



**Executive Summary**  
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# **Analysis of developments in EU capital flows in the global context – third annual report**

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## Executive summary

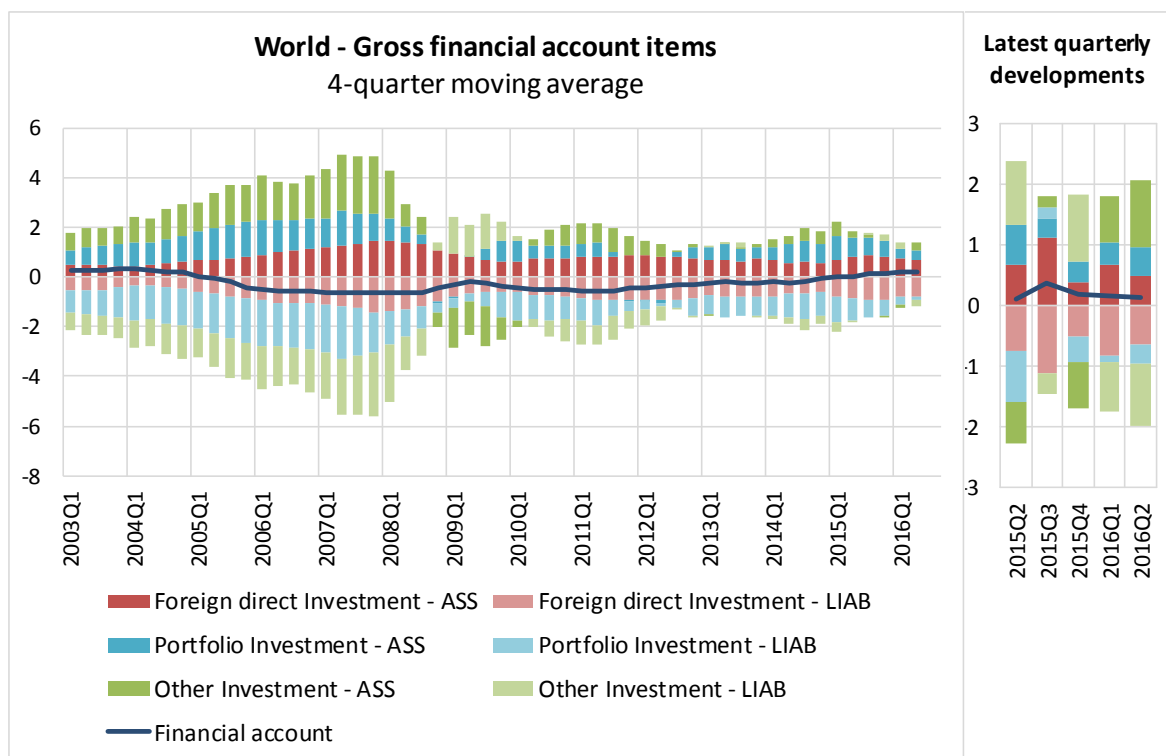
The purpose of our report is to provide a comprehensive overview of capital movements in Europe in a global context. Free movement of capital, which is one of the four fundamental economic freedoms of the European Union, can enhance welfare if it leads to better allocation of financial and productive resources. However, it can also be a source of vulnerability, with far-reaching spillovers. Monitoring and assessing capital flows is therefore crucial for policymakers, market participants and analysts.

Chapter one introduces the topic and presents the outline of our report.

Chapter two analyses global capital flows. We highlight several key developments.

- **Global gross capital flows continue remain at a subdued level compared to the pre-crisis period** (Figure 1). However, among the three main components, foreign direct investment (FDI) declined the least and while such flows are below the 2005-07 values, the 2013-15 average was actually higher than in 2002-04. In contrast, gross portfolio investment in 2013-15 was about half of what it was in 2005-07 and was also below values observed in 2002-04. Gross other investments (which mostly comprise cross-border loans) fell even more and in several quarters during 2012-15, there was a retrenchment of earlier other investment flows. These developments highlight **that FDI remained more stable than other capital flows during the global reduction of gross flows in the aftermath of the 2007-08 global financial and economic crisis.**
- However, **the latest three quarters at the time of writing (2015Q4-2016Q2) saw a reduction in global FDI flows. There was a significant retrenchment of other investments in 2015Q5, though in the first two quarters of 2016 other investments expanded again somewhat.** It needs to be seen whether these developments were a temporary setback to global capital flows, or the beginning of a major slowdown in global FDI and other capital flows.

**Figure 1: Global gross financial flows (percent of GDP)**



Source: Bruegel based on data from the IMF International Financial Statistics (quarterly capital flows) and IMF World Economic Outlook (annual GDP).

Note: the values shown are the aggregate of 77 countries, including all large economies. Therefore, the combined financial account of these countries (indicated by the solid line) should be close to zero and the significant deviations from zero in 2006-13 likely indicate reporting errors. The left panel shows the ratio of the 4-quarter moving average capital flows to the 4-quarter moving average GDP level (for which we first interpolated annual GDP data at the quarterly level, assuming smooth within-year changes). We use 4-quarter averages to reduce short-term noise and to be able to highlight key tendencies. The right panel shows the ratio of actual quarterly capital flows (i.e. no moving average) to the 4-quarter average GDP level. Thereby, the magnitudes in the two panels are comparable to the ratio of annual capital flows to annual GDP. Negative values for assets, and positive values for liabilities, indicate retrenchment of earlier investments.

- **The recovery of capital flows in different regions in the post-crisis period has been uneven.** By the first quarter of 2010, gross capital flows reached nearly pre-crisis levels in Latin America, in the ASEAN-4, and in Sub-Saharan Africa, but remained subdued in central and eastern Europe (CEE) and in Commonwealth of Independent States (CIS) countries. In 2015, gross flows into Latin America and Sub-Saharan Africa stabilised at high levels – much higher levels than before the crisis – while the Asean-4 and the BRICS experienced capital outflows in recent quarters, suggesting that **there is no general trend of capital outflows from emerging countries** and that two large regions even continue to experience large-scale capital inflows. In CEE, CIS and advanced countries, gross flows remain well below pre-crisis levels.
- **The euro area has been characterised by capital outflows** since the end of 2012, predominantly driven by bank-related outflows (loans and deposits) in 2013-14, which might have been the result of global bank deleveraging in relation to the euro-area’s sovereign and banking crisis. However, this trend

reversed in 2014Q3 and other investment is flowing in again, including an unusually large inflow in 2016Q1, though in 2016Q2 such inflows moderated. The renewed inflow of other investments might be related to the improved soundness of financial institutions as a result of the preparation for, and the actual take-over by the European Central Bank of the single supervisory role in the euro area. On the other hand, in 2015 the euro area experienced portfolio investments outflows practically for the first time since 2001, reflecting to some extent the impact of the ECB's asset purchase programme. Thereby, total net capital outflow from the euro area has accelerated.

- The **CEE countries' net financial inflows** have receded substantially since the height of the financial crisis and these countries became net capital exporters in 2015-16. Net pre-crisis inflow of other investment switched to outflows, net portfolio inflows went down to zero, and FDI inflows reduced significantly.
- **In contrast to the euro area and CEE countries, Sweden, Denmark and the United Kingdom experienced substantial net capital inflows** from 2014 to our most recent observation of 2016Q1. This was driven by strong portfolio and FDI inflows, while bank-related outflows over the same period offset somewhat the observed inflows.
- In **non-EU advanced countries**, the relatively stable earlier FDI outflows suddenly halted in 2015, which might explain, at least partly, the recent decline in global FDI. Improved domestic economic outlooks might have played a role. Another major change is the switch from large portfolio investment inflows to outflows in 2015, which might have been reinforced by the changed behaviour of former reserve-accumulating central banks.
- **The global decline in foreign exchange reserves continues**, which has likely contributed to portfolio outflows from advanced countries. Significant further reserve depletion of global foreign exchange reserves might lead to interest rate increases in advanced countries.
- Central bank policies in advanced countries, as well as the vote in the United Kingdom's June 2016 Brexit referendum to leave the EU, have likely influenced **exchange rate movements**, which in turn will have an impact on capital flows.
- **Latin America and Sub-Saharan Africa** are the only two main emerging regions that continue to receive large capital inflows, larger than in the pre-crisis period. In Sub-Saharan Africa inflows are almost entirely composed of FDI, while in Latin America, FDI and portfolio inflows account for about half of net capital inflows.
- Official statistics on foreign asset positions are imprecise because of **unrecorded financial wealth held in tax havens**. Research shows, for example, that consideration of such unrecorded wealth would turn the reported negative net international investment position (NNIP) of the euro area positive.
- Nevertheless, official statistics show that **recent NIIP developments in EU countries differ from most non-EU country groups**. In the euro area, in the group of Denmark, Sweden and the United Kingdom (DESEUK), and in the group of CEE countries, a process of shrinking of both net assets and net liabilities started in 2015-16, along with an increase in the total net position. In

contrast, net assets and liabilities of Latin American and CIS countries have even increased recently.

- Among the three components of the NIIP, it is notable that earlier positive net FDI claims of the euro-area, the DESEUK group and non-EU advanced countries have fallen, and the earlier negative net FDI positions of CEE countries, Brazil and India, and to a lesser extent CIS countries have increased. These developments highlight that a **recent setback to global FDI linkages**.
- Large gross stocks are prone to major valuation changes, which can lead to significant shifts in the net stock position even if net flows are small. Therefore we assessed the **investment yields and valuation effects of foreign assets and liabilities**.
- Our analysis of the yields show that **larger EU countries such as Germany, France, Finland, the Netherlands, Sweden and the United Kingdom have succeeded in replicating to some extent the privileges of the US on equity returns** throughout the periods taken into consideration. In contrast, the **CEE region experienced large negative spreads on equity because of very high returns on their liabilities**, but they had the remarkable privilege of large positive spreads on debt-type foreign assets. It is also worthwhile highlighting that the **vulnerable euro-area countries where financial assistance programmes were implemented (with the exception of Greece) do not display largely negative tendencies on returns on foreign assets and liabilities** relative to other EU countries, because of the financial assistance programmes and Eurosystem Central Bank (ESCB) flows. Continued participation in the euro helped financial-assistance countries to manage their external accounts during the crisis years.
- **Revaluation effects also show sizeable heterogeneity both across countries, and through time.** Germany, Spain and Sweden suffer from the worst revaluation spreads in equity. In terms of debt revaluations, several EU countries report negative spreads. This could mainly be due to the 'other investment' component, which comprises inter- and intra-bank loans, reflecting the period of financial disintegration starting with the crisis.
- **The difference between the total return on assets and liabilities was especially large for equity in Greece**, because of the collapse of Greek liabilities. The United States has lost its positive overall return on equity, primarily driven by revaluation gains of foreign investors in the US, due to the strong US dollar and strong increase in US equity prices.
- **There is a striking difference between the gross foreign claims of EU and non-EU advanced country banks:** while claims of EU banks have declined significantly since 2007-08 (and have even halved for euro-area banks), claims of non-EU banks (after some volatility in 2007-09) continued to increase even after 2009.

The third chapter focuses on capital flows in the European Union, with a special focus on the possible impacts of capital controls in Greece, Iceland and Cyprus.

To highlight the main tendencies in the heterogeneous EU, among first twelve euro-area countries we make a distinction between debtors (Greece, Portugal and Spain) and creditors (Austria, Belgium, Germany, Luxembourg and the Netherlands) on the

basis of their net international positions, while France and Italy are explored separately. The rest of the EU Member States that are are divided into the North (Denmark and Sweden), Central and Eastern Europe (Czech Republic, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovakia and Slovenia) and the UK.

- **In the euro area, gross flows remain subdued** compared to the pre-crisis period across all groupings. However, there have been significant fluctuations over time, even if the level remains below the pre-crisis period. These fluctuations are correlated across country groups but their relative size differs substantially. Gross flows accentuated during the first quarters of 2012 and the end of 2014 and were relatively more important in creditor and debtor countries. Nevertheless, they had different implications with respect to the direction of the net changes.
- Similar dynamics emerge in **debtor countries** and **Italy**. These countries have over time turned into net exporters of capital. The intensification of gross flows during 2012 coincided with the most dramatic shift in their net financial account. Initially, portfolio net outflows were only partly compensated for by the inflow of other investment, which in turn also began flowing out from these countries. During 2015, these countries ended up running small overall surpluses. Net outflows in portfolio investment were somewhat counteracted by net inflows of other investment. Their NIIP has stabilised and began to rise as a result, while remaining in a debtor position. Almost the entirety of this position is made up of other investment claims in the debtor countries, while in Italy its composition has shifted once again after 2012 from portfolio to other investment.
- In **creditor countries**, the net financial account surplus widened up to 2015, as these countries became net exporters in every category of cross-border investment. After 2012, portfolio and direct investment net inflows turned into large net outflows. This is reflected in their NIIP positions and its composition: direct investment, a net asset, is increasing while portfolio investment, a net liability, is falling. After peaking in 2015, however, the overall net outflow has attenuated somewhat, owing to a complete reversal in the direction of other investment flows.
- **France** has experienced a significant attenuation in gross flows relative to the pre-crisis period that has, nonetheless, caused very little change to its net balance: the net financial account balance has remained close to zero. A decomposition of the balance shows a consistent surplus in other investment and a consistent deficit in the portfolio account, which was the primary reason for France's steadily negative NIIP.
- The magnitude of gross flows in **Northern Europe** and in **CEE** tends to be smaller than in the euro area. The **north of Europe** has been a net exporter of capital since the end of 2009. It runs a negative position of portfolio net liabilities, while other investments turn the overall position from negative to positive.
- **Central and Eastern European countries** experienced prolonged inflows, mainly of direct investment, in the run-up to the crisis. By the end of 2011 though, other investment started flowing out, reflecting a massive withdrawal

of banking funds from the region. **CEE** had turned into a net exporter of capital by 2013Q1, a trend that continues. **CEE** thus exhibits net liabilities in all instruments but more than half of NIIP liabilities are direct investment.

- In contrast, the **UK**, owing to its role as a major financial centre, experienced gross flows of up to 80% of GDP during the financial crisis. It experienced large inflows in 2007-08, mostly in terms of portfolio investment, which were then abruptly reversed in 2009. Large net portfolio inflows re-emerged in 2014, driving the net financial balance to a deficit of 20% of GDP, a trend which subsided in the course of 2015. The **UK** remains a debtor in NIIP components apart from direct investment.
- We focus on the three EEA countries that introduced **capital controls** – **Iceland** (in 2008), **Cyprus** (in 2013) and **Greece** (in 2015) – to assess their likely impacts. Overall, the imposition of capital controls in both Cyprus and Iceland led to a moderation of both portfolio and banking flows. Interestingly, as capital controls were lifted in April 2015 in Cyprus, a major increase in foreign bank claims was observed, as investment could flow again into the country without restrictions. In contrast, portfolio and banking foreign claims on Greece had already decreased substantially before capital controls were imposed. A recovery in banking claims on Greece started in late 2015 and continued into early 2016, suggesting some improvement in confidence in the Greek economy. The diminished uncertainty related to the implementation of the third financial assistance programme likely played a role in confidence building.
- Lacking a sufficiently comprehensive macro-financial model, we compare the three EEA capital control countries to other countries that underwent financial assistance programmes, both EU and non-EU, in order to gauge possible impacts of capital controls on economic performance. We find that developments in real GDP and unemployment developments in Iceland, Cyprus and Greece were no worse than in other EU Member States with financial assistance programmes and no capital controls. Moreover, relative to the initial programme assumptions, these three countries outperformed both their EU and non-EU counterparts that faced no restrictions on capital flows.

Chapter four presents the results of our in-depth study on institutional investors and risk sharing in Europe's Capital Markets Union.

- Institutional investors, as professional parties, typically hold geographically diversified portfolios of marketable securities. In that way, **institutional investors contribute to financial integration and risk sharing** in Europe's Capital Markets Union and beyond.
- Assets managed by institutional investors (defined as pension funds, insurance companies and investment funds) have increased significantly in the past fifteen years. Beyond the general increasing trend, the size of the funds managed by the three types of institutional investors and their increase over time varies significantly in different EU countries.
- **The key hypothesis we test** with panel regression estimates: the larger the assets managed by institutional investors, the smaller the home bias and thereby the greater the scope for risk sharing.



- We use a simple **indicator of home bias in portfolio investments** based on the International Capital Asset Pricing Model (ICAPM). We define an indicator measuring the **euro-area bias in portfolio investments**. The two indicators are calculated for equity and debt securities separately. Our new indicators show that in the euro area, Denmark, Sweden and the United Kingdom, home bias is lower than in the newer EU member states and non-EU advanced countries, while euro-area bias is comparably high in the euro-area and newer EU Member States, but low in the other three older EU Member States and in advanced countries. Furthermore, the euro area is unique in terms of debt securities: home bias is the lowest and euro-area bias is the highest among the country groups. Since non-EU countries are generally characterised by a higher degree of home bias than EU countries, we conclude that EU membership may foster financial integration and reduce information barriers, which sometimes limit cross-country diversification.
- We also calculate our **home bias indicators for the aggregate of the euro area as if the euro area was a single country**, by consolidating intra-euro area assets and liabilities. We report remarkable similarity between the euro area as a whole and the United States in terms of equity home bias, while there is a higher level of debt home bias in the United States than in the euro area as a whole.
- We create a new quantitative measure that we call '**Pension fund foreign investment restrictions index**' to control for the impact of prudential regulations on the ability of institutional investors to diversify geographically across borders. Our index suggests that most EU countries today apply very limited, if any, restrictions on foreign investment. However, some EU countries imposed substantial limits in 2001 and have gradually relaxed these barriers in recent years (Denmark, Finland, Germany, Hungary, Romania and Sweden). In the EU, persistent barriers to cross-border investment are still present in Austria, Greece and Poland.
- To explore whether the size of the assets managed by institutional investors contributes to home bias, we run a set of **panel regressions** for 25 countries. We include a number of relevant controls, namely: GDP per capita, a proxy for capital markets development (the Financial Development Index of the World Economic Forum), a proxy for openness (share of exports of goods and services to GDP), availability of domestic securities (domestic market capitalisation relative to home GDP) and availability of foreign securities (foreign market capitalisation relative to home GDP). For euro-area countries, we also include euro-area home bias as a regressor. We use two functional forms, two versions of equity home bias and estimates with and without country and time fixed effects.
- Our **results provide strong support for our main hypothesis**: all 48 estimated parameters have a negative sign and most of them are statistically significantly different from zero.
- Most of the **control variables** also have statistically significant coefficients with the expected sign for economic interpretation.
  - Higher **GDP per capita** is strongly associated with lower home bias, as expected, given that it can serve as a proxy for several factors influencing the ability of a country to diversify its asset holdings, such

as economic development, institutional quality, investor protection or average education level in the country.

- Higher **trade openness** is strongly associated with lower home bias, as expected; this result is therefore consistent with the argument that cross-border trade integration drives financial integration.
- **Home market capitalisation** is positively related to home bias, as expected, highlighting that countries with a larger home stock of securities diversify less.
- The results of the **availability of rest of the world securities** are more mixed: while the estimated parameter tends to be negative (as expected), in a number of specifications the estimated parameter is actually positive.
- The parameter estimate of the **Financial Development Index** (which may capture effects similar to GDP per capita) is never significant and the sign of the estimated parameter varies. The most likely reason for this result is the strong correlation between the Financial Development Index and GDP per capita relative to the United States.
- Importantly, our estimates tend to suggest that **our new pension fund foreign restriction index is positively related to home bias**.
- Results for the **euro-area bias** are mixed: when fixed effects are not included, the parameter estimate of euro-area bias is always negative and statistically significant in most cases.

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