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# The changing landscape of financial markets in Europe, the United States and Japan

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## **Abstract**

We compare the structure of the financial sectors of the EU27, Japan and the United States, looking at a set of 23 indicators. We find a large variation within the European Union in the structure of the financial sector. Using principal components analysis, we identify robust groups of EU countries. One group consists of the Eastern European members that entered the EU more recently. These have substantially smaller financial sectors than the old member states. A second group can be classified as market-based (MBEU) and the third group is more bank-based (BBEU). We compare US, MBEU, BBEU, Eastern EU and Japan with the following main results. First, the groups within Europe are geographically related. Second, in many indicators, MBEU countries are closer to the (market-based) US, while BBEU countries more closely resemble Japan. Paradoxically, however, market-based EU countries also have large banking sectors. Banks in market-based countries have larger cross-border assets and liabilities, and derive a larger fraction of their income from fees, rather than interest income, than banks in bank-based countries. Finally, for most indicators, the ordering of groups of countries is quite stable over time, but while the crisis has had no impact on the relative ordering of the groups, it has slightly widened the gap between the US and all EU regions in some respects. We also find that during the crisis, substitution between market-based and bank-based sources of finance occurred in the US, and to a lesser extent in MBEU and BBEU countries.

## 1. Introduction

In this paper we compare the US, Japan and groups of EU countries using 23 indicators related to the structure of individual countries' financial systems, such as household deposits, bank credit to non-financial firms, market capitalisation of listed firms, the size of the banking sector, the volume of initial public offerings, venture capital investment activity, the size of foreign banking assets, bank concentration levels and bank profitability.

We classify these (groups of) countries as more bank-based or more market-based (a related terminology is relationship-based financing versus arm's length financing). In a bank-based system, banks are the crucial players in channeling funds from investors to non-financial corporations. They pool resources of dispersed capital providers and play an important role as delegated monitors of the firms they lend to, on behalf of deposit holders (see eg Boot and Thakor, 2008). In the market-based paradigm, it is predominantly through markets that firms interact with those providing the capital. Here firms can more easily find funding by participating in markets for tradable securities, such as stocks or corporate bonds.

Traditionally, in Japan and continental Europe, the role of banks has been much greater than in the US, where markets play a larger role in transactions between providers and users of capital. Of course differences between financial systems around the world are more often a question of degree (see eg Allen *et al*, 2004, for an earlier comparison of EU, US and Asian financial systems). In the United States, banks do play an important role, for instance in financing smaller firms. Conversely, in traditionally bank-based Germany, the market for corporate bonds has grown significantly over the past decade. More generally, the growth of global finance has shifted the balance in the direction of market-based architecture in most of the developed world (Rajan and Zingales, 2003). Nevertheless, the paradigm of bank- versus market-based systems offers a tool for comparing financial systems in different countries.

We explore whether we can classify European countries into groups that have similar financial systems. We use principal components analysis of our financial structure indicators to assign EU countries into groups. Principal components analysis identifies the dominant correlations among the various indicators for different EU countries. We can then cluster these countries as more or less similar. We identify three clusters of European countries with

similar financial-market structures: Market-based EU (MBEU), Bank-based EU (BBEU) and Eastern EU.

The market-based countries have generally better developed markets for equity finance, including venture capital. Household deposits are slightly lower than in bank-based countries, as would be expected. Strikingly, however, while all EU countries' banking assets are generally larger (relative to GDP) than those in Japan or the US, those EU countries classified as market-based turn out to have significantly larger banking sectors as well. These banking sectors in market-based EU countries in particular have much larger cross-border assets and liabilities. Also, they earn a lower fraction of their income from interest income than the banking sectors in bank-based countries.

We use our classification to see how the market structure in these various groups evolved. Some studies claim that European countries are moving towards more a market-based financial system. Indeed, since the 1990s, many bank-based continental European countries have now developed strong markets for both equity and corporate bonds, in particular since the introduction of the euro (see Hartmann *et al*, 2003). Although there has been convergence, the differences between the US, Japan, and EU remain pronounced.

In addition, we ask how countries in the various groups have fared during the recent financial crisis. The empirical and theoretical literature on the relationship between market structure, growth and stability is still in its infancy. Recent views are that an efficient financial system is essential for growth – which can be strong markets, strong banks, or both – (see eg Levine, 2011)<sup>1</sup>, and that the relative performance of either markets (and the associated arms' length financing) or banks (and the relationship-based model of investment) depends on the circumstances (see eg Rajan and Zingales, 1998). A recent paper by Allard and Blavy (2011) finds that market-based countries experience stronger recovery after economic shocks than bank-based ones. For such countries, Darvas (2013) argues, there is more scope for substitution of debt securities to compensate reduced availability of bank lending.

Compared to the existing literature, we update indicators to reflect information up to 2011 and expand the set of indicators to compare these countries, for instance by including bank

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<sup>1</sup> Although there can be too much of a good thing, according to Arcand *et al* (2012).

credit to the non-financial corporate sector<sup>2</sup>, venture capital investments, initial public offerings, securitisation, and cross-border bank ownership. Earlier contributions (eg Allen *et al*, 2004) have analysed the extent to which financial systems in the US, Japan and Europe conform to the stylised claim that continental EU and Japan represent the more bank-based end of the spectrum, while the US and United Kingdom would be more market-based. Other recent studies focus on the differences in financial structure between countries within the EU, and in particular between northern and southern countries (Rajan and Zingales, 2003) and between old and new member states (Allen *et al*, 2005). These studies look at indicators such as stock and bond market capitalisation, sizes of consumer deposits and bank credit extended to the private sector, and bank asset sizes and competition and operational parameters for the banking sectors.

We also contribute to the existing literature in another way by using data-driven analysis to identify groups of countries and the key ways in which the financial sectors of these countries differ. The existing literature assumes *a priori* that countries are either more bank-based or more market-based. Identifying the key points of difference is a first, and important, step in identifying the relationship between financial market structure and outcome, both in terms of fragility and growth.

## **2. The changing financial landscape**

### *2.1 Which indicators matter?*

To classify systems, the first indicator to compare is the size of banking systems: volumes of bank loans, as well as deposits held by households, are expected to be larger in bank-based systems than in market-based systems (see also Allen *et al*, 2004). And conversely, tradable debt and equity would be more important in market-based systems, resulting in more sizeable and active markets in both stocks and corporate bonds.

However, we do not have to rely only on the size of bank intermediation versus the size of markets for tradable funding instruments. Many studies find that also on other dimensions, distinctions among financial systems go hand in hand with distinctions in the importance of

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<sup>2</sup> Avoiding the sizable contributions from in particular consumer mortgages to total bank credit to the private sector

banks versus markets. Typically, bank-based systems are associated to financing that is more relationship-based: investors and the firms they invest in have stronger ties. Over time, financiers build up knowledge of the firms they invest in. Reputation is important, and it is harder to attract funding from new investors, who have an information disadvantage compared to existing investors. This gives financiers some degree of monopoly power over the firms they finance, allowing them to keep earning returns on their investments in the long run (Boot and Thakor, 2008). In the arms' length system associated to more market-based architectures, in contrast, firms are much less locked into relations with their financiers. Both ownership and control are typically more fragmented in such systems, and we expect for instance more stock ownership by individual households.<sup>3</sup> In market-based systems, there is more competition among financiers, which lowers interest rate margins, and information about firms is more widely available. This makes trading of securities easier, and one expects larger and more liquid markets for securities in market-based systems (Rajan and Zingales, 2003).

Such ownership structures affect the governance of firms. While in relationship-based systems, active monitoring by large block holders or creditors discipline firms' managements, in market-based systems the capital market plays a larger role in providing discipline: weakly managed firms fall prey to take-over bids in such systems (see eg Tirole, 2006, chapter 1).<sup>4</sup> Consequently, we also explore the size of merger and acquisition activity across the regions, and in particular also consider the role of cross-border M&A. In the banking sector, a related indicator of the openness of the financial system is the extent of cross-border activity of banks.

Private equity firms play a role in equity markets analogous to that of banks in debt markets (see eg Boot and Thakor, 2008). In essence, venture capitalists provide intermediation in the equity market, and act as delegated monitors (for their investors) in the companies they invest in. Although the close ties of private equity firms with the firms they invest in provide an

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<sup>3</sup> In bank-based systems, the role of large stockholders (for instance in family-owned firms) is more important (see eg Tirole, 2006, chapter 1).

<sup>4</sup> This also requires that the interests of outside owners of stocks are protected more strongly in such market-based systems. Shareholder protection is indeed more elaborate in those markets (Rajan and Zingales, 2003, table 9).

example of relationship-based financing on the equity side, venture capital is nevertheless much more important in more market-based systems. The reason is that such firms' business model relies on liquid markets for exit: venture capital firms sell the equity of successful investments to outsiders. Only in a transparent and liquid market will those outsiders be willing to engage in such transactions (Black and Gilson, 1998). To account for such differences, apart from VC activity we also include equity issuance and IPO activity among our indicators.

## 2.2 *Grouping countries - market based versus bank based Europe*

We have collected data on 23 different financial sector indicators for EU27 countries plus the United States and Japan. The indicators of all 29 countries are included in appendix B.<sup>5</sup> We want to identify clusters of countries that are broadly similar and discuss the differences between clusters of countries and the evolution of these differences.

Among European countries there is considerable heterogeneity in many indicators, and distinctions between countries are gradual. We have used principal components analysis (PCA) to find linear combinations of indicators that capture the largest amount of cross-country variance for EU27. We then use a clustering algorithm to identify similar groups of countries. Both are explained in more detail in appendix A. Using this methodology, we identify four groups of countries.

1. The Netherland, United Kingdom, Belgium, France, Finland, and Sweden.
2. Austria, Denmark, Germany, Greece, Italy, Portugal, and Spain
3. Bulgaria, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia, and Slovenia
4. Ireland, Malta, Cyprus, Luxembourg

We call the first group 'market-based EU'. Figure 2.1 (reproduced from figure A.1 in the appendix) shows visual evidence for the clustering of the countries in these groups, plotting the first two principal components. We see that these countries are closer to the US than other EU countries. The second group consists of 'bank-based EU' countries, and these resemble Japan more closely. The third group includes the Eastern European countries that accessed

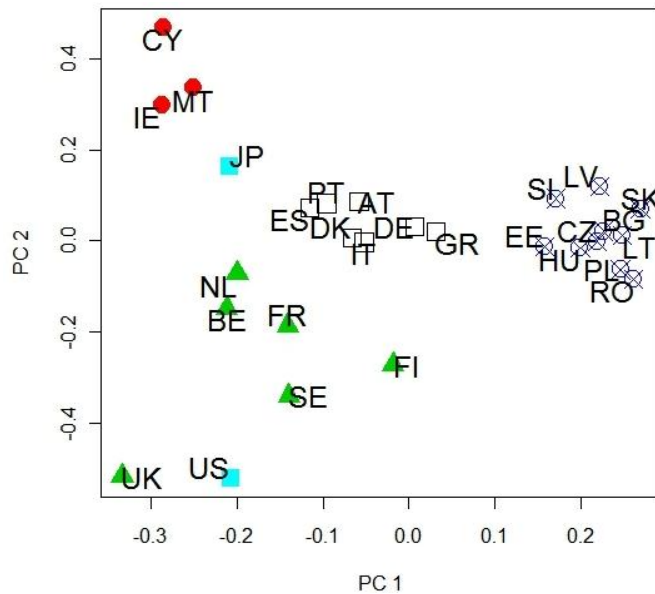
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<sup>5</sup> The data is also available in a separate .csv file from the CPB and Bruegel websites.



the EU more recently. As we shall see, these countries have generally smaller financial systems than those in the old member states. Finally, we classified Ireland, Cyprus, Malta and Luxembourg as outliers. These countries have banking sectors that are both very large and extend a large amount of credit compared to their national economies.

**Figure 2.1: Groups of countries resulting from PCA analysis**



This classification is broadly similar to that of Allard and Blavy (2011), who use the ratio of private sector loans to private sector liabilities to the market as determined from the national accounts.<sup>6</sup> As shown in appendix A, our groups are fairly stable against changing the year or the exact grouping procedure, although some countries<sup>7</sup> migrate between groups as we change the exact grouping procedure. From figure A.1, it is clear that the market-based countries are more diverse than the bank-based ones, with Belgium, France and the Netherlands positioned closest to the (denser) cluster of bank-based countries.

The map of Europe below shows the four groups of countries we have identified. These groups are clearly geographically related. The market-based countries are located in the

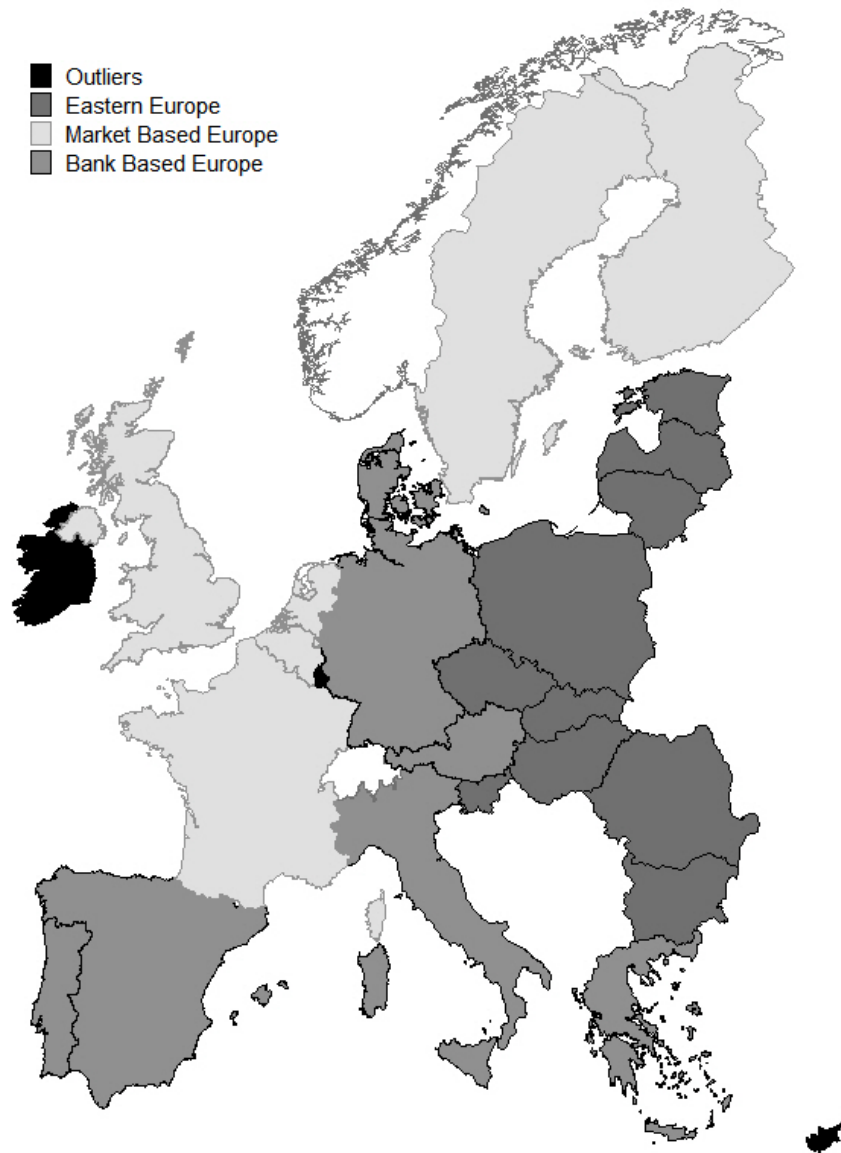
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<sup>6</sup> They differ in their classification of Denmark as market based and Belgium as well as the Netherlands as bank based. Denmark is border-line according to Allard and Blavy (2011). The different classification of Belgium and the Netherlands arises because we include more characteristics of financial markets. Both Belgium and the Netherlands have relatively well-developed equity markets.

<sup>7</sup> Namely: Belgium, the Netherlands, France, Cyprus and Malta

North West of Europe, and the member states in the East form a separate group. Bank-based countries comprise Southern Europe and Central Europe.

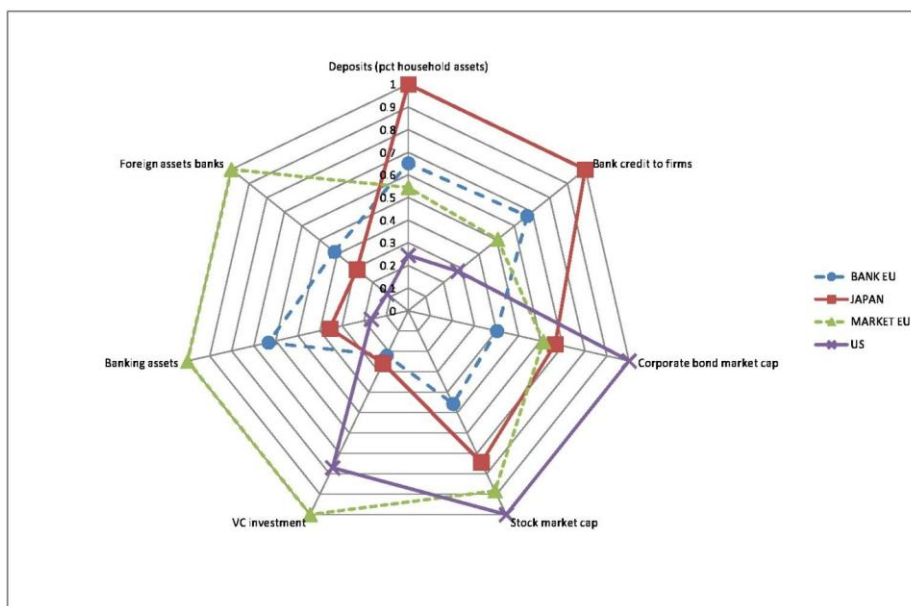
**Figure 2.2: Classification of EU countries into groups based on principal component analysis (see appendix A).**



Although we will discuss the indicators of individual countries in some detail in the next chapter, it is worthwhile discussing the drivers of the assignment into the market-based and bank-based EU groups, and their comparison with the financial system characteristics of the US and Japan. To do so, figure 2.3 graphs a comparison of seven indicators in which the distinction among the groups is particularly clear and robust over time (data in figure 2.3 are for the year 2006). On each of the nine axes, we plot the relative sizes of the indicator (as a

percentage of GDP) for each of the four groups, market-based EU, bank-based EU, the US and Japan. For each indicator, we normalised the largest value to one. As an example, looking at the axis denoted “stock market cap”, the largest stock market capitalisation (as a percentage of its GDP) is for the US market, which is normalised to 1. Stock market capitalisation is slightly smaller in market-based EU countries (at 0.88 times the US value), next is Japan (0.74 times the US figure), while the smallest figure occurs in bank-based EU countries.

**Figure 2.3: Comparison of market-based EU, bank-based EU, US and Japan based on seven indicators, 2006 figures.**



Looking at the plot, the US has the largest outcomes in equity related fields, and is followed by the EU countries that we classify as market-based (eg the UK, France<sup>8</sup> and the Netherlands). These typically have well developed stock markets, active venture capital markets, as well as bond markets (though Japan scores at a similar level in this dimension).

On bank-related dimensions, the picture is more mixed. Household deposits typically make up a large fraction of total household assets in bank-based countries (as well as Japan), and similarly, bank credit to firms is higher in these countries than in market-based EU or the US. Paradoxically, however, the EU countries we classify as market-based are also the countries

<sup>8</sup> As an aside, note that also Allard and Blavy (2011) classify France as market-based.

with the largest banking sectors. This appears related to the observation that for market-based countries, foreign bank assets are of greater importance.

In the next section, we shall look at these and other indicators in more detail, exploring both how they vary over time, and how individual countries perform.

### **3. The changing financial landscape**

#### *3.1 Channels for financial intermediation*

##### 3.1.1 Bank-intermediated credit

A common indicator for assessing the importance of bank-intermediated finance in a country is the size of bank credit to the private sector, as a percentage of GDP. A look at this statistic<sup>9</sup> for recent years confirms the traditional view of Europe and Japan as being more bank-based than the US. Bank loans to the private sector across the EU averaged 136% of GDP in 2011, while the corresponding figure for Japan is 105%. Both regions have bank credit to the private sector roughly twice the size of that in the US in 2011, where this indicator is at 55% of GDP.<sup>10</sup>

Looking at the recent evolution of bank credit, figure 3.1, the most striking point is the massive growth of bank credit in the EU, whether in old or new member states, in countries classified as market oriented or bank oriented. Only since the onset of the financial crisis in 2007 has this growth stopped and turned into some decline. This is in stark contrast with the situation in Japan and the US, where credit has remained more stable over the last decade, with Japan not experiencing much effect from the crisis.

But also within the EU, we see a large divergence among countries, see Figure 3.1, right-hand panel for levels in 2011 (the ordered bar plots that we present in this paper always contain data for 2011 unless stated otherwise). Even excepting Cyprus as a clear outlier, there

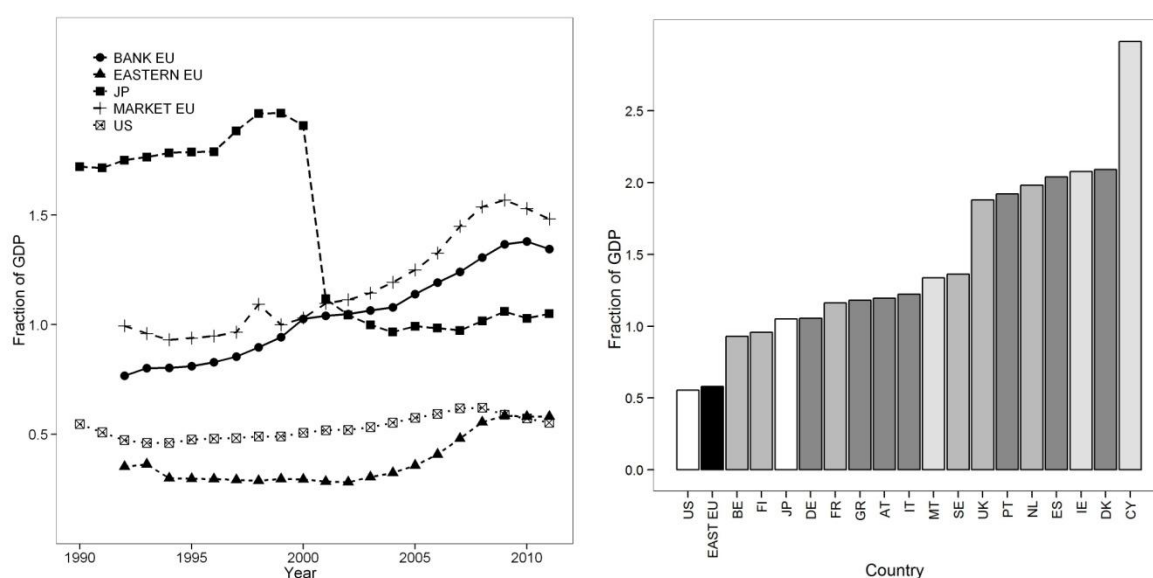
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<sup>9</sup> The data for all indicators that we present are collected in appendix B.

<sup>10</sup> In the US, a much larger share of credit is extended by the shadow banking system, including finance companies, money market mutual funds and government-sponsored enterprises; see eg Pozsar *et al* (2010).

is a stark difference between the highest six countries, including the UK (188%), the Netherlands (198%) and Spain (204%), featuring large volumes of bank loans to the private sector compared to GDP, and the other countries, which cluster more around the Japanese level. Nor is this difference clearly related to the classification of countries as bank-based or market-based. The EU-average growth in volumes over the past decade is driven to a large extent by this subset of six countries. In eastern European countries, bank credit is much lower on average, comparable to the US level. Strong growth has taken place across most of these countries, however, a growth which has leveled off after 2008.

**Figure 3.1: Bank credit to the private sector, as a percentage of GDP.<sup>11</sup>**

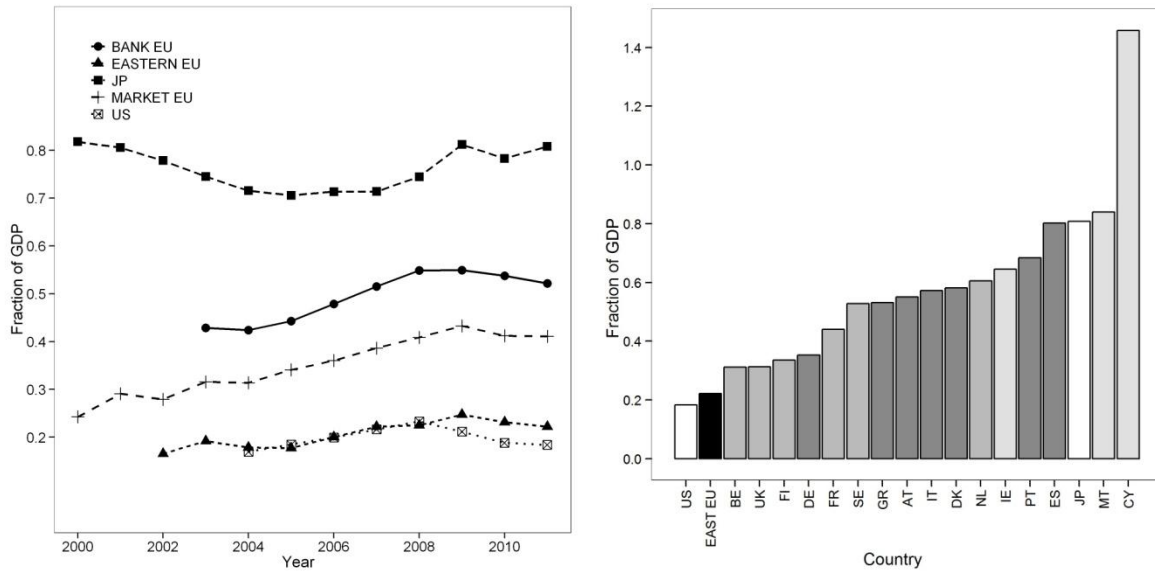


These graphs suggest a much larger and growing role for bank intermediation in particular in the former set of six countries, Spain, Portugal, the UK and the Netherlands, as well as Ireland and Denmark, compared to traditionally bank-based countries such as Germany and Japan. This might call into question the distinction between market-based and bank-based systems that we put forward. But note that this indicator measures all credit to the private sector. In particular, it also includes consumer mortgages, and hence partly reflects housing booms in these countries.

<sup>11</sup> The jump in Japanese figures is due to a change in reporting.

If we are interested in the role of banks in channeling funds towards the *corporate* sector in particular, it is more instructive to focus on only bank credit to the non-financial corporate sector, as in figure 3.2.<sup>12</sup>

**Figure 3.2: Bank credit to non-financial firms.**



We observe that countries' ranks are significantly different along the dimension of credit to the corporate sector, compared to the total credit indicator. While Spain and Portugal are still among the top countries in this dimension, we see that Japan scores highest, along with the outlier islands. In contrast, in the UK, credit to the non-financial corporate sector is among the lowest in this sample.

There is now also a clearer distinction between the average of BBEU and MBEU countries (left-hand panel), with bank loans to the corporate sector higher in bank-based countries than in those classified as market-based.<sup>13</sup> Growth in the last decade has been highest in the outlier-countries (Cyprus, Ireland, Malta, see right-hand panel for 2011 figures), while in all EU groups we see on average a decline in bank lending to firms since 2009. This is as

<sup>12</sup> Figures are based on bank balance sheet data (for EU: ECB data on loans to non-financial corporations, for the US and Japan, Central Bank data on commercial loans). Alternatively, one might use loan data from non-financial firms' balance sheets, as provided in the National Financial Accounts (see eg Allard and Blavy, 2011). A drawback of this data is, however, that these loans include a sizeable fraction of intra-firm loans (as opposed to bank loans).

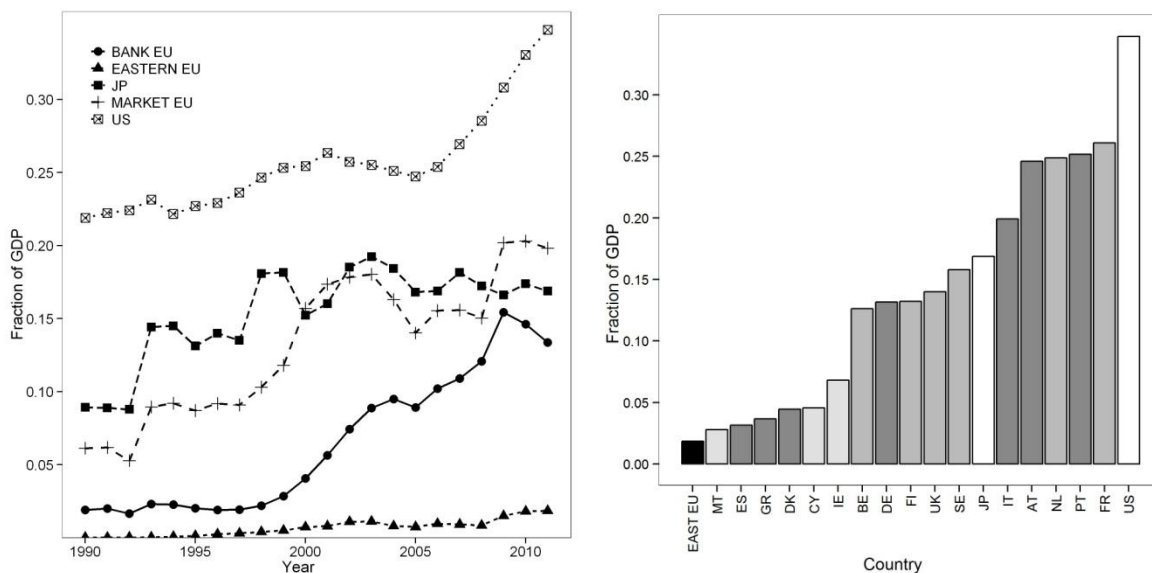
<sup>13</sup> Although the Netherlands does not conform to this general picture.

opposed to the situation in Japan, where bank lending seems to have recovered in 2011. As with total bank credit, the figures for the more recent EU members are lower than average. See table B.2 (appendix B) for the detailed figures on an individual country level.

### 3.1.2 The market channel for credit provision

The bank-credit-to-corporate-sector statistic provides a way of capturing the role of banks in credit intermediation. We can, conversely, also look at market mechanisms, rather than bank intermediation, for credit provision to firms. One prominent such market channel is the market for corporate bonds, see figure 3.3. Again, the numbers confirm the view of the US as the most market-based of these economies, where the volume of the corporate bond market in 2011 amounted to 35% of GDP, with Japan (17%), and the EU average (15%) lagging somewhat behind. If we consider developments between 2005 and 2011, Europe as a whole appears to be catching up. In fact, European bond markets have grown quite extensively since around 2000, in particular in the euro area. Bond market size generally appears relatively robust under the financial market turmoil.

**Figure 3.3: Size of the market for corporate bonds**

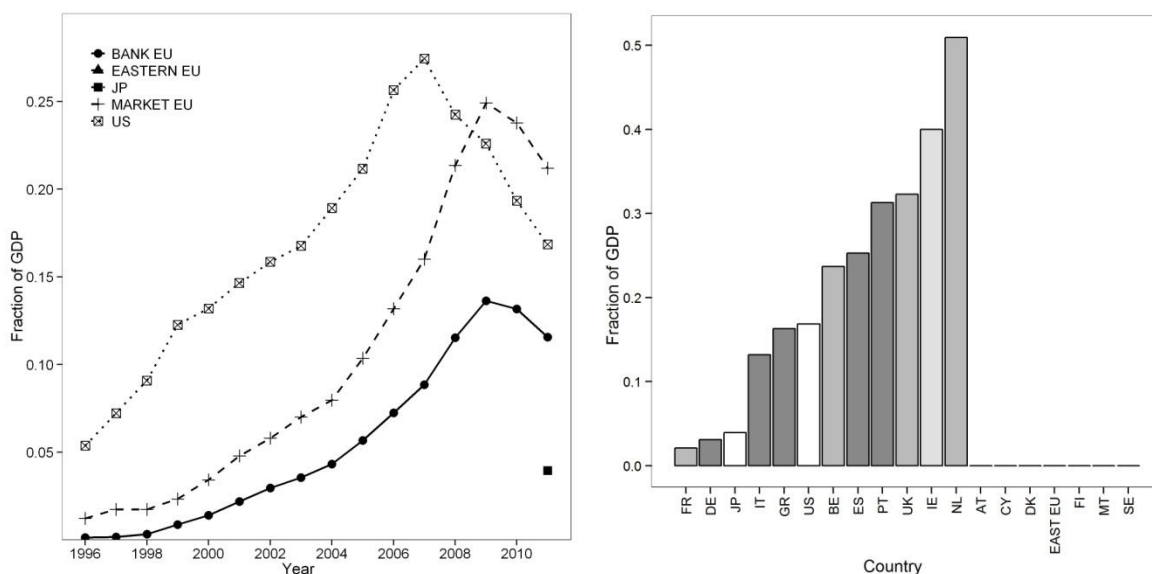


As a recurrent theme, looking at the EU as a whole hides the divergence in the development of corporate bond markets among EU member states. We see particularly large bond markets in France, Portugal and the Netherlands, and again generally lower numbers for the eastern

European accession countries. Also, the development of the UK bond market has lagged somewhat behind.

Apart from the corporate bond market, also securitisation has substantially gained in importance over the last decade as a market channel for credit intermediation. Securitisation allows issuers of loans to resell those loans to external capital providers. Figure 3.6 depicts growth of securitisation volumes. In the US, outstanding volumes started to decrease from 2008 onwards, with new issuance (see table b.5 in appendix B) almost coming to a standstill. In various EU countries, volumes kept increasing until more recently, and surpassed the US levels before starting to decline. In interpreting these figures, however, we should note two important caveats. First, they include securitised credit also to consumers, in particular in the form of mortgages, and indeed these form the bulk of securitisation volumes. And second, a large part (typically around 80%) of these securitised loans are retained by the issuing banks, and hence are not actually funded in the market.

**Figure 3.4: Outstanding securitised loans**



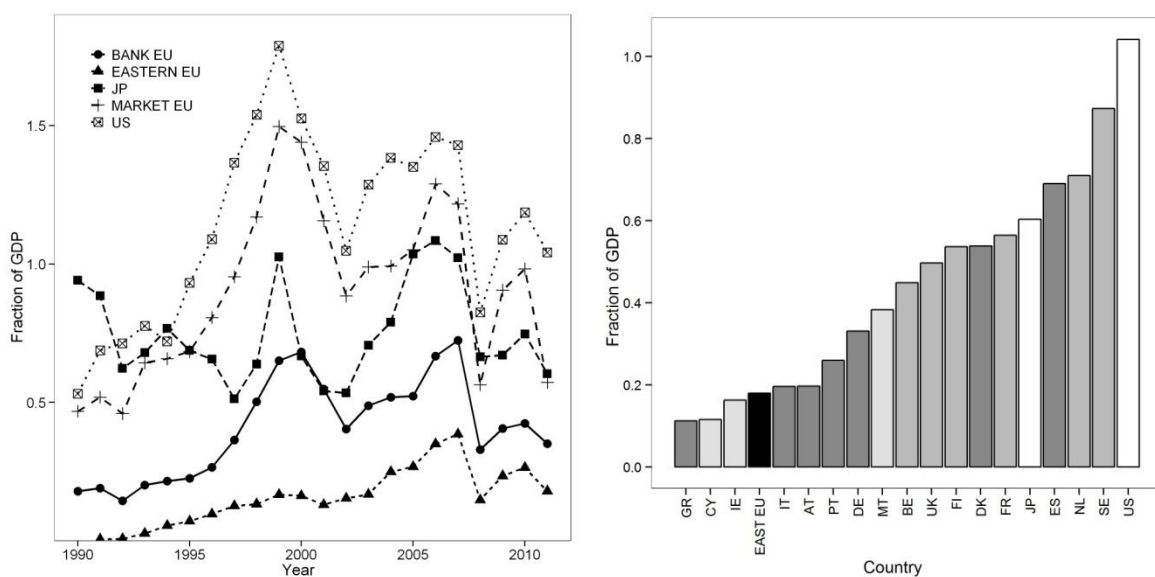
### 3.1.3 Equity funding

For a second perspective on the importance of market-based funding, we may look at the importance of market-based equity funding. Firstly, consider the importance of stock markets (table B.6), as measured by stock market capitalisation of listed firms. Clearly, the size of the



US market (with a 2011 stock market capitalisation of 104% of GDP) exceeds that of both the EU (43%) and Japan (60%). Again, there is a large dispersion of sizes within the EU, with those countries classified as market-based having on average significantly higher stock market capitalisations (exceeding Japanese levels) than the bank-based countries. For countries in Eastern EU, capitalisations remain smaller, but have grown to the 20-30% range of their GDPs in the past decade. Although all stock markets have lost value after the crisis, differences among groups of countries remain clear.

**Figure 3.5: Stock market capitalisation**

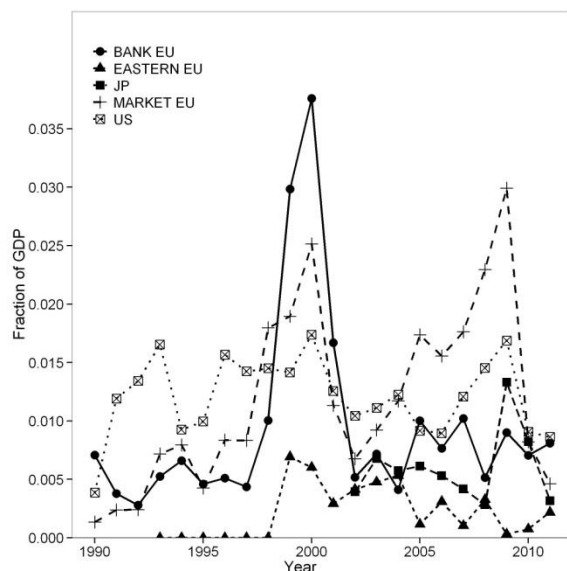


Of course, the mere size of the stock market conveys only limited information on the active use of the equity market in financing listed firms. One way of studying stock market activity is to look at the actual trading of stocks (see table b.7 in appendix B). Comparing the levels of stock market activity confirms the view of the US as the most stock-oriented region, with market-based EU countries (as well as Spain) generally outperforming Japan, and bank-based EU countries. The level of activity is volatile over time, and has in all decreased since the peak reached in 2007.

Another metric by which to compare stock market activity is to look at issuance of shares by listed companies. Figure 3.6 shows the evolution of stock issuance for the various groups of countries. We see that over the past decade, issuance in MBEU countries has been on average higher than those in BBEU, with the exception of the ‘dot.com’ years around the millennium

change, where activity in Germany was particularly high.<sup>14</sup> After the crisis, however, issuance has dropped and as a result levels have converged.

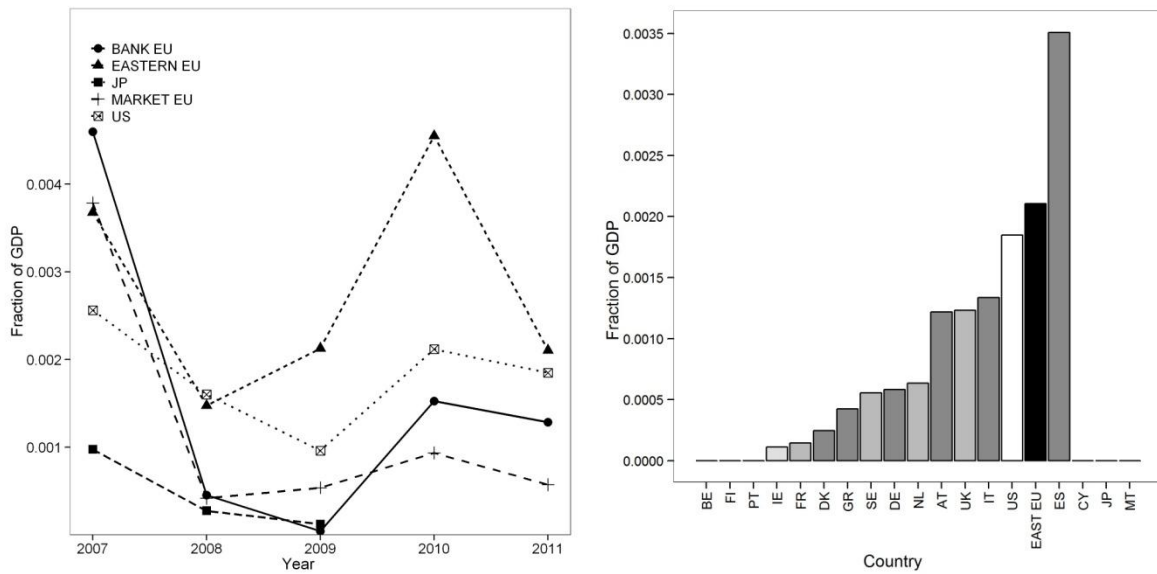
**Figure 3.6: Issuance of listed shares**



A related indicator to consider is the money raised through Initial Public Offerings (compared to GDP). Figure 3.7 shows data for the period 2007-2011, with the right-hand panel again representing 2011 figures for individual countries. The most striking observation is the large share of IPOs in Eastern EU. Closer observation reveals this to be driven entirely by Polish IPO figures, which indeed top the list across this period (with the exception of Luxembourg, which is excluded from this set). Looking at the pattern of all series, it is clear that since the onset of the financial crisis, IPO volumes have generally dropped in 2008-2009, with slight apparent recovery since then.

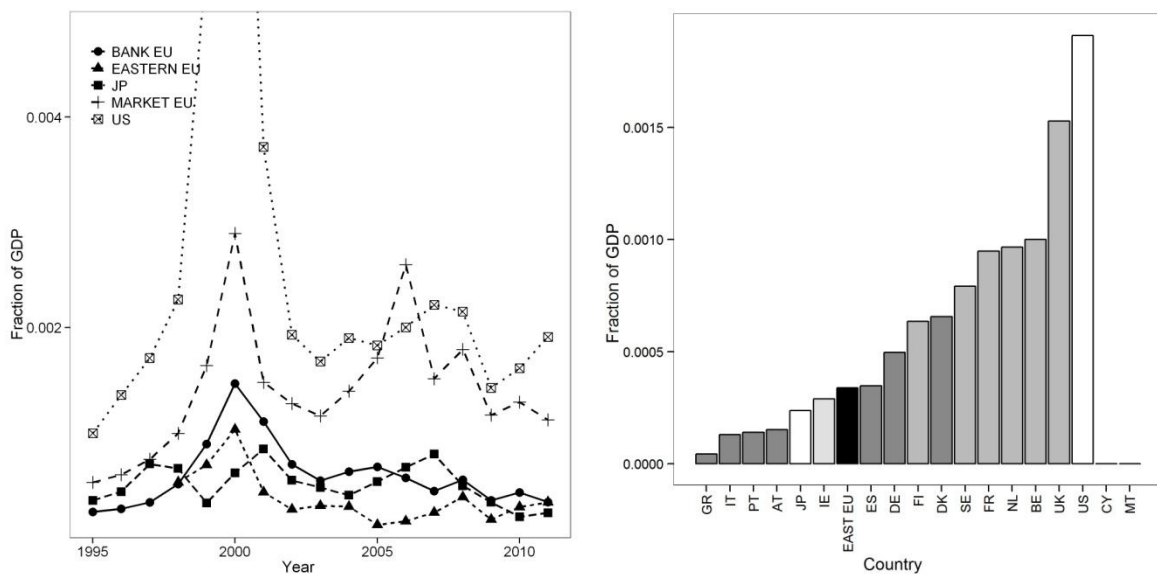
<sup>14</sup> Since issuance in individual countries is rather volatile, we do not include a one year snapshot of the order of individual countries in 2011. See table B.8 in the appendix for the details per country.

**Figure 3.7: IPO volume**



Corporate bonds and stock markets tend to be more attractive for the larger corporations. Smaller and medium sized enterprises may generally be more dependent on banks for their funding, but another channel for providing those firms with funds is the market of private equity, in particular, venture capital. Table B.10 in appendix B lists the sizes of annual investments by venture capital firms (comprising seed capital, investment in start-up firms, and later stage and growth investments, but excluding private equity investment in buy-outs and restructuring).

**Figure 3.8: Investments by venture capital firms**



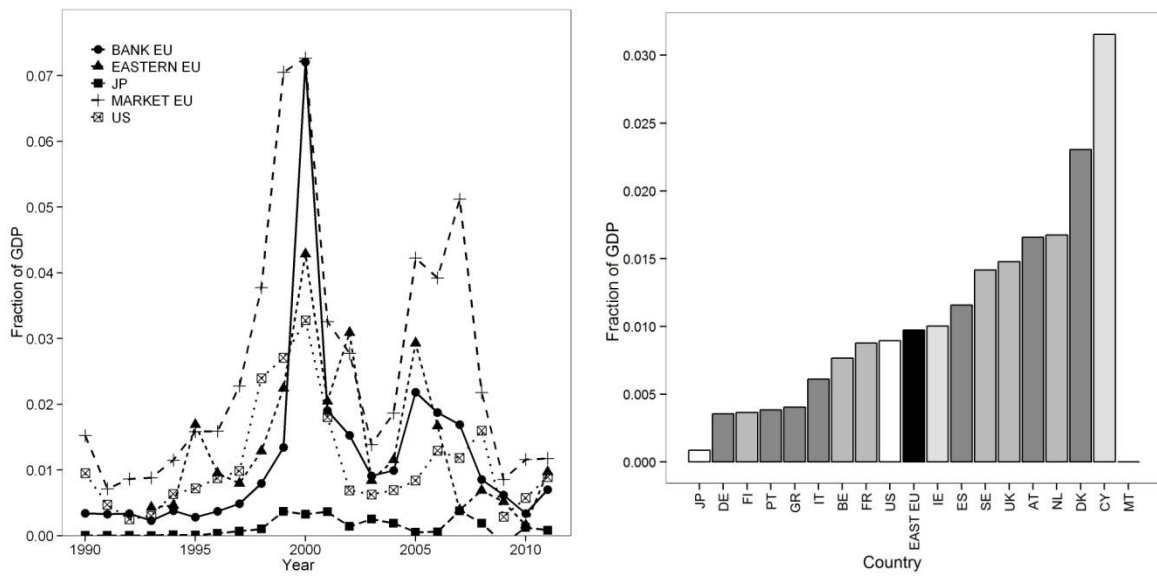
In graphs 3.8 we plot the evolution of annual investments by venture capital firms (as a percentage of GDP). VC investments peak around the millennium change, and once more before the financial crisis, before declining. The trough in many countries occurs in 2009. We see that over the past few years, average venture capital investments have been large in the US and in MBEU, and here volumes have remained comparable to their levels before the crisis. In the other regions, venture capital investments have been much lower, and indeed seem to be declining further. Within the EU, in particular the UK sees levels of VC investments of the same order of magnitude as those in the US. BBEU countries, on the other hand, are at the lower end, and many countries in Eastern EU reach similar levels of VC investment as those in BBEU.

In market-based systems, capital markets are not only channels for funding firms. They are also an essential part of firm governance: it is partly through capital market discipline that firms' managers are incentivised to put in effort, as underperforming firms may fall prey to acquisition by more successful rivals.

We therefore next consider the M&A activity for the different regions. In Figure 3.9 we focus on cross-border mergers and acquisitions. This in addition provides a measure of how open a country's capital market is to foreign investors. In table B.11 we list recent figures for M&A activity more generally.

Looking at the patterns, we see a clear divide between MBEU countries on the one hand, where cross-border take-overs are abundant, and BBEU and Eastern EU on the other. The US scores lower than MBEU on cross-border take-overs, but looking at total M&A figures (including domestic ones, see table b.9 in appendix B), US figures are among the highest. In Japan, in contrast, M&A activity is comparatively low. Finally, M&A activity has clearly converged to much lower levels since the onset of the crisis, with only little sign of recovery by 2011.

**Figure 3.9: Cross-border M&A (by country of seller)**

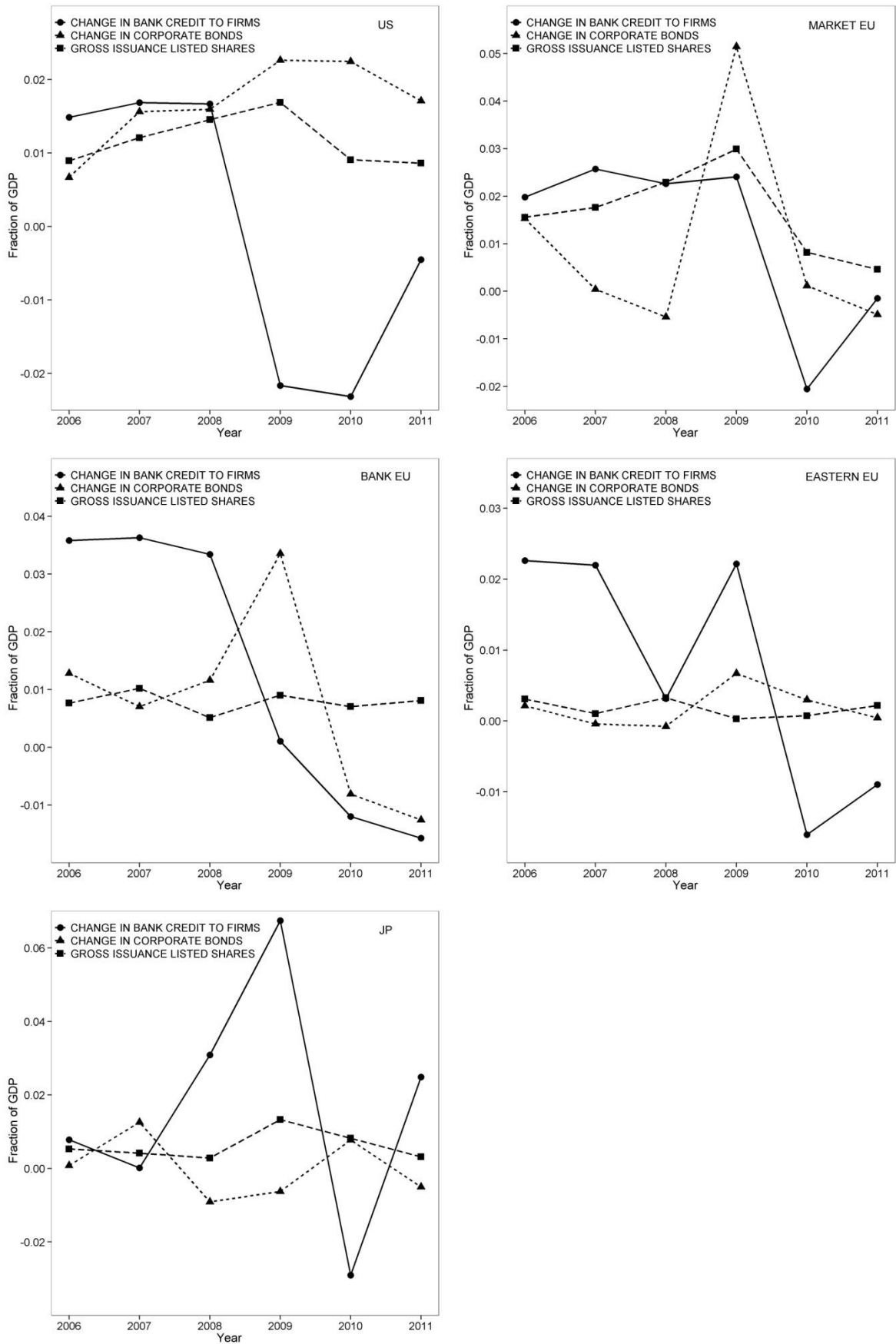


### 3.1.4 Substitution bank credit by market funding during the crisis

In

figure 3. we study the numbers on gross issuance of listed shares, bond issuance by non-financial firms, and changes in bank credit to non-financial firms, for each group of countries, for the period 2006-2011. The figures suggest that during the crisis, market-based financing has to some extent substituted bank-based financing. In all regions, the volume of bank loans decreased following the crisis (ie negative change in bank loan volume), though in the US the decline sets in earlier. This is clearest for the United States, shown in the top LHS, gross issuance of listed shares as well the size of the corporate bond market has risen as bank credit to the private sector has dropped. In Europe, we see an increase in corporate bond market volume in 2009, which is stronger in market-based Europe (top RHS) than in bank-based Europe (middle LHS). The peak in share issuance in 2009 is more pronounced in market-based Europe than bank-based Europe. In the case of Eastern EU (middle RHS), and Japan (bottom LHS) we see no such pattern in changes in market funding.

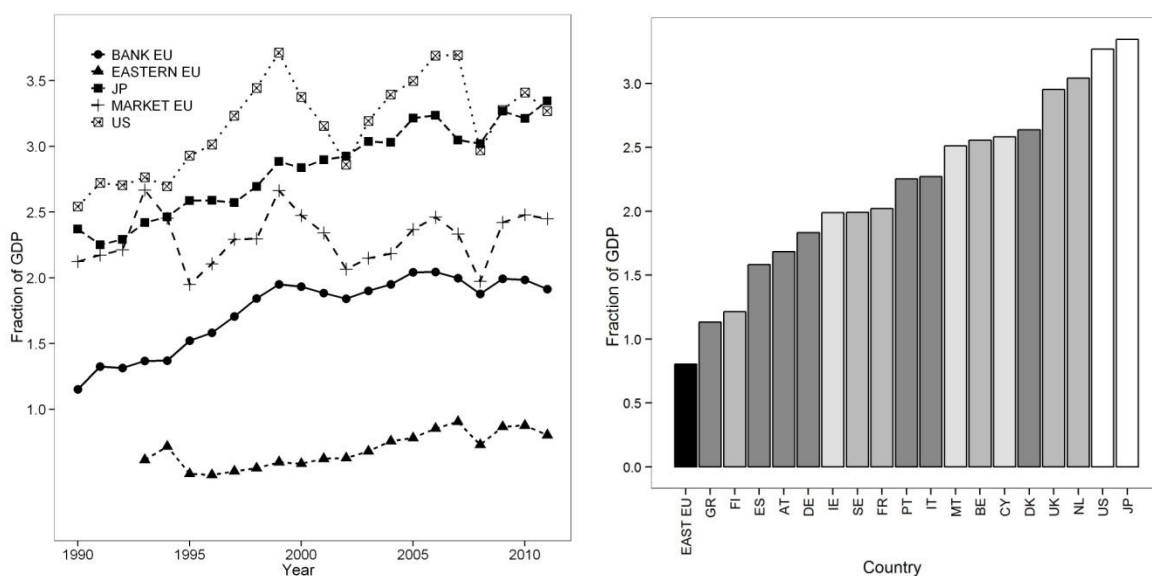
**Figure 3.10: Market substitution of bank credit to non-financial firms**



### 3.2 Liability side - consumer finances

The funds used by firms for investment are ultimately supplied by households, who either directly or through an intermediate hold the firms' capital. We can therefore obtain a related view of the channels of intermediation by focusing on household portfolios. First, we note the variation in the size of total household assets (relative to GDP) across countries. For the US and Japan, household assets in 2011 exceeded three times GDP. For the other groups, the number is lower. In BBEU the ratio to GDP is somewhat below two, while for MBEU it is somewhat higher at 2.44 in 2011. Eastern EU states score significantly lower, with total household assets at 80% of GDP, again stressing how different financial sectors in these countries still are from the rest of Europe. There is some dispersion among the EU countries, with the Netherlands and the UK at the higher end within the EU. Total financial assets drop significantly between 2006 and 2008, but there is no change in relative position of groups.

**Figure 3.11: Household total financial assets as fraction GDP**

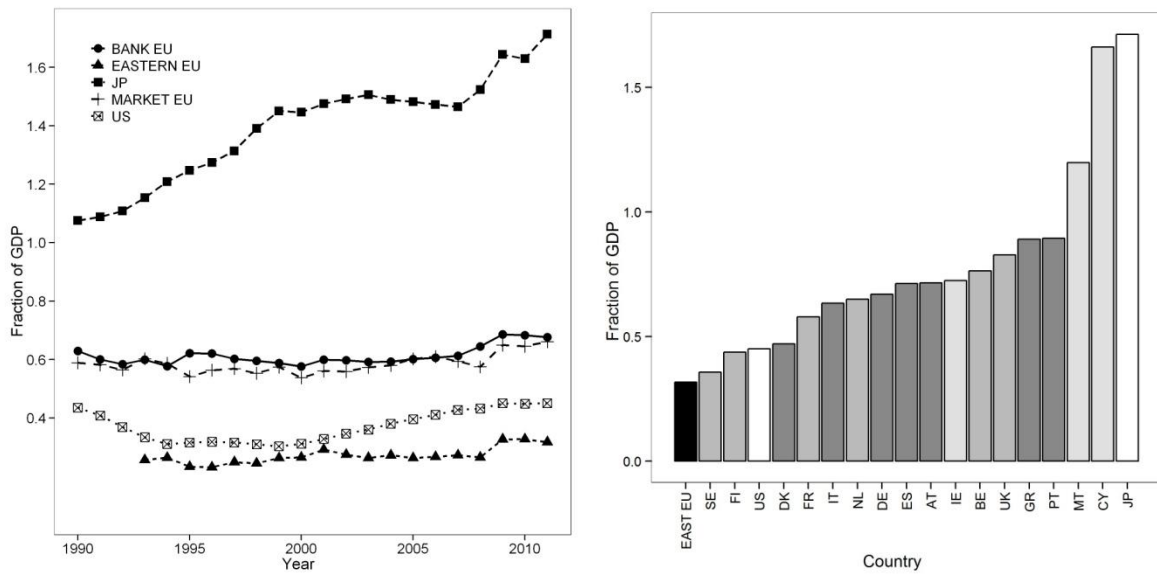


Countries with the highest levels of total financial assets also seem to exhibit the largest volatility. This is related to the composition of these assets, because these countries have a large fraction of their financial assets in equity or insurance and technical reserves. The composition of these assets also relates to the bank based or market based nature of the economy. We distinguish three main categories: deposits, shares and other equity, and insurance and technical reserves. In line with intuition, between 1990 and 2011 Japan consistently has the largest deposits at 1.71 times GDP, while Eastern Europe consistently the smallest with 0.32 times GDP, closely followed by the US. Within Europe, the BBEU



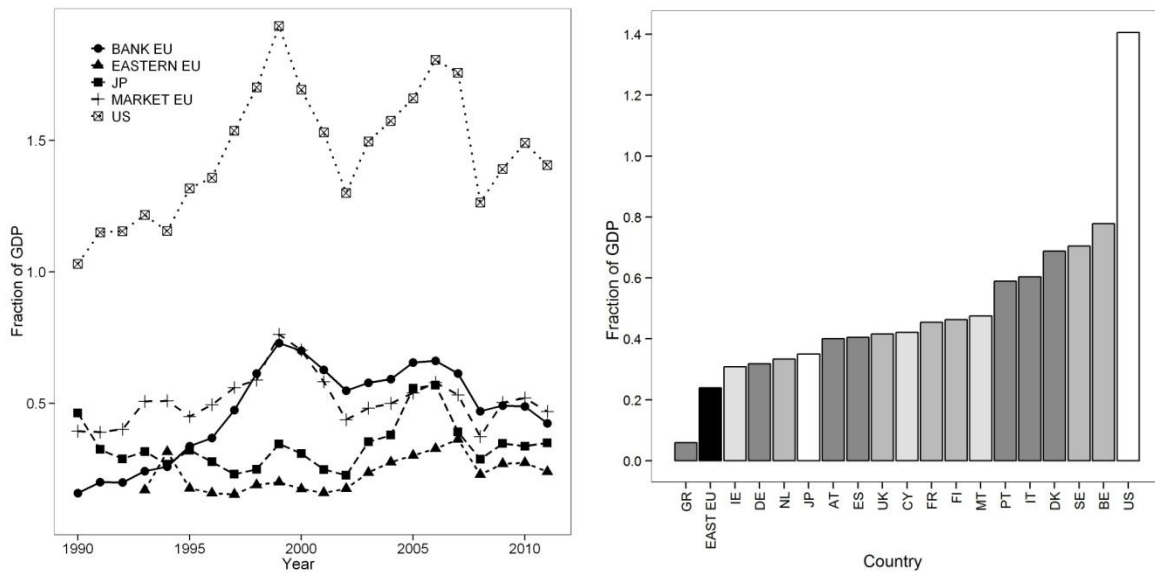
countries and MBEU countries are comparable, with the former seemingly somewhat below the other, which is in line with our classification of these groups, as in bank based countries, consumers hold more deposits with banks. Deposits in all countries seem to be rising since the onset of the financial crisis, but especially so in Japan.

**Figure 3.9: Household deposits as fraction GDP**



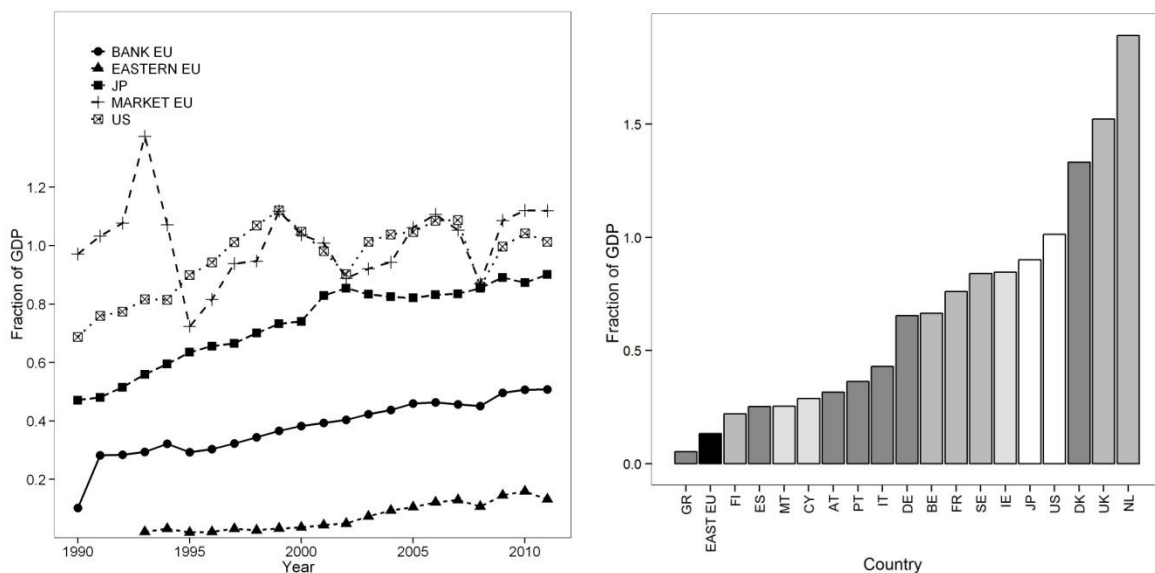
Holdings of shares and other equity have increased significantly in BBEU and MBEU between the beginning of the 1990s and 2000, as shown in figure 3.10. The trend, however, has stopped or reversed. Households in Eastern Europe hold virtually no shares or other equity.

**Figure 3.10: Household shares and other equity as fraction GDP**



The ordering of groups is now reversed with the US scoring highest and Japan scoring lowest, in accordance with these countries' market-based and bank-based natures. BBEU, however, scores somewhat higher than MBEU, which seems counterintuitive. As shown in figure 3.11, especially in the UK and in the Netherlands, insurance and technical reserves are considerable. To a considerable extent, these consist of equity holdings.

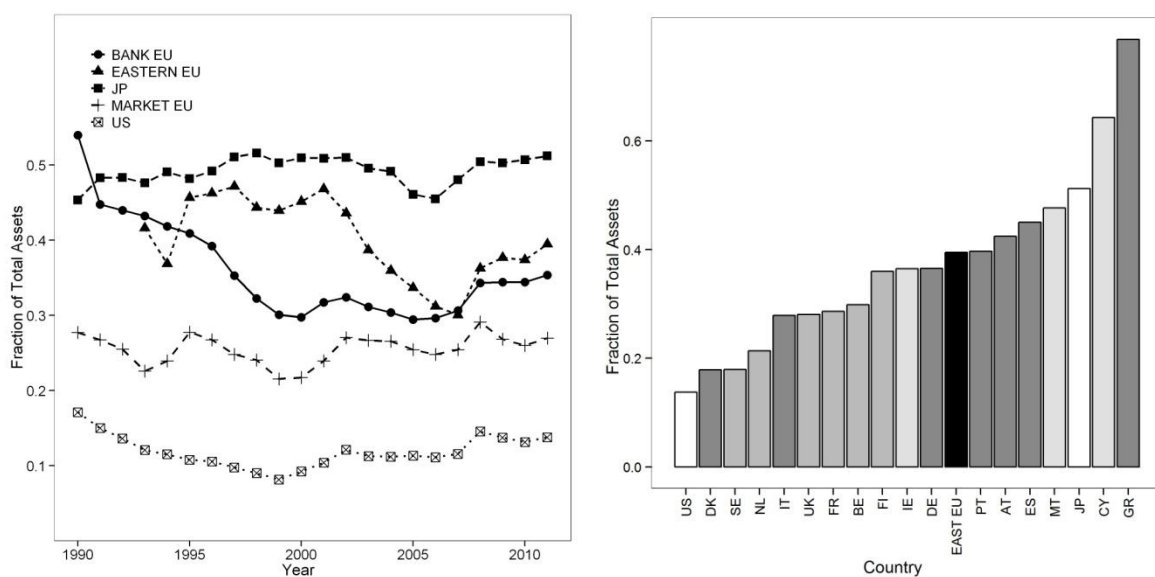
**Figure 3.11: Household insurance and technical reserves as fraction GDP**



We now turn to the relative importance of the different channels. As an indicator of the relative importance of bank intermediation, we consider the size of households' bank deposits relative to total household financial assets. Compare first again the main three regions. Japan

still scores highest. In 2011, 51% of Japanese households' financial assets consisted of bank deposits. The difference between bank based and market based countries becomes more pronounced, which becomes especially clear in the bar plot. The real shift can be seen with Eastern European countries. While consumers in these countries have relatively low total financial assets, they hold a large fraction of them in the form of deposits. Deposits rose in all regions in the period 2006-2008. After that, however, the level of deposits increased in Eastern EU and BBEU, stayed constant in Japan, and decreased in MBEU and the US.

**Figure 3.12: Household deposits as fraction of total financial assets**

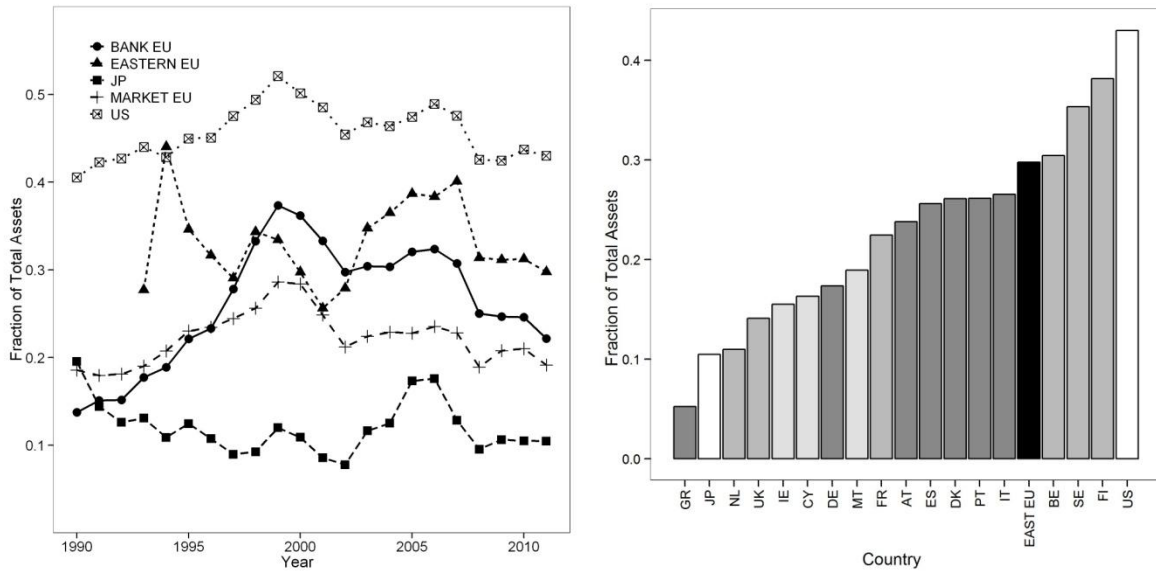


Looking at shares and other equity in household portfolios more or less gives the reverse image for the three regions, as shown in figure 3.13. In 2011, US households hold 43% of their financial assets in equity, for Japan we find a low figure of 10% and again the EU is in between at 21%. For individual countries within the EU, we have a different break-up. The highest shares of equity in household portfolios are found in Eastern European countries. Romania and Estonia both have 52%, while Finland, Spain, Lithuania and Poland all have figures in excess of 40%. At the lower percentage end we find Slovakia, the UK and the Netherlands. The reason for these latter two countries' appearance is that in both the UK and the Netherlands, households have much capital in insurance reserves, the third category we consider.

Between 2007 and 2009, shares and other equity as a fraction of other financial assets decreased for all regions. Household insurance and technical reserves have been on the rise in

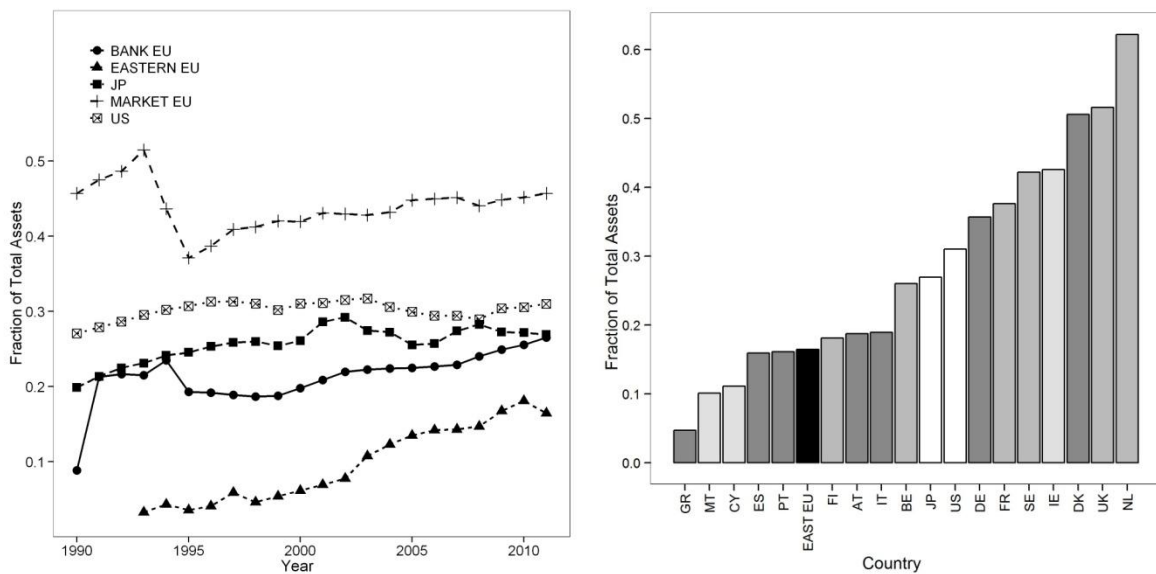
all regions since 1995, except for Japan which declined steadily between 1990 and 2002. The relative position of all regions remains stable throughout the crisis. The gap between the US and all EU regions, however, is slightly increasing.

**Figure 3.13: Household shares and other equity as fraction other financial assets**



Again BBEU and MBEU are situated counter intuitively, but this can once more be explained by looking at household insurance and technical reserves.

**Figure 3.14: Household insurance and tech. reserves as fraction total financial assets**



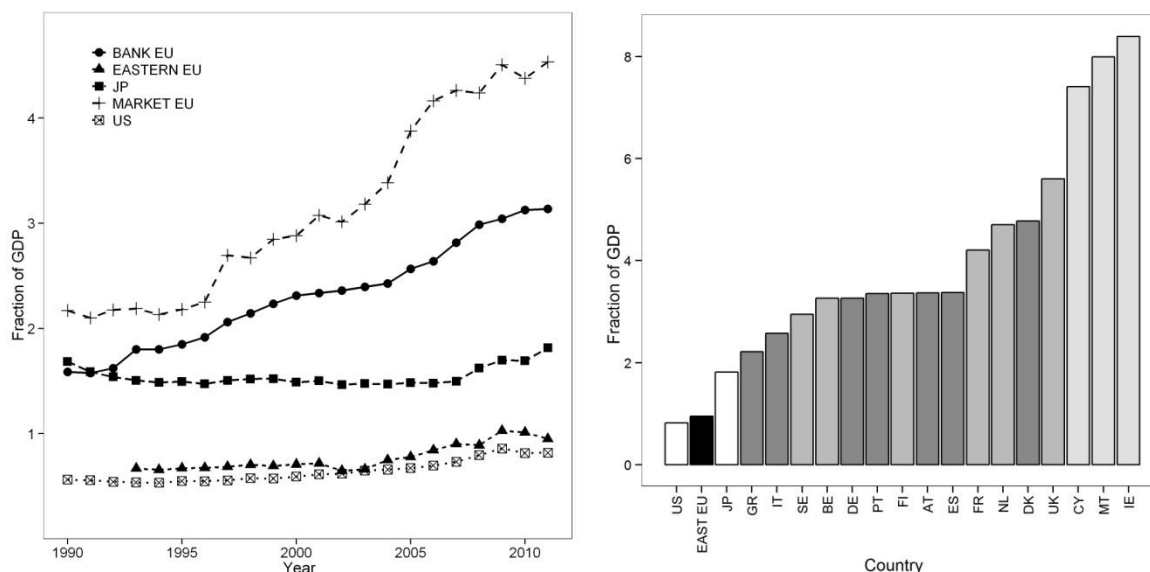
### 3.3 Structure of the banking sector

Banks provide an important channel of intermediation. But even among countries that have a comparable share of bank intermediation, the structure of the banking sector may differ very much, in terms of size, ownership structure, importance of foreign markets, and competitive parameters. In this section we describe these differences in some detail.

#### 3.3.1 Bank assets

Figure 3.15 below shows the developments between 1990 and 2011 for our four groups of European countries, Japan and the US. In accordance with the size of bank credit to the private sector, the US has a relatively small banking system (82% of GDP in 2011) compared to BBEU (314% in 2011), or MBEU (465% GDP in 2011), while Japan is located in between (182% of GDP in 2011).

**Figure 3.15: Total banking assets as fraction of GDP**



Banking assets in Europe have increased substantially as a percentage of GDP, with the exception of Eastern Europe. In MBEU the figure has doubled, while for the European outlier countries banking assets have grown massively, resulting in the top positions in 2011. In general, the banking sector in the new member states in Eastern EU is still relatively small. These countries are making the transition towards a more developed financial system (see eg Allen, Bartiloro and Kowalewski, 2005 and ECB, 2005). In contrast, for the US and Japan the ratio has stayed relatively flat. Growth has slowed down but not reversed since the financial

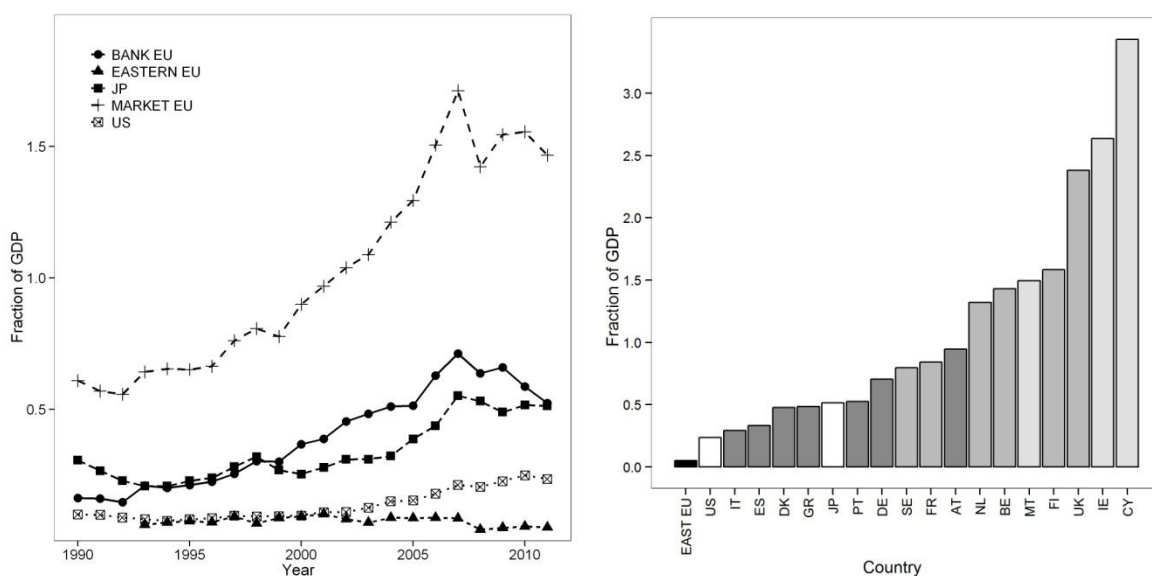
crisis. The size of the banking sector seems somewhat more volatile in MBEU compared to BBEU, US or Japan.

Paradoxically, more market oriented countries also have the largest banking sectors. For instance, the UK, the Netherlands and France have a large banking sector with assets exceeding 4 times GDP in 2011. As we discuss below, this may be related with the large cross-border activity of banks in market-based countries. Within Europe, there is substantial variation in the size of the banking sector. For example, in 2011, banking assets as a percentage of GDP range from 67% for Romania to 840% for Ireland (with Luxembourg the outlier at banking assets of over 25 times its GDP). The bar-plot shows this more clearly.

### 3.3.2 Cross-border links

Banking systems in different countries also differ in terms of how internationally they operate. Figure 3.19 below compares foreign assets of banks as a percentage of GDP for the EU groups of countries, Japan and the US. Growth has been particularly fast in MBEU (as well as in the outlier countries) and much less so in BBEU. In addition, after the financial crisis the trend has reversed, showing the partial withdrawal of banks within their national borders. In particular, in Eastern Europe, banks have virtually no foreign assets. The high score of Europe relative to the US and Japan indicates the importance of intra-European banking activity. A similar picture emerges when looking at the banks' liability sides.

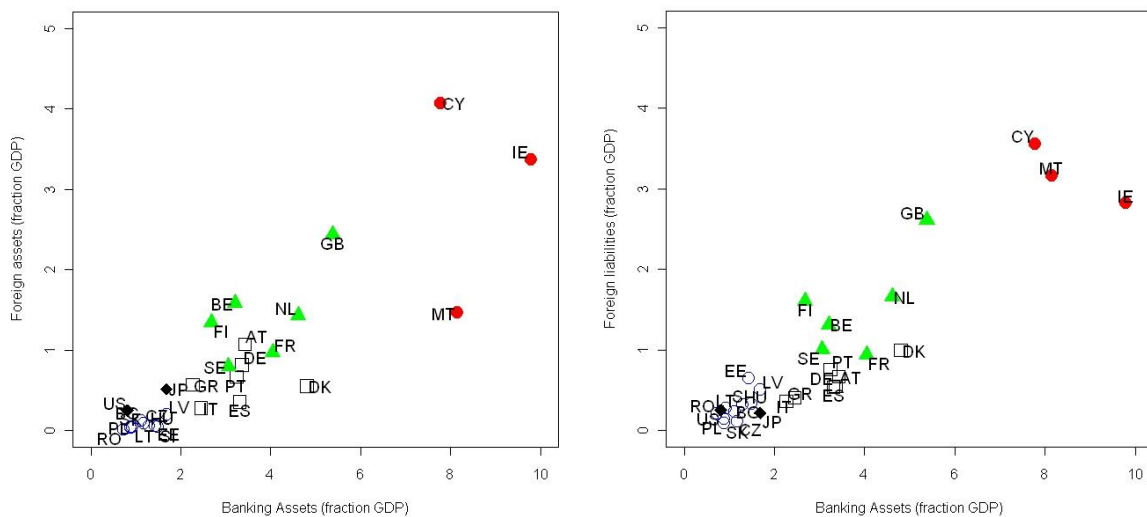
**Figure 3.16: Cross-border assets as a fraction of GDP**



Disaggregating these figures reveals the large diversity within Europe. Figures for 2011 range from 4% for Slovakia, 29% for Italy, to 263% for Ireland and more than 1200% for Luxembourg (not shown).

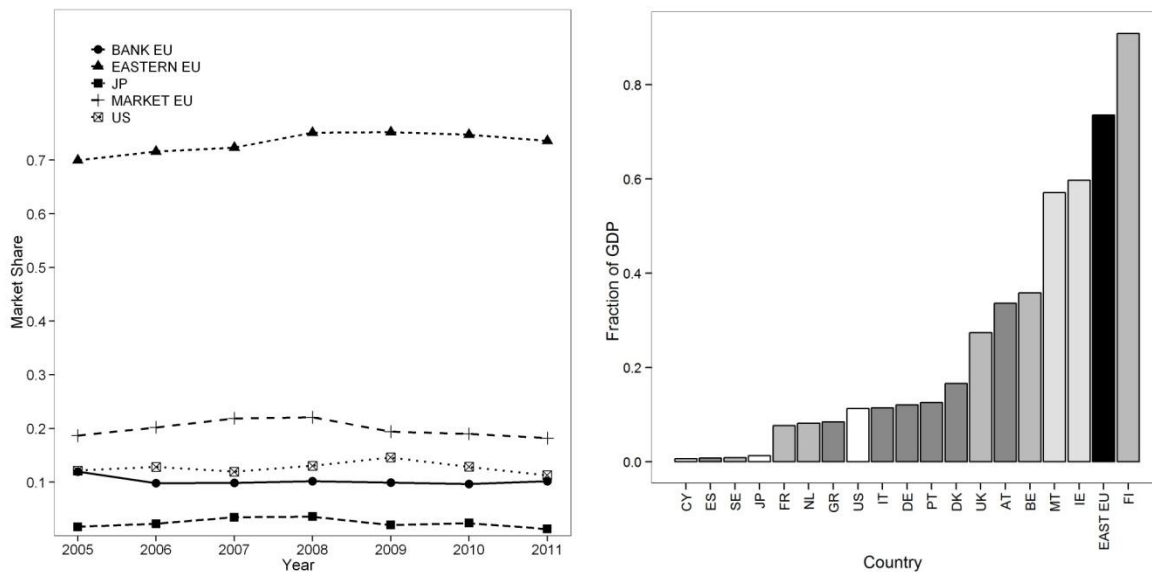
As the correlation plots below clearly show, banking systems with large total assets relative to GDP tend to have large foreign assets and large foreign liabilities too. This suggests that countries with large financial sectors function as hubs through which international capital markets finance international investments.

**Figure 3.17: Correlation banking assets and foreign assets / liabilities**



Complementary to the level of foreign assets held by banks in a particular country, we can also look at the market penetration of foreign banks in different countries for the period 2005-2011. Like the previous indicator, it is a measure of the openness of the banking system, but now on the receiving side. The market share of foreign banks in Eastern European countries stands out with around 70% (even 97% in the Czech Republic and Estonia). The banking system in these countries is practically owned by foreign banks. Comparing the groups also shows that MBEU is on average more open to foreign banks than BBEU, as expected, although there are exceptions like Sweden (market-based, 0.8%) or Austria (bank-based, 34%). Market penetration of foreign banks is very low in Japan, at 1.3%. The US also scores relatively low with 11% market share of foreign banks. These market shares are quite stable over this period, although they exhibit a slight decline after the 2007-2008 financial crisis.

**Figure 3.18: Market share foreign-owned banks**

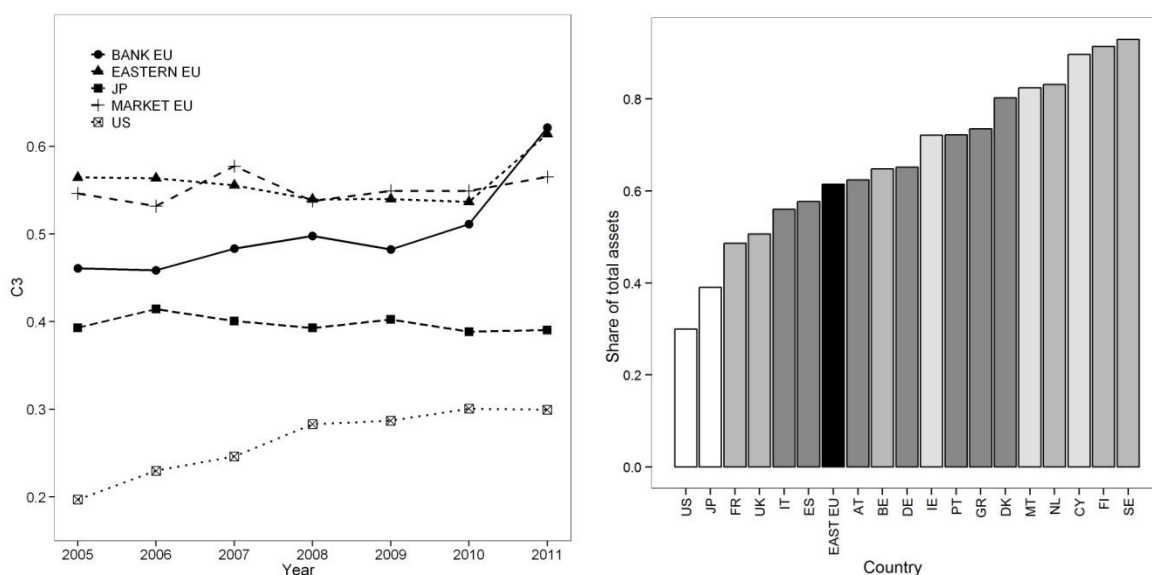


### 3.3.3 Concentration and ownership

Focusing next on the structure of the internal banking sector, we consider concentration and types of bank ownership. We start by simply looking at the C3 (market share of the three largest banks) in the various regions (table B.20 lists figures per country). The level of concentration in the various European regions is broadly similar, although there is quite some heterogeneity among European countries. In comparison, concentration levels in the US and Japan it is relatively low.

**Figure 3.19: Market share of three largest banks (C3)**

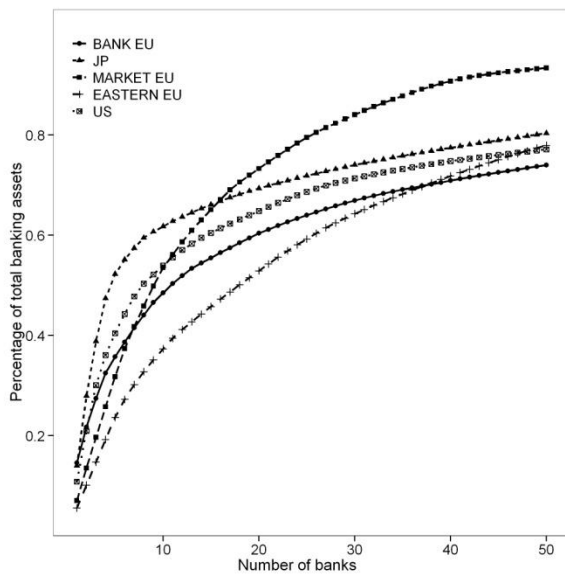




For every individual European country the banking sector is more concentrated than in the US, with substantial variation in the levels of concentration within Europe. The C3-ratio for instance, is 30% for the US, 39% for Japan, and ranges from 44% in Poland, 50% in the UK to 100% in Estonia. Looking at the HHI (Hirschmann-Herfindahl Index) competition measure gives similar results, see table B.20 in appendix B.

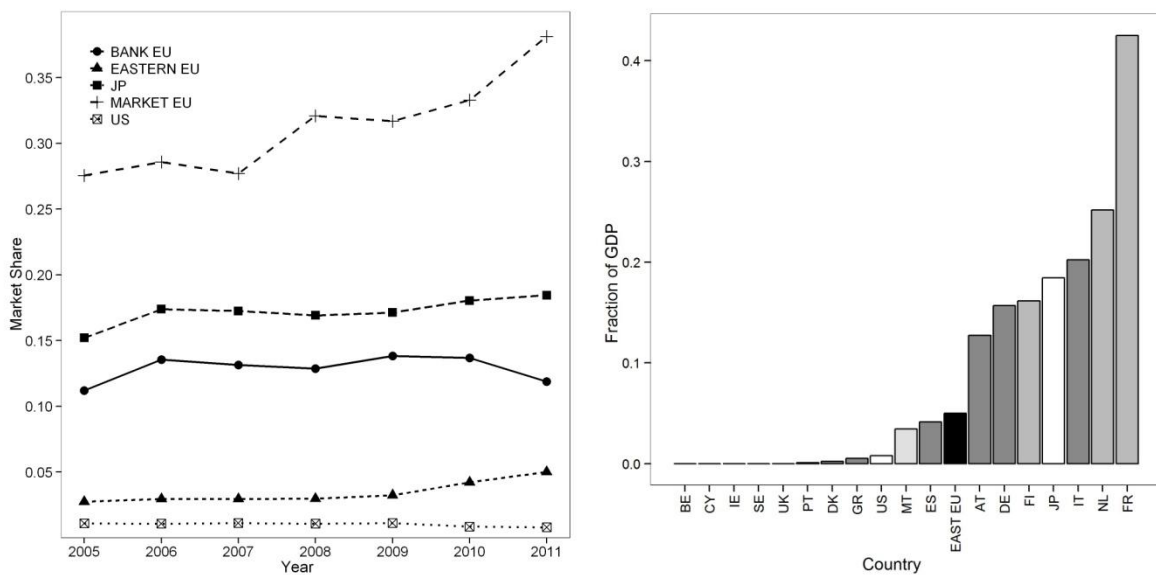
This may, however, reflect the more geographically integrated nature of financial markets within the US or Japan. Figure 3.20 below therefore shows the cumulative distribution in 2010 for the 25 largest banks in the EU, the US, and Japan. For Japan the 10 largest banks have more than 60% of all banking assets, in the US this figure lies around 50%, while in the EU regions it is generally lower. If the banking sector in Europe were truly European in nature, concentration levels in Europe would compare favorably to those in the US.

**Figure 3.20: Cumulative size distribution banks**



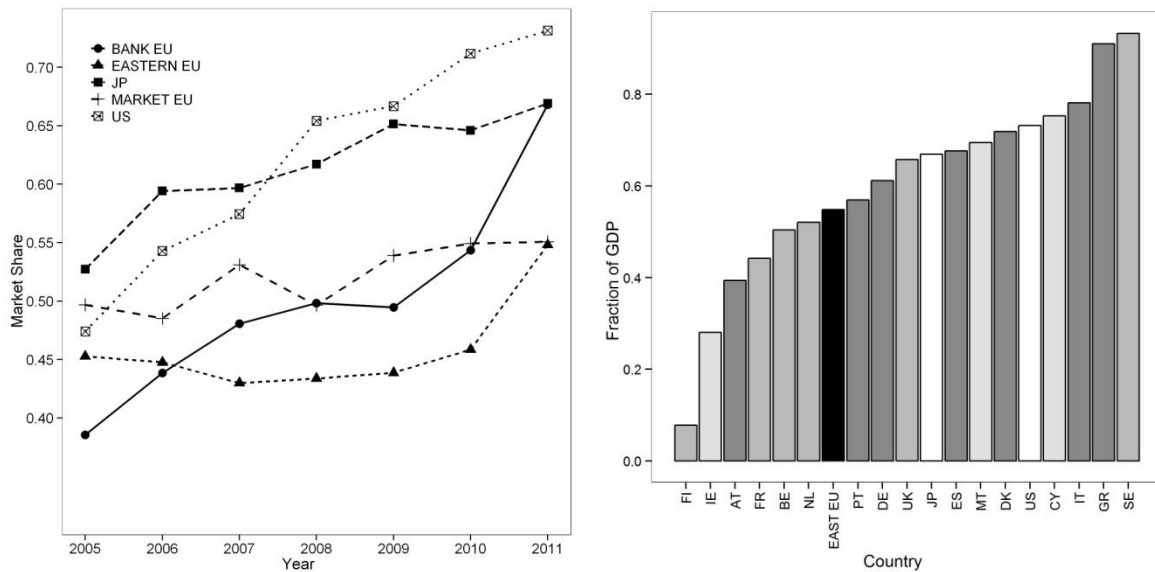
In terms of ownership structure of banks, we consider market share of cooperative banks and market share of listed banks. Cooperative banks are not listed. They have a large market share in France (43%), Netherlands (25%), Italy (20%), and Japan (18%), Germany (16%) Finland (16%), while they hardly have any market share in for instance the US or the UK. While the relative position of the US and Japan conforms to intuition, cooperative banks play a larger role in MBEU as compared to BBEU. This is mainly driven by France, and shows that some countries have more mixed indicators than others.

**Figure 3.21: Market share of cooperative banks**



Listed banks' market shares are large in most systems, and have been rising since 2005. The United States (73%) are currently on top but have been behind Japan before 2007. Within the EU the picture is mixed, with France and Belgium on the low end, while Italy and Greece score at the high end. Indeed, BBEU scores higher than MBEU. The market share of listed banks seems to rise quite steadily.

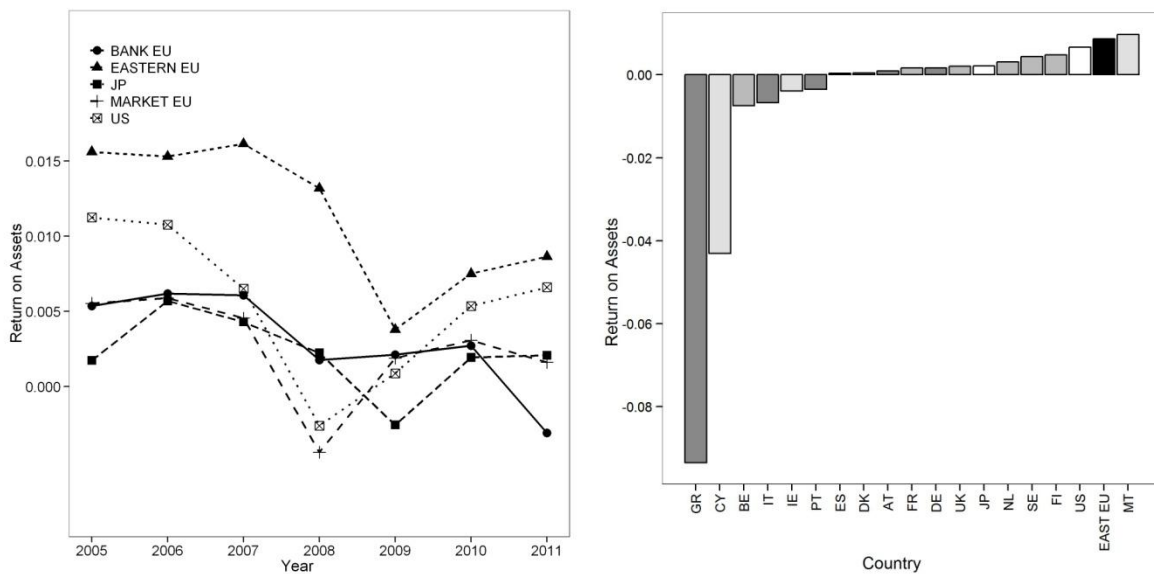
**Figure 3.22: Market share of listed banks**



### 3.3.4 Profitability

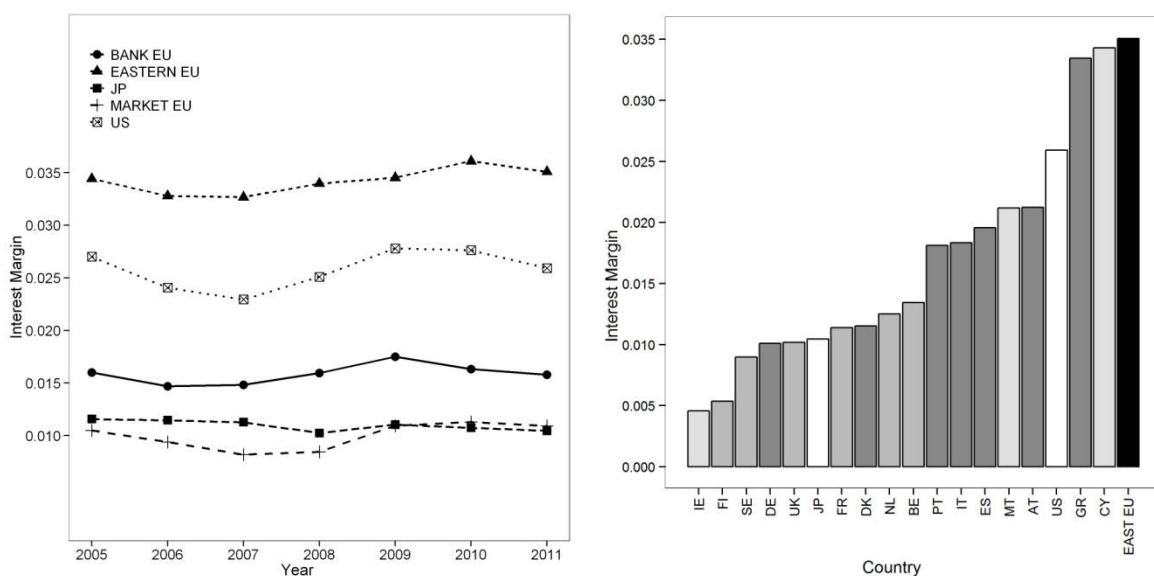
We now turn to profitability of banks as captured by pre-tax ROA and the Net interest margin. Banks in the US are more profitable on both measures as compared to old member states. Within Europe there is a clear divide between new member states and old member states. Banks in new member states are more profitable than banks in old member states. There is a large dispersion among countries, however. For Japan, the numbers are comparable to those in the old EU member states. Interestingly, the return on assets dropped faster in MBEU during the 2007-2008 financial crisis compared to BBEU, but also recovered faster.

**Figure 3.23: Return on assets**



While the net interest margin of BBEU is generally higher compared to the interest margin in MBEU, return on assets is on average quite similar. When we look in more detail, we see that MBEU (Netherlands, France, Belgium, UK) have a somewhat higher return on assets. This suggests that other income sources are more important for countries in BBEU.

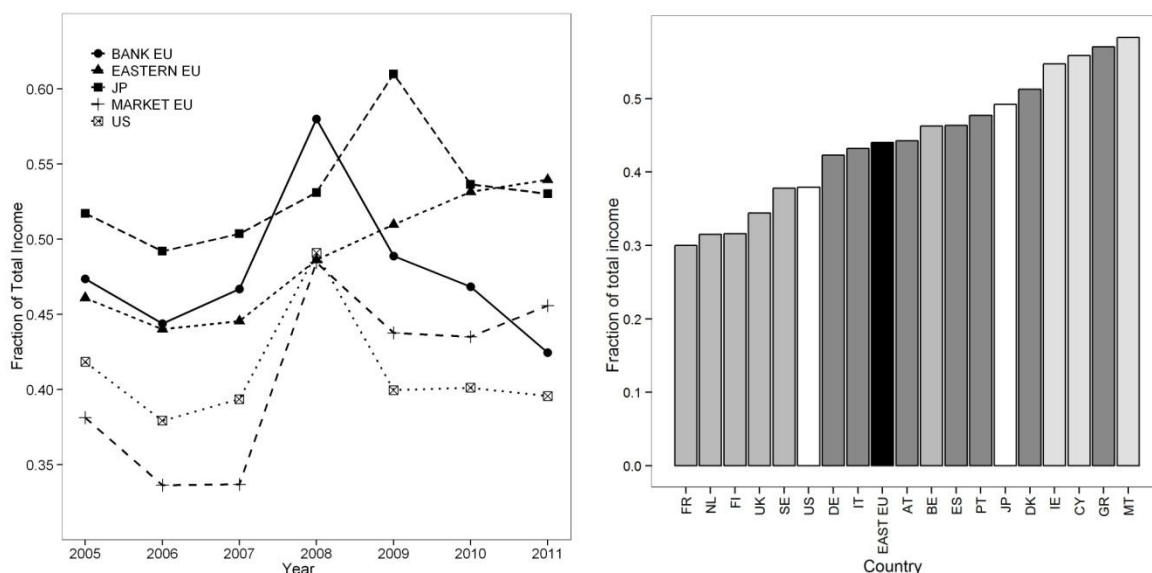
**Figure 3.24: Net interest rate margin**



This is indeed borne out when looking at interest revenue as a fraction of bank income shown in figure 3.28. The bar plot on the right-hand side illustrates this for 2006, just before the

crisis.<sup>15</sup> For most years the level in BBEU exceeds that in MBEU. As interest revenue is fairly stable during the crisis, it is also apparent that other sources of income were more severely hit by the 2007-2008 financial crisis.

**Figure 3.25: Interest revenue as a fraction of bank income (RHS for 2006)**



#### 4. Concluding remarks

We analyse the financial structures of European countries, and compare these to those of Japan and the United States. We do so by exploring a large number of indicators, including not only traditional indicators such as bank credit to the private sector, or stock market capitalisation, but also measures such as the activity of private equity markets, the development of corporate bond markets, the issuance of listed equity and the prevalence of mergers and acquisitions.

Although performance against individual indicators is mixed for all countries, we find that by looking at the overall performance of countries on all indicators, we can assign countries into groups that share common performance across these indicators. For Europe, we distinguish the eastern European accession countries that generally have smaller sizes of both banking sectors and financial markets than those of the old EU15 member states. Within the latter set of countries, we identify a group of market-based and a group of bank-based countries. The

<sup>15</sup> We make an exception in showing 2006 data instead of 2011 in the bar plot because income is relatively volatile.

distinctions among these two groups are driven in particular by dimensions that are associated with equity capital financing, such as stock market activity, venture capital investments and openness of the economy to foreign capital. In these respects, market-based countries are more similar to the US. Also, in EU bank-based countries, as well as in Japan, household deposits generally make up a more significant share of total household assets, as would be expected. On the other hand, differences in bank lending between market-based and bank-based EU countries are less pronounced, whereas in the US bank lending is much lower.

A more paradoxical observation is that it is the EU market-based countries that have the larger banking sectors. Generally, in European countries, banking assets are much larger, relative to GDP, than in the US and Japan. But also banking sectors in market-based Europe are much larger than those in bank-based countries. In a large part this seems to be driven by the cross-border activity of banks in market-based countries: both foreign assets and liabilities are much larger in these countries than in their bank-based neighbours. Perhaps the same characteristics that make market-based countries more accessible for providers of equity capital also allow their banks to play a role as financial hubs through which international capital markets finance international investments. Also the source of banks' income for banks in market-based countries is qualitatively different from that in bank-based countries: in market-based countries, bank operating income is more reliant on other sources than the interest margin.

Following the onset of the financial crisis, many of the indicators have declined (though less so in Japan) and hence in Europe, some convergence among bank-based and market-based countries has taken place for many indicators, while markets in the US appear more resilient in some respects.

We do see some signs that in particular in the US, issuance of securities (both debt and equity) has offset some of the decline in bank lending to firms. In both market-based EU and bank-based EU there was a marked increase in bond issuance from 2008 to 2009 and this increase was twice as large in the market-based group.

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## Appendix A - Grouping of countries using PCA

Although the countries differ on each individual characteristic, these differences may be correlated among groups of indicators. We want to identify which 27 European Union individual member states financial systems are more alike, with more strongly correlated indicators, and on which indicators there is independent dispersion. For this, we use Principal Components Analysis (PCA), which finds those linear combinations of indicators that capture the largest amount of cross-country variance. By keeping a limited number of linear combinations of such correlated indicators (the principal components), we can reduce the dimensionality of the problem of finding related groups of countries.<sup>16</sup> Algebraically, this decomposition for country  $i$  is formulated as follows

$$\text{Characteristics}_i = \text{Score}_{i1} * \text{Component}_1 + \text{Score}_{i2} * \text{Component}_2 + (\text{Other Components})$$

We then use using K-means clustering on the first two principal components to determine which countries can be clustered into groups.<sup>17</sup>

In our PCA analysis, we use the following indicators, using data for the year 2006, the year previous to the financial crisis, to prevent the crisis from distorting our classification:

- banking assets relative to GDP,
- household deposits as a percentage of GDP,
- household shares and other equity as a percentage of GDP,
- foreign assets of banks as a percentage of GDP,
- credit to non-financial firms as a percentage of GDP,
- corporate bonds outstanding as a percentage of GDP,
- total stock market capitalisation as a percentage of GDP,
- venture capital investment as a percentage of GDP.

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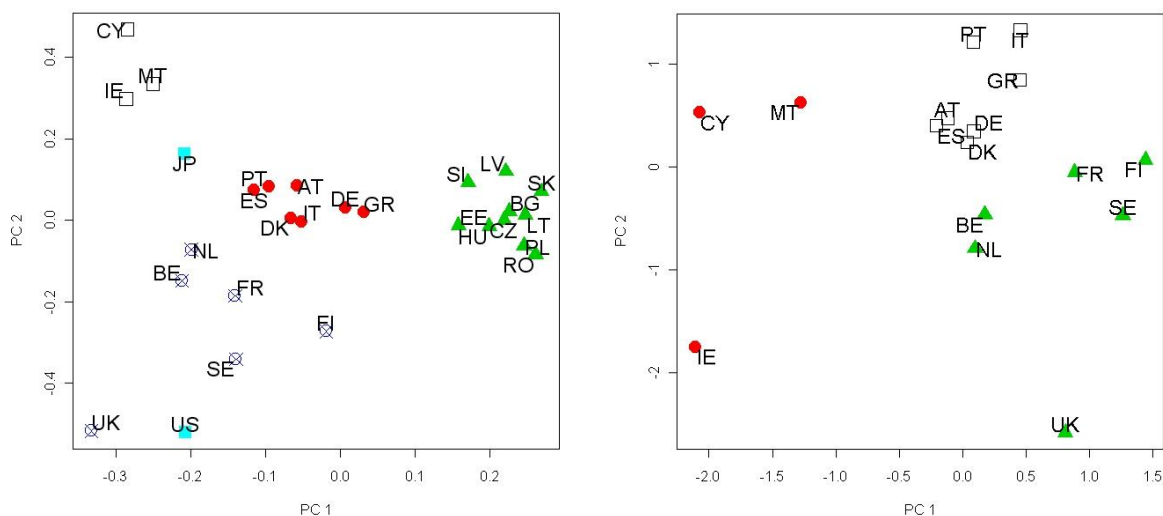
<sup>16</sup> As is standard in PCA analysis with large variation in the dimensions of different variables, we normalise the variances to one.

<sup>17</sup> K-means clustering partitions observations into groups where each observation belongs to the group with the nearest mean. It requires specification how many clusters there are. A recursive algorithm then determines which countries fall in the same group.

As a first step, the figure below shows the clustering of countries in the first two principal components (indicated by the differently shaped point in the plot) if we use all EU27 countries, except for Luxembourg, and use K-means on the first two principal components. Luxembourg is a definite outlier on most dimensions. We ignore it from the start to prevent distortion of the principal components. Because Luxembourg creates relatively large fraction of variation in the sample, the first principal components would be biased towards its indicators, as PCA extracts those dimensions that capture the largest variance.

The eastern European countries are clearly identified as one group. These countries are associated with high profitability, a large fraction of foreign banks, small banking sectors, low levels of household deposits relative to GDP. This should not come as a surprise, as the financial sectors in these countries differ strongly from those in ‘old’ member states, in line with previous findings by eg Allen *et al* (2005).

**Figure A.0.1 PCA - all EU27 (LHS) and EU27 without Eastern Europe (RHS)<sup>18</sup>**



Because we want to focus on the variation in countries with well-developed financial sectors that are not clear outliers, in the second stage of our analysis we leave out all eastern European countries as well as Luxembourg. Including countries that are so clearly different from the rest, biases the principal components towards those indicators that distinguish these outlier countries. The resulting grouping is shown on the right-hand side of figure A.1. Table

<sup>18</sup> Excluding Luxembourg

A.1 below summarises the grouping that we find. We call group one market based financial Europe, group two bank-based Europe, while group three consists of eastern European countries that entered the EU more recently, and group four comprises the outliers Ireland, Cyprus, and Malta.

**Table A.1      Groups of countries within Europe**

<b>Group 1 (Market Based EU)</b>	BE	FR	FI	NL	SE	GB				
<b>Group 2 (Bank based EU)</b>	AT	ES	GR	DE	DK	PT	IT			
<b>Group 3 (Eastern Europe)</b>	BG	CZ	EE	HU	LV	LT	PL	SI	SK	RO
<b>Group 4 (Outlier)</b>	CY	MT	IE							

To check robustness of this grouping we slightly adapt the PCA starting from our original analysis. following dimensions - year of reference, the number of components underlying the clustering analysis, and the indicators included.

**Figure A.0.2 Robustness checks PCA**

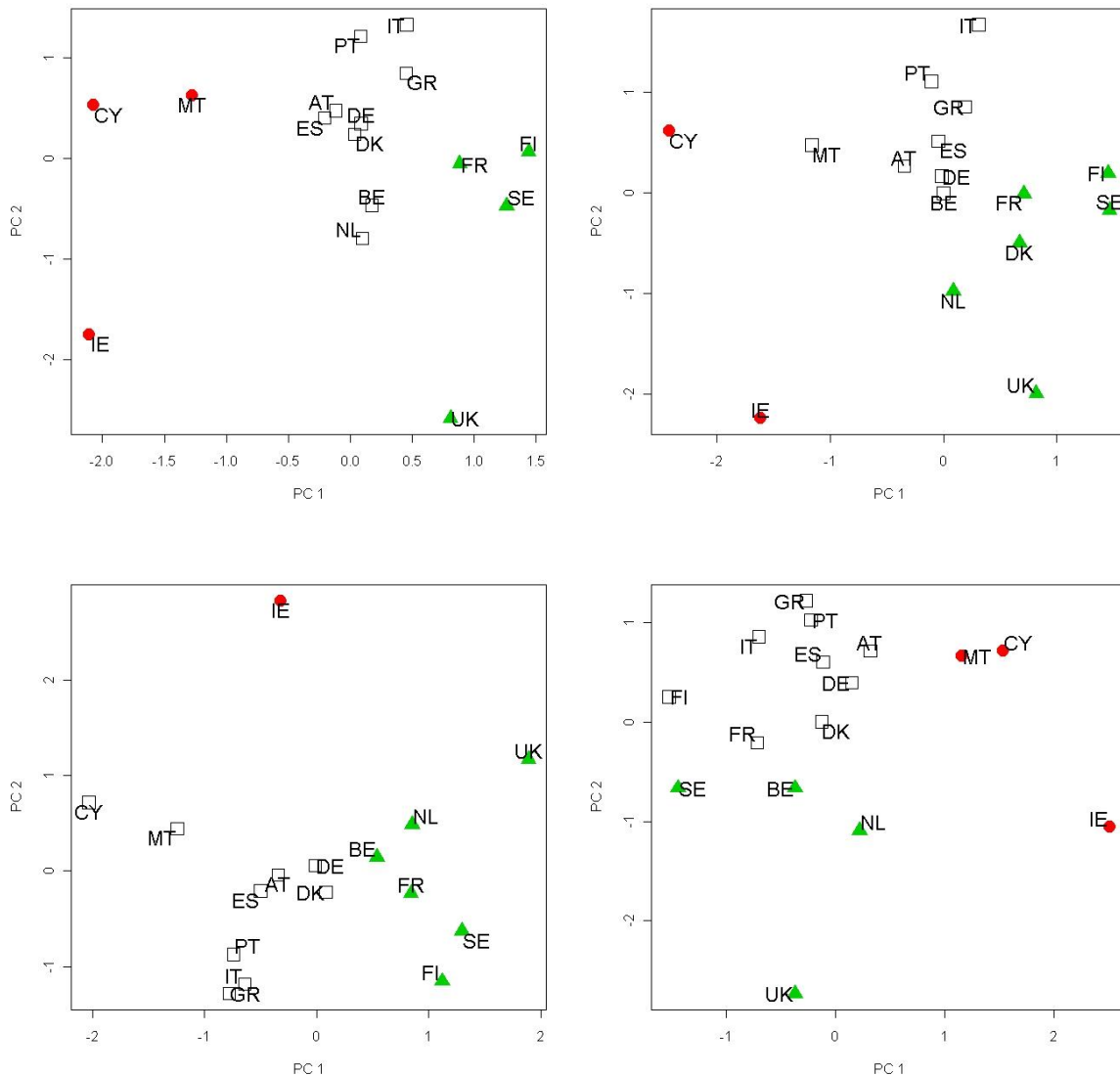


Figure A.2 above shows how the clustering of countries changes if we subsequently cluster countries using just the first principal component (top - LHS), if we use reference data for the year 2005 instead of 2006 (top - RHS), if we include concentration measure C3 and Net Interest Margin as two additional indicators (bottom - LHS), or if we measure household deposit and equity relative to household total assets instead of GDP (bottom -RHS). Note that the axes (ie the principal components themselves) cannot be compared because their meanings in terms of indicators differ among these four variants. We conclude that the following countries switch groups: Belgium (two switches), France (one switch), the Netherlands (one switch), Cyprus (one switch), and Malta (two switches). The other countries are robust to these changes in the PCA analysis.

## Appendix B - Data

**Table B.1: Bank credit to the private sector as fraction GDP (Source: IMF Financial statistics, World Bank)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	0,93	0,96	1,02	-	0,99	1,03	1,05	1,05	1,05	1,06	1,16	1,16	1,15	1,20	1,27	1,22	1,20
Belgium	0,73	0,75	0,76	-	0,81	0,78	0,76	0,74	0,74	0,71	0,74	0,82	0,91	0,94	0,97	0,95	0,93
Bulgaria	0,40	0,70	0,10	0,10	0,12	0,12	0,15	0,19	0,26	0,35	0,41	0,45	0,63	0,72	0,76	0,74	0,72
Cyprus	1,21	1,31	1,39	1,43	2,11	2,12	2,14	2,06	2,06	2,08	2,10	2,23	2,50	2,52	2,70	2,84	2,98
Czech Republic	0,68	0,66	0,68	0,59	0,54	0,47	0,39	0,30	0,30	0,31	0,35	0,39	0,46	0,51	0,52	0,53	0,56
Denmark	0,31	0,32	0,32	0,35	0,35	1,35	1,43	1,45	1,52	1,58	1,72	1,86	2,03	2,16	2,23	2,16	2,09
Estonia	0,16	0,22	0,32	0,32	0,32	0,36	0,39	0,45	0,51	0,61	0,70	0,83	0,91	0,96	1,07	0,99	0,85
Finland	0,62	0,59	0,53	0,52	0,53	0,53	0,56	0,58	0,64	0,68	0,75	0,79	0,82	0,86	0,94	0,95	0,96
France	0,86	0,83	0,82	-	0,82	0,85	0,88	0,86	0,89	0,91	0,93	0,98	1,06	1,09	1,12	1,14	1,16
Germany	1,00	1,06	1,11	1,17	1,16	1,19	1,19	1,18	1,16	1,13	1,13	1,10	1,05	1,09	1,13	1,08	1,05
Greece	0,30	0,31	0,32	0,34	0,42	0,47	0,57	0,61	0,65	0,71	0,80	0,85	0,94	0,98	0,94	1,16	1,18
Hungary	0,22	0,22	0,24	0,24	0,26	0,32	0,33	0,35	0,43	0,46	0,51	0,56	0,63	0,70	0,70	0,69	0,65
Ireland	0,70	0,73	0,82	0,87	1,01	1,05	1,09	1,08	1,14	1,33	1,59	1,80	1,99	2,20	2,35	2,15	2,08
Italy	0,56	0,54	0,55	0,58	0,70	0,76	0,77	0,80	0,83	0,85	0,89	0,94	1,01	1,05	1,11	1,23	1,22
Latvia	0,08	0,07	0,11	0,15	0,16	0,19	0,26	0,33	0,40	0,51	0,68	0,88	0,89	0,90	1,05	0,99	0,83
Lithuania	0,15	0,11	0,11	0,12	0,14	0,13	0,14	0,16	0,23	0,29	0,41	0,50	0,60	0,63	0,70	0,64	0,54
Luxembourg	0,86	0,87	0,93	-	-	1,02	1,29	1,04	1,03	1,06	1,29	1,55	1,85	1,84	1,87	1,85	1,70
Malta	0,86	0,95	0,96	1,01	1,06	1,05	1,12	1,08	0,99	1,06	1,06	1,15	1,17	1,24	1,34	1,33	1,34
Netherlands	0,93	0,99	1,05	-	1,25	1,34	1,35	1,41	1,48	1,58	1,65	1,67	1,88	1,93	2,15	1,99	1,98
Poland	0,17	0,19	0,21	0,23	0,26	0,27	0,27	0,27	0,28	0,28	0,29	0,33	0,39	0,50	0,50	0,52	0,55
Portugal	0,63	0,70	0,78	0,89	1,09	1,26	1,33	1,36	1,35	1,36	1,41	1,52	1,62	1,74	1,87	1,91	1,92
Romania	-	0,11	0,08	0,12	0,08	0,07	0,09	0,10	0,14	0,16	0,20	0,26	0,35	0,46	0,47	0,46	0,45
Slovakia	0,36	0,43	0,56	0,53	0,54	0,51	0,37	0,39	0,32	0,30	0,35	0,39	0,42	0,45	-	-	-
Slovenia	0,25	0,26	0,26	0,30	0,33	0,36	0,38	0,39	0,41	0,48	0,56	0,66	0,79	0,85	0,93	0,94	0,91
Spain	0,72	0,73	0,78	0,85	0,90	0,98	1,01	1,06	1,13	1,25	1,46	1,67	1,88	2,03	2,12	2,14	2,04
Sweden	0,97	0,96	0,97	0,97	0,98	0,42	0,98	0,99	1,00	1,01	1,08	1,13	1,21	1,28	1,36	1,36	1,36
United Kingdom	1,13	1,17	1,17	1,16	1,18	1,29	1,34	1,38	1,43	1,51	1,60	1,71	1,87	2,12	2,14	2,03	1,88
EU	0,85	0,86	0,88	0,91	0,94	1,00	1,03	1,04	1,06	1,09	1,15	1,21	1,29	1,36	1,41	1,40	1,36
Japan	1,79	1,79	1,88	1,96	1,96	1,91	1,12	1,04	1,00	0,97	0,99	0,98	0,97	1,02	1,06	1,03	1,05
United States	0,48	0,48	0,48	0,49	0,49	0,51	0,52	0,52	0,53	0,55	0,57	0,59	0,62	0,62	0,59	0,57	0,55

**Table B.2: Bank credit to non-financial firms as fraction GDP (Source: ECB bank balance sheet data, FRB commercial banks balance sheet data, Bank of Japan loan data)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	-	-	-	-	-	-	-	-	0,58	0,49	0,49	0,50	0,51	0,55	0,56	0,56	0,55
Belgium	-	-	-	-	-	-	-	-	0,31	0,30	0,30	0,30	0,33	0,35	0,33	0,31	0,31
Bulgaria	-	-	-	-	-	-	-	-	-	0,23	0,25	0,26	0,38	0,44	0,45	0,45	0,44
Cyprus	-	-	-	-	-	-	-	-	-	-	0,80	0,84	1,01	1,29	1,38	1,38	1,46
Czech Republic	-	-	-	-	-	-	-	0,17	0,16	0,16	0,17	0,20	0,21	0,20	0,21	0,21	0,21
Denmark	-	-	-	-	-	-	-	-	0,43	0,45	0,48	0,52	0,58	0,64	0,65	0,61	0,58
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	0,45	0,50	0,45	0,38
Finland	-	-	-	-	-	-	-	-	0,24	0,25	0,26	0,27	0,28	0,33	0,33	0,33	0,34
France	-	-	-	-	-	-	-	-	0,34	0,34	0,36	0,37	0,41	0,44	0,44	0,43	0,44
Germany	-	-	-	-	-	-	-	-	0,38	0,36	0,35	0,35	0,35	0,38	0,38	0,36	0,35
Greece	-	-	-	-	-	-	-	-	0,34	0,34	0,36	0,35	0,39	0,43	0,40	0,52	0,53
Hungary	-	-	-	-	-	-	-	-	0,23	0,25	0,25	0,29	0,29	0,28	0,31	0,28	0,24
Ireland	-	-	-	-	-	-	-	-	0,46	0,57	0,66	0,81	0,92	1,03	1,02	0,68	0,64
Italy	-	-	-	-	-	-	-	-	0,44	0,44	0,45	0,49	0,53	0,56	0,57	0,57	0,57
Latvia	-	-	-	-	-	-	-	-	0,22	0,26	0,33	0,41	0,42	0,45	0,52	0,49	0,41
Lithuania	-	-	-	-	-	-	-	-	-	0,18	0,22	0,27	0,31	0,32	0,35	0,31	0,25
Luxembourg	-	-	-	-	-	-	-	-	1,42	1,23	1,23	1,23	1,36	1,67	1,58	1,40	1,25
Malta	-	-	-	-	-	-	-	-	-	-	0,69	0,77	0,79	0,87	0,91	0,86	0,84
Netherlands	-	-	-	-	-	-	-	-	0,45	0,46	0,46	0,47	0,52	0,55	0,60	0,59	0,61
Poland	-	-	-	-	-	-	-	-	-	0,15	0,13	0,13	0,16	0,15	0,17	0,15	0,15
Portugal	-	-	-	-	-	-	-	-	0,58	0,56	0,57	0,59	0,62	0,70	0,73	0,69	0,68
Romania	-	-	-	-	-	-	-	-	-	0,11	0,12	0,15	0,16	0,17	0,19	0,20	0,20
Slovakia	-	-	-	-	-	-	-	-	-	-	-	0,24	0,25	0,24	0,24	0,23	0,23
Slovenia	-	-	-	-	-	-	-	-	-	0,32	0,37	0,42	0,51	0,56	0,59	0,59	0,57
Spain	-	-	-	-	-	-	-	-	0,50	0,54	0,64	0,77	0,86	0,89	0,89	0,87	0,80
Sweden	-	-	-	-	-	-	0,48	0,46	0,44	0,43	0,44	0,47	0,50	0,49	0,56	0,54	0,53
United Kingdom	-	-	-	-	-	0,24	0,26	0,25	0,24	0,24	0,29	0,32	0,33	0,34	0,38	0,33	0,31
EU	-	-	-	-	-	0,24	0,29	0,27	0,38	0,37	0,39	0,42	0,45	0,48	0,49	0,47	0,46
Japan	0,85	0,85	0,83	0,85	0,84	0,82	0,81	0,78	0,75	0,72	0,71	0,71	0,71	0,74	0,81	0,78	0,81
United States	-	-	-	-	-	-	-	-	-	0,17	0,18	0,20	0,22	0,23	0,21	0,19	0,18

**Table B.3: Corporate bonds as percentage GDP (Source: BIS, domestic and international debt securities for non-financial corporations)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	4,00%	3,15%	3,24%	3,83%	5,15%	5,42%	5,59%	6,12%	9,22%	10,66%	11,20%	13,06%	17,30%	15,36%	20,78%	22,27%	24,61%
Belgium	7,11%	7,07%	7,08%	7,33%	4,38%	5,31%	7,11%	6,95%	9,08%	9,51%	6,57%	7,27%	7,66%	6,84%	12,79%	11,95%	12,62%
Bulgaria	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,40%	0,35%	0,44%	0,62%	0,59%	0,27%
Cyprus	1,64%	1,62%	1,70%	2,64%	2,58%	2,72%	2,60%	0,95%	0,76%	0,64%	0,59%	0,54%	2,49%	1,66%	1,64%	4,32%	4,55%
Czech Republic	0,77%	1,09%	1,28%	1,38%	1,87%	2,92%	2,95%	3,73%	3,60%	2,64%	1,99%	3,46%	4,17%	3,79%	6,99%	8,62%	9,12%
Denmark	3,71%	3,85%	3,61%	4,02%	3,86%	4,07%	3,59%	3,70%	3,84%	4,99%	5,20%	5,80%	5,20%	4,33%	5,48%	4,91%	4,44%
Estonia	0,00%	0,00%	0,00%	0,00%	0,18%	0,16%	0,14%	2,99%	2,69%	2,26%	3,01%	2,35%	2,01%	1,74%	2,24%	2,11%	3,05%
Finland	7,57%	7,05%	7,16%	7,50%	7,49%	9,61%	10,83%	12,22%	14,12%	13,59%	12,84%	13,81%	12,56%	9,33%	14,39%	14,41%	13,21%
France	11,76%	12,65%	12,46%	13,51%	15,25%	19,89%	23,02%	24,62%	25,23%	23,53%	20,06%	22,13%	22,28%	21,11%	25,96%	27,47%	26,11%
Germany	0,70%	0,69%	0,90%	1,08%	1,68%	3,51%	4,30%	5,80%	7,76%	8,42%	7,52%	8,73%	9,33%	11,60%	14,36%	14,61%	13,15%
Greece	2,07%	1,74%	1,50%	1,98%	2,19%	3,00%	2,79%	3,29%	4,52%	5,23%	6,72%	9,71%	10,49%	12,07%	13,25%	4,15%	3,65%
Hungary	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,35%	0,15%	0,96%	1,29%	1,21%	1,00%	1,29%	2,07%	1,95%
Ireland	0,77%	0,67%	1,40%	0,65%	0,76%	0,74%	1,06%	1,52%	2,01%	1,45%	1,36%	1,87%	1,63%	2,94%	5,55%	7,75%	6,82%
Italy	2,27%	2,10%	1,91%	2,05%	2,94%	3,90%	8,22%	12,03%	13,77%	14,76%	14,26%	15,94%	16,68%	18,74%	25,20%	22,70%	19,92%
Latvia	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%
Lithuania	0,00%	0,00%	0,00%	0,00%	0,00%	0,50%	0,29%	0,29%	0,00%	0,00%	0,00%	0,00%	0,00%	0,02%	0,00%	0,00%	0,00%
Luxembourg	6,55%	13,60%	14,67%	18,02%	16,31%	20,55%	34,76%	32,79%	35,83%	38,30%	28,80%	18,57%	17,06%	15,97%	44,17%	52,75%	54,41%
Malta	5,69%	5,58%	5,64%	11,93%	11,15%	10,50%	10,11%	8,75%	6,79%	20,91%	18,11%	16,97%	16,07%	13,80%	8,97%	6,96%	2,79%
Netherlands	6,78%	7,53%	8,43%	10,49%	12,93%	26,29%	27,28%	25,45%	23,36%	19,12%	15,76%	17,19%	17,39%	16,18%	23,56%	25,48%	24,89%
Poland	0,00%	0,02%	0,10%	0,09%	0,08%	0,04%	0,14%	0,14%	0,16%	0,14%	0,10%	0,10%	0,00%	0,06%	0,08%	0,08%	0,11%
Portugal	6,97%	8,39%	7,90%	9,44%	9,59%	9,95%	11,23%	14,44%	12,87%	13,56%	15,04%	19,55%	23,16%	21,21%	26,32%	26,07%	25,18%
Romania	0,00%	0,00%	0,03%	0,03%	0,04%	0,00%	0,60%	1,60%	1,38%	0,80%	0,48%	0,20%	0,00%	0,00%	0,00%	0,00%	0,00%
Slovakia	0,00%	0,95%	0,93%	2,59%	3,18%	4,20%	3,57%	4,01%	3,32%	2,15%	1,35%	0,93%	0,39%	0,33%	0,36%	0,34%	0,30%
Slovenia	0,00%	0,00%	0,00%	0,00%	0,00%	0,91%	1,12%	0,55%	0,59%	0,95%	1,48%	1,44%	1,34%	1,02%	2,28%	2,20%	1,97%
Spain	4,80%	3,93%	3,74%	3,95%	4,37%	4,82%	5,16%	4,86%	4,87%	4,47%	3,59%	3,79%	3,74%	2,85%	3,13%	3,18%	3,14%
Sweden	6,01%	5,61%	6,39%	8,32%	10,50%	12,12%	16,67%	16,19%	13,70%	12,65%	11,68%	12,43%	14,44%	11,88%	17,66%	14,48%	15,79%
United Kingdom	6,36%	6,82%	6,82%	8,16%	10,02%	11,92%	11,80%	12,07%	12,15%	10,71%	9,58%	11,02%	10,69%	10,92%	14,75%	13,96%	14,00%
EU	4,72%	4,87%	4,96%	5,66%	6,69%	9,12%	10,60%	11,68%	12,44%	11,97%	10,60%	11,84%	12,11%	12,30%	16,31%	16,05%	15,22%
Japan	13,12%	14,00%	13,51%	18,09%	18,16%	15,24%	16,03%	18,52%	19,24%	18,43%	16,82%	16,90%	18,15%	17,24%	16,61%	17,39%	16,88%
United States	22,70%	22,92%	23,63%	24,66%	25,34%	25,45%	26,35%	25,73%	25,52%	25,11%	24,72%	25,39%	26,95%	28,55%	30,81%	33,05%	34,76%

**Table B.4: Securitisation outstanding as percentage GDP (source: SIFMA, national central banks)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	0,26%	0,88%	1,27%	1,09%	1,13%	1,04%	0,83%	1,43%	1,67%	1,33%	1,72%	2,47%	14,17%	20,70%	23,06%	23,68%
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
France	-	1,02%	1,24%	1,16%	1,09%	1,12%	1,19%	1,34%	1,39%	1,36%	1,33%	1,42%	1,30%	1,63%	1,90%	1,85%	2,12%
Germany	-	0,03%	0,04%	0,16%	0,51%	0,72%	0,77%	0,84%	0,91%	0,99%	1,73%	2,99%	3,62%	4,83%	4,23%	3,79%	3,11%
Greece	-	0,10%	0,10%	0,10%	0,10%	1,04%	1,12%	0,95%	0,89%	1,07%	2,04%	4,27%	5,29%	9,89%	19,42%	17,71%	16,30%
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	0,64%	0,59%	1,19%	2,23%	3,51%	4,39%	3,33%	3,54%	2,63%	2,97%	8,04%	13,63%	30,67%	43,21%	48,54%	39,99%
Italy	-	0,11%	0,15%	0,24%	0,90%	1,76%	3,87%	5,39%	5,82%	6,63%	7,88%	8,23%	8,35%	11,97%	15,94%	14,69%	13,20%
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	0,07%	0,51%	0,94%	2,33%	3,88%	7,00%	10,18%	12,58%	13,20%	18,59%	22,99%	39,69%	45,14%	51,83%	55,38%	50,95%
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	0,28%	0,29%	0,47%	1,27%	1,58%	3,28%	4,83%	10,37%	13,25%	15,90%	17,13%	17,44%	21,70%	28,07%	33,88%	31,31%
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	0,49%	0,67%	1,11%	2,06%	2,91%	3,49%	4,83%	6,29%	8,29%	10,81%	14,76%	21,01%	24,88%	28,02%	28,64%	25,28%
Sweden	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	-	2,07%	2,74%	2,61%	3,74%	5,74%	8,05%	9,42%	11,71%	13,73%	17,99%	23,18%	25,12%	36,07%	43,74%	37,93%	32,28%
EU	-	0,60%	0,87%	0,97%	1,55%	2,37%	3,43%	4,28%	5,13%	5,97%	7,78%	10,00%	12,25%	16,28%	19,10%	18,47%	16,31%
Japan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,94%
United States	-	5,37%	7,22%	9,09%	12,26%	13,19%	14,64%	15,85%	16,77%	18,91%	21,17%	25,65%	27,45%	24,25%	22,60%	19,33%	16,85%



**Table B.5: Securitisation issuance as percentage GDP (source: SIFMA, national central banks)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Belgium	-	0,26%	0,62%	0,70%	0,32%	0,09%	0,06%	0,00%	0,89%	0,68%	0,16%	0,73%	1,24%	9,80%	8,16%	3,87%	4,92%
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
France	-	0,66%	0,26%	0,26%	0,45%	0,22%	0,49%	0,54%	0,41%	0,38%	0,20%	0,40%	0,31%	0,68%	0,37%	0,47%	0,80%
Germany	-	0,03%	0,00%	0,16%	0,43%	0,27%	0,28%	0,54%	0,32%	0,31%	1,00%	1,61%	0,85%	3,03%	0,75%	0,55%	0,50%
Greece	-	0,00%	0,00%	0,00%	0,00%	0,93%	0,39%	0,00%	0,22%	0,40%	1,15%	2,79%	2,45%	5,53%	9,40%	0,43%	2,93%
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Ireland	-	0,00%	0,00%	0,65%	1,24%	1,58%	2,48%	0,00%	1,38%	0,00%	1,00%	5,87%	8,12%	19,22%	15,89%	4,23%	0,00%
Italy	-	0,04%	0,05%	0,09%	0,70%	0,87%	3,87%	3,19%	2,22%	2,58%	2,45%	2,28%	2,25%	5,80%	4,57%	1,03%	2,99%
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	0,07%	0,44%	0,47%	1,47%	1,45%	5,42%	5,46%	5,29%	3,70%	7,61%	7,63%	22,21%	12,12%	7,72%	24,23%	14,13%
Poland	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Portugal	-	0,00%	0,00%	0,20%	0,88%	0,36%	3,16%	3,45%	8,03%	5,16%	4,76%	3,93%	5,21%	8,21%	6,12%	9,92%	5,75%
Romania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	0,34%	0,15%	0,55%	1,15%	1,26%	1,75%	2,99%	3,22%	3,83%	4,63%	6,99%	10,92%	9,28%	6,06%	5,15%	5,71%
Sweden	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
United Kingdom	-	0,22%	0,34%	0,72%	1,67%	2,40%	3,10%	3,45%	4,13%	4,72%	5,95%	8,17%	7,59%	14,73%	5,74%	6,03%	5,76%
EU	-	0,21%	0,17%	0,33%	0,82%	0,94%	1,90%	2,01%	2,04%	2,12%	2,78%	3,75%	4,71%	6,86%	3,82%	3,69%	3,41%
Japan	-	-	-	-	-	0,53%	0,67%	0,94%	0,76%	1,04%	1,63%	1,94%	1,33%	0,74%	0,65%	0,51%	0,71%
United States	-	2,82%	3,27%	5,05%	4,04%	3,87%	5,27%	6,34%	7,97%	10,03%	13,14%	12,49%	9,12%	1,24%	1,22%	0,98%	1,08%

**Table B.6: Stock market capitalisation as fraction GDP (Source: World Bank)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	0,14	0,14	0,17	0,16	0,16	0,16	0,13	0,15	0,22	0,30	0,41	0,59	0,61	0,17	0,14	0,18	0,20
Belgium	0,37	0,43	0,55	0,96	0,73	0,78	0,71	0,50	0,56	0,75	0,76	0,99	0,84	0,33	0,55	0,57	0,45
Bulgaria	0,00	0,00	0,00	0,08	0,05	0,05	0,04	0,05	0,08	0,11	0,18	0,31	0,52	0,17	0,15	0,15	0,15
Cyprus	0,27	0,25	0,23	0,28	0,72	0,47	0,64	0,48	0,36	0,31	0,39	0,86	1,35	0,32	0,21	0,30	0,12
Czech Republic	0,27	0,28	0,21	0,19	0,19	0,19	0,14	0,20	0,18	0,27	0,29	0,33	0,41	0,22	0,27	0,22	0,18
Denmark	0,31	0,39	0,55	0,57	0,61	0,67	0,55	0,44	0,57	0,62	0,69	0,84	0,89	0,38	0,60	0,74	0,54
Estonia	-	-	0,22	0,09	0,31	0,32	0,24	0,33	0,38	0,51	0,25	0,35	0,27	0,08	0,14	0,12	0,07
Finland	0,34	0,49	0,60	1,19	2,68	2,40	1,53	1,02	1,03	0,97	1,07	1,28	1,50	0,57	0,38	0,50	0,54
France	0,33	0,38	0,47	0,67	1,01	1,09	0,88	0,66	0,75	0,76	0,82	1,08	1,07	0,52	0,75	0,75	0,56
Germany	0,23	0,28	0,38	0,50	0,67	0,67	0,57	0,34	0,44	0,44	0,44	0,56	0,63	0,30	0,39	0,44	0,33
Greece	0,13	0,17	0,25	0,58	1,45	0,87	0,66	0,46	0,55	0,54	0,60	0,79	0,87	0,26	0,17	0,24	0,11
Hungary	0,05	0,11	0,32	0,29	0,34	0,26	0,20	0,20	0,20	0,28	0,29	0,37	0,35	0,12	0,22	0,22	0,13
Ireland	0,38	0,46	0,60	0,75	0,71	0,84	0,71	0,49	0,53	0,61	0,56	0,73	0,55	0,19	0,13	0,16	0,16
Italy	0,19	0,20	0,29	0,46	0,60	0,69	0,47	0,39	0,41	0,45	0,45	0,55	0,50	0,22	0,15	0,15	0,20
Latvia	0,00	0,03	0,05	0,06	0,05	0,07	0,08	0,08	0,10	0,12	0,16	0,13	0,11	0,05	0,07	0,05	0,04
Lithuania	0,02	0,11	0,17	0,10	0,10	0,14	0,10	0,10	0,19	0,28	0,31	0,34	0,26	0,08	0,12	0,16	0,10
Luxembourg	1,47	1,59	1,83	1,83	1,70	1,67	1,18	1,09	1,28	1,47	1,36	1,87	3,23	1,15	2,02	1,89	1,13
Malta	0,04	0,13	0,13	0,21	0,49	0,52	0,35	0,32	0,36	0,50	0,68	0,71	0,75	0,42	0,24	0,29	0,38
Netherlands	0,85	0,91	1,21	1,50	1,69	1,66	1,14	0,91	0,91	0,88	0,93	1,15	1,22	0,44	0,68	0,85	0,71
Poland	0,03	0,05	0,08	0,12	0,18	0,18	0,14	0,15	0,17	0,28	0,31	0,44	0,49	0,17	0,31	0,40	0,27
Portugal	0,16	0,20	0,34	0,51	0,53	0,52	0,38	0,32	0,36	0,38	0,35	0,52	0,57	0,27	0,42	0,36	0,26
Romania	0,00	0,00	0,02	0,02	0,02	0,03	0,05	0,10	0,09	0,16	0,21	0,27	0,26	0,10	0,18	0,20	0,11
Slovakia	0,06	0,10	0,09	0,04	0,05	0,06	0,07	0,08	0,08	0,10	0,09	0,10	0,09	0,05	0,05	0,05	0,05
Slovenia	0,01	0,03	0,08	0,11	0,10	0,13	0,14	0,20	0,24	0,29	0,22	0,39	0,61	0,21	0,24	0,20	0,13
Spain	0,33	0,39	0,51	0,67	0,70	0,87	0,77	0,67	0,82	0,90	0,85	1,07	1,25	0,59	0,89	0,84	0,69
Sweden	0,70	0,89	1,08	1,09	1,44	1,33	1,04	0,71	0,92	1,04	1,09	1,43	1,32	0,52	1,06	1,26	0,87
United Kingdom	1,22	1,43	1,47	1,63	1,95	1,74	1,47	1,15	1,32	1,28	1,34	1,55	1,37	0,70	1,28	1,37	0,50
EU	0,41	0,49	0,61	0,78	1,00	1,00	0,80	0,61	0,69	0,72	0,74	0,92	0,92	0,41	0,60	0,65	0,43
Japan	0,69	0,66	0,51	0,64	1,03	0,67	0,54	0,53	0,71	0,79	1,04	1,08	1,02	0,66	0,67	0,75	0,60
United States	0,93	1,09	1,37	1,54	1,79	1,53	1,35	1,05	1,29	1,38	1,35	1,46	1,43	0,83	1,09	1,19	1,04

**Table B.7: Stock market turn-over as a percentage of GDP (source: World Bank)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	10,80	8,75	5,84	8,25	5,50	4,89	3,78	2,80	4,26	8,18	15,05	24,49	32,38	25,24	6,69	12,78	9,25
Belgium	5,36	9,47	11,90	21,66	23,23	16,34	17,68	13,37	13,69	22,14	33,32	41,48	55,63	41,74	26,99	23,88	20,96
Bulgaria	0,03	0,00	-	0,09	0,40	0,45	0,51	1,08	0,95	2,02	4,80	4,54	13,05	3,19	0,82	0,41	0,49
Cyprus	3,25	4,94	3,28	6,45	68,01	99,42	35,49	5,89	2,30	1,11	2,40	23,34	24,44	8,96	4,02	2,73	1,96
Czech Republic	6,28	12,99	11,89	7,53	6,63	11,19	5,20	7,76	9,23	15,50	31,56	22,16	23,23	19,09	10,50	7,12	7,19
Denmark	14,26	18,80	27,50	40,61	35,81	57,20	43,98	29,66	31,51	39,82	59,01	64,39	77,76	61,90	47,67	46,31	45,23
Estonia	-	-	29,37	16,48	4,99	5,75	3,52	3,30	5,73	6,88	17,82	5,78	9,53	3,28	1,95	1,71	1,10
Finland	14,53	17,48	29,57	46,49	87,11	169,67	143,65	130,54	99,52	116,39	139,69	171,58	220,76	143,55	38,04	43,08	65,53
France	23,19	17,62	28,32	40,25	54,08	81,67	80,50	64,38	61,58	68,87	71,43	111,04	132,39	115,32	52,14	57,55	53,16
Germany	22,73	31,55	24,83	34,98	38,23	56,68	75,47	61,45	47,33	51,57	63,74	85,67	101,18	85,69	39,07	43,11	49,24
Greece	4,67	6,00	15,62	34,62	141,70	76,44	28,79	17,03	20,01	19,08	27,18	41,01	49,70	14,12	16,07	14,41	8,27
Hungary	0,78	3,57	16,06	33,45	29,83	26,19	9,14	8,95	9,94	12,76	21,67	27,71	34,90	19,97	20,48	20,58	13,92
Ireland	19,37	16,58	20,03	48,16	52,47	14,80	21,32	26,62	27,66	23,69	31,82	35,73	52,55	14,11	8,28	8,19	7,20
Italy	7,68	8,08	16,54	38,85	44,40	70,51	49,14	44,07	43,79	46,35	62,43	72,94	108,76	28,99	21,78	26,39	40,44
Latvia	-	0,21	1,37	1,28	0,62	2,91	1,98	1,33	1,30	0,80	0,60	0,56	0,49	0,13	0,08	0,11	0,18
Lithuania	0,47	0,56	2,30	1,96	2,64	1,77	1,73	1,29	1,06	2,06	2,85	6,96	2,62	1,04	0,82	0,82	0,57
Luxembourg	0,99	2,59	3,04	6,06	4,91	5,95	2,14	1,19	0,89	1,07	0,64	0,54	0,45	2,87	0,52	0,33	0,21
Malta	0,44	0,38	0,61	1,46	8,56	4,67	1,20	1,23	0,83	1,66	2,52	3,99	1,19	0,86	0,23	0,33	0,55
Netherlands	59,34	81,22	73,70	104,36	116,28	175,86	257,95	105,60	98,44	122,55	130,90	161,74	230,45	131,26	76,15	76,47	66,28
Poland	1,99	3,53	5,06	5,16	6,64	8,54	3,90	2,95	3,92	6,55	9,86	16,11	19,88	12,84	12,95	16,49	18,64
Portugal	3,63	5,90	18,10	38,72	32,27	46,35	22,67	15,37	13,41	20,32	21,70	34,80	62,35	32,77	19,56	13,74	15,22
Romania	0,00	0,02	0,76	1,42	0,89	0,64	0,64	0,88	0,74	1,25	3,44	3,47	4,78	1,84	1,17	1,05	1,78
Slovakia	3,29	8,51	7,97	3,52	1,58	3,12	3,18	2,28	1,45	1,17	0,11	0,13	0,04	0,02	0,20	0,20	0,47
Slovenia	1,65	1,90	1,72	3,23	3,28	2,33	3,87	4,34	2,51	3,46	2,21	2,62	5,74	2,58	2,08	0,58	1,03
Spain	10,02	40,32	79,11	116,34	120,46	169,87	137,73	147,75	105,81	114,36	137,71	156,15	205,50	153,15	109,87	98,38	95,20
Sweden	36,74	49,52	69,58	79,97	92,05	157,74	132,65	87,07	83,82	113,90	125,20	169,67	209,47	132,00	96,19	95,17	93,96
United Kingdom	44,09	47,43	61,02	80,18	91,69	124,24	126,56	118,49	118,88	168,40	182,72	173,53	367,04	246,10	156,70	133,52	122,22
EU	22,38	27,78	34,98	51,34	60,70	86,98	87,31	71,33	63,72	78,07	89,45	105,47	158,79	104,05	59,65	58,37	58,33
Japan	23,09	26,60	28,95	24,23	41,72	56,94	43,90	39,52	52,82	73,68	109,31	143,51	149,14	121,25	83,27	77,99	70,91
United States	69,61	91,88	123,73	150,42	199,70	321,88	283,77	239,57	140,20	164,06	171,20	249,86	305,21	450,19	337,11	210,80	203,73

**Table B.8: Gross issuance of listed shares as percentage GDP (Source: national central banks, ECB)**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	0,00%	0,00%	0,02%	0,03%	2,15%	3,53%	0,70%	2,56%	2,43%	1,07%	6,23%	5,92%	3,59%	0,90%	1,04%	1,13%	0,69%
<b>Belgium</b>	0,37%	2,50%	1,86%	7,23%	5,24%	7,86%	1,16%	0,40%	0,44%	4,97%	8,02%	1,94%	4,43%	4,08%	0,33%	0,41%	0,36%
<b>Bulgaria</b>																	
<b>Cyprus</b>						0,00%	0,00%	0,00%	0,00%	1,34%	2,80%	3,72%	27,89%	3,91%	1,16%	8,67%	4,17%
<b>Czech Republic</b>																	
<b>Denmark</b>																	
<b>Estonia</b>						0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,00%	0,87%	0,01%	0,20%	0,02%
<b>Finland</b>	1,11%	0,45%	0,56%	0,67%	0,44%	4,05%	2,16%	0,87%	0,46%	0,71%	1,14%	0,42%	0,35%	0,55%	0,06%	0,49%	0,23%
<b>France</b>	0,46%	0,50%	0,63%	0,79%	0,59%	1,02%	0,50%	0,73%	1,47%	0,88%	1,21%	1,42%	2,10%	1,44%	1,97%	0,61%	0,71%
<b>Germany</b>	0,46%	0,77%	0,50%	1,16%	4,16%	5,88%	2,99%	0,61%	0,87%	0,37%	0,77%	0,39%	0,35%	0,38%	0,71%	0,78%	0,82%
<b>Greece</b>	0,26%	0,37%	1,35%	2,06%	7,67%	6,47%	0,72%	0,24%	0,22%	0,27%	1,47%	1,73%	4,75%	0,29%	1,85%	1,51%	1,48%
<b>Hungary</b>																	
<b>Ireland</b>	0,31%	0,45%	0,46%	0,57%	0,51%	1,32%	0,55%	0,73%	0,56%	0,64%	0,90%	1,16%	1,42%	0,38%	6,60%	3,05%	9,88%
<b>Italy</b>	0,59%	0,25%	0,45%	0,77%	1,99%	0,76%	0,49%	0,30%	0,65%	0,23%	0,88%	0,41%	0,35%	0,49%	1,22%	0,44%	0,75%
<b>Latvia</b>																	
<b>Lithuania</b>																	
<b>Luxembourg</b>	0,74%	1,75%	4,25%	5,34%	11,69%	70,51%	25,68%	39,30%	0,29%	9,94%	0,67%	3,88%	0,98%	13,33%	8,63%	16,22%	25,65%
<b>Malta</b>						0,00%	0,00%	0,00%	0,00%	0,03%	0,46%	1,07%	7,41%	0,69%	1,35%	3,48%	0,18%
<b>Netherlands</b>	0,14%	1,14%	0,99%	2,38%	4,91%	3,95%	2,89%	0,59%	0,70%	0,30%	1,01%	0,22%	1,65%	0,18%	2,05%	0,66%	0,17%
<b>Poland</b>																	
<b>Portugal</b>	1,07%	0,71%	0,56%	2,42%	1,28%	5,78%	1,87%	0,72%	0,67%	1,09%	0,64%	1,01%	0,10%	0,94%	0,86%	0,11%	1,15%
<b>Romania</b>																	
<b>Slovakia</b>						0,00%	0,18%	0,00%	0,01%	0,02%	0,00%	0,00%	0,00%	0,00%	0,00%	0,06%	0,21%
<b>Slovenia</b>					1,33%	1,22%	0,41%	0,85%	1,01%	1,17%	0,27%	0,75%	0,27%	0,66%	0,10%	0,04%	0,32%
<b>Spain</b>	0,15%	0,03%	0,05%	0,75%	0,42%	1,63%	0,23%	0,05%	0,05%	0,54%	0,32%	0,58%	2,25%	0,74%	0,63%	0,74%	0,72%
<b>Sweden</b>																	
<b>United Kingdom</b>									0,58%	1,10%	1,44%	2,08%	1,18%	3,75%	5,47%	1,23%	0,32%
<b>EU</b>	0,45%	0,63%	0,56%	1,25%	2,50%	3,44%	1,56%	0,71%	0,82%	0,80%	1,33%	1,13%	1,33%	1,37%	1,91%	0,84%	0,87%
<b>Japan</b>								0,39%	0,68%	0,58%	0,61%	0,53%	0,42%	0,28%	1,33%	0,82%	0,32%
<b>United States</b>	0,99%	1,57%	1,42%	1,45%	1,41%	1,74%	1,26%	1,04%	1,11%	1,23%	0,92%	0,90%	1,21%	1,45%	1,69%	0,91%	0,86%

**Table B.9: IPOs as percentage GDP (Source: EVCA yearbooks 2012, Jay Ritter IPO data, Kaneko and Pettway's Japanese IPO Database)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	-	-	-	-	-	-	-	-	-	-	-	-	0,83%	0,00%	0,00%	0,00%	0,12%
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	0,31%	0,01%	0,03%	0,00%	0,00%
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	0,60%	0,02%	0,02%	0,01%	0,00%
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	0,06%	0,00%	0,00%	0,00%	0,00%
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	0,17%	0,01%	0,02%	0,98%	0,02%
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-	0,30%	0,00%	0,00%	0,00%	0,00%
France	-	-	-	-	-	-	-	-	-	-	-	-	0,17%	0,00%	0,05%	0,03%	0,01%
Germany	-	-	-	-	-	-	-	-	-	-	-	-	0,33%	0,02%	0,00%	0,10%	0,06%
Greece	-	-	-	-	-	-	-	-	-	-	-	-	0,54%	0,12%	0,01%	0,14%	0,04%
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	0,15%	0,00%	0,00%	0,05%	0,00%
Ireland	-	-	-	-	-	-	-	-	-	-	-	-	1,17%	0,00%	0,00%	0,00%	0,01%
Italy	-	-	-	-	-	-	-	-	-	-	-	-	0,26%	0,01%	0,01%	0,16%	0,13%
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	0,18%	0,01%	0,00%	2,55%	1,46%
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	0,20%	0,27%	0,19%	0,16%	0,06%
Poland	-	-	-	-	-	-	-	-	-	-	-	-	0,38%	0,28%	0,52%	1,05%	0,49%
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	0,21%	0,91%	0,00%	0,00%	0,00%
Romania	-	-	-	-	-	-	-	-	-	-	-	-	0,00%	0,01%	0,00%	0,00%	0,00%
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	2,14%	0,35%	0,00%	0,00%	0,00%
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	1,04%	0,03%	0,00%	0,14%	0,35%
Sweden	-	-	-	-	-	-	-	-	-	-	-	-	0,23%	0,00%	0,00%	0,08%	0,06%
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	0,66%	0,03%	0,03%	0,18%	0,12%
EU	-	-	-	-	-	-	-	-	-	-	-	-	0,43%	0,05%	0,04%	0,15%	0,11%
Japan	-	-	-	-	-	-	-	-	-	-	-	-	0,10%	0,03%	0,01%	-	-
United States	-	-	-	-	-	-	-	-	-	-	-	-	0,26%	0,16%	0,10%	0,21%	0,18%

**Table B.10: Venture capital investment as percentage of GDP (source: EVCA, NVCA, Japan Venture Research)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	0,00%	0,00%	0,00%	0,02%	0,03%	0,07%	0,06%	0,05%	0,04%	0,05%	0,04%	0,03%	0,03%	0,02%	0,03%	0,02%	0,02%
Belgium	0,05%	0,05%	0,08%	0,10%	0,25%	0,21%	0,12%	0,08%	0,04%	0,06%	0,04%	0,17%	0,11%	0,09%	0,13%	0,07%	0,10%
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	0,00%	0,04%	0,02%	0,01%	0,00%
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	0,01%	0,05%	0,16%	0,04%	0,03%	0,00%	0,01%	0,00%	0,00%	0,02%	0,01%	0,01%	0,01%	0,01%
Denmark	0,01%	0,02%	0,01%	0,03%	0,05%	0,09%	0,17%	0,13%	0,11%	0,14%	0,40%	0,08%	0,09%	0,08%	0,09%	0,13%	0,07%
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	0,03%	0,04%	0,08%	0,10%	0,11%	0,19%	0,15%	0,20%	0,13%	0,07%	0,10%	0,09%	0,12%	0,10%	0,07%	0,11%	0,06%
France	0,03%	0,04%	0,04%	0,06%	0,12%	0,21%	0,09%	0,07%	0,09%	0,09%	0,08%	0,11%	0,07%	0,12%	0,10%	0,09%	0,09%
Germany	0,03%	0,03%	0,04%	0,07%	0,13%	0,19%	0,13%	0,06%	0,03%	0,04%	0,06%	0,04%	0,04%	0,06%	0,04%	0,05%	0,05%
Greece	0,01%	0,03%	0,01%	0,02%	0,05%	0,09%	0,06%	0,03%	0,01%	0,00%	0,00%	0,01%	0,01%	0,01%	0,01%	0,00%	0,00%
Hungary	-	-	-	0,08%	0,01%	0,06%	0,04%	0,02%	0,03%	0,12%	0,05%	0,04%	0,01%	0,03%	0,00%	0,03%	0,03%
Ireland	0,04%	0,06%	0,05%	0,05%	0,09%	0,20%	0,11%	0,08%	0,06%	0,04%	0,06%	0,05%	0,06%	0,03%	0,03%	0,02%	0,03%
Italy	0,02%	0,03%	0,02%	0,04%	0,05%	0,13%	0,08%	0,07%	0,05%	0,03%	0,03%	0,07%	0,03%	0,03%	0,02%	0,02%	0,01%
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	0,11%	0,79%	0,18%	0,13%	0,30%
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	0,11%	0,12%	0,14%	0,16%	0,23%	0,34%	0,21%	0,18%	0,09%	0,08%	0,10%	0,09%	0,09%	0,10%	0,06%	0,06%	0,10%
Poland	-	-	-	0,06%	0,09%	0,11%	0,05%	0,03%	0,02%	0,01%	0,00%	0,01%	0,02%	0,05%	0,02%	0,04%	0,06%
Portugal	0,05%	0,02%	0,04%	0,04%	0,04%	0,11%	0,05%	0,04%	0,07%	0,10%	0,13%	0,04%	0,08%	0,06%	0,03%	0,04%	0,01%
Romania	-	-	-	-	-	0,04%	0,04%	0,02%	0,11%	0,00%	0,02%	0,04%	0,04%	0,03%	0,03%	0,02%	0,02%
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	0,03%	0,04%	0,04%	0,04%	0,08%	0,12%	0,13%	0,10%	0,12%	0,15%	0,08%	0,09%	0,07%	0,09%	0,05%	0,05%	0,03%
Sweden	0,01%	0,10%	0,03%	0,05%	0,17%	0,21%	0,36%	0,21%	0,14%	0,22%	0,29%	0,22%	0,18%	0,23%	0,14%	0,22%	0,08%
United Kingdom	0,08%	0,06%	0,10%	0,13%	0,18%	0,38%	0,16%	0,15%	0,16%	0,20%	0,29%	0,48%	0,25%	0,29%	0,16%	0,19%	0,15%
EU	0,04%	0,04%	0,05%	0,07%	0,12%	0,21%	0,12%	0,09%	0,08%	0,10%	0,11%	0,14%	0,09%	0,11%	0,07%	0,08%	0,07%
Japan	0,04%	0,04%	0,07%	0,07%	0,03%	0,06%	0,08%	0,05%	0,05%	0,04%	0,05%	0,07%	0,08%	0,05%	0,03%	0,02%	0,02%
United States	0,10%	0,14%	0,17%	0,23%	0,55%	1,00%	0,37%	0,19%	0,17%	0,19%	0,18%	0,20%	0,22%	0,22%	0,14%	0,16%	0,19%

**Table B.11: Mergers and acquisitions as percentage GDP (Source: EVCA yearbook 2012, Thomson Reuters)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	-	-	-	-	-	-	-	-	-	-	-	-	3,75%	3,40%	1,06%	1,43%	2,25%
Belgium	-	-	-	-	-	-	-	-	-	-	-	-	5,92%	8,23%	6,72%	2,94%	8,30%
Bulgaria	-	-	-	-	-	-	-	-	-	-	-	-	7,36%	3,95%	6,77%	1,67%	1,77%
Cyprus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Czech Republic	-	-	-	-	-	-	-	-	-	-	-	-	1,00%	2,76%	2,17%	1,05%	1,08%
Denmark	-	-	-	-	-	-	-	-	-	-	-	-	4,27%	2,57%	1,14%	1,26%	4,47%
Estonia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Finland	-	-	-	-	-	-	-	-	-	-	-	-	7,08%	2,44%	0,99%	0,83%	1,34%
France	-	-	-	-	-	-	-	-	-	-	-	-	5,27%	5,56%	1,44%	1,89%	2,81%
Germany	-	-	-	-	-	-	-	-	-	-	-	-	4,54%	2,13%	2,24%	1,59%	1,50%
Greece	-	-	-	-	-	-	-	-	-	-	-	-	2,70%	4,41%	1,30%	0,70%	0,71%
Hungary	-	-	-	-	-	-	-	-	-	-	-	-	4,69%	1,99%	2,31%	0,56%	3,35%
Ireland	-	-	-	-	-	-	-	-	-	-	-	-	4,92%	1,75%	2,61%	2,97%	4,90%
Italy	-	-	-	-	-	-	-	-	-	-	-	-	7,48%	3,46%	0,96%	1,39%	3,23%
Latvia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lithuania	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Luxembourg	-	-	-	-	-	-	-	-	-	-	-	-	30,24%	12,31%	9,25%	5,80%	27,63%
Malta	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Netherlands	-	-	-	-	-	-	-	-	-	-	-	-	26,12%	11,11%	4,22%	3,37%	3,47%
Poland	-	-	-	-	-	-	-	-	-	-	-	-	1,14%	1,37%	0,72%	1,05%	4,46%
Portugal	-	-	-	-	-	-	-	-	-	-	-	-	4,00%	4,25%	1,01%	2,24%	0,76%
Romania	-	-	-	-	-	-	-	-	-	-	-	-	1,41%	1,07%	0,51%	0,19%	0,09%
Slovakia	-	-	-	-	-	-	-	-	-	-	-	-	3,90%	2,41%	1,53%	1,46%	1,39%
Slovenia	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Spain	-	-	-	-	-	-	-	-	-	-	-	-	7,72%	4,39%	6,15%	3,52%	4,59%
Sweden	-	-	-	-	-	-	-	-	-	-	-	-	6,66%	10,41%	1,98%	3,24%	4,88%
United Kingdom	-	-	-	-	-	-	-	-	-	-	-	-	12,52%	10,92%	8,07%	6,28%	4,98%
EU	-	-	-	-	-	-	-	-	-	-	-	-	7,64%	5,27%	3,18%	2,57%	3,34%
Japan	-	-	-	-	-	-	-	-	1,77%	1,70%	3,59%	2,32%	2,99%	1,59%	2,15%	2,46%	3,08%
United States	-	-	-	-	-	-	-	-	4,86%	6,74%	9,02%	11,04%	11,26%	6,50%	5,20%	5,61%	6,20%

**Table B.12: Cross-border mergers and acquisitions as percentage GDP (Source: Unctad)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	0,26%	0,36%	1,09%	1,66%	0,18%	0,30%	4,78%	0,02%	0,83%	0,61%	1,94%	1,19%	2,57%	0,32%	0,47%	0,11%	1,66%
Belgium	0,60%	3,07%	2,38%	2,68%	9,81%	3,14%	2,96%	2,15%	1,02%	0,65%	2,08%	0,71%	0,21%	0,49%	2,54%	2,01%	0,76%
Bulgaria	0,24%	0,71%	4,75%	0,48%	8,55%	4,49%	0,08%	0,86%	1,84%	10,59%	9,11%	3,10%	2,30%	0,44%	0,31%	0,05%	-0,18%
Cyprus	-	-	-	-	-	-	-	-	-	-	0,14%	1,62%	6,16%	-3,60%	0,22%	2,96%	3,15%
Czech Republic	-	-	-	-	-	-	-	-	-	0,49%	8,57%	1,07%	0,06%	2,28%	1,35%	-0,23%	0,34%
Denmark	0,11%	0,25%	0,33%	2,19%	2,65%	5,69%	1,53%	1,15%	0,65%	2,40%	3,46%	5,49%	1,85%	1,76%	0,53%	0,46%	2,31%
Estonia	0,74%	0,49%	1,26%	2,66%	2,00%	2,30%	1,41%	0,20%	0,14%	0,15%	17,45%	0,02%	-0,26%	0,46%	0,15%	0,02%	1,07%
Finland	1,32%	0,93%	0,60%	3,68%	2,41%	5,65%	0,39%	6,04%	2,16%	1,71%	1,48%	1,31%	3,37%	0,42%	0,21%	0,14%	0,36%
France	0,48%	0,86%	1,25%	1,15%	1,64%	2,63%	1,08%	2,06%	0,97%	0,98%	1,51%	1,77%	1,09%	0,16%	0,03%	0,15%	0,88%
Germany	0,30%	0,49%	0,55%	0,87%	1,86%	13,06%	2,58%	2,31%	1,04%	1,31%	2,28%	1,90%	1,32%	0,88%	0,39%	0,26%	0,36%
Greece	0,04%	0,35%	0,07%	0,02%	0,14%	0,19%	1,41%	0,04%	0,48%	0,63%	0,54%	2,47%	0,24%	2,02%	0,15%	-0,27%	0,40%
Hungary	4,63%	3,47%	0,64%	1,28%	1,11%	2,40%	2,60%	1,92%	1,33%	0,44%	2,90%	2,54%	0,53%	1,00%	1,45%	0,17%	1,23%
Ireland	0,87%	0,97%	2,78%	0,82%	4,87%	5,37%	5,81%	4,22%	0,12%	1,54%	1,19%	1,47%	0,31%	1,09%	0,76%	1,03%	1,00%
Italy	0,36%	0,22%	0,28%	0,37%	0,93%	1,71%	0,81%	0,94%	1,01%	0,63%	2,30%	1,89%	1,11%	-0,10%	0,05%	0,31%	0,61%
Latvia	0,46%	1,00%	1,01%	0,16%	0,28%	4,39%	0,47%	0,04%	0,11%	-	0,02%	0,05%	0,16%	0,58%	0,42%	0,30%	0,01%
Lithuania	-	-	0,12%	5,62%	3,89%	1,50%	1,58%	1,57%	0,72%	0,45%	0,23%	1,20%	0,09%	0,21%	0,05%	1,27%	0,90%
Luxembourg	1,35%	2,46%	18,84%	0,18%	34,72%	20,72%	13,26%	13,01%	3,28%	0,21%	21,27%	83,28%	14,28%	-6,15%	0,85%	10,20%	15,76%
Malta	-	-	-	0,08%	6,41%	-	-	3,11%	0,66%	7,62%	-	8,13%	-1,15%	-	0,16%	3,86%	-
Netherlands	0,86%	0,85%	4,92%	4,80%	9,48%	8,72%	6,89%	2,51%	1,70%	2,18%	4,54%	4,71%	20,77%	-0,93%	2,26%	0,53%	1,67%
Poland	0,71%	0,63%	0,51%	1,04%	2,21%	5,43%	1,84%	1,58%	0,37%	0,50%	0,66%	0,80%	0,17%	0,18%	0,18%	0,23%	1,95%
Portugal	0,12%	0,65%	0,07%	0,35%	0,17%	2,53%	0,34%	0,85%	1,07%	0,66%	0,97%	1,35%	0,74%	-0,51%	0,21%	0,96%	0,38%
Romania	0,61%	0,26%	1,10%	3,06%	1,24%	1,43%	0,16%	0,27%	0,83%	2,90%	1,99%	4,36%	1,13%	0,48%	0,19%	0,09%	0,05%
Slovakia	0,02%	0,65%	0,18%	0,24%	0,20%	9,08%	5,66%	13,64%	0,48%	1,02%	0,37%	2,57%	0,07%	0,14%	0,01%	-	0,00%
Slovenia	0,09%	0,14%	0,65%	-	0,06%	-	1,86%	6,46%	0,00%	0,50%	0,41%	0,05%	0,12%	0,76%	-	0,71%	0,10%
Spain	0,21%	0,23%	0,71%	0,95%	0,94%	3,82%	1,43%	1,29%	0,58%	0,68%	2,09%	1,13%	3,58%	2,11%	2,20%	0,62%	1,16%
Sweden	3,73%	1,40%	1,31%	4,36%	23,06%	5,29%	2,54%	3,02%	1,37%	3,01%	2,71%	5,67%	0,99%	3,83%	0,27%	0,05%	1,41%
United Kingdom	-	-	-	-	-	-	-	-	-	2,64%	7,52%	6,15%	6,10%	5,58%	1,15%	2,69%	1,48%
EU	0,53%	0,66%	1,04%	1,33%	3,05%	6,07%	2,15%	1,96%	0,99%	1,39%	3,15%	2,99%	3,11%	1,37%	0,71%	0,72%	0,98%
Japan	0,01%	0,04%	0,07%	0,10%	0,37%	0,33%	0,36%	0,14%	0,25%	0,19%	0,05%	0,06%	0,38%	0,19%	-0,11%	0,13%	0,09%
United States	-	-	-	-	-	-	-	-	-	0,69%	0,84%	1,29%	1,18%	1,60%	0,29%	0,57%	0,89%



**Table B.13: Household financial assets as fraction of GDP (Source: Eurostat, National Central Banks, OECD)**

Row Labels	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	1,33	1,35	1,40	1,42	1,45	1,46	1,45	1,44	1,50	1,54	1,60	1,67	1,66	1,59	1,76	1,77	1,68
<b>Belgium</b>	2,47	2,57	2,72	3,01	3,28	3,20	3,07	2,63	2,66	2,70	2,77	2,77	2,65	2,39	2,61	2,55	2,56
<b>Bulgaria</b>	-	-	-	-	-	0,50	0,57	0,56	0,60	0,64	0,68	0,83	1,11	0,88	0,96	0,99	1,07
<b>Cyprus</b>	1,80	1,83	1,83	1,76	2,62	2,22	2,18	2,25	2,20	2,25	2,75	3,01	3,16	2,49	2,71	2,68	2,58
<b>Czech Republic</b>	0,85	0,81	0,82	0,87	0,86	0,86	0,89	0,83	0,86	0,86	0,85	0,85	0,89	0,80	0,93	0,99	0,96
<b>Denmark</b>	1,57	1,62	1,72	1,76	1,87	1,83	1,78	1,74	1,85	2,02	2,31	2,41	2,39	2,12	2,45	2,60	2,64
<b>Estonia</b>	0,58	0,63	0,61	0,51	0,58	0,61	0,57	0,66	0,77	0,84	1,01	1,26	1,18	1,13	1,39	1,16	1,08
<b>EU</b>	1,67	1,77	1,92	1,99	2,22	2,12	2,02	1,87	1,94	1,99	2,11	2,15	2,06	1,82	2,09	2,11	2,05
<b>Finland</b>	0,75	0,80	0,80	0,90	1,11	1,10	1,03	0,99	1,08	1,11	1,22	1,28	1,21	1,06	1,28	1,35	1,21
<b>France</b>	1,46	1,51	1,60	1,67	1,82	1,79	1,68	1,65	1,72	1,77	1,85	1,94	1,96	1,80	2,00	2,07	2,02
<b>Germany</b>	1,38	1,44	1,54	1,63	1,72	1,72	1,72	1,68	1,77	1,81	1,89	1,83	1,84	1,74	1,88	1,88	1,83
<b>Greece</b>	1,13	1,17	1,28	1,50	2,14	1,67	1,54	1,33	1,28	1,34	1,48	1,48	1,48	1,16	1,24	1,18	1,13
<b>Hungary</b>	0,55	0,60	0,62	0,65	0,73	0,74	0,80	0,79	0,76	0,83	0,87	0,99	0,98	0,91	1,12	1,09	0,88
<b>Ireland</b>	-	-	-	-	-	-	1,53	1,41	1,50	1,58	1,67	1,71	1,59	1,56	1,89	2,00	1,99
<b>Italy</b>	1,93	2,00	2,13	2,36	2,49	2,54	2,41	2,41	2,40	2,48	2,58	2,57	2,42	2,40	2,43	2,39	2,27
<b>Japan</b>	2,59	2,59	2,57	2,69	2,88	2,84	2,90	2,92	3,04	3,03	3,21	3,24	3,05	3,02	3,27	3,21	-
<b>Latvia</b>	-	0,28	0,31	0,34	0,37	0,41	0,42	0,43	0,42	0,59	0,68	0,74	0,56	0,50	0,64	0,63	0,59
<b>Lithuania</b>	0,34	0,36	0,47	0,40	0,44	0,42	0,42	0,48	0,51	0,57	0,60	0,65	0,64	0,76	0,79	0,81	0,74
<b>Luxembourg</b>	-	-	-	-	-	-	-	-	-	-	-	1,21	1,23	1,30	1,40	1,36	1,27
<b>Malta</b>	-	-	-	-	-	-	-	-	-	2,51	2,70	2,68	2,56	2,43	2,55	2,52	2,51
<b>Netherlands</b>	2,40	2,54	2,75	2,93	3,13	3,03	2,74	2,52	2,63	2,73	2,90	2,91	2,88	2,46	2,86	3,00	3,04
<b>Poland</b>	0,34	0,33	0,39	0,48	0,53	0,53	0,56	0,54	0,66	0,80	0,81	0,85	0,92	0,62	0,84	0,86	0,76
<b>Portugal</b>	1,76	1,75	2,20	2,28	2,30	2,24	2,13	2,04	2,09	2,11	2,16	2,21	2,25	2,21	2,32	2,30	2,25
<b>Romania</b>	-	-	-	0,29	0,36	0,33	0,33	0,33	0,35	0,46	0,55	0,82	0,94	0,76	0,70	0,67	0,63
<b>Slovakia</b>	0,65	0,66	0,65	0,60	0,67	0,62	0,62	0,78	0,71	0,63	0,62	0,64	0,61	0,57	0,61	0,65	0,67
<b>Slovenia</b>	-	-	-	-	-	-	0,81	0,86	0,90	0,95	0,98	1,03	1,08	0,95	1,06	1,09	1,05
<b>Spain</b>	1,45	1,43	1,56	1,74	1,78	1,66	1,62	1,53	1,63	1,66	1,74	1,86	1,81	1,56	1,68	1,66	1,58
<b>Sweden</b>	1,13	1,19	1,32	1,31	1,67	1,48	1,55	1,37	1,52	1,59	1,72	1,87	1,75	1,46	2,08	2,19	1,99
<b>United Kingdom</b>	2,63	2,96	3,13	2,93	3,55	3,10	2,95	2,42	2,54	2,52	2,85	2,96	2,67	2,11	2,92	2,93	2,95
<b>United States</b>	2,93	3,01	3,23	3,44	3,71	3,38	3,15	2,86	3,19	3,39	3,50	3,69	3,69	2,97	3,28	3,41	3,27

**Table B.14: Household deposits as a fraction of GDP (Source: Eurostat, National Central banks, OECD)**

Row Labels	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	0,70	0,70	0,72	0,72	0,71	0,69	0,70	0,70	0,72	0,71	0,70	0,68	0,69	0,71	0,76	0,73	0,72
<b>Belgium</b>	0,67	0,68	0,71	0,70	0,66	0,63	0,64	0,64	0,67	0,70	0,72	0,72	0,71	0,69	0,75	0,76	0,76
<b>Bulgaria</b>	-	-	-	-	-	0,13	0,17	0,17	0,19	0,23	0,26	0,28	0,31	0,32	0,36	0,39	0,41
<b>Cyprus</b>	1,13	1,16	1,22	1,18	0,81	0,90	1,06	1,21	1,17	1,22	1,60	1,53	1,66	1,59	1,68	1,68	1,66
<b>Czech Republic</b>	0,30	0,30	0,36	0,39	0,39	0,39	0,42	0,37	0,36	0,38	0,37	0,38	0,41	0,39	0,45	0,47	0,46
<b>Denmark</b>	-	-	-	-	-	-	-	-	0,39	0,41	0,44	0,45	0,47	0,45	0,48	0,48	0,47
<b>Estonia</b>	0,06	0,08	0,11	0,11	0,13	0,15	0,17	0,17	0,17	0,17	0,19	0,21	0,19	0,23	0,28	0,28	0,28
<b>EU</b>	0,58	0,58	0,58	0,56	0,57	0,54	0,57	0,56	0,57	0,57	0,58	0,59	0,58	0,59	0,65	0,64	0,64
<b>Finland</b>	0,40	0,38	0,36	0,35	0,35	0,33	0,32	0,32	0,34	0,34	0,36	0,36	0,36	0,40	0,43	0,44	0,44
<b>France</b>	0,55	0,55	0,57	0,58	0,58	0,54	0,54	0,55	0,56	0,56	0,56	0,54	0,54	0,54	0,56	0,57	0,58
<b>Germany</b>	0,57	0,58	0,59	0,61	0,60	0,57	0,59	0,60	0,61	0,61	0,61	0,60	0,60	0,63	0,67	0,67	0,67
<b>Greece</b>	0,62	0,64	0,65	0,62	0,67	0,71	0,77	0,70	0,63	0,67	0,73	0,73	0,76	0,83	0,88	0,88	0,89
<b>Hungary</b>	0,24	0,25	0,24	0,25	0,26	0,25	0,27	0,25	0,25	0,27	0,27	0,28	0,27	0,28	0,33	0,30	0,27
<b>Ireland</b>	-	-	-	-	-	-	0,50	0,54	0,53	0,55	0,57	0,58	0,58	0,63	0,71	0,74	0,73
<b>Italy</b>	0,69	0,68	0,60	0,56	0,54	0,53	0,55	0,56	0,57	0,57	0,58	0,60	0,60	0,63	0,66	0,65	0,63
<b>Japan</b>	1,25	1,27	1,31	1,39	1,45	1,45	1,48	1,49	1,51	1,49	1,48	1,47	1,46	1,52	1,64	1,63	-
<b>Latvia</b>	-	0,04	0,06	0,06	0,07	0,09	0,11	0,13	0,15	0,17	0,22	0,25	0,22	0,19	0,22	0,23	0,22
<b>Lithuania</b>	0,07	0,05	0,06	0,07	0,10	0,11	0,14	0,14	0,15	0,17	0,20	0,23	0,24	0,22	0,28	0,29	0,26
<b>Luxembourg</b>	-	-	-	-	-	-	-	-	-	-	-	0,52	0,57	0,66	0,65	0,64	0,63
<b>Malta</b>	-	-	-	-	-	-	-	-	-	1,21	1,21	1,21	1,29	1,24	1,23	1,20	1,20
<b>Netherlands</b>	0,47	0,48	0,48	0,50	0,50	0,49	0,52	0,52	0,54	0,55	0,56	0,56	0,57	0,58	0,63	0,63	0,65
<b>Poland</b>	0,18	0,19	0,21	0,22	0,25	0,28	0,30	0,26	0,25	0,26	0,25	0,24	0,25	0,23	0,31	0,31	0,30
<b>Portugal</b>	0,82	0,84	0,80	0,78	0,77	0,79	0,80	0,78	0,76	0,74	0,72	0,73	0,75	0,82	0,84	0,83	0,89
<b>Romania</b>	-	-	-	0,10	0,11	0,09	0,11	0,12	0,11	0,12	0,12	0,14	0,15	0,15	0,20	0,20	0,19
<b>Slovakia</b>	0,47	0,46	0,46	0,42	0,47	0,42	0,43	0,54	0,46	0,37	0,34	0,34	0,33	0,35	0,36	0,36	0,37
<b>Slovenia</b>	-	-	-	-	-	-	0,39	0,38	0,38	0,39	0,40	0,39	0,38	0,39	0,42	0,44	0,45
<b>Spain</b>	0,63	0,58	0,54	0,53	0,55	0,58	0,60	0,58	0,56	0,56	0,56	0,59	0,61	0,66	0,70	0,73	0,71
<b>Sweden</b>	0,28	0,27	0,24	0,21	0,22	0,19	0,22	0,23	0,23	0,23	0,24	0,26	0,29	0,28	0,35	0,36	0,36
<b>United Kingdom</b>	0,60	0,67	0,65	0,60	0,66	0,61	0,66	0,63	0,66	0,67	0,72	0,75	0,71	0,66	0,82	0,79	0,83
<b>United States</b>	0,32	0,32	0,32	0,31	0,30	0,31	0,33	0,35	0,36	0,38	0,40	0,41	0,43	0,43	0,45	0,45	0,45

**Table B.15: Household shares and other equity as a fraction of GDP (Source: Eurostat, National Central banks, OECD)**

Row Labels	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	0,23	0,25	0,28	0,31	0,33	0,35	0,34	0,30	0,32	0,35	0,40	0,47	0,46	0,35	0,42	0,45	0,40
<b>Belgium</b>	0,67	0,72	0,84	1,19	1,44	1,42	1,30	0,90	0,94	1,03	1,07	1,13	1,03	0,76	0,88	0,80	0,78
<b>Bulgaria</b>	-	-	-	-	-	0,19	0,15	0,19	0,21	0,21	0,21	0,34	0,66	0,38	0,39	0,38	0,44
<b>Cyprus</b>	0,33	0,29	0,23	0,20	1,29	0,89	0,72	0,63	0,59	0,58	0,68	0,96	1,04	0,47	0,57	0,52	0,42
<b>Czech Republic</b>	0,44	0,39	0,35	0,36	0,35	0,33	0,33	0,31	0,33	0,29	0,28	0,27	0,27	0,22	0,25	0,25	0,23
<b>Denmark</b>	0,22	0,27	0,32	0,34	0,44	0,41	0,37	0,34	0,39	0,48	0,65	0,76	0,74	0,49	0,64	0,76	0,69
<b>Estonia</b>	0,46	0,50	0,46	0,34	0,36	0,36	0,32	0,41	0,50	0,55	0,68	0,89	0,81	0,76	0,88	0,66	0,57
<b>EU</b>	0,38	0,41	0,50	0,58	0,72	0,68	0,58	0,48	0,52	0,53	0,58	0,60	0,56	0,41	0,48	0,48	0,43
<b>Finland</b>	0,21	0,25	0,28	0,36	0,55	0,53	0,44	0,40	0,46	0,48	0,55	0,60	0,54	0,38	0,51	0,57	0,46
<b>France</b>	0,39	0,41	0,42	0,47	0,59	0,58	0,48	0,43	0,47	0,49	0,52	0,59	0,58	0,43	0,50	0,51	0,45
<b>Germany</b>	0,26	0,28	0,34	0,39	0,48	0,49	0,47	0,37	0,42	0,42	0,47	0,43	0,44	0,32	0,34	0,35	0,32
<b>Greece</b>	0,18	0,20	0,37	0,66	1,27	0,72	0,47	0,34	0,38	0,40	0,49	0,49	0,49	0,11	0,17	0,10	0,06
<b>Hungary</b>	0,15	0,17	0,19	0,20	0,23	0,25	0,27	0,27	0,25	0,27	0,30	0,35	0,35	0,31	0,38	0,38	0,34
<b>Ireland</b>	-	-	-	-	-	-	0,44	0,38	0,37	0,36	0,37	0,34	0,30	0,25	0,31	0,31	0,31
<b>Italy</b>	0,48	0,50	0,67	0,97	1,16	1,18	0,99	0,92	0,89	0,89	0,95	0,95	0,81	0,75	0,71	0,71	0,60
<b>Japan</b>	0,32	0,28	0,23	0,25	0,35	0,31	0,25	0,23	0,35	0,38	0,56	0,57	0,39	0,29	0,35	0,34	-
<b>Latvia</b>	-	0,13	0,13	0,16	0,17	0,20	0,18	0,17	0,14	0,24	0,23	0,25	0,19	0,13	0,18	0,15	0,12
<b>Lithuania</b>	0,20	0,25	0,23	0,17	0,19	0,17	0,15	0,20	0,20	0,24	0,24	0,24	0,22	0,37	0,28	0,30	0,24
<b>Luxembourg</b>	-	-	-	-	-	-	-	-	-	-	-	0,40	0,38	0,29	0,32	0,30	0,26
<b>Malta</b>	-	-	-	-	-	-	-	-	-	0,50	0,64	0,63	0,54	0,48	0,56	0,52	0,48
<b>Netherlands</b>	0,48	0,55	0,65	0,69	0,81	0,78	0,60	0,43	0,44	0,44	0,44	0,44	0,42	0,29	0,37	0,39	0,33
<b>Poland</b>	0,08	0,06	0,07	0,16	0,16	0,12	0,08	0,09	0,23	0,30	0,33	0,34	0,38	0,16	0,22	0,24	0,19
<b>Portugal</b>	0,64	0,62	0,73	0,80	0,82	0,72	0,65	0,60	0,65	0,68	0,73	0,76	0,74	0,62	0,66	0,63	0,59
<b>Romania</b>	-	-	-	0,11	0,15	0,14	0,12	0,15	0,19	0,28	0,37	0,42	0,48	0,33	0,34	0,37	0,33
<b>Slovakia</b>	0,07	0,06	0,06	0,05	0,05	0,04	0,04	0,05	0,06	0,07	0,08	0,07	0,07	0,04	0,04	0,05	0,04
<b>Slovenia</b>	-	-	-	-	-	-	0,24	0,26	0,27	0,31	0,30	0,34	0,41	0,28	0,32	0,32	0,29
<b>Spain</b>	0,43	0,49	0,65	0,83	0,82	0,67	0,65	0,55	0,64	0,67	0,74	0,82	0,76	0,49	0,54	0,48	0,41
<b>Sweden</b>	0,32	0,37	0,49	0,50	0,72	0,61	0,55	0,44	0,54	0,61	0,71	0,83	0,73	0,53	0,81	0,87	0,70
<b>United Kingdom</b>	0,52	0,59	0,66	0,61	0,83	0,71	0,57	0,38	0,42	0,42	0,47	0,47	0,40	0,24	0,42	0,45	0,42
<b>United States</b>	1,32	1,36	1,54	1,70	1,93	1,69	1,53	1,30	1,50	1,57	1,66	1,81	1,76	1,26	1,39	1,49	1,41

**Table B.16: Household insurance and technical reserves as a fraction of GDP (Source: Eurostat, National Central banks, OECD)**

Row Labels	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	
<b>Austria</b>	0,18	0,20	0,21	0,23	0,25	0,26	0,27	0,27	0,28	0,29	0,31	0,31	0,30	0,30	0,33	0,33	0,32	
<b>Belgium</b>	0,24	0,27	0,30	0,35	0,40	0,41	0,43	0,44	0,48	0,51	0,58	0,60	0,60	0,58	0,64	0,67	0,67	
<b>Bulgaria</b>	-	-	-	-	-	0,01	0,01	0,02	0,02	0,02	0,03	0,04	0,05	0,04	0,06	0,07	0,07	
<b>Cyprus</b>	0,21	0,23	0,23	0,22	0,27	0,24	0,23	0,23	0,24	0,24	0,25	0,27	0,27	0,24	0,26	0,27	0,29	
<b>Czech Republic</b>	0,04	0,05	0,05	0,05	0,06	0,06	0,07	0,07	0,08	0,10	0,10	0,11	0,12	0,11	0,13	0,14	0,14	
<b>Denmark</b>	0,68	0,70	0,77	0,80	0,84	0,85	0,84	0,84	0,89	0,96	1,04	1,03	1,01	1,02	1,15	1,21	1,33	
<b>Estonia</b>	0,00	0,00	0,00	0,01	0,01	0,01	0,01	0,01	0,02	0,03	0,05	0,06	0,07	0,07	0,10	0,12	0,11	
<b>EU</b>	0,47	0,51	0,58	0,60	0,69	0,66	0,65	0,60	0,63	0,64	0,70	0,72	0,69	0,60	0,72	0,74	0,74	
<b>Finland</b>	0,09	0,10	0,12	0,13	0,15	0,19	0,20	0,20	0,22	0,22	0,24	0,24	0,23	0,21	0,25	0,24	0,22	
<b>France</b>	0,33	0,37	0,42	0,45	0,49	0,50	0,52	0,52	0,55	0,58	0,62	0,66	0,68	0,67	0,74	0,77	0,76	
<b>Germany</b>	0,38	0,40	0,43	0,45	0,47	0,50	0,51	0,52	0,55	0,56	0,58	0,59	0,60	0,60	0,66	0,66	0,65	
<b>Greece</b>	0,02	0,02	0,03	0,03	0,04	0,04	0,04	0,04	0,04	0,04	0,04	0,05	0,05	0,05	0,05	0,05	0,05	
<b>Hungary</b>	0,02	0,03	0,03	0,04	0,06	0,07	0,09	0,10	0,10	0,13	0,14	0,17	0,18	0,15	0,22	0,22	0,10	
<b>Ireland</b>	-	-	-	-	-	-	0,55	0,46	0,57	0,62	0,69	0,74	0,67	0,60	0,76	0,85	0,85	
<b>Italy</b>	0,18	0,19	0,20	0,23	0,25	0,28	0,29	0,32	0,35	0,38	0,40	0,41	0,39	0,38	0,42	0,44	0,43	
<b>Japan</b>	0,64	0,66	0,67	0,70	0,73	0,74	0,83	0,85	0,83	0,82	0,82	0,83	0,84	0,85	0,89	0,87	-	
<b>Latvia</b>	-	0,00	0,00	0,00	0,01	0,01	0,01	0,01	0,01	0,02	0,02	0,03	0,03	0,04	0,08	0,09	0,09	
<b>Lithuania</b>	0,00	0,00	0,00	0,00	0,01	0,01	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,04	0,06	0,06	0,06	
<b>Luxembourg</b>	-	-	-	-	-	-	-	-	-	-	-	0,11	0,11	0,14	0,17	0,18	0,18	
<b>Malta</b>	-	-	-	-	-	-	-	-	-	0,14	0,17	0,20	0,22	0,21	0,23	0,25	0,25	
<b>Netherlands</b>	1,25	1,33	1,42	1,54	1,64	1,57	1,46	1,39	1,46	1,56	1,71	1,72	1,70	1,44	1,69	1,82	1,89	
<b>Poland</b>	0,01	0,01	0,03	0,02	0,03	0,03	0,04	0,04	0,10	0,14	0,15	0,18	0,20	0,15	0,21	0,23	0,20	
<b>Portugal</b>	0,18	0,20	0,22	0,24	0,26	0,28	0,29	0,30	0,32	0,32	0,37	0,39	0,40	0,40	0,43	0,44	0,36	
<b>Romania</b>	-	-	-	0,00	0,00	0,00	0,00	0,00	0,01	0,01	0,01	0,01	0,01	0,01	0,01	0,02	0,02	0,02
<b>Slovakia</b>	0,01	0,01	0,01	0,01	0,01	0,01	0,02	0,03	0,04	0,05	0,08	0,10	0,11	0,10	0,12	0,13	0,14	
<b>Slovenia</b>	-	-	-	-	-	-	0,05	0,05	0,06	0,07	0,08	0,09	0,09	0,09	0,11	0,12	0,12	
<b>Spain</b>	0,14	0,16	0,18	0,19	0,21	0,23	0,24	0,24	0,24	0,25	0,25	0,25	0,25	0,23	0,26	0,26	0,25	
<b>Sweden</b>	0,40	0,41	0,46	0,49	0,62	0,60	0,66	0,59	0,63	0,65	0,66	0,66	0,61	0,55	0,81	0,85	0,84	
<b>United Kingdom</b>	1,33	1,51	1,62	1,55	1,88	1,62	1,55	1,25	1,31	1,29	1,51	1,58	1,43	1,08	1,53	1,52	1,52	
<b>United States</b>	0,90	0,94	1,01	1,07	1,12	1,05	0,98	0,90	1,01	1,04	1,05	1,09	1,09	0,86	1,00	1,04	1,01	

**Table B.17: Size banking sector as fraction of GDP (source: ECB, national central banks, OECD, Eurostat)**

Country	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
Austria	2,14	2,23	2,24	2,37	2,44	2,53	2,68	2,51	2,61	2,71	2,93	3,04	3,23	3,75	3,75	3,42	3,36
Belgium	2,83	3,09	3,00	2,93	3,00	2,77	2,99	2,89	3,01	3,15	3,49	3,53	3,88	3,68	3,40	3,20	3,26
Bulgaria	-	-	-	-	0,34	0,30	0,40	0,46	0,50	0,65	0,75	0,84	1,01	1,04	1,09	1,11	1,10
Cyprus	-	-	-	-	-	-	3,94	3,69	3,59	3,69	4,60	5,22	5,84	6,89	8,27	7,79	7,41
Czech Republic	1,24	1,19	1,24	1,18	1,18	1,20	1,09	0,98	0,94	0,97	0,99	0,99	1,08	1,02	1,14	1,17	1,16
Denmark	1,00	1,09	2,09	2,25	2,34	2,49	2,53	2,89	3,02	3,19	3,60	3,74	4,27	4,64	4,93	4,80	4,77
Estonia	0,34	0,39	0,58	0,52	0,56	0,60	0,63	0,67	0,72	0,89	1,06	1,15	1,28	1,36	1,54	1,43	1,19
Finland	1,17	1,14	0,97	0,93	0,98	0,98	1,20	1,19	1,33	1,46	1,57	1,64	1,70	2,13	2,32	2,67	3,36
France	2,25	2,31	2,41	2,49	2,65	2,60	2,71	2,70	2,74	2,89	3,18	3,43	3,77	3,99	4,06	4,04	4,21
Germany	1,98	2,19	2,51	2,72	2,84	2,97	3,00	3,01	3,00	3,01	3,08	3,09	3,13	3,19	3,13	3,35	3,26
Greece	-	-	0,96	1,06	1,37	1,50	1,45	1,36	1,33	1,33	1,48	1,54	1,76	2,00	2,13	2,27	2,22
Hungary	-	-	-	-	-	-	0,65	0,62	0,76	0,85	0,90	1,08	1,13	1,21	1,43	1,30	1,14
Ireland	1,54	1,60	2,56	2,95	3,31	3,95	4,50	4,69	5,14	5,96	7,07	8,16	8,76	9,62	10,17	9,79	8,40
Italy	1,60	1,46	1,51	1,40	1,45	1,49	1,50	1,59	1,67	1,70	1,81	1,92	2,19	2,35	2,47	2,45	2,58
Latvia	-	-	-	-	-	-	0,79	0,74	0,85	1,01	1,21	1,43	1,47	1,41	1,62	1,69	1,47
Lithuania	-	-	-	-	-	-	0,32	0,33	0,39	0,47	0,63	0,72	0,83	0,82	0,98	0,93	0,80
Luxembourg	28,81	29,44	31,62	33,41	32,63	32,08	36,18	32,57	31,75	31,22	32,14	30,36	31,18	32,25	29,87	26,17	25,67
Malta	-	-	-	-	-	-	3,60	3,58	3,95	4,59	5,65	5,93	6,94	7,27	7,12	8,15	7,99
Netherlands	2,13	2,37	2,89	3,37	3,55	3,88	3,94	3,83	4,04	4,48	5,48	5,66	5,80	5,04	4,64	4,61	4,70
Poland	0,44	0,47	0,48	0,53	0,55	0,57	0,63	0,60	0,59	0,69	0,67	0,70	0,75	0,72	0,88	0,88	0,84
Portugal	-	-	2,18	1,95	2,10	2,18	2,22	2,21	2,44	2,32	2,34	2,47	2,60	2,80	3,09	3,24	3,35
Romania	-	-	-	-	-	-	-	0,28	0,29	0,38	0,44	0,53	0,58	0,60	0,73	0,74	0,67
Slovakia	-	-	-	-	-	-	0,91	0,91	0,81	0,91	0,98	1,10	1,06	1,02	0,90	0,88	0,84
Slovenia	-	-	-	-	-	-	0,78	0,81	0,83	0,90	1,05	1,12	1,26	1,31	1,51	1,50	1,47
Spain	1,91	1,88	1,67	1,74	1,80	1,83	1,90	1,91	1,99	2,11	2,43	2,56	2,85	3,13	3,29	3,30	3,37
Sweden	0,88	1,00	1,74	1,53	1,61	1,62	1,78	1,83	1,86	2,06	2,21	2,46	2,53	2,72	3,20	3,06	2,95
United Kingdom	2,34	2,34	3,21	2,97	3,19	3,26	3,55	3,44	3,77	3,97	4,61	5,02	4,85	4,85	5,73	5,38	5,60
EU	2,03	2,09	2,37	2,41	2,55	2,62	2,70	2,67	2,77	2,89	3,18	3,36	3,49	3,54	3,69	3,66	3,70
Japan	1,50	1,47	1,51	1,52	1,52	1,49	1,50	1,47	1,47	1,47	1,48	1,48	1,50	1,62	1,70	1,69	1,82
United States	0,55	0,55	0,56	0,58	0,57	0,59	0,61	0,62	0,65	0,66	0,67	0,70	0,73	0,80	0,86	0,82	0,82

**Table B.18: Banks' foreign assets as fraction of GDP (source: BIS locational banking statistics)**

	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	0,32	0,32	0,35	0,39	0,38	0,50	0,54	0,56	0,61	0,63	0,89	1,11	1,29	1,20	1,20	1,07	0,95
<b>Belgium</b>	0,91	0,94	1,02	1,03	1,17	1,22	1,41	1,63	1,81	1,94	1,98	2,23	2,52	1,90	1,77	1,58	1,43
<b>Bulgaria</b>	0,12	0,11	0,23	0,11	0,12	0,18	0,16	0,15	0,10	0,16	0,14	0,18	0,16	0,11	0,14	0,13	0,13
<b>Cyprus</b>	0,43	0,39	0,49	0,41	0,46	0,55	0,62	0,59	0,54	0,52	0,86	1,11	1,23	3,53	4,77	4,07	3,43
<b>Czech Republic</b>	0,08	0,10	0,13	0,11	0,16	0,16	0,19	0,12	0,09	0,08	0,11	0,11	0,10	0,07	0,07	0,09	0,07
<b>Denmark</b>	0,29	0,31	0,35	0,39	0,34	0,39	0,33	0,37	0,45	0,48	0,47	0,58	0,71	0,64	0,60	0,55	0,48
<b>Estonia</b>	0,04	0,03	0,08	0,04	0,09	0,11	0,08	0,12	0,10	0,11	0,10	0,09	0,13	0,11	0,07	0,06	0,14
<b>Finland</b>	0,12	0,15	0,15	0,14	0,20	0,24	0,34	0,36	0,33	0,37	0,32	0,40	0,41	0,41	0,57	1,34	1,58
<b>France</b>	0,40	0,38	0,45	0,45	0,44	0,48	0,50	0,57	0,58	0,76	0,90	0,97	1,09	0,91	0,98	0,97	0,84
<b>Germany</b>	0,22	0,24	0,30	0,38	0,41	0,52	0,58	0,69	0,74	0,79	0,77	0,96	1,07	0,93	0,95	0,82	0,70
<b>Greece</b>	0,10	0,14	0,16	0,17	0,15	0,18	0,18	0,19	0,23	0,22	0,22	0,28	0,41	0,54	0,74	0,57	0,48
<b>Hungary</b>	0,04	0,04	0,06	0,08	0,10	0,06	0,06	0,05	0,04	0,06	0,06	0,06	0,06	0,05	0,05	0,06	0,07
<b>Ireland</b>	0,63	0,87	1,12	1,39	1,57	1,72	1,78	1,92	2,31	2,75	2,94	3,66	3,96	3,59	4,08	3,37	2,64
<b>Italy</b>	0,14	0,17	0,17	0,18	0,15	0,17	0,15	0,20	0,20	0,22	0,22	0,27	0,30	0,29	0,28	0,28	0,29
<b>Japan</b>	0,23	0,24	0,28	0,32	0,27	0,25	0,28	0,31	0,31	0,32	0,39	0,44	0,55	0,53	0,49	0,52	0,51
<b>Lithuania</b>	0,03	0,04	0,04	0,02	0,04	0,06	0,05	0,06	0,03	0,06	0,06	0,07	0,07	0,03	0,07	0,05	0,08
<b>Luxembourg</b>	20,50	20,88	22,38	24,13	23,37	25,09	25,68	26,22	23,38	22,00	20,25	21,16	20,77	16,93	17,32	14,26	12,42
<b>Malta</b>	0,39	0,39	0,37	0,49	0,41	0,44	0,53	0,60	0,61	0,51	0,43	0,72	0,73	0,75	0,60	1,47	1,49
<b>Netherlands</b>	0,48	0,49	0,57	0,76	0,68	0,77	0,88	1,00	1,08	1,19	1,17	1,49	1,69	1,34	1,33	1,43	1,32
<b>Poland</b>	0,09	0,07	0,09	0,06	0,08	0,09	0,09	0,08	0,08	0,12	0,11	0,11	0,10	0,03	0,03	0,04	0,04
<b>Portugal</b>	0,23	0,22	0,42	0,45	0,38	0,43	0,44	0,47	0,54	0,54	0,49	0,55	0,60	0,55	0,69	0,67	0,53
<b>Romania</b>	0,03	0,04	0,07	0,03	0,03	0,05	0,05	0,04	0,03	0,04	0,04	0,04	0,04	0,01	0,02	0,01	0,01
<b>Slovakia</b>	0,11	0,06	0,07	0,06	0,04	0,05	0,08	0,03	0,04	0,05	0,03	0,04	0,04	0,02	0,05	0,05	0,04
<b>Slovenia</b>	0,11	0,15	0,12	0,09	0,07	0,10	0,15	0,16	0,11	0,06	0,09	0,07	0,12	0,07	0,07	0,04	0,04
<b>Spain</b>	0,24	0,21	0,20	0,21	0,20	0,24	0,24	0,28	0,29	0,30	0,33	0,36	0,42	0,36	0,41	0,36	0,33
<b>Sweden</b>	0,14	0,16	0,18	0,20	0,21	0,27	0,26	0,30	0,32	0,43	0,43	0,63	0,73	0,75	0,86	0,79	0,79
<b>EU</b>																	
<b>United Kingdom</b>	1,17	1,20	1,25	1,31	1,21	1,42	1,51	1,55	1,66	1,72	1,81	2,12	2,43	2,13	2,49	2,44	2,38
<b>United States</b>	0,08	0,09	0,10	0,09	0,09	0,10	0,11	0,11	0,13	0,15	0,15	0,18	0,21	0,21	0,23	0,25	0,24

**Table B.19: Assets of foreign-owned banks, cooperative banks, and listed banks as fraction total banking assets (source: Bankscope)**

	Foreign Owned							Cooperative							Listed						
	2005	2006	2007	2008	2009	2010	2011	2005	2006	2007	2008	2009	2010	2011	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	26%	21%	27%	30%	27%	25%	34%	13%	15%	18%	16%	16%	17%	13%	19%	20%	23%	22%	23%	25%	39%
<b>Belgium</b>	31%	31%	32%	37%	35%	32%	36%	0%	0%	0%	0%	1%	0%	0%	59%	59%	60%	50%	51%	53%	50%
<b>Bulgaria</b>	63%	70%	85%	88%	88%	87%	85%	3%	3%	3%	3%	3%	3%	5%	17%	16%	16%	14%	14%	16%	24%
<b>Cyprus</b>	7%	8%	10%	12%	12%	12%	1%	5%	4%	4%	3%	4%	3%	0%	61%	60%	61%	61%	66%	68%	75%
<b>Czech Republic</b>	90%	91%	90%	95%	96%	97%	96%	3%	4%	5%	7%	7%	7%	8%	20%	21%	20%	21%	20%	20%	24%
<b>Denmark</b>	20%	19%	17%	17%	20%	18%	17%	0%	0%	0%	0%	0%	0%	0%	67%	67%	69%	69%	65%	68%	72%
<b>Estonia</b>	74%	71%	66%	98%	97%	97%	95%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%	0%
<b>Finland</b>	81%	79%	75%	80%	77%	89%	91%	21%	21%	32%	29%	30%	19%	16%	18%	20%	11%	8%	10%	10%	8%
<b>France</b>	8%	8%	9%	8%	9%	9%	8%	40%	41%	40%	40%	41%	42%	43%	38%	40%	43%	38%	45%	44%	44%
<b>Germany</b>	19%	13%	10%	11%	11%	10%	12%	12%	16%	15%	16%	18%	16%	16%	15%	34%	37%	41%	39%	41%	61%
<b>Greece</b>	11%	10%	10%	10%	9%	8%	8%	0%	0%	0%	0%	0%	0%	1%	87%	86%	85%	85%	85%	86%	91%
<b>Hungary</b>	55%	56%	57%	61%	61%	60%	42%	0%	0%	0%	2%	2%	0%	0%	32%	35%	35%	33%	36%	37%	58%
<b>Ireland</b>	51%	47%	47%	59%	54%	55%	60%	0%	0%	0%	0%	0%	0%	0%	26%	28%	28%	24%	27%	26%	28%
<b>Italy</b>	3%	3%	7%	8%	9%	10%	11%	16%	19%	19%	20%	21%	23%	20%	53%	55%	69%	72%	71%	76%	78%
<b>Japan</b>	2%	2%	3%	4%	2%	2%	1%	15%	17%	17%	17%	17%	18%	18%	53%	59%	60%	62%	65%	65%	67%
<b>Lithuania</b>	76%	76%	76%	78%	76%	70%	83%	0%	0%	0%	0%	0%	0%	0%	8%	7%	7%	6%	7%	9%	10%
<b>Luxembourg</b>	75%	75%	74%	66%	70%	69%	73%	1%	1%	1%	1%	1%	1%	0%	10%	10%	8%	8%	10%	11%	17%
<b>Malta</b>	63%	70%	68%	66%	64%	64%	57%	4%	4%	5%	4%	4%	3%	3%	60%	49%	54%	56%	58%	59%	69%
<b>Netherlands</b>	32%	32%	31%	24%	18%	11%	8%	17%	17%	16%	19%	19%	23%	25%	45%	43%	43%	49%	43%	52%	52%
<b>Poland</b>	72%	73%	72%	73%	75%	73%	72%	3%	3%	3%	3%	3%	3%	3%	88%	85%	82%	80%	83%	82%	91%
<b>Portugal</b>	15%	15%	16%	16%	16%	16%	13%	0%	3%	3%	3%	3%	3%	0%	46%	45%	47%	49%	49%	49%	57%
<b>Romania</b>	81%	88%	88%	88%	85%	84%	87%	0%	0%	0%	0%	0%	0%	0%	23%	25%	24%	24%	23%	25%	34%
<b>Slovakia</b>	79%	85%	84%	84%	84%	84%	95%	0%	0%	0%	0%	0%	0%	0%	44%	47%	46%	46%	41%	41%	47%
<b>Slovenia</b>	25%	24%	24%	26%	26%	25%	21%	2%	2%	2%	2%	3%	4%	4%	22%	22%	22%	22%	22%	23%	26%
<b>Spain</b>	2%	2%	2%	2%	3%	2%	1%	6%	7%	7%	6%	6%	6%	4%	57%	54%	53%	49%	50%	62%	68%
<b>Sweden</b>	1%	1%	1%	1%	1%	1%	1%	0%	0%	0%	0%	0%	0%	0%	93%	90%	92%	94%	92%	93%	93%
<b>EU</b>								20%	20%	20%	22%	22%	22%	25%	45%	46%	50%	48%	51%	53%	58%
<b>United Kingdom</b>	21%	25%	28%	34%	27%	28%	27%	0%	0%	0%	0%	0%	0%	0%	57%	52%	61%	60%	65%	64%	66%
<b>United States</b>	12%	13%	12%	13%	15%	13%	11%	1%	1%	1%	1%	1%	1%	1%	47%	54%	57%	65%	67%	71%	73%

**Table B.20: Competition measures - C3 and HHI (source: Bankscope)<sup>19</sup>**

	C3							HHI						
	2005	2006	2007	2008	2009	2010	2011	2005	2006	2007	2008	2009	2010	2011
Austria	51,22	46,16	49,11	48,55	47,12	47,92	62,42	1.108	941	1.001	925	872	904	1.737
Belgium	70,11	70,38	71,18	71,74	67,62	65,25	64,81	1.931	1.923	1.958	2.037	1.860	1.796	1.790
Bulgaria	44,46	40,96	44,71	42,53	44,47	41,57	46,75	1.004	930	1.037	954	1.010	956	1.161
Cyprus	65,37	64,83	68,02	69,76	70,62	77,02	89,64	1.840	1.725	1.841	1.887	2.039	2.233	2.824
Czech Republic	75,00	74,62	72,28	71,24	70,76	71,88	82,02	2.005	1.964	1.896	1.833	1.814	1.868	2.327
Denmark	79,16	77,07	76,89	76,28	75,02	78,08	80,26	3.569	3.503	3.687	3.604	3.192	3.537	3.882
Estonia	98,17	96,91	96,33	98,53	98,57	98,01	100,00	5.780	5.477	5.058	6.746	6.677	6.613	8.822
Finland	88,83	85,95	78,21	83,02	82,73	89,47	91,39	3.355	3.104	2.831	3.435	3.307	4.536	5.210
France	40,87	43,28	46,56	41,48	49,26	47,96	48,57	846	890	1.004	878	1.125	1.100	1.139
Germany	31,43	38,75	40,04	43,50	40,88	43,65	65,13	413	757	870	1.072	798	993	2.247
Greece	60,78	60,45	57,38	57,82	57,91	59,15	73,47	1.523	1.516	1.435	1.445	1.441	1.511	2.179
Hungary	49,48	51,54	52,55	51,26	53,91	55,56	82,81	1.322	1.503	1.564	1.457	1.615	1.692	3.493
Ireland	52,00	47,04	45,16	58,80	54,65	56,03	72,10	1.231	1.009	1.032	1.570	1.358	1.507	2.574
Italy	48,12	46,13	53,40	56,13	52,73	56,08	56,01	992	911	1.365	1.422	1.226	1.351	1.373
Japan	39,30	41,44	40,07	39,28	40,24	38,84	39,04	684	717	662	636	676	639	662
Lithuania	72,06	72,56	72,67	73,59	71,26	66,21	79,36	2.171	2.173	2.135	2.109	2.031	1.855	2.432
Luxembourg	32,86	30,07	24,44	25,19	30,29	35,27	45,56	578	534	410	432	513	612	972
Malta	73,69	62,19	70,95	74,07	72,11	69,47	82,39	2.153	1.662	1.946	2.011	1.959	1.918	2.529
Netherlands	86,15	84,59	82,30	82,89	69,81	79,71	83,14	2.764	2.652	2.555	2.670	2.090	2.677	2.822
Poland	42,96	40,78	42,71	37,49	40,27	39,80	43,79	908	851	884	722	785	770	929
Portugal	59,76	57,47	58,47	60,74	61,40	61,71	72,15	1.462	1.352	1.387	1.478	1.523	1.525	2.021
Romania	58,84	58,62	51,29	48,45	45,20	49,01	64,56	1.539	1.563	1.286	1.153	1.073	1.216	1.873
Slovakia	60,43	64,63	59,45	60,83	55,05	56,36	66,60	1.412	1.585	1.410	1.417	1.294	1.362	1.753
Slovenia	59,84	60,04	60,56	58,18	56,18	55,47	60,67	2.010	1.995	2.052	1.885	1.717	1.616	1.878
Spain	56,75	52,98	53,34	49,03	49,11	53,65	57,63	1.484	1.283	1.259	1.097	1.116	1.394	1.608
Sweden	78,88	74,88	76,52	78,90	77,70	78,93	92,96	2.466	2.230	2.369	2.639	2.618	2.708	3.836
EU	10,37	10,03	12,76	12,80	11,82	11,89	13,44	136	132	158	163	152	163	204
United Kingdom	48,53	43,80	53,67	53,01	49,92	49,23	50,62	954	820	1.146	1.143	1.062	1.032	1.093
United States	19,69	22,99	24,62	28,31	28,71	30,07	29,96	230	296	329	386	384	418	422

<sup>19</sup> C3 equals the aggregate size of the 3 largest banks relative to the size of all banks. HHI is the sum of per-bank market share squared. All values constructed using Bankscope data.



**Table B.21: Profitability - pre-tax ROA<sup>20</sup>, Net Interest Margin<sup>21</sup>, Cost to income ratio<sup>22</sup> (source: Bankscope)**

	pre-tax ROA							Net Interest Margin							Cost to income ratio						
	2005	2006	2007	2008	2009	2010	2011	2005	2006	2007	2008	2009	2010	2011	2005	2006	2007	2008	2009	2010	2011
<b>Austria</b>	0,47	0,77	0,71	0,12	0,04	0,43	0,09	1,34	1,43	1,82	2,26	2,12	2,14	2,12	63,20	60,14	60,32	65,32	57,51	56,51	58,51
<b>Belgium</b>	0,58	0,78	0,55	-3,58	0,08	0,33	-0,75	1,07	1,06	1,03	1,24	1,35	1,32	1,34	58,97	53,44	61,31	82,22	66,91	64,60	92,95
<b>Bulgaria</b>	1,96	1,85	2,28	2,11	1,16	0,94	0,96	5,07	4,72	4,36	4,53	4,62	4,66	4,46	53,41	52,14	46,72	48,96	48,94	47,37	46,75
<b>Cyprus</b>	0,65	0,99	1,45	-0,11	1,02	0,79	-4,30	2,51	2,28	2,63	2,62	2,27	2,86	3,43	59,87	52,25	46,53	64,09	46,49	50,48	71,14
<b>Czech Republic</b>	1,35	1,24	1,29	1,26	1,48	1,48	1,27	2,52	2,56	2,74	3,10	3,23	3,34	3,15	55,68	54,43	51,99	52,70	41,49	43,55	44,61
<b>Denmark</b>	0,65	0,72	0,57	-0,01	-0,15	0,14	0,04	1,33	1,21	1,09	1,22	1,51	1,26	1,15	55,34	53,23	57,46	67,91	55,09	59,73	65,14
<b>Estonia</b>	1,79	1,99	2,24	1,44	-3,54	0,35	2,32	2,21	2,18	2,37	2,99	2,17	2,20	2,83	54,73	44,90	42,63	39,51	47,59	44,85	48,28
<b>Finland</b>	1,11	1,16	2,14	0,58	0,53	0,58	0,48	1,15	1,29	1,12	1,30	1,03	0,76	0,54	56,61	51,46	51,34	43,32	38,29	33,61	37,42
<b>France</b>	0,48	0,59	0,35	0,01	0,18	0,36	0,16	0,91	0,82	0,67	0,79	1,17	1,18	1,14	63,38	62,66	70,01	82,31	65,78	63,54	66,52
<b>Germany</b>	0,23	0,33	0,29	-0,20	0,06	0,17	0,16	1,37	1,00	0,98	1,03	1,26	1,22	1,01	68,75	66,74	68,85	93,53	70,25	68,67	70,45
<b>Greece</b>	1,02	1,06	1,41	0,67	0,16	-0,70	-9,35	3,07	3,11	3,11	3,00	2,79	2,95	3,35	55,12	52,00	53,38	55,85	55,38	70,06	62,24
<b>Hungary</b>	1,91	1,66	1,60	1,41	0,75	0,18	-0,91	4,58	4,20	4,14	3,64	4,41	4,82	5,13	56,60	57,65	64,42	71,80	51,97	50,02	54,42
<b>Ireland</b>	0,53	0,63	0,59	0,12	-1,54	-2,99	-0,39	0,82	0,88	0,95	0,85	0,77	0,65	0,46	49,60	47,99	46,88	50,80	53,59	69,87	69,35
<b>Italy</b>	0,65	0,75	0,79	0,39	0,23	0,29	-0,68	1,82	2,07	2,11	2,20	2,08	1,88	1,83	63,51	61,51	61,45	68,25	74,94	78,27	82,19
<b>Japan</b>	0,17	0,57	0,43	0,22	-0,26	0,19	0,21	1,16	1,15	1,13	1,02	1,10	1,07	1,05	56,48	56,73	59,55	66,92	78,96	66,73	66,68
<b>Lithuania</b>	0,92	1,17	1,41	0,84	-4,29	-0,36	1,70	2,36	2,33	2,52	2,79	1,86	1,74	2,06	61,43	55,36	50,18	52,85	64,18	64,74	57,08
<b>Luxembourg</b>	0,57	0,87	0,69	0,25	0,45	0,42	0,00	0,73	0,83	0,79	1,27	1,30	1,18	1,03	57,68	51,64	54,19	62,45	55,21	57,58	86,12
<b>Malta</b>	1,13	1,15	0,91	-0,51	1,94	1,15	0,97	2,13	1,69	1,89	1,87	1,71	1,90	2,12	39,24	35,10	37,68	111,40	28,62	39,16	44,27
<b>Netherlands</b>	0,68	0,55	0,71	-0,89	0,00	0,29	0,31	1,07	0,85	0,81	1,02	1,08	1,22	1,25	61,12	68,84	70,19	167,47	75,10	68,54	67,00
<b>Poland</b>	1,71	1,82	2,06	1,44	0,79	1,14	1,44	3,54	3,20	3,28	3,31	3,23	3,43	3,35	63,57	62,08	57,92	56,71	57,10	53,35	49,91
<b>Portugal</b>	0,81	0,88	0,81	0,35	0,41	0,43	-0,35	1,94	1,98	1,97	2,00	1,65	1,64	1,81	64,61	60,94	60,51	64,90	60,63	61,95	66,97
<b>Romania</b>	1,47	1,45	1,41	2,01	0,90	0,65	0,51	5,56	5,22	4,19	5,04	5,28	5,54	4,86	66,85	65,69	62,04	53,68	50,32	51,53	55,03
<b>Slovakia</b>	1,50	1,41	1,24	1,04	0,70	1,18	1,30	2,78	2,83	2,87	3,05	3,26	3,45	3,62	69,30	72,91	75,25	58,40	60,81	52,50	52,25
<b>Slovenia</b>	0,86	0,92	0,95	0,44	0,10	-0,27	-0,95	2,68	2,50	2,34	2,49	2,26	2,54	2,57	60,20	61,25	56,37	61,34	59,32	57,72	61,92
<b>Spain</b>	0,86	1,00	1,03	0,70	0,54	0,52	0,04	1,70	1,73	1,80	1,87	2,16	1,96	1,96	53,70	50,61	48,01	48,89	47,26	49,68	53,31
<b>Sweden</b>	0,73	0,81	0,75	0,45	0,25	0,44	0,44	1,14	1,09	1,09	1,09	1,12	1,00	0,90	55,23	53,56	53,96	57,42	55,64	55,56	57,54
<b>EU</b>	0,56	0,62	0,53	-0,18	0,16	0,22	0,00	1,25	1,15	1,09	1,14	1,36	1,34	1,27	60,92	59,92	62,24	74,83	62,90	63,14	67,57
<b>United Kingdom</b>	0,53	0,50	0,36	-0,35	0,26	0,23	0,21	1,18	1,02	0,86	0,75	0,97	1,05	1,02	58,38	57,70	61,17	79,49	60,20	60,66	66,51
<b>United States</b>	1,12	1,08	0,65	-0,26	0,09	0,54	0,66	2,70	2,41	2,29	2,51	2,78	2,76	2,59	61,22	62,16	68,17	78,38	65,21	66,36	69,86

<sup>20</sup> Defined as net income over total assets - data2115 / data2025

<sup>21</sup> Defined as net interest revenue over total earning assets - data2080 / data2010

<sup>22</sup> Defined as overheads over net interest revenue plus other operating income - data2090 / (data2080 + data2085)



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