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2016

Online at <https://mpa.ub.uni-muenchen.de/76622/>

MPRA Paper No. 76622, posted 6 February 2017 12:49 UTC

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## Acknowledgments

The authors would like to thank Muriel Métais and the Banque de France for providing data on French money market funds. We would also like to thank Keith Savard and Elham Saeidinezhad for useful discussions related to this report.

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# Cross-Border Investment in Europe:

## From Macro to Financial Data

Jonathon Adams-Kane, Claude Lopez<sup>1</sup> and Jakob Wilhelmus

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## Executive Summary

International capital flows and cross-border financial integration remain omnipresent in the European political debate as countries struggle with low and divergent GDP growth, new European financial regulation and the anticipation of Brexit.

In such a shifting environment, this report first identifies some of the more recent patterns in the landscape of European gross cross-border investment followed by a closer look at banking and portfolio investments.

### Key Findings and Main Conclusions

- Excluding the UK, Europe's share of global gross capital inflows fell only marginally relative to the pre-crisis period, whereas the UK never recovered its former share. Increased shares went mainly to European financial hubs—Ireland, Luxembourg, and the Netherlands—where there appears to have been some consolidation of financial intermediation over this period, and to developing countries and Asian financial hubs. Core euro area countries remain the primary actors in cross-border investment both globally and within the region.
- External imbalances persist for Southern and worsen for Central and Eastern Europe.
- European banks' claims worldwide and on developed Europe have significantly diminished, but their claims on developing Eastern European countries remain stable.

→ Countries' external imbalances and banks' exposure to less-regulated markets emphasize the necessity of well-established financial oversight as well as of a harmonization of the national rules and legislation. These would help ensure the success of European financial integration in terms of more evenly distributed growth and improved financial stability.

While banks are still the main financial intermediaries in the euro area, their share of the euro area financial sector is declining in favor of asset management firms, especially investment funds. Simultaneously, financial hubs like Ireland and Luxembourg have strengthened their position as the region's main fund domiciles since the financial crisis, benefiting from the implementation of the improved rules for Undertakings for Collective Investment in Transferable Securities (UCITS) in mid-2011 and early 2014.

- Regional specificities in the financial sector remain strong, as illustrated by the level of diversity of investment funds in Europe—significantly higher than in the U.S.—and by significant heterogeneity in European countries’ reliance on banking.

→ While financial oversight is an ongoing process, the financial sector has already internalized many of the new rules, leading to a reallocation of capital across countries and investment types. Any new development on the regulatory side should account for this dynamic adjustment as well as the regional features of the financial sector, and how they translate differently in terms of enhancing financial stability.

## 1. Introduction

Capital flows play a central role in today's interconnected global economy, particularly at a time of volatile financial markets and concerns about the global economic outlook. The potential benefits are well known, from risk diversification and increased returns to strengthening countries' rates of investment and economic growth. Europe has been a key player in cross-border investment.<sup>2</sup> The routinely high ranking of many European countries in the Milken Institute Global Opportunity Index reflects this dominant position. This year is no exception, with the UK, Ireland, Sweden and Norway in the top 10.

The strong European position in cross-border investment has often been linked to the European single market (European Union) and the resulting integration. The advent of the euro strengthened the financial aspect of this trend. This rapid integration, combined with the lack of adequate regulatory oversight, is often identified as one of the main causes of the 2010-2012 European sovereign debt crisis. It allowed countries to accumulate unsustainable external imbalances, especially within the euro area, leaving European banks overly exposed. The post-crisis European recovery, slow yet steady, shows the resilience of the region. However, significant economic differences across countries remain a concern. The lack of synchronization among European economies, the current regulatory pressure and uncertainty as well as the prospect of Brexit pose significant challenges.

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<sup>2</sup> Throughout this report, "Europe" generally refers to the EU-28 plus Norway and Switzerland.

In such a shifting environment, this report aims to identify some of the more recent patterns in the landscape of European cross-border investment, especially portfolio investment and banking.<sup>3</sup> First, it depicts the evolution of the size and composition of European gross flows and positions through time and geographic allocation. The analysis specifically investigates *gross* as opposed to *net* flows and positions because domestic and foreign investors may have different behavior.<sup>4</sup> Second, it focuses on portfolio investments and analyzes their recent change in distribution across countries and investment vehicles.

While our analysis is rich in empirical findings, four appear particularly interesting. First, core euro-area countries, including Luxembourg and the Netherlands, are the main actors in attracting investments and in making them. Meanwhile, external imbalances persist for Southern Europe and are worsening for Central and Eastern Europe. Second, European banks' cross-border exposure has significantly diminished, but has changed little regarding developing Europe. The countries' external imbalances and banks' exposure to these less-regulated markets emphasize the necessity of well-established financial oversight as well as harmonization of the national rules and legislation. These changes would help ensure

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<sup>3</sup> *Foreign direct investment* inflows mainly measure transactions that increase nonresidents' direct equity in domestic firms with controlling interest, commonly defined as a share of ownership of at least 10 percent, net of any divestment. *Portfolio investment* inflows consist of nonresidents' purchases from residents of equity and debt securities originally issued by residents, net of nonresidents' sales to residents of these securities. *Banking* inflows include capital flows not accounted for as FDI or portfolio investment. These consist mainly of loans (net of repayment) from nonresidents, primarily foreign banks; nonresidents' deposits in domestic banks; and domestic firms' trade credit and other accounts payable to nonresidents.

<sup>4</sup> Gross flows and positions have grown substantially relative to net flows and positions in recent decades, and are now recognized as giving a more complete picture of where countries invest and what form that investment takes (Lane and Milesi-Ferretti 2001; Kraay et al. 2005), returns on these investments (Gourinchas and Rey, 2007), and how these international exposures play out during crises (Forbes and Warnock 2012; Janus and Riera-Crichton 2013; Broner et al. 2013).



the success of European financial integration by evenly distributing growth and improving financial stability.

The remaining two points focus on European portfolio investment and the growth of alternative lending. Banks' share of total assets in the euro area financial sector is declining in favor of asset management firms, especially investment funds; in addition, financial hubs such as Ireland and Luxembourg are becoming increasingly important. Financial hubs seem to be benefiting from the harmonized regime for cross-border investment throughout Europe. Finally, the report confirms that regional specificities in the financial sector remain strong, as illustrated by the level of diversity of investment funds in Europe—which is significantly higher than in the U.S.—and by substantial heterogeneity in European reliance on banking. This point cannot be ignored when designing a framework for European, or international, financial oversight.

The report proceeds as follows: Section 2 discusses the patterns of capital flows and positions for the world and Europe, while Section 3 focuses on the income generated by European investments. Moving away from countries' total external assets and liabilities, Section 4 provides bilateral information on countries' portfolio investment abroad. Section 5 investigates the European financial sector, more specifically the fastest growing category, investment funds, and its three main actors: money market, bond, and equity funds. Finally, Section 6 concludes, highlighting the relationship between the reports' main findings and the notions of financial integration, regulation, and stability.

## 2. Global and European Capital Flows

Global gross capital flows famously surged in the years leading up to the global financial crisis and then collapsed precipitously (see Figure 1). At the center of the surge was Europe, which benefitted from the creation of the euro area—which eliminated exchange-rate risk for financial transactions in the region—and several other important dimensions of financial integration that had been progressing from as early as the 1980s.<sup>5</sup> These included reductions in capital controls, financial regulatory harmonization, and concomitant improvements in financial market depth and liquidity.<sup>6</sup> These effects spilled over to drive gross flows outside the euro area as well, especially in the case of the UK, which plays a unique role in intermediating European flows. Elsewhere, the spurring of gross flows was mainly limited to the U.S. and other advanced economies.

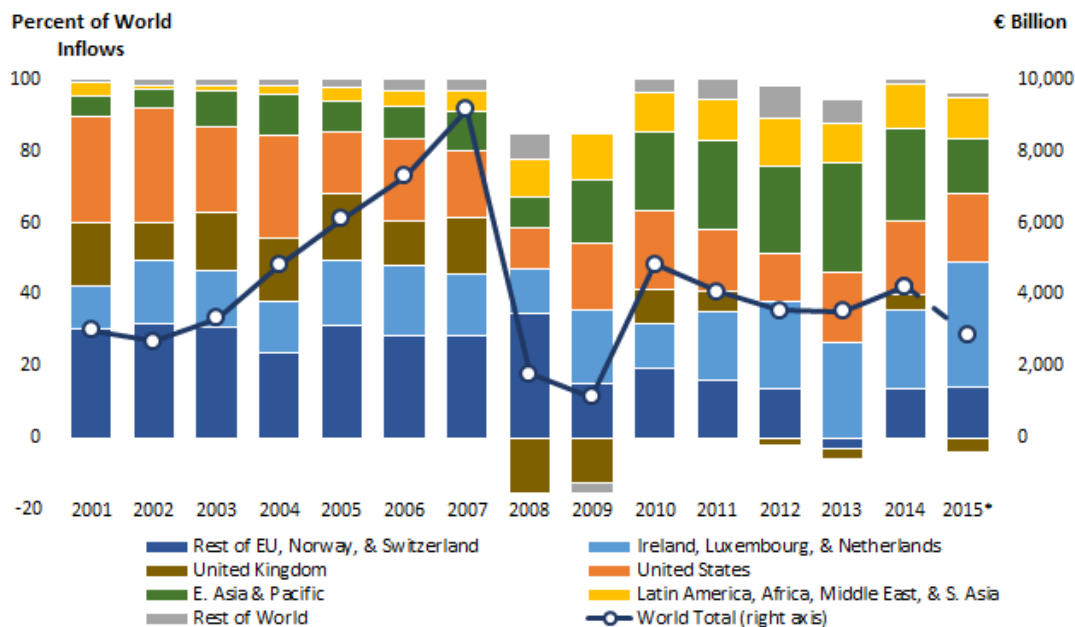
**Figure 1: Global gross capital inflows by destination, 2001-2015<sup>7</sup>**

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<sup>5</sup> At the same time, the creation of the euro area introduced new challenges to adjusting to external imbalances particular to the context of a common currency and monetary policy; Lane (2013) provides an overview of these.

<sup>6</sup> Lane (2008) and Lane (2013) provide overviews of the empirical evidence on the drivers of capital flows, both globally and specifically for Europe.

<sup>7</sup> The East Asia and Pacific, and Latin America, Africa, Middle East, and South Asia groupings follow World Bank classifications. \* 2015 country coverage was incomplete at the time of writing. However, countries missing in 2015 only accounted for 3.4% of total world inflows in 2014; these are concentrated in the Latin America, Africa, Middle East, and South Asia group.



Sources: IMF IFS (IMF 2016a); Milken Institute International Finance and Macroeconomics Research (MI-IFM) calculations.

As illustrated by Figure 1, the shock of the global financial crisis affected gross capital flows worldwide but had a disproportionate impact on the UK.<sup>8</sup> By 2010, global flows had bounced back to their 2004 level, and in subsequent years fell only slightly as Europe experienced slow growth and a drawn out sovereign debt crisis. Excluding the UK, Europe’s share of the global total fell only marginally relative to the pre-crisis period, whereas the UK never recovered its former share.<sup>9</sup> Increased shares of global flows went mainly to European financial hubs, namely Ireland, Luxembourg, and the Netherlands; to developing countries; and to Asian financial hubs. The shift in East Asia’s share at the time of the global financial crisis has shown some persistence, although there was some decline in 2014 and 2015.<sup>10</sup>

<sup>8</sup> The evolution of global gross capital outflows broken down by region of origin is similar to that of inflows by destination illustrated in Figure 1.

<sup>9</sup> Throughout this report, “Europe” generally refers to the EU-28 plus Norway and Switzerland.

<sup>10</sup> Much of the growth in Asia’s capital flows is accounted for by Hong Kong and Singapore. Following the crisis, these financial hubs took over some of the cross-border banking between Asian countries that had previously been intermediated mainly by European banks (Remolona and Shim, 2015). The decrease in capital inflows to Asia in 2014 and 2015 was largely accounted for by China. An overview of Asian capital flows is provided by Adams-Kane, Lopez, and Wilhelmus (2016); and Wilhelmus et al. (2016) focuses on China. For an exhaustive descriptive analysis of global capital flows, see Darvas et al. 2014).

Box 1 shows that the choice of currency when measuring global gross capital flows matters. The majority of the assets and liabilities held by European countries are denominated in euros, which tended to appreciate against the dollar leading up to the financial crisis and then to depreciate in the aftermath. Thus, when trends in capital flows and positions over this period are measured in U.S. dollars, as they often are, the movement of the exchange rate reinforces the trend in the underlying transactions and positions. In this report, capital flows and positions are measured in euros because most of the international investment for the countries considered are denominated in that currency.

### Box 1: Unit of Account and the Reflection of Exchange Rates in Measured Positions and Flows

*“The theoretical ideal of a widely recognized and perfectly stable standard unit of account simply does not exist in practice.” – IMF Balance of Payments Manual, Sixth Edition (IMF 2013, p. 44)*

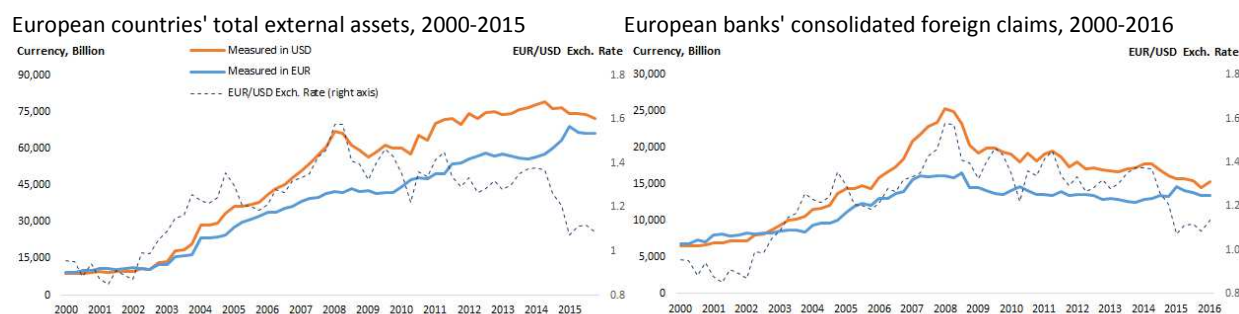
Meaningful cross-country comparisons of capital flows and positions can only be made using a common unit of account, most commonly the U.S. dollar. However, the choice of unit of account is not trivial (see IMF 2013, McGuire and Wooldridge 2005). This problem is illustrated in Figure B.1, which compares the same two series—European countries’ total external asset positions and the total foreign claims of European-headquartered banks—measured in dollars and euros, shown together with the euro/dollar exchange rate.

One striking feature of both series is that when they are measured in dollars, they show a sharp increase leading up to the global financial crisis, followed by a sharp decrease after it began. When measured in euros, both series evolve much more smoothly. The underlying reason for this is that international investments are denominated in a mix of currencies, so converting them into any single currency for the purpose of aggregation and comparison makes these measures sensitive to changes in exchange rates.

The most recent comprehensive estimates of the currency composition of European countries’ international investment positions suggest that, as of 2012, roughly 59 percent of their total

external assets and 66 percent of their external liabilities were denominated in euros.<sup>11</sup> Compare these, respectively, to 18 percent and 10 percent for the dollar, and 8 percent and 11 percent for the pound. Hence, the euro seems a more appropriate unit of account than the dollar when focusing on European countries.

**Figure B.1:** Dollar vs. Euro measures<sup>12</sup>



Sources: IMF IFS (left); BIS CBS (BIS 2016) on an immediate borrower basis (right); MI-IFM calculations.

[End of Box]

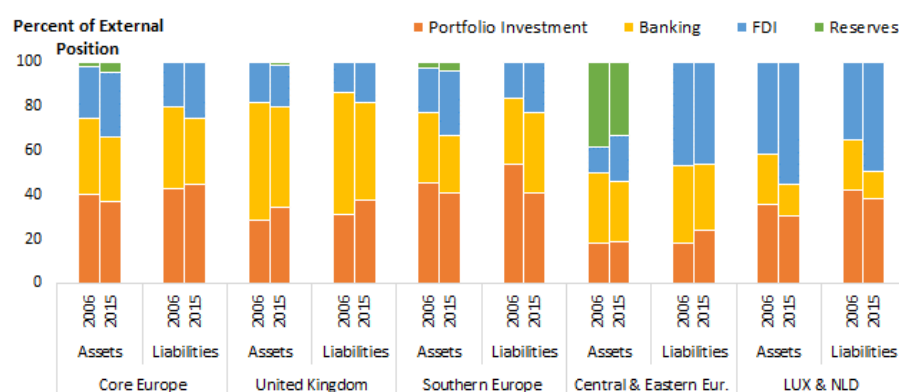
At the end of 2015, Europe remained the world's top destination for capital flows, despite a decrease in inflows in 2013. This was driven primarily by a worsening reversal in nonresidents' bank deposits in the UK, Germany, and Spain, together with a smaller reversal in lending to Greece, and by a large decrease in foreign direct investment (FDI) flows to Luxembourg and the Netherlands in 2014 (which was more than compensated for by a stabilization in European banking flows in that year).<sup>13</sup> During this time, the composition of capital flows and international investment positions (IIPs) in European countries underwent some changes. Most notably, there was an overall reduction in the role of banking flows, although they are still important throughout the region (see Figure 2). Box 2 examines the decline of international activity by European banks in more detail.

<sup>11</sup> Based on country-level estimates of currency shares from Bénétrix, Lane, and Shambaugh (2015).

<sup>12</sup> Data are quarterly. External assets data go through 2015 quarter 4, and bank claims data go through 2016 quarter 1. Bank claims data (right) are limited to European countries with publicly available data reported to the BIS; this subset accounts for more than 97 percent of the IIPs of Europe over the sample period.

<sup>13</sup> It should be noted that this measure of FDI inflows to Luxembourg and the Netherlands largely consists of investment in special purpose entities, most of which is rerouted elsewhere (OECD 2015).

**Figure 2:** Composition of European international investment positions, 2006 vs. 2015<sup>14</sup>



Sources: IMF IFS; MI-IFM calculations.

## Box 2: The Retreat of European Banks from International Banking

European banks have reduced, in aggregate, their share of international banking both globally and in Europe. This reduction has been distributed unevenly across regions and bank nationality. As illustrated in Figure B.2, from 2006 to 2016 the banks' combined share of global foreign bank claims (including British and Swiss bank groups along with those based in the euro area) fell from 76 percent to 56 percent. Over the same period, their share of claims on developed Europe fell from 79 to 65 percent, while claims on developing Europe held steady at around 90 percent.

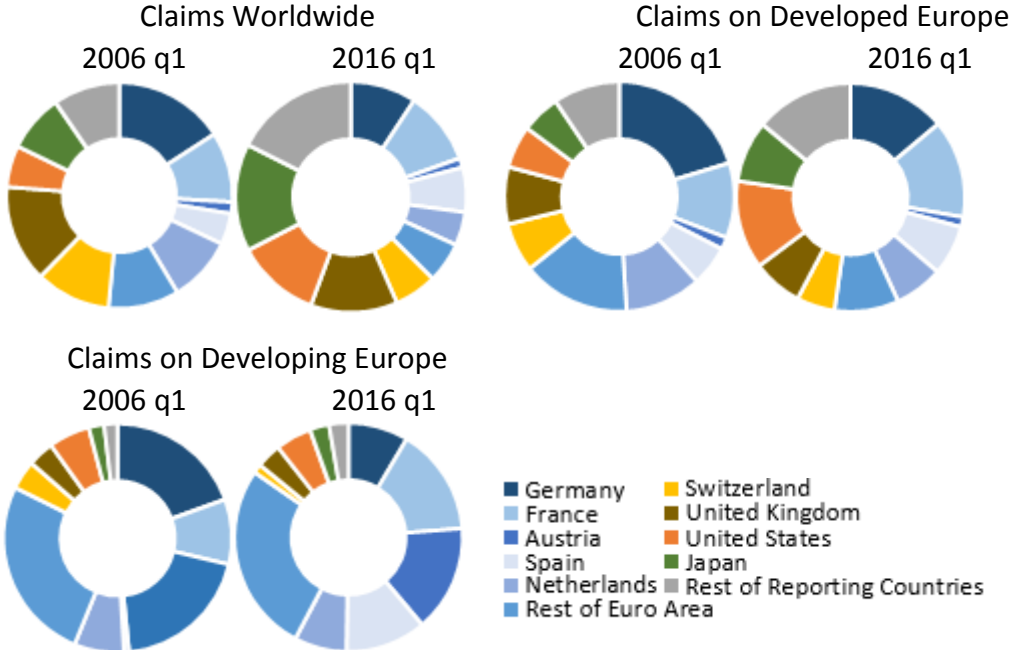
There was also a reshuffling based on nationality, with bank groups based in Germany, the UK, Switzerland, and the Netherlands tending to lose share, and those based in France and Spain holding steady or gaining. Meanwhile, U.S. and Japanese bank groups have filled much of the void left by the general retreat of European banks, both globally and in Europe.

This reshuffling is driven not only by the contraction or expansion of international activity by any given bank but also by the sale of subsidiary banks. For example, when the Belgian financial

<sup>14</sup> Core Europe consists of Austria, Belgium, Denmark, Finland, France, Germany, Sweden, and Switzerland; Southern Europe of Cyprus, Greece, Italy, Malta, Portugal, and Spain; and Central and Eastern Europe (restricted to EU countries) of Bulgaria, Croatia, Czech Republic, Estonia, Latvia, Lithuania, Poland, Slovak Republic, Slovenia, and Romania. The UK, and collectively Luxembourg and the Netherlands, are separated due to their roles as financial hubs. Ireland and Norway are omitted due to incomplete data on IIPs. Hungary is omitted due to a methodological change resulting in a break in data comparability during the sample period (Magyar Nemzeti Bank 2014).

group Fortis was broken up after the financial crisis hit, its Belgian banking operations were acquired by the French group BNP Paribas.

**Figure B.2:** Foreign bank claims by nationality of bank group<sup>15</sup>



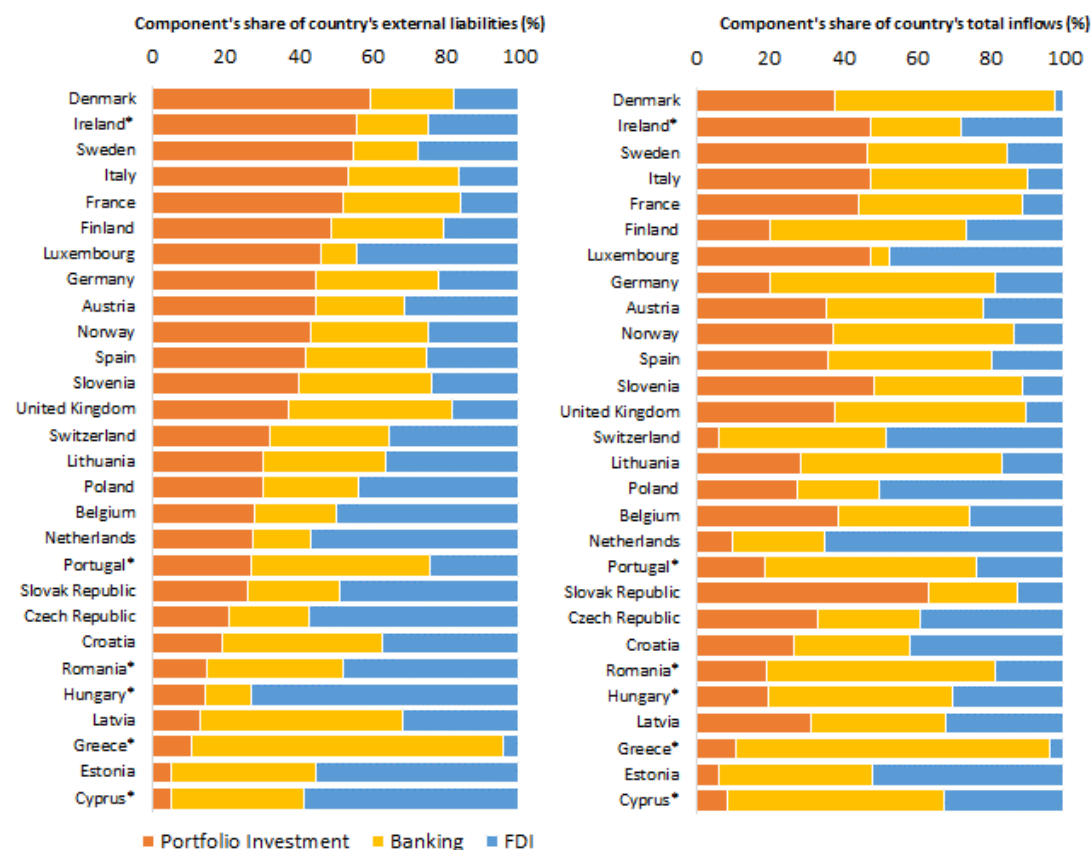
Sources: BIS CBS, immediate borrower basis; MI-IFM calculations.

[End of Box]-----

Figure 3 provides a more disaggregated picture of European capital flows and IIPs by reporting the share of foreign direct, portfolio, and banking investments. Countries appear highly heterogeneous. As of the end of 2015, portfolio investment ranged from 5 percent of nonresidents’ claims on Cyprus to 60 percent in the case of Denmark. Similarly, banking inflows ranged from 10 percent in Luxembourg to 85 percent in Greece. A comparison of the composition of capital inflows with that of the stock of external liabilities shows that there is far from an exact correspondence. This highlights the fact that capital flows alone give an incomplete picture of which classes of financial instruments are important sources of funding—and risk—for a given country.

<sup>15</sup> Italian banks have significant foreign claims, especially on developing Europe, where they are about equal to those of France or Austria (as of 2016 quarter 1). However, Italy’s data are not publicly available broken down by counterparty region for periods prior to 2013 except as part of the euro area aggregate, so here Italy is included in the residual euro area group. Borrower country groups follow BIS classifications at the time of writing.

**Figure 3:** Composition of European countries' external liabilities, 2015 (left) and capital inflows, 2013-2015 average (right)<sup>16</sup>



Sources: IMF IFS; MI-IFM calculations.

### 3. European International Investment Positions and Investment Income

The preceding section illustrates the heterogeneity across European subregions and countries in the composition of foreign investment and of their investment abroad. These differences have implications on investment income paid and earned on these external liabilities and assets, and for risk sharing and vulnerability to shocks. While a set of core European countries

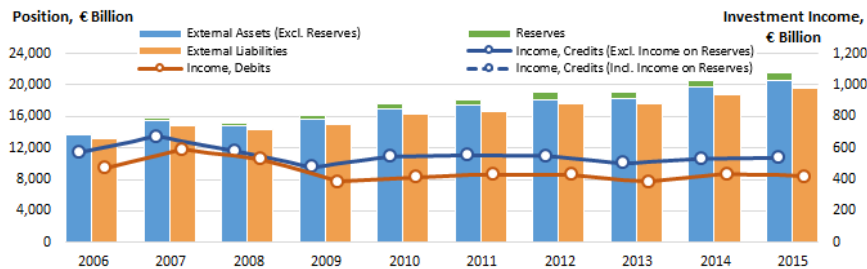
<sup>16</sup> Capital flows are measured in terms of absolute value to capture the magnitude of negative flows, i.e., disinvestment, together with positive inflows; absolute values are taken of annual flows, and these values are averaged across the three years. \* Cyprus, Greece, Hungary, Ireland, Portugal, and Romania had outstanding loans with the IMF during the sample period; the principle and servicing of IMF loans are included in the “banking” components of liabilities and inflows, respectively.



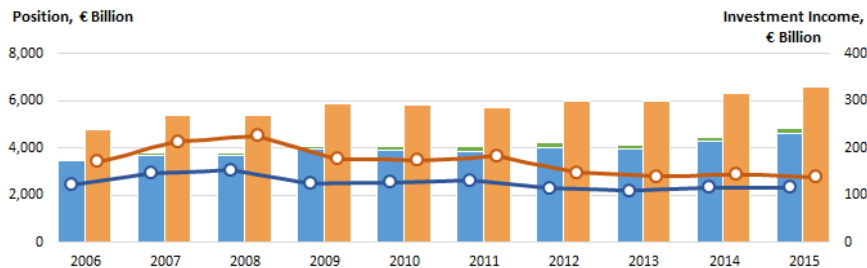
are net creditors and make positive net income on their IIPs, peripheral countries tend to be net borrowers and net payers of investment income (see Figure 4).<sup>17</sup>

**Figure 4:** European international investment positions and investment income paid and received<sup>18</sup>

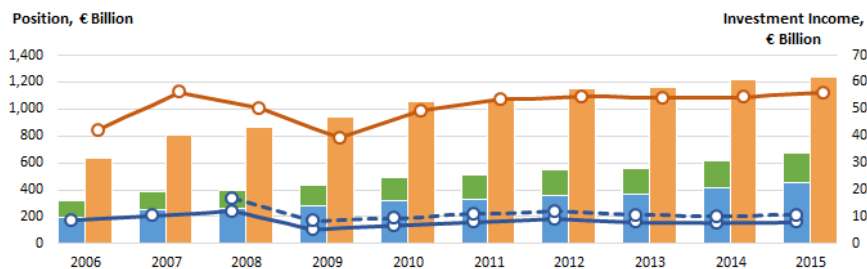
*Core Europe*



*Southern Europe*



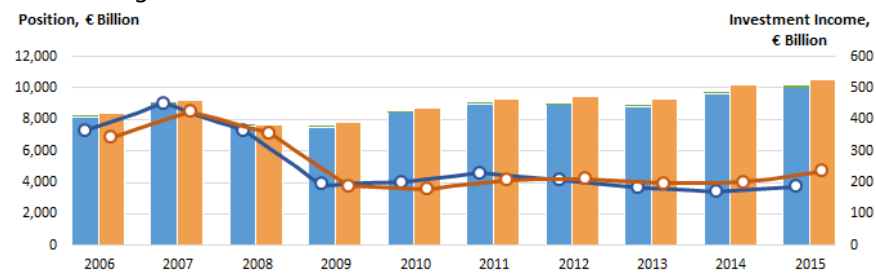
*Central & Eastern Europe*



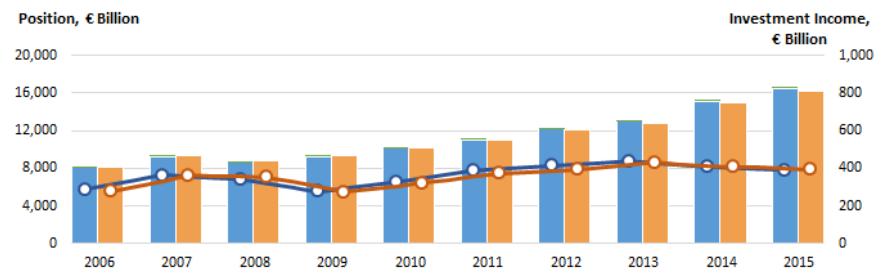
<sup>17</sup> In principle, the sign of a country's net investment income does not necessarily correspond to the sign of its net external position. For the U.S., for example, Gourinchas and Rey (2007) show that while the country is a sizeable net debtor, its net investment income is positive due to an excess return on gross assets over gross liabilities.

<sup>18</sup> Country groupings are the same as those in Figure 2, subject to data limitations. For all groups except Central and Eastern Europe, investment income from official reserves accounts for an insignificant fraction of total investment income and thus is omitted from the figures.

### United Kingdom



### Luxembourg & Netherlands



Sources: IMF IFS; IMF BOPS (IMF 2016b); MI-IFM calculations.

But within the broad group of the European periphery, there is a stark difference between Southern European and the Central and Eastern European countries. Central and Eastern European countries tend to have much more sharply negative net IIPs and income flows. Furthermore, while the difference between the income paid on external liabilities and that earned on external assets has tended to narrow for the South, it has grown for Central and Eastern Europe.

This is partly the result of countries outside the euro area having to hold significant stocks of official foreign exchange reserves, the yields on which have deteriorated significantly as a function of shifts in monetary policies following the global financial and European sovereign debt crises. Other likely factors include the greater weight of FDI in Central and Eastern Europe's liabilities, differences in risk premia, and broad differences between the groups in their levels of economic and financial development.

Lower yields have spilled over to interest rates on loans and deposits, the main components of the banking category of IIPs and capital flows shown in Figures 2 and 3 above. While this category's share of external assets and liabilities is roughly the same for Core, Southern, and Eastern and Central Europe, trends in the interest rates on these assets and liabilities have not been symmetric across groups. Interest income on these positions have fallen across Europe on

both the assets and liabilities sides, but the spread between them has increased for the Core and South (in some cases switching from negative to positive, for example in Germany), whereas it has deteriorated and switched signs from positive to negative in Central and Eastern Europe (see Figure 5).

**Figure 5:** Investment income paid and received on banking positions (percent rates)<sup>19</sup>



Sources: IMF IFS; IMF BOPS; MI-IFM calculations.

Two main messages emerge from these results. First, Central and Eastern Europe as a group show significantly greater external imbalances and potential vulnerability to global or regional

<sup>19</sup> Country groupings are the same as those in Figure 2, subject to data limitations.

shocks than Southern Europe. A great deal of attention has been paid to Southern Europe as a potential source of systemic risk for the rest of Europe and the global economy. This is probably justified given the magnitudes of the South's positions; Southern Europe's liabilities are roughly five times greater than those of Central and Eastern Europe (see Figure 4). However, Central and Eastern Europe should be watched closely as well.

Second, for Europe's core, external positions and investment income flows have been fairly stable, even in the face of the global financial crisis, sovereign debt crisis, and ensuing shifts in monetary policy. Following the global financial crisis, Core Europe's gross capital flows quickly (i.e., by 2010) stabilized at a level—and as a share of the world total—roughly comparable to that in 2003 or 2004, and have stayed fairly stable since.

#### 4. European Portfolio Investment Holdings

Moving from countries' total external assets and liabilities to bilateral information on which countries invest where, with a focus on the portfolio investment category, Figure 6 shows the different holdings of European countries on distinctive counterparties—Asia, euro area, rest of Europe, Latin America, U.S., and rest of world—in both 2006 and 2015. It is important to note that holdings in which the two groups (holder and counterparty) overlap in constituents do not include domestic portfolio investments. All country groups report a majority of euro-area holdings. This is especially pronounced in the Southern, Core, and Central and Eastern Europe groups, which each have more than 70 percent of their external portfolio investment holdings in euro area assets. The holdings' composition is more diverse for the UK, financial hubs, and Scandinavia. It must be noted, however, that Norway is the main driver of the increased holdings of U.S. securities in Scandinavia, accounting for almost 73 percent of the total increase of €264 billion (\$287 billion) over the past 10 years.<sup>20</sup> Financial hubs, namely Luxembourg and Ireland, house most investment funds within the region (see Figure 8). Their function as intermediaries of financial flows allows residents of other countries to hold claims on

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<sup>20</sup> This is mostly due to Norway's sovereign wealth fund increased exposure to U.S. securities, from 29 percent in 2011 to almost 40 percent in 2016; see Norges Bank Investment Management (2011, 2015).

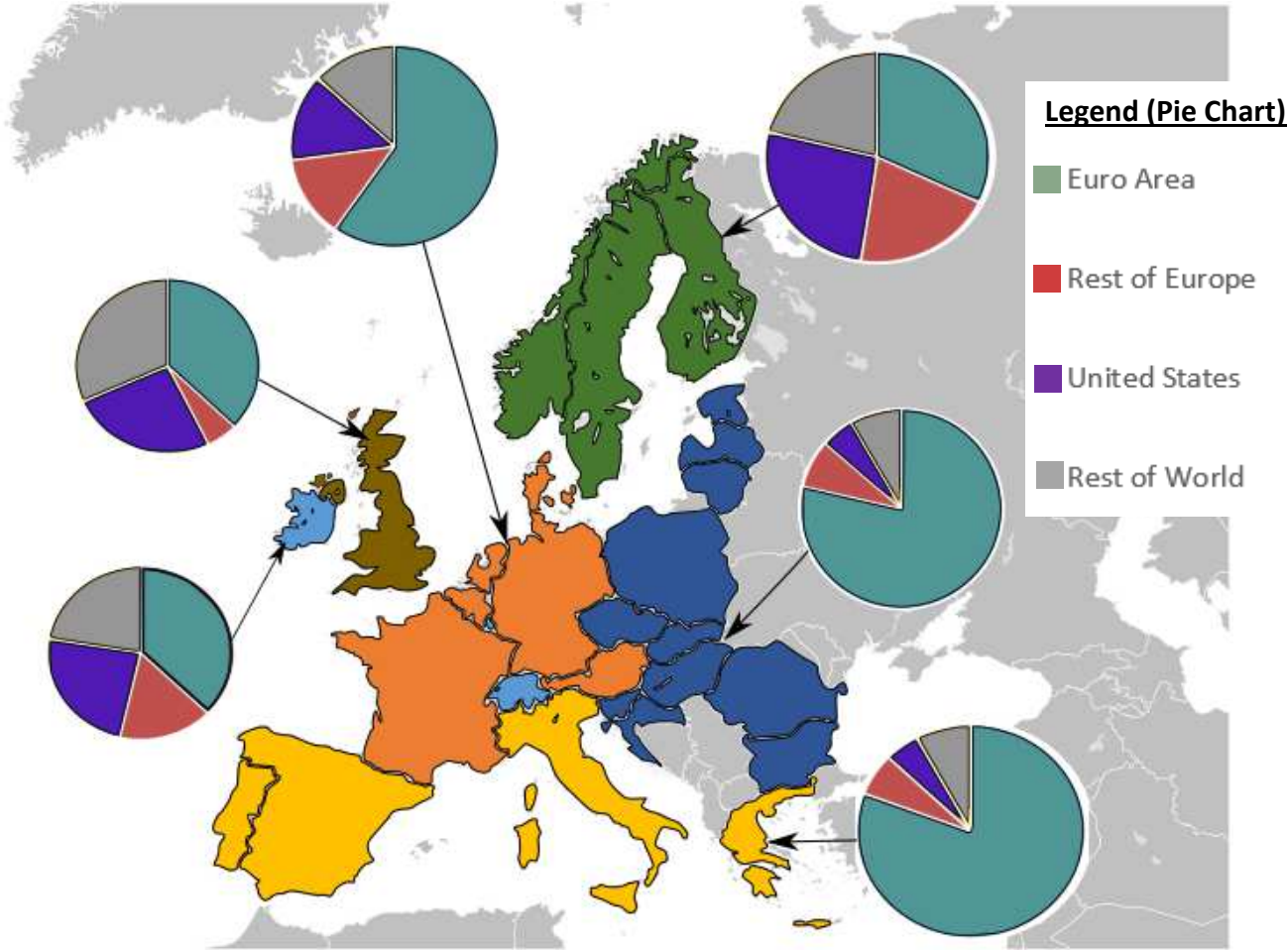
investment vehicles that are ultimately holding claims on other countries.<sup>21</sup> This helps to explain the low holdings of U.S. securities for most of the country groups; some of the holdings on financial hubs are in fact re-routed to other markets.

Finally, the UK profile is quite different from all other groups. Given its role as global financial center, its exposure to countries outside the European Union has always been high: more than 50 percent of its total holdings were allocated outside Europe in both 2006 and 2015. As a comparison, Southern and Core Europe hold 19 percent and 27 percent outside Europe.

**Figure 6:** European country groups’ portfolio investment by destination

(pie charts show allocation by destination)

■ Scandinavia ■ Central and Eastern ■ Core ■ Southern ■ UK ■ Financial Hubs



<sup>21</sup> One difficulty with bilateral portfolio investment data is that they may not be allocated to the country of the ultimate acquirer of the claim.

Sources: IMF CPIS; MI-IFM calculations.

## 5. The European Financial Sector<sup>22</sup>

To illustrate the shifting composition of the euro area financial sector, Figure 7 reports the total assets in 2009 and 2016 of the main financial intermediaries: credit institutions, investment funds, insurance companies, pension funds, and other financial intermediaries.<sup>23</sup>

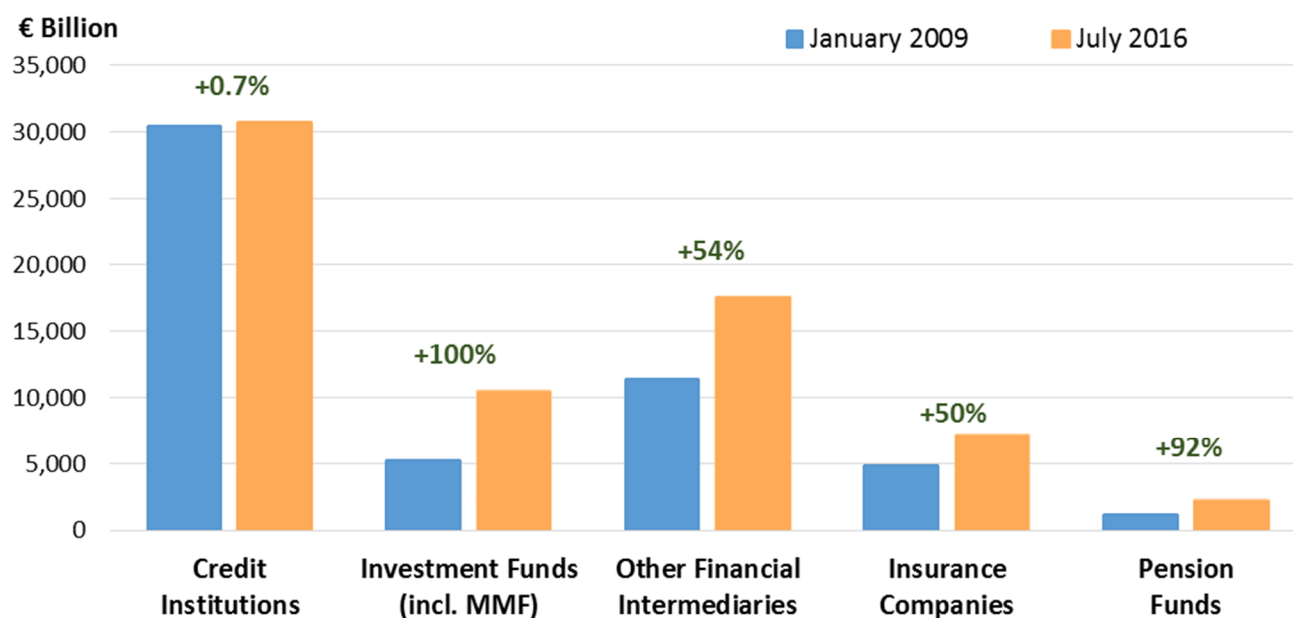
Credit institutions, the largest group and mainly consisting of commercial banks, are entities with the main purpose of receiving deposits and extending credits for its own account, with total assets of €30.6 (\$33.6) trillion. While the size of this industry remained stable between 2009 and 2016, its market share decreased by almost 15 percentage points from 53 to 39 percent of total financial intermediation. This reflects the growth of market-based and alternative credit intermediation. Investment funds, collective investment undertakings that invest publicly raised capital in financial and non-financial assets, observed the highest growth rate, with a 100.4 percent jump from €5.2 (\$7) to €10.5 (\$11.55) trillion, driven in part by a search-for-yield in the ongoing low interest rate environment. However, the biggest increase in total assets has been in what is referred to as other financial intermediaries (OFI), with a growth of more than €6 trillion from €11 (\$14.8) to €17.5 (\$19.2) trillion. OFI are similar to credit institutions in that they directly provide funding to financial and non-financial corporations, but do so with a maturity structure of their liabilities that is more short-term oriented, e.g., repurchase agreements. Generally, investment funds are considered part of the OFI sector and combining both of these groups from Figure 7 illustrates the growth of the alternative lending sector in Europe in recent years; in 2016 these institutions combined held almost €27 (\$29.7) trillion. The other two subsectors, namely insurance companies and pension funds, grew by 50 and 92 percent respectively. While they are financial intermediaries, their business model makes them quite different from the previous actors.

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<sup>22</sup> For reasons of data availability and comparability, the following section focuses on the euro area.

<sup>23</sup> Other financial intermediaries include, among others, Financial Vehicle Corporations and Security and Derivative Dealers, see ECB (2007).

**Figure 7:** Total assets of the euro area’s financial sector



Sources: European Central Bank; Thomson Reuters Datastream; MI-IFM calculations.

## Investment Funds

The growing importance of investment funds in non-bank intermediation has raised concerns about their possible role as a source and catalyst of systemic risk in times of financial distress.<sup>24</sup> However, investment funds are a broad and heterogeneous group, and the next sections provide a closer look at their distribution across Europe as well as across types of investments, especially money market, bond and equity funds.<sup>25</sup>

## Geography of Risk

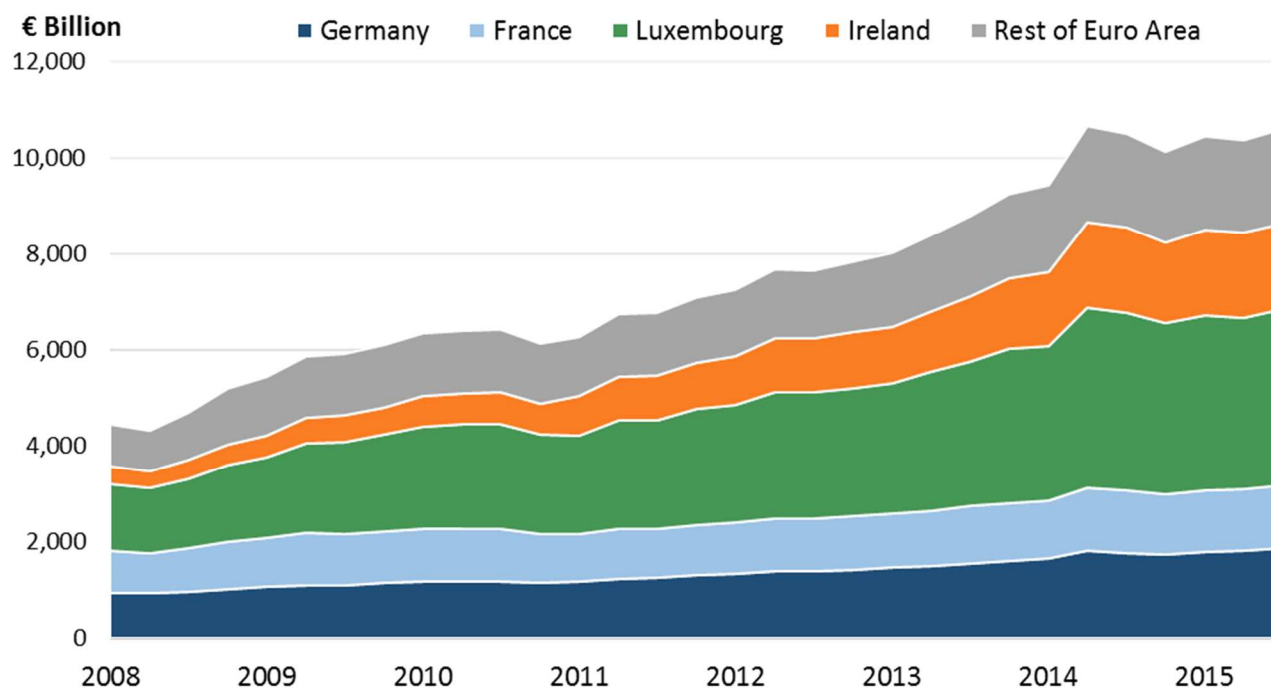
The investment fund assets by domicile show that most funds within Europe are concentrated in four countries (see Figure 8). France and Germany, with a combined €3.2 (\$3.5) trillion, are two of the major investment fund domiciles. Their share of 30 percent, however, is second only

<sup>24</sup> Lopez et al. (2016) and ECB (2016)

<sup>25</sup> Fund categories are not fixed and might change over time, which can lead to changes in the assets managed by certain categories due to reclassification of funds, e.g., a money market fund being classified as bond fund.

to Luxembourg and Ireland, which have a combined share of 51 percent, or €5.5 (\$6) trillion, confirming their status as financial hubs.

**Figure 8:** Investment fund assets by domicile, euro area.



Sources: European Central Bank; MI-IFM calculations.

Figure 9 shows the different fund types and their total assets for the euro area. Bond and equity funds are the main drivers of the sector's overall growth.<sup>26</sup> Growth within the funds arguably is driven by the impact of current monetary policy on both bond and equity prices (see Box 3). This effect is caused by accounting assets as mark-to-market, meaning that they are valued at their current market price or a fair-value assessment thereof. The three largest fund types are equity, bond, and money market funds, which account for more than 85 percent of total assets under management.

<sup>26</sup> Mixed funds are hybrids of bond and equity funds and therefore are considered included in them.



### Box 3: Current Monetary Policy and its Impact on Equity and Debt Securities

*“Monetary policy actions have their most direct and immediate effects on the broader financial markets, including the stock market, government, and corporate bond markets.” — Ben Bernanke<sup>27</sup>*

Central Banks typically control an overnight interest rate as their policy tool by adjusting the supply of reserves. The transmission of monetary policy happens through the relationship of this overnight rate to the rest of the yield curve.<sup>28</sup> This relationship is crucial since interest rates, such as the unsecured money market rates (Euribor in Europe), determine short-term bank loans and deposit rates that directly affect financing conditions for household and corporations.

It also directly impacts bond yields because government bond yields are falling (rising) during accommodative (restrictive) monetary policy. This is due to the fact that major central banks, such as the Federal Reserve, conduct their open market operations in government and agency securities.<sup>29</sup> In the case of an accommodative policy, this is followed by an increased search-for-yield in the fixed income sector and rising demand for corporate bonds, thereby leading to higher prices of corporate bonds as yields decrease and corporations are able to issue bonds with lower coupons. Lower interest rates also impact equity prices, as investors, all else being equal, can discount future cash flows at the lower rates and therefore are willing to pay more for stocks.<sup>30</sup>

**Figure 9:** Investment fund assets by category, euro area

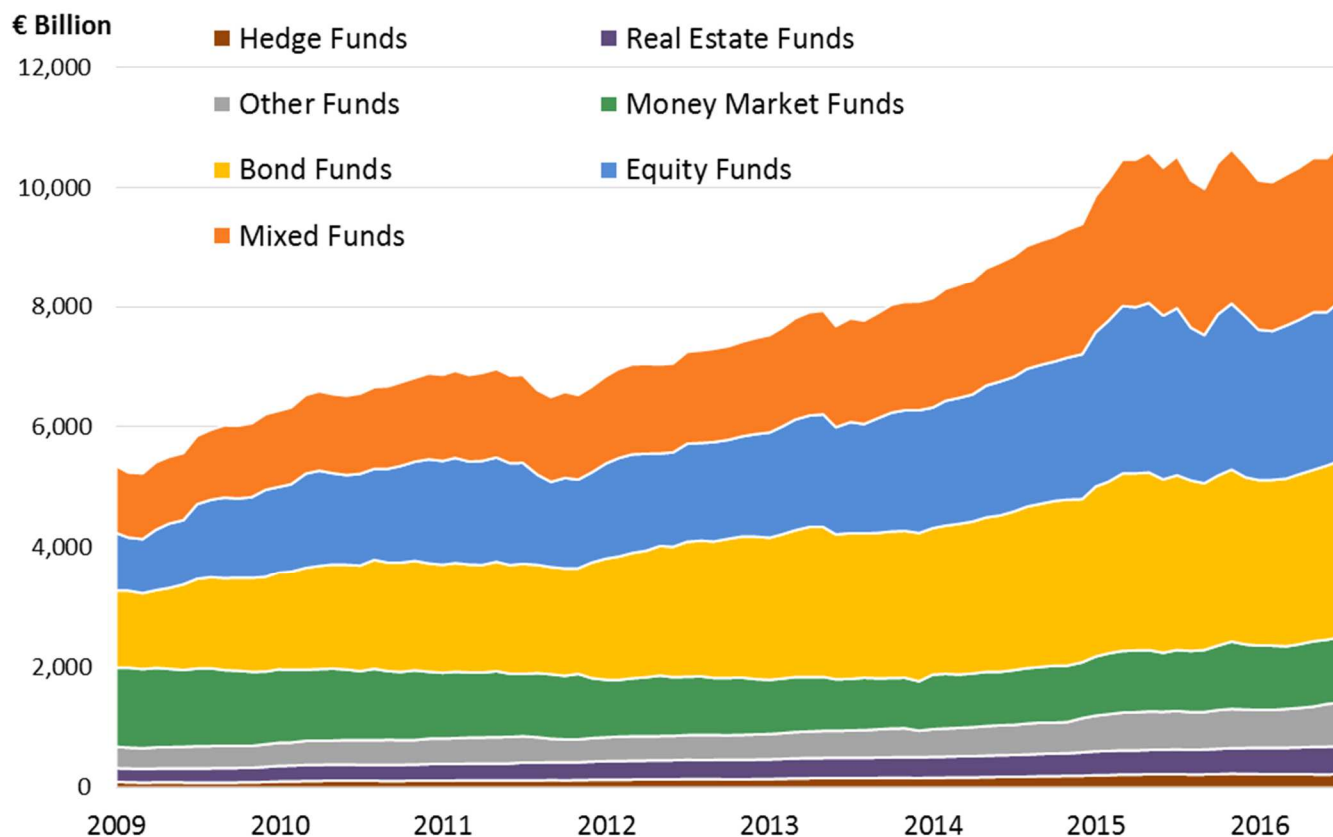
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<sup>27</sup> Bernanke (2003).

<sup>28</sup> See, for example, Carpenter and Demiralp (2011).

<sup>29</sup> The ECB, lacking a direct fiscal counterpart, is conducting its main refinancing operations as weekly standard tenders.

<sup>30</sup> For a more detailed discussion on the effect of monetary policy shocks see Bernanke and Kuttner (2005).



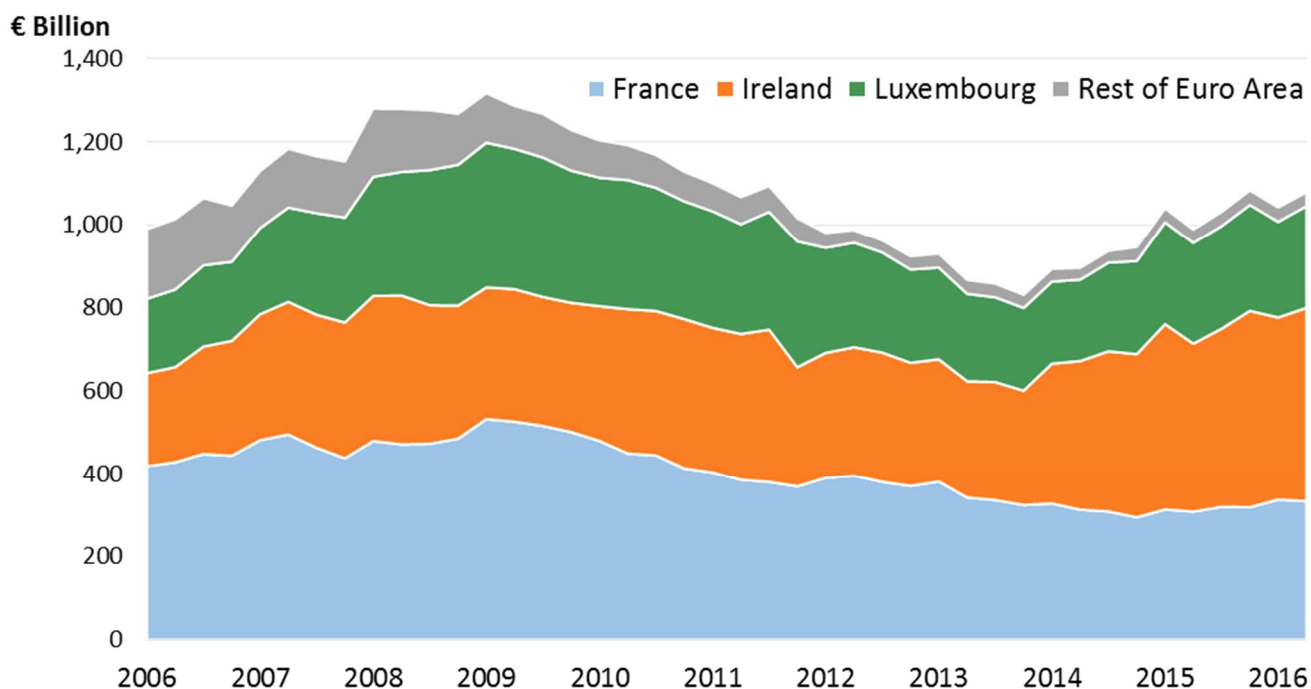
Sources: European Central Bank; Thomson Reuters Datastream; MI-IFM calculations.

## Money Market Funds

Money markets and their funds were the first to attract regulators' attention due to their close ties with the real economy through their credit intermediation activities. Figure 10 shows that money market funds (MMF) are concentrated in three countries — Ireland, Luxembourg, and France — collectively holding around 96 percent of total MMF assets. In general, MMFs are separated into those that have a constant net asset value (CNAV) and variable net asset value (VNAV). Before the global financial crisis, most MMFs worldwide followed CNAV, under which an investment fund aims to maintain a stable share price, e.g., \$1. Many investors prefer the stable share price because it has certain advantages, e.g., exemption from capital gains tax. However, this perceived stability came under scrutiny during the financial crisis when many funds were unable to maintain the constant share price without sponsor support, culminating in the Reserve Primary Fund “breaking the buck,” that is, lowered its share price below \$1,

accelerating a run on the sector.<sup>31, 32</sup> The run on MMFs was mitigated only through the combined support of the treasury, which guaranteed MMF assets, and two liquidity measures by the Federal Reserve.<sup>33, 34</sup> This turmoil of the money market fund sector, which generally was regarded as a low-risk investment similar to deposits, led to concerns about the impact of money market funds and investment funds on financial stability.

**Figure 10:** Money Market Assets by Domicile, euro Area



Sources: European Central Bank; Thomson Reuters Datastream; MI-IFM calculations.

Unlike in the U.S., Europe has a more diversified MMF sector that accommodates both CNAV and VNAC funds. Most VNAV funds are based in France while Ireland and Luxembourg are home to funds that mainly follow CNAV. This may partly explain the increase in assets in those countries, as investors sought the perceived safety of CNAV funds around recent uncertainty. Another major driver of asset reallocation is the current, and expected, level of return for euro

<sup>31</sup> This perceived stability has been one of the reasons that has led regulators to push CNAV funds to float their net asset value, thereby clarifying the underlying risk.

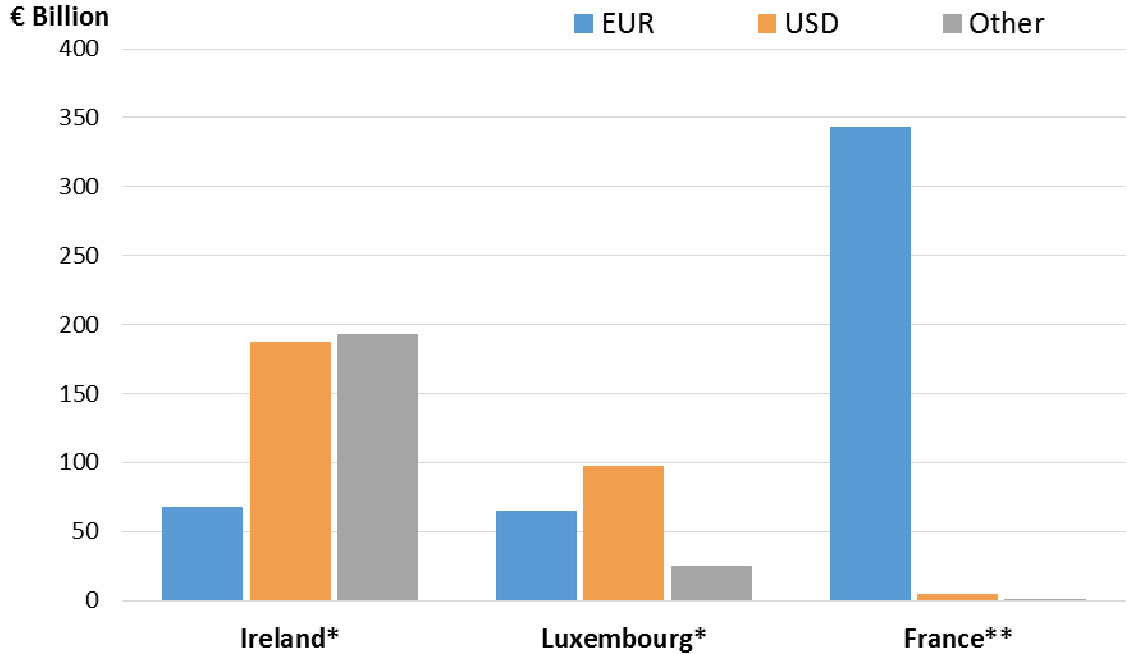
<sup>32</sup> Sponsor support, generally, refers to a transfer of assets without a direct equivalent or purchase of fund assets at a premium.

<sup>33</sup> The Asset-Backed Commercial Paper Money Market Fund Liquidation Facility and the Commercial Paper Funding Facility.

<sup>34</sup> U.S. Securities and Exchange Commission (2012).

denominated money market instruments. As outlined in Box 3, the European Central Bank’s (ECB) current monetary policy has caused rate decline throughout financial markets by way of monetary transmission.<sup>35</sup> Therefore, parts of the asset decrease in French MMFs have to be considered as rate driven as investors can effortlessly move their shares to funds in Ireland and Luxembourg, which are more exposed to the higher rates on the dollar and pound money markets (see Figure 11). Another important factor, as detailed in Box 2, is the unit of account. As the euro depreciated, total assets of funds in Luxembourg and Ireland have reflected their exposure to other currencies.

**Figure 11:** Currency breakdown of money market funds’ assets



Sources: \* MI-IFM calculation from respective Central Bank data. \*\* Provided by the Banque de France.

Note: Ireland includes total asset breakdown, whereas Luxembourg is limited to debt securities (75% of total assets).

<sup>35</sup> Refers to the impact that policy rates have on different rates, see Carpenter and Demiralp (2011).

## Equity and Bond – A Continuum of Risk

Beyond MMFs, other asset management activities are increasingly considered potential sources of instability.<sup>36</sup> For investment funds, this has meant additional scrutiny, especially on the two biggest fund types, bond and equity.

Equity funds, which invest primarily in stocks, have become one of the largest fund types within the euro area (see Figure 9). Their total net assets grew from €974 billion (\$1,315 billion) in 2009 to €2,656 billion (\$2,921 billion) as of 2016, in line with the sector overall. Bond funds are categorized broadly as funds that primarily invest in securities other than shares, a category that has outgrown all other types both in percent and amount invested. Since January 2009, when total assets under management were close to €1,300 (\$1,755) billion, bond funds grew by 130 percent to a total of €2,950 (\$3,245) billion, making it the biggest single fund type in the euro area.

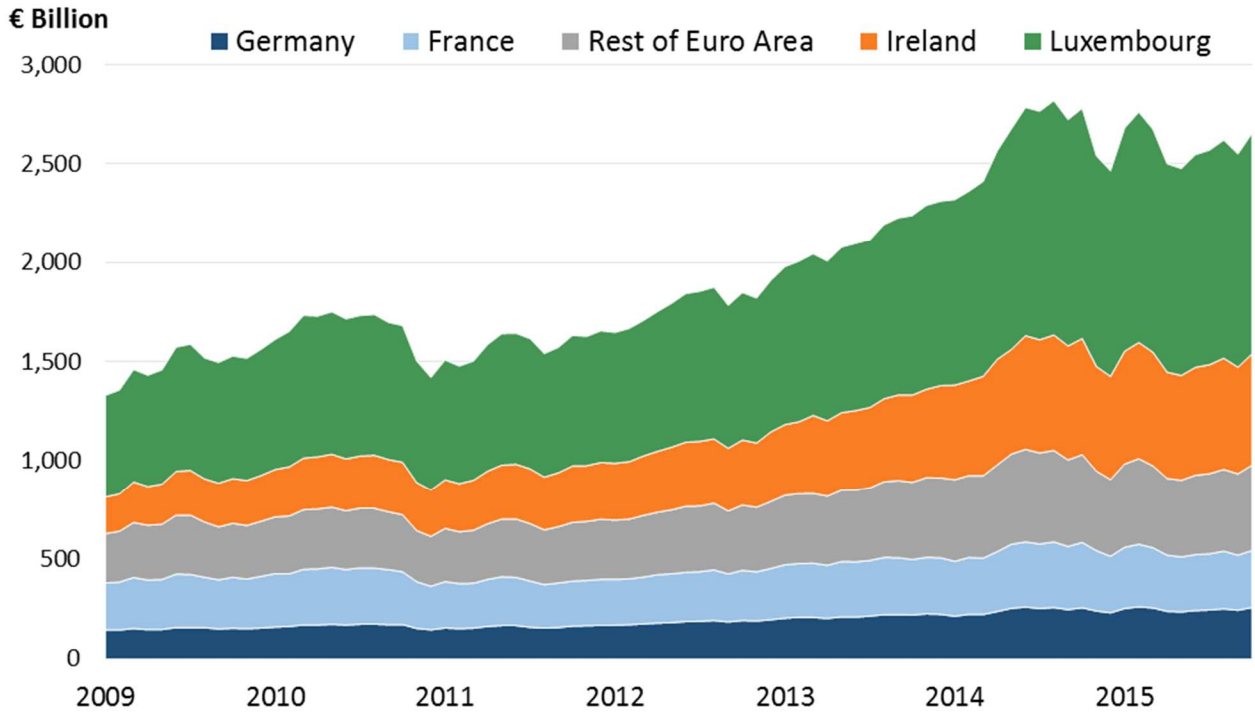
A significant part of the growth of both broad fund categories is explained by directives under the Undertakings of the Collective Investment in Transferable Securities (UCITS), which promote a cross-border asset management market. Currently around 85 percent of all European investment funds are classified as UCITS funds. In fact, UCITS has substantially decreased the difficulties of cross-border investments by creating a secure and well-regulated framework for the European Union. However, there are other national regulations and directives that can determine asset manager and investor decisions. At the national level, taxation is a major factor in domicile selection, as is the existing financial infrastructure and available services. Therefore, while direct regulation is uniform, the aforementioned differences have led to a concentration of funds (see Figures 12 and 13).<sup>37</sup> The picture is the same for equity and bond funds, more than 50 percent of which, in terms of asset value, are managed in Luxembourg and Ireland.

### **Figure 12: Equity fund assets by domicile, euro area**

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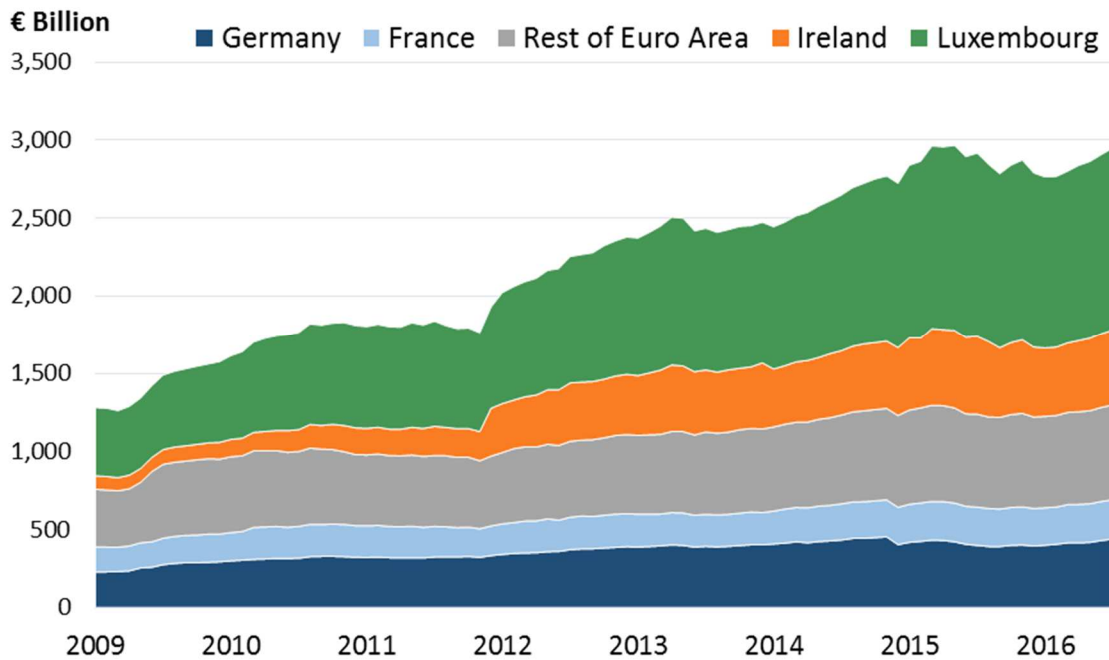
<sup>36</sup> Office of Financial Research (2013).

<sup>37</sup> There are small deviations from general rules that are at the discretion of national authorities.



Sources: European Central Bank; Thomson Reuters Datastream; MI-IFM calculations.

**Figure 13:** Bond Fund Assets by Domicile, Euro Area



Sources: European Central Bank; Thomson Reuters Datastream; MI-IFM calculations.

Figures 14 and 15 provide a more disaggregated look at equity and bond funds using market data and comparing European funds to their U.S. counterparts.<sup>38</sup> Aggregated data cannot capture the difference between the risk exposure of a bond fund investing mainly in European sovereign bonds and an equity fund focused on emerging markets. Figure 14 shows how the higher level of diversification of European funds and their allocations, especially when compared to U.S. bond funds.<sup>39</sup> The three biggest fund categories in Europe only account for 20 percent of the total, compared to 52 percent for the U.S. The heterogeneity of European bond funds is likely to be even higher as the “other bond” category is defined as “Funds [that] invest in bonds and have currency exposures that do not qualify them for inclusion in other [...] bond categories.” The next two largest categories, “corporate bond” and “diversified bond,” are funds that invest principally in investment-grade corporate and government bonds.<sup>40</sup> Overall, the size of European bond funds is 70 percent of that of U.S. bond funds in terms of total assets under management. The reason for the overall difference of investment fund assets becomes clear in Figure 15. Total assets of European equity funds are less than one-third of the U.S. funds’ \$7.6 trillion (€6.9 trillion). Again, the diversity of European funds is not only greater in terms of the number of categories but also asset concentration.<sup>41</sup> The three biggest European equity funds combined only hold about 28 percent of total fund assets, compared to more than 50 percent for the U.S. The biggest U.S. category in size, “large blend,” defined as “portfolios [that] are fairly representative of the overall U.S. stock market in size, growth rates and price,” manages almost as much assets (\$1.9 trillion or €1.7 trillion) as the entire European equity fund sector.<sup>42</sup>

**Figure 14:** Breakdown of Bond Funds in Europe and the U.S.<sup>43</sup>

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<sup>38</sup> The coverage for equity funds is almost seamless, but bond funds data by Morningstar only covers 73% of the bond fund’s AUM.

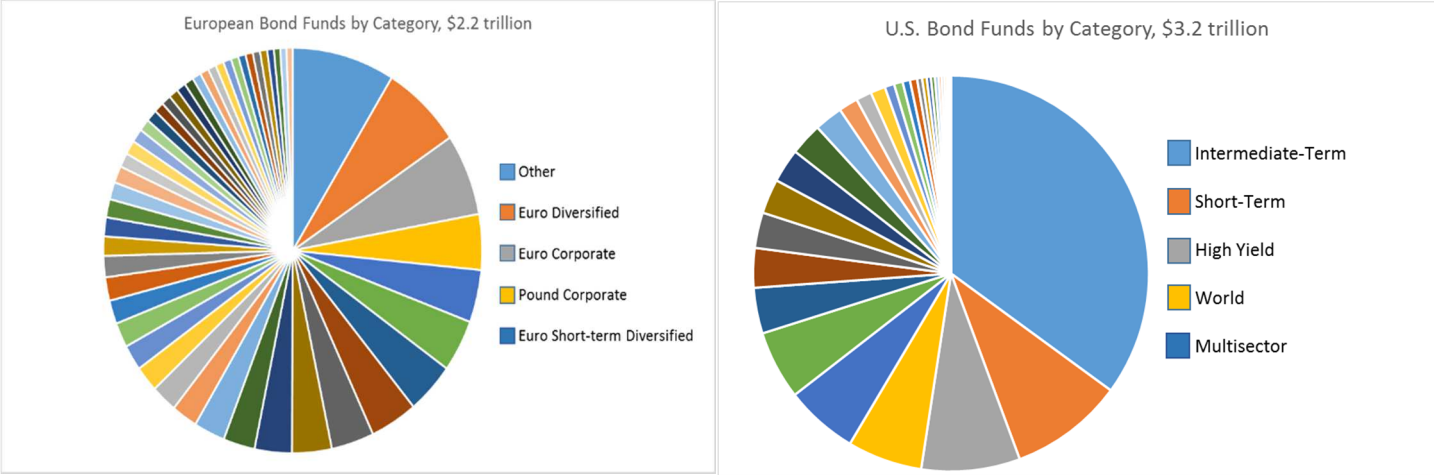
<sup>39</sup> See Novick et al. (2016) for more detail on the U.S. sector.

<sup>40</sup> Morningstar (2015).

<sup>41</sup> This is in parts due to different currencies and their hedges as part of category separation.

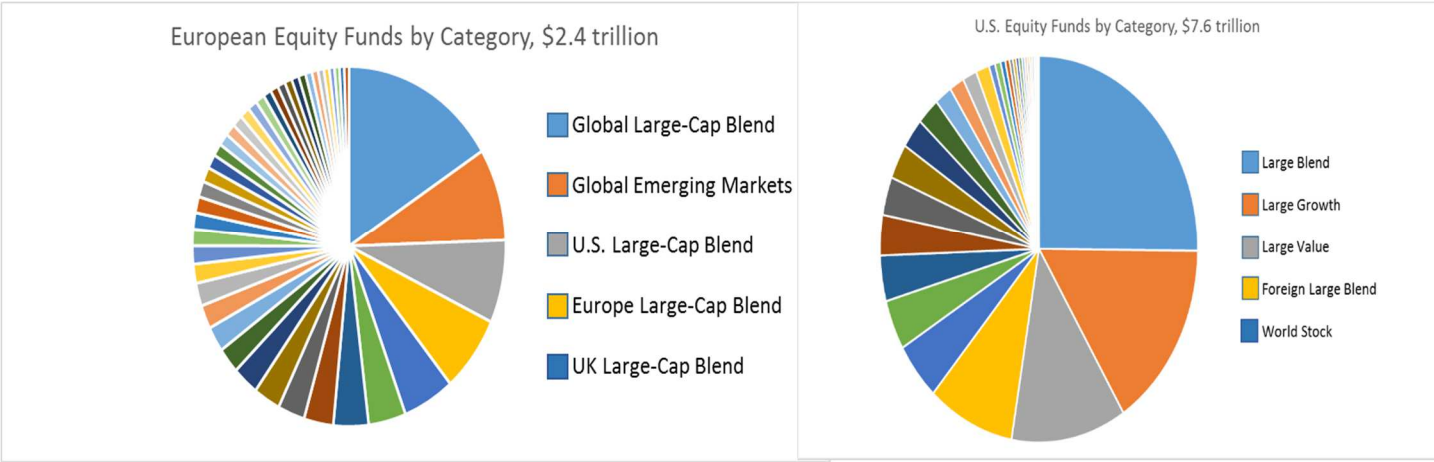
<sup>42</sup> Morningstar (2016).

<sup>43</sup> For ease of comparison both European and U.S. fund assets are shown in dollar.



Sources: Morningstar, October 2016; MI-IFM calculations.  
**Note:** Europe only shows categories with more than \$10 billion assets under management. Therefore around \$200 billion are excluded from the first pie chart.

**Figure 15:** Breakdown of Equity Funds in Europe and the U.S.



Sources: Morningstar, October 2016; MI-IFM calculations.  
**Note:** Only shows categories with \$10, or more, billion assets under management.



## Conclusion

International capital flows and cross-border financial integration remain omnipresent in the European political debate as countries struggle with low and divergent GDP growth, new European financial regulation, and the anticipation of Brexit.

This report provides insights regarding international capital flows and positions before focusing on the banking and portfolio investment categories. The main findings can be summarized in four points: First, core euro-area countries remain the primary actors in cross-border investment both globally and within the region. Meanwhile, external imbalances have persisted for Southern, and worsened for Central and Eastern Europe. Second, while European banks' claims worldwide and on developed Europe have significantly diminished, claims on developing Eastern European countries remain stable.

Third, a closer look at portfolio investment, especially for the fast-growing investment funds, confirms the strengthened position of financial hubs like Ireland and Luxembourg as fund domiciles since the financial crisis. Interestingly, the implementation of the improved rules for UCITS in mid-2011 and early 2014 corresponds to an enhanced growth for equity and bond funds' total assets, mostly in these two countries. Finally, European investment funds show a diverse range in investment types and strategies, especially when compared to the U.S. This is particularly relevant for bond funds. European bond funds' total assets amount to about 70 percent of the U.S. total, while their diversity in terms of number of subcategories is more than double that of the U.S. Unlike for the U.S., no category captures a significant part of the total for Europe.

The external imbalances for Southern, Central, and Eastern Europe remain a concern, especially in light of the recent European sovereign debt crisis, which followed the global financial crisis. Back then, in 2010, Southern European countries' external imbalances resulted from the greater financial integration that came with the single currency. The surge in credit and intraregional capital flows, combined with overly optimistic expectations, mispricing of risk, and insufficient oversight led to the gradual increase in national current account deficits. These led to the "large external debts in the Eurozone periphery, matched by growing claims held notably

by commercial banks in the core.”<sup>44</sup> Severe growth contractions that followed the crisis explain most of the reductions in the imbalances. As discussed above, our report shows that, while the situation in Southern Europe may have improved, noticeable external imbalances remain, and imbalances are worsening in Central and Eastern European countries, most of which are future euro-area members.

This raises the question of financial integration, the necessary financial oversight and other national requirements. Prior to the crisis, financial linkages between countries were growing, while regulation and supervision remained mostly at the national level. The start of Basel III implementation, as well as European initiatives such as the banking union, mark major improvements in macroprudential policy. However, broader oversight is still a work in progress: Basel III won't be fully implemented until 2019; the implementation of Markets in Financial Instruments Directive II, focused on increasing transparency and investor and consumer protection, has been delayed until 2018; and the regulation for MMFs, implemented in the U.S. last October, is still under negotiation in Europe. Also, the European Market Infrastructure Regulation, which pertains to the derivatives market, in particular over-the-counter derivatives, central counterparties and trade repositories, remains mostly a work in progress.<sup>45</sup>

While reform of financial oversight is an ongoing process, the financial sector has already internalized many of the new rules, leading to a reallocation of capital flows across countries and investment types. This is particularly true for Europe, which hosts half of the globally systemically important banks and is the home of several major financial hubs. On the one hand, the enhanced regulatory scrutiny and its related costs contributed to European banks' retreat from international banking. On the other hand, it triggered the expansion of the alternative lending sector, domiciled mostly in Ireland and Luxembourg. Besides being well-established financial hubs, Ireland's and Luxembourg's attractiveness has been strengthened by the expansion of UCITS, a harmonized regime throughout Europe for the management and sale of mutual funds, and advantageous national fiscal regimes. In other words, the strengthening of

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<sup>44</sup> Diaz Sanchez and Varoudakis (2013, p. 2), Lane and Pels (2012), and Blanchard and Giavazzi (2002) present similar arguments.

<sup>45</sup> Lopez and Saeidinezhad (2016) provide a summary of the UK and EU financial reforms.

financial integration without a certain degree of harmonization across Europe may undermine the potential overall benefits of cross-border investments within the region.

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