Non-Bank Financing of European Non-Financial Firms

Study report

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Introduction

The European economy has returned to growth in recent years, although at a slower pace than before the global financial crisis (2007-2009) and the European sovereign debt crisis (2010-2012). This economic downturn has severely affected the economies of all European countries. National sovereign debts have increased, at the same time we have seen bank bailouts, austerity plans, and amplification of companies' and households' financial constraints, which is impairing long-term investment.

European non-financial firms were particularly affected by this crisis, which made them search for alternative sources of financing, namely non-bank financing. Two factors explain the recent rise in non-bank financing. First, European firms have been traditionally heavily dependent on bank lending. Second, banks restricted credit supply as a consequence of the crisis. Yet, bank financing still plays a dominant role in the capital structure of most European non-financial firms.

Some argue that reducing the bank dependence of non-financial firms, especially among small and medium size enterprises (SMEs), can significantly help to boost economic growth and job creation, while promoting SMEs' resilience to future financial shocks.

This report identifies the main trends in the European financing market for non-financial firms. It devotes special attention to the evolution of bank versus non-bank financing, and its purpose is to contribute to the on-going public debate on how to stimulate the financing of long-term investment and economic growth in Europe.

1. Executive summary

While the European economy is in the process of recovering from a period of almost a decade of slow economic growth and financial constraints, firms are struggling to raise capital to finance both investment projects and working capital. The European financial system has been traditionally predominantly bank-oriented and maintains these characteristics even after the 2007-2009 financial crisis, unlike other advanced economies such as the United States of America, where new sources of non-bank finance were already in place before the beginning of the crisis.

Several processes of deregulation of the banking sector taking place in Europe since the 1980s allowed banks to diversify their activity. Today banks offer a broad range of products and financial activities. Traditional activities like lending to the private sector account today for only one third of banks' total assets (18% to households and 15% to non-financial firms). Bank concentration is high and has been growing as a consequence of the financial crisis. However, the European banking market is fragmented and the integration process has been reversed with a decrease in cross-border credit flows in the post-crisis period. In fact, banks have become increasingly focused on their home markets in this period.

The adoption of economic policies in each country in the years immediately after the crisis has increased asymmetries in economic performance across Europe. Countries without large economic imbalances (Poland) or that went through a fast adjustment process after the crisis (Bulgaria, Estonia, Latvia, and Lithuania) had good economic performance. Other countries with structural economic problems before the crisis (Greece, Portugal, Spain, Cyprus, and Italy) went through an economic recession and are still experiencing limited growth. Others had moderate growth (Germany, Belgium, and France) in the post-crisis period.

European countries have not been successful in narrowing government deficits and decreasing public debt to pre-crisis levels by 2014, even after some bank bailouts, national structural reforms and austerity measures. The economic downturn period in Europe has produced difficulties for banks to finance themselves and therefore to extend loans to non-financial corporations and households. The European countries have not been able to successfully address important questions for their future economic and financial stability. Some important steps have been undertaken (i.e., the European Banking Union), but considerable uncertainty and challenges remain to be addressed. For example, the recent challenge with the UK's decision to leave the European Union following a referendum (Brexit).

Therefore, non-bank alternatives of funding are a crucial element for long-term growth in Europe, as bank lending is highly procyclical and volatile. In this regard, capital markets (namely bond and equity markets), as well as *shadow banking* (i.e., financial entities that directly extend financing to non-financial firms other than banks) are important to overcome bank-financing limitations and shortfalls.

In Europe, capital markets are a much less important source of funding than in the US. The divergence is even more striking when we look across different regions in Europe. Southern and Eastern Europe are the regions where the importance of capital markets in the financing structure of the private sector is lower. In contrast, capital markets have a bigger role in the financing of the economy in Northern Europe, the UK, and Ireland.

1. Executive summary

Bond and equity markets presented a stable evolution between 2003 and 2015. Nevertheless, it is interesting the attention that firms devoted to capital markets in 2009, exactly when the banking system significantly cut lending and required abnormally high credit standards from debtors. This pattern indicates that capital markets were able to substitute in part the crucial role of banking system in financing the economy.

This recent financial crisis triggered the access of non-financial firms to capital markets as an alternative source of funding. One can think this event has created opportunity for a new trend in market-financing in Europe. However, immediately after the crisis, it fell to pre-crisis values and the banking-system regained its position. Market-financing has high costs relative to bank-financing, which makes it hard to substitute bank loans, especially for SMEs.

Due to its importance, the banking sector has shaped the financing structure of firms in Europe. Capital markets lack the power to attract the majority of firms in need of funds. The influence of the banking sector also extends to the term structure of liabilities. We observe that both loans and bond maturities decreased during the financial crisis.

Shadow banking also has the potential to be an important alternative source of funding when the supply of bank funds is limited. Banking activity is extremely regulated and the contracts are hard to enforce. Moreover, banks have to comply with strict capital ratios, which makes their activity highly procyclical. The fact that other types of financial institutions can provide funds with similar characteristics but under much lighter obligations is important to reduce the cyclicality of capital supply.

Trade credit can also play an important role as a source of finance for SMEs. Trade partners are likely to know better the financial situation of each other, reducing the information asymmetries and barriers.

While traditional debt is the most common source of external finance for European firms, particularly for SMEs, it is important to continue to work to diversify the sources of financing such as business angels, crowdfunding, venture capital, and private equity. Compared to the US, these sources are still underdeveloped in Europe.

We believe that several procedures need to be undertaken: the regulatory framework for non-bank financing products and services needs to be developed and implemented, and the traditional model of banking activity will have to change to overcome the barriers of market costs, market penetration, and consumer confidence.

2. European macroeconomic analysis

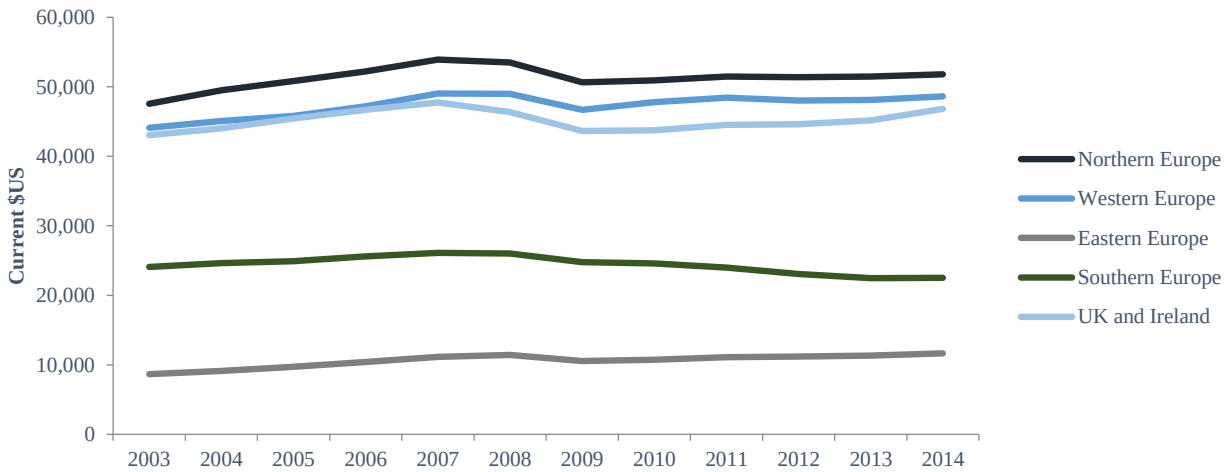
GDP Growth

The performance of European economies has been highly heterogeneous. European countries show substantial differences in GDP growth. For most of our analysis, countries are aggregated into five regions (Appendix 1), which share similar economic and financial characteristics.

During the last decade (between 2003 and 2014) the average real GDP growth rate of countries considered in this study was 1.65%. In general, there was an economic slowdown in all economies as a consequence of the global financial crisis. Eastern Europe countries show the highest growth rate both before and after the crisis, and the UK and Ireland the highest growth rate after the crisis. As the financial crisis substantially changed the European economic and financial environment, we analyze in detail both the pre-crisis and post-crisis periods.

During the pre-crisis period (from 2003 to 2007), UK and Ireland were growing at an average rate of 4.05%, Northern countries at 3.56%, Eastern countries at 2.97%, Southern countries at 2.83%, and Western countries at 2.61%. At the peak of the crisis, between 2008 and 2010, Eastern countries had a growth rate of -7.70%, Northern Europe -4.97%, UK and Ireland -4.92%, Western Europe -3.70%, and Southern countries -3.68%. Southern countries since then have had negative growth and Northern and Western countries modest growth. UK and Ireland are the only group showing some signs of economic recovery in the post-crisis period. Therefore, we conclude that all groups of countries were negatively affected by the global financial crisis of 2007-2009.

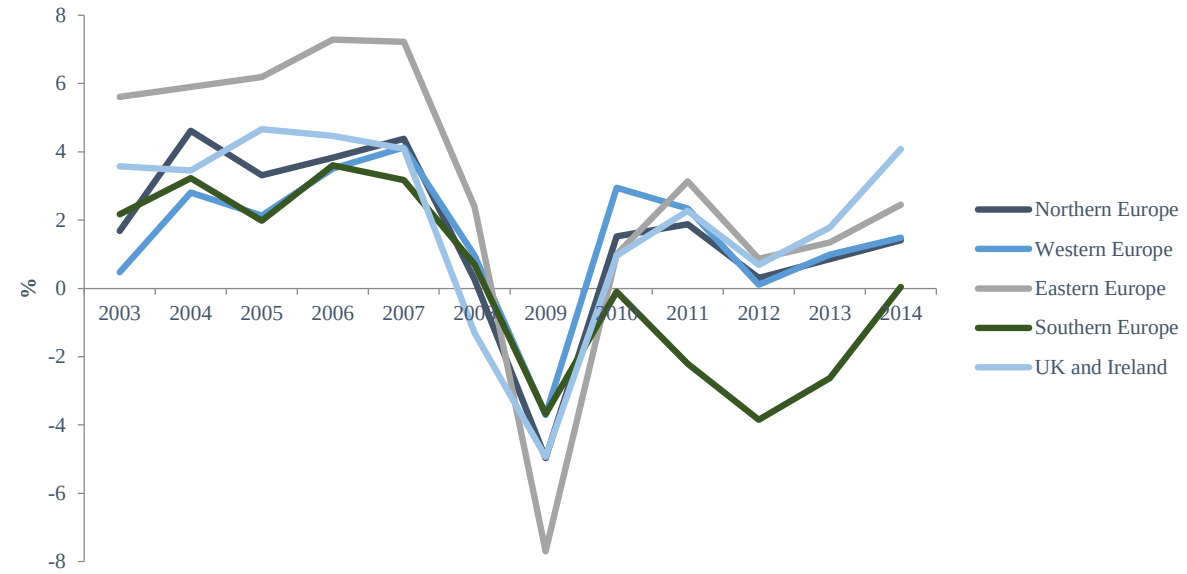
Exhibit 1
Evolution of Real GDP per capita, by groups of countries (constant 2005, $US)



Source: World Bank Development Indicators (WDI)

2. European macroeconomic analysis

Exhibit 2
Evolution of Real GDP growth, by groups of countries



Source: World Bank Development Indicators (WDI)

Inflation

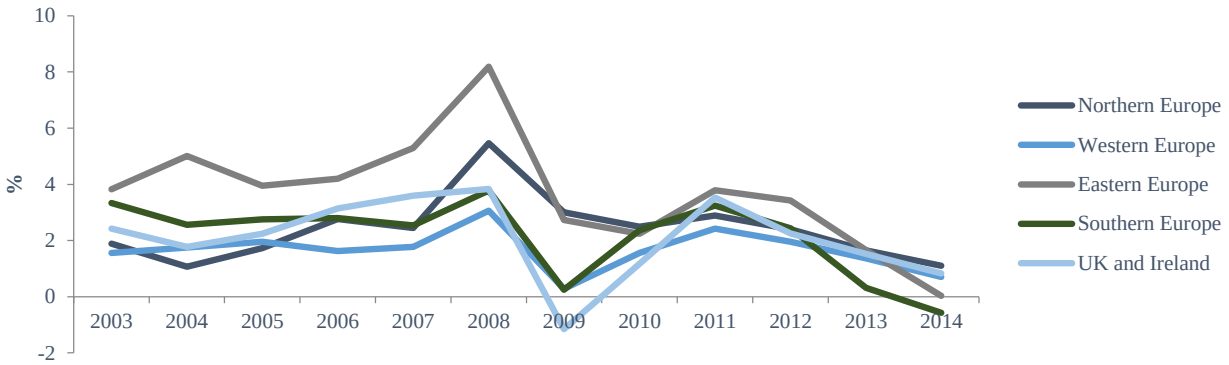
The average inflation rate was 2.40% in Europe from 2003 to 2014. With the exception of Eastern Europe, which had an inflation rate of 3.69% in the pre-crisis period and 3.15% in the post-crisis period, all groups of countries maintained similar levels of inflation. Northern and Western countries and UK and Ireland had an average inflation rate of about 2% between 2003 and 2014. Overall, inflation rates in Europe fluctuated between 1% and 8% in this period with the exception of the peak of the crisis in 2009, when deflation was observed in all regions. While most countries recovered from this deflationary period by 2010, the Southern countries, which were most affected by the sovereign debt crisis, suffered deflation until recently.

After the crisis, inflation rates show a downward trend in Europe, and there are signs of convergence to a similar level (2%). Stabilization of inflationary processes is indeed an important achievement in the post-crisis period, especially as it occurred at the same time as aggressive monetary policies were undertaken by the European Central Bank (ECB) to avoid a deflationary spiral.

As for the future, the low levels of oil and commodity prices and the global economic uncertainty lead to the prediction of low inflation, which we expect to last for a lengthy time in Europe.

2. European macroeconomic analysis

Exhibit 3
Evolution of Inflation, by groups of countries



Source: World Bank Development Indicators (WDI)

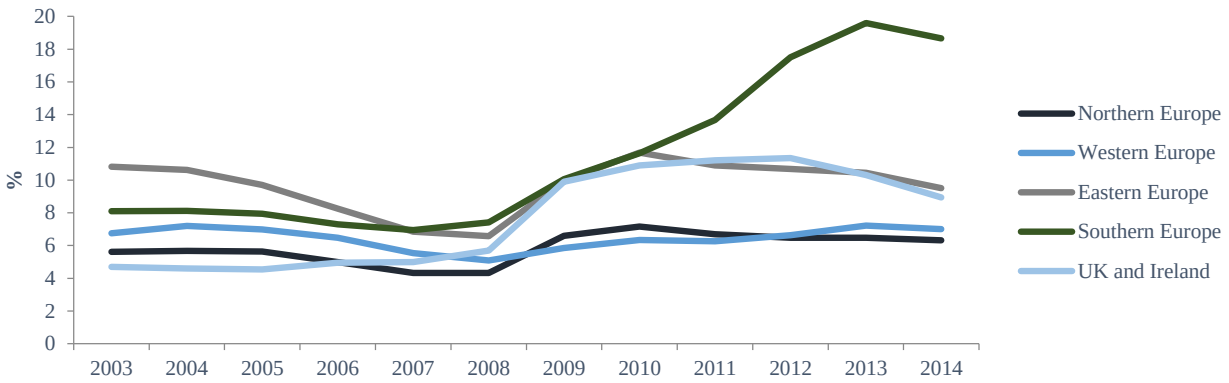
Unemployment

The unemployment rate is one of the most important economic and social indicators of the state of a given economy. A high unemployment rate indicates underutilized capacity in the labor market and pressure on governments to implement labor market reforms. This indicator presents a procyclical behavior and may affect the government budget due to increases in expenditures (i.e., unemployment benefits) and contraction of tax revenues during periods of economic recession.

The recent economic crisis has reversed the stable levels of unemployment achieved in Europe since 2000. Prior to 2005, the unemployment rate showed a downward trend and in the 2005-2008 period European countries achieved the lowest range at about 5% to 8%. In the post-crisis period (2008-2014), the average unemployment rate of all groups of countries increased significantly to about 10%. In particular, there was a dramatic increase in unemployment in three out of five groups of countries. Not surprisingly, the Southern countries group was the most affected. In 2014, the unemployment rate more than doubled in this region compared with 2008. The high unemployment rate in Europe is particularly pronounced among the youthful population (under the age of 25). Despite the stable level even during the crisis, Eastern countries show a persistent high level of unemployment (above 10%).

2. European macroeconomic analysis

Exhibit 4
Evolution of Unemployment rate, by groups of countries



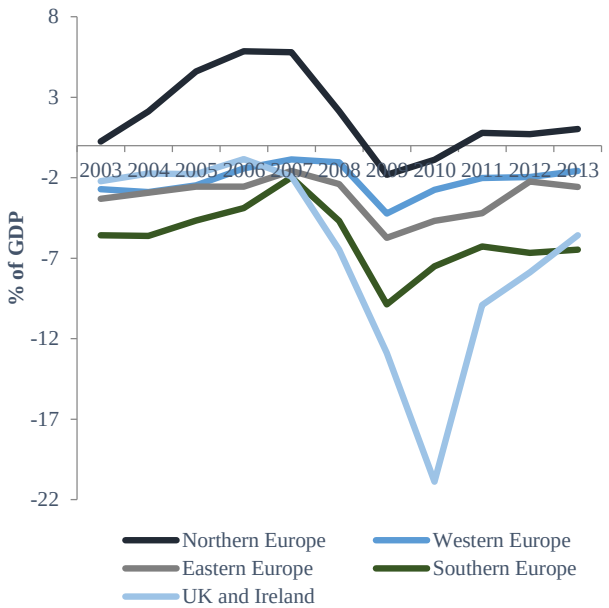
Source: World Bank Development Indicators (WDI)

Government budget deficit and debt

The European countries, on average, experienced a government budget deficit of 3.29%, between 2003 and 2014, and a government debt of about 54% of GDP, which is within the limit of the European Market Union (EMU). After 2007, the budget deficit increased to higher levels. The UK and Ireland experienced an average peak of -20.88%, followed by Southern European countries (-10.27%), Eastern and Western countries at about -2%, and Northern countries with a balanced budget. Thus, the crisis has increased budget deficits among all groups of European countries.

Government debt (as % of GDP) has increased since 2007 for all European regions to a higher level than that of the pre-crisis period and with no signal of recovery in recent years. Interestingly, Southern countries were decreasing the level of government debt prior to 2007 to an average of 80% of GDP, the lowest level since 2003, and are at values above 100% of GDP since 2011.

Exhibit 5
Evolution of Government Budget Surplus (Deficit), by groups of countries

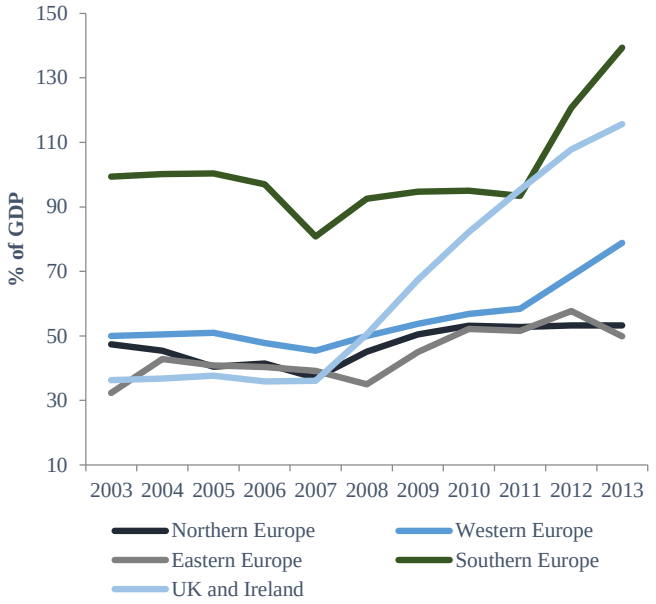


Source: World Bank Development Indicators (WDI)

2. European macroeconomic analysis

The crisis has significantly increased government indebtedness, especially among the Southern Europe and UK and Ireland groups, which have the highest government debt as a percentage of GDP since 2008.

Exhibit 6
Evolution of Government Debt, by groups of countries



Source: World Bank Development Indicators (WDI)

3. Size of the banking sector *versus* capital markets

This section characterizes the two sources of external financing of non-financial firms: **banking sector** and **capital markets**. The question of the relative importance of the banking sector and capital markets is particularly important in periods of restricted bank lending supply, such as the one observed during the recent crisis. Bonds and equity markets, in alternative, may act as substitutes when neither internal funds nor bank financing are easily available. Recent research in the US finds evidence of substitution from bank loans to bonds during times of tight monetary policy and lending standards, high levels of non-performing loans, and low bank equity prices (Becker and Ivashina, 2014). The problem of the cyclicality of bank finance is even more pronounced in countries where capital markets are less developed, such as in the case of most European countries. Evidence shows that the economic costs of financial crisis and subsequent economic recessions are larger in bank-oriented systems than in market-oriented systems (Gambacorta et al., 2014; Pagano and Langfield, 2014).

The table below summarizes the main advantages/disadvantages of each type of financing.

Bank finance	Capital market
(+) Banks have superior monitoring capabilities compared to bond markets	(+) Bond markets mitigate the excessive dominance of bank finance
(-) Bank funding can be expensive and cyclical	(+) Bonds substitute for banks during banking crises
(-) Bank lending is more volatile than bond finance	(-) Bond issues have high issuance costs

The financial scenario in Europe differs greatly from that of the US, where a large fraction of financing is done through capital markets. In 2007, according to a European Commission publication, the market size of the euro area's equity and corporate bond markets was at 85% and 81% of GDP, respectively. At the same time, the size of the US equity and corporate bond markets was 144% and 168% of GDP[2], respectively. Exhibits 7-10 present several indicators of the relative importance of bank and non-bank financing (as a % GDP): private credit by deposit money banks; syndicated loans issuance volume; corporate bond issuance volume, and stock market capitalization. We observe that bank credit to the private sector (firms and households) is much more important in Europe than in the US. Moreover, bank credit increased until 2009 in Europe remaining at similar levels thereafter (90% to 100% of GDP). We now turn the attention to alternative sources of debt and equity finance. Syndicated loans and corporate bonds issuance volume is much higher in the US than in Europe. In Europe, syndicated loans represented 4.4% of GDP throughout the period, while bond issuance was just 1.9% of GDP. While lenders in syndicated loans are mainly banks, lending relationships are not as important as in individual bank loans, and there is an increasing number of other participants (i.e., institutional investors) in this market. Stock market capitalization commoved similarly in Europe and the US, although it represents a significantly larger fraction of GDP in the US versus Europe (60 p.p. higher).

2 Quarterly Report on the Euro Area

3. Size of the banking sector *versus* capital markets

Exhibit 7
Evolution of Private Credit by Deposit Money Banks, Europe vs US

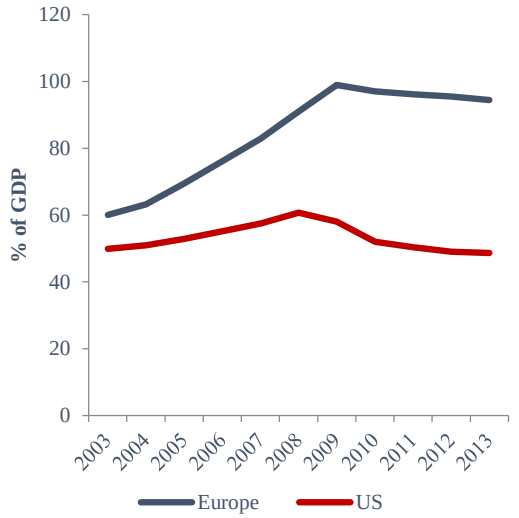


Exhibit 8
Evolution of Syndicated Loan Issuance Volume, Europe vs US

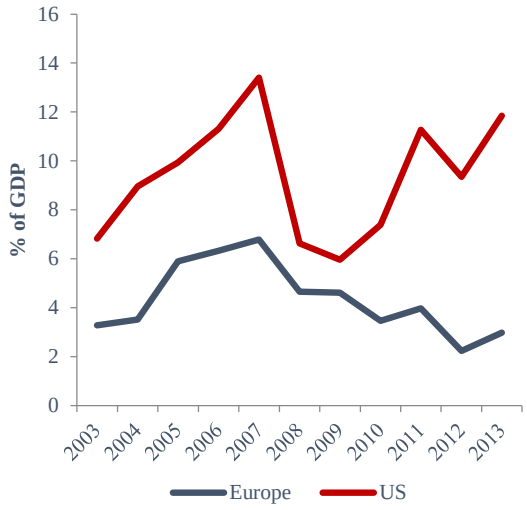


Exhibit 9
Evolution of Corporate Bond Issuance Volume, Europe vs US

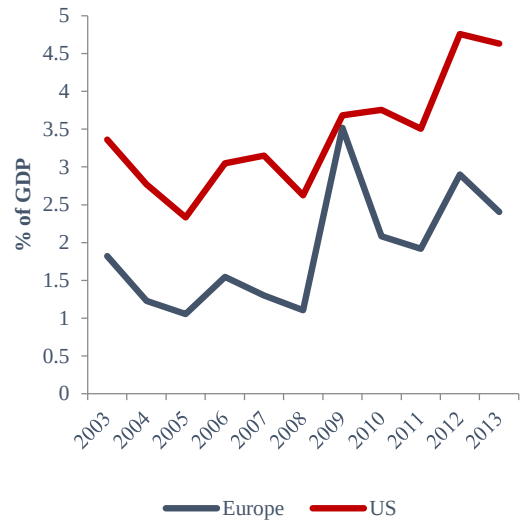
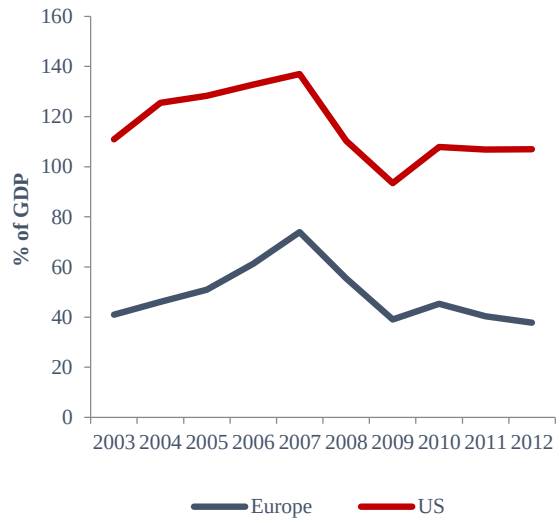


Exhibit 10
Evolution of Stock Market Capitalisation, Europe vs US



Source: World Bank Global Financial Development Database

3. Size of the banking sector *versus* capital markets

There are important differences in the sources of financing between European countries and the US (the benchmark of financial development), but one needs to have in mind that SMEs are the "backbone" of the European economy. SMEs are defined as companies with total assets that do not exceed $US 43 million and with fewer than 250 employees. These companies represent 99% of all businesses in the EU market. According to 2014 data from the European Commission Annual Report for European SMEs, the 22.3 million SMEs in the non-financial sector employed almost 90 million people and generated more than €3.7 trillion in value added across the 28 EU countries[3]. After years of downsizing until 2013, SMEs had positive employment growth in 2014. They have created 85% of all the new jobs in the economy, providing two-thirds of the total private sector employment. Improved macroeconomic and business conditions have contributed to such performance but employment still needs to recover and start-ups have a key role in job creation in the economy (Haltiwanger et al., 2013). The performance of SMEs is thus crucial to the development and growth of the private sector. Implementing an appropriate capital structure is one of the dimensions that can improve firm performance and productivity. Yet, SMEs face restrictions in accessing external finance and they are highly bank dependent. Credit shortages are particularly acute for these firms as access to capital markets is typically not an option.

In Europe, the liberalization of capital movements across countries can promote an easier access to finance for SMEs when facing a shortage of domestic credit supply. Moreover, it can increase competition and, as a consequence, decrease the cost of capital for non-financial firms. However, the level of financial system integration in Europe is limited and there are significant differences in the regulatory framework across countries. Cross-border lending, for instance, still has low importance and, at the domestic level, bank concentration remains significant. Exhibit 11 shows the external loans and deposits held in banks abroad by the non-banking sector (as a percentage of domestic banks' total deposits). It shows that the external loans and deposits for the non-banking sector represent a small fraction of the total amount of domestic bank deposits. It represents less than 40% across all groups of countries with the exception of UK and Ireland. The figure would be even lower if we considered only loans.

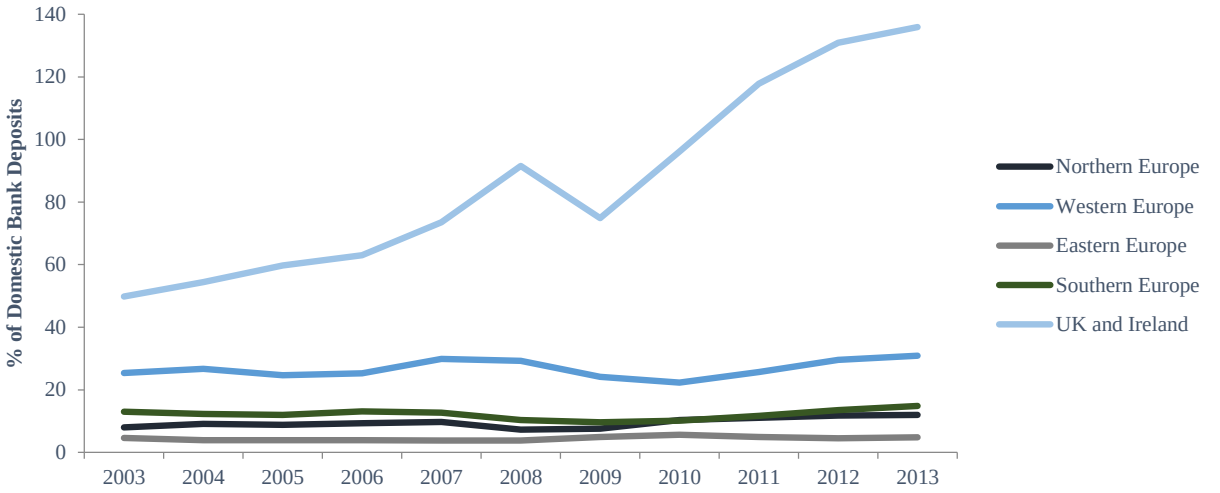
Comparing the results with external loans and deposits to the banking sector (also in exhibit 11), we observe substantially more capital flows among banking industry players. The gap between the two highlights the lack of integration of European capital markets for non-financial firms and households, and the need for European authorities to deepen financial integration through regulation.

These figures motivate the discussion on alternative sources of financing. We devote close attention to each of the alternative financing sources and evaluate their relevance by groups of countries. We start by characterizing the evolution of the banking sector, its size in the economy, and efficiency. The second part analyzes capital markets and the breakdown between equity and bond markets. This discussion is relevant not only for practitioners but also for policy makers, as the development of each of these financing sources greatly depends on the institutional, regulatory, and legal frameworks.

[3] European Commission, "The anual report on European SMEs 2014-2015"

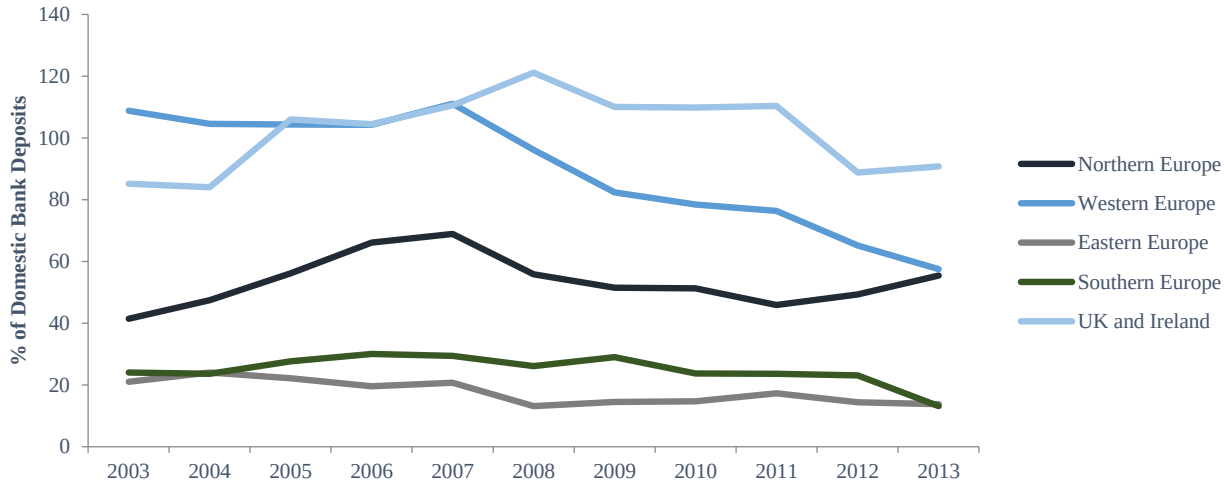
3. Size of the banking sector *versus* capital markets

Exhibit 11
Evolution of External Loans and Deposits of Reporting Banks to the Non-banking Sector, by group of countries



Source: World Bank Global Financial Development Database

Exhibit 12
Evolution of External Loans and Deposits of Reporting Banks to the Banking Sector, by groups of countries



Source: World Bank Global Financial Development Database

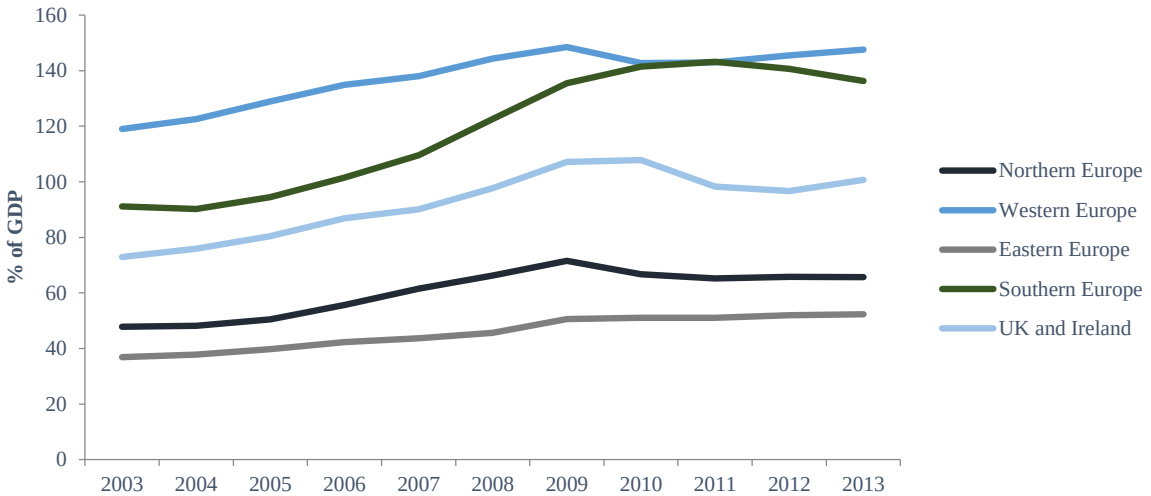
4. Banking sector outlook

Banking industry

The banking system in Europe is fragmented and includes banks with a wide range of sizes, strategies and ownership structures. Since 1980 a European Directive has allowed banks to offer all services, including securities trading. This was an incentive for banks to expand their range of activities beyond deposits and loans. According to the European Central Bank (ECB), there are 7,726 banks in the EU banking system, 5,248 in the Eurozone. The banking industry includes a few very large financial institutions ("too big to fail", the nine largest European banks have total assets of €1 trillion each and belong to UK, Germany, France, and Spain), and a large number of small institutions with different ownership structures (Liikanen, 2011). In the last decade the number of larger banks has increased as a consequence of mergers and acquisitions. The almost doubling in size of the EU banking system since 1996 was driven by the growth of the largest 20 banks (ESRB, 2014).

Exhibit 13 shows demand, time, and savings deposits in banks and other financial institutions as a share of GDP. This variable indicates the size of resources coming from economic agents' savings and entering into the banking system. There is wide variation across countries in Europe. Northern and Eastern countries show ratios of about 50%, UK and Ireland's ratios of about 100%, and the ratios for Western and Southern countries vary between 90% and 150%. These results indicate a greater size of the banking industry in the Western and Southern countries, as well as UK and Ireland. The trend has been increasing in all groups throughout the period of analysis.

Exhibit 13
Evolution of Financial System Deposits, by groups of countries



Source: World Bank Global Financial Development Database

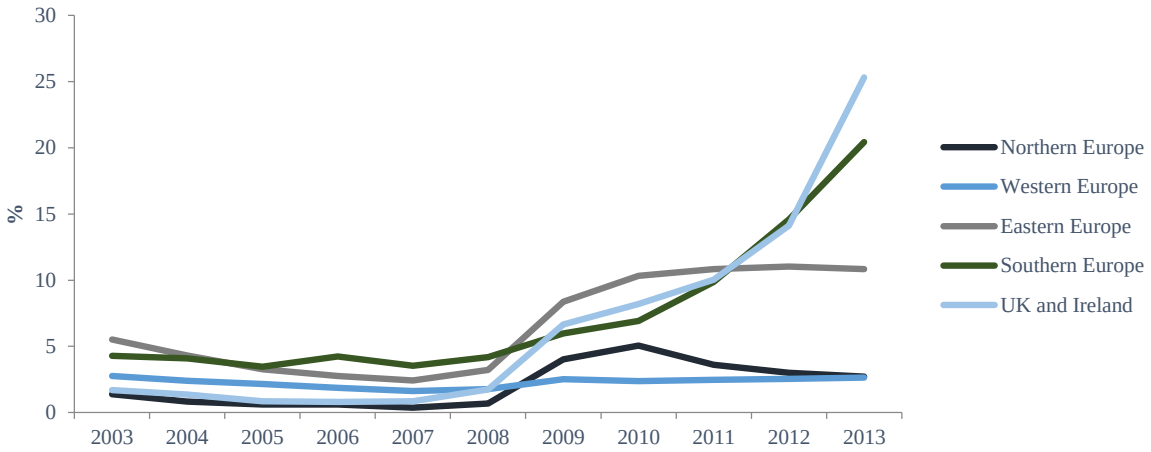
4. Banking sector outlook

It is worthwhile to mention the absence of any contraction in deposits at the peak of the crisis. The global financial crisis had, however, negative consequences for the banks' balance sheets. Banks were hit by shocks in the value of their security portfolios. Next, they were affected by the sovereign debt crisis due to their relationship with domestic public administrations. The crisis affected banks' funding costs and profitability due to higher default rates (exhibit 14), which in many cases forced them to deleverage to reduce their asset base. However, banks have not reduced the volume of private credit (compared to GDP) after 2008 for most regions (exhibit 15). The exceptions are the Northern Europe and UK and Ireland regions. Private credit (by deposit money banks as a percentage of GDP) measures financial resources provided to the private sector by domestic money banks. As banks tightened lending standards during this period they limited access to new loans but were not able to reduce existing loans. This restricted access to bank financing, especially for long-term loans, forcing non-financial corporations to seek other sources of external financing. Buttiglione et al. (2014) documents that the deleveraging of both public and private sectors is still modest, but the adjustment of the European banking sector has accelerated in the last years.

Still regarding the characterization of the banking industry, comparing exhibits 15 and 16, we see no differences between the share of private credit by deposit money banks versus the share of deposit money banks and other financial institutions. It indicates the almost exclusive role of deposits banks in extending credit in European economies, and a limited role of the shadow banking system (network of financial institutions comprising non-depository banks such as investment banks, structured investment vehicles, hedge funds, non-bank financial institutions, and money market funds) in Europe.

Overall, bank-financed debt has slightly increased over the period of analysis in Europe, and the European financial system is predominantly bank-oriented when compared with the US (exhibit 7).

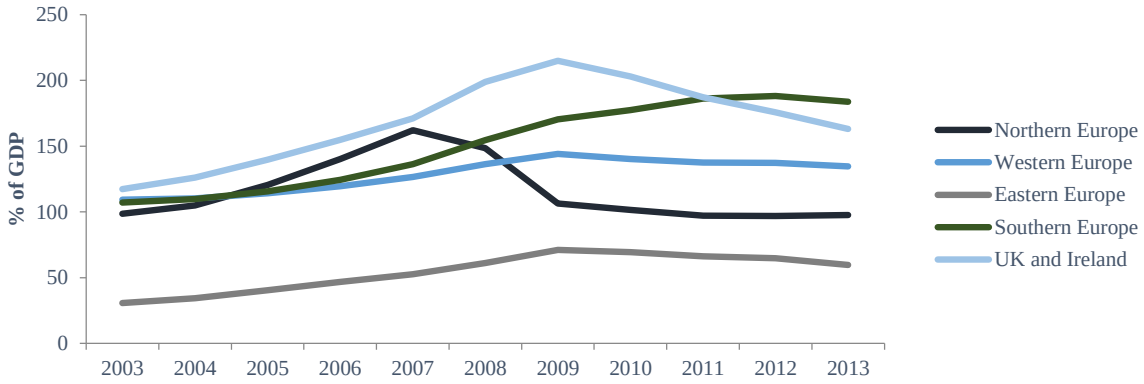
Exhibit 14
Evolution of Bank Nonperforming Loans to Gross Loans, by groups of countries



Source: World Bank Global Financial Development Database

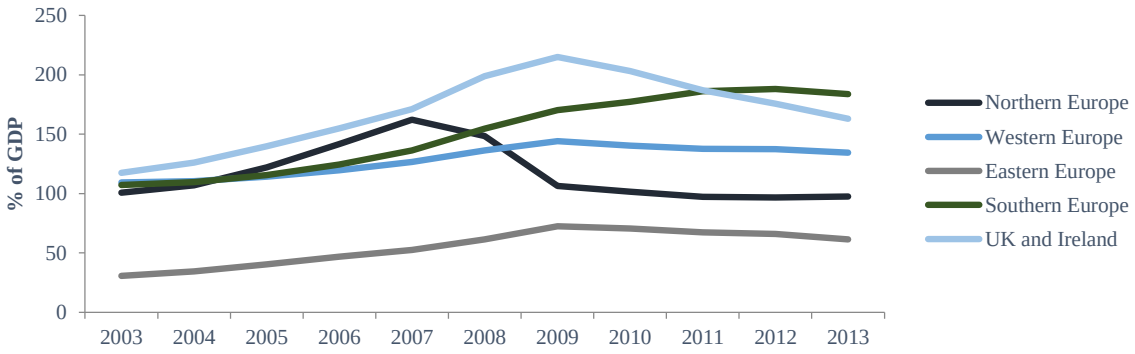
4. Banking sector outlook

Exhibit 15
Evolution of Private Credit by Deposit Money Banks, by groups of countries



Source: World Bank Global Financial Development Database

Exhibit 16
Evolution of Private Credit by Deposit Money Banks and Other Financial Institutions, by groups of countries

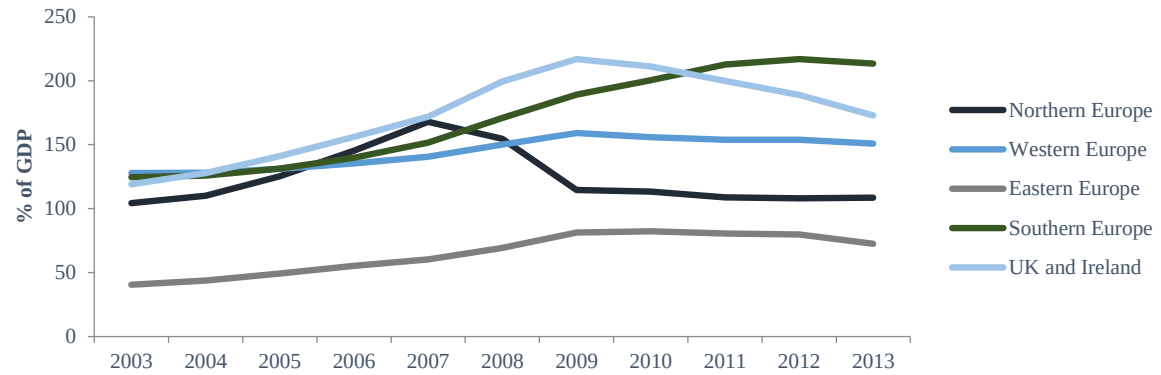


Source: World Bank Global Financial Development Database

The size of the European banking system (as measured by total assets) grew significantly in the run-up to the financial crisis (exhibit 17) in some regions. It was the case in Southern Europe, UK and Ireland. Overall the banking sector has a great importance in Europe, with total bank assets exceeding GDP throughout the period of analysis in all regions except Eastern Europe.

4. Banking sector outlook

Exhibit 17
Evolution of Deposit Bank Assets, by groups of countries



Source: World Bank Global Financial Development Database

Next we analyze the competition and efficiency of the banking system in Europe. Some conventional measures of efficiency and competition include bank net interest margins and bank concentration (exhibits 18 and 19).

Western Europe, the UK, and Ireland rank at the top of countries with higher banking competition. These regions present lower bank concentration and low net interest margins. In turn, the banking system in Eastern countries is less efficient, presenting higher net interest margins, although this does not seem to be driven by lower competition. Yet, the Eastern region presents a convergence toward a more efficient banking sector over the period of analysis. The recent crisis triggered the increase in loan spreads motivated by the rise in probabilities of default on loans, but the increase has not led to higher net interest margins, except in Northern Europe. Bank concentration (market share of the top 3 banks) is high at about 60% to 70%. The banking industry concentration in Europe is still much higher than in the US (35% in 2013).

Exhibit 18
Evolution of Bank Net Interest Margin, by groups of countries

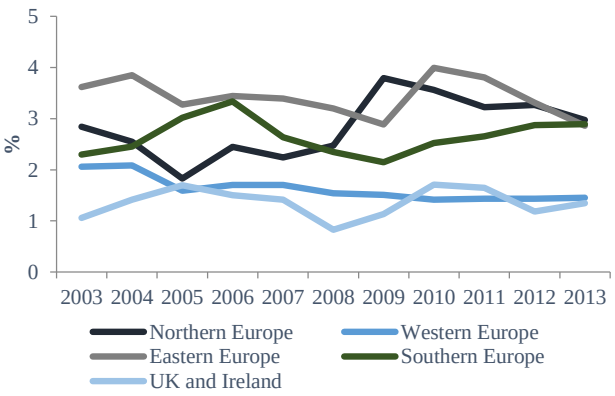
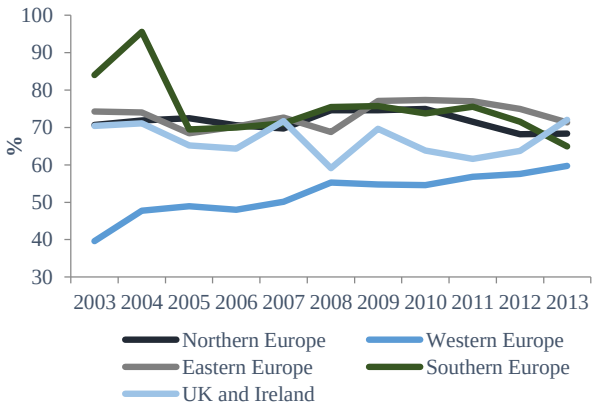


Exhibit 19
Evolution of Bank Concentration, by groups of countries



Source: World Bank Global Financial Development Database

4. Banking sector outlook

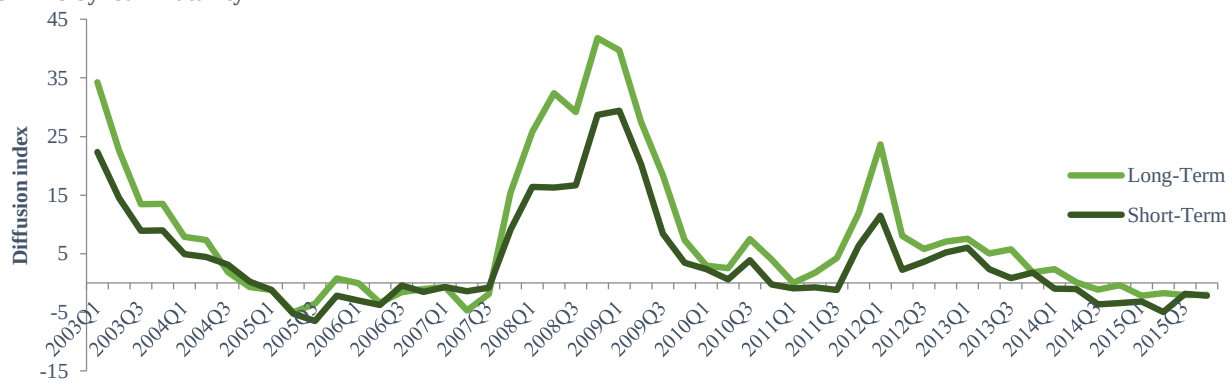
Financial crises are usually preceded by a large increase in debt-based financing (Schularick and Taylor, 2012; Mian, Sufi, and Verner (2016)). Since 2007 there is evidence that changes in the provision of finance to the private sector can be explained by both supply and demand-side factors. During an economic downturn the demand for credit can decrease due to a reduction in investment opportunities, a drop in collateral values, and a deterioration of borrowers' creditworthiness. Exhibit 20 shows the diffusion index[4] of demand for loans of Eurozone non-financial firms. We clearly observe that the percentage change in demand for loans during the crisis has fallen drastically. This indicator fluctuated a great deal during the period. In the most recent year, the demand for loans presented a positive trend of growth.

However, the supply of credit can also drop if banks decide to tighten their lending standards and/or have liquidity constraints due to capital requirements. Exhibit 21 shows that banks significantly tightened credit standards during more adverse periods such as the 2007-2009 financial crisis.

Exhibit 20
Evolution of Demand for Loans by Eurozone firms, by groups of countries

Source: ECB

Exhibit 21
Evolution of Credit Standards required by Eurozone Banks to firms by loan maturity



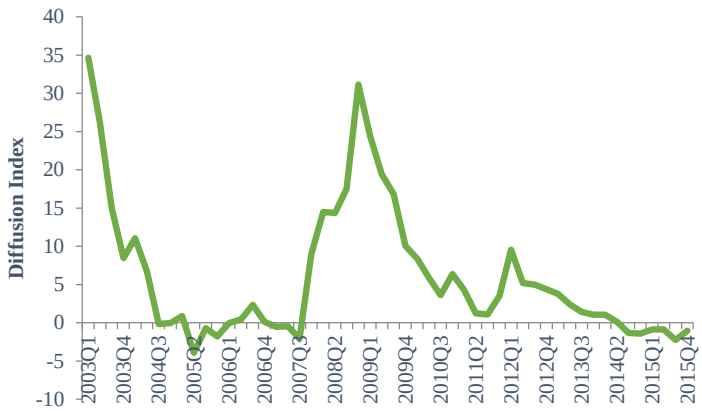
Source: ECB

[4] Diffusion index is a method of summarizing the common tendency of a statistical series. It is calculated as the weighted difference between the share of banks reporting loan demand has increased and the share of banks reporting it has declined. The diffusion index is constructed as follows: banks who have answered "considerably" are given a weight twice as high (score of 1) as banks having answered "somewhat" (score of 0.5). The intuition is similar for diffusion index on credit standards and collateral requirements (exhibits 21 and 22).

4. Banking sector outlook

Exhibit 22 shows how collateral requirements of Eurozone banks have increased during the crisis. When facing such an adverse shock, bank-dependent firms may not be able to substitute bank loans and are consequently forced to cut investments and employment. This is why some argue bond financing appears much more stable than bank credit.

Exhibit 22
Evolution of Collateral Requirements by Eurozone Banks, by groups of countries



Source: ECB

Syndicated loans

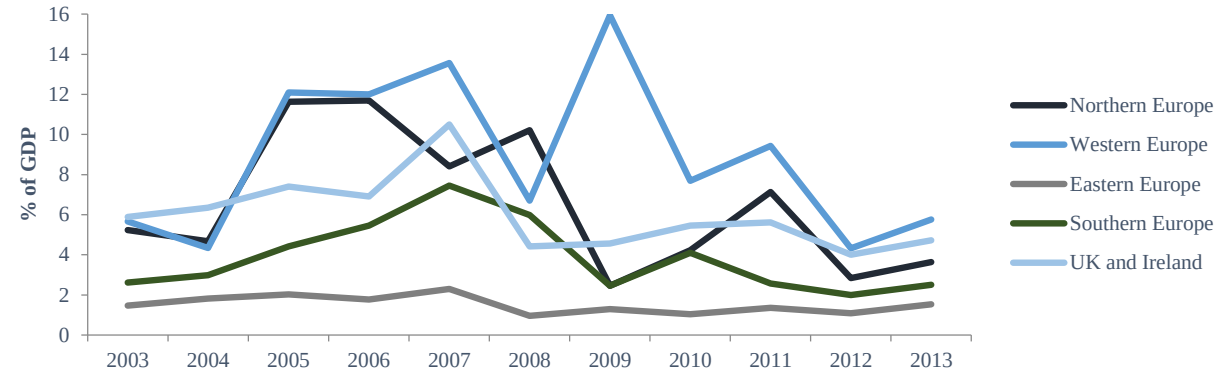
A syndicated loan is one that is provided by a group of lenders (usually banks and sometimes other financial companies or institutional investors). Syndicated loans have characteristics of both private and public debt and therefore are in between bank loans and bonds as a form of financing of non-financial firms. In Europe, this market is still dominated by banks, which makes it hard that pricing is driven by market forces. These agreements are typically revolving lines of credit that may serve multiple corporate purposes (i.e., working capital, investment, acquisitions). Unlike Europe, in the US there is a secondary market for syndicated loans. We study loan syndication in Europe in the next section.

Syndicated loans have a heterogeneous importance in European regions (exhibit 23). Western Europe is the area where this type of financing is more important, reaching 16% of GDP in 2009, followed by Northern Europe, UK and Ireland. In contrast, it has low occurrence in Eastern Europe. In the introduction to this section (exhibit 9), we have already compared syndicated loan markets in Europe and the US. Exhibit 24 shows that the majority of regions presented an increase in the amount raised through syndicated loans until 2007, after which the banking sector dramatically decreased loan granting. After 2012 the total amount of syndicated loans started to increase again, except for Western Europe, the UK, and Ireland, where a contraction is observed again in 2015.

Another characteristic of interest in this market is the loan maturity. Exhibit 25 shows the distribution of syndicated loan maturities in different years (up to 20 years). Maturities tend to be clustered around 3, 5, and 10 years. Other maturities such as 1, 2, 7, 8, and 15 years are also frequent. During the 2007-2009 financial crisis there was a shift toward lower maturities.

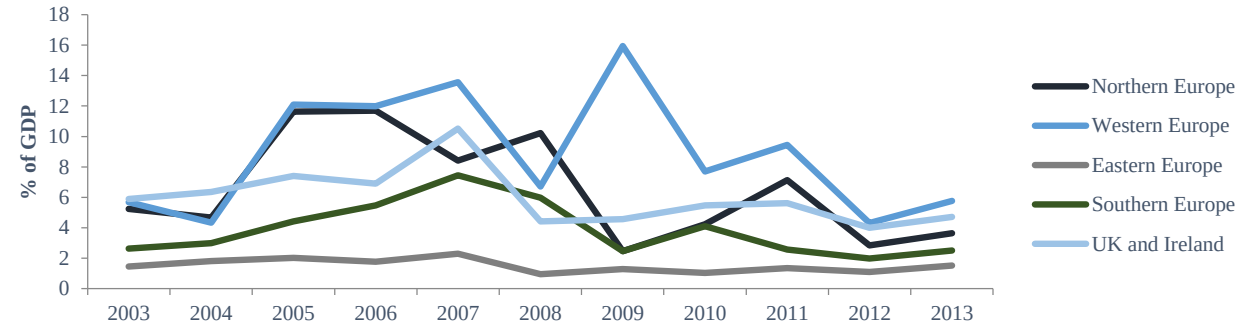
4. Banking sector outlook

Exhibit 23
Evolution of Syndicated Loan Issuance Volume, by groups of countries



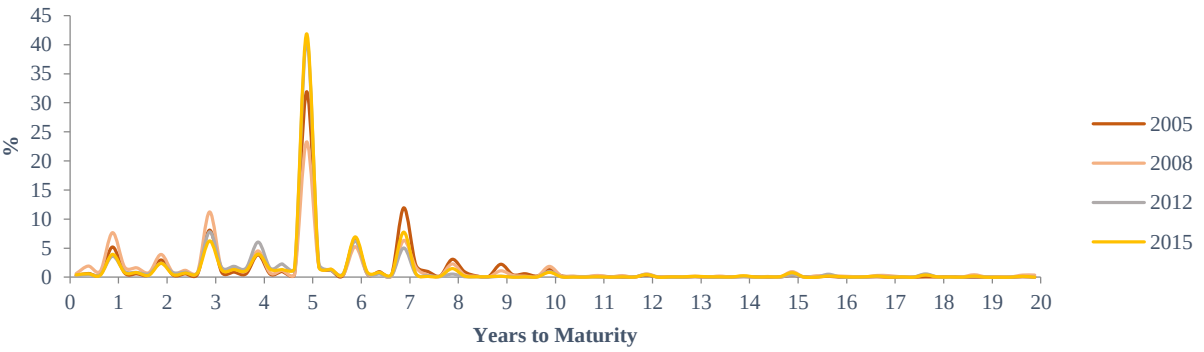
Source: World Bank Global Financial Development Database

Exhibit 24
Evolution of Syndicated Loans (average per group), by groups of countries



Source: Thomson ONE

Exhibit 25
Distribution of Syndicated Loans Maturities



Source: Thomson ONE

5. Capital markets sector outlook

Capital markets

The Capital Markets Union (CMU) in Europe is an ongoing long-term project developed by the European Union institutions. The goal is to further deepen market finance in Europe, making it easier for young firms and SMEs to access capital markets, as well as deepening markets for high quality securitisation. Removing barriers to cross-border investment should create a free movement of capital at the European level. The access to capital markets differs across EU member states and the investment chain needs to be strongly integrated in order to achieve efficiency both domestically and across borders. One of the most challenging obstacles is the regulatory framework that is deeply-rooted in historical and cultural differences of governance, law, and tax systems from different legal origins (US-English, French-Latin, German, and Scandinavian). In fact, research on the role of legal origin explains that the starting conditions of legal institutions determines the path of economic and financial development over time (La Porta et al., 1997)[5]. These studies suggest that capital markets are more developed in countries with a common law tradition in which stronger legal rules and enforcement better protect the rights of creditors and minority shareholders from expropriation from the management and controlling shareholders.

According to the World Bank Doing Business Report, the ranking of European member states shows important differences in terms of business information disclosure, conflicts of interest, corporate transparency, minority investor protection, tax rates, recovery rates, contract enforcement costs, strength of insolvency frameworks, and length of resolving insolvency. Interestingly, some member states with small capital markets rank fairly well with respect to some of the legal determinants that are favorable to capital market developments: Bulgaria, Cyprus and Slovenia are in the global top 20 with respect to the World Bank Protecting Minority Investor's Index, as are Lithuania and Latvia with respect to enforcing contracts index[6].

Looking at existing barriers to the free movement of capital integration process, the fragmentation of market infrastructures is particularly important. There are numerous market infrastructure providers offering services in the European market. According to ESMA, there are 104 regulated markets, 153 multilateral trading facilities, 16 authorized central counterparties, and 6 trade repositories. Another major issue is that on average cross-border trades are more expensive than domestic trades (Oxera, 2011). This happens because fund management companies may incur higher costs on identical services due to the fact that securities have to be registered using intermediaries domiciled in different member states. The existence of these differences in costs may arise from different factors: (i) cross-border barriers such as divergent securities holding laws; (ii) economies of scale and the ensuing variation in costs across jurisdictions; and (iii) variation in the exact type of service provided. Nonetheless, all these regulatory differences create legal uncertainty, overlapping or inconsistent legal requirements, cases of regulatory arbitrage, inefficiencies, and additional costs.

In recent years the European Commission has set the priority for the development of a single rule book. It is considered a great step toward the harmonization of the regulatory framework for capital markets. Still in progress, it aims to implement a large set of key reforms.

[5] North (1990)

[6] European Commission, "Action Plan on Building a Capital Markets Union, Commission Staff Working Document, Brussels, 30 september 2015

5. Capital markets sector outlook

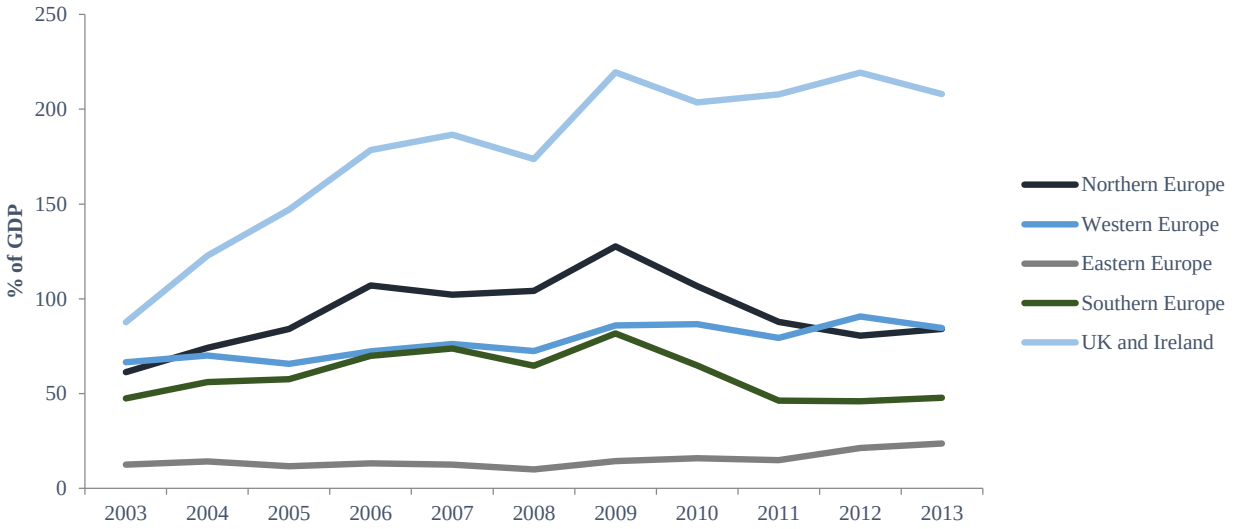
Despite these important differences in regulatory framework, firms in Europe find diverse sources of financing for their investments in capital markets. In the capital markets (bonds and equity), firms attract a broader spectrum of institutional investors and the general public. In this section we first analyze the European bond market. We will then analyze equity markets.

Bond market

Exhibit 9 compares the corporate bond issuance volume (as % of GDP) in Europe and the US. We find an overall upward trend in bond issuance in both regions over the sample period, although in the US it represents a much larger fraction of GDP. In the last two years bond issuance was around 4.5% to 5% of GDP in the US, the highest level in the period of analysis. In Europe it was substantially lower at 2.5% of GDP.

We start by looking at the importance of debt raised in capital markets in Europe. Exhibit 26 shows the (outstanding) gross portfolio debt liabilities (as % of GDP). Portfolio liabilities include bonds, debentures, notes, and money market or negotiable debt instruments. We observe that debt securities markets have a greater importance in the financing of the economy in UK and Ireland, at more than double the GDP from 2009 on. Bond markets are much less important in the remaining groups of countries, especially in Southern and Eastern countries.

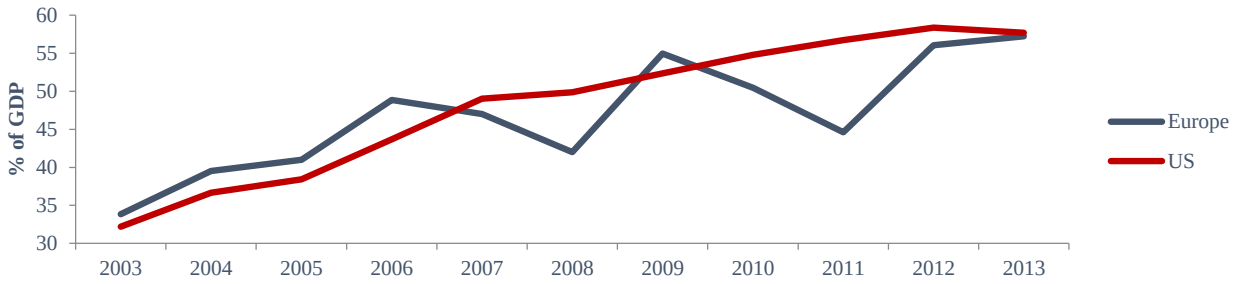
Exhibit 26
Evolution of Gross Portfolio Debt Liabilities, by groups of countries



Source: World Bank Global Financial Development Database

5. Capital markets sector outlook

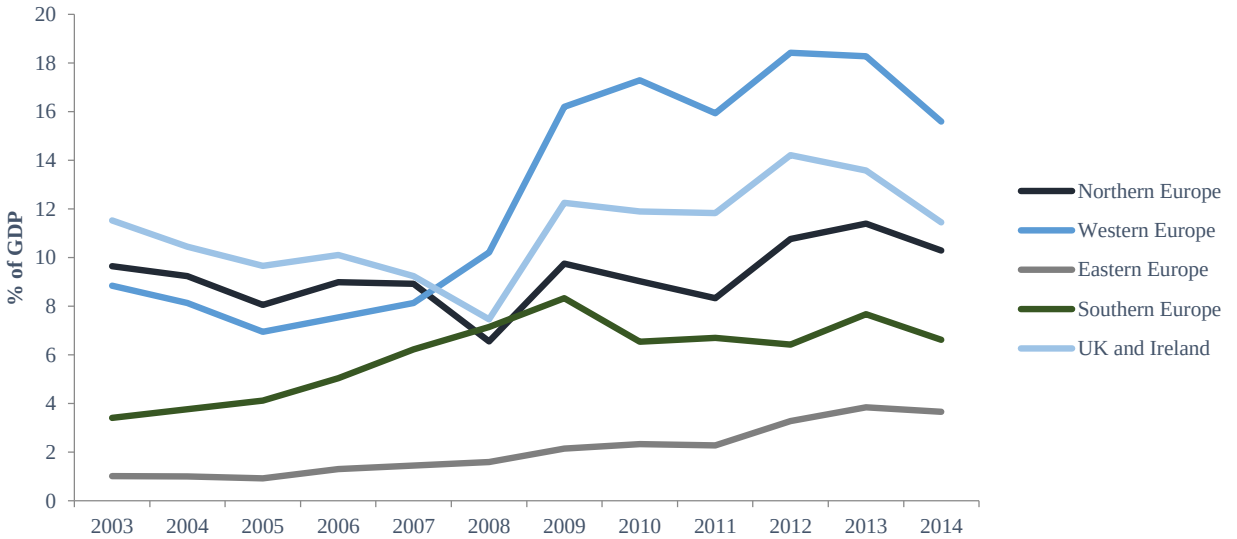
Exhibit 27
Evolution of Gross Portfolio Debt Liabilities, Europe vs US



Source: World Bank Global Financial Development Database

The findings are slightly different when we look at outstanding non-financial firms' bonds. Exhibit 28 shows the evolution of total bonds outstanding for non-financial firms as a percentage of GDP. It represents total debt securities issued in international and domestic markets. Bonds issued by non-financial corporations are particularly important in Western Europe, the UK, and Ireland and have been gaining importance in all regions, except UK and Ireland in the sample period. Bonds were an important resource for companies in Western Europe during the global financial crisis, although little evidence can be found in other regions. Comparing exhibits 26 and 27, we find that the bond market is probably too oriented for financial institutions and governments instead of non-financial firms.

Exhibit 28
Evolution of Total Bonds Outstanding (%GDP), by group of countries

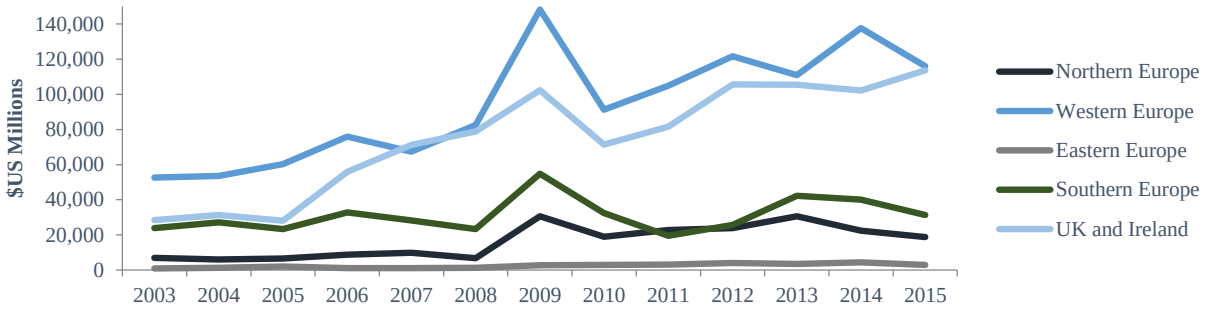


Source: Bank For International Settlements.
Note: We plot this graph for countries whose Central Banks report data to the BIS. These are Austria, Belgium, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Latvia, Lithuania, Luxembourg, Netherlands, Norway, Poland, Portugal, Russia, Slovakia, Slovenia, Spain, Sweden, Turkey, and United Kingdom.

5. Capital markets sector outlook

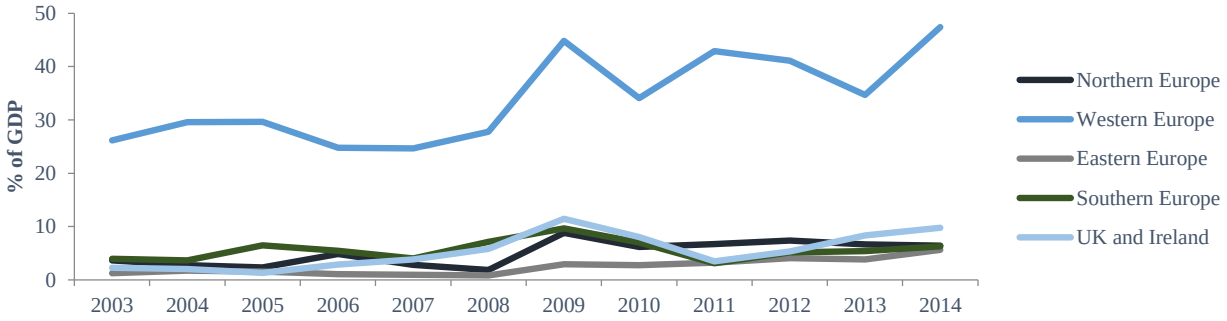
Bonds are usually seen as a substitute for bank loans when the latter are not available or are very costly, especially to the non-financial sector[7]. The net fraction of firms reporting a decrease in loan availability was 30%, a number that fell to 10% in the period 2010-13 (bank lending survey). In contrast, there is almost no change in the availability of debt securities financing. The evidence in Europe is consistent with this notion. Exhibit 29 shows the total amount of bonds (non-convertible) issued by non-financial firms by group of countries from 2003 to 2013. Exhibit 30 shows the corporate bond issuance volume as a percentage of GDP. During the period of financial crisis the shortage in bank lending forced firms to turn to capital markets. We observe a rise in corporate bonds issuance between 2008 and 2010 for all regions except Eastern Europe. This suggests that firms that relied on capital markets were buffered against the contraction in bank lending supply. In addition, this period triggered a positive trend in corporate bond issuance volume that lasted into the post-crisis period (in Northern Europe, Western Europe, UK and Ireland).

Exhibit 29
Evolution of Total Amount Raised Through Non-Convertible Bonds (average per group), by groups of countries



Source: Thomson ONE

Exhibit 30
Evolution of Corporate Non-Convertible Bond Issuance Volume in percentage of GDP, by groups of countries



Source: Thomson ONE

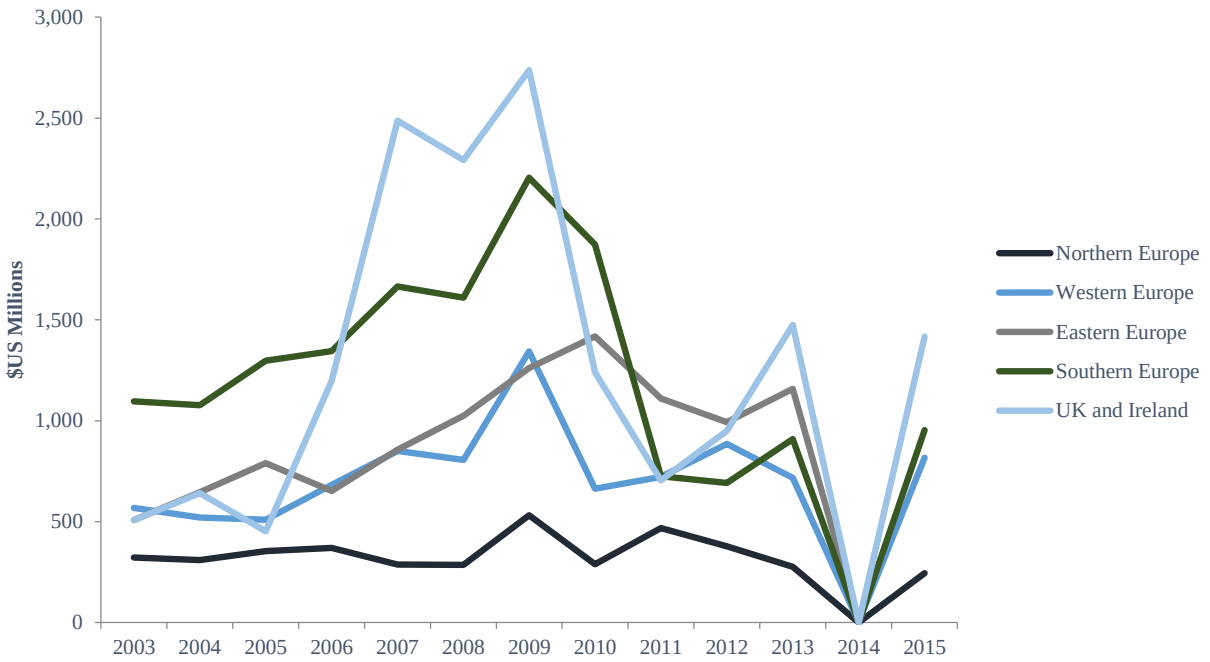
[7]Kashyap et al. (1996) find evidence that firms turn to the bond market to replace scarce bank loans. Becker and Ivashina (2014) show substitution from loans to bonds during tight monetary policy periods, high rate of non-performing loans, and low bank equity prices.

5. Capital markets sector outlook

Indeed, markets seem to be replacing banks as a source of financing, although mainly for large firms. The financial crisis triggered the vision of capital markets as an alternative to credit channels (Allen et al., 2012). Unfortunately, many firms have no access to bond and commercial paper markets, especially SMEs. This feature is not specific to Europe. Faulkender and Petersen (2006) show that the percentage of firms with access to bond markets is also small in the US, even among the public firms.

The amount raised per single issue by non-financial firms is highly volatile and heterogeneous across European regions (exhibit 31). Higher amount per issue is positively correlated with firm size. Southern Europe and UK and Ireland appear as the regions in which bond issues were higher until 2010, but facing a decrease then and retaking high levels in 2015. These countries exhibit evidence that only the biggest firms are able to raise debt financing from capital markets. The evidence is similar for Eastern Europe, as this region has very limited bond issuance volume. Under this perspective, Northern and Western Europe are the regions where lower amounts are raised per issue.

Exhibit 31
Evolution of Amount Raised per Bond Issue (average per group), by groups of countries



Source: Thomson ONE

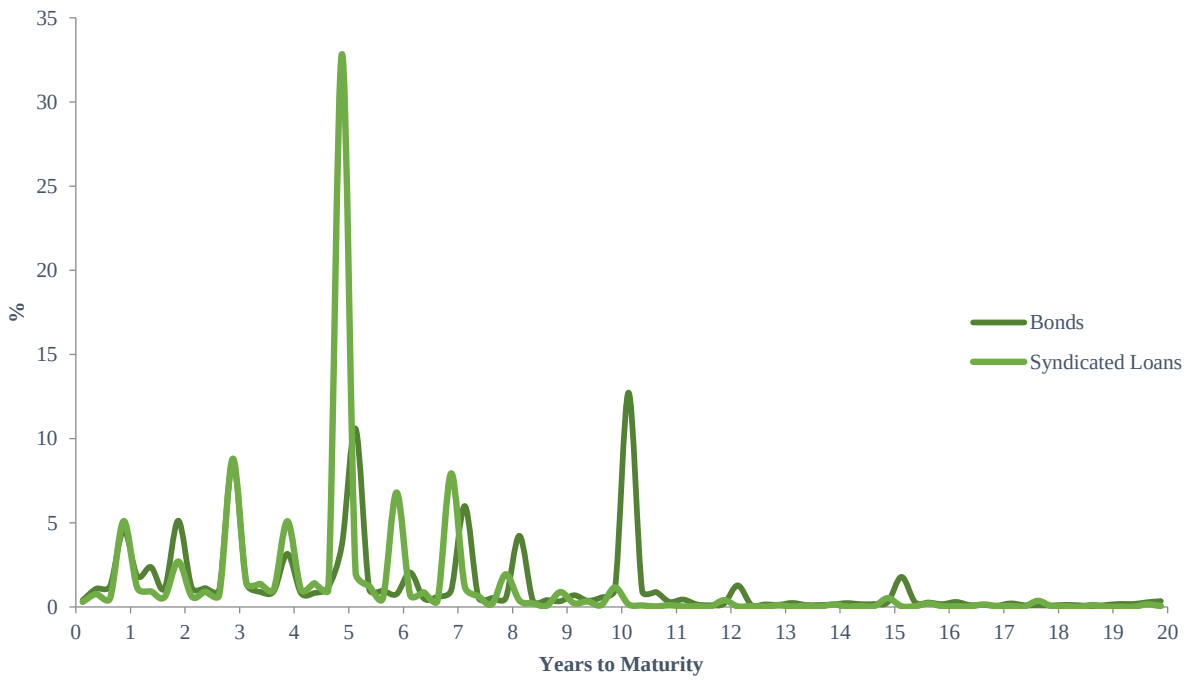
5. Capital markets sector outlook

Overall, the corporate bond issuance volume represents a small fraction of GDP in Europe, especially when compared with syndicated bank loans (exhibit 23).

These two sources of financing also differ in terms of maturities. In exhibit 32 we pool all bond issues and syndicated loans from 2003 to 2015 and plot the densities of the different maturities (we exclude maturities greater than 20 years). We observe bonds' maturity tends to cluster around 1, 2, 3, 5, 7, and 10 years. Around 13% of all bonds are issued with 10-year maturity. In turn, syndicated loans present lower maturities (33% at 5 years). Maturities differ not only due to investors' requirements, but also due to characteristics of each source of financing. Bond investors prefer longer maturities, as they can always trade their bond portfolio on the market. Syndicated loans in Europe are not easy to trade on the market and investors therefore have a preference for shorter maturities.

Exhibit 33 show bonds' maturity distribution for different years. Similarly to syndicated loans, bond maturity has diminished in the post-crisis period.

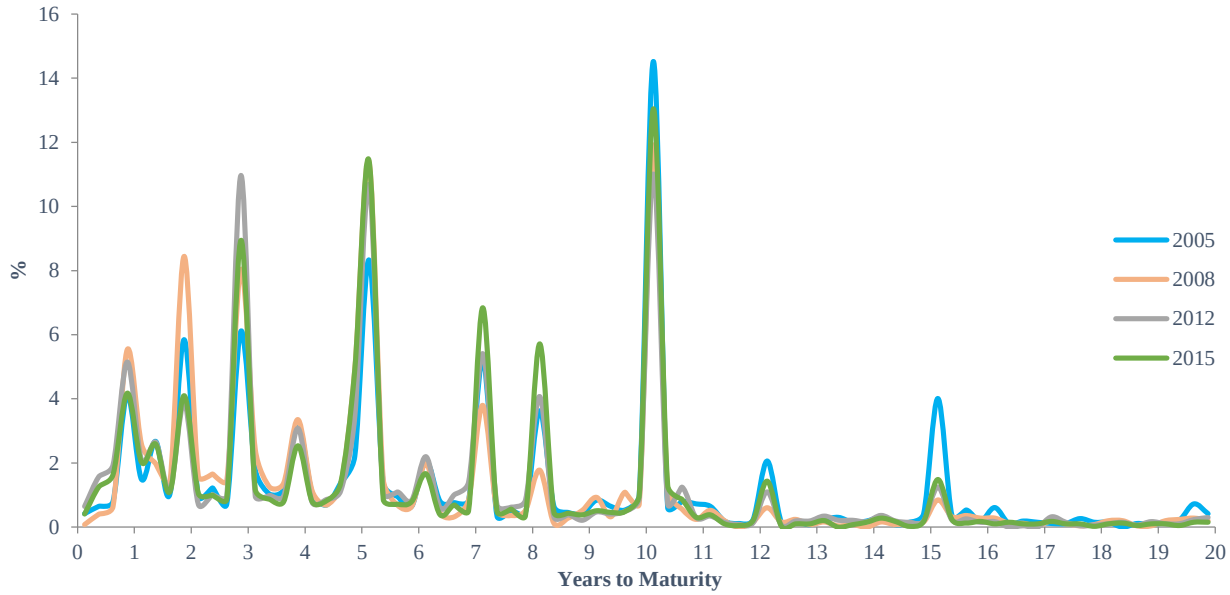
Exhibit 32
Distribution of Bonds and Syndicated Loans' Maturities



Source: Thomson ONE

5. Capital markets sector outlook

Exhibit 33
Distribution of Bonds' Maturities



Source: Thomson ONE

5. Capital markets sector outlook

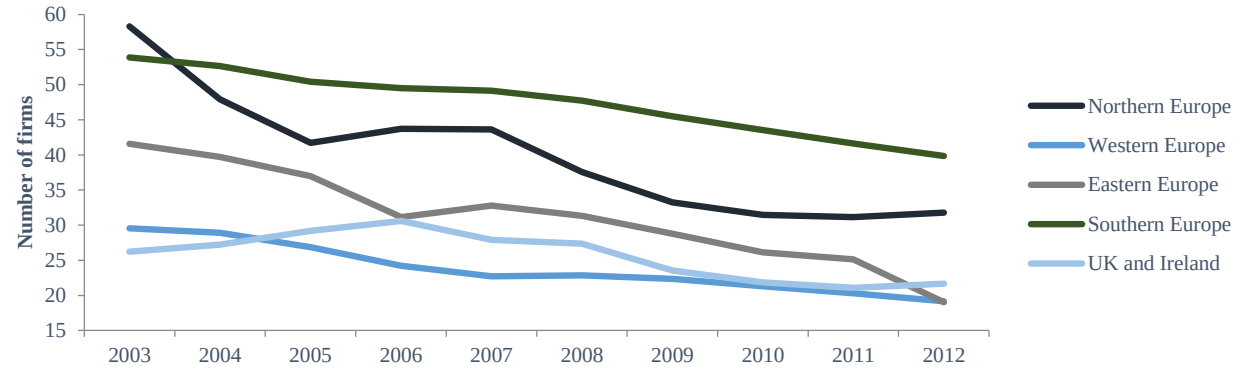
Equity market

The number of listed companies per capita has been decreasing in Europe since 2003. Exhibit 34 shows the number of listed companies per 1 million people. Southern and Northern Europe lead the ranking. Western Europe and UK and Ireland are at the bottom with around 20 to 33 listed companies per 1 million people. This pattern is in part reversed when we consider outstanding stock market capitalization (exhibit 35). Western Europe and UK and Ireland have an important position with stock market capitalization reaching 133% and 97% of GDP in 2007, respectively. Northern Europe also shows a high stock market capitalization as a percentage of GDP.

Regarding the concentration of stock market capitalization in the biggest firms, exhibit 36 shows the percentage of market capitalization excluding the 10 largest companies. There is not much heterogeneity in Europe. Actually the 10 largest companies hold in general between 60% to 70% of total market capitalization.

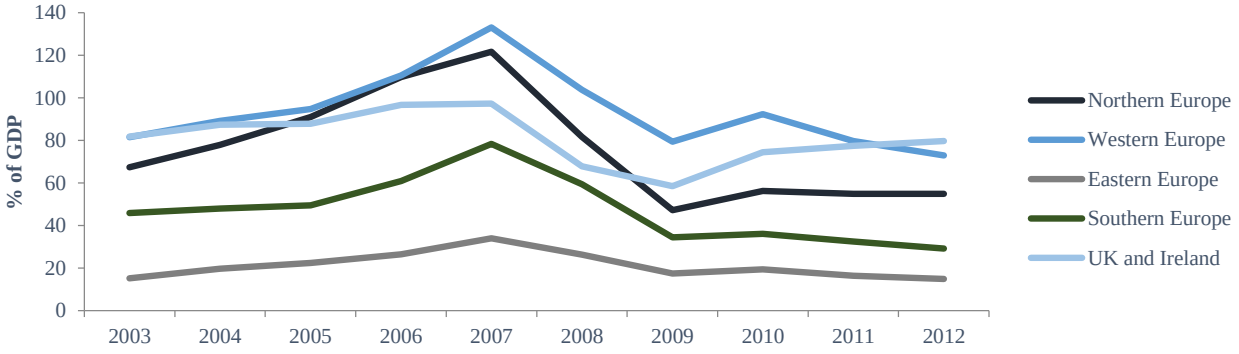
In the next section we describe public equity as a source of financing in Europe.

Exhibit 34
Evolution of Number of Companies Listed per 1 Million people, by groups of countries



Source: World Bank Global Financial Development Database

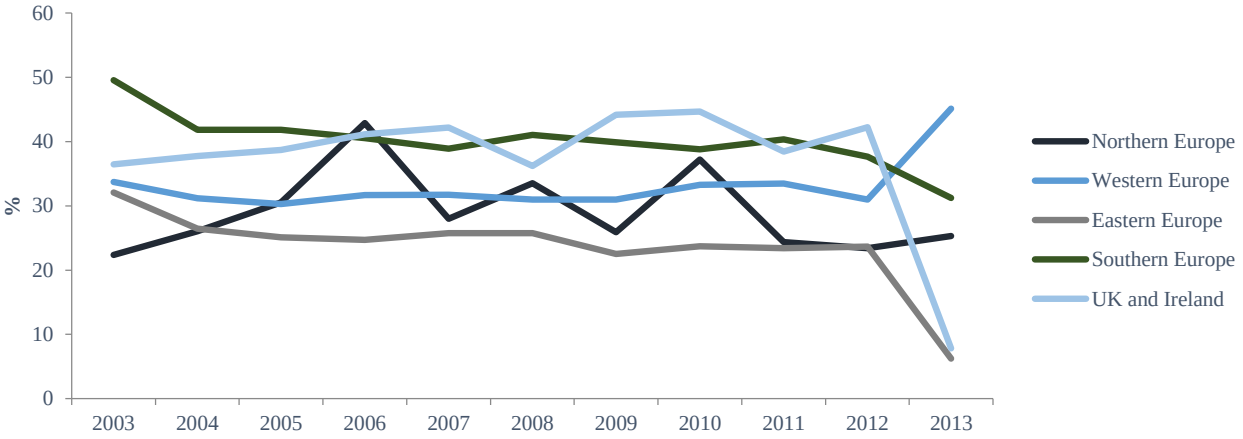
Exhibit 35
Evolution of Stock Market Capitalization, by groups of countries



Source: World Bank Global Financial Development Database

5. Capital markets sector outlook

Exhibit 36
Evolution of Market Capitalization excluding the 10 Largest companies to Total Market Capitalization, by groups of countries



Source: World Bank Global Financial Development Database

Equity as a financing alternative

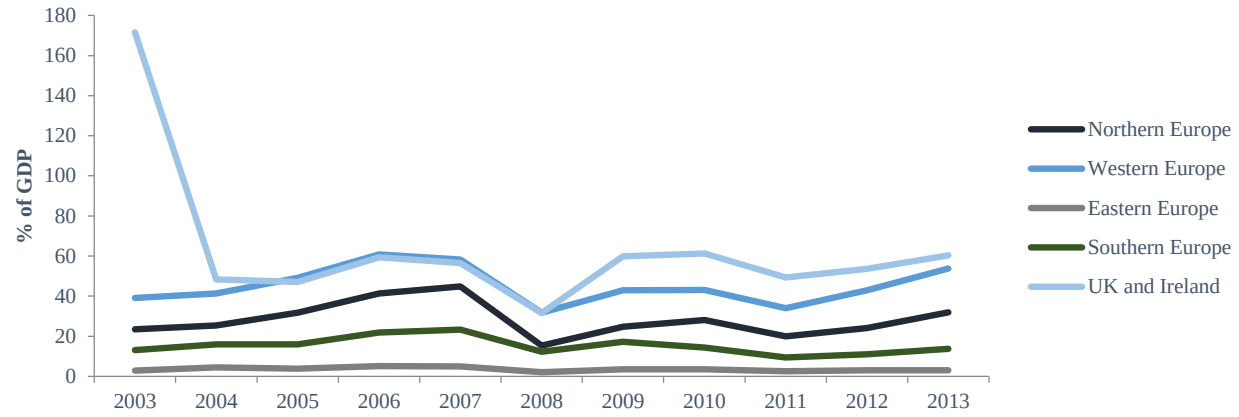
Exhibit 37 presents gross portfolio equity liabilities as a percentage of GDP. This figure directly compares with exhibits 15 (private credit by deposit money banks) and 26 (gross portfolio debt liabilities). Public equity is the least used source of financing in all regions over the period of analysis. This characteristic is shared by Europe and the US. Erel et al. (2011) show that US non-financial corporations tend to issue a volume ten times higher in bonds than in stock (SEOs), and the value is even higher in loans. Therefore, equity markets are unlikely to provide a substitute financing source for many firms, especially SMEs. Exhibit 38 shows the evolution of gross portfolio equity liabilities in Europe and the US.

After a sharp decline in gross portfolio equity liabilities during the 2008 crisis, it has converged to the pre-crisis values after 2011. This change may be due to the reduction of market price of equity securities. Between 2011 and 2013 there was an increasing trend in gross portfolio equity liabilities.

Similarly to the gross portfolio debt liabilities (exhibit 26), the Northern, Western Europe, UK and Ireland regions present higher ratios of equity securities over GDP. This leads us to conclude that in these regions the access to capital markets is easier than in Southern and Eastern Europe. These regions also seem to push the European trend of access to capital markets upward in the latter years, although the values remain much lower than in the US (exhibit 38). Exhibit 39 compares the volume of SEO and non-convertible bonds issuance by non-financial firms in Europe. The dominance of bond issuance is clear, as well as its positive trend in the period of analysis, while equity issuance (through SEO) has remained fairly stable.

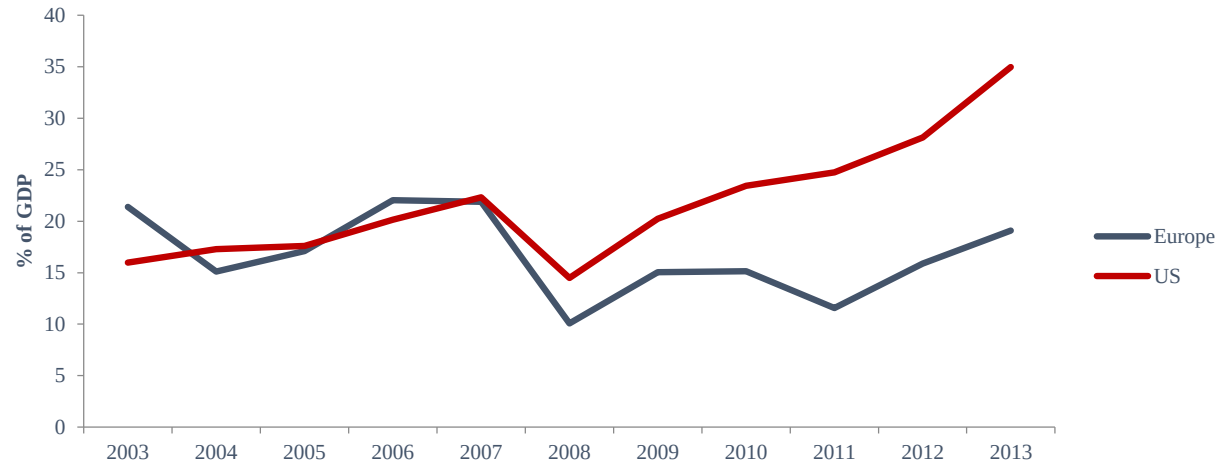
5. Capital markets sector outlook

Exhibit 37
Evolution of Gross Portfolio Equity Liabilities, by groups of countries



Source: World Bank Global Financial Development Database

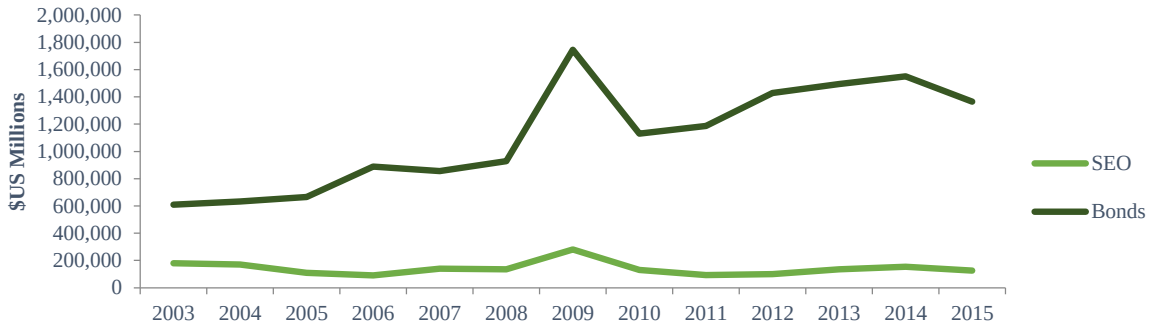
Exhibit 38
Evolution of Gross Portfolio Equity Liabilities, Europe vs US



Source: World Bank Global Financial Development Database

5. Capital markets sector outlook

Exhibit 39
Evolution of Capital Market Financing by non-financial Firms in Europe

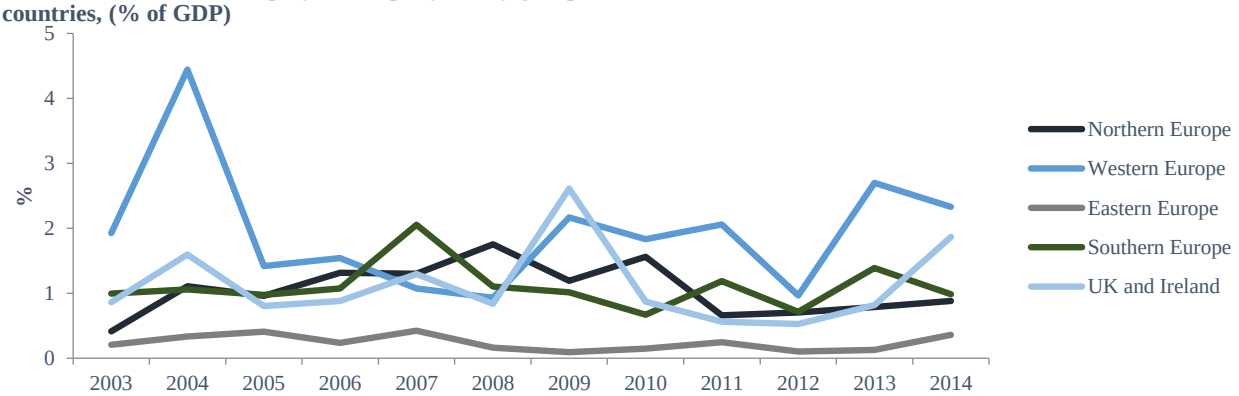


Source: Thomson ONE

Exhibit 40 shows the volume of equity issuance in percentage of GDP. Overall, excluding the peak in 2009, no group of countries presents a volume of equity issuance higher than 2.5% of GDP per year in this period. With the exception of Eastern Countries, all groups presented an increase in equity raised in 2008-2010, i.e. the period when loans became scarcer. In the latter years (2012-2014), equity started to gain importance again. In 2014, Western Europe and UK and Ireland were the regions with higher volume of equity raised over GDP.

Next we observe the total amount raised through equity issuance by non-financial firms by groups of countries (exhibit 41). We see a peak in 2009 as a consequence of the financial crisis. Unlike bank lending, capital markets did not shrink during the crisis. Thus, large firms have relied on debt and equity securities to overcome the bank credit crunch. Firms with access to bond and stock markets have apparently no shortage of long-term finance. For these firms, the development of corporate bond and equity market in Europe has reduced the dependence on bank loans and the degree of cyclicality of funding. Similarly to the bond market, there was an expansion in the post-crisis relative to the pre-crisis period in equity issuance.

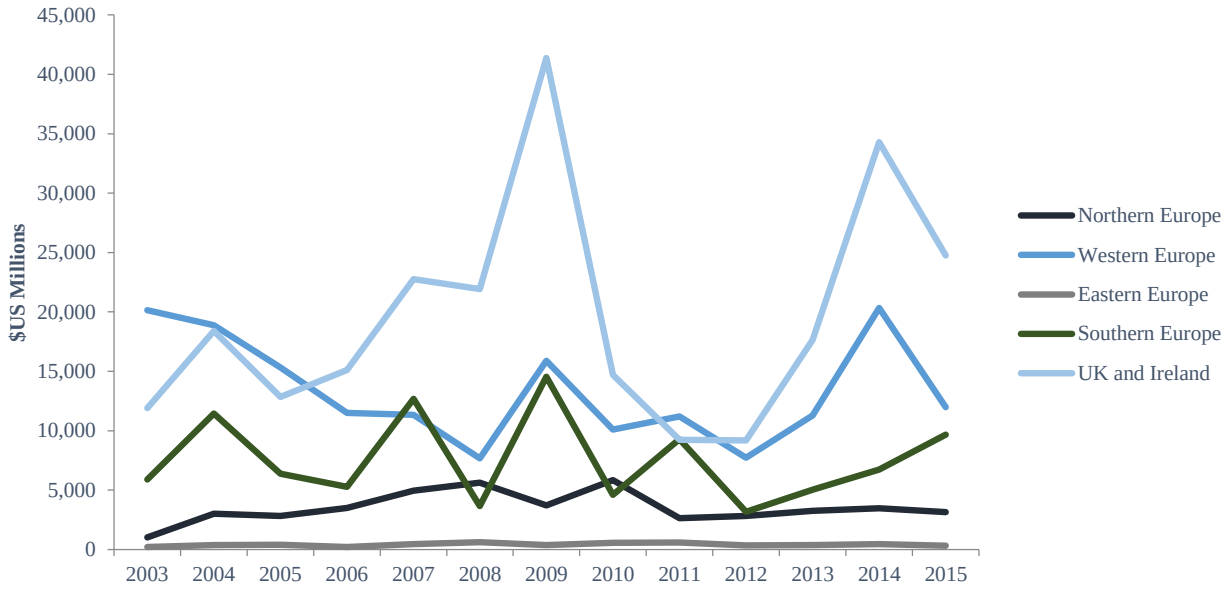
Exhibit 40
Evolution of Volume of Equity issued per year, by groups of countries, (% of GDP)



Source: Thomson ONE

5. Capital markets sector outlook

Exhibit 41
Evolution of Volume of Equity issued per year, by groups of countries, ($US Millions)

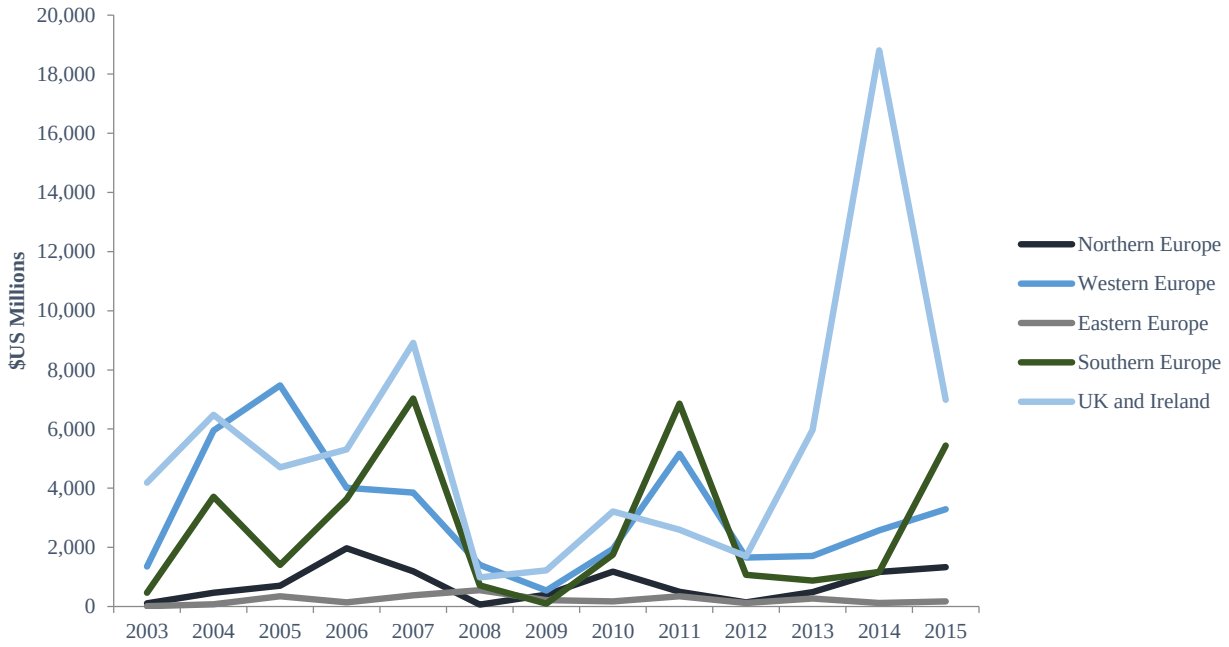


Source: Thomson ONE

An important question is whether the amount raised each year was due to initial public offerings (IPOs). Exhibit 42 shows the IPOs amount over total equity raised each year for different groups of countries. Although there is no clear pattern either in terms of regions or over time, the reduction of the IPO share on total equity issued (in all regions) indicates that companies might have avoided going public during the economic downturn. While IPOs have been depressed during the financial crisis, there was a rise in corporate bond and secondary equity issuance (by companies already listed on stock markets). Exhibit 43 shows the division of total equity issuance between IPOs and SEOs. We observe that IPOs fell during the financial crisis and they have still to rebound to the level before the crisis. In addition, the overall equity issuance increased considerably during the crisis, as in the case of bond issuance.

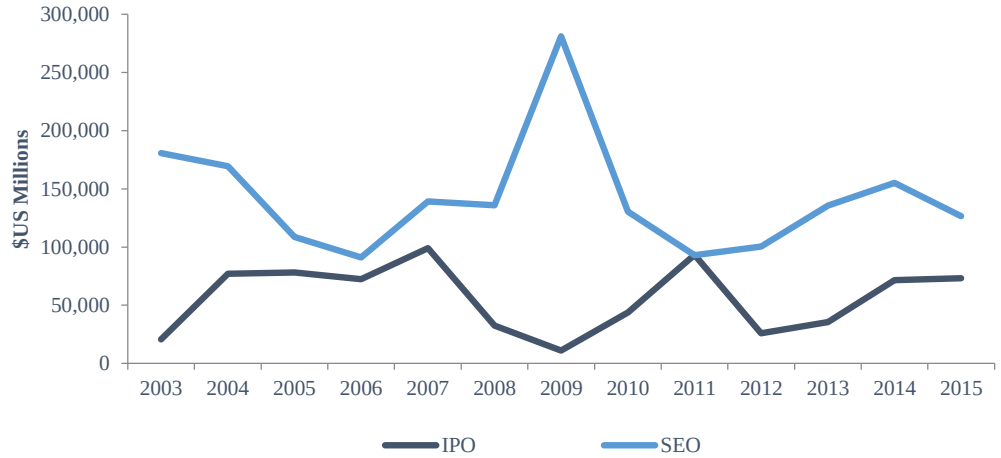
5. Capital markets sector outlook

Exhibit 42
Evolution of Total Amount of Equity raised through IPOs per year, by groups of countries



Source: Thomson ONE

Exhibit 43
Evolution of Equity Securities (division between IPO and SEOs)



Source: Thomson ONE

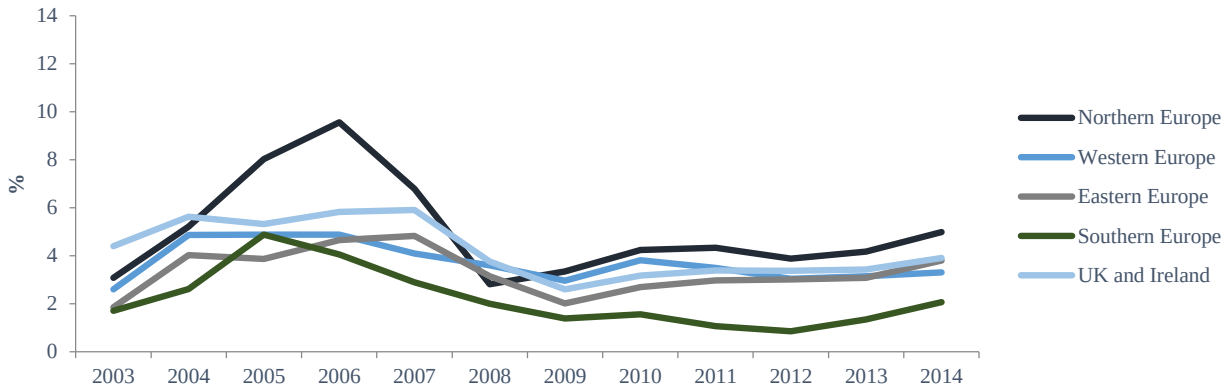
5. Capital markets sector outlook

European corporate sector outlook

SMEs represent a vast majority of the firms in the European corporate structure (i.e., number of firms, employment, gross value added). There is no evidence that these firms perform worse in terms of return on assets and sales turnover (exhibits 44 to 47). However, as we have revealed in this report, those firms suffer typically larger losses during economic downturns, as in the 2008 crisis. These firms have faced severe shortfalls in cash flows, hampering their capacity to meet existing financing obligations.

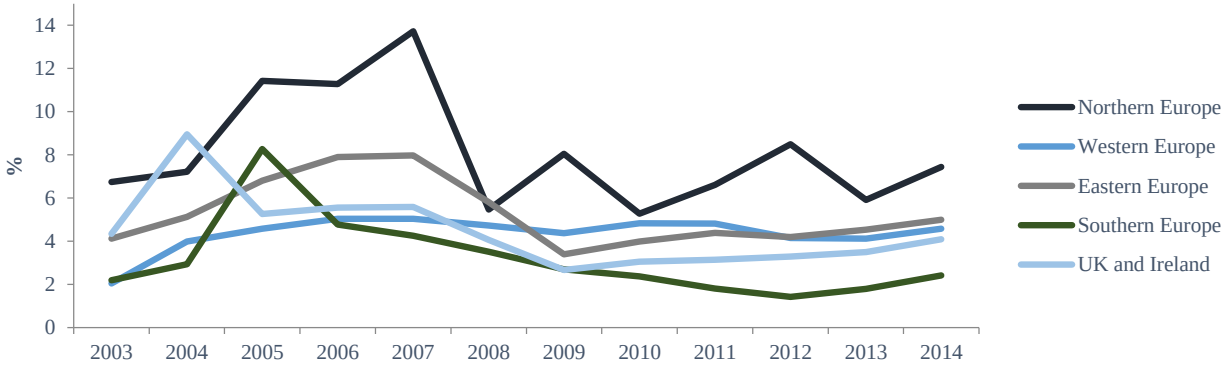
These results illustrate the necessity of a flexible financing framework for small and medium enterprises in Europe.

Exhibit 44
Evolution of Return on Assets (Non-SMEs), by group of countries



Source: Amadeus

Exhibit 45
Evolution of Return on Assets (SMEs), by group of countries



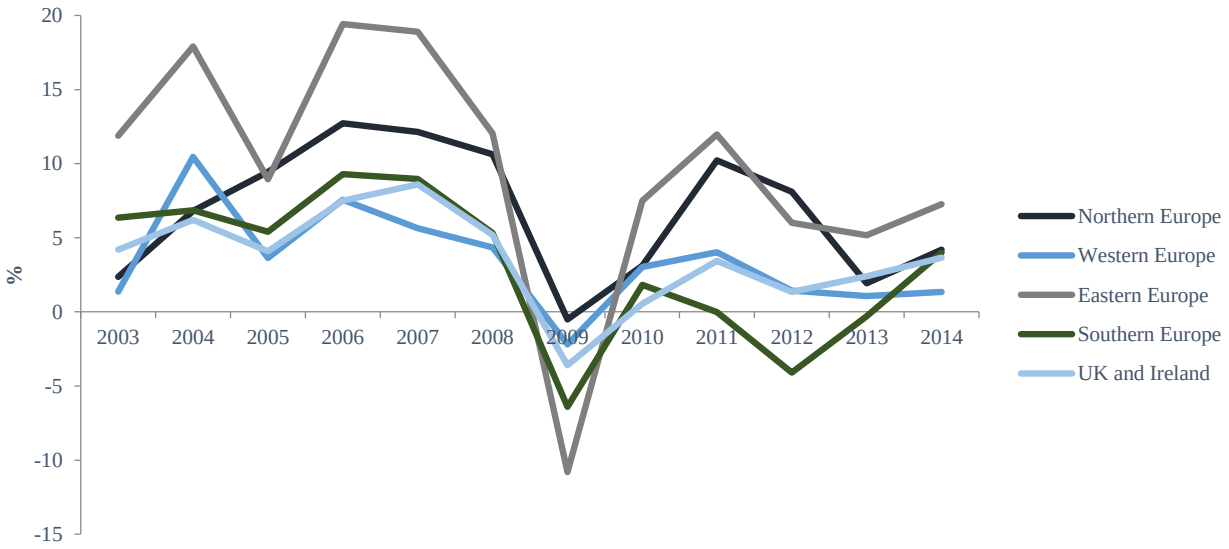
Source: Amadeus

5. Capital markets sector outlook

Exhibit 46
Evolution of Turnover (Non-SMEs), by group of countries

Source: Amadeus

Exhibit 47
Evolution of Turnover (SMEs)



Source: Amadeus

5. Capital markets sector outlook

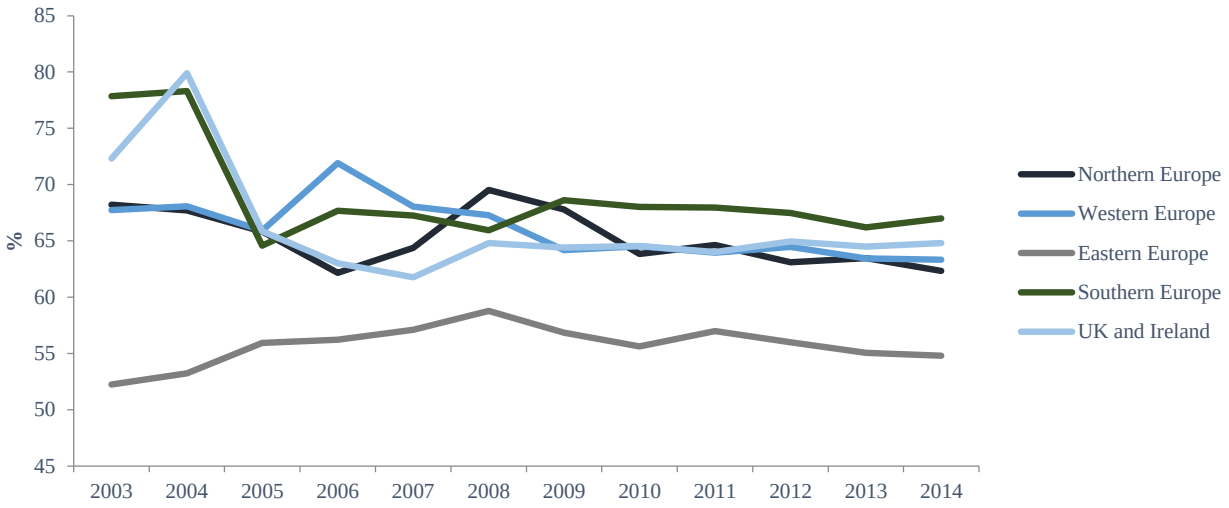
SMEs are particularly dependent on external finance and there are significant differences across European countries. This section analyzes the capital structure of firms. Exhibits 48 and 49 show that the typical debt-to-assets ratio (leverage) has been fairly constant in Europe, ranging from 45 to 85%. The dispersion is higher in SMEs than non-SME firms. Firms in Europe are highly leveraged, and their sustainability has improved only due to the low interest rate policy.

The disaggregation by groups of countries provides interesting insights. The composition of debt differs significantly across regions and the crisis has increased these differences. There is a clear distinction between countries where short-term debt dominates the liability structure (UK and Italy have the highest level of short-term debt for SMEs) and countries where companies rely to a greater extent on long-term debt (Germany especially, but also France and Spain). Italy is the country that combines a low level of equity and a high reliance on short-term debt.

Another important aspect of capital structure is the maturity of debt. Exhibits 50 and 51 plot the percentage of assets financed by long-term liabilities. UK and Ireland, and Eastern Countries are the regions where firms exhibit a lower percentage of long-term liabilities over total assets, consistent both for SME and non-SME firms. In the remaining regions, the typical firm has a share of long-term liabilities ranging from 5% to 25%. Although there are some changes regarding each group of countries, the range of variation is not substantially affected when the sample is restricted to SMEs.

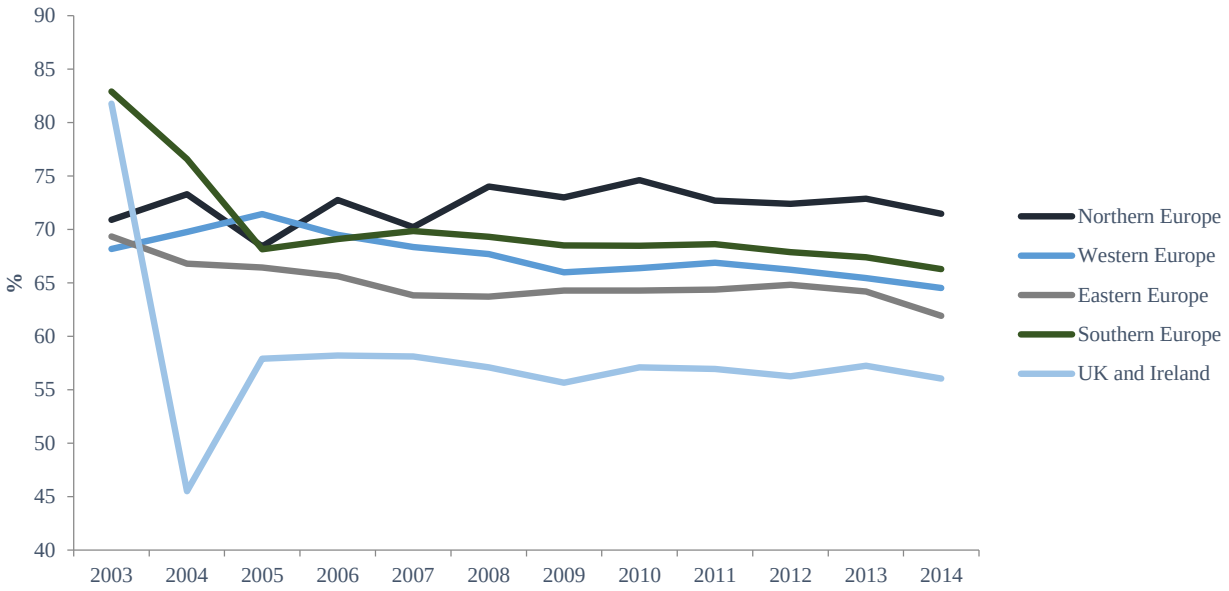
5. Capital markets sector outlook

Exhibit 48
Evolution of Leverage Ratio (Non-SMEs), by groups of countries



Source: Amadeus

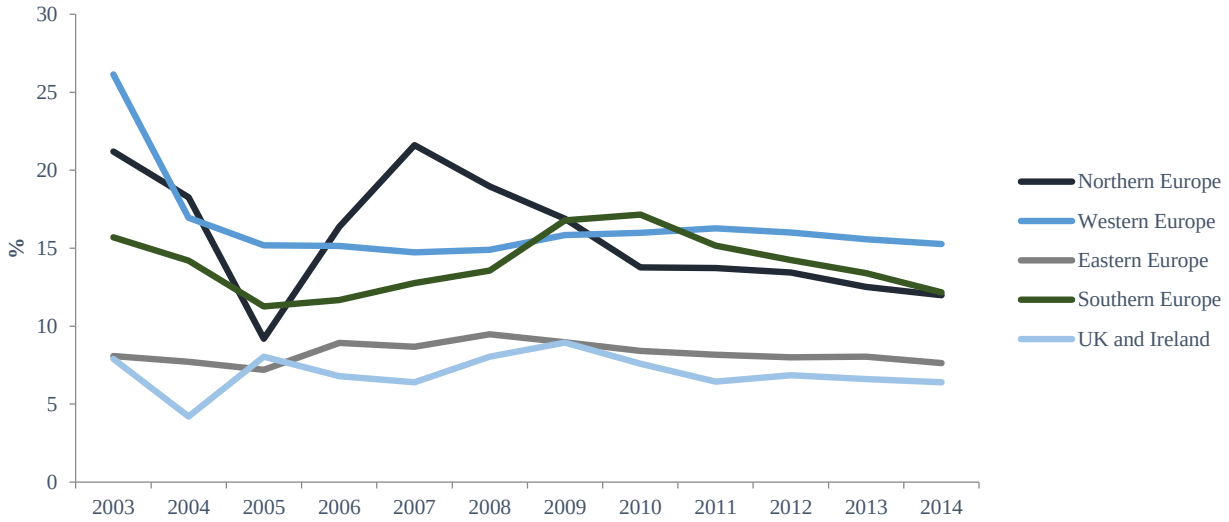
Exhibit 49
Evolution of Leverage Ratio (SMEs), by groups of countries



Source: Amadeus

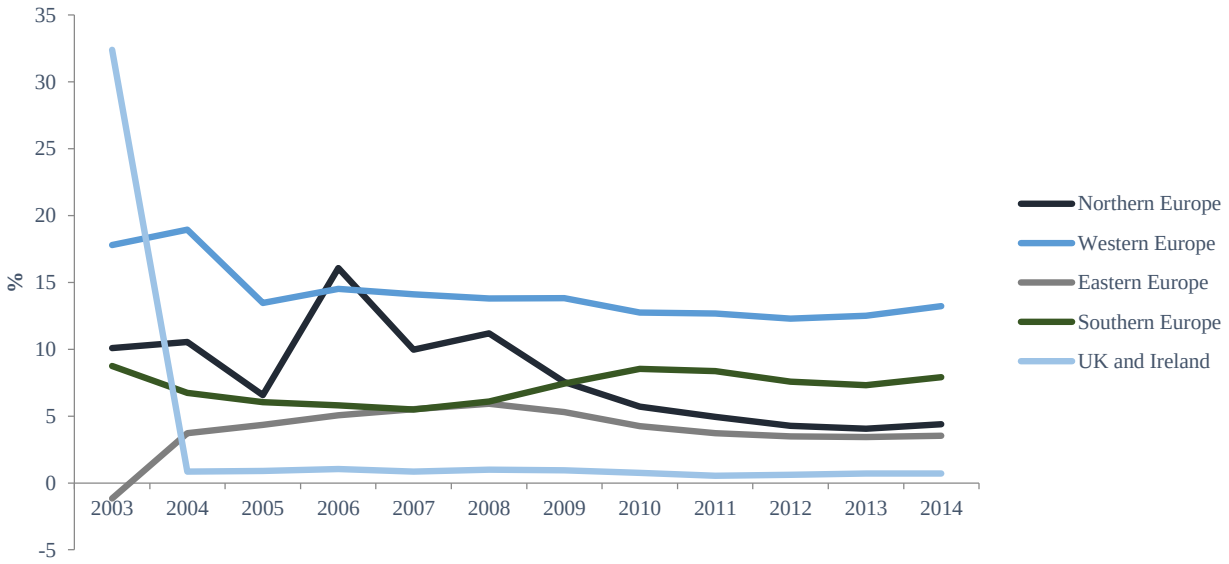
5. Capital markets sector outlook

Exhibit 50
Evolution of Long-term Liabilities over total assets (Non-SMEs), by groups of countries



Source: Amadeus

Exhibit 51
Evolution of Long-term over total assets (SMEs), by groups of countries



Source: Amadeus

6. Savings market structure

Financial portfolio households

This section characterizes the financial holdings of households. We report indicators of financial asset holdings such as bank accounts, mutual funds, insurance plans, and pension funds. Moreover, we examine the depth of access to financial tools, namely through the percentage of adults holding loans, credit, and debit cards and usage of electronic methods of payments. Some indicators are obtained through surveys, which limits the number of reporting countries.

Analysis for Northern and Western countries and UK and Ireland reveals that more than 90% of individuals hold personal current accounts, which slightly exceeds US figures (around 88%). The average is slightly lower for Southern countries (Italy and Greece pull the average down, while Cyprus, Portugal and Spain are aligned with other groups). Eastern countries present a substantially lower ratio of current accounts holdings (54% on average), but there is much heterogeneity. The trends, however, reveal that convergence has been occurring in these countries with respect to other European countries. The number of accounts per 1,000 adults has increased from 477 to 1,145 in 2013 (140% increase). There is evidence that the number of bank accounts per 1,000 adults evolved at a slower pace in other areas (for instance for Northern countries in the same period the increase was 68%).

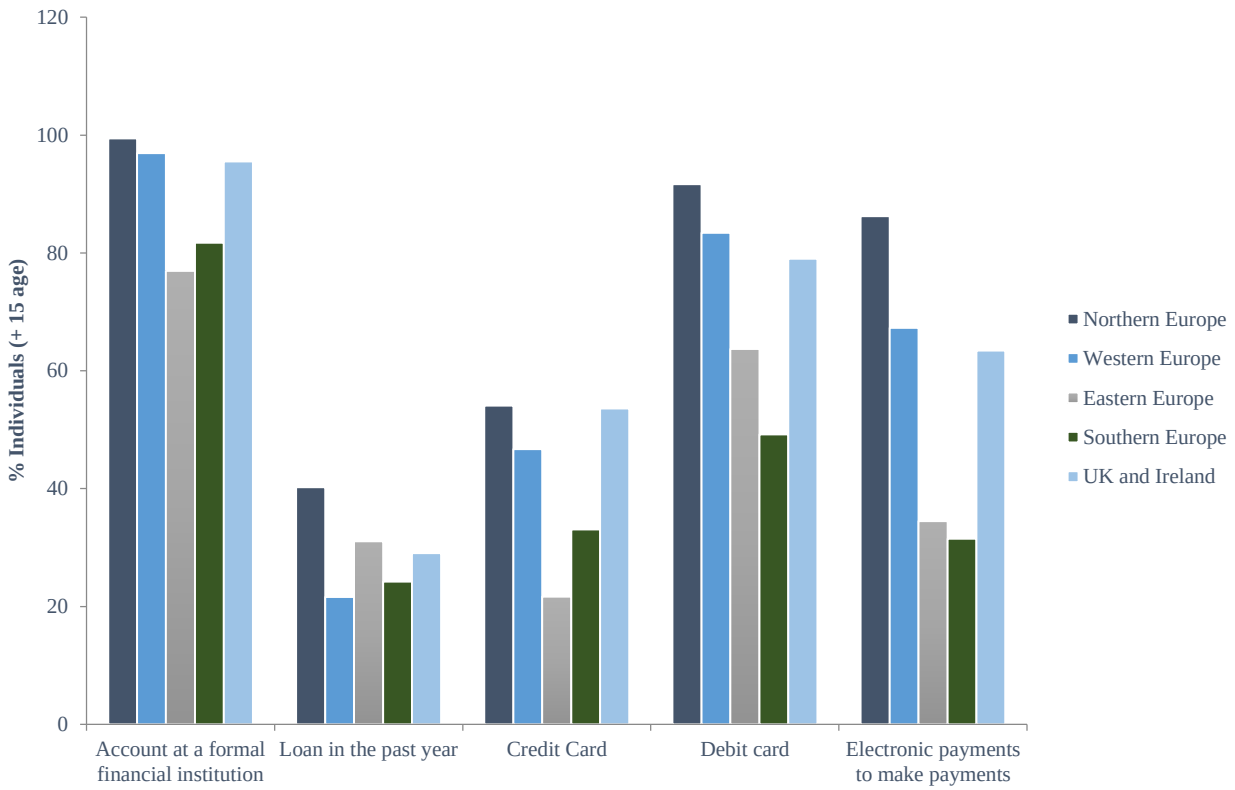
Looking at the percentage of adults with loans, all groups of countries present averages below the US average (45%). The cross-section of countries reveals that the extensive margin of loans among individuals is consistently smaller for almost all groups (Northern, Southern, Western countries, and UK and Ireland). The exception is the Eastern area, where some countries exhibit high prevalence of adults with loans (unreported).

As expected, debit cards prevail over credit cards in all countries and the correlation between the two is higher when comparing utilization rates across regions. Regarding debit cards, Northern and Western countries and UK and Ireland have utilization rates of 80%, Southern countries are at about 50% and Eastern Europe at 40%. The US average is 72%. Some countries, especially from Eastern Europe (Albania, Armenia, Azerbaijan, Georgia, Moldova, Montenegro, and Romania), have utilization rates below 30%, which perhaps indicates a handicapped development of the financial industry, as this is considered a basic means of payment. Turning attention to credit cards, the utilization rates decrease consistently to levels lower than in the US (62%).

6. Savings market structure

Electronic payments are being increasingly used in modern and advanced societies. Unlike the previously discussed means of payment (credit and debit cards), electronic payments move a step further in depth of financial market development as they require greater sophistication of users with respect to modern technologies and stronger confidence in information systems. In accordance with previous results, Northern and Western Countries, as well as UK and Ireland, lead in the utilization rate of electronic payments (almost 90%, and around 60% respectively). The majority of these countries present an even higher prevalence than the US. The remaining two groups of countries are substantially less developed in terms of this means of payment.

Exhibit 52
Household financial indicators (2011), by group of countries



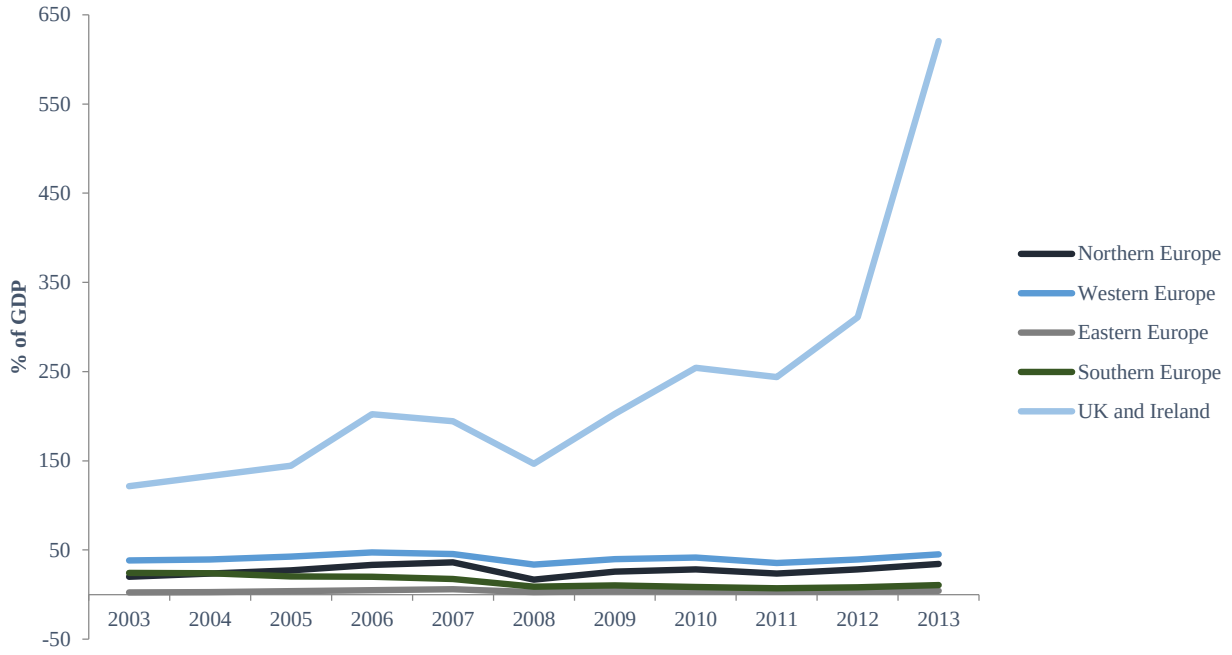
Source: World Bank Global Financial Development Database

6. Savings market structure

Assets of mutual funds, pension funds and insurance companies

Mutual funds are analyzed in this section, as a large majority are held by private investors, namely individuals. These assets represent a modest fraction of GDP for Eastern, Southern, and Northern countries. The average for Western Europe is slightly higher but still below 50% of GDP (exhibit 53). While for most regions this ratio has been stable over tine, the UK and Ireland have an increasing trend and much higher level of investment in mutual funds (311% of GDP on average over the sample period). Overall, investment in mutual funds weights differently in different domestic economies ranging from countries where it is almost non-existent (the majority of eastern countries) to Ireland. In addition, it is worth analyzing the peak of the crisis. In 2008, the investment in mutual funds fell by 50 percentage points relative to 2007. Given that GDP shrank substantially in this period, there was a massive contraction in mutual funds' total amount at that time.

Exhibit 53
Evolution of Mutual Fund Assets, by group of countries

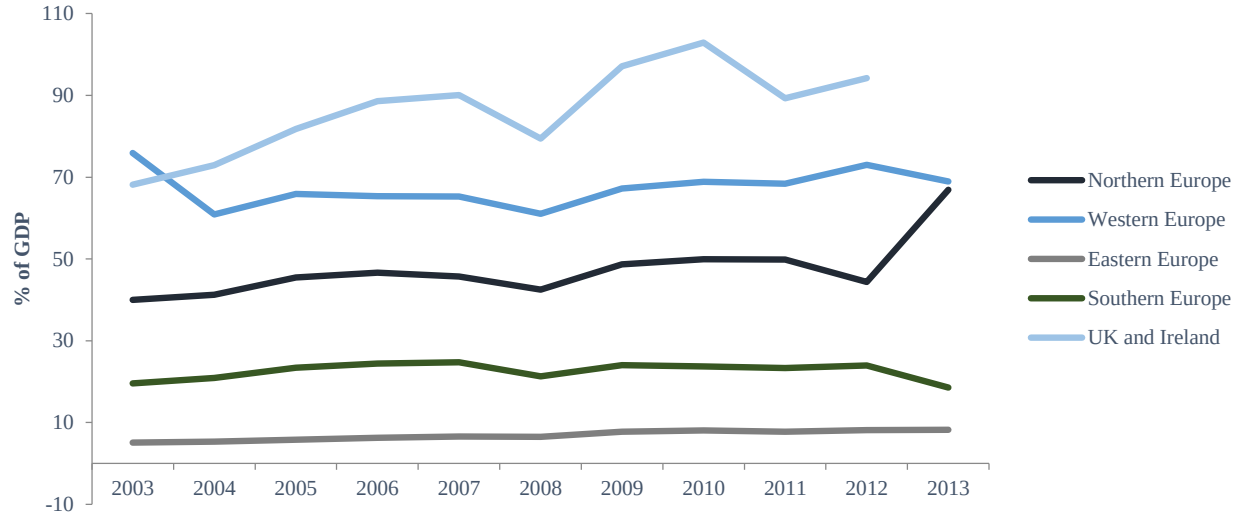


Source: World Bank Global Financial Development Database

With respect to insurance company assets, UK and Ireland dominate and show a slightly positive trend over the period (exhibit 54). The time series are stable for the remaining four groups of countries. Again there is a low weight of this type of asset in GDP for Eastern, Southern, and Northern countries. The decrease in insurance company assets was less than that of the mutual fund industry.

6. Savings market structure

Exhibit 54
Evolution of Insurance company assets, by group of countries

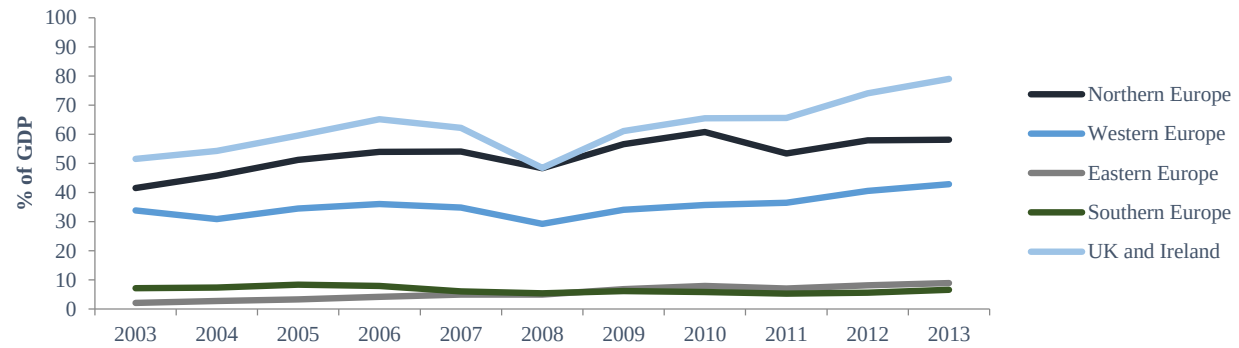


Source: World Bank Global Financial Development Database

The share of pension fund assets over GDP is heterogeneous across Europe (exhibit 55). They are insignificant for the large majority of Eastern and Southern countries; the same for many of the Northern and Western countries, although there are some exceptions (Denmark, Finland, Iceland, Netherlands, and Switzerland) that contribute to increase the average. UK and Ireland have the highest share of pension fund assets over GDP (74% in 2012).

Overall, Northern, Western countries, and UK and Ireland present a greater financial depth. This is seen not only in the engagement of individuals with more sophisticated means of payment, but also in the investment in alternative financial assets. While some positive trends point toward financial development, some countries are still at an early stage of that development, especially Eastern countries.

Exhibit 55
Evolution of Pension Fund Assets, by group of countries



Source: World Bank Global Financial Development Database

7. Future trends

The most common source of external finance for European SMEs is bank lending, making startups reliant on traditional bank debt to meet working capital and investment needs. This may impair the ability of SMEs to grow, as they are innovative and fast growing firms with a high risk-return profile.

While bank debt will continue to be crucial for the non-financial sector, improving access to finance for all types of business across Europe, in particular SMEs, is crucial. Diversification of the available financing sources is necessary in order to enable firms in Europe to grow and emerge, as well as to be innovative and competitive. The process toward the establishment of a single market for capital in Europe can make an important contribution to address this challenge successfully.

New forms of alternative finance, which are rapidly growing in Europe, such as business angels, crowd-funding, venture capital, and private equity are an essential part of the needed development of non-bank financing alternatives. Compared to the US market, these sources are still underdeveloped in Europe. Exhibit 56 summarizes the alternative sources of financing for SMEs, as formally defined by OECD. Next we characterize and provide data on the most important ones.

Exhibit 56
Alternative non-bank finance instruments for SMEs

Low Risk/ Return	Low Risk/ Return	Medium Risk/ Return	High Risk/ Return
Asset-Based Finance	**Alternative Debt**	**"Hybrid" Instruments**	**Private Equity**
Asset-based lending	Corporate Bonds	Subordinated Loans/Bonds	Venture Capital
Factoring	Securitised Debt	Silent Participations	Business Angels
Purchase order finance	Covered Bonds	Participating Loans	Specialized Platforms for Public Listing of SMEs
Warehouse receipts	Private Placements	Profit Participation Rights	Crowdfunding (equity)
Leasing	Crowdfunding (debt)	Convertible Bonds	
		Bonds with Warrants	
		Mezzanine Finance	

Source: OECD Report – "New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments."

Crowdfunding[8] is a nascent market in Europe, particularly since 2000, and its users are changing. It has been mostly used as an instrument by non-monetary and community organizations, but most frequently and over time has become an alternative source of funding across many sectors. The advantages of this source is that it serves finance specific projects rather than a firm and raises external finance from a large investor pool rather than a small group of investors.

The rate of increase of funds raised globally has increased dramatically from US$ 1.5 billion in 2011 to an estimated US$ 5.1 billion in 2013. In addition, it is estimated that there were 536 active platforms worldwide as of 2013, an increase of 23.5% with respect to 2011. The average amount of funds raised per project increased from €215,000 in 2013 to €260,00 in 2014 (for equity crowdfunding), consolidating crowdfunding as a new source of finance.

[8]By definition crowdfunding gathers funds from a wide range of contributors who want to invest directly in a specific project, and from all forms possible (loans, equity, donations, and rewards), loans are the most widely distributed instrument, representing more than 10 times the volume of equity investments channelled through these platforms in 2014. Source: OECD Report – "New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments."

7. Future trends

North America and Europe, are the markets where crowdfunding is most common. These regions accounted respectively for 59% and 35% of the capital raised worldwide in 2012. Between 2012 and 2013, North American crowdfunding volumes grew by 105% to US$ 1.6 billion, whereas in Europe crowdfunding volumes grew by 65%, reaching US$ 945 million. In the rest of the world, growth was even more pronounced with a 125% average annual growth rate.

Between the US and Europe there is a different context regarding the type of crowdfunding raised. This is a consequence of the different regulatory frameworks in place. While in the US equity crowdfunding has been delayed by regulatory limitations, so that in most cases it takes the form of donation or reward-based crowdfunding, in most European countries, equity-based platforms have been in operation for some years. The size of equity crowdfunding in Europe was estimated to be between €50 to €100 million in 2013, still a minor share of the market if compared, for instance, with the €26 billion of the IPO market (OECD, 2014).

In terms of worldwide distribution of different categories of crowdfunding, donations and reward-based crowdfunding are the most widespread. The second largest category is debt crowdfunding, which exhibits a higher rate of expansion. Equity crowdfunding still accounts for a minor share of the market, growing at a relatively moderate pace, as shown in the table below.

Exhibit 57
Crowdfunding categories: worldwide amounts and growth rates, 2013

Crowdfunding Category	Amount (US$ million)	Annual Growth (%)
Donation and Reward Crowdfunding	1,400	85%
Debt Crowdfunding	1,200	111%
Equity Crowdfunding	116	30%

Source: OECD Report – "New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments."

While the new wave of fast growth businesses and startups emerges and the pace of technology enables the rapid demand of crowdfunding, the regulatory environment has limited its expansion and in fact has not evolved at the same pace. Regulators in some OECD countries have sought to promote the development of this source of financing, but important concerns about transparency and protection of investors still need to be addressed. Some European member states have already taken significant steps toward a clearer framework for the industry. Italy was the first country to adopt an *ad hoc* regulation on equity crowdfunding, which came into effect in July 2013 and allows innovative startups to raise equity through crowdfunding platforms. Equity crowdfunding is also allowed in other countries, such as the UK, whereas in the US, regulation is framed in terms of exemption to the general rule that forbids offering securities to the general public. In France, in 2013 some first steps were taken by the government and regulators to develop a more favorable regulatory framework for crowdfunding, while ensuring investors' protection.

7. Future trends

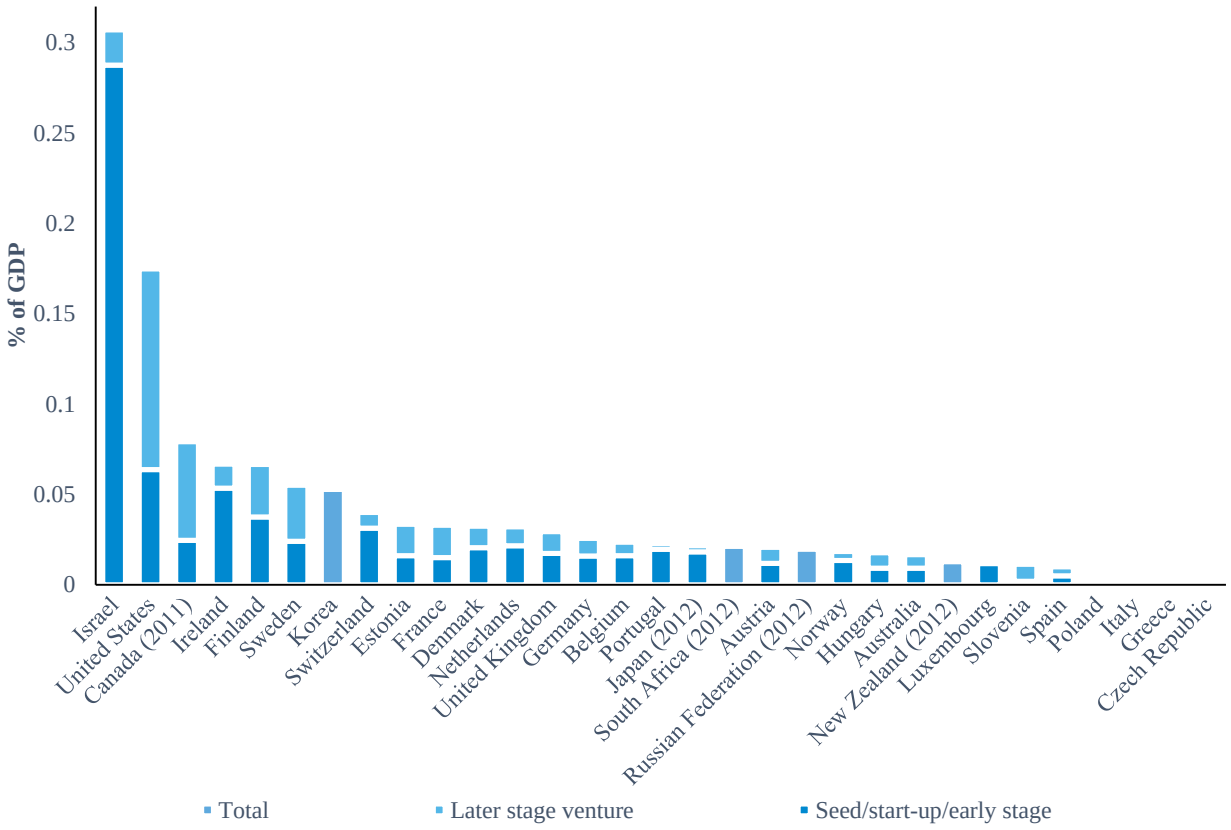
Firms looking for long-term corporate investment to sustain value creation, growth, and innovation, should typically consider **equity finance**. However, for SMEs raising equity capital may be much more expensive than raising debt finance. The main categories of equity finance are private equity and public equity. There also exist informal sources of equity finance, which include family and friends. Indeed, for startup companies, the amount of funds raised through these informal channels generally exceeds other venture finance, including in countries with a well-developed equity capital market, such as the US (Mac and Bhaird, 2010). In Europe, since 2001 returns in the private equity segment have outperformed those in public equity markets by 9.4%. The 2007-2009 financial crisis further widened the gap return between these markets (Idinvest, 2014). Private equity is divided into two distinct components, namely venture capital, targeted at new and early stage companies, and other private equity, such as growth capital and buyouts, targeted at mature businesses.

This is an instrument relevant for businesses with a high risk-return profile such as high growth or innovative firms. Over the last decades this source has developed considerably. The European private equity funds, in 2014, had a total of €550 billion of assets under management. Most private equity investments were raised in UK followed by France and Sweden. In terms of the type of private equity investors, over one third came from institutional investors (pension funds, investment funds and insurance companies). This has partly offset the recent stagnation in public equity markets. In private equity markets, the prevalent form of investment is buyout. In recent years as investors search for yield and portfolio diversification, interest in upper-tier SMEs has increased.

Venture capital (VC) as a subset of private equity is typically used by firms in a startup stage. Across OECD and non-OECD countries, VC represents a small fraction of GDP, most often less than 0.05%. The countries in which this industry is relatively more developed are Israel (0.31%), the US (0.17%) and Canada (0.08%). Ireland, Finland and Sweden are immediately follow these countries. About 90% of EU VC investments are located in eight countries (UK, Ireland, France, Belgium, Luxemburg, Netherlands, Denmark, and Austria) so it is not a broadly used instrument.

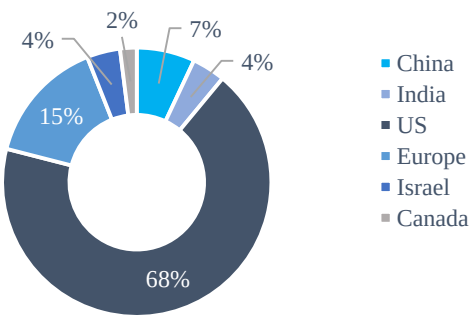
7. Future trends

Exhibit 58
Venture capital investments as a percentage of GDP (2013)



The VC market in the US is the largest one worldwide, where 68% of global VC activity took place in 2013, as shown in exhibit 59. Between 1995 and 2010 VC investments in the US were, on average, three times the size of investments in Europe. However, the number of VC deals in Europe is higher than in the US. This indicates that European venture capitalists disperse funds more broadly through smaller deals (OECD, 2013).

Exhibit 59
Annual VC investments, main global markets, 2013 (USD billion, %)



Source: OECD Report – "New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments."

7. Future trends

The global financial crisis profoundly affected the VC industry. The level of VC investment was still below the pre-crisis level in most countries in 2013. This is in line with the downward trend observed in equity markets, despite the increasing interest in alternative instruments by investors in search of opportunities to diversify their portfolio and for higher yields. Although the assets under management of the private equity funds experienced a dramatic surge in the pre-crisis period, the sector has stagnated since 2008 and did not offset the decline in IPOs. In fact, the role of stock markets as a destination for growth companies is decreasing, as reflected in the decline in the number of IPOs worldwide.

VC and angel investing have been providing new finance opportunities for innovative and high growth high-tech businesses. This source has increased their role as an alternative source of finance since the industry has become formal and organized, through syndicates, associations, and networks. The motivation to choose VC funds and business angels are fundamentally different. They depend on scale, operating models, targets, and business finance projects. However, they are highly complementary in the financing continuum for early stage firms. Business angels need a well-functioning VC market to provide the resulting finance that some of the businesses they support will require. At the same time, a well-developed angel market can create more investment opportunities and increase the deal flows for VCs.

Business angels (BAs) are difficult to formally measure in terms of market size as data are difficult to obtain. Over the last years the angel investment sector has increasingly gained recognition as a powerful source of financing for high-growth companies, and has become more formalized and organized through syndicates, associations and networks (Ibrahim, 2008; OECD, 2011). The angel investing market is largely informal, since they act privately and generally prefer to maintain anonymity (CSES, 2012). In the US, angel investors need to be accredited under securities laws, whereas in other countries certification is necessary but can take the form of a self-certification. These requirements intend to ensure that the investors have the necessary financial resources as well as an understanding of the implications of investing in startup companies (OECD, 2011). Since there is a lack of harmonization in definitions and a lack of a centralized data warehouse, the only data available are from business associations. According to these sources this market remains limited in Europe and the most active countries are the UK, Spain, and France. The constant growth of BAs activity over the last decade came to a halt during the 2007-2009 financial crisis, though the fall was not as dramatic as in the VC industry (OECD, 2011). Therefore, BAs appear to be less sensitive to market cycles than are professional VC investors. Nevertheless, for BAs the lack of opportunities represents an important challenge, which may discourage or defer investment in the first place. Overall in Europe, the total investment through angel networks had already surpassed the seed component of the VC industry which may also be explained by the increasing orientation by VC funds toward later stage financing. Business Angel investment in early stage VC funds has also increased in recent years (OECD, 2011; Ernst&Young, 2014).

7. Future trends

We conclude that there are four important market barriers that prevent the development of non-bank financing in Europe.

The first barrier is knowledge and awareness from SMEs about the available alternative instruments of finance. It is essential to increase businesses knowledge about the instruments and help firms to develop a strategic vision about their financing plan, and understanding which instrument suit best their needs. In this sense, it is necessary to inform SMEs about the different instruments available in the market, according to the specific stages of their business life cycle, the advantages, risks, and opportunities for leveraging.

The second barrier is the quality of business plans and investment projects of SMEs. They need to develop their market approach as an "investor ready" strategy.

The third barrier is information asymmetries and transparency. In order to boost the development of the non-bank finance alternatives market it is important to reduce information asymmetries. Today's data infrastructure and the lack of hard data on non-debt financing instruments are important limitations for the design, implementation, and assessment of policies. They not only decrease the investor interest because there is no historical tracking, they also may negatively influence the investors' perception of risk.

The fourth barrier is the regulatory framework. It should enable the development of instruments with greater risk than traditional debt finance for investors. Designing and implementing effective regulation, which balances financial stability, investors' protection and the opening of new financing channels for SMEs, is a challenge for policy makers and regulatory agencies. This is especially the case in light of the rapid evolution in the market, resulting from technological changes as well as the engineering of products that, in a low interest rate environment, respond to the appetite for high yields by investors.

In summary, non-bank finance could emerge and gain traction, forcing the banking sector to change their business model. The new entrepreneurial trends, innovation in technology, and the general need for greater certainty around the regulatory agenda will make banks rethink their role as a positive contributor to economic growth, and non-bank players to assume a more active role in the financing of economic activity.

Appendices

Appendices

1. Aggregated data in regional homogeneous groups (same socioeconomic level)

Eastern Europe	Northern Europe	Southern Europe	UK & Ireland	Western Europe	United States of America
Bulgaria	Denmark	Cyprus	Ireland	Austria	US
Croatia	Finland	Greece	United Kingdom	Belgium	
Czech Republic	Iceland	Italy		France	
Estonia	Norway	Portugal		Germany	
Hungary	Sweden	Spain		Luxembourg	
Latvia				Netherlands	
Lithuania				Switzerland	
Poland					
Romania					
Slovak Republic					
Slovenia					

Appendices

2. List and definition of indicators in this report

2. European macroeconomic analysis

Exhibit 1
Evolution of Real GDP per capita, by groups of countries
Real GDP over total population. This is the average per person output of the economy at current prices.

Exhibit 2
Evolution of Real GDP growth, by groups of countries
Percentage change in real GDP between two consecutive years.

Exhibit 3
Evolution of Inflation, by groups of countries
The growth rate of general level of prices for goods and services (consumer prices). It is measured as an annual percentage increase.

Exhibit 4
Evolution of Unemployment rate, by groups of countries
A measure of the prevalence of unemployment. It is calculated as the percentage of unemployed population in the total population currently in the labor force, in a given year.

Exhibit 5
Evolution of Government Budget Surplus, by groups of countries
A comparable indicator across countries about the general government spending, as a share of GDP. Cash surplus (or deficit) is computed as revenues minus expenses, minus net acquisition of financial assets.

Exhibit 6
Evolution of Government Debt, by groups of countries
The ratio between a country's government debt and its gross domestic product (GDP), as a share of GDP.

Appendices

2. List and definition of indicators in this report

3. Relative size of the banking sector *versus* capital markets

Exhibit 7
Evolution of Private Credit by Deposit Money Banks, Europe vs US
Financial resources provided to the private sector by domestic money banks as a share of GDP. Domestic money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.

Exhibit 8
Evolution of Syndicated Loan Issuance Volume, Europe vs US
Ratio of new syndicated borrowing volume by private entities in industries other than finance, holding companies, and insurance to GDP.

Exhibit 9
Evolution of Corporate Bond Issuance Volume, Europe vs US
Ratio of new corporate bond issuance volume by private entities in industries other than finance, holding companies, and insurance to GDP.

Exhibit 10
Evolution of Stock Market Capitalisation, Europe vs US
Total value of all listed shares in a stock market as a percentage of GDP.

Exhibit 11
Evolution of External Loans and Deposits of Reporting Banks to the non-banking sectors, by group of countries
Ratio of loans and deposits of reporting external banks to the nonbanking sectors, to domestic bank deposits.

Exhibit 12
Evolution of External Loans and Deposits of Reporting Banks to the banking sectors, by groups of countries
Ratio of loans and deposits of reporting external banks to the banking sector, to domestic bank deposits.

4. Banking sector outlook

Exhibit 13
Evolution of Financial System Deposits, by groups of countries
Demand, time, and saving deposits in deposit money banks and other financial institutions as a share of GDP.

Exhibit 14
Evolution of Bank Nonperforming Loans to Gross Loans, by groups of countries
Value of non-performing loans divided by the total value of loan portfolio (including non-performing loans before the deduction of specific loan-loss provisions). The loan amount recorded as non-performing should be the gross value of the loan as recorded on the balance sheet, not just the amount that is overdue.

Exhibit 15
Evolution of Private Credit by Deposit Money Banks, by groups of countries
The financial resources provided to the private sector by domestic money banks as a share of GDP. Domestic money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.

Appendices

2. List and definition of indicators in this report

Exhibit 16
Evolution of Private Credit by Deposit Money Banks and Other Financial Institutions, by groups of countries
The financial resources provided to the private sector by domestic money banks and other financial institutions as a share of GDP. Domestic money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.

Exhibit 17
Evolution of Deposit Bank Assets, by groups of countries
Total assets held by deposit money banks as a share of GDP. Assets include claims on domestic real non-financial sector which includes central, state, and local governments, non-financial public enterprises, and private sector. Deposit money banks comprise commercial banks and other financial institutions that accept transferable deposits, such as demand deposits.

Exhibit 18
Evolution of Bank Net Interest Margin, by groups of countries
Accounting value of bank's net interest revenue as a share of its average interest-bearing (total earning) assets.

Exhibit 19
Evolution of Bank Concentration, by groups of countries
Assets of three largest commercial banks as a share of total commercial banking assets. Total assets include total earning assets, cash and due from banks, foreclosed real estate, fixed assets, goodwill, other intangibles, current tax assets, deferred tax assets, discontinued operations and other assets.

Exhibit 20
Evolution of Demand for Loans by Eurozone firms, by groups of countries
Loan demand in the Euro Area. Changing composition calculated as a weighted diffusion index based on the share of each country in the total loan outstanding amounts of the area aggregate, also weighted with the share of each bank in the total loan outstanding amount of the banks in the Bank Lending Survey (BLS) sample.

Exhibit 21
Evolution of Credit Standards required by Eurozone Banks to firms by loan maturity
Credit standards required by Eurozone Banks according to loan maturity (changing composition). Changing composition calculated as a weighted diffusion index based on the share of each country in the total loan outstanding amounts of the area aggregate, also weighted with the share of each bank in the total loan outstanding amount of the banks in the Bank Lending Survey (BLS) sample.

Exhibit 22
Evolution of Collateral Requirements by Eurozone Banks, by groups of countries
Changing composition in collateral requirements by bank lenders in the Euro Area. Changing composition calculated as a weighted diffusion index based on the share of each country in the total loan outstanding amounts of the area aggregate, also weighted with the share of each bank in the total loan outstanding amount of the banks in the Bank Lending Survey (BLS) sample.

Exhibit 23
Evolution of Syndicated Loan Issuance Volume, by groups of countries
Ratio of new syndicated borrowing volume by private entities in industries other than finance, holding companies, and insurance, to GDP.

Exhibit 24
Evolution of Syndicated Loans (average per group), by groups of countries
Within-group average of new syndicated borrowing volume by private entities in industries other than finance, holding companies, and insurance per year.

Exhibit 25
Distribution of Syndicated Loans Maturities, by groups of countries
Density of maturities corresponding to new syndicated loans emitted by non-financial corporations in different years, excluding maturities over 20 years.

Appendices

2. List and definition of indicators in this report

5. Capital markets sector outlook

Exhibit 26
Evolution of Gross Portfolio Debt Liabilities, by groups of countries
Ratio of gross portfolio debt liabilities to GDP. Debt liabilities cover (1) bonds, debentures, notes, etc., and (2) money market or negotiable debt instruments.

Exhibit 27
Evolution of Gross Portfolio Debt Liabilities, Europe vs US
Comparison of the gross portfolio debt liabilities to GDP ratios in Europe and the US.

Exhibit 28
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Appendices

3. Bibliography

Balcerowicz, L., Rzonca, A., Kalina, L., and Laszek, A., *Economic Growth in the European Union*, The Lisbon Council Think Tank.

Becker, Bo and Ivashina, V., 2014, *Financial Repression in the European Sovereign Debt Crisis*, Swedish House of Finance, Research Paper No. 14-13; Paris December 2014 Finance Meeting EUROFIDAI - AFFI Paper.

Buttiglione, L., Lane, P.R., Reichlin, L., and Reinhart, V., 2014, *Deleveraging, What Deleveraging?*, Geneva Reports on the World Economy 16, ICMB and CEPR.

CSES, 2012, *Evaluation of EU Member State Business Angel Markets and Policies. Final report*, Centre for Strategy & Evaluation Services.

Ernst&Young, 2014, *Adpating and evolving. Global venture capital insights and trends 2014*.

European Commission, 2016, Commission Staff Working Document, European Financial Stability and Integration Review, *A focus on Capital Markets Union*, Brussels, SWD (2016) 146 final.

European Commission, 2015, Green Paper, *Building a Capital Markets Union*, Brussels, SWD (2015) 13 final.

European Commission, Commission Staff Working Document, 2015, Communication from the Commission to the European Parliament, the Council, the European Economic and Social Committee and the Committee of the Regions, *Action Plan on Building a Capital Markets Union*, Brussels, SWD (2015) 183 final.

European Commission, Commission Staff Working Document, 2013, Green Paper, *Long-Term Financing of the European Economy*, Brussels, SWD (2013) 76 final.

European Federation of Financial Analysts Societies (EFFAS), 2013, Public Consultation, Green Paper, *Long-Term Financing of the European Economy*.

Gambacorta, L., Yang, J., and Tsatsaronis, K., 2014, *Financial structure and growth*, BIS Quarterly Review.

Giovannini, A., Mayer, C., Micossi, S., Di Noia, C., Onado, M., Pagano, M., and Polo, A., 2015, *Restarting European Long-Term Investment Finance* (RELTIF), A Green Paper Discussion Document, CEPR.

Appendices

3. Bibliography

Haltiwanger, J., Jarmin, R., and Miranda, J., 2013, Who creates jobs? Small versus large versus young, *Review of Economics and Statistics* 95, 347-361.

Ibrahim D.M., 2008, *The (Not So) Puzzling Behaviour of Angel Investors*, Vanderbilt Law Review, Vol. 61, Arizona Legal Studies Paper No. 07-16.

Idinvest, 2014, *Mezzanine debt market in Europe. Analysis of supply and demand*, Idinvest Partners.

Idinvest, 2014, *European Private Equity Market Panorama*, Idinvest Partners.

Kaousar, I. and Wehinger, G., 2014, *Non-bank debt financing for SMEs: The role of securitisation, private placements and bonds*, Discussions at an OECD Financial Roundtable, OECD Journal: Financial Market Trends 140 – Volume 2014/1.

Kashyap, A.K., Stein, J.C., and Wilcox, D.W., 1996, Monetary policy and credit conditions: Evidence from the composition of external finance: Reply, *American Economic Review* 86, 310-314.

La Porta, R., Lopez-De-Silanes, F., Shleifer, A., and Vishny, R. W., 1997, Legal determinants of external finance, *Journal of Finance* 52, 1131-1150.

Liikanen, E., 2014, *On the size and structure of the banking sector*, in *Banking after regulatory reforms – business as usual?*, SUERF Study 2014/3 (joint publication with the Bank of Finland), ESRB.

Mac and Bhaird C., 2010, *Resourcing Small and Medium Sized Enterprises. A Financial Growth Cycle Approach*, Springer-Verlag, Berlin, Heidelberg.

Mian, Atif R., Sufi, A., and Verner, E., 2016, *Household Debt and Business Cycles Worldwide*, Fama-Miller Working Paper, Chicago Booth Research Paper.

OECD, *2015, New Approaches to SME and Entrepreneurship Financing: Broadening the Range of Instruments.*

Oxera, 2011, *Monitoring prices, costs and volumes of trading and post-trading services.*

Pagano, M. and Langfield, S., 2014, *Banking in Europe: Too much of a good thing*, Mimeo.

Schularick, M. and Taylor, A.M., 2012, Credit booms gone bust: Monetary policy, leverage cycles and financial crises, *American Economic Review* 102, 1029-1061.