should allow equal financing conditions for non-financial corporations as long as they display the same level of risk and return. As NFCs rely mostly on banks for financing, equalising the conditions for obtaining loans is key to support growth, especially for SMEs that mainly use loans. Large firms can more easily rely on debt or equity instruments.

Figure 23 shows the average interest rate applied to loans for NFCs across EU countries. This cost varies to a large extent in the EU, showing that integration does not apply in the EU with respect to the credit market.

To some extent, the large heterogeneity in the interest rates of loans also reflects the difference in associated sovereign risks. Therefore, it can express country-specific risks, and not only a lack of integration. Indeed, the deterioration of economic activity of distressed economies has affected NFCs' borrowing costs. The interest rate applied to loans in these countries is above 5%, while it is less than 2% in Germany. Given the relatively larger reliance of NFCs on domestic activity in these countries, the higher cost of borrowing also reflects risk specific to the countries that impact NFCs' risk of default. However, country-specific risk does not fully explain the variation in interest rates on loans across countries. Indeed, when looking at Figure 24, we can see that country risk explains a significant part, but not all of the interest rate variation on loans. For instance, countries with similar

Figure 23: Average interest rate applied to loans for NFCs

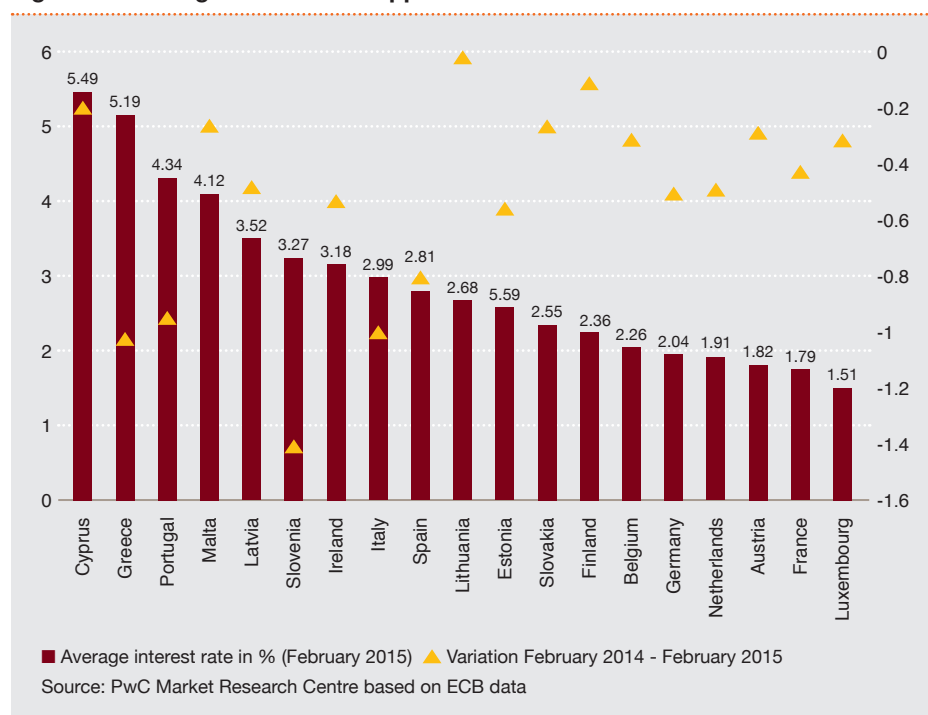
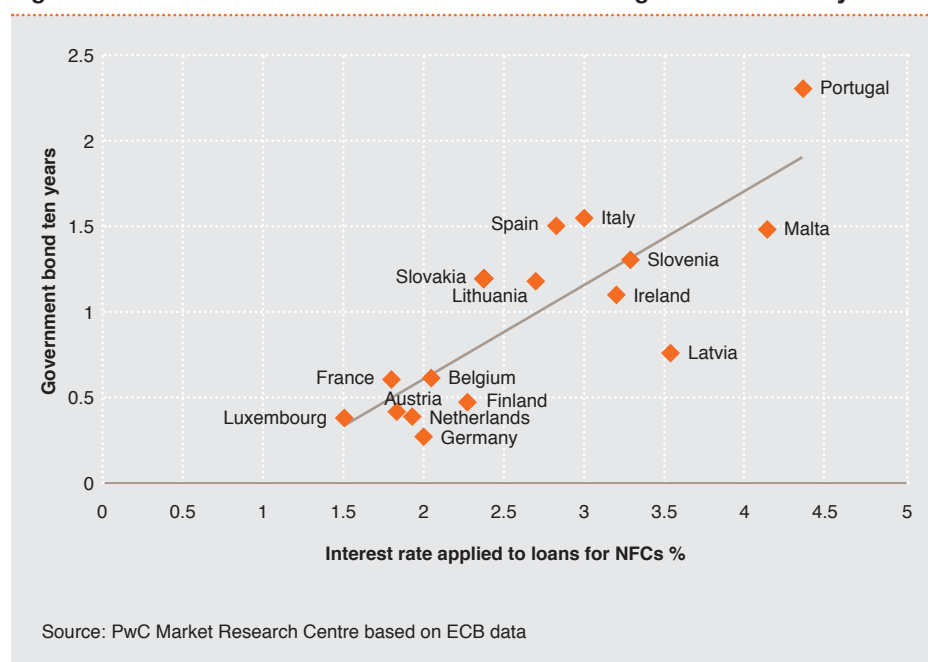


Figure 24: Relation between interest rate on loans and government debt yield



government debt yields (a measure of country-specific risk), such as Ireland and Slovakia, dispose of different interest rates on loans.

To further illustrate the heterogeneity in the cost of financing across SMEs in the EU, we have selected four countries from the Western, Eastern, Southern and Northern regions. All these countries belong to the euro area, such that we could expect less divergence in the cost of financing. Table 1 shows two measures of the cost of borrowing. The first measure is the interest rate for NFCs for loans up to EUR 1m. We can suppose that this concerns mostly SMEs. The second measure is a composite indicator of the cost of borrowing computed by the ECB that takes into account the volume of the loans as well as the corresponding interest rate. These two indicators confirm what has been demonstrated above. There are no equal conditions of financing across countries, in particular for SMEs. While the differences are quite low for Western and Northern regions, a lot needs to be done to reduce the inequality of access to finance between the Southern and Eastern countries, and the Western and Northern countries.

Since the latter quarters of 2013, the European Union has shown signs of economic recovery despite episodes of sovereign crises. Within this context, we can expect a reduction in the differences in the cost of borrowing brought about by a reduction in the cost of borrowing in the most expensive countries. But this is not the case (see Figure 23 on page 33). Whereas the interest rate has increased in the Netherlands by around 2% between 2014 and 2015, it has decreased in Germany by more than 4%.

More specifically, when assessing the convergence of countries in terms of interest rates, Figure 40 in the appendix shows that countries are not converging in terms of interest rates on loans. Excess interest rates on loans compared to German interest rates was 0.37% in 2008 and reached 0.67% in 2014. Lack of

Table 1: Cost of borrowing for selected EU countries

	Germany	Spain	Slovakia	Finland
Interest rate applied to loans of up to one million euros over one and up to five years (March 2015)	2.97%	3.45%	4.73%	2.55%
Composite cost of borrowing indicator for long-term loans (new business)	2.78%	4.19%	3.84%	2.83%

Source: ECB, Bank Lending Survey

Table 2: Evolution of banks' credit standards*

	Q4 2010	Q4 2011	Q4 2012	Q4 2013	Q4 2014	01/04/2015
Belgium	0	0	25	0	-50	-75
Cyprus	0	20	40	50	25	0
Germany	-8	0	6	-3	-3	-3
Latvia	25	50	38	25	0	-25
Portugal	14	14	29	14	14	-13
Slovenia	80	100	20	0	20	-20
Spain	0	20	40	0	20	0

Source: ECB, Bank Lending Survey

* Data rare expressed as percentages. This corresponds to the percentage of banks reporting tightening credit standards minus the percentage of banks reporting easing credit standards

convergence compared to German interest rates mainly stems from the fact that interest rates in Germany declined sharply while interest rates in other countries remained quite stable.

Another way to assess the interest rate differential is by looking at the differences in credit market conditions applied by banks to NFCs. Table 2 shows that banks' credit standards evolution does not follow the same path.

SMEs' access to finance is fragmented

Overall, around a third of SMEs think access to finance is a serious problem, showing that the credit market in the EU does not provide sufficient funds. The problem of access to finance is unevenly distributed in the EU. In countries which have experienced a sovereign debt crisis, such as Spain and Portugal, the difficulty of accessing finance is not comparable:

in Spain, around 35% of SMEs find that access to finance is a pressing issue, while less than 28% in Portugal struggle with the same problem. In Belgium, France and Germany, this percentage is around 30%, but it reaches 42.3% in Italy. Finding alternatives to credit markets is a pressing challenge for SMEs and the variation in the difficulties of SMEs to access finance shows that they are unable to find ways of financing outside their borders. Otherwise, access to finance would be equally distributed across countries.

Finally, when comparing the problem of access to finance to the outcome of applications for bank loans, we found the following:

- In Austria, Belgium, Finland, France and Germany, the barriers to access financing are relatively low with respect to other EU countries, and SMEs receive most of the funds needed when they apply for them.
- In Portugal and Spain, access to finance is somewhat high, but a majority of SMEs receive all they need when they apply for a loan.
- The Netherlands, Ireland and Italy are in an intermediary situation: more SMEs find that access to finance is a major problem and when they apply, a minority of SMEs do not receive everything they need.
- In Greece, SMEs face major problems in accessing finance, and when they acquire loans, they do not receive all the funds they need.

Overall, the loan market remains fragmented within the European countries, creating unequal conditions of growth for SMEs. Equalising access to loans would foster the economic growth of all SMEs irrespective of their country, and therefore improve the efficiency of the European economy. Given the fact that the difficulties of SMEs are unevenly distributed in the EU, special efforts should be made to help SMEs find alternative means of financing in countries where access to finance is the most pressing, such as Greece, the Netherlands, Ireland and Italy.

Regarding price-based indicators, integration is underway globally; convergence is taking place in stock markets, but different conclusions apply to the debt and the loan markets. Regarding bond markets, we can see that integration is eased by membership to the euro area

Table 3: Percentage of SMEs that consider the lack of access to finance to be a major problem

BE	DE	IE	GR	ES	FR	IT	NL	AT	PT	FI
30.9%	29.6%	33.3%	60.4%	35.3%	31.3%	42.3%	34.2%	28.1%	27.8%	27.7%

Source: ECB, Bank Lending Survey, June 2014

Table 4: Percentage of SMEs that have received the total amount of the loan for which they applied

BE	DE	IE	GR	ES	FR	IT	NL	AT	PT	FI
74.6%	70.8%	37.1%	20.7%	51.0%	72.6%	48.3%	29.8%	74.9%	55.2%	71.1%

Source: ECB, Bank Lending Survey, June 2014

as it has removed the risk associated with exchange rate volatility. However, some distressed economies in the euro area are facing idiosyncratic shocks that prevent them from converging. In the same vein, some non-euro area countries are becoming integrated. But this is due to their existing interdependencies with the euro area economies. In the loan market, convergence is not taking place at all; significant differences among countries persist and should be tackled in order to promote increased integration of capital markets.

2.2 Indicators based on economic decisions of agents

Integration of European capital markets is also a consequence of the economic decisions of agents, e.g. households that allocate their resources domestically or internationally, financial institutions that invest in their own country or abroad, and NFCs that operate in one or several countries.

We have analysed a series of standard indicators of integration derived from the economic behaviours of these agents based on the following rationale:

- The number of major local bank subsidiaries located abroad shows the extent to which a process of internationalisation is at work with respect to banks; this will foster integration by increasing competition among financial institutions.
- In the same vein, we have assessed the degree of foreign penetration of banks by looking at the number of foreign banks among the top ten in terms of assets.
- The percentage of foreign assets held by banks⁴⁰, pension funds and insurance companies indicates the degree of risk diversification. This is also an indicator of the degree of capital mobility.

40 For banks, we have measured the average of claims to non-residents and liabilities from non-residents.

- By looking at the average number of countries in which mutual funds are distributed, we determined investors' ability to access investment opportunities from international financial institutions.
- The share of cross-border mergers and acquisitions (M&As), all sectors included, is a consequence of increased financial integration, as this should impact the concentration of both financial and non-financial corporations.
- The amount of portfolio investment from one EU country to another shows the level of interdependence of the EU economies, a result of capital flows. We have studied the origin as well as the destinations of portfolio investments among EU countries to identify how investments are channelled from one country to another.
- In the same way, we have measured the correlation between private saving and national investment in order to analyse whether the investment in a particular country depends mainly on domestic saving or whether it can be sustained by international investors. Under perfect capital mobility and unchanged investment opportunities, an increase in the saving rate in one region would cause an increase in investments in all regions. Instead, large correlations between national saving and investment would indicate strong country segmentation.
- Finally, we have analysed the correlation of domestic consumption. Indeed, based on the idea that integrated capital

markets allow for international risk sharing, a high degree of correlation of consumption growth would show that financial markets afford full risk sharing to consumers located in different countries.

2.2.1 Increased capital flows within the EU confirm increased integration

EU countries are showing increased levels of integration. Looking at various indicators, such as portfolio investment flows, we found that EU member states tend to invest predominantly in other EU member states which results in harmonising the consumption behaviour of households across EU member states. Another proof of increased integration is the degree of internationalisation of financial institutions. Finally, looking at mergers and acquisitions (M&As), we found evidence for increased value of cross-border deals over time.

Portfolio investment is centred within the EU

Concerning portfolio investment flows, EU member states tend to invest predominantly in other EU member states with an average of 75% in 2013; the remaining top destinations are the US (11%), Japan (1.0%) and Switzerland (0.9%)⁴¹. This demonstrates a high level of interdependence among EU countries. From 2001 to 2013, the share of assets invested within the EU increased by 12%⁴². The speed at which it increased was the highest prior to 2004, which coincides with the admission of ten new members in the EU⁴³. The highest degree of integration was attained in 2009 with 77%, and then gradually decreased to 75%

in 2013, demonstrating that the 2008 crisis had relatively little negative impact on the capital flows of EU countries.

As a result of this increased amount of capital flows within the EU and other factors⁴⁴, the behaviours of EU households are increasingly correlated. We have measured the correlation of consumption growth between EU countries⁴⁵ and determined it was 0.2 between 1996 and 2004. Between 2005 and 2013, the correlation of consumption growth increased to 0.64. This indicates that the consumption pattern of European households tends to align, which means that the diversification of risk applies to a larger extent, and idiosyncratic shocks on consumption are less and less frequent. This may be the case because capital flows allow for diversification of risk.

Internationalisation of financial institutions

From a corporate perspective, the integration is reflected through the internationalisation of the operations of financial institutions. The European banking market is dominated by European banks. Among the top banks in each country, all leading banks in the EU are headquartered in an EU country. Restrictions in terms of international operations are likely to be low and competition will be high, as 12 out of 28 European countries have their leading national bank affiliated in a banking network headquartered in another European country⁴⁶. Foreign banking penetration may contribute to the integration of capital markets.

41 Data are from the Coordinated Portfolio Investment Survey (CPIS) of the IMF which provides the world totals and the geographical distribution of the holdings of portfolio investment assets for all EU countries except Croatia.

42 Refers to the current EU 28 (outside Croatia, due to lack of data) so as to be able to compare foreign investments in the EU from 2001 to 2013.

43 These members had a higher than average increase in the ratio of assets allocated in the EU.

44 The increased convergence in GDP growth also contributes to the correlation in consumption variation across countries.

45 See appendix for correlation tables on the period 1996-2004 and 2005-2013.

46 The study was made according to 'The Banker Top 10 Banks' per country and by analysing the banks' various locations: their headquarters vs their branches in different countries.

In addition, there is also a trend among financial institutions which are leaning toward internationalising their investment strategies. Over a third of the assets held by financial institutions come from non-resident issuers. Taking the average number of non-resident claims and liabilities to non-residents, banks increased their foreign exposure from 29.4% to 32.7% from 1999 to 2009. For insurance companies, the percentage of foreign assets in total assets has jumped from 21% to 35% on average. For pension funds, this percentage has also increased from 21% to 34%. The diversification of portfolios, and consequently the interconnectedness of capital markets, is increasingly allowing financial institutions to seize investment opportunities irrespective of the country of origin.

Cross-border mergers and acquisitions are increasing

As shown in Figure 25, the share of cross-border deals value has increased over time. In 1998, the share of cross-border deals value represented 50%. As of 2014, this share was 74%. This increasing share of cross-border deals demonstrates that EU member states are rapidly becoming interconnected and integrated. One reason for this increase is that companies that have suffered significantly from the credit crunch in Europe have been acquired by companies with better credit conditions.

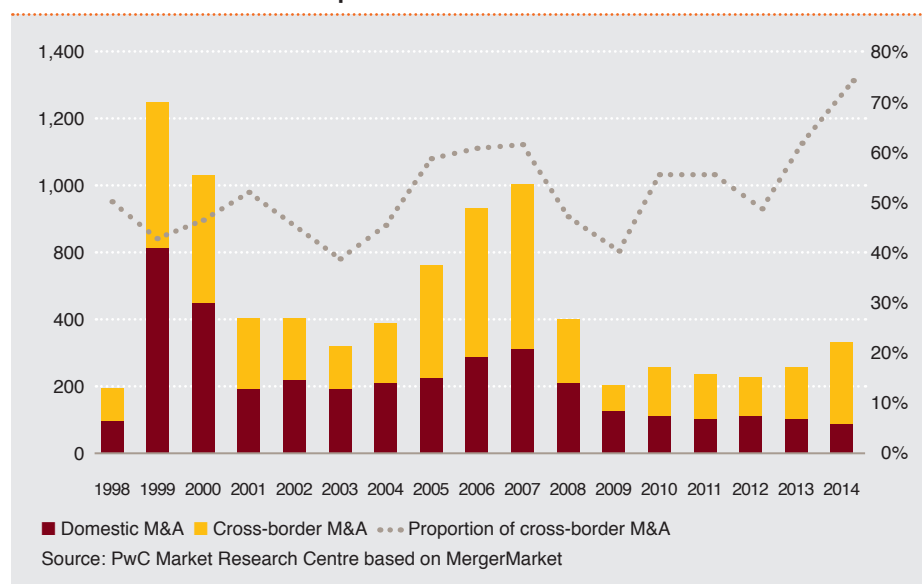
Despite the fact that the share of cross-border acquisitions has increased, especially in the last two years, the value of domestic and cross-border deals is low compared to the pre-crisis level. Indeed, from 2008 to 2014, the value of domestic and cross-border M&As was on average EUR 316.8bn compared to EUR 645.5tn between 2000 and 2007.

Table 5: Percentage of top banks headquartered abroad⁴⁷

AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IE
10	29	57	100	0	88	0	100	60	29	10	0	37	50
IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	GB
10	100	100	56	50	20	40	20	83	20	50	0	15	10

Source: PwC Market Research Centre analysis based on "The Banker Top 10 Banks"

Figure 25: Domestic, cross-border deals value (EUR bn) and the share of cross-border deal value compared to total M&A deals in the EU



The share of cross-border deal value declined significantly in the aftermath of the crisis, most likely due to confidence reasons. Also, given the credit crunch, banks have been less likely to finance M&As. At the same time, the value of domestic and cross-border M&As declined and reached its lowest level in 2009, at EUR 238.4bn.

⁴⁷ In the ranking from The Banker, only major banks operating in the country are disclosed; the numbers in the table correspond to the share of these banks that are headquartered outside of the country.



2.2.2 Financial hubs are evidence of capital markets integration

EU capital markets have allowed the emergence of strong financial hubs which are acting as platforms for cross-border distribution and can be considered a vector of integration.

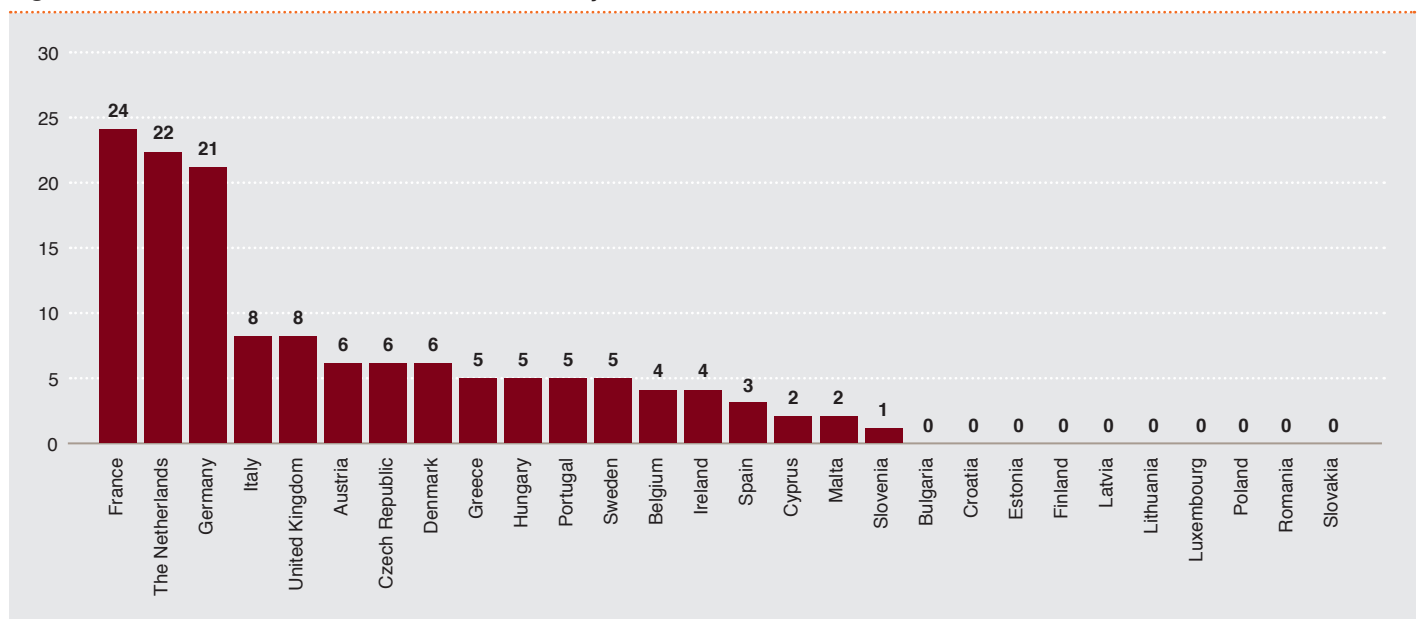
The largest economies play a major role in the integration process

The largest economies tend to show a higher level of integration, specifically a higher domination over the capital markets. When looking at the number of subsidiaries of major local banks abroad, we see that the major EU economies have the highest number of subsidiaries. They are mainly France, Germany, the Netherlands and, to a lesser extent, Italy and the UK. This indicates that major economies have better capacities to penetrate foreign banking markets. In this sense, the increased integration tends

to be accompanied by a concentration process where the major economies take the biggest advantage. This reinforces the results displayed in section 1 showing that the capital markets are highly concentrated.

Figure 27 shows that the main destinations of portfolio investments are the biggest economies within the EU. All countries, irrespective of their geographical distance from the destination country, invest in the biggest economies. For instance, Germany is within the top five destination in terms of portfolio investment for 20 countries; France is among the top five destinations for 16 countries.

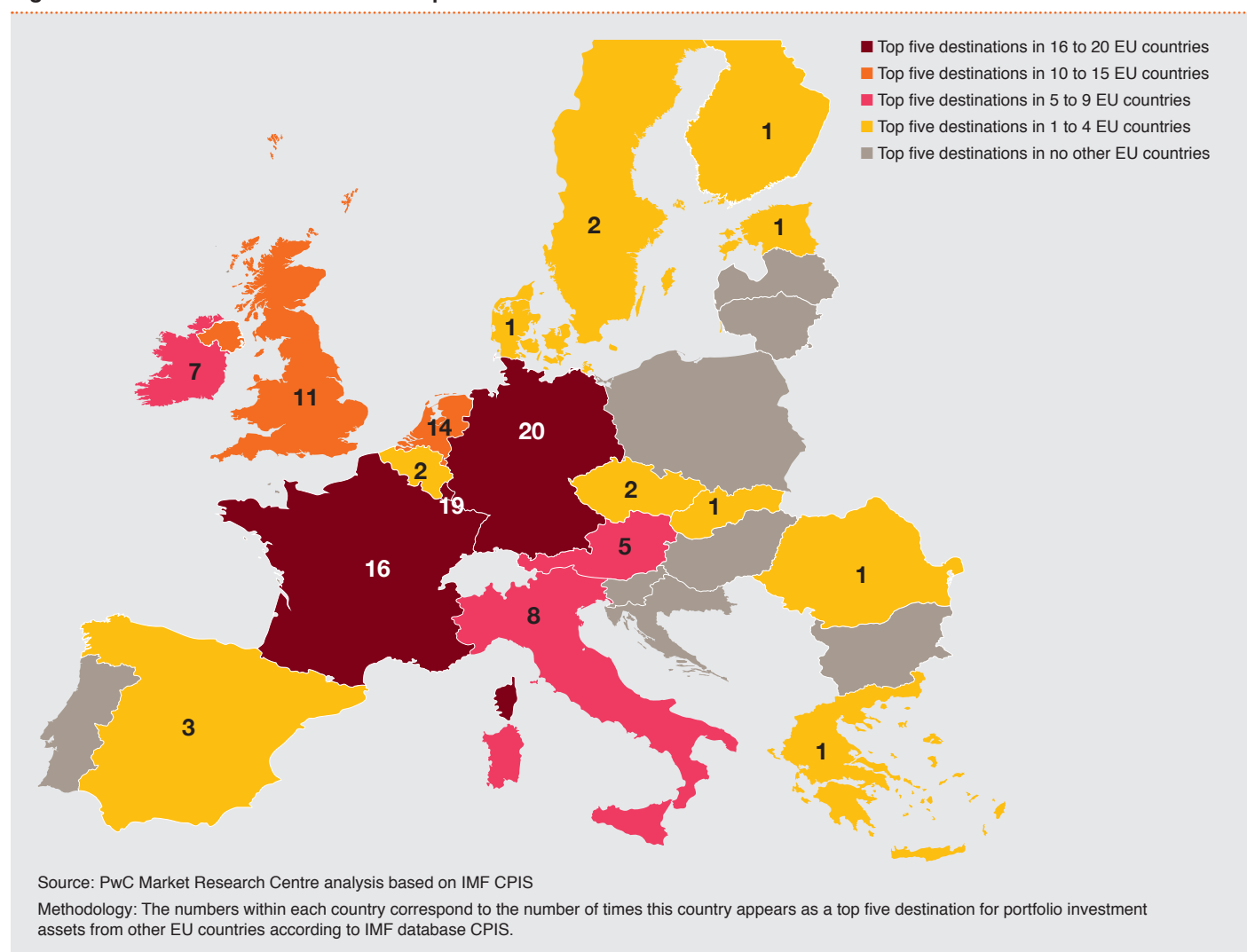
Figure 26: Number of EU countries in which the major local bank has subsidiaries⁴⁸



Source: PwC Market Research Centre analysis

48 We took the ranking from The Banker and estimated the number of EU Member States in which the largest locally headquartered bank has subsidiaries.

Figure 27: Most attractive destinations of portfolio investment assets for EU investors



Financial hubs have emerged in the EU

Barriers from capital flows have been sufficiently low to allow the specialisation of countries in terms of financial services. By analysing data on total investment funds, we have computed an average number of countries in which a sub-fund is distributed, as described in Figure 28. This indicator shows us the following points:

- Overall, sub-funds distribution remains local. Indeed, on average sub-funds are distributed in one other (0.9) country. Furthermore, 95% of these sub-funds are distributed in an EU country.
- Within the sample, we have identified three different groups. The first group consists of countries which tend not to distribute abroad.⁴⁹ The second group consists of countries which distribute in at least one country other than their own. Finally, the third group consists of hubs for fund distribution, such as Luxembourg and Ireland.
- The second group represents 71% of EU countries. However, significant heterogeneity exists in this group; countries like Spain distribute in only two countries, while the UK distributes in more than ten different countries. Overall, fund distribution within the second group remains limited to neighbouring countries. For instance, Lithuania will distribute almost exclusively to other Baltic countries.

49 Poland and Bulgaria have no cross-border funds at all. Hungary, Spain, Greece and Italy have cross-border funds, but cross-border activities remain minimal.

- Countries which aim to distribute their funds at a more global level will domicile them in hubs like Ireland or Luxembourg in order to benefit from their network and technical expertise. Consequently, funds that remain locally domiciled do not wish to be distributed abroad. This may explain the low number for most of the countries, as seen in the chart below.

Other indicators identify Luxembourg and Ireland as financial hubs:

- The share of claims and liabilities from non-residents as a percentage of the total claims and liabilities in these two countries was over 58% in Ireland and 75% in Luxembourg in 2009⁵⁰, while it was less, around 35% on average, for the rest of the countries during that year.

- In Luxembourg, five of the top nine banks are headquartered abroad, while in Ireland, four of the top eight banks are headquartered abroad. This is significantly more than other Western European countries.⁵¹
- Luxembourg is a top destination for investment. It is the first destination of portfolio investments for 12 EU member states, and is among the top five destinations for 19 EU countries, while Ireland is within the top five destinations for seven countries.

The fact that Luxembourg and Ireland are significant hubs for investment funds explains most of the statistics above, specifically why there are many foreign banks in these countries, as well as the fact they are top destinations of portfolio investments. Still, the existence of these hubs shows that when barriers are low, specialisation applies and allows the emergence of financial centres.

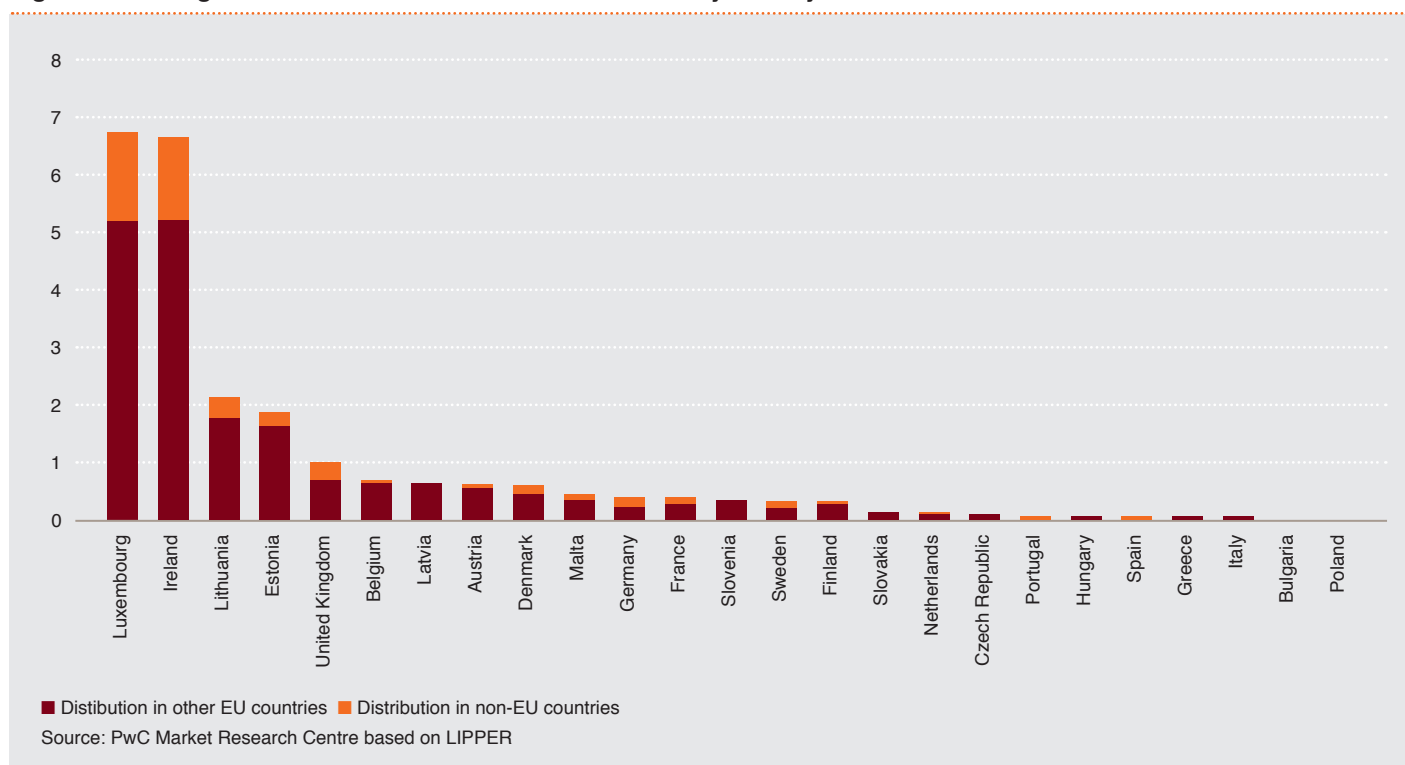
2.2.3 Home-biased capital markets need further integration

Despite increased levels of integration in EU countries, additional efforts need to be made to mitigate home bias. Home bias is a natural barrier to integration meaning that funds could preferably channel through domestic markets for cultural, historical and linguistic reasons. In this sense, home bias generates inefficiency in the allocation of funds by favouring domestic markets even when they are not the most profitable. In this sense, home bias applies to the EU in a wide range of aspects, which reduces capital market integration.

The geographical diversification of portfolios remains limited

Even though the share of foreign assets held by financial institutions has increased

Figure 28: Average number of sub-funds distributed abroad by country of domicile



50 PwC Market Research Centre based on LIPPER database.

51 PwC Market Research Centre based on IMF CPIS.

in the past years, around two thirds of their assets (and liabilities for banks) are still invested in domestic markets. If capital markets were perfectly integrated, we could expect a higher portfolio diversification.

Domestic savings still determine domestic investment

National investment still depends mainly on household domestic savings, meaning that foreign investors contribute less to the financing of domestic investment. A well-integrated capital market would imply that domestic investment depends on the EU saving rate, rather than on the domestic saving rate, due to the absence of home bias. To test this, we regressed the domestic investment growth on the domestic household saving growth and found that for 19 out of 28 countries, the domestic saving rate is correlated to national investment growth. Moreover, for these 19 countries, the savings rate variation explains around nearly 75% of the investment rate variation.

In total, capital markets in the EU still suffer from home bias, especially when it pertains to corporate activities. Also, it appears to be necessary to unlock capital markets so that the domestic investment will be less reliant on domestic saving. This should generate higher investment, and consequently, stronger growth within the EU by more efficiently allocating EU savings.

Overall, if capital markets in the EU display a very low level of market-based financing, the result is somewhat more positive with regards to the integration of these markets. Stock markets are more and more connected and their evolutions are increasingly correlated between countries. There is a process of integration at work in the bond market as well, if we remove the subprime and the sovereign debt crises. This contributes to a homogenisation of the financing conditions for firms irrespective of their countries of domicile. However, in the credit market, the level of integration is poor. The interest rates applied to loans seem to be distinct from one country to the next and these differences are maintained over time.

On the other hand, in the EU capital flows are crossing borders extensively, and the EU also seems to have taken measures to modify the economic behaviour of agents toward a higher level of internationalisation of investments, activities and asset allocation. In this respect, even though the EU countries still have a home bias, which lowers the level of integration of capital markets, cross-border flows are increasing the interdependence of European economies, allowing for more competition and creating an environment that is conducive to specialisation and the concentration of financial centres.

Table 6: Regression results: Investment variation on saving variation

	AT	BE	BG	HR	CY	CZ	DK	EE	FI	FR	DE	GR	HU	IE
Beta	0.49**	0.24	0.52**	0.38**	0.17	0.60**	0.90**	1.38**	0.57**	0.89**	0.80**	0.20	0.79**	0.98**
R Square	0.42	0.12	0.98	0.22	0.08	0.41	0.59	0.58	0.52	0.75	0.59	0.09	0.53	0.75
	IT	LV	LT	LU	MT	NL	PL	PT	RO	SK	SI	ES	SE	GB
Beta	0.87**	0.15	0.01	0.65**	-0.01	0.37	0.96**	-0.16	0.63**	0.71	1.05**	1.32**	0.83**	0.58**
R Square	0.37	0.02	0.05	0.47	0.00	0.20	0.49	0.02	0.70	0.19	0.64	0.55	0.86	0.58

Source: PwC Market Research Centre based on IMF data

** means that the coefficient is significantly different from 0 for a 95% of level of confidence

3

Barriers to the Capital Markets Union

We have distinguished between the blockages that prevent market-based solutions from emerging as alternative sources to bank loans and the blockages that are related to the geographical integration of capital markets across countries.

3.1 Impediments to market-based finance

We have identified several impediments to the development of market-based finance. The first one is related to the cost for firms, especially SMEs, to enter into market-based financing solutions. These costs are also impacting investors. The second type of impediment is cultural. As a matter of fact, European investors are more risk averse and are less attracted to investing directly in financial markets. The third type of barrier are the measures and costs associated with securitisation. Regulatory measures can, to some extent, prevent the securitisation market from growing further. Finally, we will deal with impediments regarding the development of alternative means of financing, such as crowdfunding and microfinance.

Barrier 1: SMEs' access to market-based financing remains a challenge

From a sample of SMEs surveyed by Oliver Wyman in 2013⁵², only 5% issued equity and 2% issued debt. Despite the development of new platforms that allow

non-bank financing methods for SMEs, their access to market-based solutions remains costly for both SMEs and investors.

SMEs can access equity and debt markets either through traditional platforms for listed securities, such as Euronext, which is more suited to big companies, or through new platforms dedicated to SMEs. However, the first type of platform is only available for around 1% of SMEs. Indeed, most markets around the world now have a second listing that acts like an alternative to the main market (e.g. Enternext for Euronext market and the Alternate Investment Market for the London Stock Exchange). They have lower listing costs and requirements, making them a more suitable option for SMEs seeking finance. SME equity platforms and SME debt platforms are evident alternatives to bank lending. However, these platforms have minimum size requirements for medium-sized SMEs (such as 150-200 full-time employees) because issuing debt and equity securities involve high transaction costs and a complex legal framework. Even this 1% listing on SME equity platforms represents considerable costs because they

have to meet the market requirements. Because listing entails meeting additional market requirements, even if fees are adapted for SMEs, they come with other costs stemming from underwriting, advisory, accountancy, overhead, legal issues and the fee companies must pay to remain listed. The total listing cost can be estimated around EUR 90k and annual fees come in around EUR 100k.

The second type of platform (e.g. FinPoint and Funding Circle in the UK and SmartAngels in France) allows lending money to smaller businesses and individuals: P2P, P2B, B2P or B2B transactions. These platforms are part of crowdfunding solutions. More SMEs can join these platforms because costs and market requirements are lower. However, the financial soundness of these companies remains a challenge for investors as the lack of standardised information on companies doesn't engender enough trust from investors.

Regarding the costs borne by investors, information about SMEs' creditworthiness and potential is expensive and difficult to obtain. These costs stem from audited

accounts, ownership and structure intelligence, credit information, banking relationships guarantees, information on payments performance, financial transactions and balance sheet positions. These costs can prevent investors, especially institutional ones, from investing in SMEs.

Indeed, institutional investors, such as pension funds and insurance companies, currently have a low percentage of funds invested in non-listed assets like SME securitised products. For instance, in the Netherlands, the share of securitised assets represented 0.23%⁵³ of the total institutional investors' assets in 2014. The lack of institutional investors' capability to conduct detailed credit assessments on small-ticket SME loans prevents them from assessing the risk in a precise way. Credit risk assessment is even more important as

regulations force institutional investors to protect themselves against this type of risk. Indeed, regulatory changes such as CRD IV and the Alternative Investment Fund Manager Directive (AIFMD) can generate adverse incentives against the financing of SMEs and securitisation. In Europe, regulated investors must retain 5% of the nominal value of the securitised assets on their balance sheets.

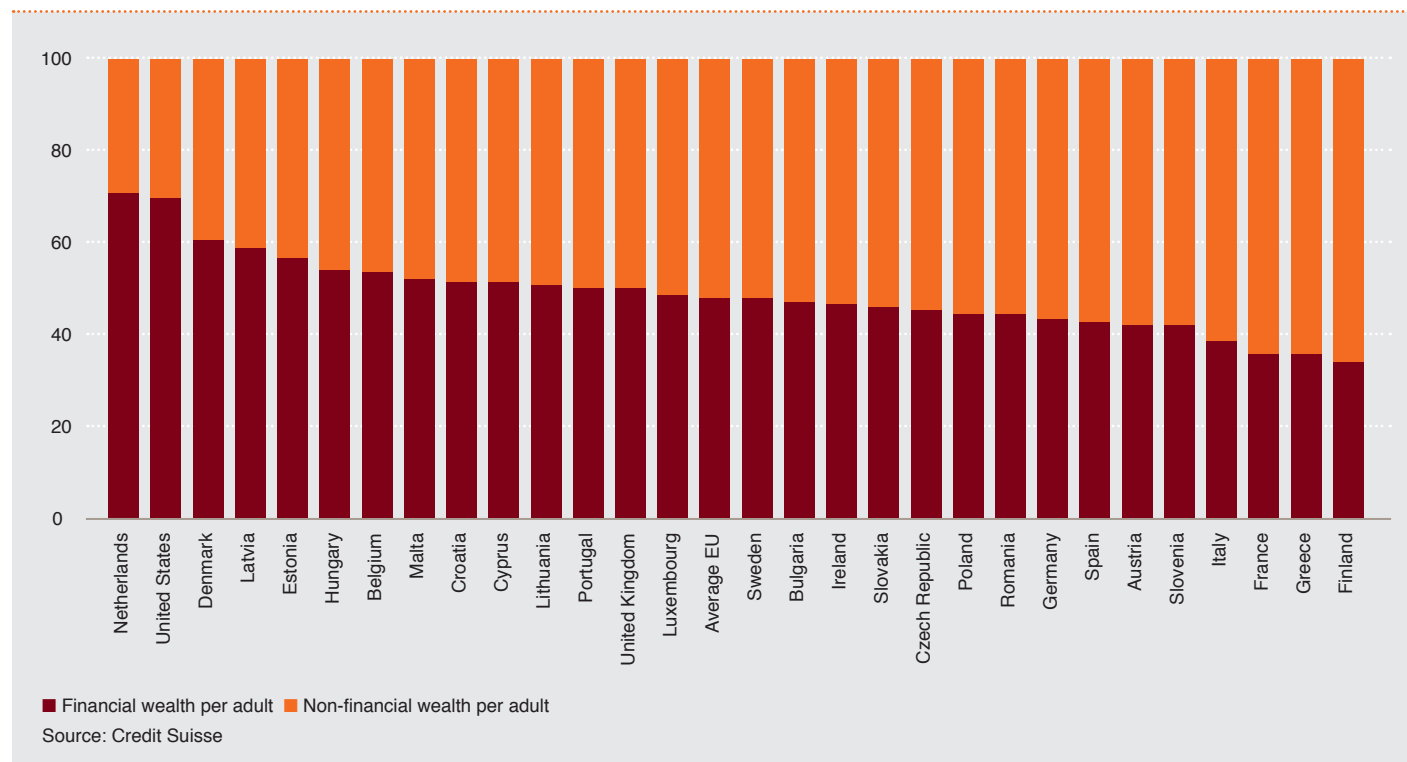
Barrier 2: Households' aversion to risk and financial markets prevents market-based finance development

Households' aversion to risks and financial markets combined with a high saving rate have created a persistent need of intermediaries for funds channelling; this could prevent the growth of market-based solutions and reinforce the bank-based model.

A recent report by Credit Suisse⁵⁴ classifies European countries as the most risk adverse regions. Households' aversion to financial markets can be seen in two areas. This is evident in the wealth allocation between financial and non-financial assets⁵⁵ and also in the asset allocation within financial assets.

Regarding overall household wealth allocation, households' assets are mainly non-financial. In Europe, the average share of non-financial assets represents 51%. In the US, this share is around 30%, showing the aversion of European investors to financial investments. However, as highlighted in Figure 29, the preference for financial assets varies across countries, showing a potential for increasing this share.

Figure 29: Financial and non-financial wealth across the EU



53 PwC Market Research Centre based on ECB and the Netherlands banks where institutional investors correspond to insurance companies, pension funds and investment funds.

54 See Hens Th. and Meier A. Finance White Paper Bhrs. Behavioral Finance, the Psychology of Investing, Credit Suisse, 2015.

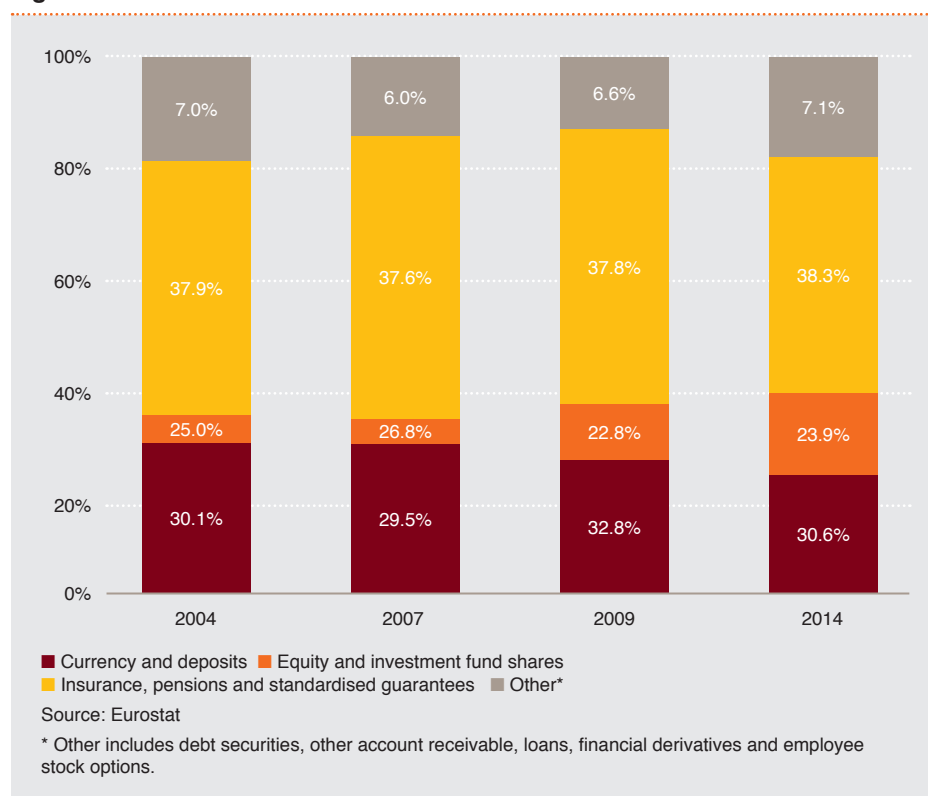
55 Financial assets include all components described in Figure 30, and non-financial assets include real assets such as houses.

The share of financial wealth within EU countries is between 34% and 61%; only the Netherlands holds a share comparable to the US (72%). The preference for financial assets is not really determined by the degree of development of the countries, as we can find countries from similar regions or with similar levels of GDP with very distinct shares of financial wealth. For instance, although Germany and Belgium have very similar GDPs per capita, their preferences for financial assets are very different (44% favour them in Germany vs 54% in Belgium).

Regarding the allocation of financial assets, as shown in Figure 30, most of them are allocated toward non-risky investments, such as insurance and pension products as well as currency and deposits. Within EU countries, the share of currency and deposits represents 30.6% as of 2014. In the US, this share is 15%.⁵⁶ Some countries, more directed toward Anglo-Saxon culture, such as the UK, the Netherlands, Denmark and Sweden, have a share of assets invested in currency and deposits similar to the US (see Figure 41 in the appendix).

The share dedicated to market-based products, such as equity and investment funds, is low, standing at 23.9% as of 2014. Allocation of financial assets toward this asset class was higher during the pre-crisis period. In 2004, this share represented 25.0% and reached a peak of 26.8% in 2007. Unsurprisingly, the crisis has had an effect on the allocation of financial assets of households. Financial asset allocations remained high for safer asset classes such as insurance, pensions and standardised guarantees. In 2009, equity and investment fund shares represented 22.8% and 23.9% in 2014 while allocation toward insurance and pension fund products reached 38.3%.

Figure 30: Evolution of households' financial assets over time in EU countries



Another point that could foster the aversion of households to financial markets is a lack of information. Evidence has been reported regarding the effect of financial literacy on stock market participation: those who have a low level of financial literacy are significantly less likely to invest in stocks.⁵⁷ However, financial literacy is not significantly different in the EU than it is in other regions. This suggests that the risk aversion of European households cannot only be explained by a lack of financial literacy.

In addition, economic and cultural differences can explain the variation in asset allocation across regions such as the US and the EU, and also within the EU.

These factors can be transaction costs, spending on information and technology, higher stockholder protection, bank regulation, tax treatment on different asset classes, mathematical literacy⁵⁸ as well as entrepreneurial culture. This suggests the potential for greater harmonisation as well as the opportunity to promote an investment culture in Europe.

Barrier 3: Costs of securitisation are high; the transmission toward SMEs' loans is not working

As reported in Figure 13, in Section 1 of this paper, the securitisation market suffered significantly in the aftermath of the crisis. As of 2014, securitisation

⁵⁶ Financial Accounts of the United States (Federal Reserve).

⁵⁷ See Van Rooij M., Lusardi A. and Alessie R., Financial Literacy and Stock Market Participation, NBER Working Paper 13565, 2007, among others.

⁵⁸ See Christelis D. et al., Differences in Portfolio across Countries : Economic Environment versus Households Characteristics, The Review of Economics and Statistics, March 2013 and Sierminska, E. and Doorley, K., To Own or Not to Own? Household Portfolios, Demographics and Institutions in a Cross - National Perspective, IZA Discussion Paper, NO 7734, November 2013.

issuance represented EUR 287.3bn and is hardly growing. Despite the various benefits of securitisation, including better returns for borrowers and investors, there are factors that prevent this market segment from growing. Despite the overall lack of confidence in this product and the shift toward other types of products (e.g. covered bonds), regulatory issues, costs and lack of transparency contribute to its stagnation.

Regarding regulation, the capital requirement has two contradictory effects on the development of securitised products. First, it promotes the issuance of products that originators can then trade. At the same time, it reduces incentives to acquire these types of products. Indeed, investing in securitised loans is less attractive than other similar assets for the investor. Higher capital requirements also leave banks with fewer funds available for other investments, which increases the opportunity cost of holding this type of asset. But it is good to see that initiatives are going on to decrease the capital requirements for so-called 'high-quality securitisations'.

During the different steps of the securitisation process, some upfront costs are generated; all of them appear at different stages of the process.⁵⁹ Upfront costs also include sunk costs, like setting up IT systems to handle the quantity of information generated by the management of an SME portfolio.

The first step is pooling. In this phase, certain conditions must be met to ensure a loan's suitability. From a bank's perspective, gathering information for a critical mass of loans (i.e. credit history, maturity tenor with a predictable cash flow stream, availability of collateral and

sectorial diversification) is more time consuming in the SME sector than it is in the residential mortgage sector where the information is standardised.

Once a pool of loans is identified, a legal adviser prepares the crucial documentation of the securitisation. This represents a considerable amount of work as ratings may be solicited from an external credit assessment institution. Both of these steps generate additional costs. Through this second step, these products provide a higher degree of transparency, but are expensive to produce. Additionally, enhancement costs are sometimes necessary to provide favourable risk/return profiles to investors, and the financing vehicles have to be audited annually. This upfront cost can be added to an asset manager fee by the servicer who administers the portfolio after the transaction has closed.

In addition, lack of transparency and weak enforcement of claims repel investors from securitised products. In order for banks to enforce claims on collateral in a reliable and transparent way, debt enforcement and insolvency components must be effective. The bank's ability to enforce secured credit claims not only depends on various legal factors, but also impacts the credit assessment of securitisation transactions. To begin with, SMEs have varying abilities to grant security interest and diverse legal techniques and outcomes depending on their country. But regardless of their origin, a well-functioning framework is essential since securitised claims rely on access to collateral. Debt enforcement also varies widely from country to country with substantial differences in the speed and rate of recovery. Specifically, weak regimes for collective enforcement of credit

claims in many EU countries can inhibit securitisation.

Finally, enforcement and insolvency frameworks vary from one EU country to the next, making it difficult for banks to pool loans across national borders—this creates a home bias for investors. All in all, these factors may stymie securitisation by reducing the expected recovery rates on loans.



59 See Aiyar S. et al., Revitalizing Securitisation for Small and Medium-Sized Enterprises in Europe, IMF Staff Discussion note, May 2015.

Barrier 4: Crowdfunding is still embryonic; it needs rules, consistency and a legal framework

Despite significant development within these markets, crowdfunding and microfinance are subject to impediments that prevent their growth. We will focus mainly on legal and regulatory issues and provide concrete examples of how they curtail growth.

Regarding crowdfunding, some European countries require credit institution licensing in order to store monetary value. This license constitutes a significant and costly market entry barrier which prevents the market from growing. The status of firms is another legal impediment. Most of the time, start-ups choose the cheapest entity type for their legal status. In the majority of countries, the closely held company type is the cheapest. But, in others, a closely held company type prevents shareholders from being part of the equity of the firms which could be attractive for investors.

The crowdfunding sector is also subject to ceiling conditions regarding their activities, which can prevent the development of activities. These ceilings are related to the amount of investments possible within platforms. For instance, in Germany, if a platform wishes to allow investments above EUR 1,000, the investor has to provide an income statement which will determine the amount that can be invested. This regulation implies that the crowdfunding market is less accessible and costly to operate. In the Netherlands, investors are not allowed to invest in more than 100 projects or more than EUR 20,000 in equity through an online platform, or more than EUR 40,000 in debt. In Spain, a new regulation limits the use of equity and debt crowdfunding to a maximum EUR 2 million per project where non-accredited investors are involved, and EUR 5 million where only

accredited investors are included. It also places limits on the amount that each non-accredited investor can contribute.

Microloans come at the first stage of development for micro and small enterprises. Currently, the regulation regarding the status of microfinance institutions is not harmonised and creates an uneven playing field in Europe. Some countries, such as France, are more advanced in terms of initiative and regulations. The France Initiative Association, which has a decentralised network, has highly developed activity with regard to so-called “honour loans” (“prêts d’honneur”), loans at zero interest which allow the beneficiaries to access significant complementary bank credits.

Other countries have inadequate or no regulations that prevent the development of microloans by non-bank institutions. In some cases, the lack of regulation prevents them from obtaining large scale funds. Croatia is an example of inadequate regulation.⁶⁰ There are two microfinance institutions in the country, operating in economically disadvantaged areas. The current regulatory framework forces them to carry out their activities under the legal status of Cooperative Savings and Loans (SLC), which is costly and not well suited to their operations. This status does not allow them to finance their activities by borrowing from foreign investors or banks and prevents them from having a critical size that would allow them to deploy their activities at a larger scale.

Portugal and Sweden are examples of countries lacking regulation. In Portugal, despite the fact that the process for regulating the sector is underway, microfinance institutions are unable to grant loans themselves. They dispose of few financial resources of their own, and are heavily dependent on state funding. In Sweden, only banking entities are authorised to provide loans. The

public institution ALMI offers a specific microcredit product (“Mikrolån”) for new enterprises without a banking history. Certain NGOs that offer help and support services to people have also decided to offer microfinance services in order to meet the growing demand. Furthermore, the foundations of certain savings funds have recently put in place microfinance projects that are part of their Social Responsibility of Enterprises initiatives.

3.2 Impediments to integration

Different impediments to integration exist. The first is linked to asymmetric information among agents which can prevent the perfect integration of capital markets. Another stems from differential taxes and subsidies which might distort investment incentives toward some countries. A third type of barrier is related to differentials in terms of regulation and supervision of financial markets. Judicial efficiency can differ across countries, requiring intermediaries to charge higher interest rates in inefficient jurisdictions to compensate for expected recovery costs in case of default. The last one is an economic barrier related to monetary policy.

Barrier 5: Asymmetric information persists in the EU

Asymmetric information among agents creates obstacles for the integration of capital markets. One illustration of this is crowdfunding. Indeed, crowdfunding is domestically oriented. According to a recent study⁶¹, almost half of surveyed platforms reported no investment coming from other countries and only 10% of them indicated between 11-30% of funds coming from abroad (30% being the maximum value). Almost three quarters of platforms claim that they have no cross-border activity.

Another example of asymmetric information that can take place within the market is the non-homogeneity of financial information regarding SMEs. As highlighted earlier, access to financial information, especially regarding SMEs, remains a challenge. This is even truer at a cross-border level. The European Securities and Markets Authority (ESMA) pointed out this issue, observing a wide variability in the quality of the information provided and identified some cases where the information provided was not sufficient or not sufficiently structured to allow comparability among financial institutions.

Another example of asymmetric information is inconsistency among EU countries regarding national accounting standards. For instance, in Austria, SMEs must use Austrian GAAP as stipulated in the Commercial Code. In their consolidated financial statements, SMEs may use Austrian GAAP or they may choose full IFRS as adopted by the EU. In Croatia, large entrepreneurs (unlisted companies that fulfil some conditions regarding the size of the company) must use IFRS.

Other SMEs must use Croatian Financial Reporting Standards. In France, SMEs can use IFRS or the French Plan Comptable Général. These inconsistencies create impediments to cross-border investments.

Barrier 6: Uneven playing field regarding fiscal consideration

The investment tax framework is not harmonised across EU countries. Differences between tax treatments in European countries create an uneven playing field and prevent the integration of markets. In addition, some countries dispose of different tax regimes between resident and non-residents, e.g. the UK.

Table 7 shows the divergence in capital gains and dividends tax rates for individuals and corporates for Slovenia, the UK, France and Czech Republic.

Within this table, we can see that tax treatment is heterogeneous and leaves an open door for excessive exemptions in some countries. We should, however, moderate our view by mentioning that divergence of fiscal treatment across countries is reduced by bilateral agreements that can be set up between countries (such as reduction of double taxation, etc.).

Table 7: Example of investment tax treatments on capital gains and dividends for selected EU countries in 2012

Countries	Tax on capital gains		Tax on dividends	
	Individuals	Corporates	Individuals	Corporates
United Kingdom	28% with exemptions under some conditions	Function of corporate income tax and some exemptions are specified under conditions	Up to 42.5%	Full exemption under some conditions
France	19% for long-term investment (two years)	90% exemption under some conditions	Taxed as ordinary individual income or 21% + social security	95% exemptions under conditions
Czech Republic	15%	Subject to corporate income tax rate	15%	15% tax rate, but with many exemptions
Slovenia	0% to 20% depending on the holding period	50% exemptions under some conditions	20%	Full exemption under conditions

Source: EBAN, Compendium of fiscal incentives in Europe 2012

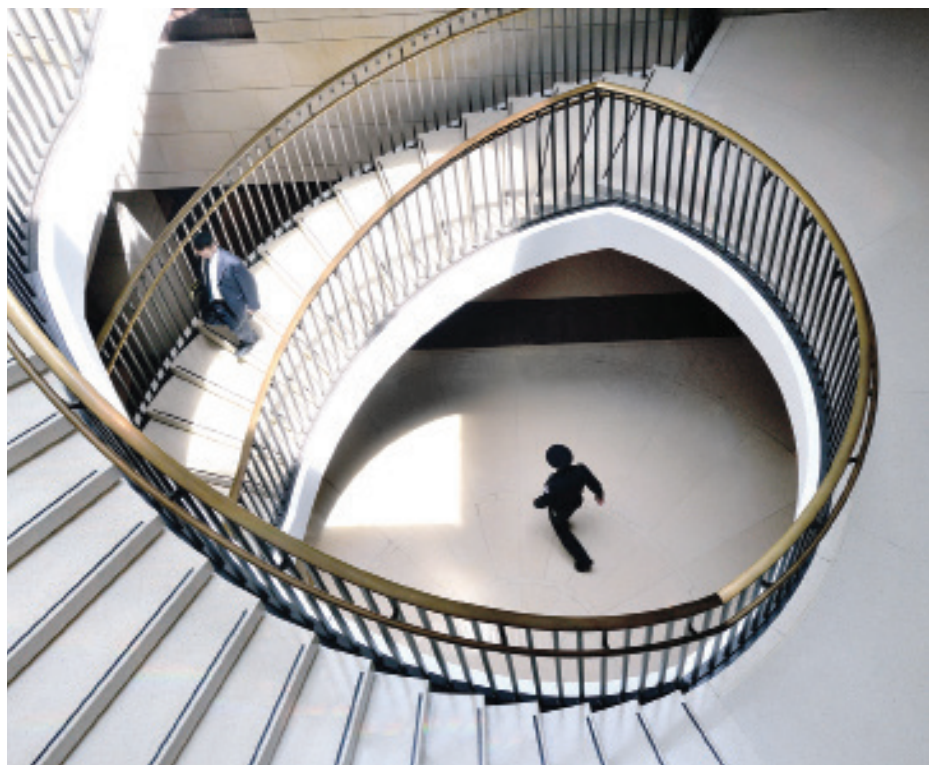
Barrier 7: Uncoordinated supervision and regulation

Integration is blocked by the lack of convergence in the National Supervisory Authorities. In the wake of the 2008 financial crisis, three supervisory bodies have been created to coordinate national supervisory actions across Europe: ESMA is one of them. ESMA works in tandem with the national financial supervisors and issues directives or regulations for the member states, but the day-to-day supervision remains with the national supervisors. However, even with a supervisory organisation in place, there are still differences of guideline applications in European countries. ESMA pointed out that the level of convergence of regulatory practices by NSAs is relatively low.

One example is the guideline regarding the collective investment under the UCITS Directive⁶²; countries have different means of

implementation in their legal systems. A total of 14 member states (including Germany, Denmark, Greece, France, Latvia and the Czech Republic) implemented it as primary legislation, six member states (including Belgium, Luxembourg, and Finland) implemented the guidelines by means of measures which do not have force of law, and some countries (including Bulgaria, Hungary and Poland) didn't implement it at all in their legal system. Furthermore, when the guidelines were implemented, not all of them were followed. For instance, Austria didn't implement the paragraph about transitional provision in UCITS guidelines and Greece didn't implement money market guidelines.

Inconsistent regulations across countries prevent capital markets integration. One example of such inconsistencies can be found in crowdfunding platforms. Indeed, crowdfunding regulation is different from one country to the other, making it difficult



62 ESMA, Peer Review – Divergence in Money Market Funds, 2012.

63 ESMA, Opinion, Investment Based Crowdfunding, December 2014.

64 Non-euro area countries are Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden and the United Kingdom.

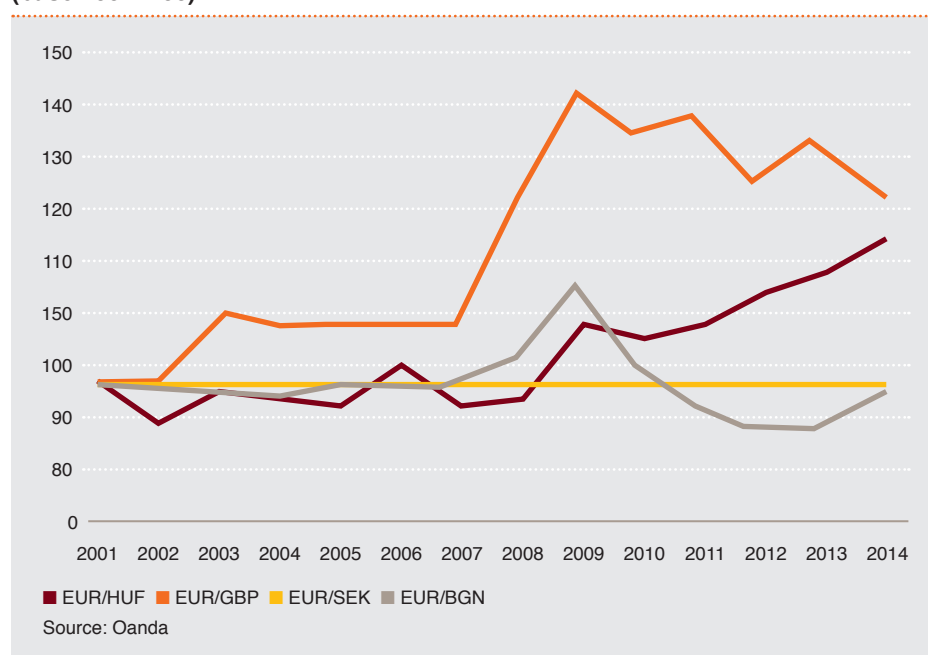
for crowdfunding platforms to expand their activities abroad. In addition, fund platforms imply numerous actors and, therefore, multiple types of regulations (such as Payment Service Regulation, Consumer Credit Regulation and AIFMD Regulation) making the coordination across countries difficult. For example, regulations regarding fund platforms are non-existent in Croatia, but in France, fund platforms are subject to the Autorité des Marchés Financiers (AMF) general regulation by ministerial order. ESMA already pointed out this issue, stating: “Because of the wide range of business models and their novelty, there was also scope for a lack of clarity about which EU legislation was applicable, or potentially applicable, and how the legislation should be applied”.⁶³

Barrier 8: The European Union is not a monetary Union

Nine of the 28 EU countries are not part of the euro area⁶⁴ and have different currencies. Hence, they are subject to exchange rate fluctuations that can force investors to require a risk premium in order to hold a security denominated in that country's currency. Some countries, such as Bulgaria, have decided to peg their exchange rate. Others have experienced significant exchange rate fluctuation compared to the euro. For example, the Pound Sterling exchange rate ranged from GBP 0.62 in 2001 to GBP 0.89 in 2009, and the Hungarian Forint hit a minimum of HUF 242.5 in 2002 and a maximum of HUF 308.3 in 2014.

In addition, these countries dispose of their own central banks which can lead to independent monetary policy measures. Non-euro area countries are also not subject to the convergence criteria imposed by the Maastricht Treaty. As a reminder, convergence criteria are related to interest rate evolution, fiscal soundness and inflation evolution—all of these are important to foreign investors.

Figure 31: Exchange rate evolution for selected non-euro area currencies (base 2001=100)



63 European Securities and Markets Authority ESMA, Opinion, Investment-Based Crowdfunding, December 2014.

64 Non-euro area countries are Bulgaria, Croatia, Czech Republic, Denmark, Hungary, Poland, Romania, Sweden and the United Kingdom.

4

Observations and conclusion

After having identified the main blockages regarding the integration of capital markets within the EU, we developed a series of observations that would support the development of market-based finance and further integration of capital markets in the EU.

Observation 1: Additional work is needed to thoroughly identify the main challenges of the CMU and to underpin the specific issues to be addressed

The integration of capital markets and the development of market-based finance is a long-term process which requires deep analysis of the current barriers preventing them from emerging. There is a need to fully understand the function of the capital market and identify precisely the blockages regarding its integration, be they economic, institutional or cultural.

After having identified these blockages, priorities should be defined according to the specific set of issues the European Commission wants to solve. As pointed out by the EC in its Green Paper⁶⁵: “Obstacles to cross-border capital flows include issues such as insolvency, corporate, taxation and securities laws, where further analysis and feedback is needed to identify the scale of the challenge in each area, and the appropriate solutions and degree of

prioritisation”. Our report constitutes a first step in trying to understand the main blockages preventing the integration of capital markets and the development of market-based finance, but further research still must be done.

Another point is whether a focus on SMEs should be targeted or not. Indeed, focusing on all SMEs might not be relevant, as not all SMEs can, or are willing to, finance themselves through capital markets. A significant number of SMEs will still rely on banks independently, depending on the degree of integration of capital markets and on other types of financing. This might be due to the critical size, culture, capabilities of managers, etc. Hence, targeting the right size and the right type of SMEs might be beneficial as it would reduce the action scope and ease policies dedicated to promoting new financing sources for particular types of SMEs.

Moreover, one should take into consideration the value that citizens of each of the member states put into the

future of the EU. Since the beginning of the crisis, pessimism about the European project has increased. In fact, according to the Eurobarometer in the aftermath of the financial crisis, the proportion of EU citizens that were pessimistic about the future of the EU rose gradually to reach 46% by mid-2013. However, this pessimistic trend has reversed in line with the upturn in economic activity and business confidence, and the proportion has declined to 36% as of May 2015.

Despite this trend for greater optimism regarding the future of the EU, the figures display a high degree of heterogeneity. The proportion of people that are pessimistic regarding the future of the EU in Ireland and Malta is 18% compared to 58% in Greece and 54% in Cyprus.

This degree of heterogeneity will be problematic whenever a consensus needs to be reached for greater harmonisation.

Observation 2: Improving cross-border distribution of capital will expand choice both for investors and companies seeking funding, and lead to higher growth

Policies which are directly focused on facilitating and supporting cross-border flows must be the first priority for CMU. Developing cross-border distribution is critical in order to promote further integration of capital markets across EU countries.

Cross-border investment should be promoted at the regulatory level. Initiatives aimed at easing cross-border transactions within the fund management industry, such as UCITS and AIFMD, and products that rely on these initiatives, such as ELTIF⁶⁶, should be pursued and further encouraged. The creation of ELTIFs will help tackle barriers to long-term investment such as infrastructure investment. ELTIFs focus on alternative investments which require a long-term commitment from investors such as undertakings that issue equity, debt instruments for which there is no readily identifiable buyer, real assets that require significant up-front capital expenditure and finally, SMEs admitted to trade on a regulated market or on a multilateral trading facility.

These trusted frameworks have enabled asset managers to attract a growing number of investors and have constituted major steps toward the harmonisation of capital markets. For instance, ESMA has already outlined several recommendations to improve the UCITS framework⁶⁷ that could be taken into account. These recommendations deal with notifications procedures, home/host competencies, harmonisation of cost disclosure, KIIDs,

fund calculators/central databases, improvements on the fund offering and finally differences in tax regimes.

In order to move toward more integrated capital markets with a higher level of cross-border distribution, one essential condition is the harmonisation of the legal and tax framework. Indeed, member states still have different tax regimes from one country to the next with respect to savings and investment taxation. Integration, therefore, requires equalising investing conditions in order to create fair competition and allow investors to base their investments on profitability rather than tax schemes. However, because the tax framework is a particularly sensitive issue in the EU, minimal progress can be expected in the short term.

In the same vein, the insolvency rules are very heterogeneous between the European countries, and this is hampering the emergence of pan-European capital markets. For instance:

- Foreign investors may be reluctant to invest in a country for which insolvency rules are different than their own.
- Pooling of loans is very complex when loans concern companies with distinct insolvency rules.
- Banks will be reluctant to lend money to foreign companies that do not submit to the same rules they do, etc.

Practically, the implementation of a more harmonised framework could be achieved through a ‘29-country regime’. It would allow countries to refer to a pan-European regulation when dealing with cross-border transactions. This type of regime constitutes an additional layer to the national regulations instead of a reform

of the regulations on a country by country basis, which would ease the adoption process.

Observation 3: To create an effective CMU, asymmetry of information between investors and borrowers across the EU should be minimised

Reducing asymmetry of information between investors and borrowers across countries is a key component to promote investment, especially at the cross-border level. Investors would be able to access information in a more transparent way and would significantly reduce their cost of seeking information, which would then lead to better financing and investment conditions. One way for borrowers to tackle asymmetry of information is by disclosing information regarding their creditworthiness in a standardised way. Additionally, financial education could alleviate asymmetry of information for investors by helping them to understand foreign financial products and market peculiarities.

As outlined in the consultation paper, around 75% of owner-managed companies, such as SMEs, in Europe do not have credit scores. One of the reasons for this is the cost of credit scoring by credit rating agencies.⁶⁸ Moreover, even when credit information exists, it is either not centralised in a single database or it is not harmonised across all member states. The ECB⁶⁹ has already suggested setting up a central public database that focuses on the credit information of SMEs which could be filled by using public and private databases. In addition, it would be constituted by aggregated business registers, standardised credit scoring, standardised loan-level information on

66 According to the ELTIF refutation, only EU alternative investment funds (AIFs) that are managed by alternative investment fund managers (AIFMs) and authorised in accordance with directive 2011/61/EU on AIFMs, will be eligible to market themselves as ELTIF.

67 See ESMA, ESMA response to the Commission Green Paper on Building a Capital Market Union, May 2015.

68 According to the High Level Expert Group Report (HELG, 2013), credit score by a Credit Rating Agency (CRA) is estimated to reach between EUR 10,000 and EUR 100,000 for SMEs.

69 See ECB, Building a Capital Markets Union – Eurosystem contribution to the European Commission’s Green Paper, May 2015.

ABS and by setting up unique identifiers for institutions, products and transactions (ISIN, Unique Product Identifier (UPI), Unique Transaction Identifier (UTI), etc.). In France, the Banque de France has developed a large credit scoring database (FIBEN) that allows investors to access SME and midsize company credit scores. Such an initiative does not exist for all member states, but could be promoted through the CMU.

Other relevant information that supports the transparency of SMEs includes accounting documents. Currently, SMEs can use various standards for their accounting including their own national standards. In the same vein as credit scores, these documents need to be harmonised across SMEs and across countries. Accounting standards designated for SMEs should be simple and should take into account the SMEs' resources and capabilities. At the same time, they should be credible and participants should find them easily comparable. In May 2015, the IASB completed a comprehensive review of the IFRS for SMEs and made amendments to the Standard.⁷⁰ The IFRS for SMEs is designed to meet the needs and capabilities of small and medium-sized entities. One of the main differences between full IFRS and IFRS for SMEs is that the latter is less complex in the following way:

- Topics which are not relevant for SMEs have been deleted (for instance, earnings per share, interim financial reporting and segment reporting, etc.).
- The principles for recognising and measuring assets, liabilities, income and expenses are simplified (e.g., amortise goodwill, expense all borrowing and development costs, etc.).

- Fewer disclosures are required (roughly a 90% reduction compared to full IFRS).
- The Standard has been written in clear, easily translatable language.
- To further reduce the burden for SMEs, revisions are expected to be limited to once every three years.

The Standard is available for any jurisdiction to adopt, independently of when it has adopted full IFRSs. Each jurisdiction must determine which entities should use the Standard. IASB is, however, putting a restriction on listed companies and financial institutions which have to comply with full IFRS. Given the potential benefit of such changes, public aid should be enlisted in order to help the SMEs to adapt to the new standards.

The lack of financial literacy and information regarding foreign investments combined with the various peculiarities that pertain to each country creates asymmetry of information generating home-biased investment and preventing the integration of capital markets. An apt illustration of this is the status quo of banks, which offer mainly domestic financial products. To encourage investing abroad, the industry must increase communication, information and transparency regarding the process of investing in foreign markets. Additional incentives could be provided to the financial services sector to propose more international investment possibilities. This could be achieved through trainings focused on cross-border investing. For example, a 'European CFA'⁷¹ could be established to help advisers to better apprise their clients of the various investment possibilities abroad. Financial literacy goes beyond educating advisers. It should also provide investors with

increased interest in capital markets. Ideally, Europe needs 'success stories' about how some investors have obtained significant returns thanks to capital markets, and not only their domestic market. Europeans also need to be aware that by saving, they can contribute to financing the economy and, in turn, to economic prosperity.

Observation 4: Recognising that banks play an important role in capital markets. In addition to being the main current providers of corporate finance, care needs to be taken to understand, and thereby mitigate, initiatives which could unintentionally negatively impact the market.

We have seen in previous sections that European firms rely heavily on banks, especially SMEs. The Capital Markets Union initiative is meant to reduce this overreliance on the banking system and to promote alternative sources of financing. However, as highlighted by the Bank of England⁷², the CMU should not be a substitute for bank-based finance. The banks' role and expertise remain significant for the development of a Capital Markets Union. In particular, their role in credit origination is crucial and they remain in a competitive position in assessing creditworthiness. The recent set of regulations affecting the banking sector has been detrimental to SMEs' lending and securitisation of SME loans.

Banks are crucial players in loan originations and the securitisation market. As emphasised in section 3, the securitisation market is facing significant impediments regarding its development. In particular, regulations pertaining to capital requirements (such as Basel and Solvency)

⁷⁰ Click here to obtain a full review of the amendments to full IFRS.

⁷¹ The Chartered Financial Analyst (CFA) Programme is a professional credential offered internationally by the American-based CFA Institute (formerly the Association for Investment Management and Research, or AIMR) to investment and financial professionals. A candidate who successfully completes the Programme and meets other professional requirements is awarded the 'CFA charter' and becomes a 'CFA charterholder'.

⁷² Bank of England, The Bank of England's Response to the European Commission Green Paper: Building a Capital Markets Union, May 2015.

dis-incentivise investors to buy securitised products. Therefore, particular interest should be devoted to understanding the main regulatory blockages that discourage investors from buying such types of products. The Association for Financial Markets in Europe (AFME) suggested a five-step action plan⁷³ which aims to revive securitisation. Among the suggested courses of action, one is dedicated to capital requirements for insurers and bankers and another to liquidity ratio. According to the propositions, capital requirements should be recalibrated to reflect the historical default rate of securitised products⁷⁴ in order to apply to these types of product the same capital requirements of other assets, such as fixed income securities. Regarding the liquidity coverage ratio, AFME supports the idea that other forms of high-quality securitisation could be included as High Quality Liquid Assets (HQLA) – for example, auto loan ABS, which can also be very liquid, and in some cases more so than many covered bonds.⁷⁵

To revitalise securitisation, promoting a Simple, Transparent and Standardised (STS) set of criteria is key. The European Commission has already taken steps to promote simpler, more transparent and standardised securitisation by launching a consultation paper⁷⁶ in order to gain further insight into the practical implications of the recommendations. The European Central Bank (ECB) and the Bank of England (BoE) have already outlined conditions for so-called qualifying securitisation. These criteria cover different elements: precise identification of underlying assets, specific structure and transparency, especially regarding default risk together with standardised

prospectuses and external credit assessments though an assessment of the underlying asset by an independent institution. Other institutions, such as the Autorité des Marchés Financiers (AMF), have suggested that a public authority should handle the role of certifying whether a securitisation respects simple, transparent and standardised securitisation criteria.⁷⁷

Observation 5: Promoting diversified sources of financing would reduce dependency on banking loans

Despite an increase in available funds and the fact that banks can be allies for capital markets integration, there is still a significant need to develop alternative means of financing. Among these alternatives, private equity, private placement and crowdfunding have emerged as vehicles for channelling funds from investors to firms, especially SMEs. One common impediment for the development of such vehicles is the diversity of the legal framework governing them. In some cases, the legal framework can be non-existent forcing these vehicles to rely on ad-hoc regulations that are not suitable or that prevent them from further developing and becoming realistic alternatives to banking loans.

Crowdfunding is a young and growing financing alternative for SMEs. However, the legal framework governing these platforms varies widely across EU countries mainly due to differences in interpretation: either they fall into an ad-hoc regulatory framework, which governs other types of entities such as credit institutions, or they are not regulated at all. In addition, for the same activities, crowdfunding

platforms have heterogeneous business models and use different intermediaries or stakeholders which ease their ability to pass through specific regulation (MiFID, AIFMD). This poses a threat to investor protection and reduces the potential of crowdfunding. Implementing an EU framework could promote investor protection and introduce a step away from the localised ‘friendly’ investing that characterises much of the sector.

As of now, private placement (PP) is successfully implemented in some member states because issuers, investors and intermediaries have found a consensus for reducing their administrative workload and the cost of private bond issuance. However, as highlighted by Demarigny (2015)⁷⁸, this consensual way of working can be threatened by a legislative initiative to extend private placements at the pan-European level. Hence, an EU law might threaten the development of private placement in Europe instead of promoting it. A practical approach at the national level could be more relevant than a global EU law; convergence in PP for closed end funds allows managers to obtain funds in a flexible way due to close contact with investors.

73 AFME, High Quality Securitisation for Europe, 2014.

74 According to Centre for European Reform, the default rate on EU securitisations between mid-2007 and mid-2014 were only 1.6%.

75 AFME, High-quality securitisation for Europe, 2014.

76 European Commission, Consultation document, An EU framework for simple, transparent and standardised securitisation, February 2015.

77 AMF, Capital Markets Union: challenges and priorities for the Autorité des Marchés Financiers, May 2015.

78 Demarigny, F., Investing and Financing Recommendations for the forthcoming Capital Markets Union, Report for the French Minister of Finance and Public Accounts, May 2015.

Appendix

Appendix 1: Bibliography

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Appendix 2: Additional figures

Figure 32: Household asset allocation, cross-country comparison in 2014

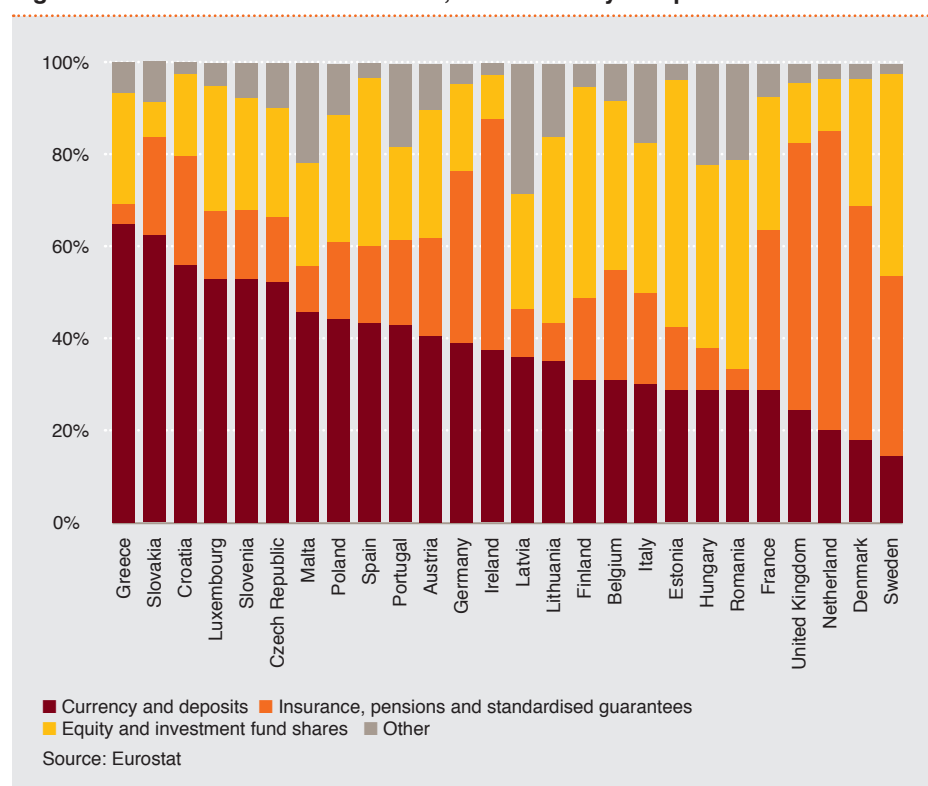


Figure 33: Correlation matrix of stock market returns for EU countries from 2001 to 2014

	AT	BE	CZ	DK	EE	FI	FR	EL	HU	IE	IT	LU	NL	PL	PT	SK	SI	ES	SE	GB	DE		
AT	1.0																						
BE	0.9	1.0																					
CZ	0.9	0.8	1.0																				
DK	0.8	0.9	0.8	1.0																			
EE	0.9	0.7	0.8	0.7	1.0																		
FI	0.7	0.8	0.6	0.9	0.6	1.0																	
FR	0.8	0.9	0.7	1.0	0.6	0.9	1.0																
EL	0.8	0.8	0.8	0.8	0.5	0.8	0.9	1.0															
HU	0.9	0.8	0.9	0.7	0.8	0.6	0.7	0.7	1.0														
IE	0.7	0.9	0.6	0.8	0.6	0.7	0.9	0.7	0.6	1.0													
IT	0.8	1.0	0.8	0.9	0.6	0.9	1.0	0.9	0.8	0.9	1.0												
LU	0.8	0.9	0.8	0.9	0.6	0.9	0.9	0.8	0.8	0.7	0.9	1.0											
NL	0.8	0.9	0.7	0.9	0.6	0.9	1.0	0.8	0.7	0.8	0.9	0.9	1.0										
PL	0.9	0.9	0.9	0.9	0.8	0.8	0.9	0.8	0.8	0.7	0.9	1.0	0.8	1.0									
PT	0.7	0.7	0.6	0.7	0.5	0.8	0.8	0.8	0.7	0.6	0.8	0.9	0.8	0.9	1.0								
SK	0.4	0.3	0.6	0.2	0.3	0.0	0.1	0.3	0.4	0.3	0.3	0.1	0.1	0.2	-0.1	1.0							
SI	0.5	0.4	0.5	0.3	0.4	0.4	0.3	0.5	0.4	0.3	0.4	0.4	0.3	0.5	0.5	0.4	1.0						
ES	0.8	0.9	0.7	0.8	0.5	0.7	0.9	0.9	0.7	0.8	0.9	0.9	0.8	0.8	0.8	0.3	0.5	1.0					
SE	0.8	0.9	0.7	0.9	0.6	0.9	1.0	0.8	0.8	0.8	0.9	0.9	1.0	0.9	0.8	0.1	0.2	0.8	1.0				
GB	0.8	0.9	0.7	0.9	0.6	0.9	1.0	0.8	0.7	0.8	0.9	0.9	1.0	0.9	0.8	0.1	0.2	0.8	1.0	1.0			
DE	0.7	0.9	0.7	0.9	0.5	0.9	1.0	0.8	0.6	0.8	0.9	0.9	0.9	0.8	0.8	0.0	0.3	0.8	0.9	1.0	1.0		

Source: PwC Market Research Centre based on OECD data

The numbers displayed are roundings, the colors indicate the true values.

Figure 34: Correlation matrix of stock market returns for EU countries from 2001 to 2007

	AT	BE	CZ	DK	EE	FI	FR	EL	HU	IE	IT	LU	NL	PL	PT	SK	SI	ES	SE	GB	DE		
AT	1.0																						
BE	0.9	1.0																					
CZ	0.9	0.7	1.0																				
DK	0.8	0.8	0.7	1.0																			
EE	0.7	0.4	0.7	0.3	1.0																		
FI	0.5	0.7	0.5	0.8	0.0	1.0																	
FR	0.8	0.9	0.6	1.0	0.2	0.9	1.0																
EL	0.7	0.9	0.7	1.0	0.2	0.9	1.0	1.0															
HU	0.9	0.8	0.9	0.7	0.7	0.5	0.6	0.7	1.0														
IE	0.9	0.9	0.5	0.7	0.4	0.4	0.7	0.7	0.6	1.0													
IT	0.9	0.9	0.7	0.9	0.4	0.8	0.9	0.9	0.7	0.8	1.0												
LU	0.6	0.8	0.5	0.9	0.1	0.9	0.9	0.9	0.5	0.7	0.9	1.0											
NL	0.7	0.8	0.5	0.9	0.2	0.9	1.0	1.0	0.6	0.7	0.9	0.9	1.0										
PL	0.7	0.7	0.6	0.8	0.4	0.7	0.9	0.8	0.6	0.7	1.0	0.9	0.7	1.0									
PT	0.2	0.4	0.1	0.6	-0.3	0.8	0.7	0.7	0.0	0.3	0.6	0.8	0.7	0.7	1.0								
SK	0.6	0.5	0.7	0.3	0.6	-0.1	0.1	0.2	0.7	0.4	0.2	-0.1	0.1	0.0	-0.5	1.0							
SI	-0.7	-0.5	-0.4	-0.5	-0.5	-0.1	-0.4	-0.3	-0.5	-0.7	-0.4	-0.2	-0.4	-0.3	0.1	-0.4	1.0						
ES	0.7	0.9	0.4	0.8	0.1	0.8	0.9	0.9	0.5	0.8	0.9	1.0	0.9	0.8	0.7	0.0	-0.3	1.0					
SE	0.8	0.9	0.6	1.0	0.3	0.8	1.0	0.9	0.7	0.9	1.0	0.9	0.9	0.9	0.6	0.2	-0.5	0.9	1.0				
GB	0.7	0.9	0.6	1.0	0.1	0.9	1.0	1.0	0.6	0.7	0.9	0.9	1.0	0.8	0.7	0.1	-0.4	0.9	1.0	1.0			
DE	0.6	0.7	0.5	0.9	-0.1	0.9	1.0	1.0	0.4	0.6	0.8	0.9	0.9	0.8	0.8	0.0	-0.3	0.9	0.9	1.0	1.0		

Source: PwC Market Research Centre based on OECD data

The numbers displayed are roundings, the colors indicate the true values.

Figure 35: Correlation matrix of stock market returns for EU countries from 2008 to 2014

	AT	BE	CZ	DK	EE	FI	FR	EL	HU	IE	IT	LU	NL	PL	PT	SK	SI	ES	SE	GB	DE	
AT	1.0																					
BE	0.9	1.0																				
CZ	1.0	1.0	1.0																			
DK	0.9	1.0	0.9	1.0																		
EE	0.9	0.8	0.9	0.9	1.0																	
FI	0.9	0.9	0.9	1.0	0.9	1.0																
FR	0.9	1.0	0.9	1.0	0.8	0.9	1.0															
EL	0.8	0.8	0.8	0.8	0.6	0.8	0.9	1.0														
HU	0.9	0.9	0.9	0.8	0.8	0.7	0.8	0.7	1.0													
IE	0.8	0.9	0.8	0.9	0.6	0.9	0.9	0.8	0.7	1.0												
IT	0.9	1.0	0.9	0.9	0.7	0.9	1.0	0.9	0.8	0.9	1.0											
LU	1.0	0.9	1.0	0.9	0.9	0.9	0.9	0.8	1.0	0.8	0.9	1.0										
NL	1.0	1.0	1.0	0.9	0.9	0.9	1.0	0.8	0.9	0.9	1.0	1.0	1.0									
PL	1.0	1.0	1.0	0.9	0.9	0.9	1.0	0.8	0.9	0.8	0.9	1.0	1.0	1.0								
PT	0.9	0.9	0.9	0.8	0.8	0.8	0.9	0.9	0.9	0.8	0.9	1.0	0.9	0.9	1.0							
SK	-0.1	0.2	0.0	0.2	-0.2	0.2	0.2	0.1	-0.2	0.5	0.3	0.0	0.2	0.0	-0.1	1.0						
SI	0.8	0.9	0.8	0.9	0.6	0.9	0.9	0.7	0.7	0.9	0.9	0.8	0.9	0.8	0.7	0.5	1.0					
ES	0.8	0.9	0.8	0.8	0.6	0.8	0.9	0.8	0.8	0.9	0.9	0.9	0.9	0.8	0.9	0.4	0.9	1.0				
SE	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.9	0.8	0.9	1.0	1.0	1.0	0.9	0.1	0.9	0.9	1.0			
GB	1.0	1.0	1.0	0.9	0.9	0.9	0.9	0.8	0.9	0.9	0.9	1.0	1.0	1.0	1.0	0.0	0.8	0.8	1.0	1.0		
DE	0.9	1.0	1.0	1.0	0.9	1.0	1.0	0.8	0.8	0.9	0.9	0.9	0.9	1.0	0.9	0.1	0.8	0.8	0.9	0.9	0.9	1.0

Source: PwC Market Research Centre based on OECD data

The numbers displayed are roundings, the colors indicate the true values.

Figure 36: Governments' gross debt as a percentage of GDP in selected EU countries in 2014

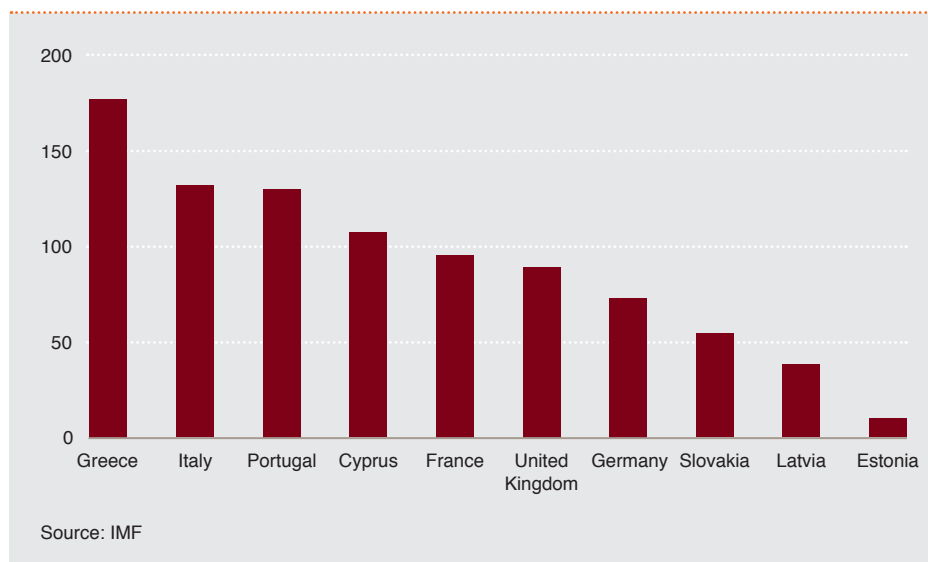


Figure 37: Stock market excess return in EU countries from 2001 to 2014

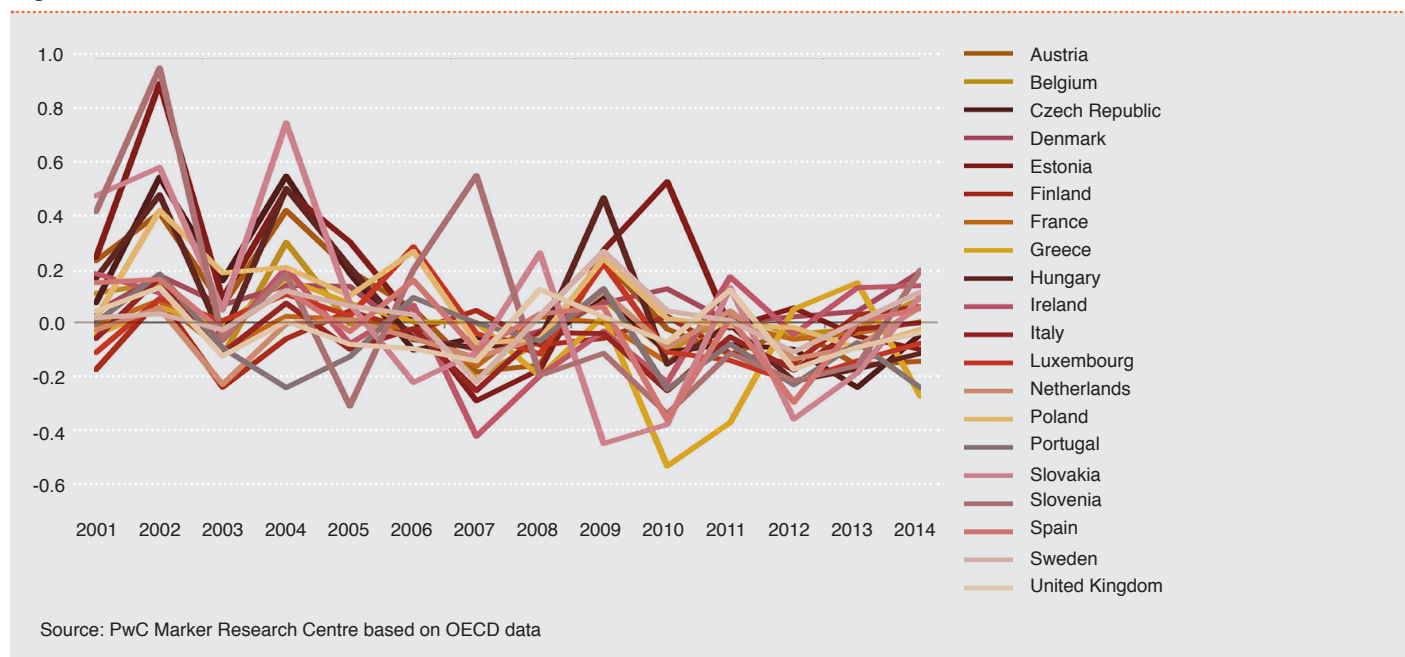


Figure 40: Excess interest rate loans compared to German loan interest rate in selected EU countries

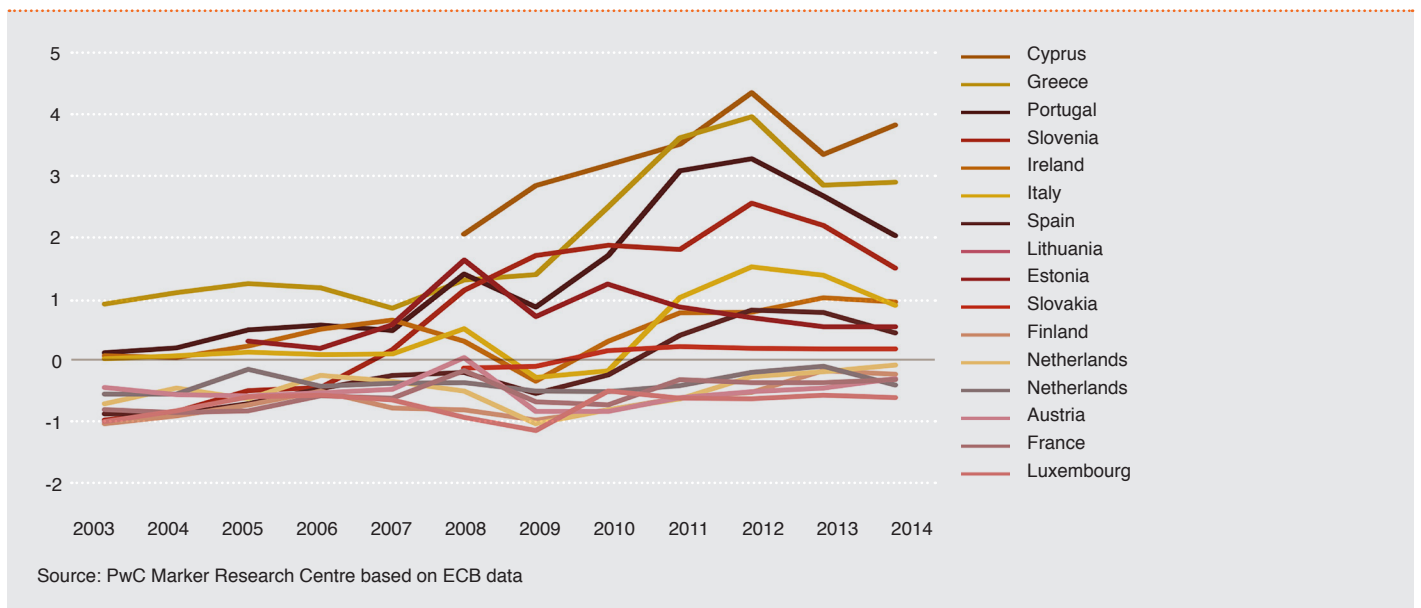


Table 8: Correlation between consumption growth of EU countries (1996-2004)

	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	GB		
BE	1.0																												
BG	0.0	1.0																											
CZ	-0.1	0.4	1.0																										
DK	0.2	0.3	0.4	1.0																									
DE	0.5	-0.1	0.1	-0.4	1.0																								
EE	0.4	0.4	0.4	0.9	-0.4	1.0																							
IE	0.6	0.1	-0.6	-0.3	0.1	-0.7	1.0																						
EL	-0.3	-0.1	0.3	0.7	-0.5	1.0	-0.5	1.0																					
ES	0.6	-0.3	-0.4	0.3	0.2	0.7	0.3	0.2	1.0																				
FR	0.7	-0.6	-0.4	0.1	0.4	0.2	0.4	0.1	0.8	1.0																			
HR	0.1	0.5	0.0	0.4	-0.3	-0.2	0.4	0.3	0.2	-0.1	1.0																		
IT	0.7	0.3	0.0	0.0	0.3	0.4	0.5	-0.5	0.0	0.2	-0.2	1.0																	
CY	0.7	-0.3	-0.3	0.4	0.3	0.6	0.2	0.3	0.9	0.9	0.0	0.2	1.0																
LV	-0.2	-0.1	0.2	0.7	-0.4	1.0	-0.5	0.8	0.4	0.0	0.3	-0.4	0.4	1.0															
LU	-0.7	-0.5	-0.7	-0.5	-0.4	-0.5	1.0	-0.6	-0.7	-0.6	0.9	-0.9	-0.9	-0.6	1.0														
HU	-0.3	-0.3	-0.8	-0.4	-0.2	-0.7	0.4	0.1	0.3	0.2	0.3	-0.4	0.1	0.0	0.6	1.0													
MT	0.6	-0.2	0.1	-0.1	0.8	0.1	0.1	-0.4	0.2	0.5	-0.5	0.7	0.5	-0.2	-0.9	-0.4	1.0												
NL	0.3	0.1	-0.3	-0.5	0.3	-0.6	0.6	-0.8	-0.2	0.0	-0.2	0.4	-0.3	-0.9	0.8	-0.1	0.1	1.0											
AT	0.7	-0.4	0.1	0.2	0.5	0.3	0.2	0.1	0.6	0.9	-0.2	0.4	0.8	0.2	-0.9	-0.2	0.7	-0.2	1.0										
PL	0.3	0.4	0.5	0.2	0.0	0.6	0.0	-0.4	-0.4	-0.2	-0.2	0.5	-0.3	-0.3	0.1	-0.8	0.2	0.5	-0.1	1.0									
PT	0.5	-0.1	-0.4	-0.1	0.2	0.6	0.4	-0.6	0.3	0.3	-0.4	0.5	0.2	-0.5	0.0	-0.3	0.3	0.7	0.1	0.5	1.0								
RO	0.2	-0.1	-0.3	0.5	-0.1	0.8	0.0	0.6	0.8	0.5	0.4	-0.4	0.7	0.7	-0.8	0.4	-0.1	-0.6	0.3	-0.6	-0.2	1.0							
SI	-0.7	-0.4	-0.5	-0.5	-0.1	-0.7	-0.1	0.0	0.0	-0.2	0.0	-0.7	-0.2	0.1	0.7	0.7	-0.4	-0.2	-0.4	-0.7	-0.3	0.2	1.0						
SK	0.2	-0.1	0.0	0.7	-0.1	0.8	-0.2	0.7	0.8	0.5	0.3	-0.3	0.8	0.8	-0.8	0.2	0.0	-0.7	0.5	-0.5	-0.2	0.9	0.0	1.0					
FI	0.2	-0.1	-0.5	-0.3	0.1	-0.8	0.3	0.2	0.2	0.4	0.2	0.0	0.3	-0.2	-0.1	0.6	0.0	0.0	0.1	-0.7	-0.2	0.3	0.2	0.2	1.0				
SE	0.3	-0.1	-0.8	-0.2	0.0	0.7	0.6	-0.4	0.5	0.3	-0.1	0.4	0.3	-0.1	-0.2	0.3	0.2	0.2	0.0	-0.1	0.6	0.2	0.2	0.1	0.1	1.0			
GB	0.3	0.0	0.1	0.6	-0.3	0.9	-0.1	0.3	0.3	0.2	-0.1	0.5	0.5	0.5	-0.7	-0.3	0.3	-0.4	0.3	0.2	0.2	0.2	-0.5	0.4	-0.2	0.3	1.0		

Source: PwC Market Research Centre analysis based on Eurostat

The numbers displayed are roundings, the colors indicate the true values.

Correlation not valid for Estonia, Lithuania and Luxembourg as these countries do not disclose data for each year.

Table 9: Correlation between consumption growth of EU countries (2005-2013)

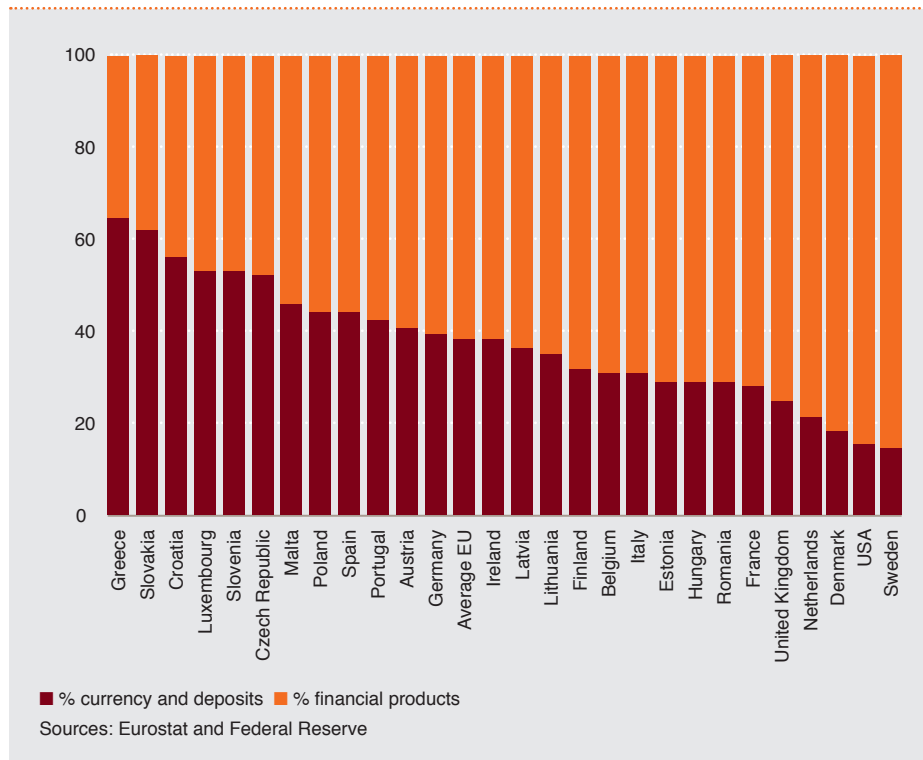
	BE	BG	CZ	DK	DE	EE	IE	EL	ES	FR	HR	IT	CY	LV	LU	HU	MT	NL	AT	PL	PT	RO	SI	SK	FI	SE	GB	
BE	1.0																											
BG	0.8	1.0																										
CZ	0.7	0.7	1.0																									
DK	0.9	0.8	0.6	1.0																								
DE	0.6	0.3	0.1	0.6	1.0																							
EE	0.7	0.7	0.5	0.8	0.6	1.0																						
IE	0.7	0.7	0.7	0.8	0.5	0.9	1.0																					
EL	0.2	0.4	0.8	0.3	-0.4	0.2	0.5	1.0																				
ES	0.7	0.8	0.7	0.8	0.3	0.8	0.9	0.6	1.0																			
FR	0.9	0.8	0.8	0.9	0.5	0.8	0.9	0.5	0.9	1.0																		
HR	0.8	0.8	0.9	0.8	0.3	0.7	0.9	0.7	0.8	0.9	1.0																	
IT	0.8	0.7	0.6	0.7	0.5	0.6	0.7	0.4	0.9	0.9	0.8	1.0																
CY	0.9	0.9	0.8	0.7	0.3	0.5	0.6	0.5	0.7	0.8	0.9	0.8	1.0															
LV	0.7	0.7	0.6	0.8	0.6	1.0	1.0	0.3	0.8	0.8	0.8	0.7	0.6	1.0														
LT	0.7	0.8	0.7	0.8	0.6	0.9	0.9	0.4	0.7	0.8	0.9	0.6	0.7	0.9	1.0													
LU	0.5	0.7	0.3	0.8	0.4	0.8	0.8	0.2	0.8	0.7	0.6	0.7	0.5	0.8	0.5	1.0												
HU	0.7	0.8	0.6	0.8	0.5	0.9	0.9	0.3	0.7	0.8	0.9	0.6	0.7	0.9	1.0	0.7	1.0											
MT	-0.2	-0.1	-0.2	0.0	0.3	0.0	0.0	-0.1	0.0	-0.1	0.0	0.1	-0.1	0.0	0.0	0.3	0.0	1.0										
NL	0.8	0.8	0.8	0.7	0.5	0.8	0.8	0.5	0.8	0.9	0.9	0.8	0.8	0.8	0.9	0.5	0.9	-0.1	1.0									
AT	0.8	0.7	0.3	0.9	0.8	0.7	0.7	0.0	0.7	0.8	0.7	0.8	0.6	0.8	0.6	0.8	0.7	0.3	0.7	1.0								
PL	0.5	0.5	0.5	0.1	0.2	-0.1	-0.1	0.1	0.0	0.2	0.3	0.4	0.6	0.0	0.2	-0.1	0.2	0.0	0.4	0.2	1.0							
PT	0.6	0.5	0.7	0.7	0.2	0.5	0.7	0.7	0.9	0.8	0.7	0.8	0.6	0.6	0.6	0.4	0.5	-0.3	0.7	0.4	0.0	1.0						
RO	0.9	0.8	0.8	0.8	0.4	0.8	0.8	0.5	0.8	0.9	0.9	0.7	0.8	0.8	0.9	0.5	0.8	-0.2	0.9	0.6	0.2	0.8	1.0					
SI	0.6	0.7	0.8	0.3	-0.1	0.2	0.4	0.7	0.6	0.6	0.7	0.7	0.8	0.3	0.4	0.2	0.4	-0.2	0.6	0.2	0.7	0.6	0.6	1.0				
SK	0.7	0.8	0.9	0.7	0.2	0.6	0.7	0.7	0.8	0.8	0.9	0.7	0.9	0.7	0.8	0.5	0.8	0.0	0.8	0.5	0.4	0.7	0.8	0.8	1.0			
FI	0.9	0.7	0.5	0.8	0.8	0.7	0.6	0.0	0.6	0.8	0.7	0.8	0.8	0.7	0.7	0.5	0.8	0.0	0.8	0.9	0.5	0.4	0.7	0.4	0.6	1.0		
SE	0.5	0.2	0.3	0.2	0.2	0.2	0.3	0.2	0.4	0.5	0.3	0.6	0.3	0.3	0.1	0.1	0.1	-0.4	0.5	0.3	0.2	0.6	0.3	0.5	0.1	0.4	1.0	
GB	0.7	0.5	0.3	0.8	0.7	0.9	0.8	0.1	0.7	0.7	0.6	0.5	0.5	0.8	0.7	0.6	0.8	-0.2	0.7	0.7	-0.2	0.6	0.8	0.1	0.4	0.6	0.4	

Source: PwC Market Research Centre analysis based on Eurostat

The numbers displayed are roundings, the colors indicate the true values.

Correlation not valid for Estonia, Lithuania and Luxembourg as these countries do not disclose data for each year.

Figure 41: Allocation of financial assets across EU countries in 2014



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The PwC Market Research Centre is a multi-purpose entity composed of analysts, experts and economists who assist clients in their decision making by providing sectoral studies, projections, macroeconomic forecasts and survey analysis with a focus on the financial services industry.

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