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Analysis of developments in EU capital flows in the global context

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Abstract

This report reviews the key theoretical foundations underlying the benefits and risks of net capital flows, in particular large, persistent inflows or outflows, and the significance of gross flows and their composition. We analyse global capital flows between country groupings. We conclude that global flow patterns changed significantly and Europe has been left behind. The magnitude of capital outflows from Russia and Ukraine due to geopolitical developments have been much smaller than during the financial crisis. In Europe, financial disintegration, which began with the financial crisis, has not been reversed when considering various indicators of financial stocks and flows. Turning to foreign assets and liabilities, we that see central and eastern European countries experienced large negative spreads on equity, and that some larger EU member states succeeded in somewhat replicating the US's privilege on equity returns. Correlation between returns and revaluations was small, suggesting revaluation gains did not compensate low returns. Using bilateral data and panel econometric models we examine determinants of capital flows and stocks. Euro membership boosted debt flows, while EU membership increased equity flows. Global uncertainty reduces capital flows, but higher financial integration dampens this effect. We calculate financial weighted real effective exchange rates and government bond yields and spreads.

Executive summary*

The purpose of our report is to provide a comprehensive overview of capital movements in Europe in a global context.

The first chapter of the report briefly introduces the rationale for monitoring capital flows, which are related to welfare-enhancing characteristics of capital flows, but also to the risks associated with the vulnerability that they create, as exemplified by financial and consequent economic distress throughout the world.

The second chapter briefly summarises theoretical aspects of capital flows. The key conclusions are the following:

- Capital flows are frequently viewed as the financial counterpart to savings and investment decisions and thereby the focus is typically on net capital flows, which represent the key variable to gauge countries' net external borrowing requirements.
- Current and capital accounts do not have to be balanced, as inter-temporal consumption smoothing and the consequent external borrowing/lending can be beneficial, especially if capital flows "downhill" from capital-rich countries to capital-poor countries.
- However, persistent and excessive current account deficits, which are financed by financial account surpluses, expose countries to the risk of sudden stops and reversals in capital flows, which can lead to significant financial instability, and may lead to painful and prolonged macroeconomic adjustments.
- Prolonged current account deficits can also lead to distortions in the allocation of capital in the economy, whereby booms emerge with relative price changes between sectors, leading to the expansion of non-traded sectors and the contraction of tradable sectors, which in turn can make it difficult to service external liabilities once the boom is over.
- Persistent current account surpluses lead to the accumulation of net foreign assets, which are subject to valuation changes and can involve welfare costs. Current account surplus countries can be indirectly hit by sudden stops in the financing of deficit countries, because this implies a loss of export markets and the need to invest capital elsewhere. There is also a macroeconomic adjustment problem for countries with persistently large current account surpluses (and consequent net capital outflows) from export-oriented to domestically-oriented sectors.
- Beyond net flows, gross flows and their instrument composition (debt vs. equity), maturity structure, currency composition, and sectoral composition matter too. Gross flows can amount to several dozen percent of GDP even when net flows are small. Gross flows enable risk sharing and are subject to contagion in cases of financial turmoil.

The third chapter analyses global capital flows, by grouping countries of the world into ten groups. The key findings are the following:

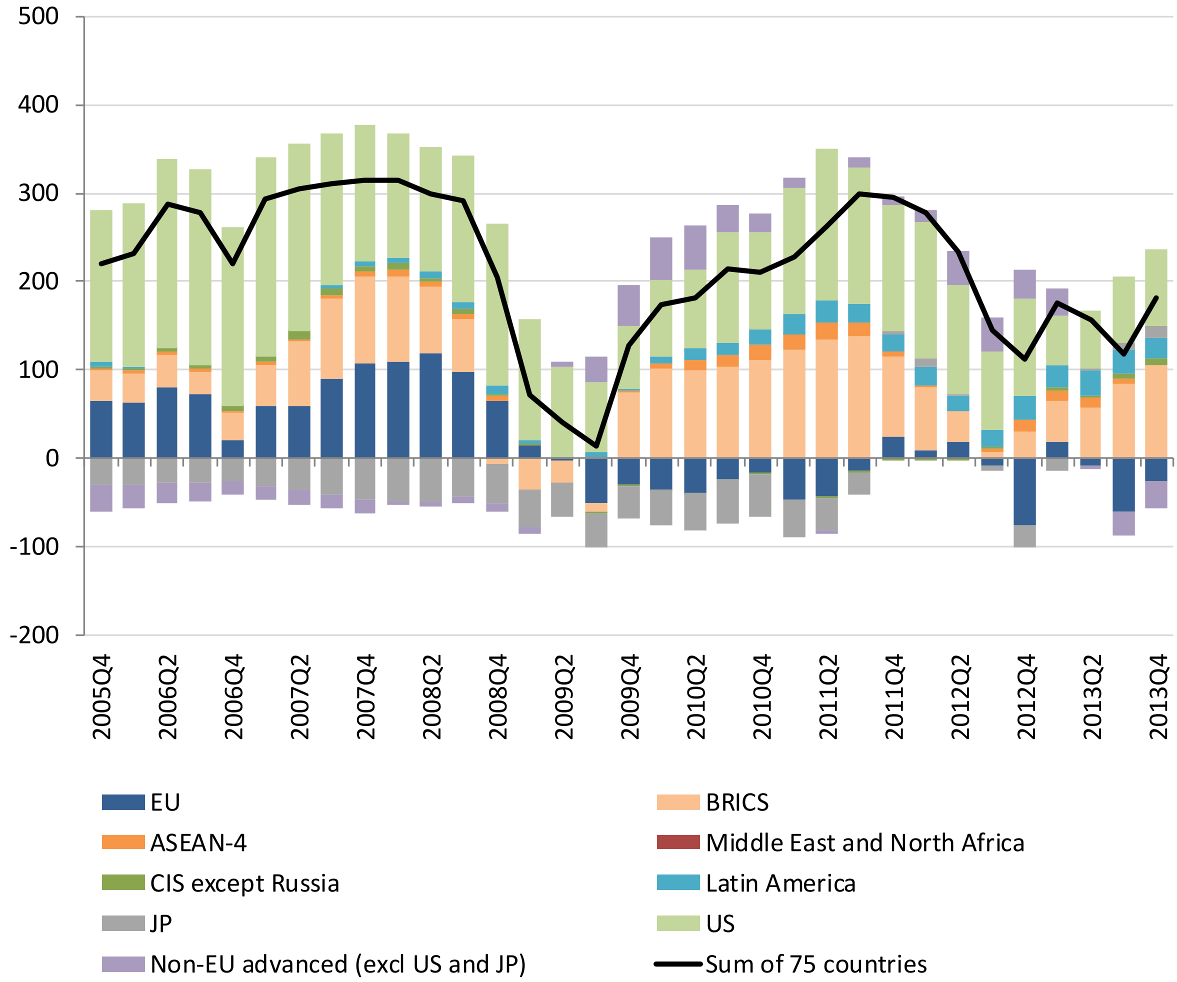
- The financial crisis resulted in a collapse of both net and gross financial flows across the world. Figure 1 reports the developments with new flows. The EU

* The authors are thankful to several colleagues from the European Commission and from Bruegel for valuable comments and suggestions.

moved from a stable and sizeable capital account surplus before the crisis (reflecting an overall EU current account deficit) to a capital account deficit post crisis, except for a few quarters.

- Interesting observations can be made if we separate the EU into the euro area, the three Northern EU countries (UK, Denmark, and Sweden) and central and eastern European (CEE) member states. The euro area had a more or less balanced net financial account both before and during the height of the global crisis, but since the specific euro-crisis intensified in 2011 it experienced sizeable capital outflows (which were mirrored in increased current account surpluses). Despite calmer financial markets in 2013-14, capital in net terms is still flowing out. Moreover, there was also a major reduction in gross flows relative to the pre-crisis period, which have remained subdued in 2013-14 too.
- Other regions in Europe and the rest of the world show quite different patterns. Net flows did not turn negative in CEE members of the EU, in the three Northern non-euro countries and in most non-European regions. Only in countries in the Middle East and North Africa, and in four smaller Asian countries (ASEAN-4), were there sudden capital outflows in 2003-14, but not in other regions.

Figure 1 Net financial account for different country aggregates (in USD billions)



Source: Bruegel calculations using IMF Balance of Payments Statistics and Eurostat for the EU, which exclude intra-EU flows.

Note: A positive value indicates net capital inflows into the country/country group. We report four-quarter moving averages. The 75 countries included in our country groups account for 92 percent of GDP of the countries included in the IMF World Economic Outlook.

- The financial crisis also resulted in a collapse of gross financial flows across all country aggregates, while the subsequent recovery of capital flows was uneven across regions. 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. The same recovery, albeit to a somewhat lesser extent, can be observed for the BRICS and non-EU advanced economies. The euro area, CEE9 and the CIS 8 (excluding Russia) continue to display depressed levels of gross in- and outflows of capital, even in 2013.

- The magnitude of gross flows relative to GDP is several factors higher now in every non-European emerging and developing country region than in the euro area, in sharp contrast to pre-crisis developments. These developments suggest that global capital flow patterns changed significantly and Europe is left behind.

- In terms of instruments, portfolio investment played a major role before the financial crisis in the euro area, the three Northern EU members, the non-EU advanced economies and the ASEAN-4, whereas the CIS 8 (excl. Russia), Latin America, Middle East and North Africa, and Sub-Saharan Africa benefited mostly from net direct investment flows. During the recovery, the euro area experienced volatile portfolio investment flows and mostly negative other investment flows, while the other non-EU advanced economies registered a strong recovery starting in early 2010, on the back of stable portfolio investment and bank inflows. In Latin America and the ASEAN-4, the recovery was mostly driven by positive net portfolio debt flows, as well as FDI.

- Available data on banks also suggest that a major deleveraging process is ongoing in Europe, but not in the rest of the world, though European banks continue to have much larger balance sheets relative to GDP than in other advanced countries.

- All these and other developments point toward the special situation of Europe, and in particular the euro area, which we highlight and analyse in more detail in Chapter 4.

- The net international investment positions (NIIP) of the euro area and non-EU advanced economies has been negative and stable over the past years, mainly on the back of negative portfolio investment and positive FDI stocks. However, as highlighted by a recent academic article (Zucman, 2013), around 8% of the global financial wealth of households is held in tax havens, three-quarters of which goes unrecorded. Accounting for unrecorded assets the Eurozone turns into a net creditor rather than a net debtor to the rest of the world, as indicated by official statistics. This finding suggests that major improvements are needed in capital flows and stocks statistics.

- In the CEE, FDI liabilities are dominant and account for about the same as the sum of net portfolio and other investment liabilities. CEE and the group of Brazil and India, are the only regions (among the regions we considered) where the net position of all three main categories (FDI, portfolio, other investments) are negative, suggesting that these regions relied significantly on capital from abroad and, therefore, are prime examples of "downhill" capital flows. CIS 8 (excl. Russia) and Latin America also have negative overall NIIP, but they have positive net portfolio and/or other investment positions.

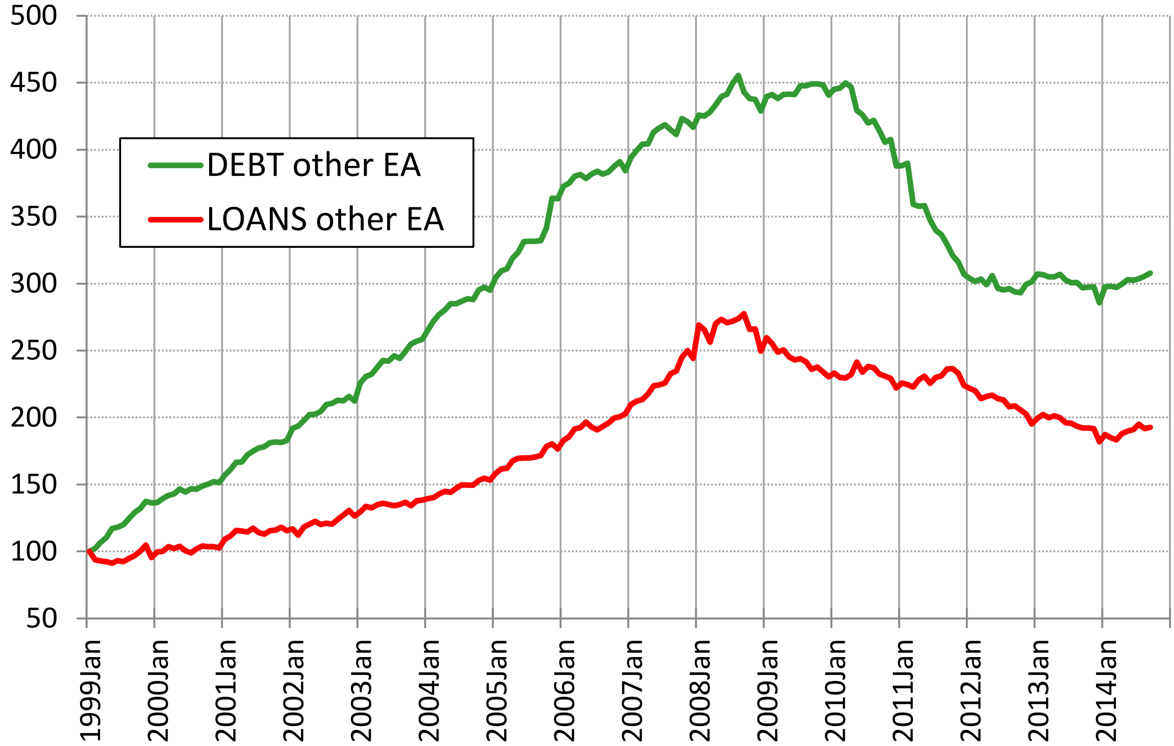
- Japan and Switzerland exhibit strong positive NIIPs. Switzerland accumulated sizable positive reserve assets, stemming from interventions in the foreign exchange rate market by the Swiss National Bank.
- The section on Ukraine and Russia highlights that while both countries are experiencing capital outflows since the start of the geopolitical unrest in 2014, their magnitude is in fact much smaller than what was observed during the height of the global crisis (the most recent data is from September 2014 for Ukraine and 2014Q1 for Russia). A look at the exposure of European banks to the two countries underlines that capital has been withdrawn by European banks too, though there are still sizeable claims. By the second quarter of 2014, claims of US banks on Russia declined only moderately, and claims of Japanese banks on Russia hardly declined. The latest bilateral portfolio investment data is for the end of 2013, which in fact shows an increase in foreign claims on Russia. Concerning net FDI inflows to Russia, Europeans reduced their flows drastically, while interestingly, there is an increase in FDI inflows from Asia, which, by the first quarter of 2014, compensated about 1/7th of the reduction in European FDI inflows.

The fourth chapter focuses on European capital flows and in particular on developments in the euro area.

- Being a currency union, the euro area is a special case for the study of capital flows. The first eight years after the currency unification coincided with extraordinary global growth in cross border capital flows that was reinforced by the currency unification. Euro-area periphery countries accumulated very large financial account surpluses before the crisis (almost 15% of the total group GDP), which was mirrored in the financial account deficit of the euro-area core countries.
- In terms of composition, the euro-area flows were dominated by portfolio instruments (especially debt instruments) and other investments, while FDI played a marginal role. By contrast, FDI accounted for a larger share of gross flows in the CEE.
- In 2008, portfolio net financial inflows into the periphery contracted, and became large and negative between summer 2011 and 2012. This development captures the intensification of the euro crisis, which saw foreign investors increasingly off-load debt issued by countries in the euro area periphery. This development, however, seems to have been neutralized by other investment flows of an opposite sign related to financial assistance and the ECB's liquidity provision.
- A more detailed analysis of net flows by sector shows that the euro area was indeed characterised by a substitution between private and public flows during the financial crisis, particularly in the periphery.
- Euro area banks' foreign claims rose steadily in the great moderation period (2000-2006), reaching a peak in 2008 with gross claims at 150 percent of GDP. This has subsequently fallen over the next three or so years, before eventually flattening at around 100 percent of euro area GDP.
- The euro area core accumulated gross claims of up to 200 percent of core GDP, before halving to approximately 100 percent by 2014. The majority of this fall occurred during the period 2008 – 2010.

- Net foreign claims were negative in the euro area periphery from 2000 until finally returning to positive levels in 2012, albeit at very low levels. Net banking sector claims still remain negative.
- Euro area core claims on the periphery rose from under 10 percent of core GDP, to almost 20 percent at the peak in 2008, before declining to around levels similar to the initial values in 2000 by 2014.
- While the core's holdings of claims on the periphery grew the most over the period 2000-2008, the largest holdings are on the centre (France and Italy).
- The majority of core and centre's claims held are on the 'other euro area' and 'non EU advanced', while the largest share of the periphery's claims come from other EU and proportionately much lower non EU advanced and other euro area.
- Special attention is paid to the issue of financial dis-integration, as the deep financial integration that had been reached in the euro area thanks to the currency unification has in fact halted, and to a significant extent, reversed during the crisis. For example, Figure 2 shows that euro area banks' cross-border, but intra-euro, assets increased quite sharply till the intensification of the euro-area crisis, but reduced very significantly by 2013. The home bias in banks' holdings of sovereign and other debt has increased, fuelling a so-called doom-loop between banks and sovereigns in financially vulnerable countries. The share of non-residents in holdings of government debt was reduced during the crisis in vulnerable euro-area member states, while it continued to increase in Germany and France.
- The main conclusion we draw is that the financial dis-integration, which started with the euro crisis, has not been reversed when considering various indicators of financial stocks and flows. Some price indicators, such as the spread between government bonds yields of euro area countries, narrowed significantly after the introduction of the ECB's Outright Monetary Transactions (OMT). Indicators such as capital flows, cross-border loans, debt securities holdings and the home-bias in government bond holdings stopped deteriorating further, however, there are only very limited signs of a reversal of financial disintegration in the euro area countries that suffered the most stress.

Figure 2 Euro-area banks' loans to, and holdings of debt securities issued by, residents of the euro area outside their home countries (January 1999 = 100), January 1999 – September 2014



Source: Bruegel calculations using data from the ECB.
Note: the red line shows loans of all euro-area Monetary Financial Institutions (MFIs) to residents in euro area countries outside their home countries, including other MFIs. The green line indicates the holdings of "securities other than shares" (as reported in the ECB's statistics on MFIs' balance sheet) of residents in other euro area countries (outside the home country of the MFI). Here all securities other than shares are considered, without disaggregating across issuing sectors.

In Chapter 5 we analysed a special topic, the current return on foreign assets and liabilities, and valuation changes. The main conclusions are:

- There is significant heterogeneity across countries in spreads between current returns on foreign assets and liabilities. Countries from CEE have experienced non-negligible negative spreads for equity, mostly due to the large (over 10 percent per year) return that foreign investors made on investment in the CEE region.
- The 'old' EU member states had on average close to zero equity spreads. Larger EU countries, such as Germany, France, Finland, the Netherlands, Sweden and the United Kingdom had positive spreads and they thereby succeeded in replicating, to a lesser extent, the privileges of the US on equity returns throughout the periods taken into consideration.
- On the debt side, the US benefited from positive current return spreads in 2004-2006, which then fell to zero in the latter periods. In contrast to equity, most EU countries received positive spreads in all three periods, though these spreads are typically small. Switzerland's privilege on debt instruments improved over EU countries, nearly approaching the positive current return spread of Japan.

- It is also worthwhile highlighting that the vulnerable euro-area periphery countries (with the exception of Greece) do not display largely negative tendencies on current returns on foreign assets and liabilities relative to other EU countries.
- Revaluation effects were also diverse across countries. The USA, Switzerland and Japan suffered from a relative revaluation loss on equity, thereby providing risk-sharing to the rest of the world. In contrast, old EU member states benefitted from gains on their net equity holdings, while in the newer member states revaluation of equity was close to zero in the full period. The 'revaluations spread' was the opposite on net debt assets: USA, Switzerland and Japan had positive spreads, while old EU member states had negative spreads.
- The correlation between current return and revaluation was typically small, suggesting that revaluation gains did not tend to compensate for low returns.

Chapter 6 presents the results of our in-depth analysis using bilateral data on capital flows.

- We estimated panel regression models for capital stocks and flows using a large set of explanatory variables and a number of different specifications.
- We found that bilateral holdings of debt, and to a lesser extent, portfolio equity, tend to be bigger when two countries are both members of the euro area, suggesting that belonging to the euro area does have a significant effect on bilateral asset holdings. However, the euro-effect on FDI is not always significant while the sign is not robust across specifications.
- EU membership of one or both countries tends to be negatively and significantly associated with bilateral asset holdings of debt, suggesting that membership in the monetary union (and not merely in the EU) is what really boosted bilateral debt holdings. On the other hand, EU membership positively influences FDI, but more in those pairs of EU countries in which at least one of the two was not a member of the monetary union, underlying that euro membership did not boost cross-border FDI holdings.
- Trade openness (considering total trade) tends to be positively associated with real bilateral asset holdings, while the correlation with bilateral trade is very strong.
- Sharing a border tends to be positively associated with bilateral debt holdings (especially for FDI), while distance is negatively associated with bilateral asset holdings. Size, proxied by population, is also positively related to asset holdings. These findings are similar to those of the gravity literature on trade, according to which bilateral trade is expected to be positively correlated with mass, and negatively correlated with distance.
- Both bond and stock market capitalisation tend to be significant and positively correlated with bilateral asset holdings, which is intuitive.
- Interestingly, the size of a receiver country's government debt to GDP tends not to be significant for debt and portfolio equity investment, whereas it is strongly and negatively correlated to bilateral FDI asset holdings. This may point to the fact that FDI investment, normally considered a more stable and long-term form of investment, tends to be more susceptible to the potential risk coming from high government debt in the receiving country.
- The estimation results for flows largely confirmed the findings for stocks. For flows, we also included the unemployment rate, which tended to have a

negative estimated coefficient (suggesting that higher unemployment, which is a reflection of weaker economic situation, is negatively correlated with capital flows), but the estimated coefficient is never significant.

- We also included the VIX volatility index, which is significantly and negatively related to capital flows across different models and types of capital flows. Since the VIX index is generally regarded as a measure of global uncertainty, this result suggests that bilateral capital flows are indeed negatively impacted by global uncertainty. However, the estimated parameter of the interaction between the VIX index and the level of financial integration (measured as the stock of bilateral asset holdings) is positive and highly significant in almost all models. This suggests that when financial integration is higher, the negative impact of an increase in global uncertainty on capital flows is smaller.
- The inclusion of fixed effects (time and reporter country dummies) as well as the exclusion of offshore centres and major financial centres from the sample in general does not affect the result significantly.
- By calculating financially-weighted real effective exchange rates (REERs), we found that in some, though not all, cases there are major differences between trade- and financially-weighted REERs. Also, for a number of countries, REERs derived on the basis of debt-type financial assets differ significantly from REERs derived on the basis of equity-type financial assets held worldwide. These findings suggest that a given exchange rate movement can have a rather different impact on trade flows and on financial wealth.
- We also calculated financially-weighted government bond yields and spreads relative to these weighted yields. This new dataset will allow assessment of a country's borrowing cost relative to the group of those countries with which it has financial links.

1. Introduction

The free movement of capital is one of the four fundamental economic freedoms of the European Union. Free capital movements can enhance welfare if they lead to better allocation of financial and productive resources. However, they can also be a source of vulnerability, with far-reaching spillovers. The past decades present several examples of capital flows resulting in various excesses, which eventually led to financial and economic crises, occasionally spreading to other regions of the world too.

Monitoring and assessing capital flows is therefore crucial for policymakers, market participants and analysts. The purpose of our report is to provide a comprehensive overview of capital movements in Europe in a global context, which DG Markt of the European Commission can consider as a background paper when preparing its annual report on "The Free Movement of Capital" for the Economic and Financial Committee (EFC) of the European Union.

For this reason, we analyse comprehensively the various issues connected to capital flows, going from a more general to a euro-specific perspective. In Chapter 2 we start with a review of the key theoretical aspects concerning capital flows, which should help in understanding the developments we describe in later parts. A large literature focuses on net capital flows and the associated current account balances, and we highlight the risks associated with both persistently high deficits and surpluses. But it is similarly important to underline the significance of gross flows, including their composition in terms of instruments, maturity structure, and currency, as large gross flows and accumulated stocks can be a major source of vulnerability even when the net flows are more or less balanced.

In Chapter 3 we turn to the analysis of global capital flows. While our main focus is on more recent periods, as background we report and discuss developments over a time span covering the global financial and economic crisis as well as the run-up to the crisis. By aggregating countries into ten groups, we highlight different patterns of capital flows throughout the world. Due to geopolitical conflicts near the EU borders, we place a special emphasis on capital flows and stocks in Ukraine and Russia, as well as on a bilateral basis.

Chapter 4 focuses on Europe, and in particular on the euro area. While we do analyse all EU countries, the special euro area focus is motivated by its unique characteristics, such as high level of financial integration among sovereign states that share a common currency, and by the euro area's enduring economic weaknesses at a time when EU countries outside the euro are generally recovering from the global financial and economic crisis. After assessing developments in capital flows and stocks, we pay particular attention to the analysis of financial dis-integration within the euro area. This development significantly reversed the extensive financial integration seen in pre-crisis years, which has largely complicated the conduct of the common monetary policy.

In Chapter 5 we present a special analysis of returns on, and revaluation of, foreign assets and liabilities. In particular, we examine whether European countries share some of the privileges that the United States has - low-yielding liabilities and high-yielding assets. Given the major capital inflows into Central and Eastern European member states, we focus our analysis on these countries. We also explore potential correlations between returns and revaluations.

Finally, in Chapter 6 we use bilateral data on capital flows and stocks to perform various analyses. Using a panel econometric model, we assess the drivers of bilateral capital stocks and flows with an emphasis on the role of membership in the EU and the euro area. We also analyse the role of global factors in determining capital movements. Additionally, we calculate financially-weighted real effective exchange rates (REERs) for 72 countries, compare them to trade-weighted REERs, and calculate financially-weighted government bond yields and spreads for 57 countries.

2. Theoretical aspects of capital flows

2.1 Net capital flows

The literature investigating the implications of net capital flows and of their real counterpart, i.e. the underlying current account imbalances, is sizable. Capital flows are in fact traditionally viewed as the financial counterpart to savings and investment decisions. From this perspective, the focus is typically on net capital flows, which represent the key variable to gauge countries external borrowing requirements.

From a theoretical perspective, the fact that a country's current account is not balanced can be seen as a way to allow inter-temporal consumption smoothing and in this way it can be beneficial. Theory predicts that capital should flow "downhill" from capital-rich countries to capital-poor countries that offer higher returns on capital. This view has been challenged (Lucas 1990, among others), but it was still put forward in relation to the euro area current account imbalances, which at first were largely interpreted (and to some extent welcomed) as a sign of convergence (Blanchard and Giavazzi (2002)).

However, in practice, persistent current account (and, symmetrically, financial account) imbalances expose countries to a number of risks. Typically, countries that run a large current account deficit are exposed to the risk of sudden reversals in capital flows, which can lead to significant financial instability. While financial imbalances can be reversed very quickly, the underlying macroeconomic adjustment is significantly slower, due to nominal rigidities. As a consequence, sudden stops in capital inflows tend to be associated with sharp recessions that can be prolonged and accompanied by financial distress (e.g. Obstfeld and Rogoff 2005, Mendoza 2010).

There is an extensive empirical literature – born also from the IMF's special experience in dealing with balance of payment crises – that investigates current account reversals and their macroeconomic effects on the economy.

Another important aspect of prolonged current account imbalances concerns the possible distortion in the allocation of capital in the economy. Blanchard (2007) shows that large imbalances imply significant shifts in economic activity across sectors of the economy. During a high-deficit phase, the non-traded sector expands and the tradable sector contracts in relative terms; conversely, once this phase is over, rebalancing requires a relative contraction of the non-traded sector and expansion of the tradable sector. Giavazzi and Spaventa (2010) point out that models establishing the optimality of a succession of current account deficits in a catching-up process implicitly assume that the inter-temporal budget constraint is satisfied, so that the accumulation of foreign liabilities is matched by future surpluses. By introducing explicitly this constraint in a simple two-period, two-good model they show that its fulfilment requires that growth be driven by an adequate increase of the country's production capacity of traded goods and services.

Persistent current account surpluses are not without risk either. While the accumulation of net foreign assets does not face sustainability constrains, in contrast to the accumulation of net external debt, persistent and large current account surpluses and ever growing net external assets pose various risks. A large stock of external assets is subject to valuation changes and can involve welfare costs. A country that runs a persistently large surplus faces a symmetric adjustment problem, from export to domestic demand and the related reallocation from export-oriented to domestically oriented sectors (European Commission, 2012). Moreover, since imbalances are symmetric, current account surplus countries can be indirectly hit by sudden stops in the financing of deficit countries, because this would imply a correction of the current account deficit and a loss in terms of export for the current account surplus countries.

2.2 Gross capital flows and valuation effects

Behind the net capital flows, it is important to understand the dynamics of gross capital flows. In this respect, the literature highlights the importance of the relative debt-equity mix in gross flows, of the maturity structure and of currency composition (see e.g. Lane 2013). The breakdowns of aggregate figures across sectors of the economy – in particular the degree of banking intermediation – are also relevant.

A special feature of the last decade has been a rapid and strong increase in gross flows, which do not always show up in the net capital flow statistics. For most countries, in fact, net capital flows are small relative to GDP, whereas gross capital flows were in the double-digit range as a percent of GDP. The euro area is a striking example of this, as its aggregate financial account position remained mostly balanced over the ten years preceding the crisis despite very large gross flows. The main driver behind this expansion is the growth of international cross-border banking activity, whose effects are especially evident in the increase of portfolio and other investment flows. Cross-border banking can amplify a domestic credit boom to the extent it allows an expansion of domestic lending beyond the domestic deposit base (Borio et al 2011, Bruno and Shin 2012, Lane and McQuade 2012).

The rationale for also monitoring gross capital flows (as well as net flows) is a strong one in light of the risks to which they expose countries, even those that have a balanced net position. Differently from the net flows, gross flows do not point to the financing risk of the country but rather to the possible channels of risk sharing and contagion in case of financial turmoil. As pointed out in Lane (2013), in principle high gross levels of capital outflows and capital inflows could be stabilising by supporting international risk diversification. Foreign liabilities allow domestic economic risks to be shared with foreign investors, while holding foreign assets can provide some insulation for domestic investors. This occurs through bilateral valuation gains and losses that depend on the type of capital flows, in particular by their composition in terms of instruments.

Recent research by Gourinchas, Rey and Truempler (2012) and Lane and Milesi-Ferretti (2009) showed how the balance sheet of the United States played the role of insurer during the crisis. This was possible because the US' external balance sheet is short on "safe" or liquid securities and long on "risky" or illiquid ones. This implies that in normal times the US can potentially earn a risk premium on its external position (see Gourinchas, Rey and Govillot 2010). In crisis periods, instead, a country with this kind of balance sheet would suffer important losses because the value of its risky external assets collapses with respect to the value of its safe external liabilities. This happened to the US, as the value of US government bonds, which constitute a large part of the country's external debt liabilities, remained stable or actually increased at the height of the crisis. Meanwhile the value of its external assets (the bulk of which was riskier equity and FDI) dropped dramatically. The result was an equally important drop in the US net foreign asset position. Gourinchas, Rey and Truempler (2012) find that between 2007Q4 and 2009Q1, the US net foreign asset position deteriorated by twenty-one percent of GDP, of which 16percent (2,200 USD billion) represented valuation losses suffered by the US on their external net portfolios. In this way, the United States provided insurance to the countries holding US government bonds and shared in the losses of collapsing equity prices around the world.

Differences in the foreign currency exposures can also have important consequences. Foreign-currency exposures in e.g. emerging Asia, Latin America and emerging Europe have had important implications for the stability of their financial sectors (Brunnermeier et al, 2012). During the recent crisis, Asia and Latin America were long in foreign-currency assets in net terms, so that currency depreciation generates a valuation gain. Emerging Europe on the other hand, had net foreign-currency liabilities, so currency depreciation had an adverse impact on balance sheets.

2.3 Stocks

An additional reason to closely monitor capital flows is the legacy they leave behind in terms of stocks of foreign assets or liabilities. After a prolonged period of current account deficits, a country is left with a large stock of net external debt liabilities for which it can face a deleveraging or a rollover challenge. Over the (likely long) period required to deleverage, countries are exposed to the risk of valuation losses on the accumulated positions.

3. Global trends

3.1 Major country groups of the world

We start our monitoring analysis by examining capital flows and stocks at the global level, before analysing some country-specific developments. We group countries into 10 major aggregates: euro area 17, 8 Central and Eastern European countries of the European Union (CEE8), the 3 other EU countries (UK, Denmark and Sweden), 11 non-EU advanced economies, 4 Association of Southeast Asian Nations (ASEAN-4), Latin America 13, 5 Sub-Sahara African countries (SSA5), Commonwealth of Independent States not including Russia (CIS 8 (excl. Russia)), Middle East and North Africa 5 (MENA5), and the aggregate of Brazil, Russia, India, China and South Africa (BRICS). The time period we consider is from 2006Q1to the latest data available (end of 2013 or first quarter 2014): the period for which we have data for all country groups[1].

The evolution of gross and net capital flows for our country groupings is presented in Figure 3, which shows a substantial heterogeneity across country groups during the last years. In the run-up to the crisis, data indicates there were net capital inflows into most country groups (except a few quarters during 2006-2007 in the euro area,

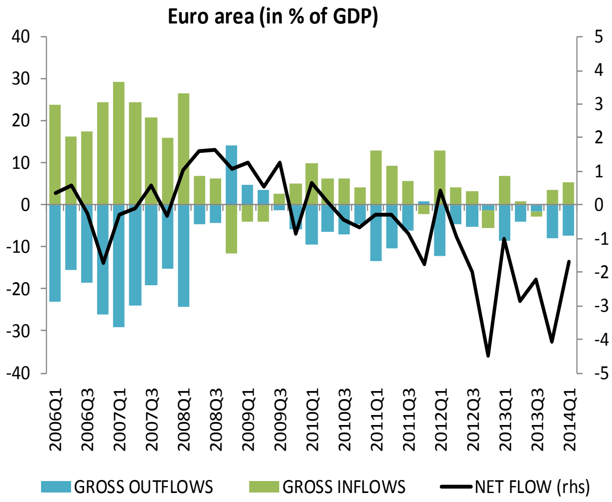
[1] "Capital flows" are defined as cross-border financial transaction recorded in a country's external financial accounts, which produce a change in the assets and liabilities of residents vis-á-vis non-residents. Inflows arise when external liabilities are incurred by the recipient economy, or when external assets are reduced (inflows with a negative sign). Capital outflows arise through purchases of external assets from the viewpoint of the reporting economy (outflows with a negative sign), as well as through deleveraging of the country's assets (outflows with a positive sign). A net flow is calculated by summing up gross in- and outflows, where outflows are recorded with a negative sign.

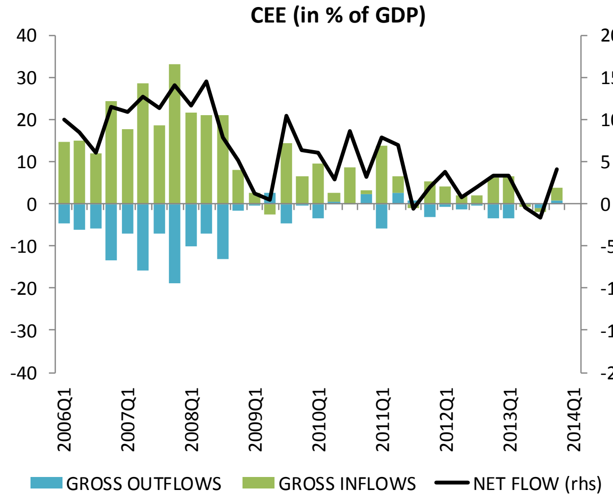
MENA5 and SSA5[2]. Figure 3 also shows that the eruption of the financial crisis in 2007 resulted in a collapse of gross financial flows in all country aggregates. Specifically, in the CEE8, the Other EU 3 and the non-EU advanced countries net flows fell to zero for a few quarters, before rebounding by the end of 2009. Sizeable net capital outflows were registered in the CIS 8 (EXCL. RUSSIA), the BRICS and Latin America as well as in the ASEAN-4. Concerning the volatility of net capital flows, the BRICS, the CEE8, Latin America, Middle East, Sub-Saharan Africa, experienced much sharper fluctuations in net capital flows (of up to +/- 20percent of GDP) than the euro area and non-EU advanced countries. The ASEAN-4 as well as the Other EU 3 experienced slightly milder fluctuations ranging from -4 to 8percent of GDP.

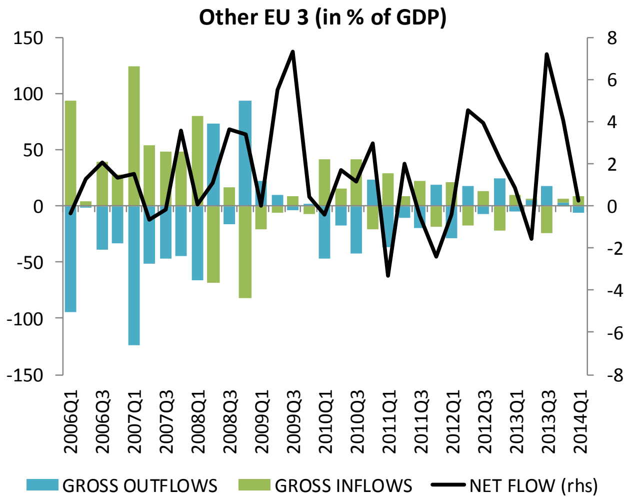
Turning to the recovery of capital flows in the post-crisis period, it can be noted that the recovery towards pre-crisis magnitudes was uneven across regions. By the first quarter of 2010, gross capital flows reached nearly pre-crisis levels in Latin America, in the ASEAN-4, and in Sub-Saharan Africa. The same, albeit to a somewhat lesser extent, can be observed for the BRICS and non-EU advanced economies. By contrast, the euro area, CEE8 and the CIS 8 (EXCL. RUSSIA) continue to display depressed levels of gross in- and outflows of capital even in 2013. In terms of net position, the euro area stands out, by moving away from its close-to-balanced pre-crisis position of net capital inflows. Instead, the euro area experienced a deteriorating financial account deficit (mirroring the increasing current account surplus) since the end of 2012, which continued throughout 2013. By the end of 2013 and the beginning of 2014, capital inflows recovered somewhat while capital outflows remained broadly stable, contributing to a slightly better net financial account position of -1.2percent of GDP in 2014Q1. The Central Eastern European Countries' net financial account did not recover to pre-crisis levels, but remained positive throughout the recovery. In 2013 it fell to zero for a few quarters, but rebounded by the end of 2013, standing at 4.2 percent of GDP by the end of 2013. An anaemic and volatile recovery can be observed for the Other EU 3, with the financial account dropping below zero in 2012 and rebounding in 2013. Also the CIS 8 (EXCL. RUSSIA) experienced volatile net capital outflows since the outbreak of the financial crisis. However, since mid-2012 a sustained recovery is taking place, as gross outflows decrease while gross inflows remain constant, contributing to a stronger positive net financial position of 7percent of GDP in 2013Q4. The Middle East and North Africa as well as the ASEAN-4 display deteriorating net capital flows on the back of sizeable gross capital outflows. The opposite can be said for Latin America, which experienced a sizeable recovery in both gross and net terms, hitting pre-crisis levels by the end of 2013. The BRICS experienced a slowdown of capital inflows by the beginning of 2012, followed by a sustained recovery from 2013Q1 onwards. Sub-Saharan Africa displays the strongest recovery, as capital flows turned positive by the beginning of 2008 and stayed increasingly positive thereafter. In the second quarter of 2013, Sub-Saharan Africa experienced gross inflows of around 21 percent of GDP.

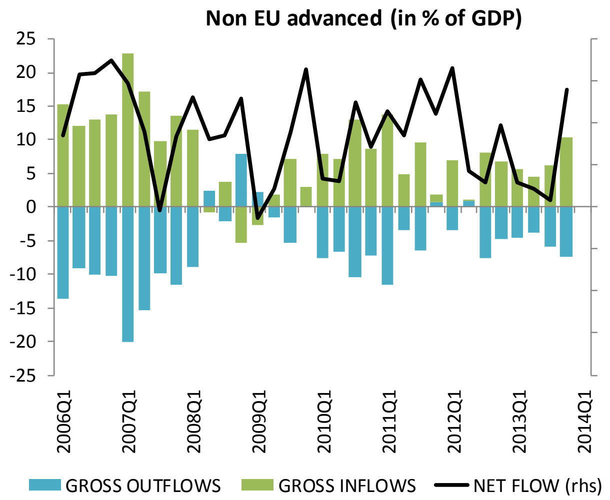
Figure 3 The evolution of gross and net capital flows in the world (percent of GDP)

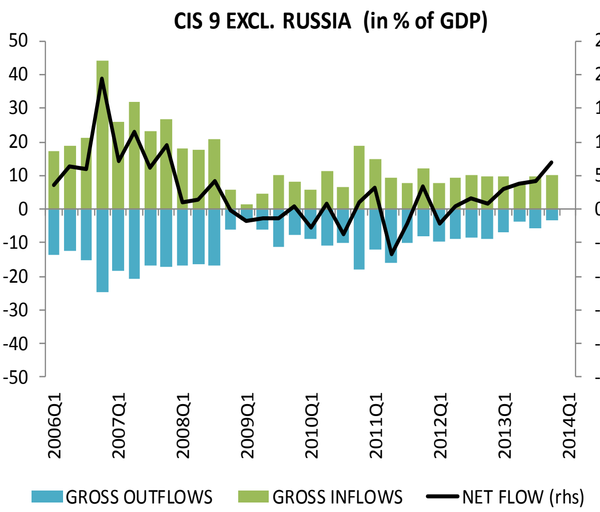
[2] We highlight the findings by Zucman (2013), which show that official statistics substantially underestimate the net foreign assets position (and consequent flows) of rich countries, since they fail to capture most of the assets held in offshore tax havens.

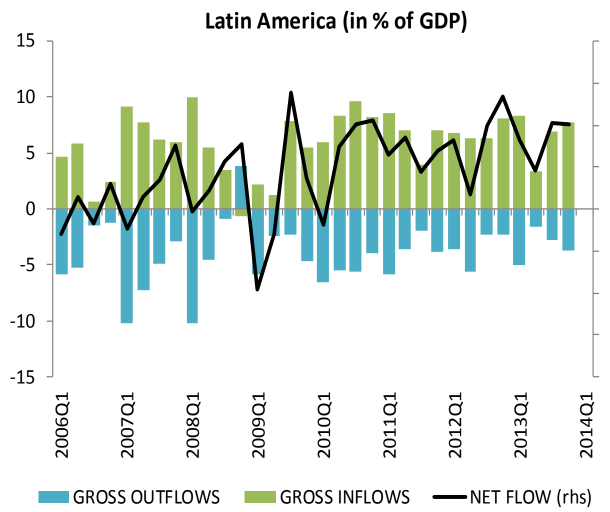

Euro area (in % of GDP)
GROSS OUTFLOWS
GROSS INFLOWS
NET FLOW (rhs)

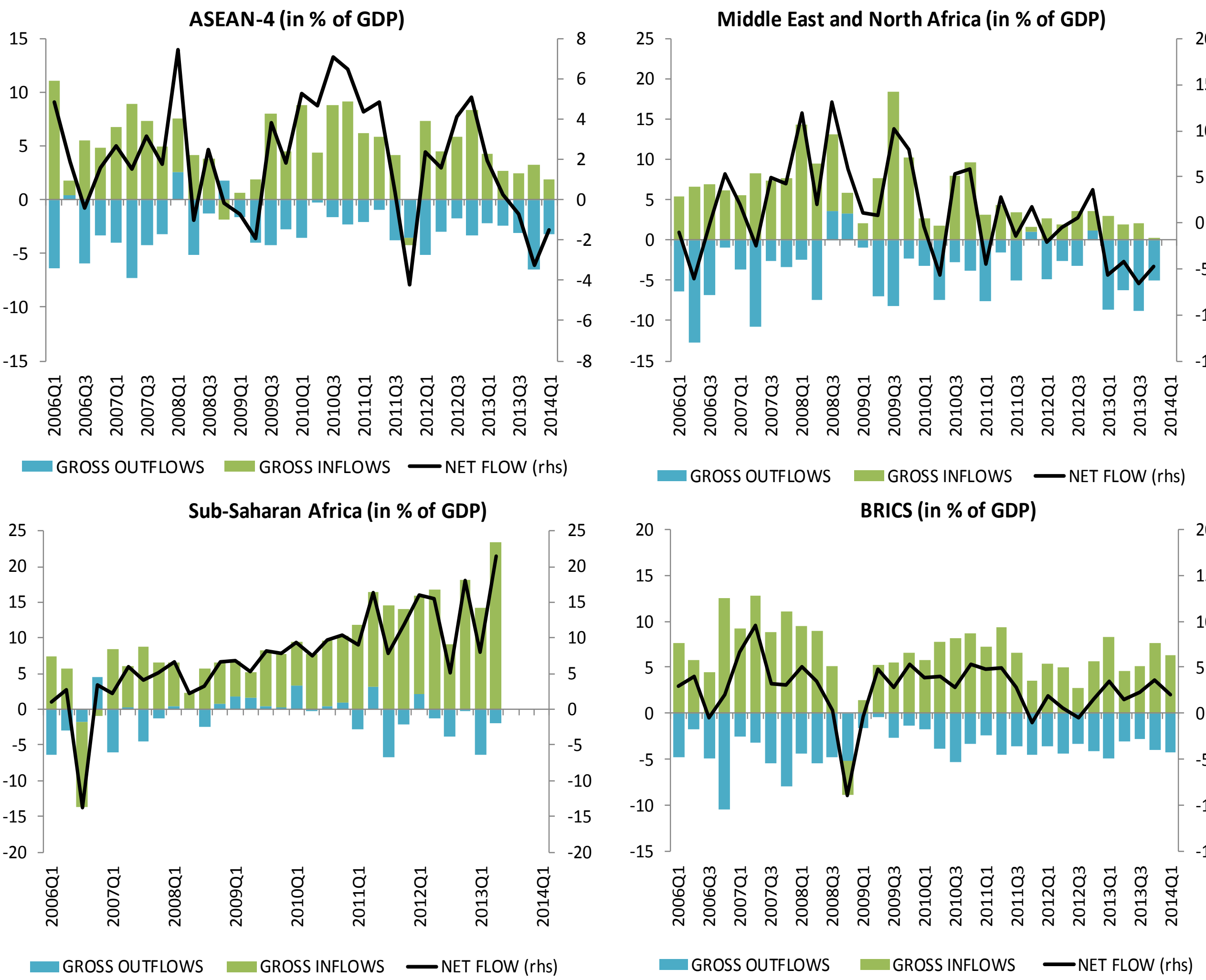

CEE (in % of GDP)
GROSS OUTFLOWS
GROSS INFLOWS
NET FLOW (rhs)


Other EU 3 (in % of GDP)
GROSS OUTFLOWS
GROSS INFLOWS
NET FLOW (rhs)


Non EU advanced (in % of GDP)
GROSS OUTFLOWS
GROSS INFLOWS
NET FLOW (rhs)


CIS 9 EXCL. RUSSIA (in % of GDP)
GROSS OUTFLOWS
GROSS INFLOWS
NET FLOW (rhs)


Latin America (in % of GDP)
GROSS OUTFLOWS
GROSS INFLOWS
NET FLOW (rhs)



Source: IMF IFS (quarterly capital flows), expect for China: Chinese State Administration of Foreign Exchange; WEO (annual GDP). Note: The country groups are as follows: Euro area = EA 17; other EU 3 = United Kingdom, Sweden, Denmark; CEE8 = Bulgaria, Czech Republic, Croatia, Latvia, Lithuania, Hungary, Poland and Romania; non-EU advanced = Canada, Japan, United States, Australia, Hong Kong, Iceland, Israel, Korea, New Zealand, Norway, Switzerland; BRICS = Brazil, Russia, India, China, South Africa; CIS 8 (excl. Russia) = Armenia, Azerbaijan, Belarus, Georgia, Kazakhstan, Kyrgyz Republic, Moldova, Tajikistan, Ukraine; Latin America = Argentina, Bolivia, Chile, Costa Rica, Ecuador, El Salvador, Guatemala, Panama, Venezuela, Mexico, Peru, Uruguay, Middle East and North Africa = Jordan, Lebanon, Morocco, Saudi Arabia, Yemen; Sub-Saharan Africa = Cabo Verde, Ethiopia, Lesotho, Mozambique, Seychelles (note that data for Sub-Saharan Africa ends in 2013Q2 due to data limitations); ASEAN-4 = Indonesia, Philippines, Thailand, Vietnam; Gross inflows/outflows is calculated as the sum of the liabilities/assets of the following instruments: direct investment, Portfolio investment and Other investment. Net flow is the net financial account.

Figure 4 shows the components of capital flows according to different instruments, namely direct investment[3] (foreign direct investment), portfolio investment[4] (equity and debt securities, the latter of which can be broken down further into bonds and money market instruments), other investment[5] and, whenever available, financial derivatives.

Throughout the run-up to the financial crisis, portfolio investment played a major role in the euro area, the other EU 3, the non-EU advanced economies and the ASEAN-4, whereas the CIS 8 (EXCL. RUSSIA), Latin America, Middle East and North Africa, Sub-Saharan Africa benefited mostly from net direct investment flows. The euro area in fact made direct investments abroad, in net terms. Interesting to note is the relative importance of other investment (which is largely composed of bank loans) on top of direct investment flows in CEE8 and in the BRICS.

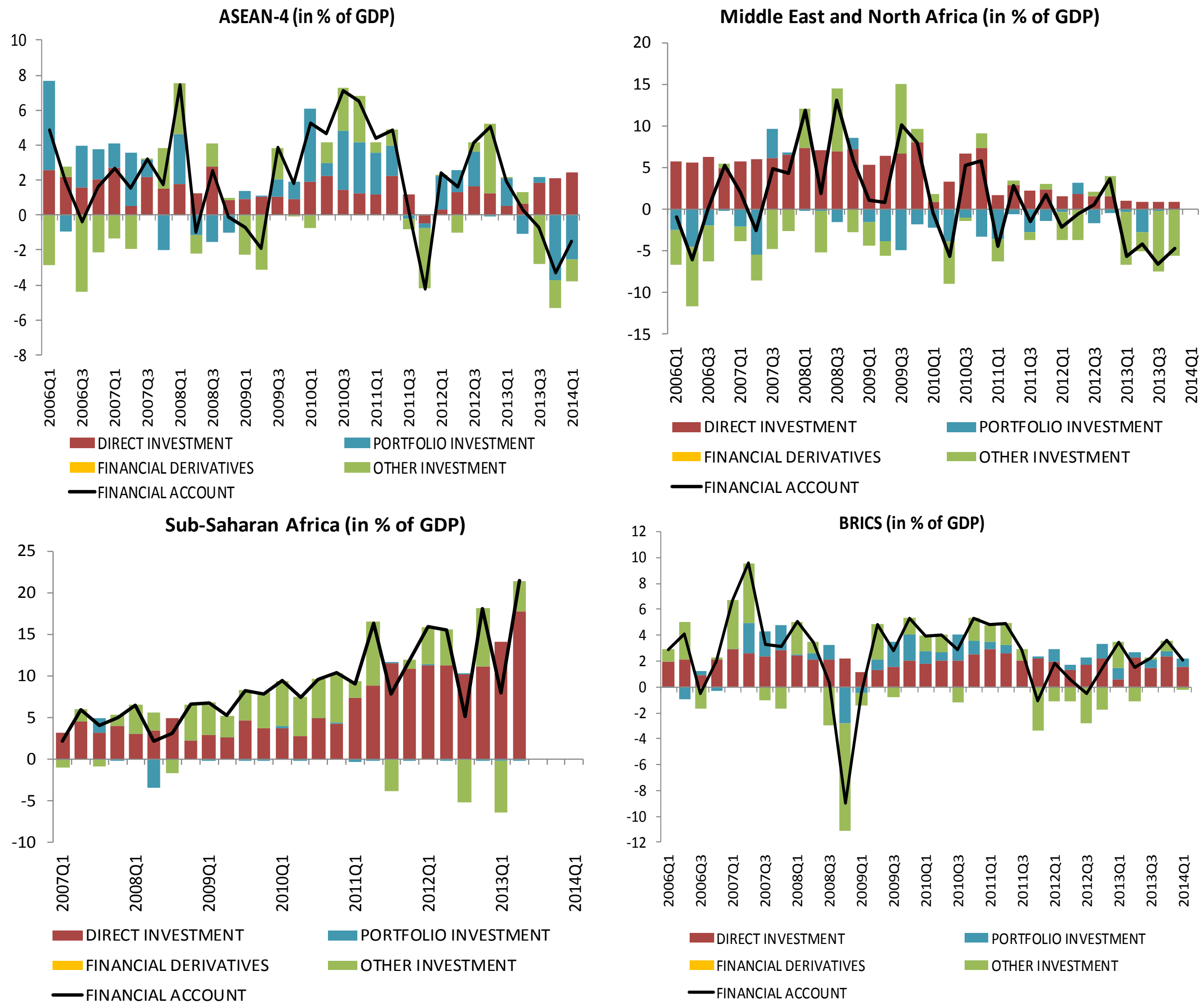
With the start of the financial crisis in 2008, these flows declined substantially in the CEE8 region, and contracted even below zero during the recovery from end 2011 to end 2012. This, combined with a decrease in direct investment inflows, contributed to a net financial account deficit in 2013. The euro area experienced volatile portfolio investment flows and mostly negative other investment flows over the past three years, both of which contributed to a deteriorating financial account deficit. Especially in 2013, large other investment outflows could be observed, suggesting a surge in bank loan activity abroad. The non-EU advanced economies registered a strong recovery starting in early 2010, on the back of stable portfolio investment and other investment inflows. In 2013, direct investment abroad picked up, contributing to a slightly less favourable financial account surplus, which however recovered fully in the last quarter of 2013. In Latin America and the ASEAN-4, the recovery in capital flows was mostly driven by positive net portfolio debt flows as well as positive foreign investment inflows. However, while Latin America experienced stable inflows throughout 2013, the financial account balance dropped below zero in the ASEAN-4, as portfolio and other investment flows reversed. The BRICS experienced a similar drop in net capital flows throughout 2012, mostly on the back of other investment outflows. In 2013, these flows turned positive again, contributing to a stronger positive financial account.

In the Middle East and North Africa FDI inflows have receded significantly since 2010, stabilizing at generally lower but still positive levels, while portfolio and other investment remained negative and volatile. In 2013, the financial account turned negative on the back of substantial other investment outflows in all quarters. By

[3] **"Direct Investment"** records financial flows between resident and non-resident firms that are under a direct investment relationship. A direct investment relationship is established when a resident firm holds at least 10% in the share capital of a non-resident firm, or vice versa.
[4] "**Portfolio Investment"** records financial flows related to transactions between residents and non-residents that affect their assets and liabilities vis-à-vis each other related to securities and derivatives. Securities are distinguished between equities and debt securities, namely bonds and money market instruments. Residents' net investment in securities issued by non-residents are recorded under 'Assets' (where a negative sign indicates an increase and a positive one a decrease), whereas non-residents' net investment in securities issued by residents are recorded under 'Liabilities' (where a negative sign indicates a decrease and a positive one an increase).
[5] **"Other Investment"** records financial flows stemming from transactions between residents and non-residents related mainly to loans and deposits. Financial flows related to loans granted by residents to non-residents, as well as residents' deposits with non-resident monetary financial institutions are recorded under "Assets". Financial flows related to loans granted by non-residents to residents, as well as non-residents' deposits with resident monetary financial institutions are recorded under "Liabilities".

contrast, Sub-Saharan Africa benefited from increasing FDI, and to a lesser extent other investment flows over the past 2 years (2011Q1-2012Q4).

Figure 4 Composition of net capital flows in the world (percent of GDP)



Source: IMF IFS (quarterly capital flows) and WEO (annual GDP); Note: see the definition of the country groups in the note to Figure 3.

The net international investment position (NIIP)[6] reflects the accumulated stock of capital flows and valuation changes of the earlier stock whenever the price of different assets and liabilities change and, is relevant for monitoring the external wealth of an economy. On the other hand, gross positions matter in terms of exposure and risk (Brunnermeier et al., 2012). It is important to note that 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.

As shown in of Switzerland as a safe haven.

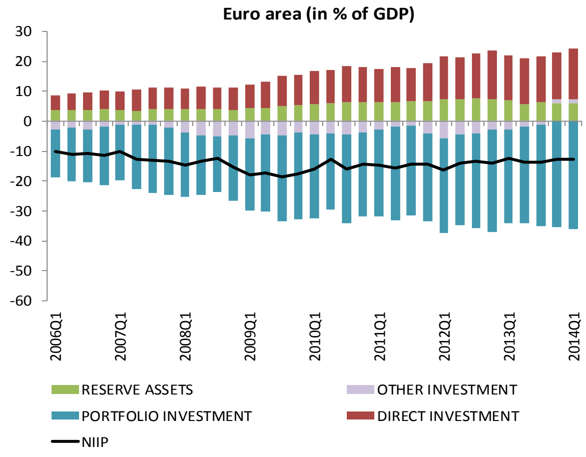
Figure 5, the net position of the euro area has been negative and stable over the past years (around -13 percent of GDP in the fourth quarter of 2013). Similarly, CEE8 (-70percent of GDP) and non-EU advanced economies (-21 percent of GDP) also exhibit

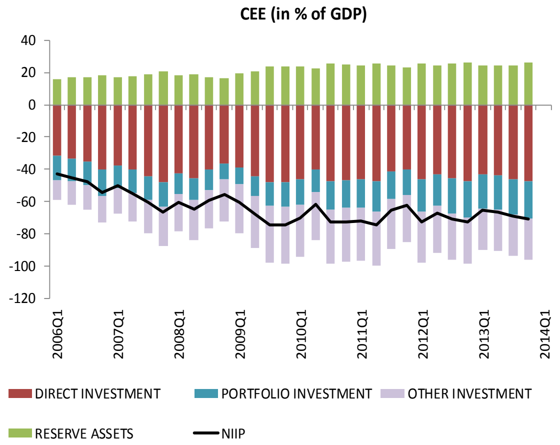
[6] The international investment position is a measure of the assets that a country owns abroad and the assets that foreigners own in the country in question. In the graphs, the negative bars indicate an increase in the claim of non-residents on a country in question, while the positive bars indicate an increase in the claims of the country in question on non-residents.

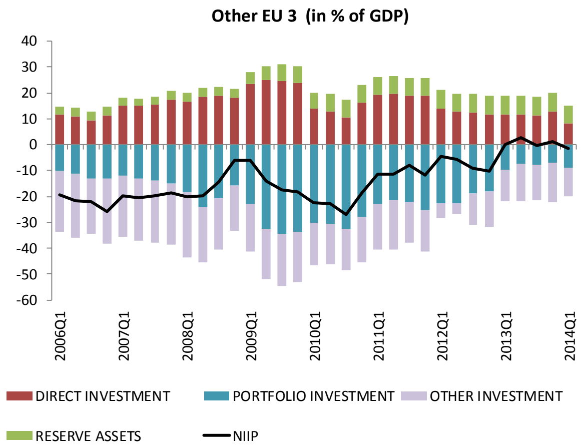
negative net positions. The NIIP position of the Other EU 3 turned positive only during 2013, staying at 1.5 percent of GPD in 2013 Q4. By contrast, both Japan and Switzerland exhibit strong positive net positions of 60 percent of GDP and 150 percent of GDP, respectively, and can be seen as outliers (therefore, we separate Japan and Switzerland out of the non-EU advanced county group). The CIS 9 (EXCL. RUSSIA), as well as Brazil and India (data not available for Russia, China and South Africa and Latin America), also have negative NIIP positions.

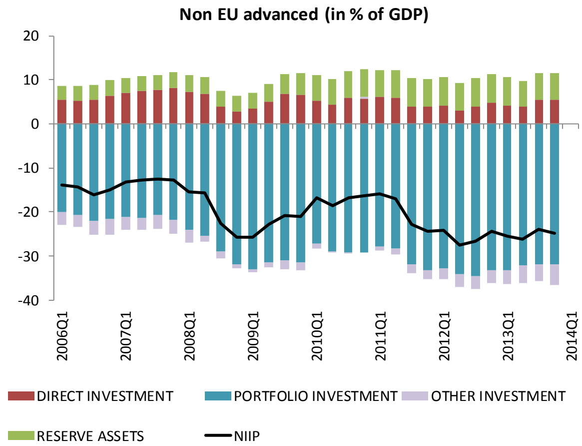
The components of the NIIP suggest major differences across the country groups. In the euro area, the negative net position is largely due to accumulated negative portfolio investment stocks. However, according to the estimates of Zucman (2013), around 8 percent of the global financial wealth of households is held in tax havens, three-quarters of which goes unrecorded. Accounting for unrecorded assets the Eurozone turns into a net creditor and not a net debtor to the rest of the world as indicated by official statistics. Foreign direct investment (FDI) abroad exceeds FDI by foreign investors in the euro area, resulting in a positive net claim on the rest of the world. Net FDI claims exhibit an increasing trend since the mid-2000s, suggesting that euro area firms use FDI to penetrate new markets or to achieve efficiency gains through splitting the value chain of the production (European Commission, 2012). Non-EU advanced economies shows a similar pattern in terms of components. In the CEE8, other investment liabilities play a significantly greater role than in euro area countries and non-EU advanced economies, suggesting that this region relied significantly on borrowing from abroad. The components of the CIS 9 (EXCL. RUSSIA) follow a similar pattern, with the difference that the region has a net claim in portfolio investment, whereas CEE8 accumulated portfolio investment liabilities in the period taken into consideration. The NIIP of Latin America is negative at present, having accumulated a significant negative direct investment stock. Accumulated reserve assets, and to a lesser extent other investment, result in a positive net claim over the rest of the world throughout the period taken into consideration. By contrast, the stock of portfolio investment turned negative in 2012 and remained a net liability thereafter, suggesting a rising attractiveness of the region for portfolio flows. Interestingly, in Brazil and India, accumulated negative portfolio investment stocks are slightly more important than direct investment stocks. Turning to Japan and Switzerland, their positive NIIPs are mainly due to accumulated positive direct and portfolio investment as well as reserve assets. Most notably, Switzerland accumulated sizeable positive reserve asset stocks, stemming from intensified interventions in the foreign exchange rate market by the Swiss National Bank since the decision to peg the Swiss Franc to the Euro in September 2011. Moreover, since the beginning of 2009, other investment by foreign investors in Switzerland exceeds other investment abroad, suggesting an increasing importance of Switzerland as a safe haven.

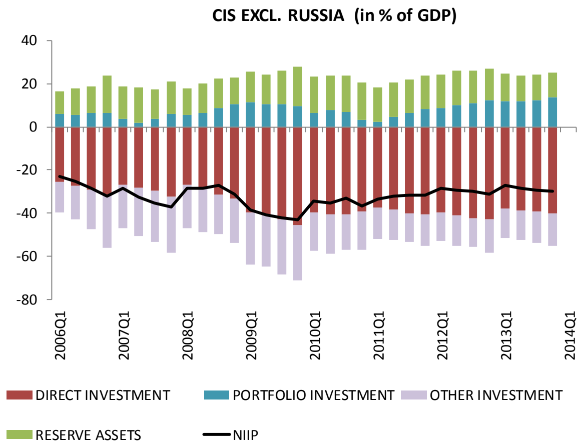
Figure 5 Net international investment positions (in percent of GDP)

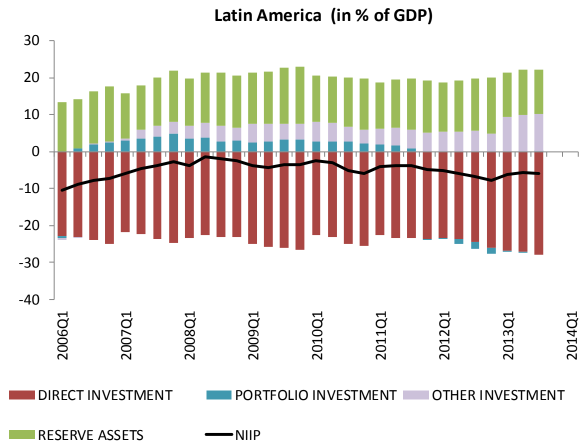

Euro area (in % of GDP)
30
20
10
0
-10
-20
-30
-40
-50
-60
2006Q1
2007Q1
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
RESERVE ASSETS
OTHER INVESTMENT
PORTFOLIO INVESTMENT
DIRECT INVESTMENT
NIIP

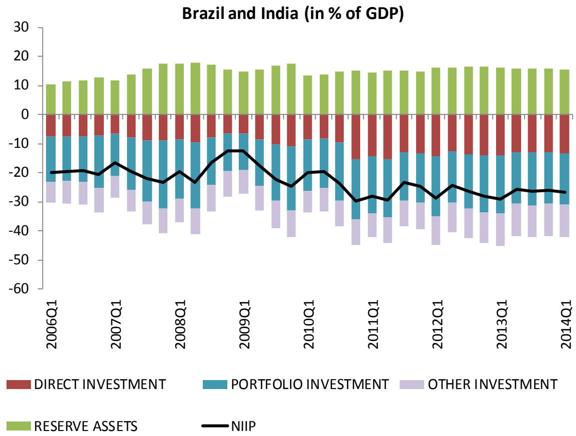

CEE (in % of GDP)
40
20
0
-20
-40
-60
-80
-100
-120
2006Q1
2007Q1
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
DIRECT INVESTMENT
PORTFOLIO INVESTMENT
OTHER INVESTMENT
RESERVE ASSETS
NIIP

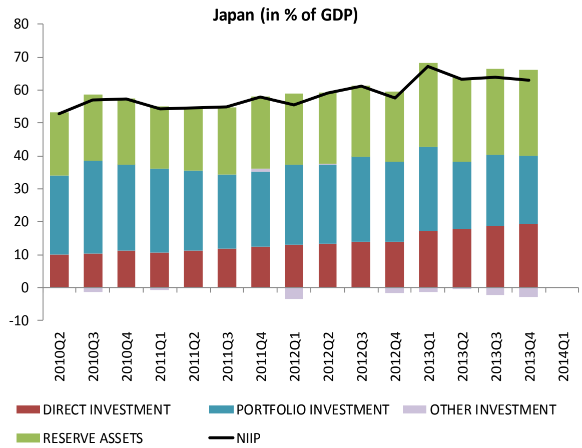

Other EU 3 (in % of GDP)
40
30
20
10
0
-10
-20
-30
-40
-50
-60
2006Q1
2007Q1
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
DIRECT INVESTMENT
PORTFOLIO INVESTMENT
OTHER INVESTMENT
RESERVE ASSETS
NIIP

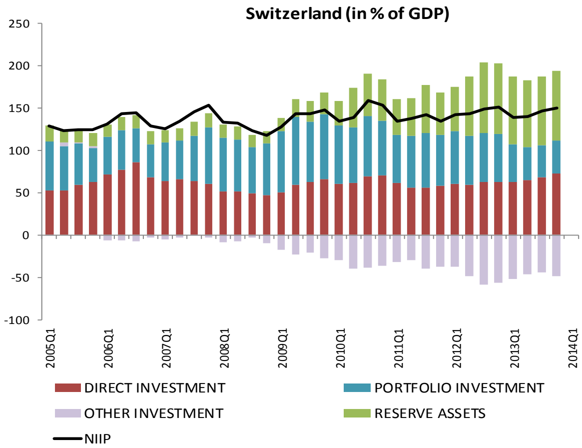

Non EU advanced (in % of GDP)
20
10
0
-10
-20
-30
-40
2006Q1
2007Q1
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
DIRECT INVESTMENT
PORTFOLIO INVESTMENT
OTHER INVESTMENT
RESERVE ASSETS
NIIP


CIS EXCL. RUSSIA (in % of GDP)
40
20
0
-20
-40
-60
-80
2006Q1
2007Q1
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
DIRECT INVESTMENT
PORTFOLIO INVESTMENT
OTHER INVESTMENT
RESERVE ASSETS
NIIP


Latin America (in % of GDP)
30
20
10
0
-10
-20
-30
-40
2006Q1
2007Q1
2008Q1
2009Q1
2010Q1
2011Q1
2012Q1
2013Q1
2014Q1
DIRECT INVESTMENT
PORTFOLIO INVESTMENT
OTHER INVESTMENT
RESERVE ASSETS
NIIP







Source: IMF IFS (quarterly IIP) and WEO (annual GDP). Note: country groups are defined in the note to Figure 3, but due to data limitations, the following changes occur: non-EU advanced: Hong Kong is included only since 2010; CEE8: Bulgaria is included only since 2007; Latin America: without Argentina, Bolivia, Ecuador, Mexico, Uruguay; CIS 8 (EXCL. RUSSIA): without Azerbaijan, Kyrgyz Republic, Tajikistan and Ukraine; No data availability for ASEAN-4, Middle East and North Africa and Sub-Saharan Africa.

3.2 Global trends in the banking sector

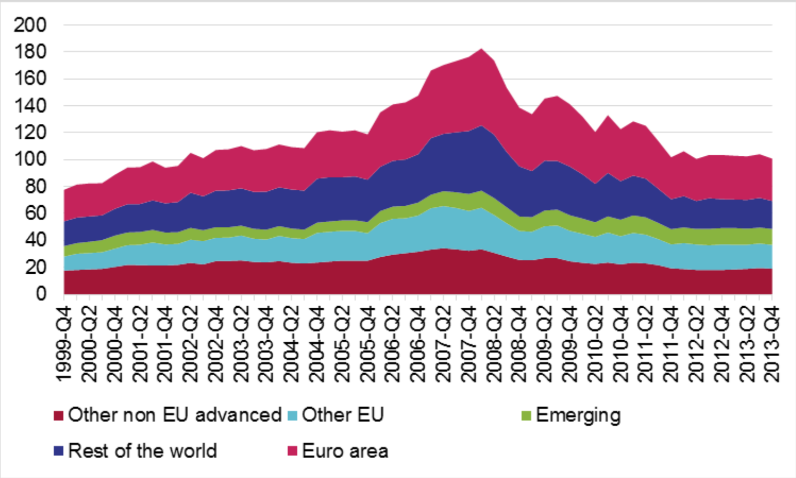
Given the importance of the banking system in Europe, we also look at the capital flows from the perspective of international banking claims as reported by the BIS banking statistics. It allows us to analyse cross-border bank integration (or deleveraging) of banks headquartered in different regions of the world as well as the analysis of the changes in the geographical composition of bank claims.

One disadvantage of using the BIS banking statistics is that most emerging economies and even some advanced economies (including some in the EU) are not reporting countries. Thus, we can only see a partial view of the global trends from the perspective of the reporting countries, although the most important financial and banking centres are included and nearly all countries in the world are included as counterparties. For example, foreign claims of banks established in new EU Members States (non-reporting) on the rest of the world are not available, but foreign claims of a reporting country over a new EU Member State or over almost every country in the world are available.

Figure 6 shows the consolidated foreign claims of BIS reporting countries over the rest of the world. According to the BIS definition, the consolidated statistics provide information about banks' risk exposures, in particular country risk. They capture the worldwide consolidated claims of banks headquartered in the BIS reporting countries, including claims of their own foreign affiliates, but excluding positions between related offices. They build on measures used by banks in their internal risk management systems[7].

Figure 6 Gross foreign claims of reporting banks on the rest of the world

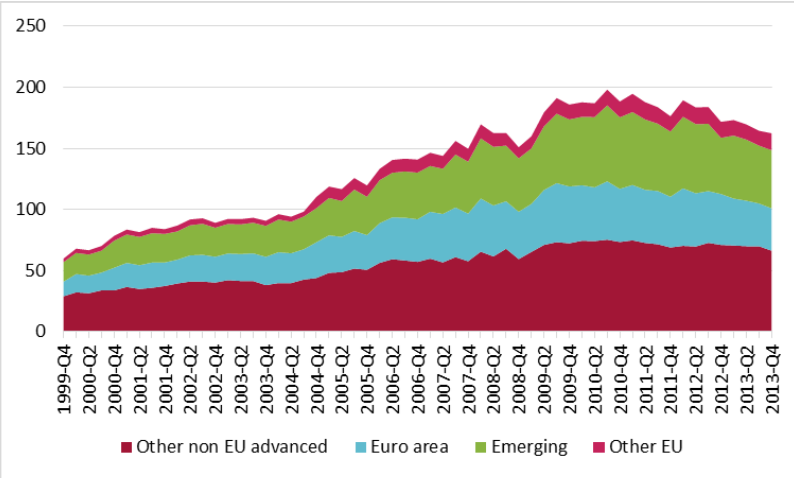
A: Claims of banks headquartered in ten euro-area countries (percent of euro area GDP)



Note: claims are shown from the reporting country perspective. Due to data limitations, the euro-area group is made of ten countries: Austria, Belgium, Finland, France, Germany, Ireland, Italy, the Netherlands, Portugal and Spain. Not enough data was available for Greece despite being a BIS reporting country. In the case of France, data for the fourth quarter 2013 was not yet available so it is assumed to remain unchanged from the third quarter. The counterparties are grouped as "Other non EU advanced" (15 countries classified as advanced by the IMF WEO), "Other EU" (11 countries), "Emerging" (172 countries classified as emerging markets or developing economies by the IMF WEO) "Rest of the world" (residual amount calculated to sum up to the foreign claims on "all countries" reported by the BIS) can be interpreted as the amount of missing or non-classified data. As a counterparty the euro area is composed of the euro area 18, and thus it represents the intra-euro area claims, while everything bellow the "euro area" area in the graphs is netted out from intra-group claims.

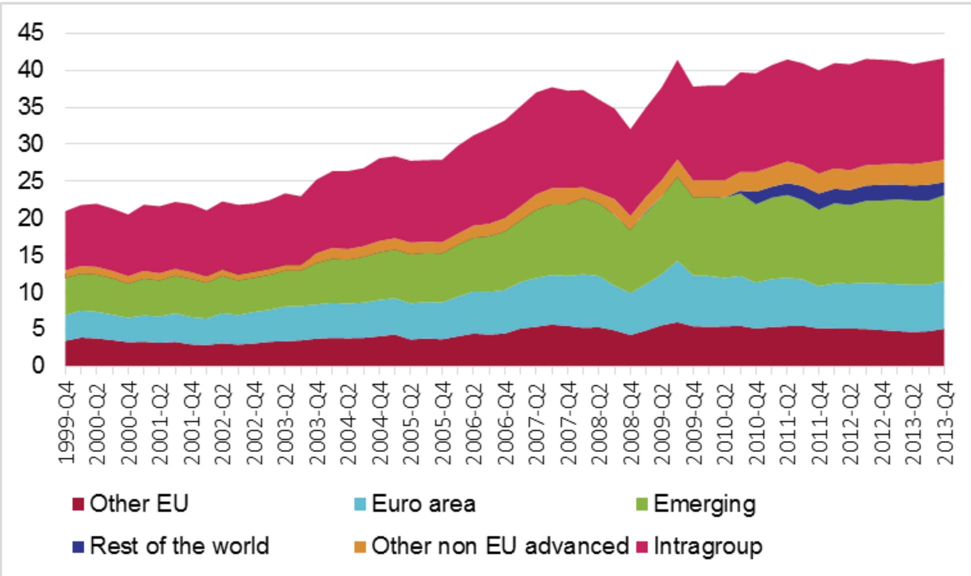
B: Claims of banks headquartered in Denmark, Sweden and the United Kingdom, (percent of their combined GDP)

[7] For additional information check http://www.bis.org/statistics/about_banking_stats.htm



Note: among the non-euro area EU countries, only Denmark, the United Kingdom and Sweden are BIS reporting countries. The euro area, from the perspective of counterparty, is made of the first seventeen euro countries, "other EU" includes and is mostly composed of intra (Denmark, United Kingdom and Sweden) claims as claims over the resting 8 non euro area EU countries are not very significant in this particular case.

C: Claims of banks headquartered in six non-EU advanced countries (percent of their combined GDP)



Note: The six countries are: Australia, Canada, Japan, South Korea, Switzerland and the United states. The euro area, from the perspective of counterparty, is made of the first seventeen euro countries, and "other EU" is the aggregate of eleven countries (the ten countries currently outside the euro area plus Latvia). The other "non EU advanced" economies corresponds to the other 9 non EU advanced economies as classified by the IMF WEO, the "intragroup" subset corresponds to the six non EU advanced reporting countries and "Rest of the world" (residual amount calculated to sum up to the foreign claims on "all countries" reported by the BIS)can be once again interpreted as the amount of missing or non-classified data.
Source: BIS consolidated banking statistics on immediate borrowing basis, OECD (exchange rates and quarterly GDP) and Bruegel calculations

Among our three reporting country samples euro-area banks reduced their foreign claims most dramatically. As regards the geographical composition of claims of euro-area banks, claims on emerging countries have not declined, but claims on all other counterparty groups (within euro-area, non-euro-area EU, and non-EU advanced) have declined quite substantially. In the group of Denmark, Sweden and United Kingdom a gradual deleveraging process started in 2010, mostly by reducing the claims on the euro area. On the contrary, in the six non-EU advanced economies the abrupt decrease in the value of their foreign claims observed in the last quarter of 2008 was quickly reversed, as it was partly due to exchange rate volatility, for which the consolidated data (unlike the locational statistics) are not adjusted.

3.3 Ukraine and Russia

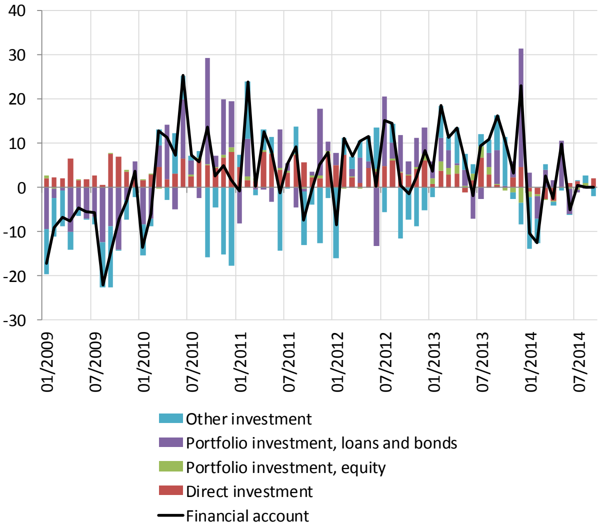
Given the recent geopolitical events that have unfolded between Ukraine and Russia, this section tries to track the impact of the crisis on the external financial situation of the two countries and their bilateral relationships in terms of FDI, banking and portfolio investments[8].

To start with, Panel A of Figure 7 reports the financial account and its components for Ukraine, capturing the latest developments of capital flows up to September 2014, the latest month available. After facing major difficulties in financing the balance of payments on the back of the global financial crisis and applying for financial assistance from the IMF in late 2008, in 2009, Ukraine was still experiencing a drought of capital flows of up to -22 percent of GDP. Large negative net flows of portfolio debt and bank loans (proxied by other investment) played a major role, as foreign banks engaged in a process of cross-border deleveraging. Only by the first quarter of 2010 capital started pouring again cautiously into the country. Both portfolio investment in loans and bonds, as well as bank loans were volatile throughout the recovery, while FDI inflows remained stable. Portfolio equity flows started to play a minor role in 2012 and 2013. By the start of 2014, when the geopolitical tensions between Russia and Ukraine escalated, Ukraine experienced capital outflows of approximately -10 percent of GDP, reflecting negative net flows of bank loans and portfolio investment in loans and bonds. Also, FDI flows turned negative throughout the first four months of 2014. Nevertheless, the magnitude of capital outflows remained well below the outflows observed in 2009. In March 2014, the outflows receded and the net financial account turned positive again, as portfolio debt flows recovered somewhat. FDI flows recovered from June to September 2014, while portfolio investment in debt and loans remained volatile. In September 2014 the financial account stood at 0.11 percent of GDP.

[8] The data has been collected from the Central Bank of the Russian Federation and the National Bank of Ukraine, from the IMF CPIS (Coordinated Portfolio Investment Survey, http://cpis.imf.org/) and from BIS consolidated banking statistics.

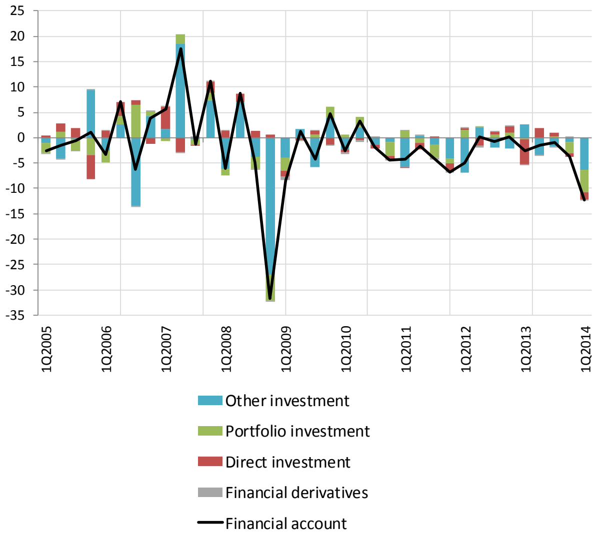
Figure 7 Financial account and components (in percent of GDP) of both countries

Panel A: Ukraine



Source: National Bank of Ukraine (for BoP data) and IMF WEO October 2014 (for GDP data). Note: July to September 2014 are preliminary data; monthly capital flows data were divided by 1/12th of the annual GDP; monthly data: 01/2009-09/2014

Panel B: Russia



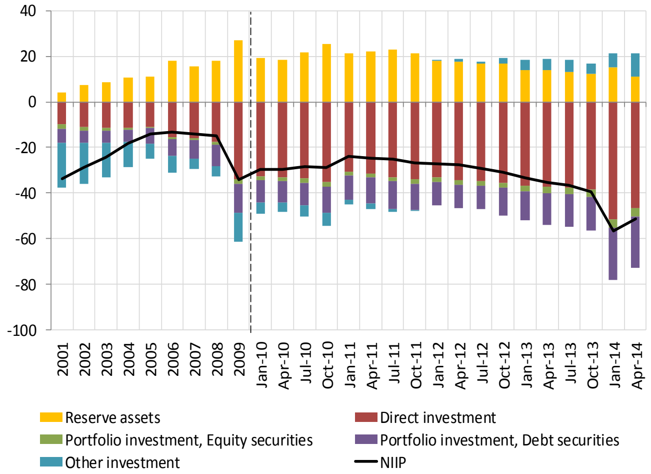
Source: Central Bank of the Russian Federation (for BoP data) and IMF WEO (for GDP data). Note: quarterly capital flows data were divided by 1/4th of the annual GDP. The Russian balance of payments statistics include the accumulation of reserve assets in the financial account, while IMF and EU sources treat reserves separately. In order to report consistent concepts throughout our paper, we do not include the changes in reserves in the financial account; quarterly data: 2005Q1-2014Q1

Turning to the Russian balance of payments, Panel B of Figure 7 shows that after a period of volatile capital inflows in the pre-crisis period (2006Q1- 2008Q2), Russia experienced large capital outflows of about 30percent of GDP with the start of the financial crisis in 2008Q3, on the back of receding portfolio and other investment flows. Over 2009-10, capital flows recovered somewhat as other investment flows stabilised. However, FDI inflows remained weak or even reversed over the same period taken into consideration. By the end of 2010, the financial account turned negative again, reflecting mainly outflows of other investment, and to a lesser extent of portfolio and FDI. With the start of the Ukraine crisis at the end of 2013 and beginning of 2014, capital outflows intensified again. Specifically, in the first quarter of 2014 the Russian financial account deficit increased to -9.2percent of GDP, on the back of outflows in bank loans and in portfolio investments amounting to -4.7percent and -3.3percent of GDP, respectively.

With regards to the accumulated capital flows and valuation changes, Panel A of Figure 8 shows the net international investment position for Ukraine. It is interesting to note the depletion of foreign exchange reserves, which fell from about 20 percent of GDP in late 2011 to about 10 percent of GPD by April 2014. FDI continues to dominate the net external liabilities of Ukraine, while the balance of portfolio debt securities is also significantly negative. Interestingly, the net stock of other investments has turned positive in mid-2012, increasing to about 10percent of GDP by April 2014.

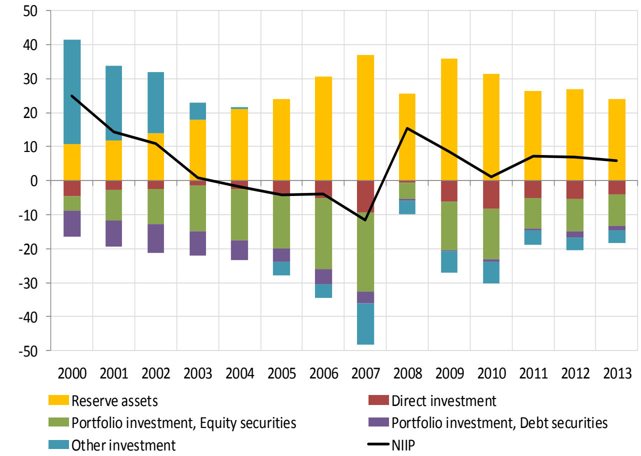
Figure 8 Net international investment position and its components (in percent of respective country GDP)

Panel A: Ukraine



Source: National Bank of Ukraine (for IIP data) and IMF WEO (for GDP data). annual data: 2001-2009, quarterly data: Jan 2010 – Apr 2014.

Panel B: Russia



Source: Central Bank of the Russian Federation (for IIP data) and IMF WEO (for GDP data).

By contrast, the Russian net international investment position has become positive since 2008, when the global financial crisis intensified, mostly due to the sudden collapse of portfolio equity liabilities (see Panel B of Figure 8). Portfolio investment in equity has played a major role before and after the crisis, being by far the most important liability, while portfolio investment in debt never returned to pre-crisis-levels. Although the stock of reserve assets was gradually depleted over the later years (2009-2013), by end 2013 reserve assets still significantly outweighed the total stock of liabilities, contributing to a positive NIIP of 6 percent of GDP.

BIS consolidated banking data, as well as FDI and Portfolio investment data allows the bilateral relationships of Russia and the Ukraine with their respective partners to be revealed and examined.

First, we scrutinize in more detail the exposure of the European banking sector to Ukraine and Russia (which amounts to 8.2 bn USD and 134.7 bn USD in Q2 2014, respectively[9]). Within the EU, Table 1 shows that Austrian banks have been the most exposed to Ukraine over the period taken into consideration, with claims averaging USD 9.2 bn from 2008Q3 to 2013Q1. While French banks still played a major role in

[9] Note that reporting EU aggregate for Russia includes: BE, DE, FR, IT, ND, PT, GR, SW, UK up to 2014-Q2 and AT up to 2012-Q4; for Ukraine it includes: BE, DE, IT, PT, GR, UK up to 2014-Q2, FR up to 2011-Q4 and AT up to 2013-Q1, no data is available for the Netherlands.

the run-up to the crisis, they reduced their exposure significantly afterwards, from 9.5 bn in 2008Q3 to 3.8 bn in 2011Q4 (latest data available for France). By contrast, Italian bank's exposure to Ukraine grew constantly over the last years, with a peak of 6.6 bn in 4Q 2010, before declining to 4.9 bn in 2Q 2014. Over the last year and the first half of 2014, all countries for which data is available have reduced their exposure to Ukraine, with the exceptions of Belgium and the UK, which, however, hold positions of minor relevance (0.1 bn USD and 0.9 bn USD, respectively). Outside the EU, the US holds claims vis-a-vis Ukraine amounting to USD 1.1 bn USD in 2014Q2, which have remained more or less constant over 2010-2014. By contrast, Switzerland reports a major reduction of claims, from 7.3 bn in 2007 to 1 bn in 2013Q1 (latest data available for Switzerland).

Table 1 Exposure to Ukraine of individual EU countries, in USD billions

	2005	2006	2007	2008	2009	2010	2011	2012	2013-Q1	2013-Q4	2014-Q1	2014-Q2
Austria	5.03	5.88	11.43	10.70	9.03	8.84	8.94	7.53	7.45	n.a.	n.a.	n.a.
Belgium	0.03	0.16	0.48	0.40	0.06	0.03	0.07	0.08	0.08	0.11	0.11	0.11
Germany	1.38	2.52	3.82	4.73	1.94	1.69	1.24	1.53	1.51	1.04	1.07	0.94
France	0.34	4.62	7.91	8.24	7.04	6.05	3.76	n.a.	n.a.	n.a.	n.a.	n.a.
Italy	0.11	0.15	2.55	4.85	2.37	6.46	6.40	6.06	6.24	6.28	5.44	4.92
Portugal	0.04	0.10	0.17	0.16	0.14	0.08	0.06	0.04	0.04	0.04	0.04	0.04
Greece	0.11	0.19	0.68	0.77	2.03	1.77	1.93	1.79	1.87	1.43	1.43	1.20
Sweden	0.08	0.25	3.96	5.48	3.12	2.77	1.84	0.87	0.75	0.13	0.08	0.07
UK	0.18	0.19	0.58	0.59	0.40	0.56	0.35	0.41	0.51	0.33	0.95	0.90
Switzerland	0.75	3.27	7.31	5.07	2.73	2.30	1.39	1.49	0.99	n.a.	n.a.	n.a.
US	0.48	0.56	1.21	0.75	0.79	1.34	1.18	1.22	1.30	0.98	1.21	1.13
Japan	0.18	0.37	0.83	0.67	0.43	0.59	0.57	0.36	0.42	0.14	0.09	0.11
Reporting EU (changing composition)	7.30	14.06	31.61	35.98	26.13	22.20	24.61	18.57	18.33	9.36	9.12	8.17

Source: BIS consolidated banking statistics, ultimate risk basis. Note: years refer to fourth quarter data of the same year; interpolation has been used to account for missing data points for France; data for Austria is available only up to 2013Q2, for Switzerland up to 2013Q3, for France up to 2012Q1. Reporting EU (changing composition) refers to the countries for which data is available (see the footnote on page 33). For example, the large fall from 2013Q1 to 2013Q4 is mostly the results that data is not available for Austria after 2013Q1.

For Russia, individual European country claims are less concentrated. Table 2 reveals that French and German and to some extent Austrian, Italian and Dutch banks have been the most prominent, since at least 2007Q4. In 2014Q1, France, with claims amounting to 47 bn USD, is certainly the most exposed, followed by Italy at 25.8 bn USD. The United Kingdom, the Netherlands and Germany exhibit exposure of around 15 to 17 bn USD in 2014Q1. The US reduced its claims of over USD 43.5 bn in 2013Q1 to USD 26.1 bn in 2014Q2, while Japan's claims remained constant over the last year and a half, averaging USD 20 bn.

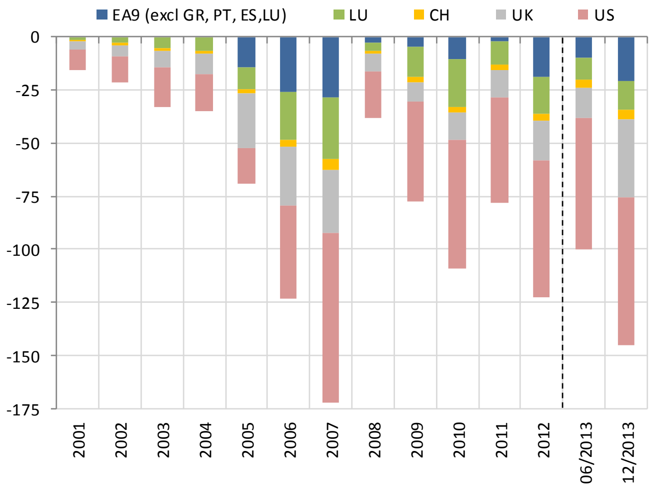
Table 2 Exposure to Russia of individual EU countries, in USD billions

	2005	2006	2007	2008	2009	2010	2011	2012-Q3	2012-Q4	2013-Q4	2014-Q1	2014-Q2
Austria	6.44	12.72	19.59	21.66	13.56	n.a.	n.a.	16.95	n.a.	n.a.	n.a.	n.a.
Belgium	1.12	1.09	8.31	8.18	5.04	4.15	4.04	4.07	3.79	0.75	0.57	0.70
Germany	11.16	16.53	33.25	40.78	27.49	25.30	22.88	26.28	24.88	19.34	17.41	17.68
France	6.12	6.63	27.29	40.05	33.24	37.94	39.43	39.87	41.13	49.20	47.32	47.75
Italy	2.00	2.57	19.70	22.27	18.56	25.21	22.96	22.87	25.71	29.20	25.75	27.67
Netherlands	7.15	11.83	18.83	20.19	13.82	11.64	13.97	13.38	15.01	17.21	16.61	15.70
Portugal	0.22	0.32	0.72	0.73	0.46	0.11	0.10	0.10	0.14	0.19	0.26	0.29
Greece	0.70	1.04	1.18	1.36	1.09	0.57	0.39	0.46	0.38	0.41	0.41	0.36
Sweden	0.82	1.51	6.30	10.49	9.11	8.54	9.19	15.03	14.57	8.52	8.70	9.08
UK	2.55	6.62	11.01	7.79	7.68	12.29	13.68	20.24	17.76	17.10	15.94	14.26
Switzerland	9.49	15.13	19.55	10.40	6.15	7.50	6.75	10.50	10.41	n.a.	n.a.	n.a.
United States	8.09	10.32	16.55	8.03	18.48	21.17	19.25	25.80	33.88	32.36	27.20	26.08
Japan	5.89	6.95	12.09	13.92	11.68	9.88	12.20	13.74	14.01	20.47	19.45	18.40
Reporting EU (changing composition)	38.74	61.54	147.84	176.44	132.29	127.31	127.85	160.25	144.29	143.20	134.27	134.66

Source: BIS consolidated banking statistics, ultimate risk basis. Note: years refer to fourth quarter data of the same year; data for Austria is available only up to 2012Q3 and for Switzerland up to 20133Q. For reporting EU composition, see the footnote on page 33.

Turning to bilateral portfolio investments with respect to Russia vis-à-vis other countries, Figure 9 confirms the overall picture of the negative net portfolio investment position of Russia as shown in Figure 8. The most important negative net positions are held with the US, the UK, the Euro area 9 and Luxembourg - interestingly enough, the net positions with Luxembourg are as big as the ones with the rest of the euro area 9, suggesting an important role of Luxembourg as a money hub for Russia. Over the last year, the negative net positions vis-à-vis the UK increased from -14 bn to -37 bn and from -10 to -21 bn for the euro area, while net positions with other countries remained somewhat stable. This suggests that foreign investors purchased significant amounts of Russian securities. Also, valuation effects might play a role, since the Russian stock exchange increased somewhat from June to December 2013 (see Figure 11).

Figure 9 Net position of portfolio investment of Russia vis-à-vis its main partners (in bn USD)



Source: IMF CPIS; Note: reported portfolio net position for Russia vis-à-vis other countries is calculated by subtracting Table 8 Derived Portfolio Investment Liabilities from Table 1 Reported Portfolio Investment Assets; the data is collected on a semi-annual basis from 2013 onwards.

A similar analysis is not possible for Ukraine, since it is not a reporting country. However, a simple method of mirror positions[10] allows reconstructing the claims of the most important countries on Ukraine as shown in Panel A of Figure 10, while Panel B reports Russian liabilities.

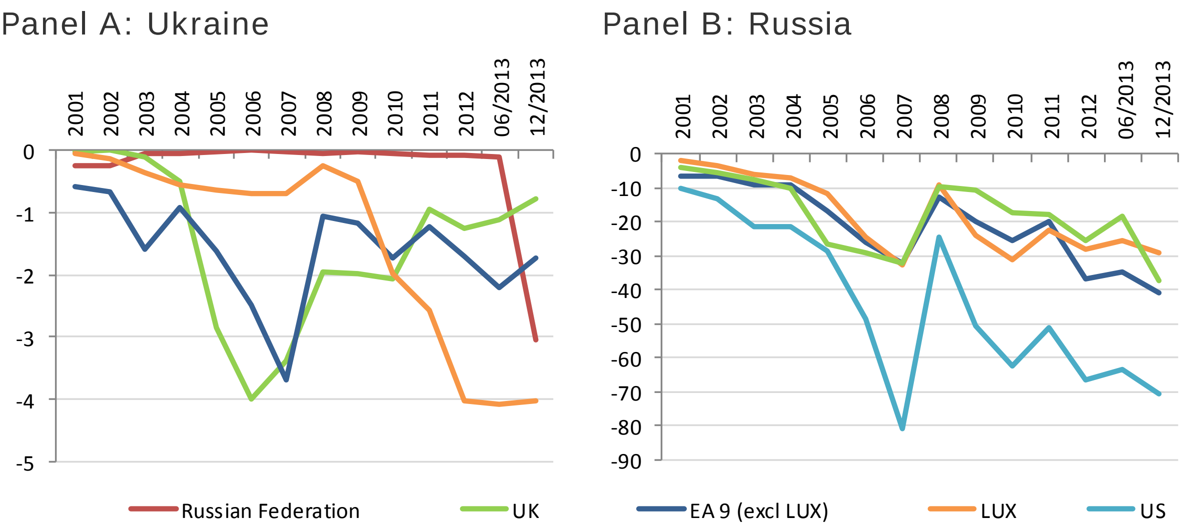
Due to crumbling stock prices (see Figure 11), the value of euro area portfolio investment decreased significantly in Ukraine during the financial crisis in 07/08, remaining at around 1.5 bn in the subsequent periods. A similar pattern can be observed for the UK, while Luxembourg increased its portfolio investments towards Ukraine from 0.5 bn in 2008 to -4 bn in 2013, more than double the position of the whole Euro area in 2013. The spike in Russian liabilities in Ukraine in end-2013 of 3 bn USD reflects the first instalment of the USD 15bn financial assistance package agreed between Russia and Ukraine in December 2013[11], before the geopolitical relations started to escalate.

In Russia, the value of portfolio investment of all countries taken into consideration suffered from falling stock prices during the financial crisis (see Figure 11), a trend which was reversed slightly afterwards. Interestingly, the US has recovered its pre-crisis levels of nearly USD 80 bn, while the Euro area, UK and Luxembourg stand at around USD 30 to 40 bn by the end of 2013.

[10] Portfolio investment **assets** of a reporting country on Ukraine are portfolio investment **liabilities** for Ukraine.

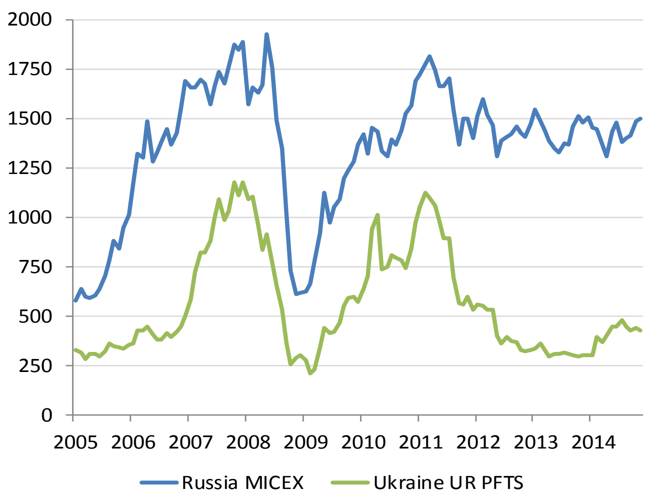
[11] See http://www.ft.com/intl/cms/s/0/75db4726-6727-11e3-8d3e-00144feabdc0.html#axzz3INVL02UU

Figure 10 portfolio investment liabilities, Ukraine and Russia (in bn USD)



Source: IMF CPIS and Bruegel calculations; Note: the data is semi-annual from 2013 onwards. euro area 8 is defined as AT, BE, FI, FR, DE, IT, IR, ND, EE (data is missing for FI in Ukraine, so it is euro area 8 excluding LUX)

Figure 11 Stock exchange indexes, Russia and Ukraine



Source: Datastream, Thomson Reuters.

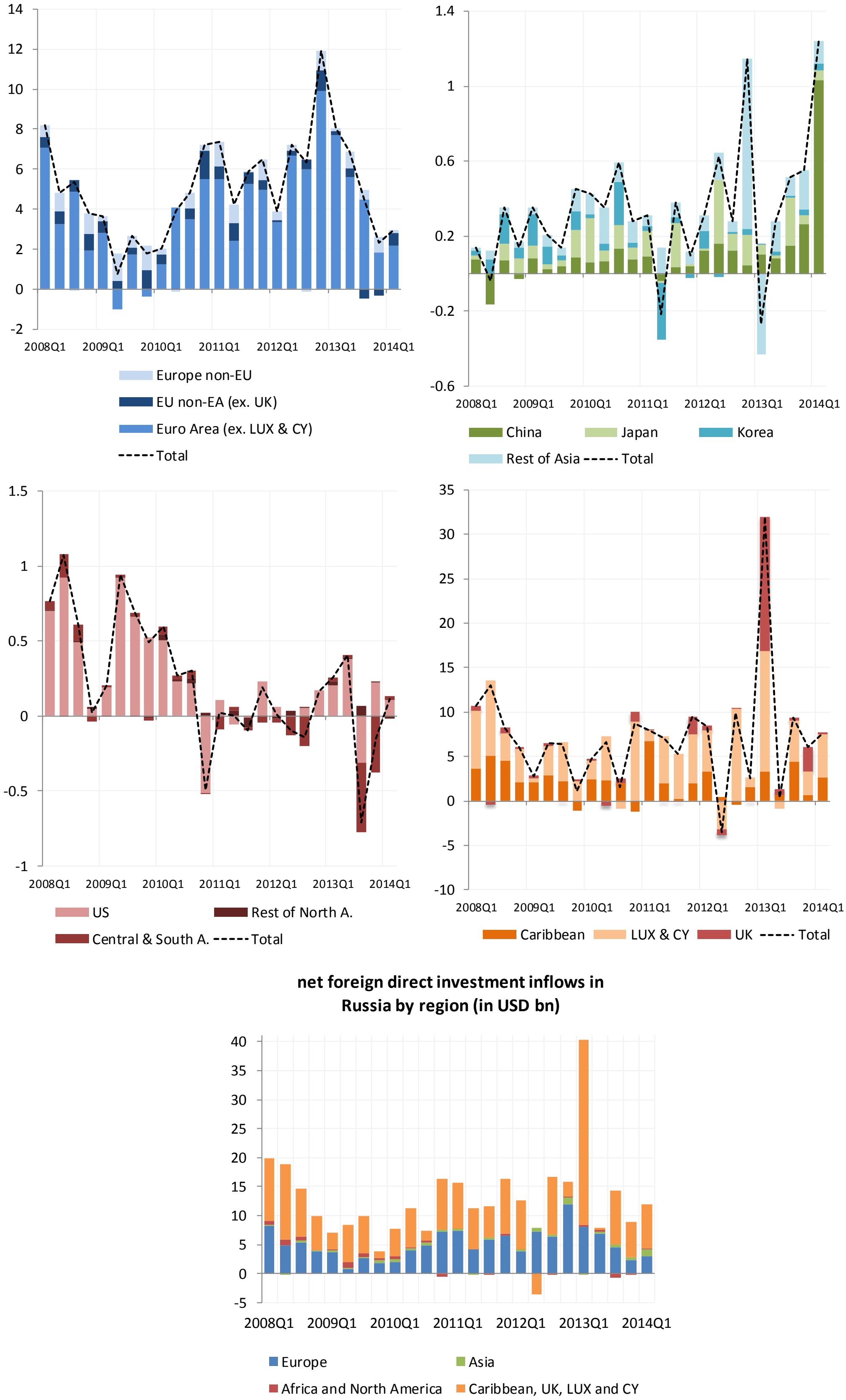
Figure 12 reports quarterly data on foreign direct investments (FDI) in Russia from 2007 till the first quarter of 2014, broken down by investing countries. The upper-left panel shows FDI coming from European countries, both EU and non-EU. The other three panels show FDI coming from Asian, American and Caribbean countries.

Over time (if we disregard possibly dubious flows from the Caribbean) Europe has played a crucial role in providing FDI to Russia, with the largest share of European FDI coming from euro area countries (in particular Ireland and the Netherlands, followed by France and Germany). Cyprus and Luxembourg are clear outliers in Europe and their abnormal flows are more similar to those from the Caribbean countries, with which they are represented[12]. FDI flows from Europe have been shrinking significantly in the last three quarters up to March 2014. This probably occurred in anticipation of escalating tensions, and sped up during the first quarter of 2014, when agreement on the first wave of sanctions was reached. More interestingly, FDI flows from Asia - mostly China - picked up during the same period. During the first three months of 2014, European net FDI inflows to Russia amounted to 2.9 USD billion (2 billion of which coming from the euro area), while Asian net FDI flows to Russia were 1.2 USD billion (1 billion of which coming from China). However, as the last panel of Figure 12 reports, its magnitude is still limited compared to the FDI flows of other regions.

Whether or not the first signs of a geographical reshuffling of capital flows can be seen, with China possibly starting to substitute for the withdrawals by European countries, is a question that might be answered by future data releases. Unfortunately, a similar analysis cannot be done for Ukraine as the available bilateral FDI data from the OECD is outdated and not available from national sources.

[12] See this article for a wider discussion of Cypriot FDI flows to and from Russia http://www.ft.com/intl/cms/s/0/3ac3f02a-6962-11e2-b254-00144feab49a.html?siteedition=intl#axzz3EhEOZW2p

Figure 12 Net foreign direct investment inflows to Russia by region (in bn USD)



Source: National bank of Russia; Note: data is provided already in net terms (i.e. inflows minus outflows). Note: the last panel shows the totals of the first four panels to allow a better comparison.

Overall, the analysis shows that both the Ukraine and Russia have experienced capital outflows in the recent past due to the geopolitical unrest, but to a much smaller extent than during the turmoil of the financial crisis. It is also worthwhile to note that while Russia displays persistent net capital outflows, Ukraine managed to attract some capital inflows in the aftermath of the financial crisis. On a bilateral basis, we found that Austrian banks played a significant role in Ukraine up until recently (data is missing from 2012Q4 onwards); while for Russia individual European country claims are less concentrated, with French, German, and to some extent Austrian, Italian and Dutch banks being most prominent since the beginning of the financial crisis. Turning to portfolio investment in Russia, negative net positions are held with the US, the UK, the Euro area 9 and Luxembourg, suggesting an important rolefor Luxembourg as a hub of international finance. Also, an analysis of investment portfolio liabilities shows the prominent role of the Euro area, Luxembourg and the UK. The US plays and even more important role in Russia. More interestingly, as European FDI flows receded somewhat, flows from Asia - mostly China - picked up over the most recent periods. Their magnitude compared to other regions' FDI flows, however, still remains small.

Looking ahead, Ukraine faces major economic challenges, which should be met with appropriate economic reforms, as outlined by Giucci and Zachmann (2014), the IMF Standby agreement (IMF 2014) and Dabrowski (2014).

4. A closer look at Europe

The previous section assessed capital flows and stock from a global perspective, presenting data on the euro area and non-euro area EU countries. In this section, we take a closer look at the European Union by considering the following six country groups:

- **Euro area (EA) Core**: Austria, Belgium, Finland, Germany, Luxemburg and the Netherlands.
- **Euro area (EA) Periphery**[13]: Cyprus, Greece, Portugal and Spain.
- Euro area (EA) Centre: France and Italy.
- **North**: Denmark and Sweden.
- **Central and Eastern Europe**: Bulgaria, Czech Republic, Croatia, Estonia, Hungary, Latvia, Lithuania, Poland, Romania, Slovenia and the Slovak Republic.
- The **UK** is considered individually in light of its special role for financial intermediation and capital flows.

While countries included in a particular group have major similarities, there is certainly a large degree of heterogeneity within most of the groups. However, increasing the number of groups further would greatly complicate the analysis. We present data for each country in the Annex of this report, enabling the analysis of country-specific data.

The data source for all the charts presented in this section is Eurostat balance of payments and international investment statistics, unless stated otherwise. All aggregate group figures are obtained by dividing the group's totals for each of the

[13] Ireland is excluded from the EA periphery, given its outstanding role as an offshore financial sector.

instrument presented by the group's GDP (as an annualised amount, that is, the sum of the present and previous three quarters).

In some cases, the group has a changing composition, as countries are added starting from the years in which their data becomes available. This is done to ensure the longest possible time series. The changes in compositions do not have major effects on the results, because typically countries are small in proportion to the group to which they are added (e.g. Cyprus).

4.1 The special case of the euro area

Being a currency union, the euro area is a special case for the study of capital flows. The first decade after the currency unification coincided with extraordinary global growth in cross border capital flows. The introduction of the currency union reinforced this global trend in the euro area, thanks to the elimination of the intra-area exchange rate risk (Lane and Milesi-Ferretti 2008).

The surge in capital flows started in the early 2000s and occurred mostly through portfolio debt flows. At the individual level, countries within the Euro area ran persistently large and divergent current account and financial account positions. This was not evident in the aggregate euro area position, which was largely balanced over the whole period. Even when they were first spotted, the persistent imbalances did not raise much concern. One reason for this was the prevailing view that balance of payment crises would be impossible in a currency union. In one of the earliest papers on European monetary union, Ingram (1973) pointed out that *"payments imbalances among member nations can be financed in the short run through the financial markets, without need for interventions by a monetary authority. Intra-community payments become analogous to interregional payments within a single country"*. This view was not challenged in the debate of the 1980s and the 1990s on the economics of Economic and Monetary Union (EMU). It quickly became conventional wisdom. The European Commission's One Market, One Money report (1990) similarly posits that "a major effect of EMU is that balance-of-payments constraints will disappear [..]. Private markets will finance all viable borrowers, and savings and investment balances will no longer be constraints at the national level". Consistently with this view, in the early 1990s the Maastricht negotiators decided to exclude members of the common currency from the benefit of EU balance-of-payments assistance under Article 143 of the Treaty.

However, Merler and Pisani-Ferry (2012) show that during the recent financial crisis, countries in the South of the euro area experienced massive capital outflows that qualify as "sudden stops", according to the methodology traditionally used for emerging countries. Euro-area sudden-stop episodes were clustered in three periods: the global financial crisis, a period following the agreement of the Greek programme and summer 2011. The timeline suggests contagion effects were present. However, private capital outflows were significantly mitigated by the ECB's provision of central bank liquidity, which was taken up particularly by weak banks in distressed countries, as mirrored in the divergence of TARGET2 (Trans-European Automated Real-time Gross settlement Express Transfer) balances. This mitigated the effect of what would have otherwise been a disruptive sudden stop. Darvas (2012a) and Gros and Alcidi (2013) for example compared the "sudden stops" in the euro area with those in newer EU Member States in Central and Eastern Europe, finding that adjustment was much quicker outside EMU than inside. Ex post, large external imbalances left a difficult legacy. In the absence of the exchange rate mechanism – due to the currency unification or the fixed exchange rate in the case of the Baltic countries and Bulgaria – unwinding imbalances is difficult and painful because the adjustment needs to be done through prices, wages, employment and productivity. Moreover, the stocks of external asset and liabilities accumulated in a decade of large current account imbalances are very large, exposing the countries to valuation risks and/or to long deleveraging efforts.

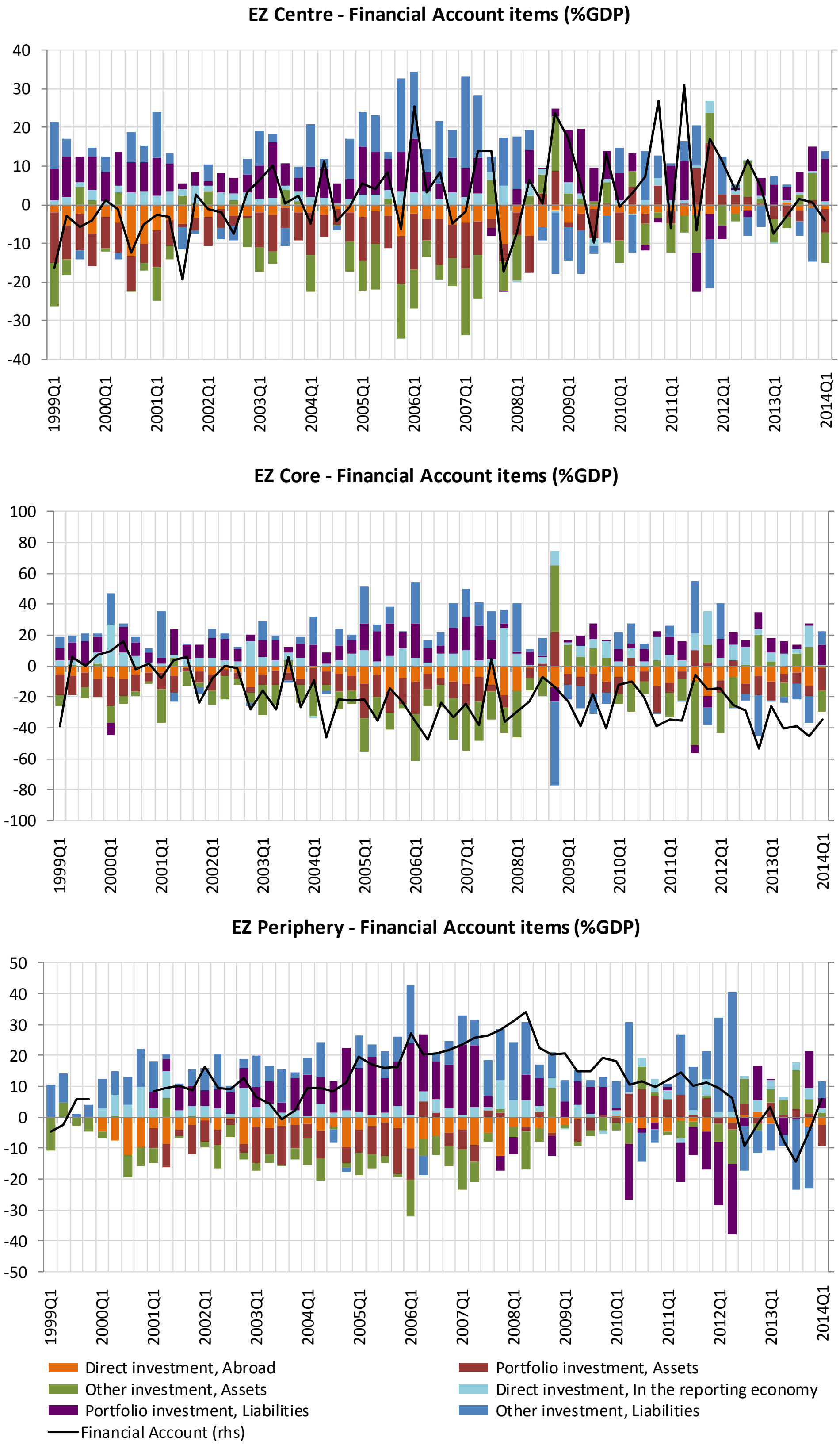
4.2 Gross and net financial flows

Figure 13 reports gross capital flows (both assets and liabilities) for the three euro-area groups, broken down by instruments, i.e. foreign direct investment, portfolio investments and other investments, which, most importantly, includes bank loans. The black line represents the net financial account as percent of the group GDP. Being the counterpart of the current account, this has been in deficit in the countries that have had current account surpluses (the euro area core); in surplus (expect some recent quarters) in the current account deficit countries (euro area periphery) and oscillating around balance, although with significant amplitude, in the intermediate group (euro area centre). Figure 13 shows that gross flows increased significantly in the first half of the 2000s, dropping with the crisis. This is not specific to the euro area, but it is more pronounced there than in the other European country groups. A problem with the analysis of gross flows is, however, that in the absence of bilateral statistics, the intragroup positions cannot be netted out, thus inflating the numbers when countries are grouped. To allow comparison, we report all countries' charts in the appendix.

The effect of the rise and contraction in gross flows is most evident in the euro area centre and periphery – where flows have nevertheless resumed somewhat during 2013. In the euro area core, flows have remained more stable over the entire period. The dynamics however vary across groups and even more across countries. In the euro-area core, quarterly gross flows increased in the period 2004-2007 to an average of more than 20 percent of the group GDP.

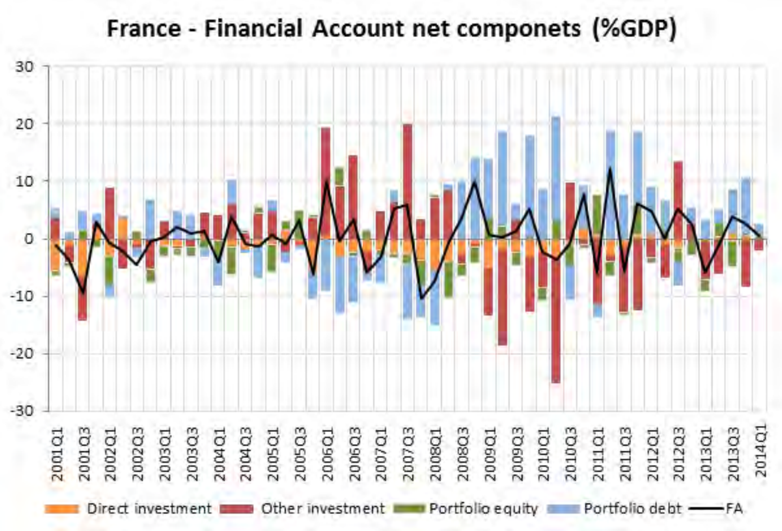
The gross quarterly flows are also sizable for the centre – which is composed of France and Italy – where they often reached 20 percent of GDP in the years immediately before the crisis. Within the centre, France is a case that deserves particular attention. There is indeed some evidence that France played a special role in intermediating capital flows from the North to the South of the euro area. Hobza and Zeugner (2014) show that France's financial system received inflows from the euro-area northern countries as well as from the rest of the world and channelled them towards the euro-area south. In this context, the financial account net components of France are shown in Figure 14. The solid black line shows the net financial account positon.

Figure 13 Gross financial flows in the three euro-area groups (percent of GDP)



Source: Eurostat and Bruegel calculations.

Figure 14 Gross financial flows in France (percent of GDP)



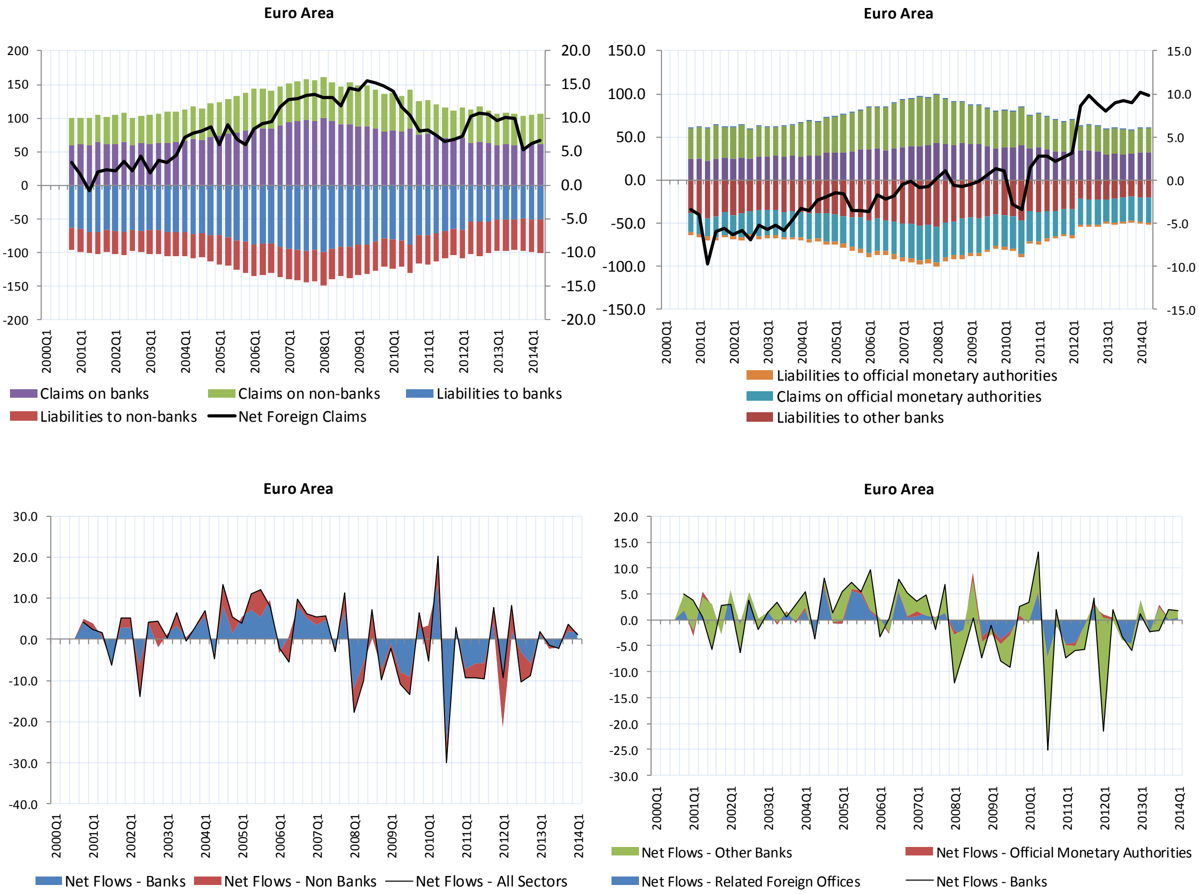
Source: Eurostat and Bruegel calculations.

Similar patterns can be observed when looking at the stocks and flows of foreign claims (including both gross and net) as reported by the BIS locational banking statistics by nationality after exchange rate adjustments[14].

Figure 15 shows the gross and net aggregate asset position of euro area banks over the rest of the world as well as the quarter to quarter changes in the stocks (quarterly flows) as a share of GDP as provided by the BIS locational banking data. The reasons to choose the locational rather than the consolidated banking data are twofold: first, it allows us to see both gross and net claims (and flows) and second, it allows us to disaggregate bank flows between a banking group and its related foreign offices from those flows between a banking group and other non-related banks.

[14] The locational statistics provide information about the currency and geographical composition of banks' balance sheets. They capture outstanding claims and liabilities of banking offices located in the BIS reporting countries, including positions between related offices. The locational statistics are compiled using principles that are consistent with balance of payments. The availability of a currency breakdown facilitates the calculation of exchange-rate adjusted changes in amounts outstanding, as an approximation for flows. For additional information, see http://www.bis.org/statistics/about_banking_stats.htm

Figure 15 Euro area banks foreign claims (percent of GDP)



Sources: BIS locational banking statistics by nationality, Eurostat, OECD and Bruegel calculations. Note: For missing data reasons, 'euro area' is defined as Austria, Belgium, Germany, Spain, France, Ireland, Italy, the Netherlands, and Portugal. Data available 2000Q1-2014Q2.

The net foreign claims of euro-area banks show a moderate accumulation, developing positively from 2000 until levelling off in late 2008 and into 2009, reaching a peak of just over 15 percent of GDP, before falling to approximately 5 percent in 2011 and experiencing a rebound in late 2012. In more recent periods, the net position has again moved towards a more balanced position.

Furthermore, we see that there was a progressive and continuous integration of the euro area financial system since the introduction of the euro until the third quarter of 2008, which saw an increase of the gross foreign claims from around 100 percent of the euro area GDP in 2000 to over 150 percent in 2008. This was followed by a process of deleveraging, reducing the claims back down to 100 percent of GDP by the end of 2013. Gross flows appear to have stabilised at this magnitude.

Figure 16 separates these developments for the euro area core, centre and periphery, though we highlight that a major flaw of such groups (similarly to such groupings based on Eurostat statistics) is that the intragroup positions cannot be netted out, given the absence of bilateral data. Hence gross flows are overestimated when grouping countries together.

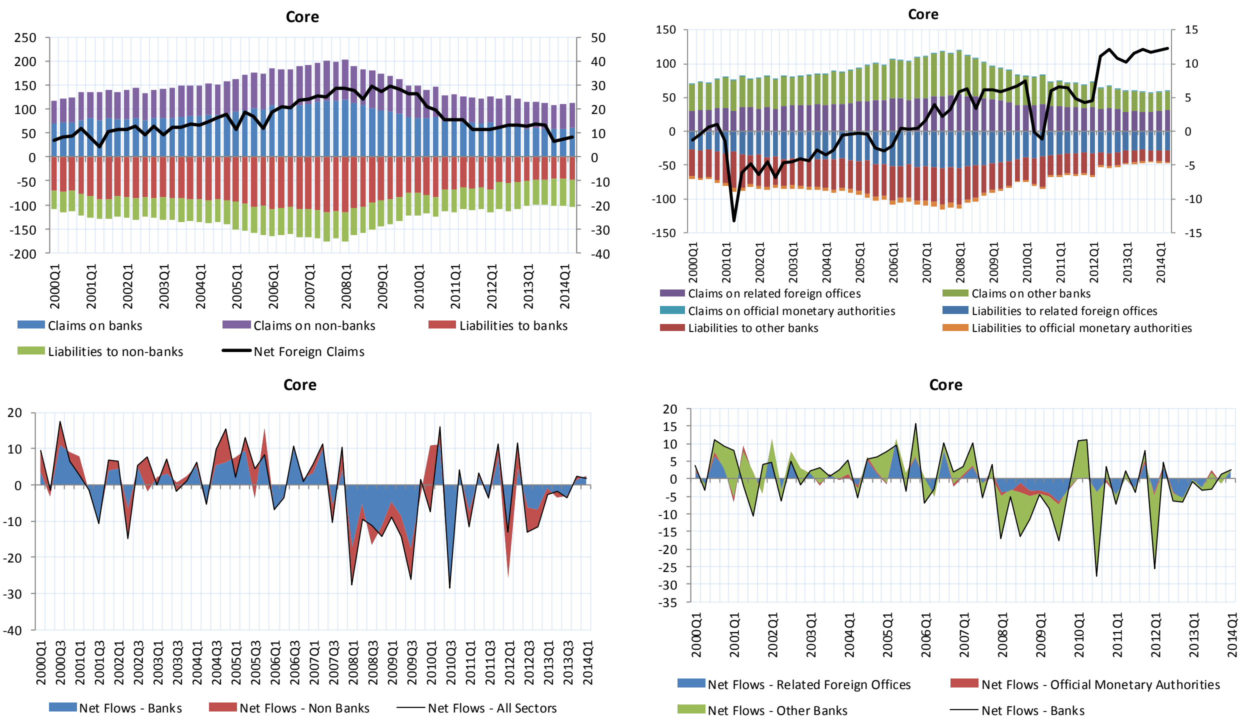
To overcome this problem we present in Figure 17 the consolidated foreign claims for each euro area subgroup, as these statistics are disaggregated by individual counterparty and thus allow us to net out for each country group.

The banks from the euro-area periphery were the only ones that kept a negative net position with respect to the rest of the world during the build-up of the crisis. Nevertheless, in the post-crisis period, euro area periphery banks have also improved their net external position from -8 percent of GDP at the end of the second quarter of 2011 to a balanced position at the end of 2013. While the net position of core euro-area banks has deteriorated from above 30 to 10 percent of GDP during the same period.

Figure 16 A, B, C Foreign claims of euro-area banks for Euro-area Core, Centre and Periphery (percent of respective country aggregate GDP)

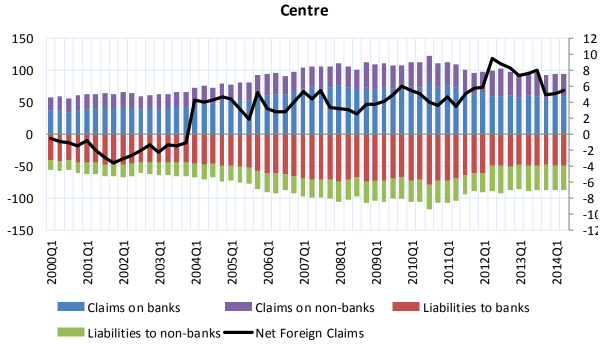
A: Euro-area Core banks' foreign claims and banking claims

Foreign claims   Banking claims

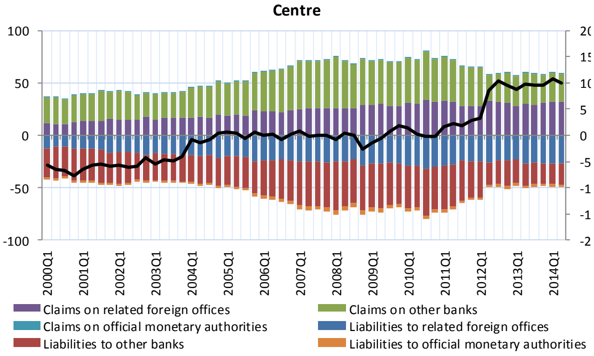


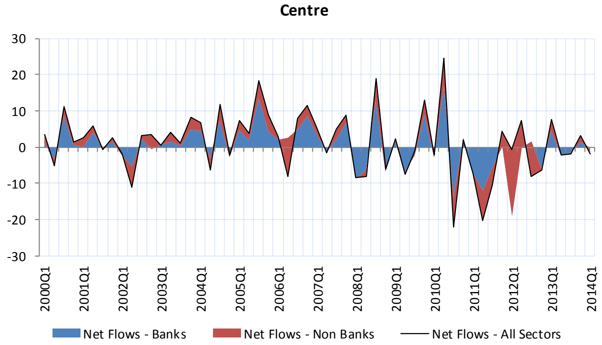
B: Euro-area Centre banks' foreign claims and banking claims.

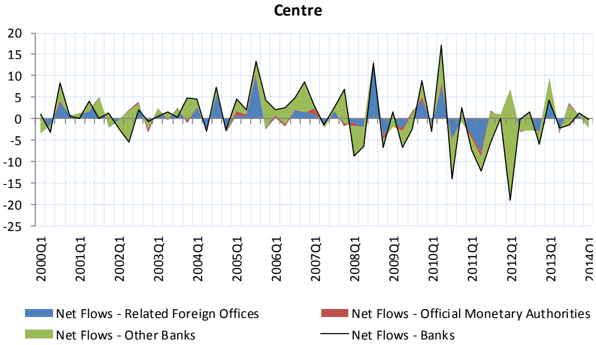
Foreign claims



Banking claims

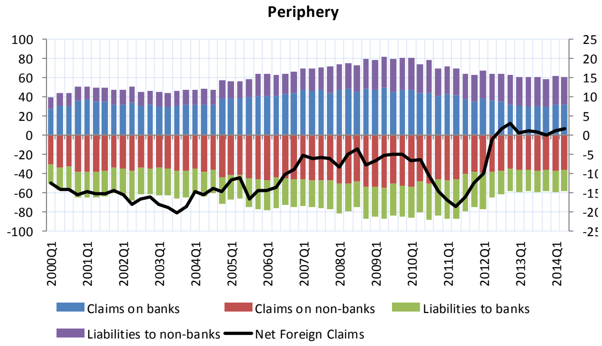




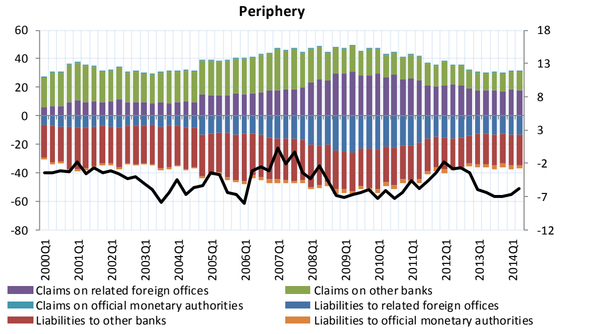


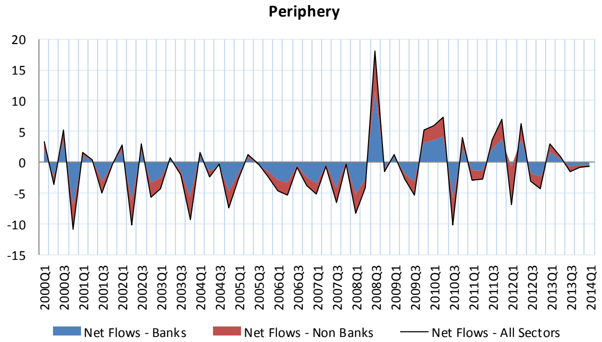
C: Euro-area Periphery banks' foreign claims (*L*) and banking claims (*R*).

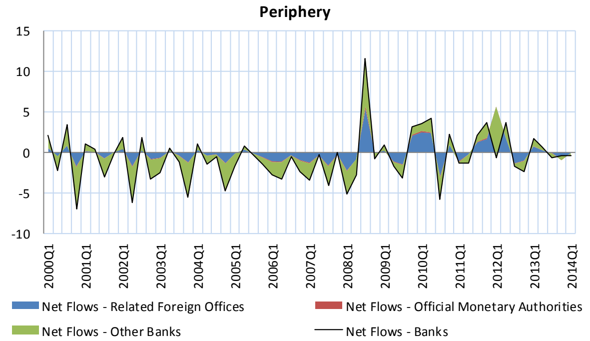
Foreign claims



Banking claims



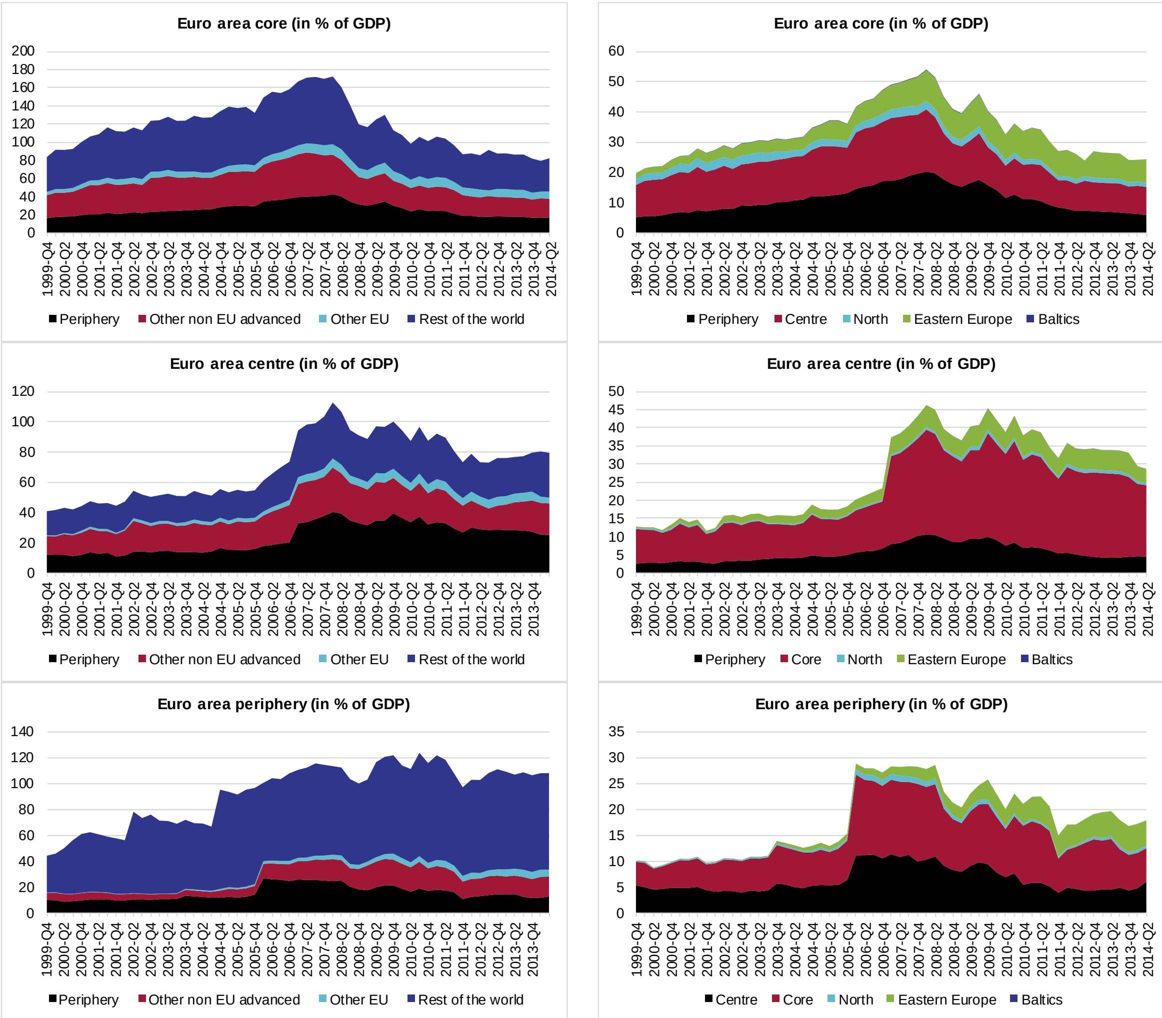




Source: BIS locational banking statistics; Note: Gross and net stocks (top); net flows (bottom); Net position (black line) on RHS scale. Core is defined as: AT, BE, DE, NL;

Centre: FR, IT; Periphery: ES, PT; data available from 2000Q1 to 2014Q2, however frequently country level data is missing, so actual series may not extend this far.

Figure 17 Consolidated foreign claims for each euro area subgroup (percent of GDP)

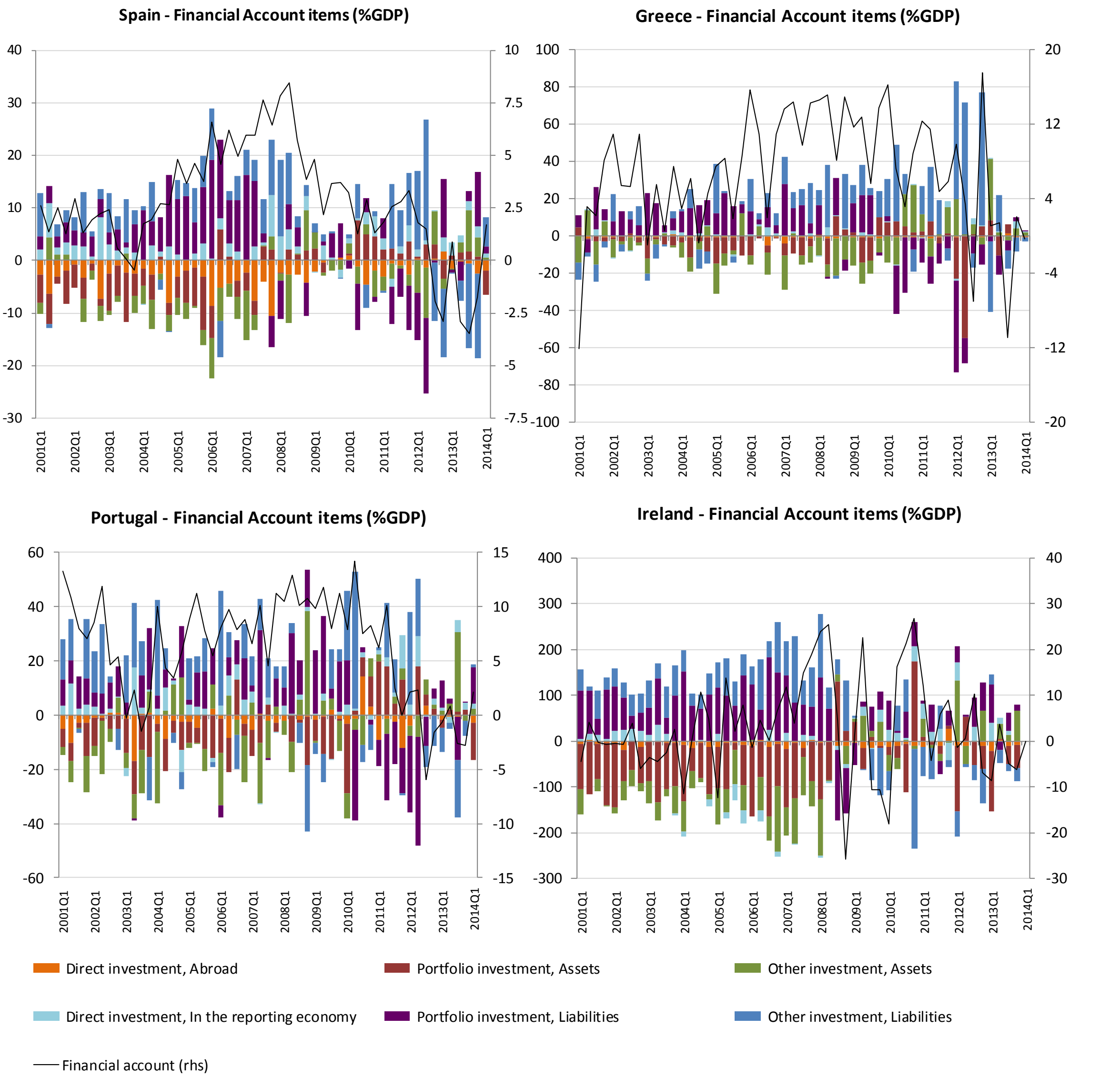


Sources: BIS consolidated banking statistics, OECD and Bruegel calculations. Note: Due to data availability the subgroups are formed as follows: Core: Austria, Belgium, Finland, Germany and the Netherlands; Centre: France and Italy; Periphery Ireland, Portugal and Spain. Data is available from 1999Q1 to 2014Q2.

Moreover, Figure 17 allows us to observe the capital flow reversal experienced by the periphery from core euro-area banks: at its peak in the first quarter of 2008 the core euro-area bank exposure to the periphery (as defined in our restricted sub-sample: Ireland, Portugal and Spain) reached 19.8 percent of the core GDP. At the end of 2013, this share stood at just 6.5 percent.

As discussed before, increases in gross flows seem to be even more pronounced in the euro area periphery during the run-up to the financial crisis. Ireland in this context is a special case, as it is home to large and internationally active banks, making it a clear outlier (see Figure 18). Quarterly gross flows have been well above 100 percent of GDP for a prolonged period of time and reached peaks of 200 percent in the years immediately before the crisis, dropping abruptly in 2009-2010. Gross flows in the other members of the periphery are significantly smaller and more in line with the aggregate figure.

Figure 18 Gross financial flows in the four euro-periphery countries (percent of GDP)



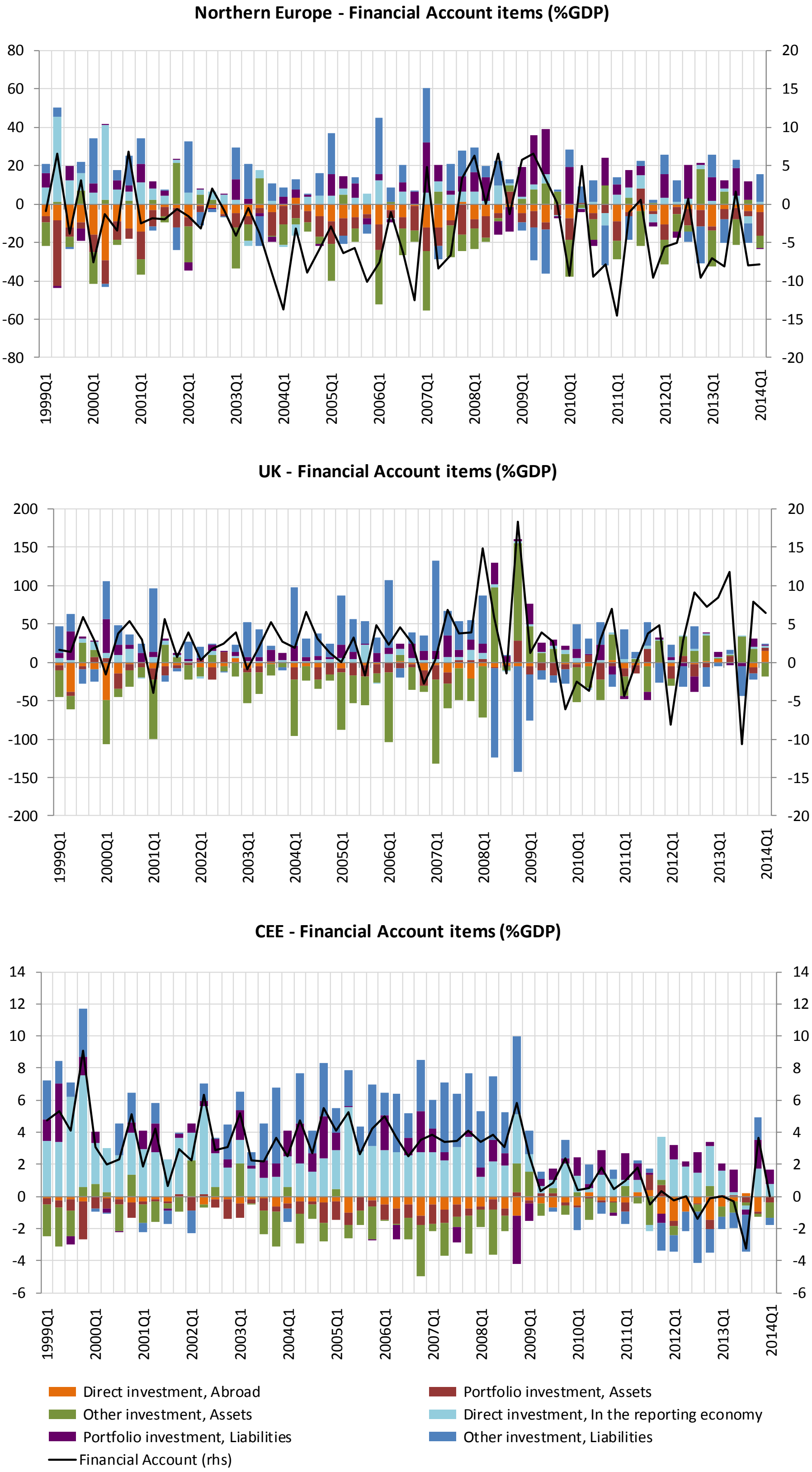
Source: Eurostat and Bruegel calculations.

In terms of composition, Figure 13 and Figure 19 show that flows in the three euro area groupings were overwhelmingly dominated by portfolio and other investments, two sources of financing that tend to be relatively more volatile than FDI. Foreign direct investment played a very marginal role, even in the euro area periphery. From an economic standpoint it is important to distinguish within the portfolio category between fixed income instrument such as bonds and equity, whose remuneration is far more sensitive to the economic developments, through valuation effects. This is what we do in the appendix at the level of the individual countries. Since the split between debt and equity is not always available, while the aggregate portfolio figure is, we prefer to represent only the aggregate at the group level to avoid introducing any bias in the results. Within portfolio, debt instrument normally played the major role.

Figure 19, which reports the other three groups, allows a comparison with non-euro European countries. The magnitude of gross flows in the non-euro group tends to be smaller than in the euro area, especially in the CEE aggregate. As a share of GDP, the UK, which plays a special role as financial centre, experienced gross flows that are significantly smaller than those experienced by Ireland. In terms of compositions, the three non-euro groups differ significantly from the euro area. For the UK, the other investment component massively dominates capital flows, whereas portfolio investments are minor. Differently from the euro area, FDIs account for a larger share of the gross flows in these groups, especially for the CEE where they constitute the bulk of inflows together with other investments (which includes bank loans).

In the case of banks' foreign claims for Denmark, Sweden and the United Kingdom, the stock accumulation on the build-up to the crisis was much steeper than in euro-area banks, but the deleveraging process has been less dramatic than for euro-area banks. Figure 19 shows the respective claims of banks for the three countries in question.

Figure 19 Gross financial flows in northern Europe, the UK and central and Eastern Europe (percent of GDP)

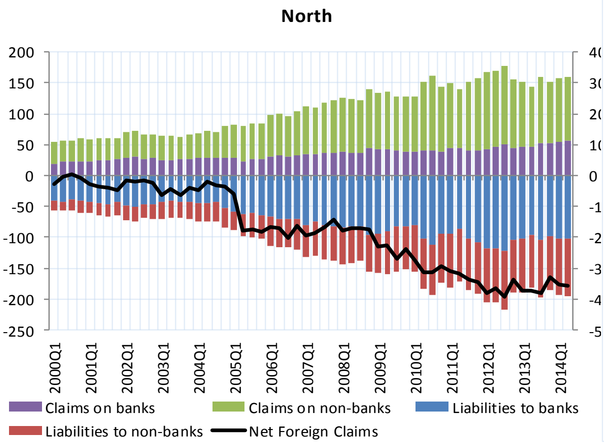


Source: Eurostat and Bruegel calculations.

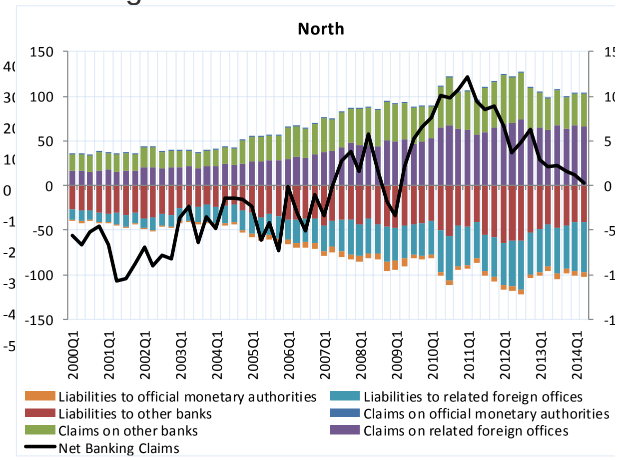
Figure 20 A, B Northern and UK bank foreign claims (percent of GDP)

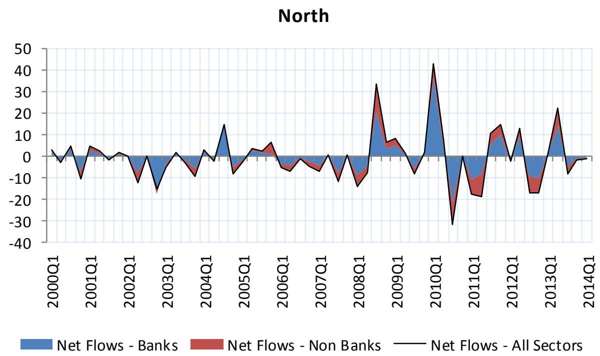
A: Danish and Swedish (North) banks' foreign (L) and banking (R) claims

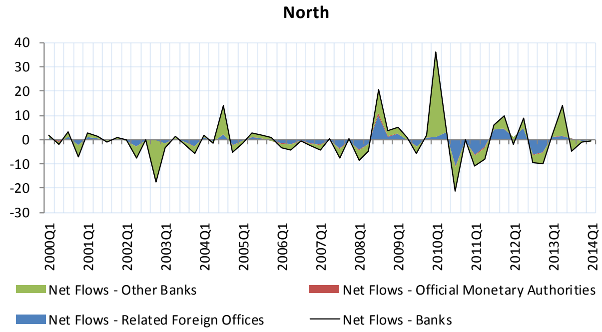
Foreign claims



Banking claims

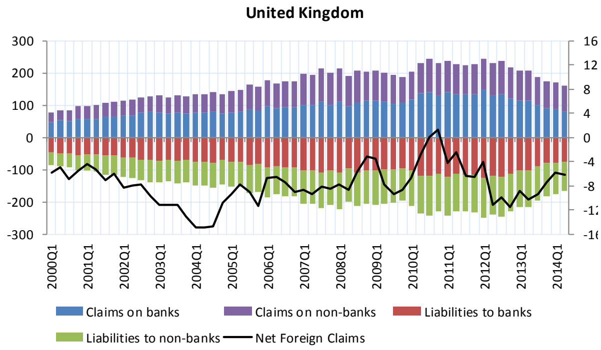




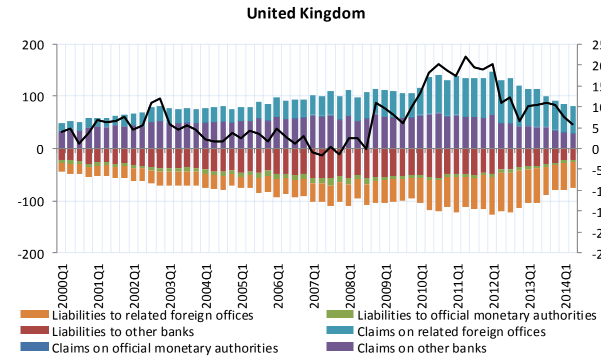


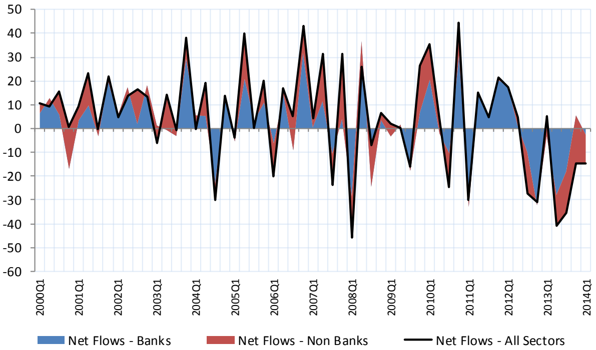
B: British banks' foreign claims

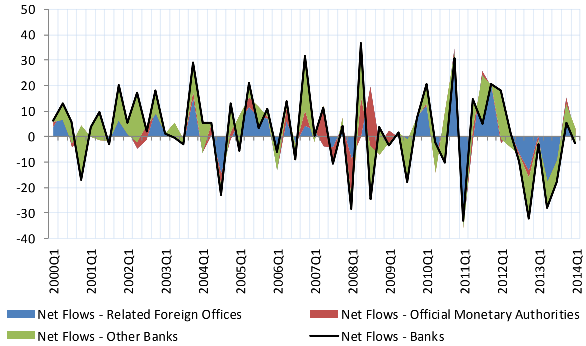
Foreign claims



Banking claims







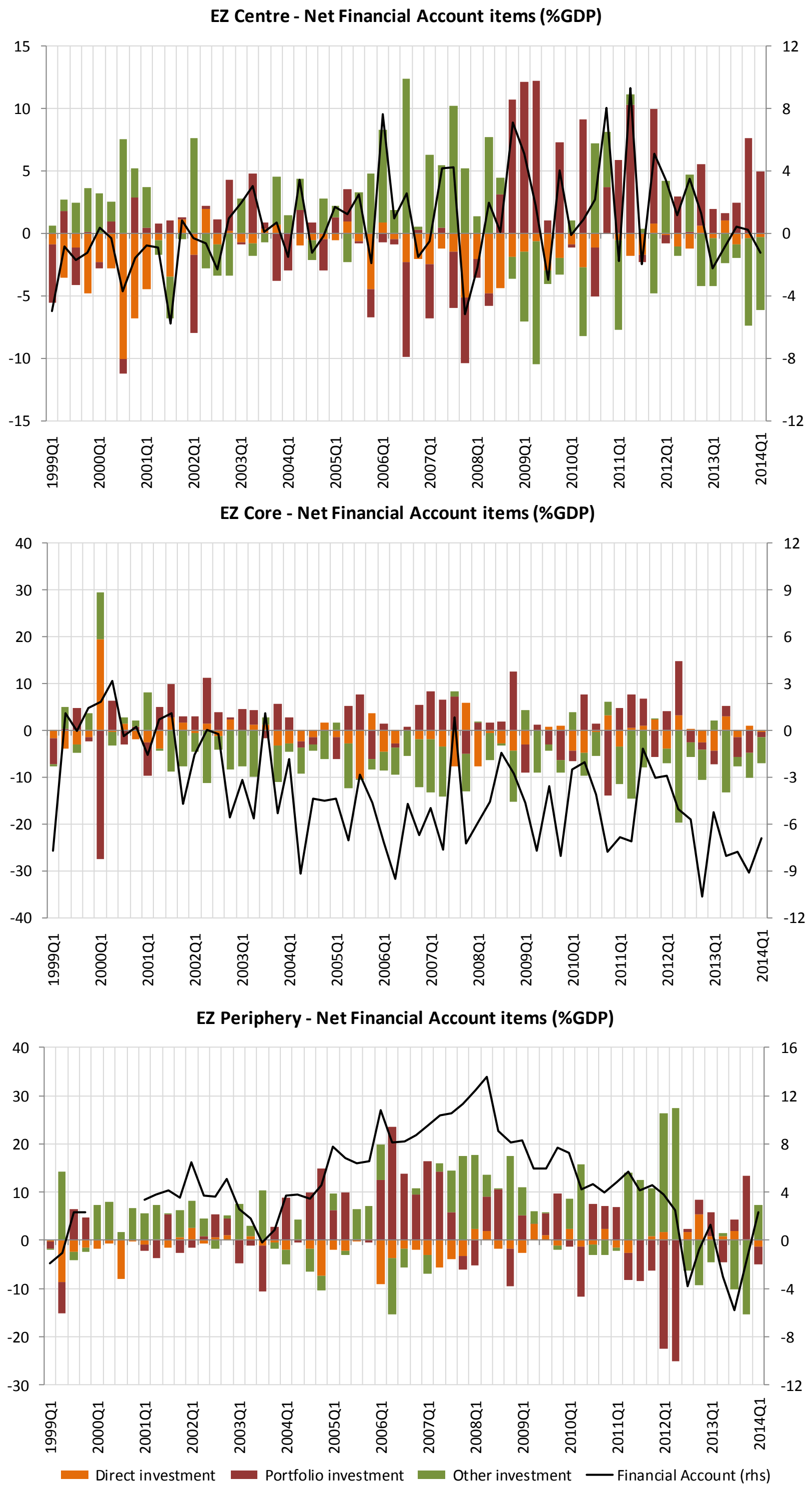
Source: Eurostat and Bruegel calculations.

4.3 Net financial flows

Figure 21 and Figure 22 show the net position of groups' financial account according to the underlying components, offering a simpler picture of the composition of countries' and groups' net balances vis-à-vis the rest of the world. As recalled previously, the net financial account is an important variable to look at in order to understand countries' external borrowing requirements. The net flows for each of the financial account components can give an indication of where potential financing problems could come from.

Figure 21 shows that the persistent financial account surplus of the euro area periphery was largely accounted for by portfolio and other investment, whereas the contribution of direct investment was negative but very small. From 2003 till 2008, portfolio net financial inflows were the most important component of the financial surplus, but the massively contracted in 2008 and became largely negative between summer 2011 and summer 2012. This captures the intensifying of the euro crisis, when foreign investors increasingly off-loaded debt issued by countries in the euro area periphery. Interestingly, the effect of the disappearing (or negative) portfolio flows on the total net financial account appears to be neutralised by other investment flows of an opposite sign. This captures the flows related to financial assistance and to the ECB's liquidity provision, which provided a cushion against the withdrawal of private external funds. In order to clearly understand how this happened, we need to look more in detail at the position of individual sectors of the economy, which we do in the next section. The persistent financial account deficit of the euro area core was instead mostly driven by other investment outflows. These outflows intensified during the last phase of the crisis, but again the aggregate view does not allow singling out the public component of these flows. Portfolio investment instead shows net inflows for the euro area core, most likely driven by the presence of Germany and international appeal of the Bund.

Figure 21 Net financial flows in the three euro-area groups (percent of GDP)

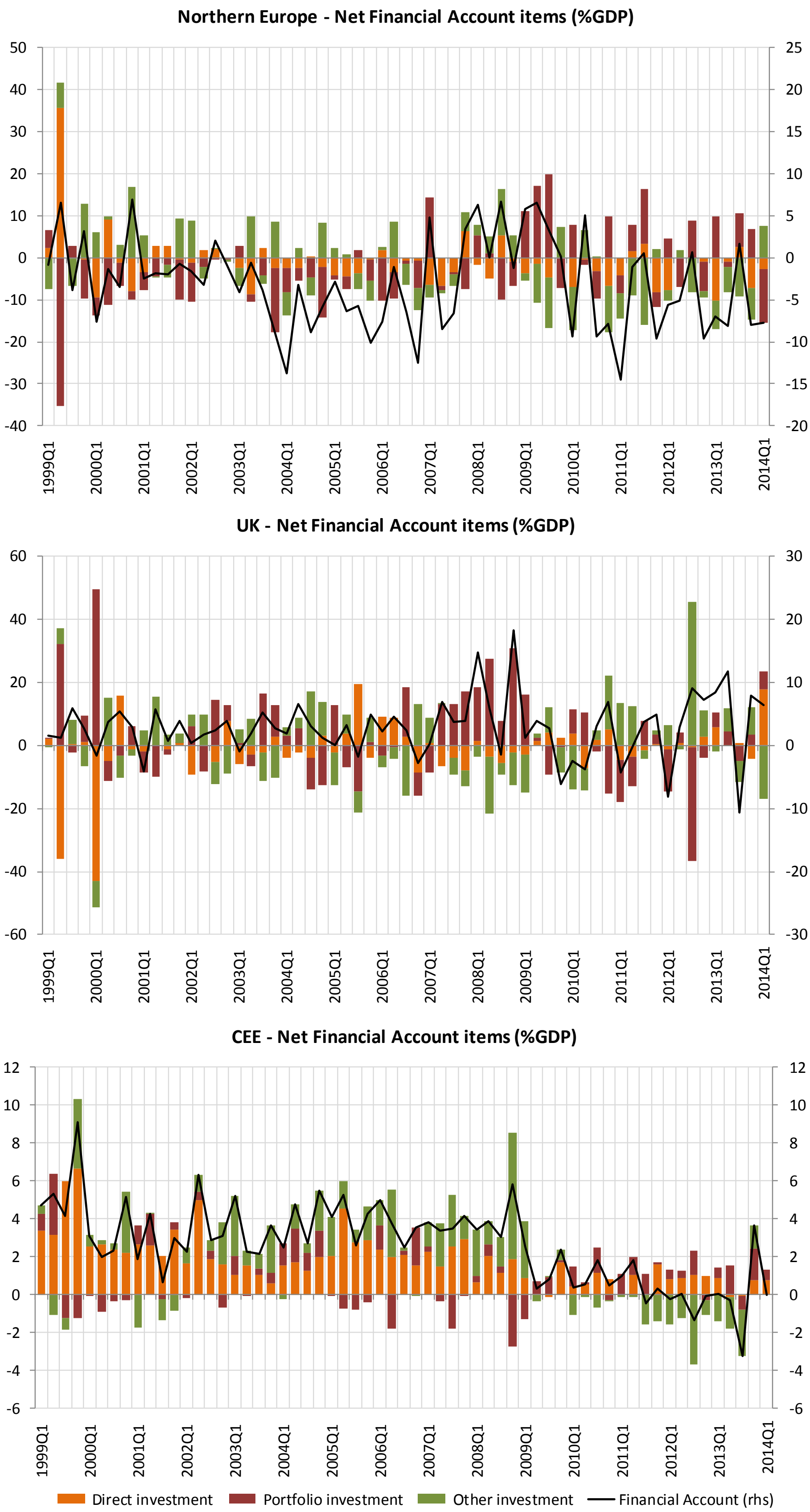


Source: Eurostat and Bruegel calculations

The more or less balanced financial account surplus of the euro area centre is instead the outcome of portfolio and other investment flows going in the opposite direction, but with higher volatility. Both France and Italy had positive and more volatile other investment inflows in the second half of the 2000s, which reverted in 2008 and were substituted by equally large portfolio inflows. Other investment flows then continued to remain negative for almost the entire period after 2008. The north of Europe has been a financial account deficit group up until the end of 2007 (reflecting current account surpluses), but in 2008-2009 their financial account turned to surplus, signalling most likely the presence of important inflows of capitals leaving the euro area in search of safety. This was particularly pressing for Denmark that eventually adopted monetary policy measures such as the negative rate on central banks deposits to curb the inflows it was undergoing (Hüttl, 2014).

The UK (Figure 22) experienced spiking inflows in 2007-2008, mostly in terms of portfolios, which were then abruptly reversed in 2009. Portfolio (and other) flows then disappeared for more than one year, finally coming back with the opposite sign. Central and Eastern Europe countries stand out once again as a different world. They experienced prolonged inflows of mainly direct investment, with capital moving 'downhill', mostly from rich EU15 countries to poorer CEE countries as highlighted by Becker et al. (2010). Parallel to this development, credit to the private sector increased rapidly before the crisis in the region too, fuelling a credit boom in the three Baltic States, Bulgaria and Romania (Darvas and Szapáry (2008). This resulted into a sustained financial account surplus that was reversed back to balance in 2009. The comparison with what happened in the euro area periphery (Figure 23) is striking.

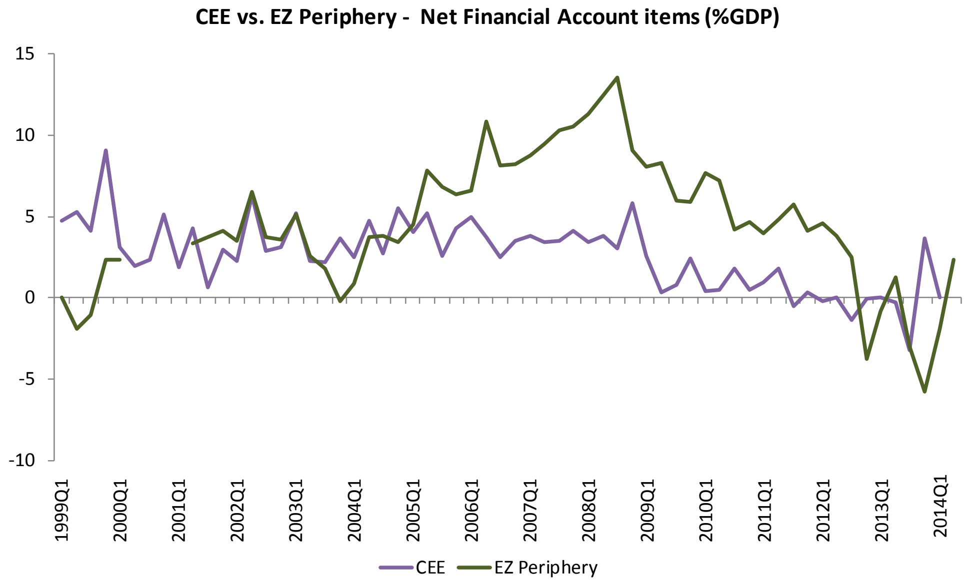
Figure 22 Net financial flows in the three euro-area groups (percent of GDP)



Source: Eurostat and Bruegel calculations.

The euro area periphery accumulated a significantly larger financial account surplus before the crisis (almost 15 percent of the total group GDP), which then dropped during the crisis, though remained positive until late 2012. This was made possible by the provision of financial assistance and especially by ECB liquidity, which allowed a smoother adjustment on the external position than that which occurred in CEE countries, especially in the Baltics (Darvas, 2012a).

Figure 23 Net financial account of the euro-periphery and central and eastern Europe (percent of GDP)

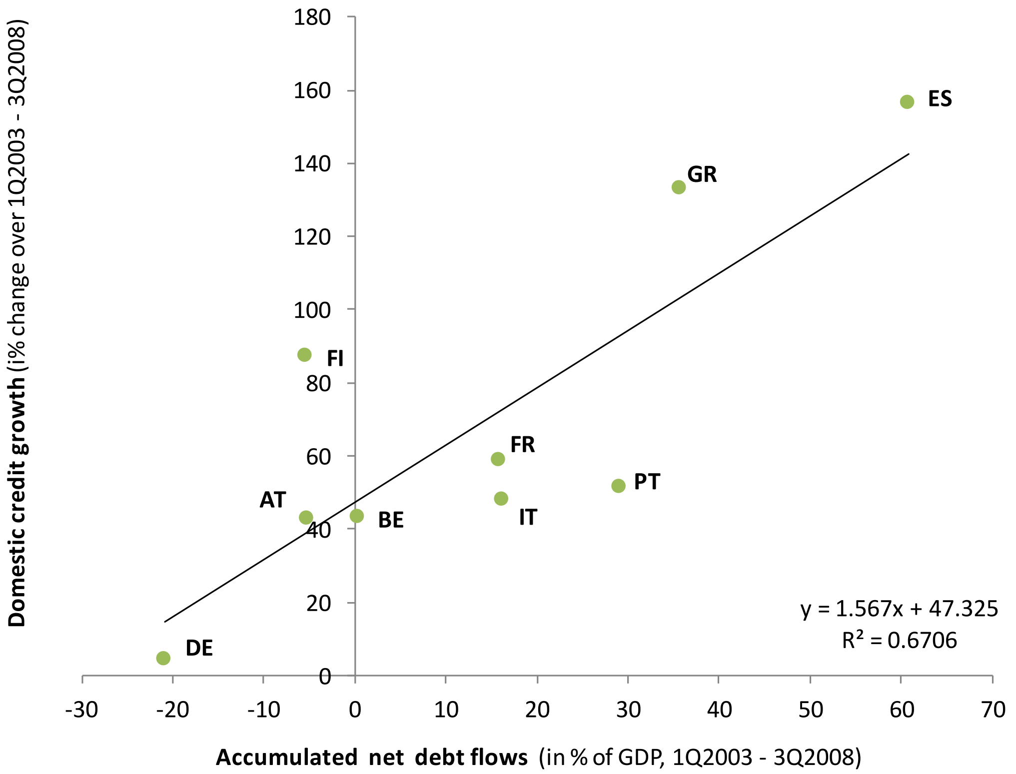


Source: Eurostat and Bruegel calculations. Data is available from 1999Q1 to 2014Q1.

A major issue that arises is the composition of economic sectors in which debt-type capital inflows were actually unutilised in the euro-area periphery and in the new member states of the EU. Unfortunately, this issue is not a well-researched topic. The relationship between capital inflows and credit booms is already well established (see Figure 24 and among others Mendoza Terrones (2012), Bruno and Shin (2012), Lane and Milesi-Ferretti (2008), Lane and McQuade (2012)), suggesting that credit-intensive sectors, like the housing sector, was a major destination of capital inflows. But the nature of the economic sectors into which capital actually flows is an area little explored in the literature, even though it has a crucial importance. For example, capital flows that support investment in the tradable sector may promote sustainable long-term growth and improve capacity of the country to repay the external loans.

Mitra (2011) argues that it is the destination, not the form of capital inflows, that most influences GDP growth. Reis (2013) highlights that credit frictions in the financial system suggest a misallocation of capital inflows, with non-productive firms surviving through an increase in their debt levels, limiting the expansion of more productive firms. This contributes to the expansion of the non-traded sector vis-à-vis the traded sector. Lane (2013) discusses the growth differentials between the traded and non-traded sector and finds striking differences across countries, with the non-traded sector expanding strongly in Greece, Ireland and Spain during 2003-2007. Finally, another body of research examines the connections between house prices and international capital flows, with an emphasis on the current account (see among others Adams et al (2011), Aizenman and Jinjarak (2009), Favilukis et al (2012)).

Figure 24 Euro area domestic credit growth vs accumulated net debt flows



Source: Eurostat, ECB and Bruegel calculations. Note: accumulated net debt flows consist of the sum of net flows in portfolio debt and other investment; data for Italy starts only in 2004Q1;

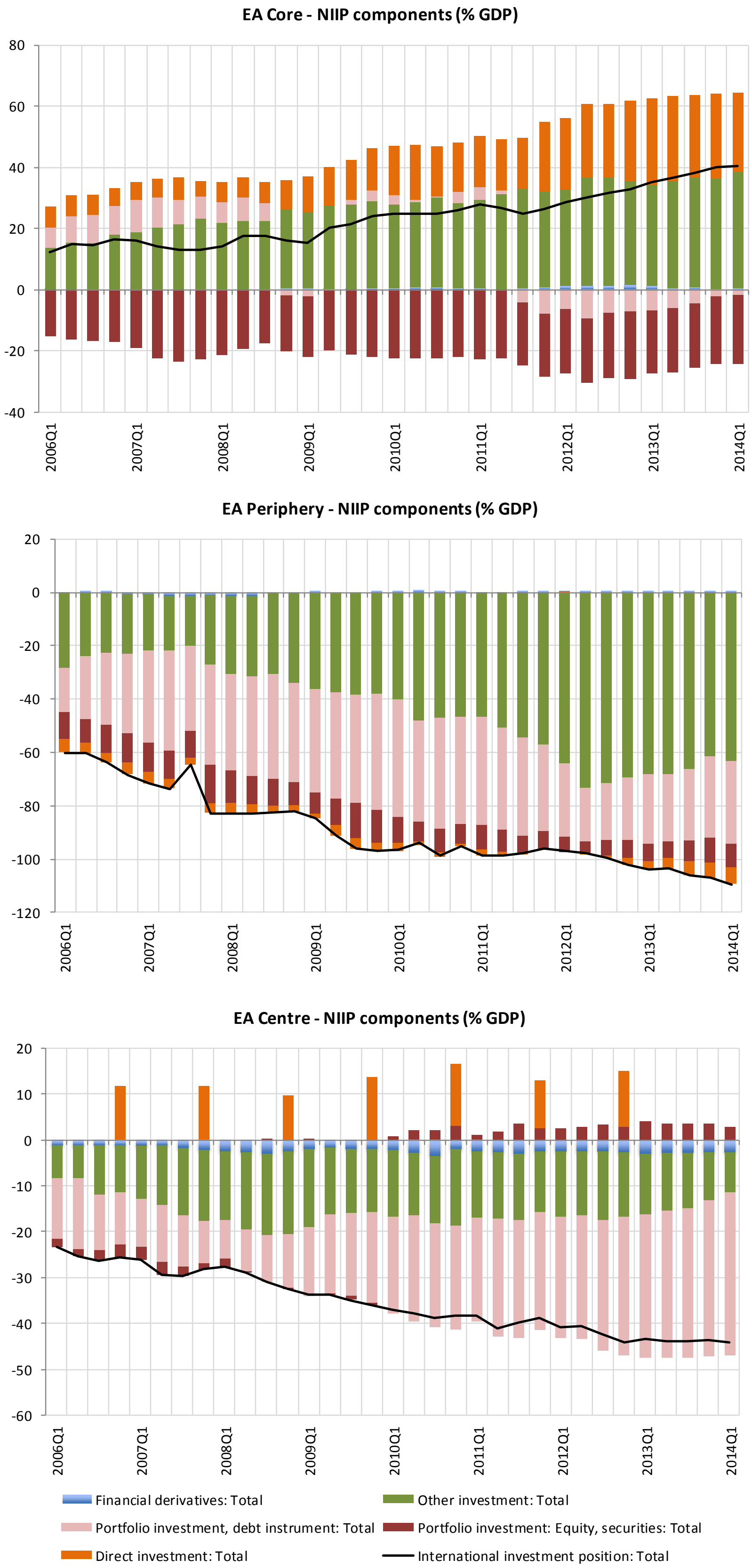
4.4 Net international investment positions (NIIPs)

As explained previously, the analysis of the stock of external assets and liabilities is an important complement to the analysis of financial flows. This section therefore investigates the groups' stocks of net international investment position (NIIP) and their components. It is important to remind that the statistical accounting of financial flows and stock is different, as flows are recorded at the nominal value while stock are valued at market priced. The accumulated flows can differ significantly from the stocks, due to valuation effects. The comparison of flows and stocks,therefore, allows one to investigate of the existence and magnitude of valuation effects.

The prolonged period of current (and financial) account imbalances resulted in the accumulation of large stock of external assets and liabilities for all the euro area groups as well as the CEE countries. The UK had a negative NIIP position of around 36 percent of GDP until 2010, but this has been considerably reduced over the last three years. Northern Europe moved closer to a balanced position by 2013. Central and Eastern European countries stand out for the large negative NIIP, which has surpassed 80 percent of GDP in 2009 and has remained constant at that level since then.

In terms of composition, the euro area core surplus is mostly accounted for by other investment (the most important part of it is cross-border bank loans) and direct investment, especially starting in 2012. Portfolio equity and debt instead contributed negatively. The contribution of portfolio investment is large and negative also for euro area periphery's, where also the balance on other investment is positive (that is, liabilities exceed claims), signalling that these countries were net receivers of international bank loans. The euro area centre also has a negative position but here the most important component is portfolio debt liabilities outstanding, followed by other investment liabilities and a larger (although still very small) share of financial derivatives. Unfortunately, data on direct investment are missing for many years for France, so we do not have a clear picture of the group aggregate, which seems to be positive and relatively large.

Figure 25 Net international investment position the three euro-area groups (percent of GDP)

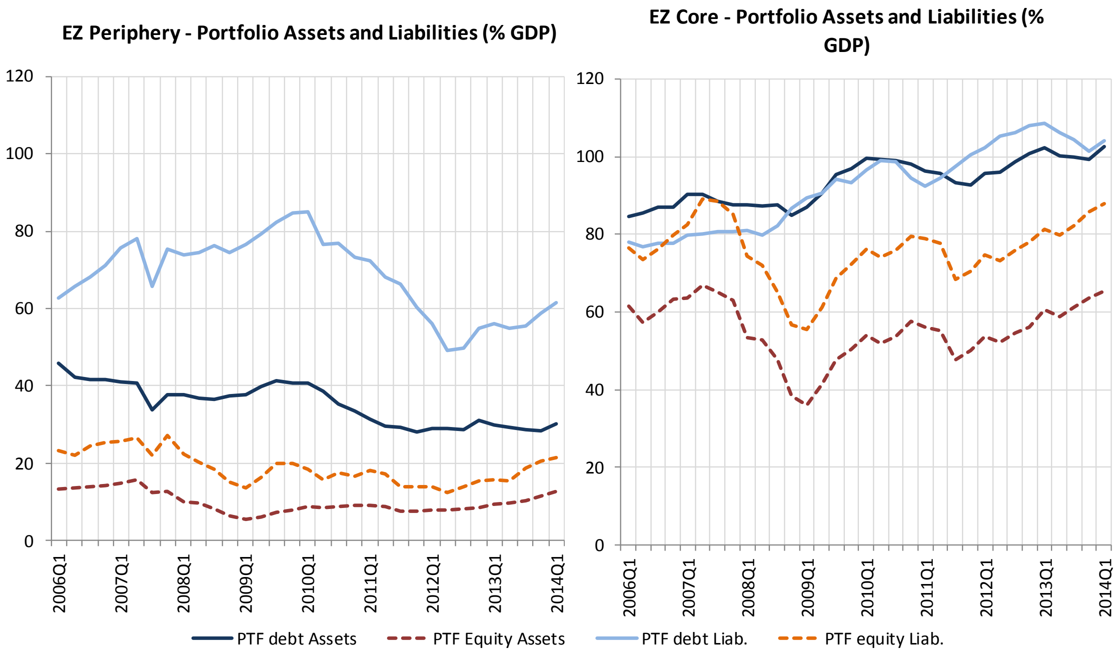


Source: Eurostat and Bruegel calculations.

The comparison of the three euro area groups raises an interesting question. The country level charts collected in the annex in fact show that in terms of *flows,* the largest share of portfolio investments is accounted for by *debt instruments* whereas equity plays a relatively minor role. In light of this evidence, one would expect that a large share of the outstanding NIIP be accounted for by stock of portfolio debt. However, the NIIP figures tell a different story. The outstanding net portfolio debt is in fact very small compared to the outstanding equity, in both the euro area core and the euro area periphery. For the euro-area centre, instead, the stock of portfolio debt is significantly more important than portfolio equity in explaining the NIIP position.

To reconcile these two apparently contradictory facts, one needs to factor valuation effect into the picture. Figure 26 is an illustration of how important such effects can be[15]. It plots the stock of assets and liabilities separately, for both portfolio debt and equity, in the euro area periphery and core.

Figure 26 Portfolio international investment position the euro-area periphery (percent of GDP)



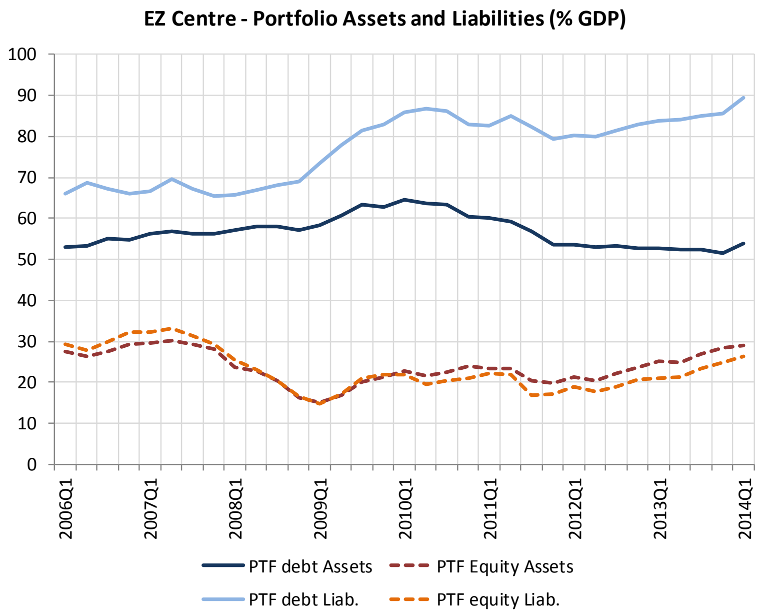
Source: Eurostat and Bruegel calculations.

The left panel shows that the market price valuation of debt liabilities dropped in the euro area periphery during the crisis, until end 2012. This is not surprising, as during the crisis the government bonds issued by these countries came under significant stress, bond yields surged and prices fell sharply. The fall pictured in the chart then stopped in 2012, consistent with the introduction of the ECB's outright monetary transactions (OMT), which eased tensions on the sovereign bond markets. Portfolio debt assets also dropped in market value, but the drop was not as pronounced as the one on the liability side. At the same time, the value of equity liabilities increased significantly more than the value of equity assets and the combination of these two

[15] For more detail, see the section 5 on revaluation and external yields across various instruments and countries.

dynamics explains the relatively larger role of equity in explaining the dynamics observed in the aggregate NIIP. A similar development is visible for the euro area core, where portfolio assets and liabilities net out almost entirely, while equity liabilities are larger in value than equity assets, although the gap is not widening as in the Periphery. The opposite situation happened in the Centre (Figure 27) where the valuation gap was significantly larger on the debt side than and almost inexistent on the equity side.

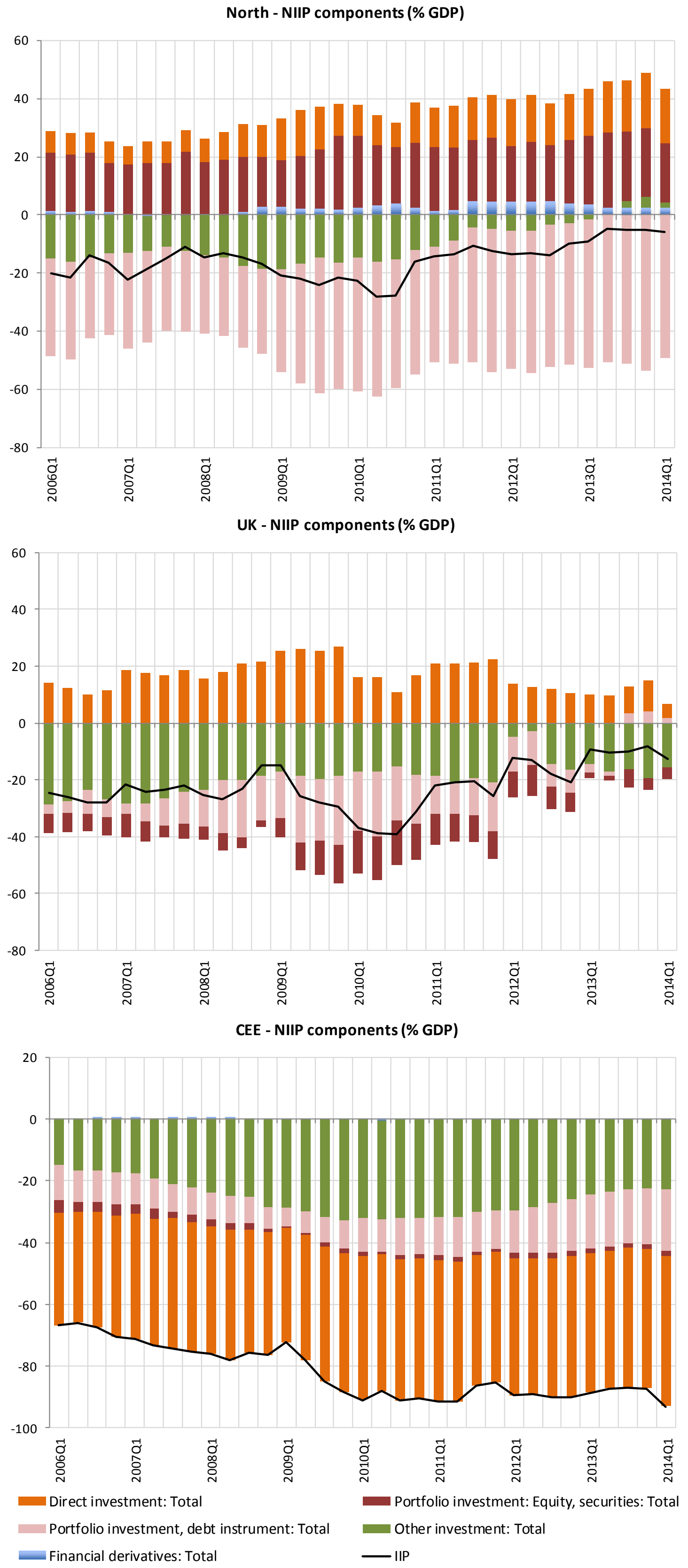
Figure 27 Portfolio international investment position the euro-area centre (percent of GDP)



Source: Eurostat and Bruegel calculations.

Concerning the other groups of countries (Figure 28), the North of Europe's external negative NIIP is driven by portfolio debt, whereas the contribution of other investment stocks has been shrinking over time, and direct investments and portfolio equity investments are positive. The UK was in deficit in terms of all NIIP components apart from direct investment, which has recently almost rebalanced through a reduction of both assets and liabilities, suggesting a sizeable cross-border deleveraging. CEE instead is again a special case, as these countries have net liabilities in all instruments. More than one-half of their NIIP liabilities are direct investment, while portfolio debt and other investment (including bank loans) share the remaining part. It is noteworthy that their net other investment liabilities decreased from about 30 percent of GDP in 2009 to about 20 percent of GDP by 2013, suggesting that foreign banks decreased their exposure to the region.

Figure 28 Net international investment position of EU north, the UK and central and eastern Europe (percent of GDP)



Source: Eurostat and Bruegel calculations.

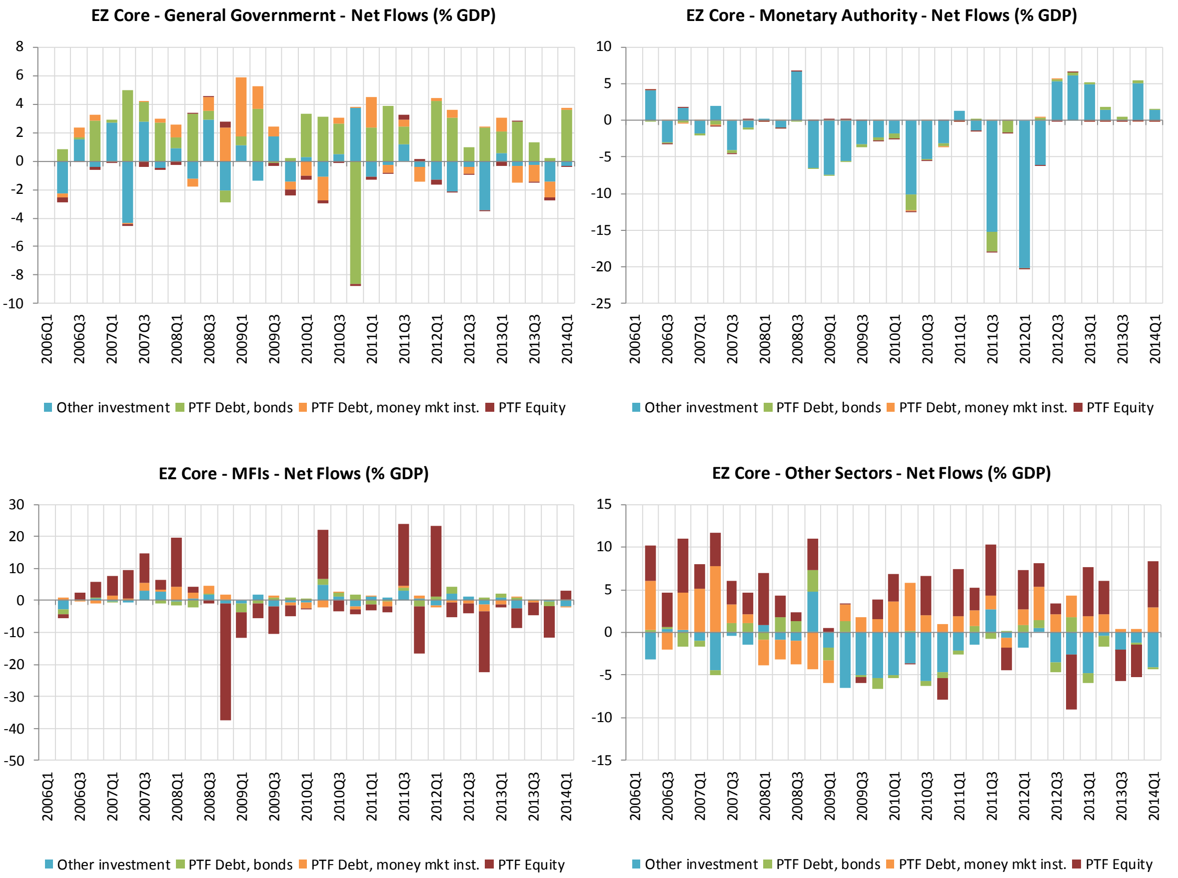
4.5 Net financial flows by sectors

Finally, we take a look at an even more detailed breakdown of financial flows, isolating the position of the different sectors in the economy. This is useful to understand in which sector the external surplus or deficit originate and it allows separating private capital flows from the public ones, such as ECB liquidity or financial assistance. The economy is divided into four sectors: general government; monetary authorities; monetary financial institutions and other sectors (including firms and households). Here, we present the net flows for several country groupings (Figure 29 to Figure 34), whereas gross flows are reported in the appendix. Notice that no data is available at the sector level for Ireland and the Netherlands so unfortunately these two countries had to be excluded from their respective groups.

The euro-area was characterised by a substitution between private and public flows during the financial crisis, particularly in the periphery, which was mirrored in the corresponding flows of the core and centre. This is especially evident in the size and relative sign of the changes in the external positions of monetary authorities. Since the beginning of the crisis, monetary authorities in the euro area core had shown large increases in external assets that only reverted in 2012. This was matched by large increases in external liabilities recorded by the monetary authorities of euro area periphery. These imbalances arose in the Eurosystem's TARGET2 system. Cross-border transfers of central bank money (deposits) through the TARGET2 system generate counter-balancing credit claims (intra-Eurosystem balances) between each national central bank and the ECB, which are automatically aggregated and netted out at the end of each day resulting in a single net bilateral position. If a national central bank is a net claimant from these transfers, the claim appears as an asset on its own balance sheet under the entry "Intra-Eurosystem claims" and vice versa. The euro area centre is, also in this case, in an intermediate position. This is due to the fact that the Centre aggregates a country where banks borrowed extensively from the ECB (Italy) with a country where reliance on the ECB facilities was instead more marginal (France). The monetary authorities of Northern Europe and CEE also recorded net inflows in 2008, probably associated to the swaps that were put in place across the world's central banks.

The General Government is typically a net external debtor to the rest of the world and the bulk of inflows are directed to portfolio debt instruments, mostly bonds. This is true for all the country groups and is due to the internationalisation of government bond markets, which implies that a fairly sizable share of government debt is held by foreigners. This is a common feature across the groups and it is evident also in the case of the non-euro countries.

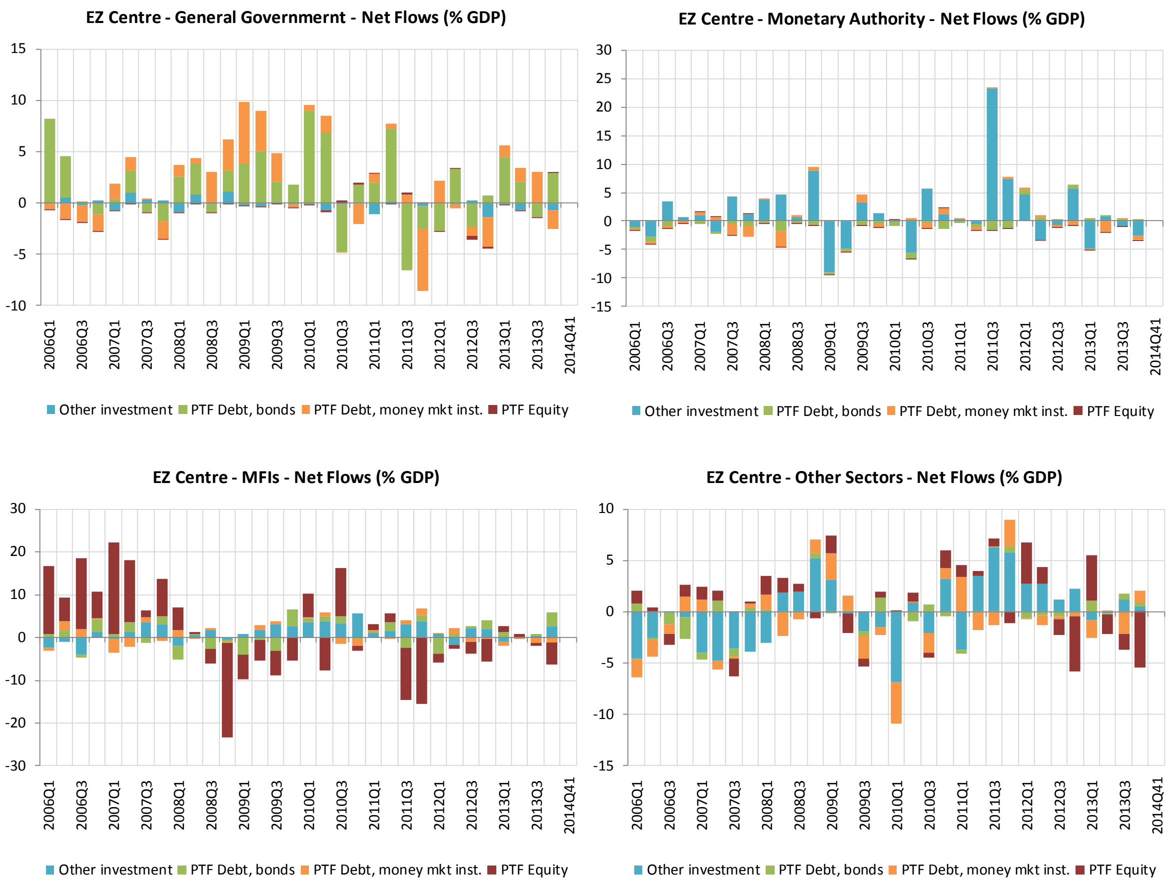
Figure 29 Capital flows by sector and instrument in the euro-area core countries (in percent of GDP)



Source: Eurostat and Bruegel calculations.

Two things are particularly interesting with respect to this sector. First, in the euro area centre, we can observe that money market instruments (a subcategory of portfolio debt) account for an important share of the pre-crisis inflows and then of crisis outflows. It is a peculiar feature of this group, as the role of money market instrument is minor in the other two regions (there has been some inflows in the euro area core before the crisis but it is not a regularity). This is mostly accounted for by France, the Euro-area countries traditionally more exposed to money market funds, especially US ones. The outflows observable in 2011 probably correspond to the point in time when US money market funds decided to reduce their exposure to the euro crisis, which then triggered also the recourse by French banks to the ECB’s lending facilities.

Figure 30 Capital flows by sector and instrument in the euro-area centre countries (in percent of GDP)

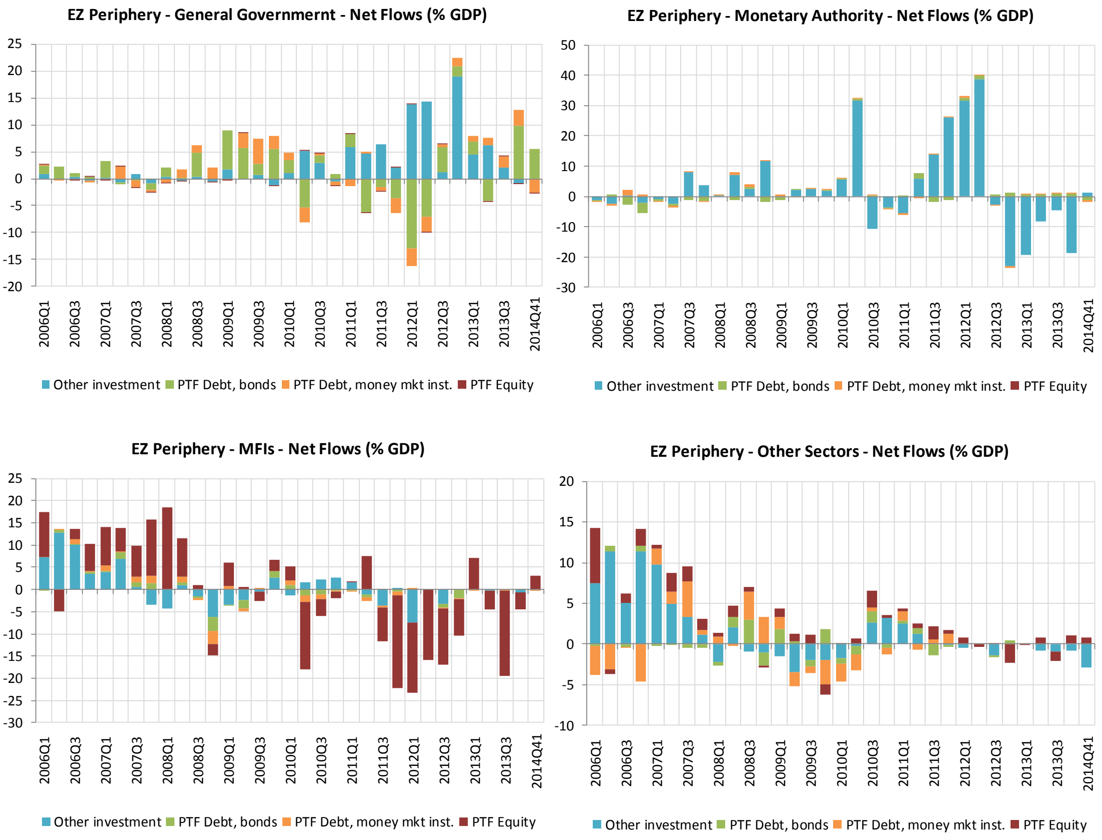


Source: Eurostat and Bruegel calculations.

The second interesting development is the sudden appearance of quite large other investment inflows in the general government sectors of the euro area periphery, starting from 2010. This represents the flows associated to the disbursement of financial assistance under the EU/IMF macroeconomic adjustment programmes. These flows generally have a comparable size and the opposite sign of the outflows recorded on the portfolio side. A similar inflow is also evident in the CEE countries, starting in 2008-09 and then reverting back to zero.

Concerning the other sectors of the economy, banks (MFIs) tend to have relatively larger (compared to the other components) flows of equity, which tend to be quite volatile. This is true everywhere. Within the euro area, it is especially accentuated in the Periphery and Centre, whereas outside the monetary union it is especially evident in the CEE and UK banking sectors. The pattern is largely the same across the regions, showing equity inflows in the banking sector up to 2007, outflows during 2008-2010 and some revival of inflows afterwards. The euro area periphery is an exception, as there the largest equity outflow came only in 2011, later than in the rest of Europe. This suggest that the equity movements observed in the euro area centre and core, as well as those in the UK are related to the global financial crisis, whereas the outflows from euro area periphery are more specifically related to the euro crisis.

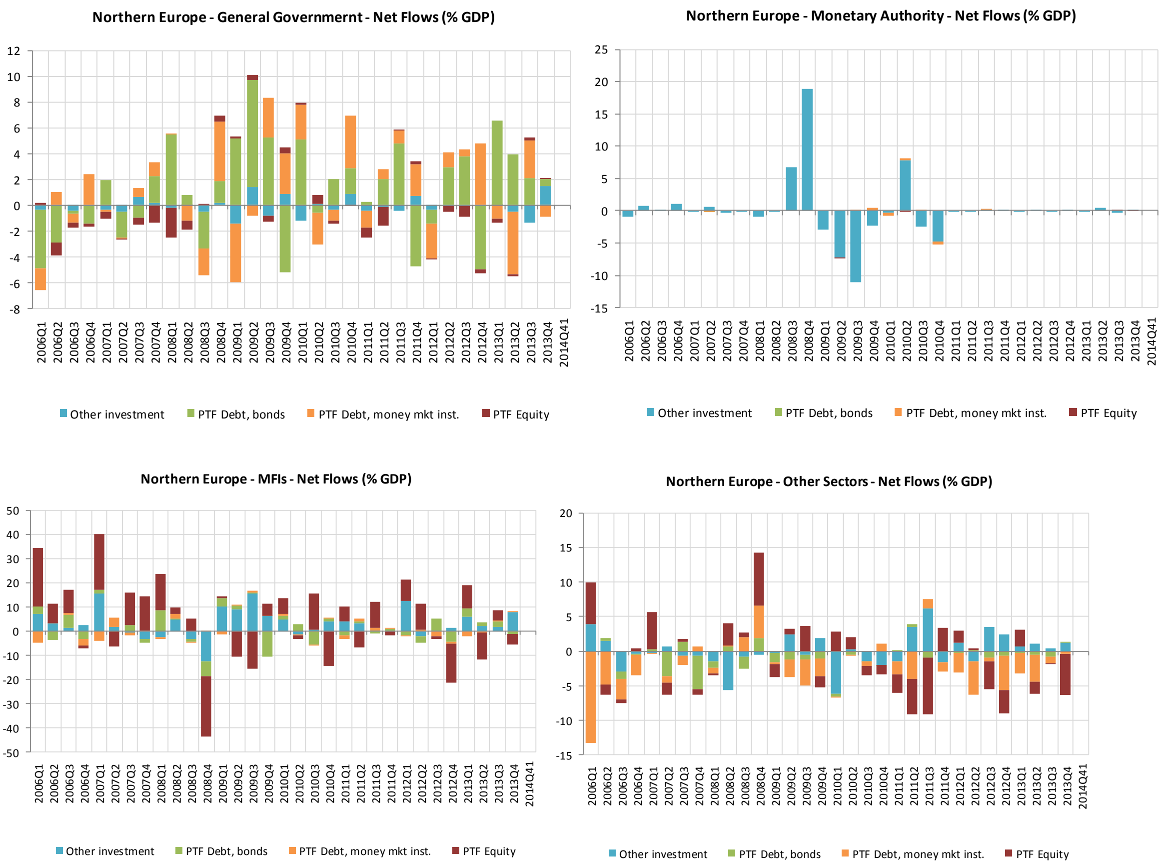
Figure 31 Capital flows by sector and instrument in the euro-area periphery countries (in percent of GDP)



Source: Eurostat and Bruegel calculations.

The other sectors normally alternate periods of net financial inflows (before the crisis) with periods of net financial outflows (during the crisis). In the euro area periphery, flows for these sectors have been completely squeezed after the crisis and the other sectors are now in a balanced position. The nature of inflows also differs cross the euro area. Inflows into euro area core's other sector are dominated by portfolio debt and equity whereas inflows into euro area periphery's other sectors are dominated by other investments. This is probably consistent with the fact that firms in the South of Europe tend to be smaller and therefore financed more by loans than with equity. The Centre gives a mixed picture, but that may be due to the fact that the group aggregates two very different countries in terms of firms' structure, such as France and Italy.

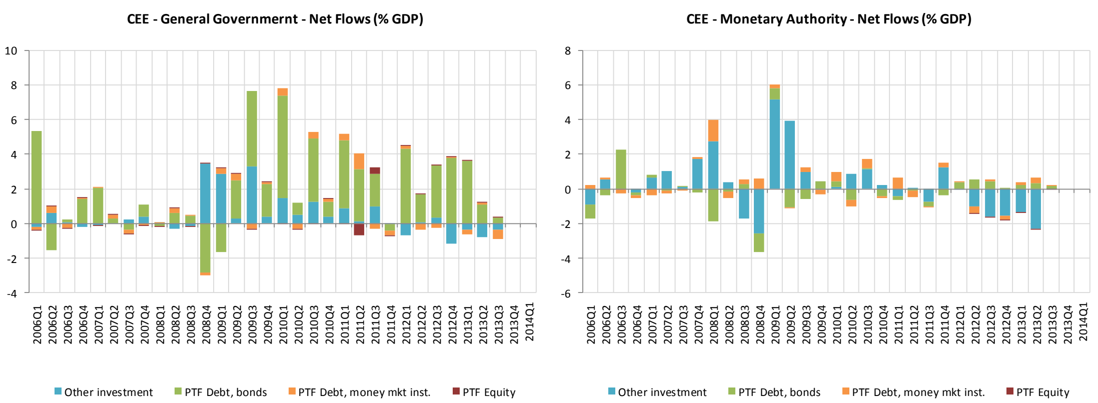
Figure 32 Capital flows by sector and instrument in northern Europe countries (in percent of GDP)

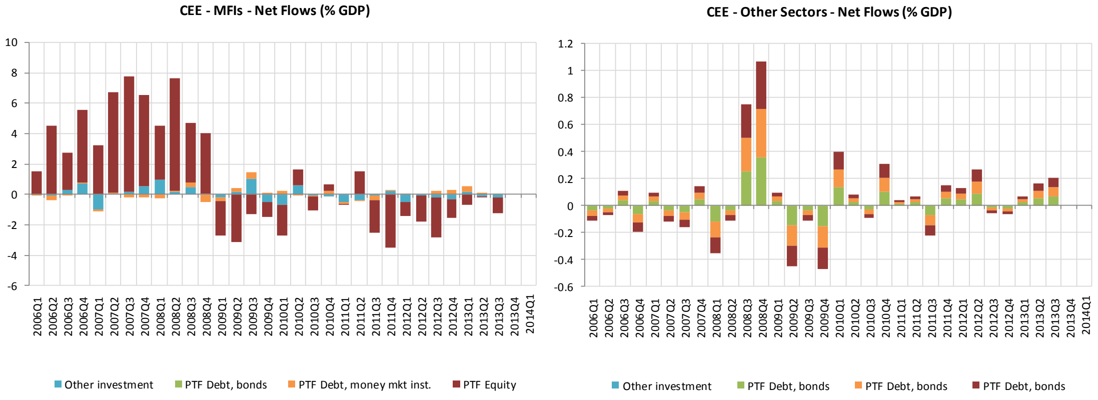


Source: Eurostat and Bruegel calculations.

Money market instruments also tend to play a more important role in this sector, although their weight varies across countries. They are for example, especially important in the euro area core and almost absent in the Central and Eastern Europe countries, where other investments play the most important role.

Figure 33 Capital flows by sector and instrument in central and eastern European countries (in percent of GDP)

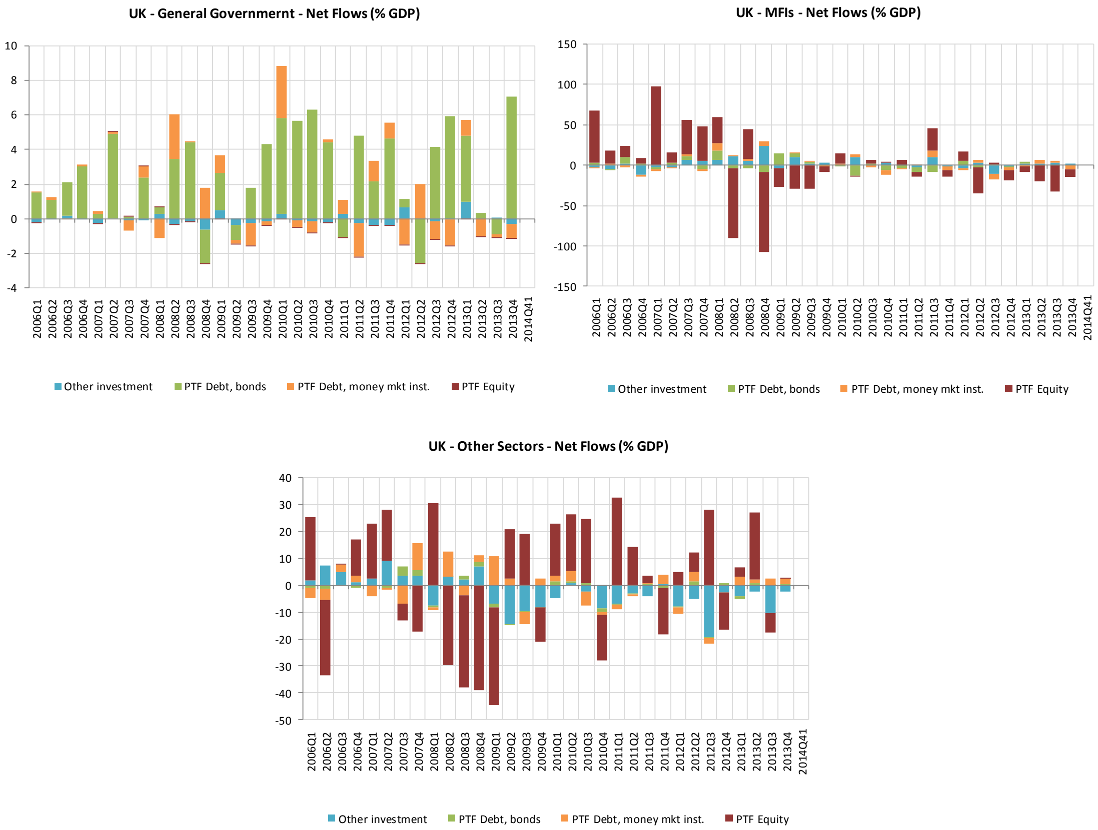




Source: Eurostat and Bruegel calculations.

The special role of the UK as a financial centre is evident in the huge magnitude of the financial flows experienced by the English monetary financial institutions. Unfortunately, there is no data on financial flows at the sector level for the UK Monetary authority, so we are not able to assess the impact of quantitative easing (QE) implemented by the Bank of England in terms of external flows, for example. The large debt portfolio inflows in the government sector during the crisis point instead to the safe haven role that the gilt had (together with the German bund and the US treasuries) during the financial crisis.

Figure 34 Capital flows by sector and instrument in the United Kingdom (in percent of GDP)



Source: Eurostat and Bruegel calculations.

4.6 Financial integration and dis-integration

Several developments reviewed so far suggest that over the last five years, Europe has been undergoing a progressive financial disintegration. We therefore analyse this issue in greater detail in this section. Behind financial disintegration there is, in the euro area, the negative feedback loop between the banking sector and sovereigns that has emerged as a characteristic feature of the euro crisis. There are mainly two reasons for this phenomenon.

First, during the initial phases of the crisis, EMU Member States were individually responsible for rescuing banks in their jurisdictions[16] . Given the huge size of banking sectors relative to GDP, the potential cost of bank rescues was high and sovereigns were vulnerable owing to the anticipation of markets that such high costs of bank bailouts could cast doubts on the future sustainability of the sovereign's public finance position and on its creditworthiness. The consequences of this became apparent when Ireland had to rescue its banking system in the early days of the crisis. At the end of 2007 Ireland had a debt-to-GDP as low as 25 percent. At the end of 2010, after extending public support to the financial system, its debt ratio jumped to 108 percent and the country needed an IMF/EU programme (the portion of debt increase directly related to the banking support is evaluated at around 40 per cent of GDP by the IMF). The nationalisation of Anglo-Irish led financial markets to become familiarised to the idea that important banks would be bailed out by government if needed, while at the same time clearly highlighting the fiscal implications of such rescues.

Second, domestic banks are heavily exposed to sovereign debt, often with a strong home bias. This is to some extent a pattern inherited from the pre-crisis era, but it contributed to the vulnerability of European banks, when debt issued by some euro area sovereigns was not considered a safe asset anymore and its value dropped, thus damaging the balance sheet positions of the affected banks.

The divergence of sovereign yields in a context of strong connection between banks and sovereigns has resulted in financial fragmentation and segmentation of risks along national borders. Banks located in weaker countries found increasing difficulty in refinancing on the market, due to the perceived poorer quality of the collateral they were holding. Cross border activity has dropped across the board. And the segmentation in the cost of banks' funding has been passed on to the retail borrowers, with lending rates (and deposit rates) markedly diverging across euro area countries. After the ECB introduced its Outright Monetary Transactions in 2012, the government bonds yields in the periphery countries dropped and the spreads narrowed. Nevertheless, the gap in interest rates charged by banks on loans to the private sector was not re-absorbed equally fast and a significant gap still remains, despite the significant reduction (if not elimination) of the "sovereign surcharge". At the same time, several indicators suggest that financial integration was fast to unravel during the crisis, whereas it has not yet significantly recovered. This is very important especially in light of the many initiatives – most notably banking union – introduced since the crisis. The next sections review these indicators of financial integration.

Re-domestication of banks' activity

[16] The situation will remain the same until the recently agreed Single Resolution Fund will not be completed.

During the financial crisis, Eurozone banks have been massively retrenching within domestic borders. The phenomenon started in 2009 but significantly accelerated in 2010/2011, when the euro sovereign crisis intensified. Especially in those countries that were under high pressure from the financial markets, the crisis led to a sizable re-domestication of banks' assets, in genera,l and of banks' debt holdings in particular.

Figure 35 gives an idea of the magnitude of this effect. The upper panel reports the outstanding amount of loans extended to all euro area private sectors by euro area banks, as well as the securities other than shares issued by euro area sectors and held by euro area banks as assets. This data is aggregated without distinguishing across sectors (such as households or corporations) nor between domestic loans or loans to other euro area countries. The numbers are indexed in 1999, showing that both series more than doubled over the last decade, after the currency unification. The start of the crisis in 2008 coincided with a halt in the growing trend but the reversal – at the aggregate euro area level – is not dramatic.

The middle and lower panel instead show a breakdown of both loans and banks' debt holdings between "domestic" and vis-à-vis "other euro area". Domestic loans are loans extended by banks to domestic borrowers, and domestic debt holdings are holdings by banks of debt issued by other domestic sectors (public and private). These are compared with the corresponding measures vis-à-vis sectors of other countries within the euro area. This breakdown allows one to understand whether or not the pre-crisis growth observed in the euro-area aggregate shown in the upper panel was driven more by within-country growth or by between-country growth.

The answer is that the aggregate growth in loans and banks' debt holdings that occurred prior to the crisis was mostly due to an explosion in cross border activity, in particular intra-euro area[17] . Loans granted by euro area banks to residents of other euro area countries almost tripled over 10 years whereas loans granted to domestic borrowers doubled[18] .

The difference is even more striking if we look at the composition of debt portfolios held on banks' assets side. Holdings of debt issued in other euro area countries increased by 4.5 times between 1999 and 2009 while holdings of debt issued by domestic resident sectors remained constant, starting to increase only when the crisis broke out in 2009. This latter development was most likely due to the fact that, as a response to the US-led financial turmoil, banks were rebalancing their portfolios in a direction that was perceived to be safer, but also pressure from their domestic regulators to concentrate their activities in the home countries may have played a role, as several unilateral actions were adopted by national supervisors to ring-fence banking activities[19]. Since the outbreak of the crisis in 2008, the drop in intra-area

[17] The Eurosystem provides statistics on cross-border loans and securities holdings of euro area banks, but these only distinguish between "domestic" and "other Euro Area". Loans and holdings vis-à-vis the rest of the world are aggregated in a single category called "external assets". Some of the National Central Banks do provide a disaggregation by instrument of the assets vis-à-vis the rest of the world (which are used later in the analysis) but not all of them do. So for comparability purposes in this paragraph the analysis is restricted to ECB data, looking only at "domestic" versus "other euro area" positions.

[18] It's important to point out that these figures also include bank loans.

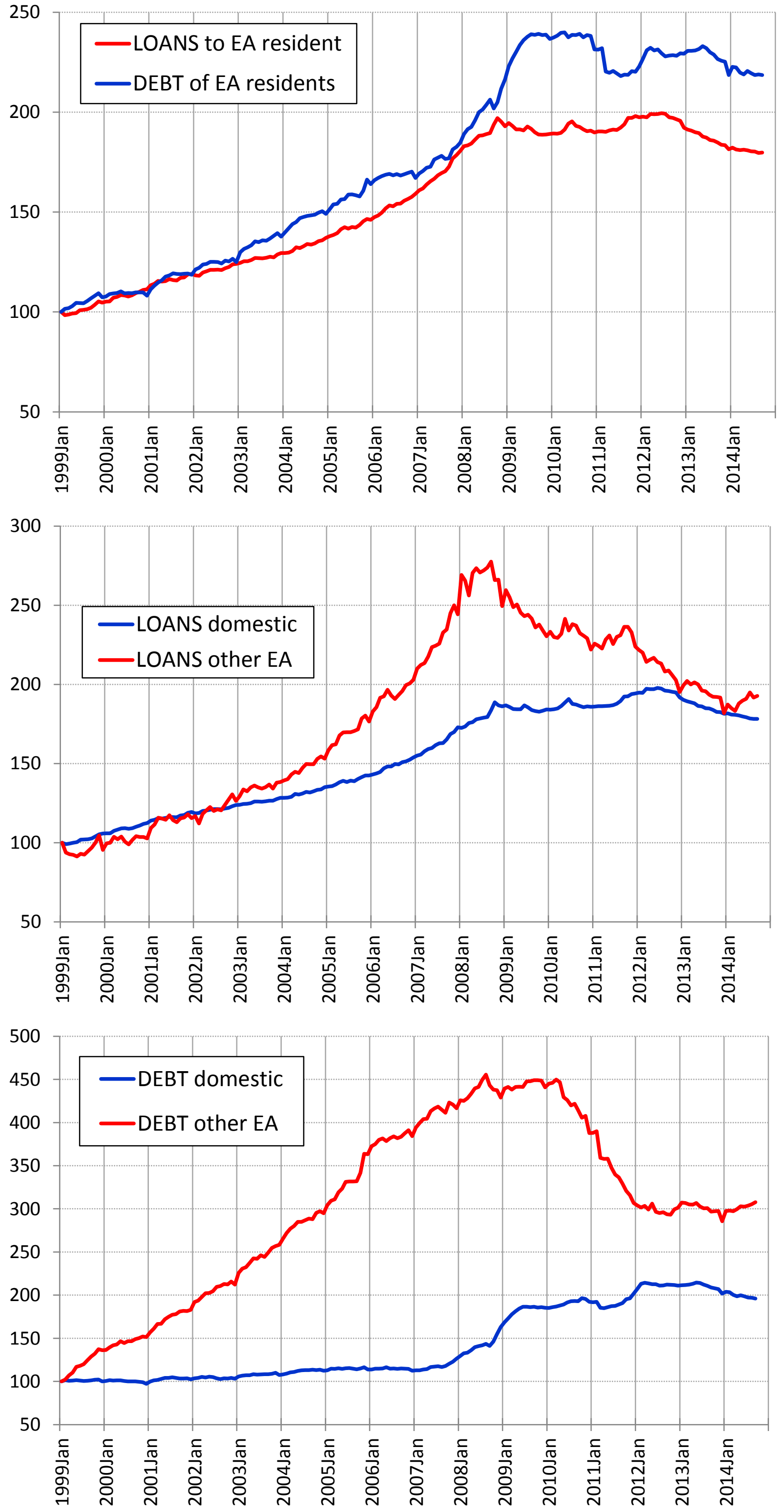
[19] For example, the European Commission even had to issue a statement in February 2013 trying to limit such activities, including intra-EU capital controls and other restrictions. According to Bloomberg (2013), "*The Commission took this action because it had been made aware that, on several occasions, national bank supervisors acted independently to impose allegedly disproportionate prudential measures on national banking subsidiaries of cross-border EU banking groups. The alleged measures in question include capital controls, restrictions on intra-*

cross-border loans and debt holdings has been as large as the previous increase had been, whereas the domestic component has remained more constant.

It is important to highlight that in 2013, when financial market stresses abated, the process of financial disintegration has not been reserved and instead cross-border bank loans continued to fall, while cross-border debt holdings remain broadly unchanged. In 2014 (our latest data is for September 2014) a slight increase in cross-border holdings started, yet the September 2014 levels are at, or even below, the January 2013 levels and well below the levels observed in 2008 and 2009.

group transfers and lending, limiting activities of branches or prohibiting expatriation of profits. These would have the effect of 'ring-fencing' assets, which could, in practice, restrict cross-border transfers of banks' capital and potentially constrain the free flow of capital throughout the EU." See at: http://www.bloomberg.com/news/2013-02-04/eu-warns-of-disproportionate-crackdown-on-cross-border-banking.html

Figure 35 Euro Area banks' loans and debt holdings – total, domestic and other euro-area (January 1999=100)



Source: Bruegel calculations using data from the ECB.
Note: "Loans" = loans to all (upper panel), domestic (middle panel) or other (lower panel) euro area resident sectors (both public and private issuers). This includes loans to other Monetary Financial Institutions; "Debt" = the item "securities other than shares" reported in the ECB's statistics on MFIs' balance sheet (further disaggregation

by specific instruments is not possible at the cross border level using ECB comparable data). Here all securities other than shares are considered, without disaggregating across issuing sectors. Data is available from January 1999 to September 2014.

Diversified evolution of "home bias" in banks' assets

The previous section introduced the issue of financial disintegration by looking at the euro area level. However, developments are even more striking if we look at the level of individual countries.

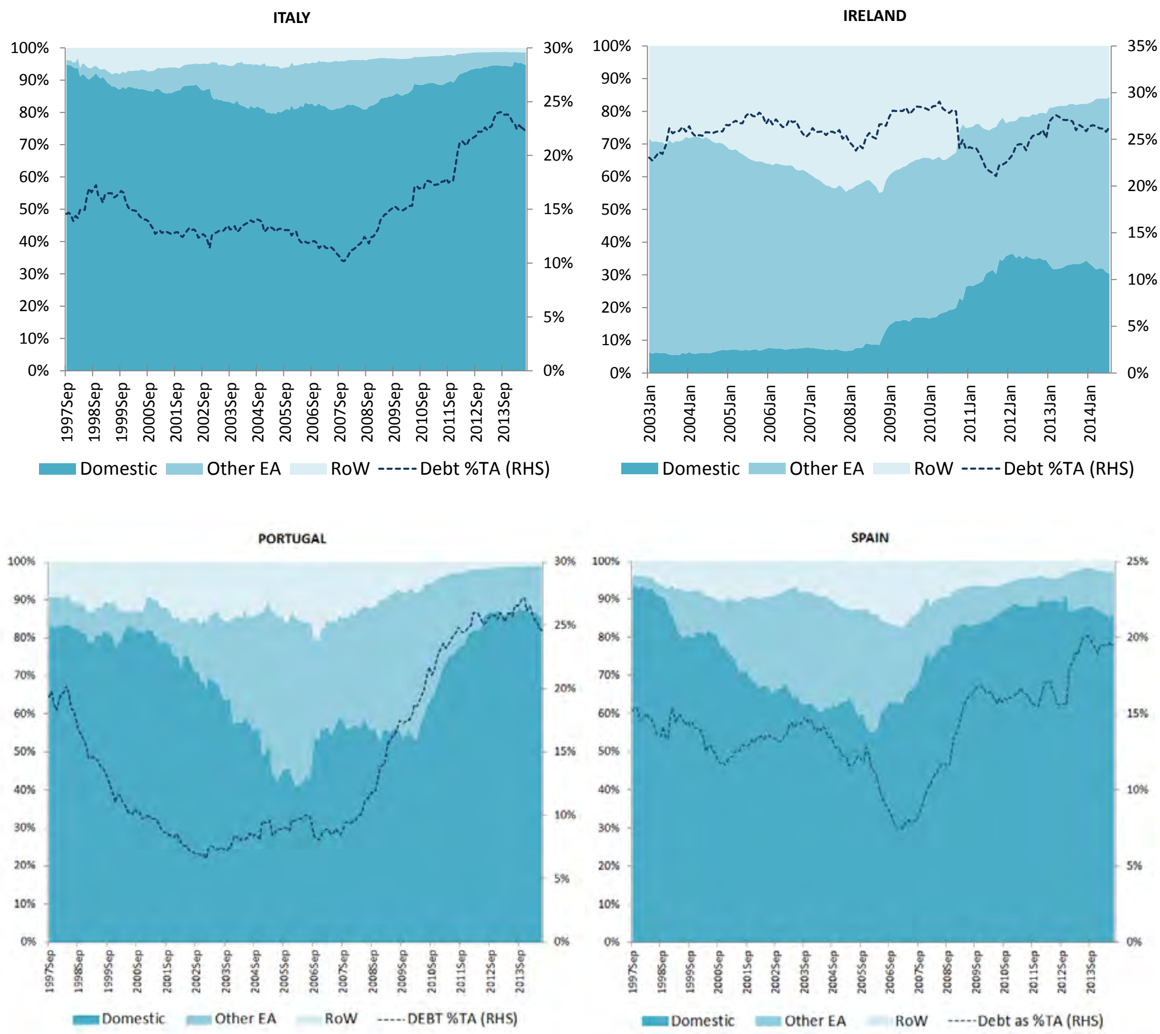
Figure 36 shows that the debt portfolios held by banks among their assets are geographically biased, and dominated by debt instruments issued by domestic entities (both public and private). The existence of long-lived forms of "home-bias" in banks' government debt portfolios has been a leitmotif in the European policy discussion over the last four years, because of its dangerous consequences for the banks. Despite being particularly pronounced in sovereign holdings, the home bias is however not necessarily an exclusive feature of this particular portfolio. Figure 36 shows for selected countries the total debt that is held by the banks as assets, disaggregating between external and domestic.

In Spain and Portugal, banks' debt portfolio became more and more diversified geographically between 1999 and 2006, when the share accounted for by domestic debt reached a minimum of 40 percent of the total portfolio in Portugal and 55 percent in Spain. However, already in late 2006 the share of domestic sectors in debt holdings increased and during the intensification of the global financial crisis, this process accelerated. By the end of summer 2013, almost 90 percent of banks' debt securities holdings were accounted for by domestic instruments. In both countries, these numbers are close to where they were before the introduction of the euro, suggesting that the international diversification achieved during the first seven years of currency unification was almost completely reversed. More recently (2013-14), there was a small reduction in the share of domestic sectors in holdings of debt instruments, but this was very minor relative to the reversal between 2006 and 2011.

Ireland and Italy are instead extreme cases in two diametrically opposed directions. In Italy, banks' debt securities holdings never really internationalised in the first place, as the share accounted for by domestic securities never fell below 80 percent, even in the years of financial integration. In Ireland, instead, domestic debt holdings were almost non-existent (below 10 percent) until 2008. The euro crisis led to renationalisation even in Ireland, where the share of domestic holdings is now around 30 percent, an unprecedentedly high value for this country.

The timing is also very interesting, as it gives insights as to the possible underlying drivers of these developments. The increase in domestic debt holdings in the Southern countries started in 2006 in Portugal and Spain and in late 2008 in Ireland. The process has accelerated in Portugal in late 2009 and the peak was reached in all three countries in 2011-12, along with the intensification of the sovereign debt crisis.

Figure 36 Debt held by banks in selected countries as assets: domestically vs. foreign issued (percent of all debt holdings) and debt as the share of total assets (percent of all assets)

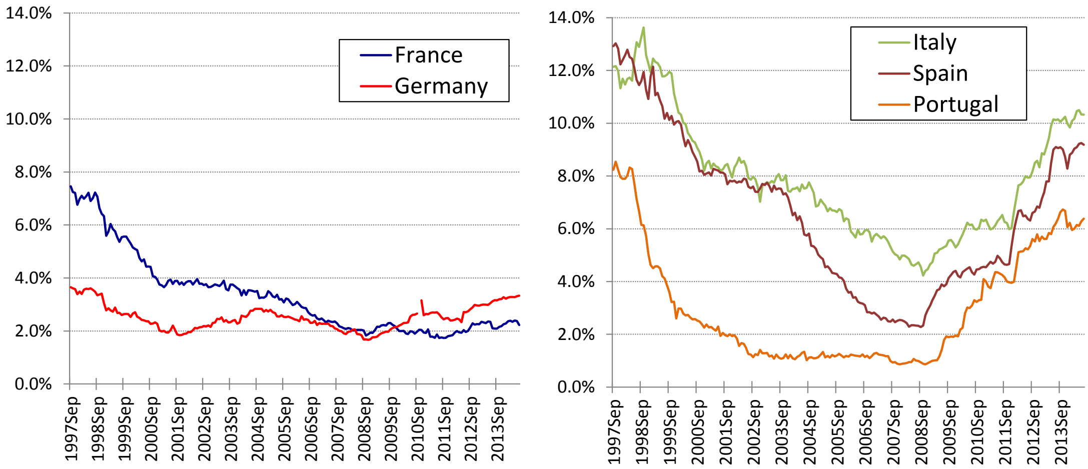


Source: Bruegel calculations using data from the ECB and national central banks. Note: Data is available from January 1999 to September 2014.

Sovereign over-exposure

The previous section showed evidence that, especially in the South of the euro area, the weight of debt instruments on banks' balance sheet has as a share of banks' total assets and it has been progressively renationalising. A pertinent question is whether or not this debt was issued by public or private sectors. The answer is that domestic public sector debt appears to be the most important component in explaining the increase of banks' debt holdings in the South. For example, public debt securities increased from 20 percent to almost 50 percent of the domestic debt portfolio held by Spanish banks; in Ireland, they grew from almost zero to about 20 percent. As a result, banks' holdings of domestic debt have reached everywhere new heights in terms of banks' total assets (Figure 37). On the other hand, this was not the case in France and Germany.

Figure 37 Holdings of domestic general government debt (percent of total assets)

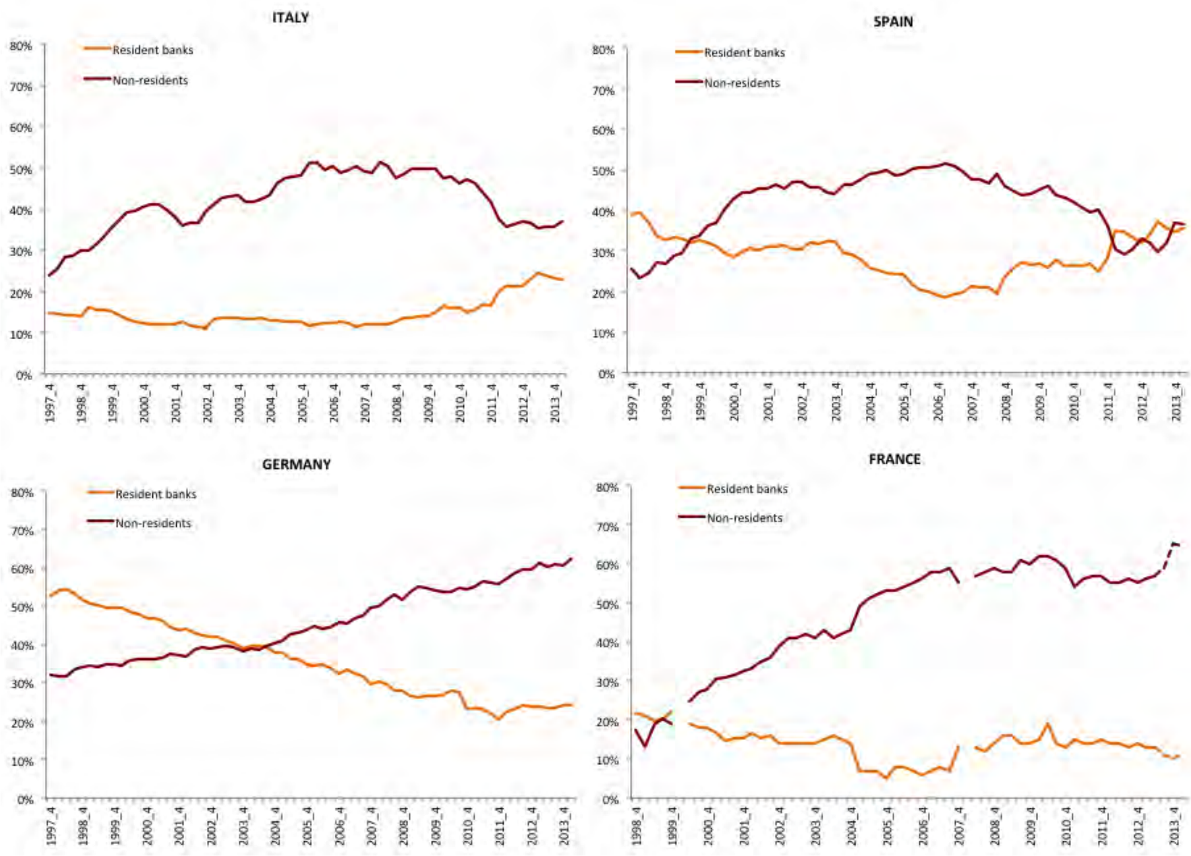


Source: Bruegel calculations using data from the ECB. Note: Data is available from January 1999 to September 2014.

The sovereign bond market is probably where the financial integration induced by the euro and successive disintegration induced by the crisis are more strikingly evident. The run up to the introduction of the single currency coincided with the convergence of government bonds yields across the euro area and with the internationalisation of sovereign bond markets. Before the crisis, in 2007, euro-area countries appeared to be characterised by large foreign holdings of sovereign debt. The share of non-residents in total holdings had been growing significantly since the introduction of the euro (Figure 38).

In general it is not possible to have a disaggregation between other euro-area residents and non-euro area residents, but Lane (2006) showed that after the introduction of the single currency, cross-border debt portfolios became more ‘EMU-oriented’ across the euro area. This means that the proportion of cross-border security holdings accounted for by Economic and Monetary Union partners increased.

Figure 38 Share of holding of government bonds by domestic banks vs. non-resident investors



*Source: Bruegel database of sovereign bonds holding (*http://www.bruegel.org/datasets/*)*
Note: "non-residents" include all investors that are not resident in the country; "domestic banks" include all banks incorporated in the country (including subsidiaries of foreign banks, but not branches);

Since the beginning of the crisis this trend has reversed concerning bonds issued by the governments of the Southern euro area countries, while the share of non-residents in the holdings of German and French debt continued to increase. This suggests that non-residents shifted their portfolios toward safer investments. The share that was being off loaded by non-resident investors has instead increasingly been taken up by domestic banks, in an attempt to moderate the rise in yields. In a historical perspective, domestic banks in continental Europe used to hold significant shares of domestic public debt even before the crisis, but the share sky-rocketed over the last 5 years, reinforcing the sovereign-banking vicious circle.

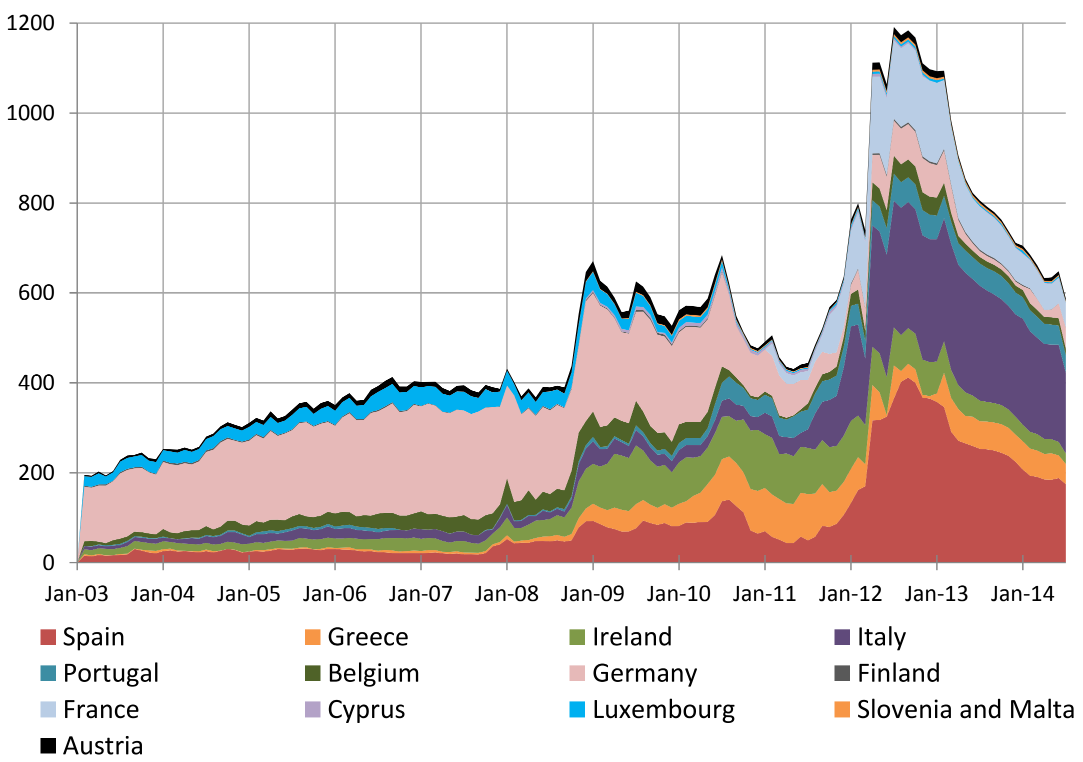
The existence of long-lived forms of "home-bias" in banks' government debt portfolios is long known. The reason why banks in Europe hold so much government debt is possibly twofold (Merler and Pisani-Ferry 2012). Government bonds are appealing because they can be easily used as collateral (both on the interbank markets in normal times and for central banks' emergency lending in troubled times) and because the Basel regulatory framework allows for the zero-risk weighting of bonds issued by euro-area governments. This might explain why banks' balance sheets are loaded with government debt, but they are not sufficient to explain the "home bias" in debt holdings. Governments may have exercised some (more or less implicit) form of pressure on banks. The introduction of the euro and the consequent convergence of interest rates to the German levels removed the rationale for such 'financial repression' and coincided with a decline in banks' holding of domestic government debt. But the temptation to resort to some form of 'financial repression' might have returned in crisis time.

Financial fragmentation in sovereign and private lending rates

The divergence of sovereign yields in the context of strong connections between banks and sovereigns has resulted in financial fragmentation and segmentation of risks along national borders. Banks located in weaker countries found increasing difficulty in refinancing on the market, due to the perceived poorer quality of the collateral they were holding. As a consequence of market segmentation along national borders, banks in weaker countries became increasingly dependent on the Eurosystem liquidity, (Figure 39). The extensive reliance on ECB liquidity may have set in motion and vicious circle, because (according to our discussion with various representatives of credit rating agencies) credit rating agencies considered high reliance on central bank support a negative factor.

We also highlight that while German banks, which were the main users of Eurosystem liquidity before the crisis, reduced their usage to a very small level after 2010, most likely due to the inflow of deposits and the willingness of other banks to fund German banks.

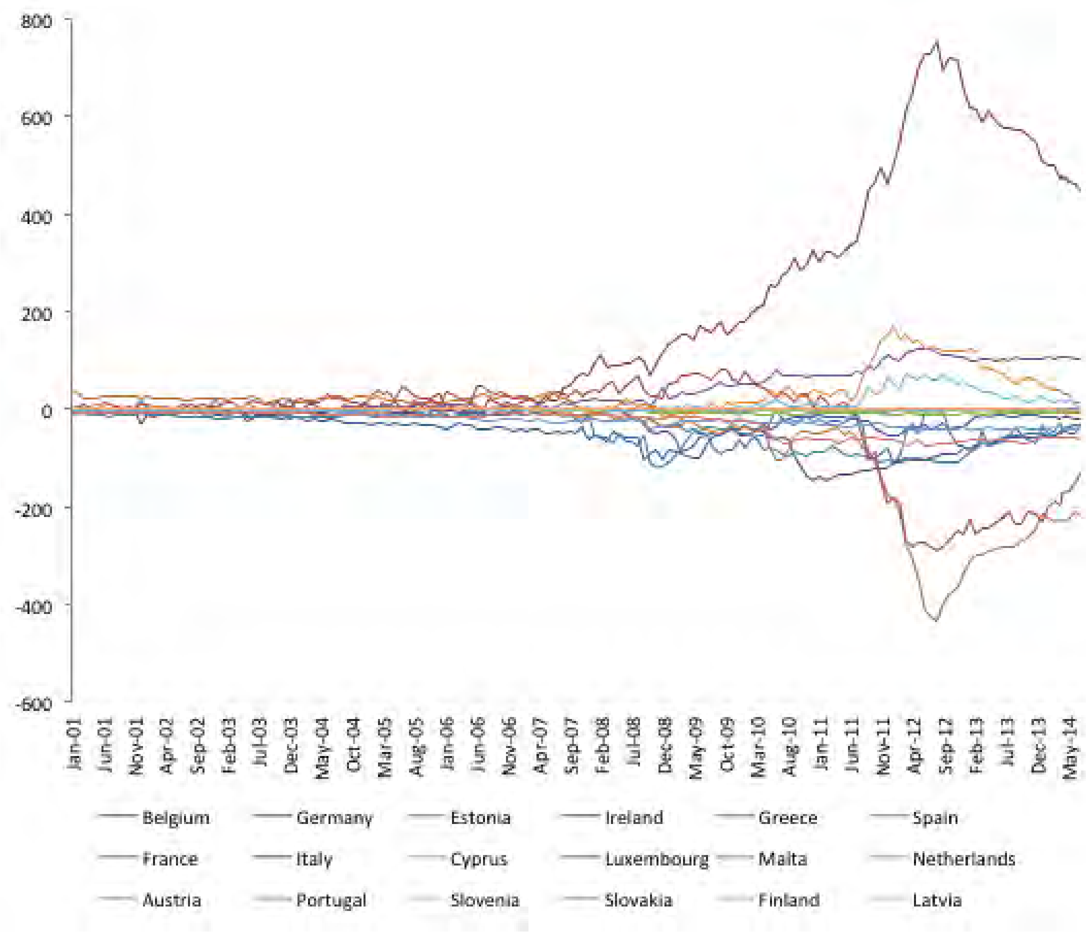
Figure 39 Use of Eurosystem liquidity (in € bn), January 2003 – July 2014



Source: national central banks.

These divergences have been reflected in the widening TARGET2 balances, widely discussed during 2011-12. TARGET2 is the Eurosystem's payment and settlement system which enables commercial banks to settle payment transactions in central bank money by crediting/debiting their current accounts at the respective national central banks (as explained at page 64, cross-border transfers of central bank money affect TARGET2 balances of national central banks vis-à-vis the ECB). Until 2007, TARGET2 positions remained close to balance (Figure 40). From 2007 (and more so with the intensifying of the sovereign debt crisis in 2010) the balances started to diverge, with Germany becoming the largest creditor. The huge divergence in TARGET2 claims and liabilities mirrors the increase in Eurosystem liquidity provision to banks in some euro-area countries.

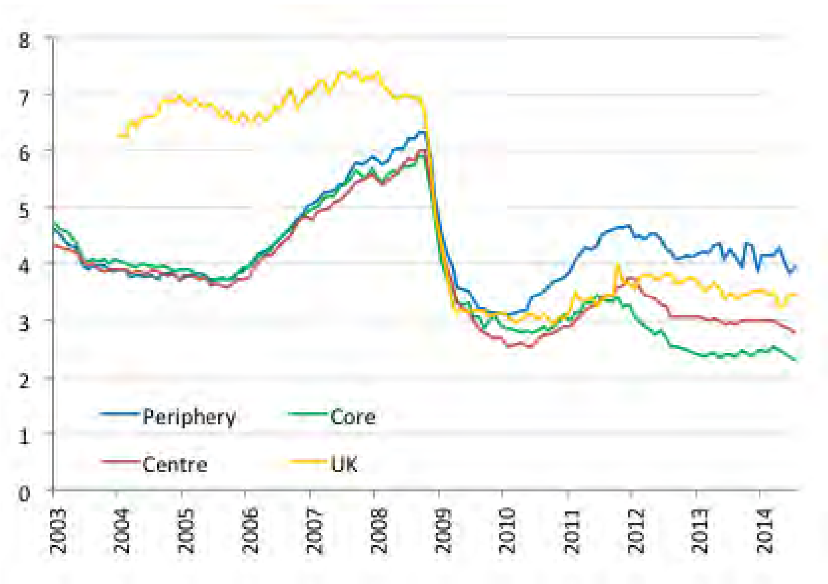
Figure 40 TARGET2 balances



Source: national central banks and Euro crisis Monitor.

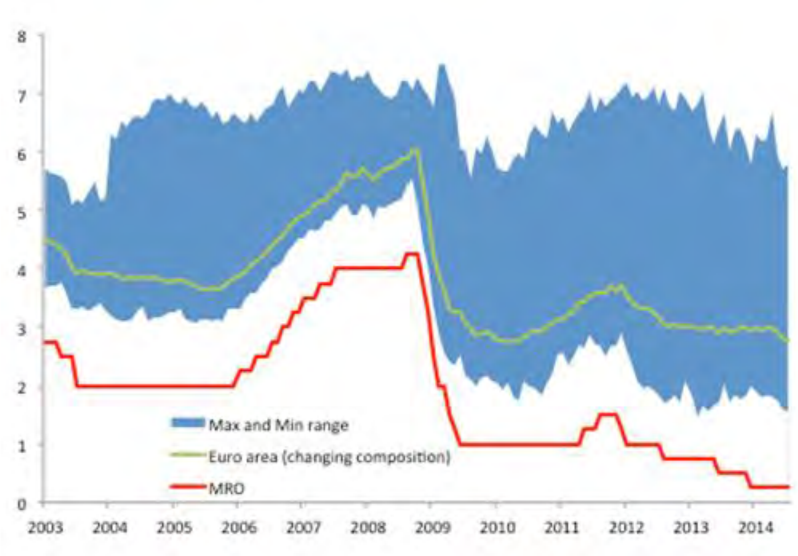
Banks have been said to use part of the funds borrowed by the ECB to buy more government bonds. Indeed, we do see a correlation (see figures above) between the peak in the TARGET2 imbalances and the underlying borrowing of ECB liquidity with the increase in banks' shares in total domestic debt holdings, but more investigation would be needed to clarify the matter. What is certain is that at the height of the crisis, given the very low interest rate at which banks were able to borrow from the ECB, investing in government bonds would ensure a considerable return on this carry trade. Target balances have narrowed significantly after the ECB introduced its OMT in late 2012, which eased tensions in government bond markets but did not pass through equally rapidly tointerest rates in the private sectors. In early 2013 banks were given the possibility to reimburse earlier the funds borrowed under the LTRO, and they used it, especially Spanish banks. This probably points to the effectiveness of the ECB's OMT in dispelling the concerns about the possible break-up of the euro and therefore easing the pressure for banks to hoard excess liquidity. As we already pointed out, this does not imply that financial disintegration toward the euro-area periphery reversed to any meaningful degree.

Figure 41 Dispersion of lending rates



Source: ECB.

Figure 42 Dispersion of lending rates vs. ECB refinancing rate



Source: ECB.

At the same time, and given the importance of banking intermediation in the European financial market, financial fragmentation and heightened uncertainty have had a strong negative impact on the private sector and the real economy. Distressed banks in the weaker countries have been cutting their lending considerably to the real economy, thus contributing to the worsening of growth prospects. Lending rates in the

Periphery are significantly higher than in the core, partly due to fact that lending risk is higher in these countries. The divergence in bank funding conditions is also an important factor in the differences in MFI loan interest rates that banks charge to non-financial corporations and households while at the same time financial fragmentation hinders the pass-through of monetary policy to lending rates, where it would be more warranted. Since late 2010, retail-lending rates have increased till mid-2012 (Figure 41 and Figure 42); even though policy rates have remained extremely low and this is partly related to the fact that banks' wholesale funding and lending rates are priced off (domestic) sovereign yields. However, the gap in lending rates persisted even after the ECB's OMT programme greatly re-absorbed the wedge in sovereign yields, suggesting that other factors were at play behind this divergence.

All the evidence presented in this section shows that the intensification of financial disintegration in 2010 was extremely rapid, but it has hardly shown signs of reversing even after the 2012 OMT considerably reduced the sovereign yield differentials. This may be the sign of a generalised lack of confidence, due both to the bleak economic outlook and uncertainty still remaining on the health of European banks. To the extent that this is the case, the ECB's comprehensive assessments and stress test of banks' balance sheets, as well as the ECB's assumptions of its new supervisory competences in the context of banking union, could be the most effective factor in meaningfully reverting the course of financial fragmentation. The slight recent improvements in cross-border lending and debt holdings during the first nine months of 2014 may already be the results of these ECB actions, but there is still a very long way to go to reverse financial disintegration.

5. Returns on investment

5.1 External annualized yield

In this section we assess returns on cross-border financial investments. We calculated the external annualized yield[20] by dividing the income flows (interest or dividend) by the stock of outstanding assets or liabilities. For the United States, for example, it is found that the cost of servicing its liabilities (which to a large extent comprise fixed income assets, partly reflecting the dominant role of the US dollar in the international monetary system) is much lower than the return on US investment abroad (which typically takes the form of various equity-type investments). Therefore, some authors have named the US the 'World Venture Capitalist' (Gourinchas and Rey, 2005)[21]. Table 3 below allows one to assess if some European countries share similar privileges.

The table reveals a significant country-heterogeneity in spreads between total returns on foreign assets and liabilities. In the pre-crisis period (2004-06), countries from CEE (Bulgaria, Czech Republic, Latvia, Lithuania, Poland, Romania and Slovenia) have experienced non-negligible negative spreads for equity. The reason is that the return foreign investors made on investment in the CEE region yielded unusually large returns, mostly well over 10 percent per year. By contrast, return on equity assets rarely exceeded 10 percent per year (only in the cases of Estonia and Hungary in 2004-06).

It is interesting to note that in 2004-06, only six of the nineteen EU countries for which we have data recorded positive spreads on equity, while the number of EU countries with positive spreads on equity is seven out of twenty-three in 2007-10 and nine out of twenty-three in 2010-13. These results suggest that most EU countries are either excellent places offering high returns on equity investments, or investors of EU countries made poor investments abroad. However, the largest 'core' EU countries, Germany, the Netherlands, Sweden and the United Kingdom, maintained positive investment spreads throughout the periods taken into consideration, while France had similarly positive spreads in the latest two periods for which data is available (2007-10 and 2011-14)[22]. These countries, therefore, tend to share the privileges that the US benefits from, though the table highlights that the positive equity spreads in the US are well above the positive spreads in these EU countries. Japan benefited from even larger positive equity investment spread than the US in 2011-14. Unfortunately Japanese data is not available for earlier periods. Also, when calculating a simple un-weighted average of "new" EU member states (countries that joined the EU between 2004-2013) and "old" member states (members before 2004), it turns out that for old member states the average spread is slightly positive (0.2 percent per year) in all three sample periods indicated (Table 6). For new member states, the spread on equity is consistently negative at about 4 percent per year.

On the debt side, the US benefited from positive spreads in 2004-2006, which then fell to zero in the latter two periods. In contrast to equity, most EU countries received positive spreads in all three periods, though these spreads are typically small except in

[20] The **external annualized yield** is derived on a quarterly basis by dividing receipts for payments on the income balance in quarter T by the market value of external assets or liabilities from the NIIP in quarter T-1, which is then factorized in order to express the returns at the annual level.

[21] Gourinchas, Pierre-Olivier and Hélène Rey (2005) 'From World Banker to World Venture Capitalist: US External Adjustment and the Exorbitant Privilege', NBER Working Paper No. 11563

[22] There was also a sizeable positive spread in Greece, but it resulted in negative returns on equity liabilities in 2011-14.

central and eastern European countries. Interestingly, the Czech Republic, Hungary, Poland and Romania had rather high returns on debt-type foreign assets relative to other countries, while the returns on their debt-type liabilities were broadly similar to other countries.

Overall, larger 'core' EU countries such as Germany, France, Finland, the Netherlands, Sweden and the United Kingdom 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 due to very high returns on their liabilities, although they had the remarkable privilege of large positive spreads on debt type foreign assets. At the same time, the USA's privilege on debt instruments was eliminated, while Switzerland's privilege improved over EU countries, nearly approaching the positive spread of Japan. It is also worthwhile highlighting that the vulnerable euro-area periphery countries (with the exception of Greece) do not display largely negative tendencies for returns on foreign assets and liabilities relative to other EU countries.

5.2. Revaluation Effects

We present the developments in the valuation of assets and liabilities from 2007Q1 to 2013Q4 that arose from changes in market value or from exchange rate movements[23]. The calculations of the accumulated revaluation effects are made in the following way. At any point in time the current stock can be decomposed into the initial stock at some earlier period, 0, the accumulated sum of flows, and the accumulated sum of revaluations. A counterfactual series of the initial stock and the accumulated flows is created, and the percentage difference between the actual series (which includes all revaluation effects) and counterfactual (which by construction ignores revaluations) is taken to be the accumulated revaluation effect.

Table 4 presents the accumulated revaluation effects in a similar structure to the above table of investment performance, with breakdowns by instrument type – *debt* (sum of debt instruments and other investment) and *equity* (sum of equity and FDI) – and by time period (2007Q1-2010Q4 and 2011Q1-2013Q4). Revaluation effects also show sizeable heterogeneity both across countries, and through time (when considering the break-down into two sub-periods 2007Q1-2010Q4 and 2011Q1-2013Q4).

Revaluation effects were diverse across countries. The USA, Switzerland and Japan suffered from a relative revaluation loss on equity, thereby providing risk-sharing to the rest of the world. In contrast, old EU member states benefitted from gains on their net equity holdings, while in the newer member states revaluation of equity was close to zero in the full period. The 'revaluations spread' was the opposite on net debt assets: USA, Switzerland and Japan had positive spread, while old EU member states had negative spreads.

Taking a closer look at country level results, we see that Germany suffered from the worst euro area revaluation spreads (revaluation of assets minus revaluation of liabilities) in equity of -11.2% and joint worst revaluation, alongside Spain, in debt instruments of -8.7%. Over the two sub-periods, we see these losses are largely due to events in the period 2007-10. Due to the high variation over time, the panels of Figure 44 show the evolution of these revaluation effects through time for select economies (Germany, France, Spain, Italy, Portugal and the United States). A

[23] Missing data does not allow the calculation for earlier periods.

comprehensive collection of these revaluation graphs can be found in the chart annex at the end of the document.

For instance, while the United States reported significant gains in debt assets, revaluation of debt liabilities were minor. We can see that US equity asset holdings as well as liabilities actually suffered large losses of up to 20% in late 2008 and into 2009, before experiencing a reversal from 2010 onwards.

5.3.Total Returns

Total returns are calculated as the simple addition of revaluation effects and returns on investments (see Table 5). Of the larger economies in Europe, Germany and Italy suffered negative total returns on their equity asset holdings in the 2007-10 period of -7.4% and -4.4% respectively. The Baltic countries showed large dispersion with total returns of -17.5% for Estonia, +0.7% for Lithuania and +23.1% for Latvia. The vast majority of these effects for Latvia and Estonia arose from revaluation effects as opposed to extremely outsized returns.

For CEE countries, the picture is somewhat mixed. While Romania and Poland have asset holdings that performed relatively poorly, this is compensated for by stronger revaluations (Poland: 15.4% revaluation and 1.4% return, 19.8% and 2.1% for Romania). For the Czech Republic returns of 9.2% are nearly completely undone by revaluation losses of 8.7%. For Bulgaria and Slovenia the revaluation losses outweigh the returns (-3.1% versus 1.3%, -11.6% versus 1.2%).

When turning attention towards spreads, as opposed to purely focusing on asset holdings, we see a similar picture – Germany’s revaluation losses of -6.7% more than outweigh the gains of +0.4% in 2007-10 when considering the spread. This continues into the period 2011-2013, where revaluation losses of -3.0% outpace investment returns of just 0.4 in terms of spreads.

One should note that those countries showing extremely large positive total returns (in spreads) have typically benefited from a collapse in value of their liabilities (For example, in the latter period Greek liabilities fell in value by approximately 38 percent and the return on investment, -4.2% is proportionately much smaller).

Figure 43 presents scatter plots of returns against revaluation effects. In the 2007-10 period, there appears to be no discernible pattern between returns and revaluations. In the second period, 2011-2014, there appears to be less dispersion and a stronger correlation for assets and liabilities individually. The correlation between returns and revaluation effects remains small for spreads in both periods (Table 7), which suggests that revaluation gains did not tend to compensate for low returns.

Table 3 External annualized yields for 24 EU countries and United States, Japan and Switzerland (in %)

	Equity									Debt								
Countries	2004-2006			2007-2010			2011-2014			2004-2006			2007-2010			2011-2014		
	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S
Austria	5.5	5.8	-0.3	4.4	3.5	0.9	4.9	4.4	0.4	3.5	3.5	0.0	3.4	3.5	-	2.4	2.8	-
Belgium*	4.5	5.3	-0.8	3.6	4.5	-	2.0	3.2	-	3.4	3.4	0.0	3.3	3.0	0.3	2.4	1.7	0.7
Bulgaria	2.1	10.1	-7.9	1.3	6.8	-	0.8	4.3	-	4.7	3.8	0.9	4.5	3.2	1.3	3.8	2.6	1.2
Cyprus**	8.6	17.0	-8.3	7.2	12.9	-	2.5	4.0	-	3.0	2.5	0.5	2.9	2.2	0.7	2.7	2.1	0.6
Czech Republic*	9.1	12.5	-3.5	9.2	12.7	-	6.7	11.4	-	9.7	6.0	3.7	7.0	4.5	2.5	4.1	3.1	1.0
Estonia	13.1	10.4	2.7	8.6	10.6	-	7.0	10.3	-	2.4	2.7	-	2.8	3.0	-	1.4	1.4	0.0
Finland	6.5	5.2	1.3	5.8	5.4	0.3	4.5	5.9	-	3.5	3.4	0.1	2.8	3.0	-	1.2	1.6	-
France**	2.2	1.4	0.8	3.6	2.5	1.1	4.1	2.7	1.5	2.3	2.1	0.2	3.7	3.2	0.5	2.3	2.0	0.3
Germany	5.7	4.7	1.0	4.9	4.5	0.4	5.6	4.8	0.8	3.8	3.5	0.3	3.6	3.1	0.5	2.5	1.7	0.8
Greece***	-	-	-	1.9	1.7	0.2	1.5	-4.2	5.7	-	-	-	2.0	3.4	-	1.3	1.7	-
Hungary	12.4	9.5	2.9	8.1	8.4	-	6.4	7.6	-	5.3	4.0	1.3	6.3	4.0	2.3	6.0	3.8	2.3
Ireland	3.2	6.8	-3.5	3.1	5.7	-	3.1	4.2	-	3.3	3.2	0.1	3.1	3.2	-	1.7	1.9	-
Italy***	-	-	-	4.7	5.0	-	3.2	3.9	-	-	-	-	2.9	3.1	-	1.8	1.8	0.0
Latvia	5.9	15.1	-9.2	0.6	1.5	-	3.2	6.9	-	5.7	2.9	2.8	5.2	3.5	1.8	2.3	1.9	0.4
Lithuania	4.1	10.8	-6.7	0.6	4.0	-	3.1	9.0	-	6.5	3.5	3.0	5.9	4.2	1.8	3.2	3.7	-
Luxembourg	3.0	3.5	-0.5	2.9	3.4	-	4.2	4.1	0.2	2.8	1.8	1.0	2.9	2.1	0.8	2.4	2.0	0.3
Netherlands	5.9	4.7	1.2	4.6	4.6	0.0	4.5	3.8	0.6	3.2	3.3	-	3.0	3.1	-	2.0	1.9	0.1
Poland	4.6	11.9	-7.2	1.4	9.0	-	3.0	7.9	-	6.2	3.5	2.6	7.6	3.7	3.9	7.6	3.5	4.2
Portugal	5.1	5.2	-0.1	5.7	6.3	-	4.7	4.9	-	3.0	3.0	0.0	3.2	3.4	-	1.9	2.4	-
Romania	-6.3	15.6	-	2.1	5.4	-	4.0	3.4	0.6	8.2	4.9	3.3	9.6	4.3	5.3	5.1	3.5	1.7
Slovenia	2.9	7.6	-4.8	1.2	5.4	-	-	2.2	-	3.7	3.1	0.7	2.6	3.1	-	2.0	2.5	-
Sweden	8.2	7.0	1.2	8.3	6.5	1.8	6.8	5.2	1.6	3.5	3.6	-	3.5	3.2	0.3	1.8	1.9	-
United Kingdom	7.6	5.4	2.2	6.0	3.7	2.3	5.5	4.2	1.3	3.1	3.1	0.0	2.8	2.8	0.0	1.2	1.5	-
Japan	-	-	-	-	-	-	6.9	2.7	4.1	-	-	-	-	-	-	2.2	0.6	1.7
Switzerland*	8.0	4.8	3.2	4.2	4.5	-	3.9	3.3	0.5	3.0	3.1	0.0	2.9	2.8	0.1	2.3	1.3	1.0
United States**	6.2	4.2	2.0	6.4	3.5	2.9	5.7	3.2	2.5	5.4	4.7	0.7	3.2	3.3	-	1.7	1.8	0.0

Source: Bruegel calculations using data from Eurostat and IMF. Note: 'Equity' groups together 'Direct Investment' and 'Portfolio investment – equity', while 'Debt' consists of 'Other investments' and 'Portfolio investment – debt'; A = Assets, L = Liabilities, S = Spread *between assets and liabilities, Data up to 2014Q1, and up to 2013Q4 for Ireland, France, US, Japan and Switzerland; no data for Slovakia, Malta, Denmark and Spain; *data starts in 2005 **data starts in 2006 ***data starts in 2008;*

Table 4 Revaluation Effects by period for selected countries (in %)

	Equity									Debt								
Countries	2007Q1-13Q4			2007Q1-10Q4			2011Q1-13Q4			2007Q1-13Q4			2007Q1-10Q4			2011Q1-13Q4		
	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S
Austria	-6.0	-	7.0	-	-	1.8	3.3	-1.5	4.8	1.3	4.3	-3.0	0.4	3.1	-2.8	1.6	3.0	-1.4
Belgium	1.4	-9.7	11.2	3.4	-8.3	11.7	-1.6	-1.0	-0.6	-	-	-0.8	-0.2	2.6	-2.8	-	-	1.8
Bulgaria	-	-4.4	-13.8	-3.1	-0.4	-2.7	-	-5.6	-9.8	-	-5.1	-9.1	-2.1	-3.8	1.6	-	-0.9	-11.3
Cyprus							-	-	-22.3							-	-	-1.2
Czech	2.1	6.0	-3.9	-8.7	8.6	-17.2	12.4	-1.7	14.1	-0.5	4.4	-4.9	-	-2.4	-7.9	9.5	8.0	1.5
Germany	-9.6	1.7	-11.2	-	-5.6	-6.7	3.1	6.1	-3.0	-2.1	6.6	-8.7	-2.4	4.2	-6.6	1.4	4.9	-3.5
Denmark	11.7	6.3	5.4	5.7	-1.8	7.4	8.4	7.3	1.0	1.4	-0.8	2.2	1.5	-0.9	2.4	1.8	2.0	-0.2
Estonia	-	-	-1.1	-	-	-6.0	8.6	6.3	2.3	8.2	7.3	0.9	8.2	5.9	2.2	2.4	-1.5	3.9
Greece							-9.1	-	29.1							-5.9	-6.5	0.5
Spain	-	-9.3	-4.6	-7.8	-	5.4	-5.0	0.1	-5.1	-	-3.3	-8.7	-	-3.1	-6.9	-0.4	0.9	-1.3
Finland	4.6	-	31.5	0.2	-	29.9	6.1	4.9	1.2	-9.9	-	0.5	-1.2	-2.2	1.0	-8.1	-7.0	-1.0
France										8.7	8.3	0.4	1.4	3.1	-1.7	8.5	7.2	1.4
Croatia				-	-	6.3							-	2.0	-12.7			
Hungary	5.6	2.6	3.0	6.1	7.9	-1.8	4.5	-3.2	7.7	-	17.0	-31.7	-	4.1	-20.2	12.8	17.2	-4.3
Ireland	32.9	24.0	8.9	12.3	11.3	1.0	20.0	14.8	5.1	7.2	10.2	-3.0	3.6	6.0	-2.4	5.7	2.1	3.6
Italy				-9.1	-	22.9							-6.1	-7.2	1.1			
Lithuania	-3.2	-	11.4	0.2	-	19.3	-4.0	2.6	-6.5	-	6.5	-21.4	-4.8	2.7	-7.5	-	4.5	-14.9
Luxembourg				-0.1	2.9	-3.0							-6.3	-	10.7			
Latvia				22.5	-7.4	29.9							0.3	2.6	-2.2			
Malta				-8.3	63.6	-71.9							20.6	1.6	19.1			
Netherlands	9.4	-	26.8	0.4	-	25.5	9.5	7.6	1.9	4.1	13.0	-8.9	0.1	12.5	-12.4	5.3	1.0	4.3
Poland	25.5	19.0	6.5	15.4	12.4	3.0	8.5	6.1	2.3	-	9.8	-24.0	-	5.4	-26.0	7.2	5.7	1.5
Portugal	-2.3	-8.9	6.6	0.9	-1.7	2.7	-3.0	-8.4	5.5	-	-2.4	-8.1	-5.8	-2.7	-3.0	-2.6	2.8	-5.4
Romania	27.1	19.7	7.4	19.8	10.3	9.5	14.7	10.7	4.0	50.3	37.2	13.1	32.0	30.0	2.1	17.4	9.8	7.5
Sweden	-0.6	5.4	-6.0	2.2	0.3	1.9	-0.6	6.5	-7.1	-	-1.9	-8.8	-9.5	-1.7	-7.7	-1.6	1.0	-2.6
Slovenia	-	-2.7	-12.7	-	-0.6	-11.0	-4.9	-2.1	-2.8	-	2.9	-21.2	-8.6	5.9	-14.5	-	-1.6	-10.1
Slovakia							9.8	-1.6	11.4							-3.1	0.6	-3.7
United	15.2	14.1	1.1	3.5	4.9	-1.4	10.3	12.4	-2.1	31.0	15.5	15.5	26.8	21.8	4.9	2.4	-4.7	7.2
Japan							8.3	13.0	-4.7							-	-8.7	-2.8
Switzerland	42.7	52.2	-9.4	27.4	26.2	1.1	14.1	21.7	-7.6	15.5	16.5	-1.0	8.9	14.6	-5.7	6.4	3.5	2.9
United	14.0	22.1	-8.2	0.0	-6.1	6.2	14.0	29.3	-15.4	29.0	3.4	25.6	22.0	1.7	20.4	5.4	1.8	3.6

Source: Bruegel calculations using data from Eurostat and IMF, for definitions see footnote in previous table.

Table 5 Total Return (Return on Investment plus Revaluation) for selected countries

	Equity						Debt					
Countries	2007-2010			2011-2014			2007-2010			2011-2014		
	A	L	S	A	L	S	A	L	S	A	L	S
Austria	-5.6	-8.3	2.7	8.2	3.0	5.2	3.7	6.6	-2.9	4.0	5.8	-1.8
Belgium	7.0	-3.8	10.8	0.4	2.2	-1.8	3.1	5.6	-2.5	-8.2	-10.7	2.5
Bulgaria	-1.8	6.5	-8.3	-14.6	-1.3	-13.3	2.4	-0.5	2.9	-8.4	1.7	-10.1
Cyprus	7.2	12.9	-5.7	-40.0	-16.2	-23.8	2.9	2.2	0.7	-9.5	-8.9	-0.6
Czech	0.5	21.3	-20.7	19.1	9.7	9.4	-3.3	2.1	-5.4	13.7	11.1	2.5
Estonia	-17.5	-9.5	-8.0	15.5	16.6	-1.1	11.0	9.0	2.0	3.8	-0.1	3.9
Finland	6.0	-24.2	30.2	10.5	10.8	-0.2	1.5	0.9	0.7	-6.9	-5.5	-1.4
France	3.6	2.5	1.1			1.5	5.1	6.3	-1.2	10.8	9.2	1.6
Germany	-7.4	-1.1	-6.3	8.7	10.9	-2.2	1.2	7.2	-6.1	3.8	6.6	-2.7
Greece	1.9	1.7	0.2	-7.6	-42.4	34.8	2.0	3.4	-1.3	-4.7	-4.8	0.1
Hungary	14.2	16.3	-2.2	10.9	4.4	6.5	-9.8	8.1	-17.9	18.9	20.9	-2.1
Ireland	15.4	17.0	-1.6	23.1	19.1	4.0	6.7	9.2	-2.5	7.5	4.0	3.5
Italy	-4.4	-27.0	22.6			-0.7	-3.1	-4.1	1.0	1.8	1.8	0.0
Latvia	23.1	-5.8	29.0			-3.6	5.6	6.1	-0.5	2.3	1.9	0.4
Lithuania	0.7	-15.2	15.9	-0.9	11.6	-12.4	1.1	6.9	-5.7	-7.2	8.3	-15.5
Luxembourg	2.8	6.3	-3.5			0.2	-3.4	-14.9	11.5	2.4	2.0	0.3
Netherlands	5.0	-20.5	25.5	14.0	11.4	2.6	3.1	15.6	-12.5	7.3	3.0	4.3
Poland	16.8	21.4	-4.7	11.4	14.0	-2.6	-13.0	9.0	-22.0	14.8	9.2	5.7
Portugal	6.6	4.6	2.1	1.7	-3.5	5.3	-2.6	0.6	-3.2	-0.7	5.2	-5.9
Romania	21.8	15.6	6.2	18.7	14.1	4.6	41.6	34.2	7.4	22.5	13.3	9.2
Slovenia	-10.5	4.8	-15.3	-7.1	0.2	-7.3	-6.0	9.0	-15.0	-9.8	0.9	-10.7
Sweden	10.5	6.8	3.7	6.2	11.7	-5.5	-6.0	1.5	-7.5	0.3	2.9	-2.7
United	9.5	8.6	0.9	15.8	16.7	-0.9	29.5	24.6	4.9	3.6	-3.2	6.8
Japan				15.2	15.7	-0.6				-9.2	-8.1	-1.1
Switzerland	31.6	30.8	0.8	18.0	25.0	-7.0	11.8	17.4	-5.6	8.7	4.8	3.9
United States	6.4	-2.7	9.1	19.6	32.5	-12.9	25.3	5.0	20.3	7.1	3.6	3.5

Source: Bruegel calculations using data from Eurostat and IMF; Note: The calculations for the second period treats the revaluations as 2011-2014, even though actual data ends in 2013Q4, not 2014Q1.

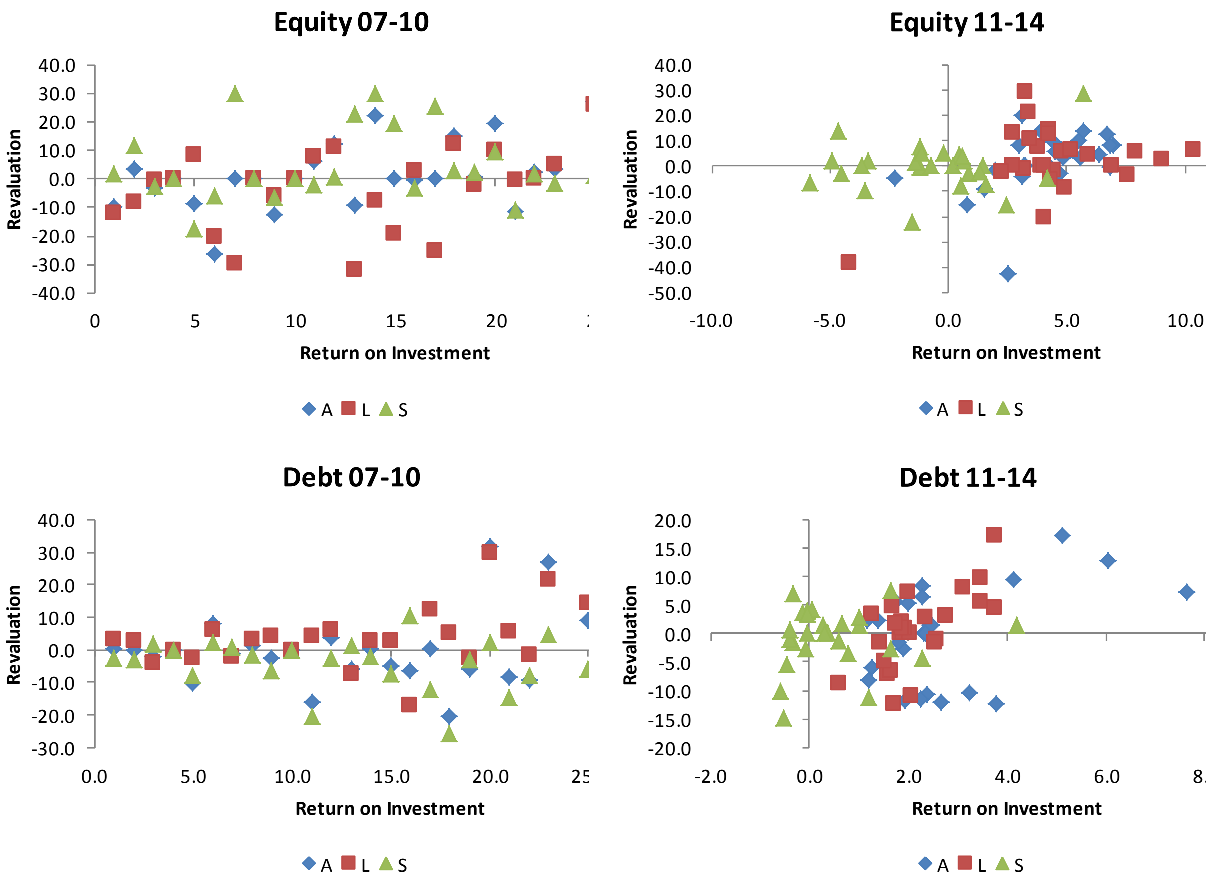
Table 6 Average Returns and Revaluations by New and Old EU member states and Non-EU countries

	Returns: Equity									Returns: Debt								
	2004-06			2007-10			2011-14			2004-06			2007-10			2011-14		
Countries	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S
NMS	7.6	11.9	-4.3	4.6	8.1	-3.5	3.7	7.4	-3.7	5.3	3.5	1.8	5.1	3.5	1.5	3.7	2.8	0.9
OMS	4.5	4.2	0.2	4.1	3.9	0.2	3.8	3.6	0.2	2.7	2.6	0.1	2.7	2.6	0.1	1.7	1.6	0.0
Non EU	7.1	4.5	2.6	5.3	4.0	1.3	5.5	3.1	2.4	4.2	3.9	0.3	3.1	3.1	0.0	2.1	1.2	0.9

	Revaluations: Equity									Revaluations: Debt								
	2007-2013			2007-10			2011-13			2007-2013			2007-10			2011-13		
Countries	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S	A	L	S
NMS	0.2	-0.4	0.5	-4.1	-1.8	-2.3	4.2	1.3	2.9	-9.1	8.0	-17.1	-8.7	3.6	-12.3	1.6	5.4	-3.7
OMS	5.0	-3.4	8.4	0.1	-7.3	7.4	5.2	4.6	0.6	-0.1	2.7	-2.8	1.3	4.8	-3.5	-0.7	-1.0	0.3
Non EU	28.3	37.1	-8.8	13.7	10.1	3.6	12.1	21.3	-9.2	22.2	9.9	12.3	15.5	8.1	7.3	0.1	-1.1	1.2

Source: Bruegel calculations using data from Eurostat and IMF; Note: NMS: New Member States: CY, CZ, EE, HU, LV, LT, PL, SV; OMS: Old Member States: AT, BE, DE, ES, FR, IT, NL, PT, SE, UK; the first columns vary between ***Returns (2004-06)*** *and* ***Revaluations (2007-2013).***

Figure 43 Scatter plots of returns on investment against revaluations (in %)



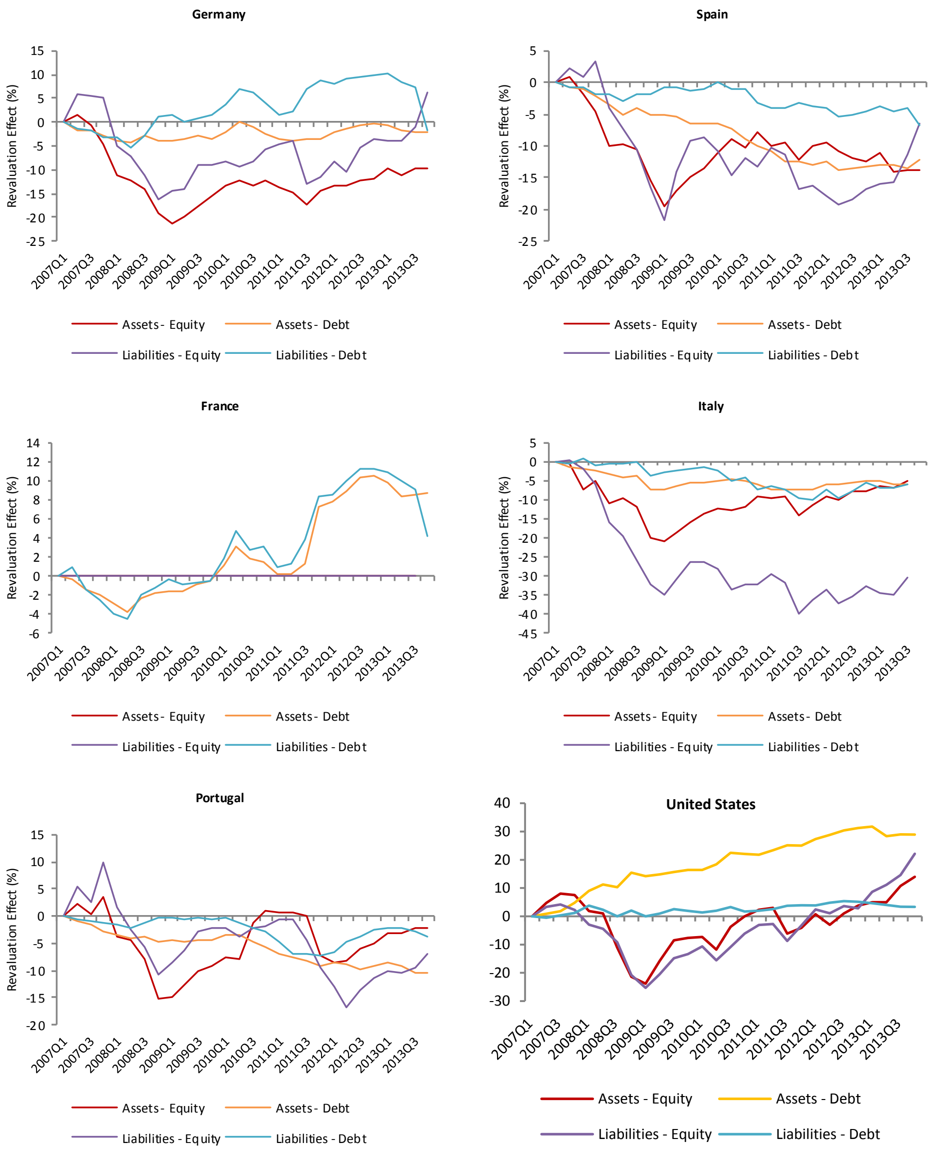
Source: Bruegel calculations using data from Eurostat and IMF;

Table 7 Correlation between returns and revaluations (in %)

	Correlation						
	Equity				Debt		
	A	L	S		A	L	S
2007-2010	-0.380	0.146	0.184		-0.015	0.265	-0.320
2011-2014	0.438	0.297	0.161		0.405	0.666	0.118

Source: Bruegel calculations using data from Eurostat and IMF;

Figure 44 Evolution of revaluation effects for selected countries (in %)



Source: Bruegel calculations using data from Eurostat and IMF;

6. In-depth analysis: dataset on bilateral capital flows and stocks

The in-depth analysis focusing on a bilateral capital flows and stocks dataset covers five main areas.

6.1. Setting up the dataset

There are limited statistics available on cross-border capital flows and stocks on a bilateral basis, and the most comprehensive work has been completed by Waysand, Ross and de Guzman (2010), which included data for 2001-2008. Hobza and Zeugner (2014) updated the bilateral dataset of Waysand, Ross and de Guzman (2010) for 2001-2012. They also introduced two methodological improvements for constructing the dataset: (1) they adopted a simple but straightforward approach to account for valuation effects when deriving capital flows data from the available stock data and (2) they proposed a methodology to make bilateral claims consistent, because the reported bilateral data by the two countries considered are in many cases not consistent (i.e. country A's asset from country B, as reported by country A, differs from the liability of country B to country A, as reported by country B).

An update of Hobza and Zeugner (2014) could serve two main goals. First, adding one more year and extending the dataset till the end of 2013 can bring new insights, since financial stresses in Europe have eased significantly throughout 2013 compared to 2012. Second, an update can serve as a cross check, since Hobza and Zeugner (2014) honestly report that in some cases when dealing with data of financial centres, they adjusted several estimated flows through visual inspection and scaling.

We planned to update the dataset and obtained the necessary confidential date till the end of 2013 from the BIS and downloaded the portfolio investment survey of the IMF, but unfortunately the OECD's bilateral FDI database is available only till 2012. We therefore could not update the dataset of Hobza and Zeugner (2014), but instead used the confidential version of their dataset for our calculations.

We converted this dataset into STATA files and collected several other relevant indictors:

Table 8 Dataset variables

Variable	Description
Reporter country	String, country name
Partner country	String, country name
ID reporter_partner_year	Unique identifier of a pair reporter/partner in each year
id_rep_year	Unique identifier of a pair reporter/year
id_pt_year	Unique identifier of a pair partner/year
Bilateral trade	The sum of exports of country A to country B and imports of country A from country B (source: IMF Direction of trade statistic)
debt	Capital flows/stocks variables from the ECFIN dataset
equity	

Fdi	
official	
othinv	
pidebt	
piequity	
programme	
smp_ecb	
target_ecb	
value	

Macro variables

We added a set of basic macroeconomic variables taken from IMF World Economic Outlook and World Bank World Development Indicators (since we aim at also including in the dataset, countries for which Eurostat does not provide data).

Each observation of bilateral capital flows has been matched with the following variables for both the reporting and the partner country.

cagdp_r/p	Current Account percent GDP
gdpusdbn_r/p	GDP USD billions
ggdebtgdp_r/p	General Government Debt percent GDP
ggnlbgdp_r/p	General Government Net Lending/Borrowing percent GDP
Unemployment_r/p	Unemployment percent Labour Force
popmillions_r/p	Population, millions
cpiavgindex_r/p	CPI (average) Index
cpiavg_ r/p	CPI (average) percent
gdpdeflator_r/p	GDP deflator index
exportgdp_r/p	Export percent GDP
importgdp_r/p	Import percent GDP
Hhconsumptionexp_r/p	HHs' consumption expenditure growth
tradegdp_r/p	Trade percent GDP
tbill_r/p	T-Bill rate
ggbondyield_r/p	GG bond yields
mmktrate_r/p	Money Market rate
vix	VIX index, the implied volatility of S&P 500 index options

Financial Structure variables

These variables have been added from the World Bank Dataset compiled by Beck et al (updated 2013) and available at: http://econ.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTRESEARCH/0,,contentMDK:20696167~pagePK:64214825~piPK:64214943~theSitePK:469382,00.html

Again, each observation of bilateral capital flows has been matched with the following variables for both the reporting and the partner country.	
LiquidLiabGDP_r/p	Ratio of liquid liabilities to GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is liquid liabilities, P_e is end-of period CPI, and P_a is average annual CPI.
CBassetsGDP_r/p	Claims on domestic real nonfinancial sector by the Central Bank as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is Central Bank claims, P_e is end-of period CPI, and P_a is average annual CPI.
DMBankAssetsGDP_r/p	Claims on domestic real nonfinancial sector by deposit money banks as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is deposit money bank claims, P_e is end-of period CPI, and P_a is average annual CPI.
OFIassets_r/p	Claims on domestic real nonfinancial sector by other financial institutions as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is other financial institutions' claims, P_e is end-of period CPI, and P_a is average annual CPI.
PrivateCreditDMB_r/p	Private credit by deposit money banks to GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is credit to the private sector, P_e is end-of period CPI, and P_a is average annual CPI.
PrivateCreditDMBandOFI_r/p	Private credit by deposit money banks and other financial institutions to GDP, calculated using the following deflation method:

	{(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is credit to the private sector, P_e is end-of period CPI, and P_a is average annual CPI.
BankDepositsGDP_r/p	Demand, time and saving deposits in deposit money banks as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is demand and time and saving deposits, P_e is end-of period CPI, and P_a is average annual CPI.
FSepositsGDP_r/p	Demand, time and saving deposits in deposit money banks and other financial institutions as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is demand and time and saving deposits, P_e is end-of period CPI, and P_a is average annual CPI.
BankCreditToDeposits_r/p	Private credit by deposit money banks as a share of demand, time and saving deposits in deposit money banks.
LiquidLiab2000usd_r/p	Absolute value of liquid liabilities in 2000 US dollars.
OverheadCosts_r/p	Accounting value of a bank's overhead costs as a share of its total assets.
NetInterestMargin_r/p	Accounting value of bank's net interest revenue as a share of its interest-bearing (total earning) assets.
BankConcentration_r/p	Assets of three largest banks as a share of assets of all commercial banks.
BankROA_r/p	Average Return on Assets (Net Income/Total Assets)
BankROE_r/p	Average Return on Assets (Net Income/Total Equity)
BankCosttoIncome_r/p	Total costs as a share of total income of all commercial banks
StockMktCapGDP_r/p	Value of listed shares to GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et

	+ Ft-1/P_et-1]}/[GDPt/P_at] where F is stock market capitalization, P_e is end-of period CPI, and P_a is average annual CPI.
Nlistedcomp_r/p	Number of publicly listed companies per 10K population.
PrivatebondMkt_r/p	Private domestic debt securities issued by financial institutions and corporations as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is amount outstanding of private domestic debt securities, P_e is end-of period CPI, and P_a is average annual CPI.
PublicbondMkt_r/p	Public domestic debt securities issued by government as a share of GDP, calculated using the following deflation method: {(0.5)*[Ft/P_et + Ft-1/P_et-1]}/[GDPt/P_at] where F is amount outstanding of public domestic debt securities, P_e is end-of period CPI, and P_a is average annual CPI.

Gravity dummies Some typical dummies and distance variables used in the trade-related gravity analysis have been added from Zucman (2013) and from Mayer and Zignago (2011). Again, each observation of bilateral capital flows has been matched with the following variables for <u>both</u> the reporting and the partner country.	
Contig	1 for contiguity
comlang_off	1 for common official of primary language
col45	1 for pairs in colonial relationship post 1945
landlocked_source	1 if the reporting country is landlocked
lat_source	Latitude reporter
lon_host	Longitude reporter
Abs_dist	Absolute distance between country A and country B, as measured by Mayer and Zignago (2011)

6.2. Literature survey

As preliminary work for our in-depth analysis, we have conducted a literature survey to gain insights from the academic work conducted in related topics, highlighting the uses of different databases from various sources in the modelling for financial flows. Table 9 presents a literature review grid to allow for easy comparisons between the various papers.

Many papers in the literature that aim to model international financial flows use a gravity model, as is already common in the international trade literature. Taking logs of all variables allows the form to become a simple linear function of the regressors.
One such example of the gravity model used can be found in the paper by Portes and Rey (2005) which regresses the log of the sum of purchases of country i from country j on the log of the size of equity market capitalisations in the two countries (the "mass" component of gravity), and a measure of "informational distance" as captured by the variables telephone calls between i and j, number of bank branch subsidiaries, degree of overlap in trading hours, and an index of insider trading.

Some of the papers constructed bespoke databases from multiple sources in order to create a richer picture of international capital flows. One common dataset used in the literature is that found in Waysand et al (2010) which combines FDI data from the OECD, portfolio investment data from IMF's Coordinated Portfolio Investment Survey (CPIS) and other investment data from the Bank for International Settlements' (BIS) Locational Banking Statistics.

With regards to the aims of the papers, there exists a broad range: from understanding the channels through which joining the euro increased capital flows between two euro area countries, to exploring the importance of history and path dependency in asset holdings.

Table 9 Literature exploiting datasets on bilateral financial flows and stocks

	Authors	Purpose related to bilateral capital flows/stock dataset	Bilateral data used	Period/country coverage	Models	Estimation technique
1	Portes, R. H. Rey, 2005, Journal of International Economics.	To show that gravity models (where the size of trading economies and distance between them are the key variables) explain international transactions in financial assets at least as well as goods traded, however it is "informational distance", not physical distance per se that matters for financial flows (although the two are correlated).	Source of Equity data: Cross-Border Capital (London). Banking data: Bankers Almanac. Other: World Competitiveness Report, 1996, 1998, 2000.	1989–1996. Annual data for US bilateral transactions with 4 developed and 16 emerging market countries.	Standard Gravity model regressing the log of the sum of purchases of country i from country j on the log of the size of equity market capitalisations in the two countries, and a measure of "informational distance" as captured by the variables: telephone calls, number of bank branch subsidiaries, degree of overlap in trading hours, and an index of insider trading.	The estimation procedure (here and below) gives White-corrected (heteroskedasticity-consistent) standard errors.
2	Lane, P.R. and Shambaugh, J.C. 2010, American Economic	To gain an understanding of the international financial impact arising from valuation effects of	Composite dataset composed of (type/source): equity holdings:	117 countries from 1990 - 2004	Model is not estimated for bilateral capital flows/stock data	N/A

	Review	movements in exchange rates	IMF CPIS FDI: UNCTAD international securities: BIS currency composition of reserves COFER (Currency Composition of Official Foreign Exchange Reserves) IMF.			
3	Waysand, C. Ross, K. de Guzman, J. 2010, IMF WP	Provide a detailed picture of financial linkages within the euro area.	A dataset of gross and net bilateral external financial positions which combines different data sources. For direct investment, the main data source is the OECD. For portfolio investment, the main data source is the IMF's	2001 - 2008	Model is not estimated for bilateral capital flows/stock data	N/A

			Coordinated Portfolio Investment Survey (CPIS). Other investment is taken from the Bank for International Settlements (BIS) Locational Banking Statistics.			
4	Milesi-Ferretti, G.M and C. Tille, 2011, Hong Kong Institute for Monetary Research WP	To document the retrenchment and heterogeneity of capital flows following the collapse of Lehman bros.	Bank of International Settlements (BIS) consolidated banking data.	2006 - 2008	The annualized change in gross in/out/banking flows between 2006Q1-2007Q2 and 2008Q4-2009Q1, scaled by 2007 GDP is regressed on control variables covering debt situation, growth, oil exporter dummy and trading partner situation. This is repeated for "collapse" and "recovery" stages of the crisis, for bank flows and capital in- and outflows.	Not stated. Presumed to be OLS.
5	Kubelec, C., F. Sa, 2012, International Journal of Central Banking	To present stylised facts about the interconnectedness of nations via their financial markets by way of network analysis.	The main source of data on FDI assets is the OECD International Direct Investment by Country data	1980–2005, Australia Argentina Canada Brazil France Mexico Germany China Italy Hong	A standard gravity model is initially estimated to overcome a missing data problem. Gravity model estimates are used to create fitted values which complete the dataset that is used for network analysis.	OLS on transformed model.

			set, which contains FDI data at book value reported by OECD members starting in 1981. There are many missing values in the data.	Kong Japan India Portugal Korea Spain Singapore United Kingdom United States		
6	Chen, Milesi-Ferretti and Tressel, 2013, External Imbalances in the Euro Area, Journal of Economic Policy	To show charts on the NFA position of the euro area and some selected countries vis-à-vis other country groups and discuss the relevant conclusions.	The dataset of Waysand et al (2010). (see entry below)	2001-2008, same as Waysand et al (2010).	Model is not estimated for bilateral capital flows/stock data.	N/A
7	Chitu, Eichengreen and Mehl, 2014, 'History, Gravity, International Finance', Journal of International	To analyse the role of "history effect" in patterns of bilateral financial investment using data on US holdings of foreign bonds.	The main sources are the 1945 survey of foreign assets conducted by the US Treasury Department in 1943 and more recently, the Report on US	1943 and 2010, US versus 88 destination countries.	A standard gravity model is estimated, regressing the log of US investors' holdings of foreign bonds on a number of regressors, such as a vector of regional effects dummies, the country's share of world GDP, a measure of international financial market frictions (calculated using trade links, distance, and dummies for English law, English language,	OLS with heteroskedastic-robust standard errors, later instrumenting foreign trade to tackle endogeneity

	Money and Finance		Portfolio Holdings of Foreign Securities conducted by the US Treasury.		and former US colonies), and additionally the 1943 value of the dependent variable.	
8	Hale, G. Obstfeld, M. 2014, NBER WP	To provide evidence that after the Euro's introduction, Core euro area countries increased their borrowing from outside of euro area and their lending to the euro area periphery.	Bank of International Settlements (BIS) locational and consolidated banking data	1997 - 2007, euro area plus UK and US	Model is not estimated for bilateral capital flows/stock data.	N/A
9	Hobza, A., Zeugner, S. European Commision Economic Paper 520, July 2014	To analyse cross-border financial spillovers between European economies.	A dataset of gross and net bilateral external financial positions which combines different data sources similarly to Milesi-Ferretti et al. (2010) or Waysand et al. (2010).	2001 - 2012	Model is not estimated for bilateral capital flows/stock data.	N/A

			(sources: IMF CPIS, banking statistics compiled by the BIS, FDI stocks and flows from the OECD).			

6.3. Econometric research exploiting the bilateral dataset

Bilateral foreign trade datasets have been extensively explored in the academic literature, mostly using gravity models. An excellent literature review of gravity equations is presented in Heada and Mayer (2015), which considers, among other topic, the microfoundations of gravity equations and discusses theory-consistent estimation. The use of gravity models for bilateral financial flows is much less advanced. An early application was presented in Portes and Rey (2005) for portfolio equity flows, by considering the sample of 14 countries between 1989-1996. In a more recent paper Kalemli-Ozcan, Papaioannou and Peydró (2010) studied bilateral banking flows among 20 industrial countries during 1977-2007. On the theoretical foundations, Okawa and van Wincoop (2012) specified the two key conditions which are needed to generate a gravity specification for asset trade, though their model may not apply to FDI and they do not exclude that other theories could also support a gravity specification.

The main research question we wish to consider is the impact of the euro on intra-euro trade and financial integration. There is an extensive literature on the euro's impact on trade using data on bilateral trade flows, originated from the seminal work of Rose (2000). A more recent estimate in Santos Silva and Tenreyro (2010) claims that the effect was close to zero, partly because before the introduction of the Euro, there was already a very high level of trade integration among the first 12 euro-countries. On the other hand, while the impact of the euro on financial integration using aggregate (not bilateral) datasets has been documented, bilateral datasets have not yet been used to address the question.

In our model we also account for the determinants of bilateral flows and stocks. The existing levels of integration as well as global trends with integration (or disintegration) are incorporated. Global pull and push factors are included too, and we analyse if the degree of trade and/or financial integration has an implication on the strength of global factors. We use the same sample both in terms of countries and time period for all five types of flows, in order to obtain comparable results.

Considering the country sample, we first estimate the models for all countries, but we also estimate them for a restricted sample in which we exclude offshore centres and the six other major financial centres (Cyprus, Luxembourg, Ireland, Netherlands, Hong Kong and Singapore).

We first estimate models for the stock of bilateral asset holdings and then for flows. In one variant of the model we include the lagged residual from the stock equation as an explanatory variable in the flow equation in order to check if an error correction mechanism is present.

The data cover 70 reporting countries and 85 partners over the period 2002-2012.

The general framework of our analysis builds on the literature that assesses the importance of membership in the EMU for capital flows (and consequently bilateral asset holdings) of countries. We follow in particular, Kalemli-Ozcan et al (2010), but study other specifications too.

We test several specifications for each of the asset instruments we have available, using two different versions of the dependent variable and different regressors. Our dependent variable is the log of real asset (debt, equity or FDI) holdings of country X (the "reporter") in country Y (the "partner"). As an addition, we also replicate the analysis using as dependent variable the log of bilateral asset holding standardized by the sum of the two countries' population, as in Kalemli Ozcan (2014). In order to obtain real values for capital stocks, we deflate them using the GDP deflator.

In choosing the regressors, the basic idea was to identify characteristic features of the partner country that may play a role in explaining the asset holding of the reporter. Our basic specification, therefore, includes the logs of macroeconomic variables that may influence investors' decisions to invest in a country, such as government debt (and the corresponding yields), openness of the receiving country, public and private bond market capitalization, and stock market capitalization. In addition we also include two indicators of distance: one dummy variable taking value 1 if the two countries are contiguous and another one based on the absolute distance as measured by Mayer and Zignago (2011). The two countries' populations as a measure of "mass" is also considered when the first version of the dependent variable is used, but not when the analysis is replicated for the standardized real debt holdings, as these are already divided by the sum of the two countries' populations.

Particularly important for our analysis is the coefficient on the dummy identifying euro area and EU membership. We include one variable that takes a value of one if both countries in each pair belong to the EU, and another variable that takes a value of one if only one of the two belongs to the EU. This variable is not time varying because in the case of EU accession, it was known well which counties would join, leading to anticipation effects. Significant investment arrived in Central and Eastern Europe a few years before they entered the EU. This is not the case for the euro Area. For countries such as Slovenia, Cyprus, Malta, Slovakia and Estonia, it was uncertain when they would join the euro area, even after they joined the EU in 2004. For this reason, we allow the dummies identifying euro area membership to vary according to time and we assign a value of one starting in the year preceding euro accession (to allow for limited anticipation effects). We therefore have one dummy that takes a value of one when both countries in a pair belong to the euro area in a given year and another variable that takes a value of one when only one of the two countries in each pair belongs to the euro area in a given year.

Results for the stocks

The first set of tables collects the results for the regressions run on stocks of bilateral asset (Table 10). Each table reports six different regressions run for each of the six different instruments that we have in the database, which differ by the regressors and the fixed effects included. Some interesting results emerge.

First, our euro area dummies tend to be positive and significantly correlated with bilateral asset holdings – except for FDI holdings. This means that bilateral holdings tend to be bigger when two countries are both members of the euro area, suggesting that belonging to the same monetary union does have a significant effect on bilateral asset holdings. Interestingly, the magnitude and the significance of this effect vary across asset types. The effect is largest for debt holdings and slightly smaller, but still strongly significant, for portfolio equity holdings. This supports the remark, which is based on the data presented in the monitoring report, that the currency unification gave an especially strong boost to debt and banking flows (which here are both considered in the variable "debt") as compared to equity.

For FDI, things are very different. The coefficient is not always significant while the sign is not robust across specifications, and there are some cases of a very significant negative coefficient. This, together with the sign and significance of the EU membership dummies that are explained in the next paragraph, suggest that the geography of bilateral FDI holdings is quite different from that of other assets.

The dummy indicating membership in the EU alone also yields interesting insight, as its sign and significance vary across asset classes with debt and FDI being on two opposite extremes, and portfolio equity in an intermediate position. Membership of only one country in the EU tends to be negatively and significantly associated with bilateral asset holdings of debt, while this coefficient for equity is positive and significant, suggesting that equity-type relations are more important than debt-type relations with extra-EU partners. EU membership of both countries is not significant for debt and the point estimate is close to zero, suggesting that membership in the monetary union (and not merely in the EU) is what really boosted bilateral debt holdings. EU membership of both countries is instead positive and significant for FDI, a result which is robust to different specifications. This suggests that FDI holdings are bigger in pairs of EU countries in which at least one of the two was *not* a member of the monetary union, underlying that euro membership did not boost cross-border FDI holdings. Yet the sum of the "both in EU" dummy (point estimate: 2.275) and either of the two euro-area dummies (point estimates: -1.016 or -1.358) is still positive, suggesting that FDI holdings across euro-area members is larger than FDI holdings among non-EU countries, confirming that EU membership had a positive impact on FDI developments throughout the EU.

Being contiguous also tends to be positively associated with bilateral debt holdings, and the effect is especially strong for FDI, where the coefficient is larger and the variable is always significant in all specifications. Distance, on the other hand, is always negatively associated with bilateral asset holdings – similar to what would be expected in the case of a typical trade gravity model – and it remains significant across specifications.

Openness of the partner, measured as total trade to GDP, tends to be positively associated with real bilateral asset holdings, although not always significant.

We also estimated a version of the model in which instead of total trade, we included bilateral trade between the country pair. The estimated parameter for bilateral trade became positive and highly significant in all specifications, suggesting that trade and financial flows (and stocks) are interlinked. However, since bilateral trade itself depends on a similar set of gravity variables as bilateral asset flows and stocks, some of the gravity variables became insignificant while the distance parameter even changed sign. This is not surprising given that bilateral trade is highly correlated with distance and multicollinearity among explanatory variables can have such impacts on estimated parameters.

Size, proxied by population, is also positively related to asset holdings. This is consistent with the traditional gravity framework for trade, according to which bilateral trade is expected to be positively correlated with mass, and negatively correlated with distance.

We also included a measure of both countries' "financial size", by introducing public and private bond market capitalization of both the reporter and the partner. We first included these four variables separately to see whether we could spot any meaningful differences in size, sign and significance of the coefficients.

We then ran an additional specification in which we aggregated private and public bond market capitalisation into a single measure of "bond market capitalisation" to GDP and add stock market capitalisation of the two countries on top of it. Both bond and stock market capitalisation tend to be significant and positively correlated with bilateral asset holdings, although we reasonably see that bond market capitalisation is more important when the dependent variable is debt holdings, whereas stock market capitalisation is more important in explaining portfolio equity and FDI holdings.

Interestingly, the size of receiver country's government debt to GDP tends to not be significant for debt and portfolio equity investment, whereas it is strongly and negatively correlated to bilateral FDI asset holdings. This may point to the fact that FDI investment –normally considered a more stable and long-term form of investment – tends to be more susceptible to the potential risk coming from high government debt in the receiving country.

The inclusion of fixed effects (time and reporter country dummies) in general does not affect the result significantly. Excluding offshore centres and the six main financial centre countries of our sample does not change our results much.

Results for the flows

Hobza and Zeugner's database also provides an estimate of gross financial flows from a reporting country to a partner country (i.e. the gross financial asset acquisition of the reporting country in the partner country). We estimated two model variants for the flows: a version with the lagged residuals of the corresponding regression for the stocks and a version without.

As Table 11 indicates, results for the flows largely confirm our findings for the stocks and therefore we do not repeat all findings here.

As was the case for the total debt asset stocks, the sign and significance of the euro area and EU membership are very clear. Euro area membership of both countries has a positive, large and significant effect on bilateral asset flows, for both portfolio debt instruments and bank loans.

Interestingly, the sign and significance of openness (trade to GDP) and distance vary greatly between portfolio debt and bank loans. Openness is irrelevant for bilateral portfolio debt holdings, whereas it has a positive and significant coefficient for other investment flows, suggesting trade openness matters for bank flows between countries while it is irrelevant for investment decisions in portfolio assets. Distance is negative and significantly correlated with bilateral bank flows while it is not significant for portfolio debt holdings, although contiguity seems to have a positive effect on both kinds of flows. The combination of these two findings suggests that bank flows tend to behave more as would be prescribed by a traditional gravity model for trade flows than for portfolio debt flows.

Another interesting result concerns the yield on government bonds in the reporting country, which is not significantly correlated with other investment flows, but is positively and significantly correlated with portfolio debt holdings, which is reasonable as the yield represents a benchmark for the return on this kind of investment.

We also add, as explanatory variables, the VIX index, an indicator of global financial volatility, as well as the interaction between the VIX and the real stock of the dependent variable, to see if global factors matter more when financial integration is high. We also add the unemployment rate of the partner country as an explanatory variable, to see if this indicator of the economic cycle matters.

We also tried an error-correction type specification. We first ran the regression for the stocks that we presented in the previous section and saved the residuals of each regression (which gives us the difference between the actual and estimated stock). We then ran the regression for the flows, adding the lagged values of the residuals as an error correction term (for each regression we use the residual computed from the corresponding regression run on stocks).

The results show that the error correction terms tend to have positive estimated parameters, which is not significant in any specification. From an error-correction perspective the estimated positive sign is incorrect. The estimated positive coefficient implies that for countries with higher assets than estimated by the model, the disequilibrium is magnified by further increase their asset holdings.

The unemployment rate tends to have a negative estimated coefficient (suggesting that higher unemployment, which is a reflection of weaker economic situation, is negatively correlated with capital flows), but the estimated coefficient is never significant.

The VIX index is significantly and negatively related to capital flows, which is a robust result across different models and types of capital flows. Since the VIX index is generally regarded as a measure of global uncertainty, this result suggests that bilateral capital flows are indeed negatively impacted by global uncertainty. However, the estimated parameter of the interaction between the VIX index and the level of financial integration (measured as the stock of bilateral asset holdings), is positive and highly significant in almost all models. This suggests that when financial integration is higher, the negative impact of an increase in global uncertainty on capital flows is smaller.

Table 10 Regression results for stocks

STOCKS Full sample	Real Debt - Model 1	Real debt - Model 2	Real debt - Model 3	Real debt - Model 4	Real debt - Model 5	Real debt - Model 6
dummy (1 if only one of the two in EA in year t)	2.369***	2.148***	2.439***	1.277***	2.242***	1.348***
	(0.106)	(0.151)	(0.153)	(0.131)	(0.147)	(0.130)
dummy (1 if both in EA in year t)	4.896***	4.044***	4.566***	2.243***	4.213***	2.378***
	(0.137)	(0.187)	(0.189)	(0.194)	(0.181)	(0.195)
dummy (1 if only one of the two in EU)	-1.090***	-1.493***	-1.673***	-0.834***	-1.610***	-0.913***
	(0.146)	(0.228)	(0.217)	(0.202)	(0.222)	(0.202)
dummy (1 if both in EU)	-1.145***	-1.068***	-1.500***	0.294	-1.286***	0.140
	(0.165)	(0.268)	(0.263)	(0.256)	(0.262)	(0.258)
Log(General Govt. Debt to GDP, partner)	-0.158***	-0.025	-0.200***	-0.090	-0.111	-0.074
	(0.048)	(0.055)	(0.054)	(0.046)	(0.057)	(0.047)
Log(Trade to GDP, partner)	0.630***	1.183***	1.075***	0.220	1.258***	-0.862
	(0.080)	(0.081)	(0.087)	(0.400)	(0.080)	(0.604)
dummy (1 if contiguous)	1.445***	0.952***	1.442***	0.675***	0.920***	0.685***
	(0.100)	(0.086)	(0.102)	(0.082)	(0.092)	(0.082)
log_abs_dist	-0.220***	-0.156***	-0.198***	-0.207***	-0.129***	-0.209***
	(0.031)	(0.034)	(0.038)	(0.033)	(0.033)	(0.033)
log(population, reporter)	0.599***	0.648***	0.489***	-0.304	0.648***	-2.777
	(0.027)	(0.048)	(0.046)	(1.334)	(0.048)	(1.858)
log(population, partner)	0.417***	0.499***	0.434***	0.574***	0.488***	0.570***
	(0.022)	(0.036)	(0.031)	(0.031)	(0.035)	(0.032)
log_ggbondyield_pt		0.369*	0.682***	0.230*	0.508***	0.292*

		(0.147)	(0.140)	(0.114)	(0.145)	(0.120)
Public bond mkt. Capitalisation to GDP, partner		0.114		0.007	0.250**	0.041
		(0.087)		(0.067)	(0.085)	(0.070)
Private bond mkt. Capitalisation to GDP, partner		0.543***		0.578***	0.599***	0.582***
		(0.041)		(0.035)	(0.040)	(0.036)
Public bond mkt. Capitalisation to GDP, reporter		-0.107		-0.231	0.004	0.038
		(0.070)		(0.157)	(0.072)	(0.188)
Private bond mkt. Capitalisation to GDP, reporter		0.864***		-0.050	0.918***	-0.112
		(0.040)		(0.068)	(0.039)	(0.071)
Public + Private Bond Mkt Cap. %GDP, Partner			1.026***			
			(0.084)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.361***			
			(0.071)			
Stock mkt. capitalisation to GDP, partner			0.413***			
			(0.069)			
Stock mkt. capitalisation to GDP, reporter			0.670***			
			(0.058)			
Constant	0.766	-6.894***	-15.503***	1.815	-7.974***	4.616
	(0.474)	(0.718)	(0.809)	(2.104)	(0.722)	(2.666)

R-squared	0.450	0.647	0.635	0.757	0.661	0.759
N	4706	1931	1931	1931	1931	1931
Country dummies				y		y
time dummies					y	y

STOCKS Full sample	Real Ptf. Debt - Model 1	Real Ptf. Debt - Model 2	Real Ptf. debt - Model 3	Real Ptf. debt - Model 4	Real Ptf. debt - Model 5	Real Ptf. debt - Model 6
dummy (1 if only one of the two in EA in year t)	1.906***	2.677***	3.035***	1.319***	2.762***	1.408***
	(0.122)	(0.210)	(0.215)	(0.157)	(0.204)	(0.154)
dummy (1 if both in EA in year t)	4.998***	5.222***	5.871***	2.482***	5.398***	2.660***
	(0.162)	(0.264)	(0.273)	(0.216)	(0.257)	(0.213)
dummy (1 if only one of the two in EU)	-0.944***	-2.006***	-2.225***	-0.920***	-2.134***	-1.015***
	(0.155)	(0.298)	(0.292)	(0.239)	(0.289)	(0.235)
dummy (1 if both in EU)	-0.797***	-2.012***	-2.553***	0.187	-2.251***	-0.011
	(0.180)	(0.365)	(0.369)	(0.288)	(0.355)	(0.285)
Log(General Govt. Debt to GDP, partner)	-0.040	-0.108	-0.276***	-0.174***	-0.215***	-0.159**
	(0.053)	(0.063)	(0.064)	(0.049)	(0.064)	(0.048)
Log(Trade to GDP, partner)	0.600***	0.853***	0.713***	0.310	0.927***	-0.922
	(0.086)	(0.092)	(0.101)	(0.424)	(0.090)	(0.674)
dummy (1 if contiguous)	1.428***	0.930***	1.528***	0.543***	0.882***	0.550***
	(0.135)	(0.098)	(0.118)	(0.084)	(0.103)	(0.084)
log_abs_dist	-0.008	0.015	-0.026	-0.063	0.036	-0.065
	(0.037)	(0.041)	(0.047)	(0.040)	(0.041)	(0.040)
log(population, reporter)	0.573***	0.534***	0.313***	-1.175	0.533***	-3.563
	(0.028)	(0.058)	(0.057)	(1.363)	(0.057)	(2.039)

log(population, partner)	0.536***	0.507***	0.428***	0.633***	0.501***	0.632***
	(0.027)	(0.038)	(0.033)	(0.030)	(0.037)	(0.030)
log_ggbondyield_pt		0.889***	1.220***	0.641***	1.072***	0.740***
		(0.169)	(0.171)	(0.132)	(0.171)	(0.138)
Public bond mkt. Capitalisation to GDP, partner		0.080		-0.135	0.206*	-0.097
		(0.097)		(0.072)	(0.097)	(0.074)
Private bond mkt. Capitalisation to GDP, partner		0.552***		0.591***	0.611***	0.596***
		(0.048)		(0.040)	(0.047)	(0.041)
Public bond mkt. Capitalisation to GDP, reporter		-0.271***		-0.019	-0.172*	0.189
		(0.078)		(0.163)	(0.080)	(0.202)
Private bond mkt. Capitalisation to GDP, reporter		1.138***		0.069	1.196***	-0.028
		(0.050)		(0.068)	(0.049)	(0.071)
Public + Private Bond Mkt Cap. %GDP, Partner			1.120***			
			(0.098)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.674***			
			(0.092)			
Stock mkt. capitalisation to GDP, partner			0.293***			
			(0.078)			
Stock mkt. capitalisation to GDP, reporter			0.917***			
			(0.074)			
Constant	-1.384**	-6.983***	-17.369***	-0.875	-7.975***	2.693
	(0.522)	(0.858)	(0.990)	(2.323)	(0.879)	(2.901)
R-squared	0.450	0.616	0.581	0.770	0.629	0.772
N	4108	1883	1883	1883	1883	1883
Country dummies				y		y
time dummies					y	y

STOCKS Full sample	Real Other Inv. - Model 1	Real Other Inv. - Model 2	Real Other Inv. - Model 3	Real Other Inv. - Model 4	Real Other Inv. - Model 5	Real Other Inv. - Model 6
dummy (1 if only one of the two in EA in year t)	1.771***	1.837***	2.100***	1.181***	1.954***	1.252***
	(0.105)	(0.125)	(0.123)	(0.136)	(0.123)	(0.136)
dummy (1 if both in EA in year t)	3.959***	3.502***	3.957***	2.097***	3.692***	2.229***
	(0.140)	(0.178)	(0.174)	(0.224)	(0.176)	(0.225)
dummy (1 if only one of the two in EU)	-1.093***	-1.373***	-1.522***	-0.902***	-1.508***	-0.980***
	(0.155)	(0.233)	(0.217)	(0.220)	(0.229)	(0.220)
dummy (1 if both in EU)	-1.630***	-1.003***	-1.349***	-0.022	-1.243***	-0.172
	(0.173)	(0.273)	(0.265)	(0.292)	(0.272)	(0.295)
Log(General Govt. Debt to GDP, partner)	-0.122*	-0.071	-0.187**	-0.099	-0.132	-0.076
	(0.050)	(0.065)	(0.065)	(0.061)	(0.068)	(0.061)
Log(Trade to GDP, partner)	1.055***	1.727***	1.658***	0.377	1.790***	-1.107
	(0.084)	(0.090)	(0.096)	(0.451)	(0.089)	(0.696)
dummy (1 if contiguous)	1.690***	1.276***	1.676***	1.044***	1.261***	1.059***
	(0.095)	(0.095)	(0.107)	(0.098)	(0.100)	(0.097)
log_abs_dist	-0.474***	-0.239***	-0.297***	-0.372***	-0.209***	-0.374***
	(0.032)	(0.038)	(0.041)	(0.039)	(0.037)	(0.038)
log(population, reporter)	0.613***	0.786***	0.669***	1.524	0.786***	-2.212
	(0.030)	(0.052)	(0.049)	(1.658)	(0.051)	(2.132)
log(population, partner)	0.261***	0.314***	0.306***	0.404***	0.301***	0.399***
	(0.023)	(0.036)	(0.029)	(0.034)	(0.035)	(0.034)
log_ggbondyield_pt		0.195	0.385*	0.144	0.320*	0.197
		(0.159)	(0.151)	(0.130)	(0.157)	(0.135)

Public bond mkt. Capitalisation to GDP, partner		0.400***		0.299***	0.543***	0.336***
		(0.097)		(0.085)	(0.097)	(0.088)
Private bond mkt. Capitalisation to GDP, partner		0.563***		0.603***	0.621***	0.608***
		(0.046)		(0.042)	(0.046)	(0.043)
Public bond mkt. Capitalisation to GDP, reporter		0.078		-0.517**	0.199*	-0.144
		(0.083)		(0.186)	(0.085)	(0.224)
Private bond mkt. Capitalisation to GDP, reporter		0.737***		-0.094	0.789***	-0.169
		(0.045)		(0.106)	(0.044)	(0.109)
Public + Private Bond Mkt Cap. %GDP, Partner			1.167***			
			(0.094)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.298***			
			(0.080)			
Stock mkt. capitalisation to GDP, partner			0.283***			
			(0.072)			
Stock mkt. capitalisation to GDP, reporter			0.599***			
			(0.064)			
Constant	-0.124	-10.653***	-17.919***	1.580	-11.917***	5.461
	(0.493)	(0.828)	(0.915)	(2.406)	(0.850)	(3.056)
R-squared	0.405	0.593	0.598	0.693	0.606	0.695
N	4185	1850	1850	1850	1850	1850
Country dummies				y		y
time dummies					y	y

STOCKS Full sample	Real Equity - Model 1	Real Equity - Model 2	Real Equity - Model 3	Real Equity - Model 4	Real Equity - Model 5	Real Equity - Model 6
dummy (1 if only one of the two in EA in year t)	1.721***	0.516**	0.738***	-0.029	0.570**	0.013
	(0.139)	(0.185)	(0.179)	(0.182)	(0.183)	(0.179)
dummy (1 if both in EA in year t)	3.425***	1.209***	1.591***	0.093	1.309***	0.176
	(0.177)	(0.226)	(0.228)	(0.263)	(0.223)	(0.256)
dummy (1 if only one of the two in EU)	-0.671***	0.383	0.329	0.968***	0.315	0.916***
	(0.179)	(0.290)	(0.254)	(0.253)	(0.290)	(0.251)
dummy (1 if both in EU)	-0.280	1.293***	1.092***	2.456***	1.163***	2.353***
	(0.200)	(0.334)	(0.313)	(0.340)	(0.334)	(0.337)
Log(General Govt. Debt to GDP, partner)	-0.352***	-0.260***	-0.277***	-0.182**	-0.271***	-0.155*
	(0.068)	(0.068)	(0.064)	(0.063)	(0.069)	(0.062)
Log(Trade to GDP, partner)	0.171	0.472***	0.224*	1.794***	0.496***	0.915
	(0.089)	(0.101)	(0.109)	(0.520)	(0.103)	(0.734)
dummy (1 if contiguous)	1.392***	0.736***	1.447***	0.776***	0.734***	0.790***
	(0.146)	(0.124)	(0.132)	(0.122)	(0.125)	(0.122)
log_abs_dist	-0.155***	-0.193***	-0.266***	-0.352***	-0.184***	-0.356***
	(0.043)	(0.044)	(0.050)	(0.053)	(0.043)	(0.052)
log(population, reporter)	0.937***	0.787***	0.545***	4.388**	0.787***	-0.410
	(0.035)	(0.063)	(0.058)	(1.657)	(0.063)	(2.354)
log(population, partner)	0.591***	0.993***	0.807***	1.046***	0.987***	1.046***
	(0.030)	(0.050)	(0.041)	(0.048)	(0.051)	(0.049)
log_ggbondyield_pt		0.187	0.291	-0.037	0.256	-0.004
		(0.147)	(0.152)	(0.127)	(0.150)	(0.131)
Public bond mkt. Capitalisation to GDP, partner		-0.449***		-0.621***	-0.389***	-0.615***
		(0.091)		(0.079)	(0.090)	(0.081)
Private bond mkt. Capitalisation to GDP, partner		0.249***		0.256***	0.271***	0.250***
		(0.051)		(0.046)	(0.052)	(0.046)

Public bond mkt. Capitalisation to GDP, reporter		-0.187*		0.337	-0.137	0.477*
		(0.090)		(0.187)	(0.093)	(0.233)
Private bond mkt. Capitalisation to GDP, reporter		1.162***		0.180*	1.180***	0.068
		(0.045)		(0.082)	(0.045)	(0.085)
Public + Private Bond Mkt Cap. %GDP, Partner			0.030			
			(0.103)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.711***			
			(0.092)			
Stock mkt. capitalisation to GDP, partner			0.376***			
			(0.082)			
Stock mkt. capitalisation to GDP, reporter			1.194***			
			(0.073)			
Constant	1.325*	-2.864**	-12.142***	-5.324	-3.432***	-3.427
	(0.570)	(0.901)	(1.070)	(2.842)	(0.918)	(3.335)
R-squared	0.378	0.560	0.543	0.676	0.561	0.678
N	4696	1898	1898	1898	1898	1898
Country dummies				y		y
time dummies					y	y

STOCKS Full sample	Real Ptf.Equity - Model 1	Real Ptf.Equity - Model 2	Real Ptf.Equity - Model 3	Real Ptf.Equity - Model 4	Real Ptf.Equity - Model 5	Real Ptf.Equity - Model 6
dummy (1 if only one of the two in EA in year t)	1.732***	0.901***	1.351***	0.540**	0.956***	0.638***
	(0.153)	(0.178)	(0.187)	(0.194)	(0.178)	(0.191)

dummy (1 if both in EA in year t)	4.263***	2.228***	3.081***	1.564***	2.345***	1.762***
	(0.203)	(0.216)	(0.239)	(0.278)	(0.216)	(0.270)
dummy (1 if only one of the two in EU)	-0.632***	-0.018	-0.424	0.830**	-0.082	0.711**
	(0.187)	(0.279)	(0.254)	(0.274)	(0.280)	(0.269)
dummy (1 if both in EU)	-1.306***	0.286	-0.619*	1.945***	0.158	1.719***
	(0.215)	(0.316)	(0.314)	(0.359)	(0.318)	(0.352)
Log(General Govt. Debt to GDP, partner)	0.006	0.039	-0.156*	0.117	-0.029	0.144*
	(0.070)	(0.072)	(0.078)	(0.069)	(0.072)	(0.068)
Log(Trade to GDP, partner)	0.280**	0.488***	0.431***	0.772	0.538***	-0.389
	(0.100)	(0.100)	(0.115)	(0.504)	(0.101)	(0.728)
dummy (1 if contiguous)	1.056***	0.155	1.007***	0.463***	0.116	0.477***
	(0.142)	(0.126)	(0.131)	(0.128)	(0.123)	(0.127)
log_abs_dist	-0.109*	-0.183***	-0.125*	-0.273***	-0.176***	-0.276***
	(0.045)	(0.046)	(0.051)	(0.048)	(0.046)	(0.048)
log(population, reporter)	0.960***	1.063***	0.715***	2.530	1.066***	-0.656
	(0.037)	(0.051)	(0.057)	(1.606)	(0.051)	(2.386)
log(population, partner)	0.710***	1.042***	0.772***	1.083***	1.036***	1.077***
	(0.033)	(0.049)	(0.045)	(0.047)	(0.049)	(0.047)
log_ggbondyield_pt		-0.519***	-0.127	-0.870***	-0.438**	-0.797***
		(0.146)	(0.157)	(0.126)	(0.148)	(0.129)
Public bond mkt. Capitalisation to GDP, partner		-0.706***		-0.904***	-0.647***	-0.866***
		(0.089)		(0.078)	(0.090)	(0.080)
Private bond mkt. Capitalisation to GDP, partner		0.443***		0.449***	0.486***	0.453***
		(0.050)		(0.047)	(0.051)	(0.047)
Public bond mkt. Capitalisation to GDP, reporter		-0.615***		0.161	-0.583***	0.448
		(0.092)		(0.216)	(0.097)	(0.269)
Private bond mkt. Capitalisation to GDP, reporter		1.295***		0.139	1.332***	0.043

		(0.049)		(0.092)	(0.048)	(0.097)
Public + Private Bond Mkt Cap. %GDP, Partner			0.372**			
			(0.114)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.984***			
			(0.100)			
Stock mkt. capitalisation to GDP, partner			0.421***			
			(0.088)			
Stock mkt. capitalisation to GDP, reporter			1.069***			
			(0.074)			
Constant	-2.174***	-3.716***	-16.809***	-5.145	-3.954***	-2.258
	(0.607)	(0.934)	(1.153)	(2.840)	(0.997)	(3.277)
R-squared	0.379	0.609	0.535	0.687	0.617	0.693
N	3954	1836	1836	1836	1836	1836
Country dummies				y		y
time dummies					y	y

STOCKS Full sample	Real FDI - Model 1	Real FDI - Model 2	Real FDI - Model 3	Real FDI - Model 4	Real FDI - Model 5	Real FDI - Model 6
dummy (1 if only one of the two in EA in year t)	0.958***	-0.181	-0.066	-0.998***	-0.165	-1.016***
	(0.140)	(0.211)	(0.201)	(0.209)	(0.211)	(0.209)
dummy (1 if both in EA in year t)	2.136***	0.358	0.560*	-1.315***	0.384	-1.358***
	(0.180)	(0.268)	(0.263)	(0.293)	(0.269)	(0.290)

dummy (1 if only one of the two in EU)	-0.736***	-0.040	0.322	0.622*	-0.062	0.644*
	(0.196)	(0.318)	(0.283)	(0.273)	(0.319)	(0.274)
dummy (1 if both in EU)	0.043	1.247**	1.613***	2.229***	1.203**	2.275***
	(0.219)	(0.388)	(0.365)	(0.363)	(0.391)	(0.365)
Log(General Govt. Debt to GDP, partner)	-0.454***	-0.443***	-0.420***	-0.380***	-0.447***	-0.368***
	(0.071)	(0.083)	(0.081)	(0.073)	(0.086)	(0.073)
Log(Trade to GDP, partner)	0.012	0.430***	0.105	1.123	0.454***	1.050
	(0.094)	(0.122)	(0.128)	(0.596)	(0.123)	(0.919)
dummy (1 if contiguous)	1.694***	1.086***	1.755***	0.914***	1.087***	0.923***
	(0.170)	(0.164)	(0.164)	(0.130)	(0.166)	(0.131)
log_abs_dist	-0.085	-0.154**	-0.284***	-0.427***	-0.147**	-0.427***
	(0.046)	(0.056)	(0.060)	(0.058)	(0.056)	(0.057)
log(population, reporter)	0.809***	0.695***	0.519***	5.956**	0.700***	1.974
	(0.037)	(0.076)	(0.069)	(1.835)	(0.076)	(2.523)
log(population, partner)	0.554***	1.004***	0.811***	1.078***	1.002***	1.082***
	(0.031)	(0.059)	(0.045)	(0.058)	(0.060)	(0.059)
log_ggbondyield_pt		0.735***	0.755***	0.567***	0.769***	0.549***
		(0.170)	(0.176)	(0.146)	(0.170)	(0.150)
Public bond mkt. Capitalisation to GDP, partner		-0.404***		-0.590***	-0.365***	-0.607***
		(0.108)		(0.097)	(0.109)	(0.099)
Private bond mkt. Capitalisation to GDP, partner		0.254***		0.253***	0.265***	0.242***
		(0.061)		(0.055)	(0.062)	(0.055)
Public bond mkt. Capitalisation to GDP, reporter		0.194		0.484*	0.228*	0.472
		(0.108)		(0.214)	(0.112)	(0.254)
Private bond mkt. Capitalisation to GDP, reporter		1.081***		0.207*	1.090***	0.146
		(0.056)		(0.096)	(0.057)	(0.104)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.079			
			(0.114)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.619***			

			(0.107)			
Stock mkt. capitalisation to GDP, partner			0.551***			
			(0.093)			
Stock mkt. capitalisation to GDP, reporter			1.152***			
			(0.091)			
Constant	2.892***	-3.891***	-11.609***	-25.742**	-4.269***	-7.769
	(0.596)	(1.089)	(1.237)	(7.890)	(1.093)	(12.784)
R-squared	0.323	0.469	0.467	0.623	0.468	0.623
N	3946	1750	1750	1750	1750	1750
Country dummies				y		y
time dummies					y	y

STOCKS Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Debt - Model 1	Real debt - Model 2	Real debt - Model 3	Real debt - Model 4	Real debt - Model 5	Real debt - Model 6
dummy (1 if only one of the two in EA in year t)	2.060***	2.173***	2.520***	1.352***	2.190***	1.382***
	(0.128)	(0.150)	(0.167)	(0.157)	(0.149)	(0.156)
dummy (1 if both in EA in year t)	4.120***	4.089***	4.638***	2.469***	4.110***	2.524***
	(0.169)	(0.190)	(0.217)	(0.239)	(0.189)	(0.240)
dummy (1 if only one of the two in EU)	-0.376*	-1.346***	-1.723***	-0.796***	-1.363***	-0.834***
	(0.179)	(0.228)	(0.234)	(0.233)	(0.226)	(0.233)
dummy (1 if both in EU)	0.116	-0.936***	-1.670***	0.211	-0.964***	0.139
	(0.210)	(0.276)	(0.303)	(0.303)	(0.276)	(0.306)
Log(General Govt. Debt to GDP, partner)	-0.086	-0.049	-0.295***	-0.147**	-0.123	-0.137*

	(0.054)	(0.060)	(0.061)	(0.056)	(0.063)	(0.056)
Log(Trade to GDP, partner)	0.343**	0.776***	0.946***	0.872	0.884***	-0.126
	(0.132)	(0.138)	(0.143)	(0.505)	(0.139)	(0.946)
dummy (1 if contiguous)	1.392***	0.881***	1.494***	0.698***	0.845***	0.710***
	(0.104)	(0.099)	(0.107)	(0.091)	(0.103)	(0.091)
log_abs_dist	-0.275***	-0.236***	-0.159***	-0.217***	-0.215***	-0.215***
	(0.035)	(0.046)	(0.045)	(0.042)	(0.046)	(0.042)
log(population, reporter)	1.206***	0.990***	0.820***	1.880	1.014***	-2.672
	(0.044)	(0.052)	(0.051)	(2.155)	(0.053)	(3.849)
log(population, partner)	0.523***	0.517***	0.461***	0.574***	0.507***	0.569***
	(0.035)	(0.043)	(0.038)	(0.039)	(0.042)	(0.040)
log_ggbondyield_pt		0.548**	0.873***	0.374**	0.586***	0.415**
		(0.166)	(0.163)	(0.143)	(0.166)	(0.149)
Public bond mkt. Capitalisation to GDP, partner		0.171		0.101	0.250*	0.127
		(0.099)		(0.082)	(0.098)	(0.085)
Private bond mkt. Capitalisation to GDP, partner		0.587***		0.585***	0.614***	0.585***
		(0.051)		(0.045)	(0.050)	(0.047)
Public bond mkt. Capitalisation to GDP, reporter		-0.043		-0.029	-0.046	0.273
		(0.091)		(0.248)	(0.093)	(0.295)
Private bond mkt. Capitalisation to GDP, reporter		1.001***		-0.159*	1.039***	-0.223**
		(0.052)		(0.070)	(0.051)	(0.079)
Public + Private Bond Mkt Cap. %GDP, Partner			1.153***			
			(0.105)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.605***			
			(0.099)			
Stock mkt. capitalisation to GDP, partner			0.304***			
			(0.078)			
Stock mkt. capitalisation to GDP, reporter			0.535***			
			(0.086)			

Constant	-0.861	-7.457***	-16.688***	-3.178	-7.990***	5.916
	(0.738)	(0.916)	(1.099)	(4.835)	(0.934)	(12.140)
R-squared	0.563	0.713	0.684	0.780	0.719	0.781
N	2800	1402	1402	1402	1402	1402
Country dummies				y		y
time dummies					y	y

STOCKS Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Ptf. Debt - Model 1	Real Ptf. Debt - Model 2	Real Ptf. debt - Model 3	Real Ptf. debt - Model 4	Real Ptf. debt - Model 5	Real Ptf. debt - Model 6
dummy (1 if only one of the two in EA in year t)	2.002***	3.010***	3.443***	1.673***	3.009***	1.713***
	(0.147)	(0.200)	(0.234)	(0.184)	(0.198)	(0.181)
dummy (1 if both in EA in year t)	4.763***	5.739***	6.430***	3.139***	5.744***	3.216***
	(0.198)	(0.260)	(0.311)	(0.258)	(0.258)	(0.256)
dummy (1 if only one of the two in EU)	-0.422*	-1.951***	-2.432***	-0.925**	-1.968***	-0.967***
	(0.212)	(0.301)	(0.328)	(0.289)	(0.296)	(0.288)
dummy (1 if both in EU)	-0.107	-2.091***	-3.036***	-0.014	-2.115***	-0.108
	(0.248)	(0.366)	(0.424)	(0.347)	(0.363)	(0.346)
Log(General Govt. Debt to GDP, partner)	-0.051	-0.190**	-0.438***	-0.321***	-0.273***	-0.309***
	(0.064)	(0.071)	(0.075)	(0.059)	(0.072)	(0.058)
Log(Trade to GDP, partner)	-0.597***	0.138	0.412*	1.040	0.259	-0.145
	(0.159)	(0.164)	(0.167)	(0.560)	(0.165)	(1.086)
dummy (1 if contiguous)	1.585***	0.800***	1.538***	0.562***	0.749***	0.575***
	(0.141)	(0.105)	(0.122)	(0.091)	(0.108)	(0.092)

log_abs_dist	-0.053	-0.075	0.042	-0.011	-0.059	-0.009
	(0.044)	(0.052)	(0.053)	(0.050)	(0.052)	(0.050)
log(population, reporter)	0.799***	0.829***	0.626***	2.397	0.862***	-3.086
	(0.054)	(0.062)	(0.063)	(2.060)	(0.063)	(3.963)
log(population, partner)	0.448***	0.510***	0.454***	0.599***	0.507***	0.596***
	(0.038)	(0.041)	(0.039)	(0.034)	(0.040)	(0.034)
log_ggbondyield_pt		1.194***	1.552***	0.881***	1.261***	0.955***
		(0.185)	(0.196)	(0.160)	(0.189)	(0.167)
Public bond mkt. Capitalisation to GDP, partner		0.183		0.044	0.245*	0.078
		(0.108)		(0.086)	(0.110)	(0.089)
Private bond mkt. Capitalisation to GDP, partner		0.599***		0.575***	0.629***	0.577***
		(0.059)		(0.051)	(0.058)	(0.052)
Public bond mkt. Capitalisation to GDP, reporter		-0.067		0.432	-0.088	0.756*
		(0.105)		(0.253)	(0.109)	(0.318)
Private bond mkt. Capitalisation to GDP, reporter		1.350***		-0.022	1.393***	-0.112
		(0.063)		(0.074)	(0.063)	(0.082)
Public + Private Bond Mkt Cap. %GDP, Partner			1.300***			
			(0.123)			
Public + Private Bond Mkt Cap. %GDP, Reporter			2.075***			
			(0.127)			
Stock mkt. capitalisation to GDP, partner			0.146			
			(0.090)			
Stock mkt. capitalisation to GDP, reporter			0.696***			
			(0.102)			
Constant	3.007***	-7.027***	-18.250***	-8.134	-7.577***	3.032
	(0.909)	(1.065)	(1.280)	(4.582)	(1.105)	(12.505)
R-squared	0.504	0.701	0.642	0.798	0.706	0.800
N	2513	1370	1370	1370	1370	1370

Country dummies				y		y
time dummies					y	y

STOCKS Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Other Inv. - Model 1	Real Other Inv. - Model 2	Real Other Inv. - Model 3	Real Other Inv. - Model 4	Real Other Inv. - Model 5	Real Other Inv. - Model 6
dummy (1 if only one of the two in EA in year t)	1.436***	1.712***	2.080***	1.156***	1.749***	1.181***
	(0.132)	(0.127)	(0.134)	(0.172)	(0.128)	(0.172)
dummy (1 if both in EA in year t)	3.114***	3.312***	3.903***	2.236***	3.364***	2.282***
	(0.172)	(0.185)	(0.198)	(0.281)	(0.186)	(0.283)
dummy (1 if only one of the two in EU)	0.019	-0.915***	-1.273***	-0.646*	-0.956***	-0.678*
	(0.182)	(0.236)	(0.235)	(0.263)	(0.235)	(0.264)
dummy (1 if both in EU)	0.148	-0.566*	-1.274***	0.013	-0.636*	-0.049
	(0.206)	(0.286)	(0.300)	(0.352)	(0.289)	(0.356)
Log(General Govt. Debt to GDP, partner)	-0.162**	-0.032	-0.250***	-0.044	-0.071	-0.035
	(0.053)	(0.072)	(0.070)	(0.072)	(0.076)	(0.073)
Log(Trade to GDP, partner)	0.874***	1.173***	1.321***	0.867	1.202***	-0.569
	(0.131)	(0.149)	(0.148)	(0.542)	(0.151)	(1.057)
dummy (1 if contiguous)	1.598***	1.282***	1.753***	1.025***	1.282***	1.035***
	(0.100)	(0.114)	(0.115)	(0.111)	(0.117)	(0.110)
log_abs_dist	-0.465***	-0.335***	-0.290***	-0.460***	-0.315***	-0.458***
	(0.035)	(0.049)	(0.046)	(0.050)	(0.049)	(0.051)
log(population, reporter)	1.316***	1.125***	1.018***	3.924	1.119***	-1.502

	(0.046)	(0.059)	(0.055)	(2.516)	(0.061)	(4.253)
log(population, partner)	0.432***	0.399***	0.357***	0.486***	0.384***	0.481***
	(0.037)	(0.042)	(0.034)	(0.044)	(0.042)	(0.045)
log_ggbondyield_pt		0.318	0.574***	0.252	0.357*	0.292
		(0.170)	(0.167)	(0.155)	(0.173)	(0.162)
Public bond mkt. Capitalisation to GDP, partner		0.346**		0.229*	0.425***	0.253*
		(0.109)		(0.101)	(0.112)	(0.104)
Private bond mkt. Capitalisation to GDP, partner		0.661***		0.686***	0.682***	0.687***
		(0.059)		(0.058)	(0.059)	(0.060)
Public bond mkt. Capitalisation to GDP, reporter		0.200		-0.324	0.242*	-0.042
		(0.105)		(0.301)	(0.109)	(0.360)
Private bond mkt. Capitalisation to GDP, reporter		0.842***		-0.097	0.867***	-0.165
		(0.054)		(0.118)	(0.054)	(0.131)
Public + Private Bond Mkt Cap. %GDP, Partner			1.317***			
			(0.112)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.545***			
			(0.106)			
Stock mkt. capitalisation to GDP, partner			0.275***			
			(0.080)			
Stock mkt. capitalisation to GDP, reporter			0.340***			
			(0.090)			
Constant	-2.794***	-10.955***	-18.583***	-7.315	-11.438***	5.186
	(0.719)	(1.023)	(1.171)	(5.301)	(1.057)	(13.425)
R-squared	0.536	0.662	0.652	0.707	0.665	0.707
N	2495	1354	1354	1354	1354	1354

Country dummies				y		y
time dummies					y	y

STOCKS Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Equity - Model 1	Real Equity - Model 2	Real Equity - Model 3	Real Equity - Model 4	Real Equity - Model 5	Real Equity - Model 6
dummy (1 if only one of the two in EA in year t)	1.095***	0.209	0.424*	-0.468*	0.206	-0.460*
	(0.172)	(0.174)	(0.191)	(0.182)	(0.176)	(0.182)
dummy (1 if both in EA in year t)	2.009***	0.528*	0.763**	-0.813**	0.520*	-0.789**
	(0.212)	(0.219)	(0.251)	(0.261)	(0.222)	(0.262)
dummy (1 if only one of the two in EU)	0.540*	0.917***	0.787**	1.357***	0.919***	1.337***
	(0.228)	(0.274)	(0.266)	(0.257)	(0.276)	(0.257)
dummy (1 if both in EU)	1.338***	1.940***	1.635***	2.840***	1.951***	2.797***
	(0.244)	(0.310)	(0.328)	(0.334)	(0.314)	(0.335)
Log(General Govt. Debt to GDP, partner)	-0.317***	-0.280***	-0.389***	-0.262***	-0.328***	-0.249***
	(0.074)	(0.068)	(0.070)	(0.066)	(0.070)	(0.066)
Log(Trade to GDP, partner)	-0.798***	-0.209	0.487**	1.661**	-0.126	1.231
	(0.153)	(0.162)	(0.176)	(0.510)	(0.168)	(0.861)
dummy (1 if contiguous)	1.655***	0.680***	1.738***	0.870***	0.636***	0.870***
	(0.156)	(0.134)	(0.139)	(0.134)	(0.136)	(0.134)
log_abs_dist	-0.295***	-0.404***	-0.233***	-0.450***	-0.399***	-0.455***
	(0.053)	(0.052)	(0.054)	(0.052)	(0.053)	(0.051)
log(population, reporter)	1.279***	1.182***	0.953***	5.455**	1.209***	0.554
	(0.051)	(0.062)	(0.062)	(2.022)	(0.065)	(3.542)
log(population, partner)	0.811***	1.244***	0.985***	1.294***	1.246***	1.300***
	(0.042)	(0.050)	(0.042)	(0.046)	(0.050)	(0.046)
log_ggbondyield_pt		0.128	0.120	-0.070	0.147	-0.039

		(0.140)	(0.153)	(0.110)	(0.143)	(0.115)
Public bond mkt. Capitalisation to GDP, partner		-0.606***		-0.716***	-0.584***	-0.732***
		(0.090)		(0.074)	(0.089)	(0.074)
Private bond mkt. Capitalisation to GDP, partner		0.230***		0.221***	0.254***	0.219***
		(0.050)		(0.042)	(0.050)	(0.042)
Public bond mkt. Capitalisation to GDP, reporter		-0.212		0.484*	-0.244*	0.412
		(0.112)		(0.233)	(0.118)	(0.290)
Private bond mkt. Capitalisation to GDP, reporter		1.423***		0.128	1.452***	0.030
		(0.057)		(0.077)	(0.056)	(0.086)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.191			
			(0.101)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.860***			
			(0.114)			
Stock mkt. capitalisation to GDP, partner			0.364***			
			(0.085)			
Stock mkt. capitalisation to GDP, reporter			1.420***			
			(0.105)			
Constant	3.227***	-1.683	-15.250***	-13.474**	-1.756	-6.417
	(0.860)	(0.990)	(1.306)	(4.564)	(1.035)	(10.944)
R-squared	0.440	0.715	0.668	0.807	0.718	0.808
N	2801	1379	1379	1379	1379	1379
Country dummies				y		y
time dummies					y	y

STOCKS Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Ptf.Equity - Model 1	Real Ptf.Equity - Model 2	Real Ptf.Equity - Model 3	Real Ptf.Equity - Model 4	Real Ptf.Equity - Model 5	Real Ptf.Equity - Model 6
dummy (1 if only one of the two in EA in year t)	1.028***	0.438*	0.586**	0.133	0.467**	0.183
	(0.178)	(0.174)	(0.194)	(0.191)	(0.177)	(0.190)
dummy (1 if both in EA in year t)	2.811***	1.320***	1.487***	0.733**	1.376***	0.829**
	(0.237)	(0.216)	(0.252)	(0.264)	(0.219)	(0.263)
dummy (1 if only one of the two in EU)	0.332	0.575*	0.510	1.447***	0.525	1.383***
	(0.234)	(0.278)	(0.268)	(0.279)	(0.283)	(0.276)
dummy (1 if both in EU)	0.153	1.059***	0.865**	2.701***	0.974**	2.582***
	(0.263)	(0.310)	(0.329)	(0.359)	(0.315)	(0.356)
Log(General Govt. Debt to GDP, partner)	-0.226**	-0.294***	-0.431***	-0.246***	-0.349***	-0.228**
	(0.078)	(0.076)	(0.076)	(0.071)	(0.078)	(0.070)
Log(Trade to GDP, partner)	-1.460***	-0.353*	0.370*	0.880	-0.261	0.274
	(0.161)	(0.162)	(0.177)	(0.529)	(0.170)	(0.947)
dummy (1 if contiguous)	1.659***	0.614***	1.654***	0.729***	0.576***	0.745***
	(0.151)	(0.135)	(0.132)	(0.131)	(0.133)	(0.130)
log_abs_dist	-0.200***	-0.143**	-0.005	-0.142**	-0.131*	-0.141**
	(0.055)	(0.055)	(0.057)	(0.054)	(0.055)	(0.053)
log(population, reporter)	0.747***	1.049***	0.831***	4.393*	1.069***	0.986
	(0.060)	(0.062)	(0.060)	(1.921)	(0.067)	(3.642)
log(population, partner)	0.931***	1.200***	0.970***	1.250***	1.192***	1.240***
	(0.046)	(0.048)	(0.046)	(0.046)	(0.049)	(0.046)
log_ggbondyield_pt		-0.480***	-0.451**	-0.871***	-0.438**	-0.826***
		(0.141)	(0.150)	(0.105)	(0.143)	(0.106)
Public bond mkt. Capitalisation to GDP, partner		-0.527***		-0.689***	-0.458***	-0.653***
		(0.092)		(0.076)	(0.095)	(0.077)

Private bond mkt. Capitalisation to GDP, partner		0.294***		0.289***	0.332***	0.294***
		(0.050)		(0.045)	(0.050)	(0.045)
Public bond mkt. Capitalisation to GDP, reporter		-0.226*		0.279	-0.220	0.696*
		(0.115)		(0.231)	(0.122)	(0.311)
Private bond mkt. Capitalisation to GDP, reporter		1.283***		-0.054	1.327***	-0.095
		(0.054)		(0.079)	(0.054)	(0.092)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.020			
			(0.112)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.627***			
			(0.111)			
Stock mkt. capitalisation to GDP, partner			0.472***			
			(0.090)			
Stock mkt. capitalisation to GDP, reporter			1.472***			
			(0.103)			
Constant	5.778***	-1.252	-15.343***	-18.933*	-1.746	-3.277
	(0.906)	(1.024)	(1.389)	(8.916)	(1.074)	(18.654)
R-squared	0.415	0.681	0.651	0.777	0.690	0.782
N	2518	1339	1339	1339	1339	1339
Country dummies				y		y
time dummies					y	y

STOCKS Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real FDI - Model 1	Real FDI - Model 2	Real FDI - Model 3	Real FDI - Model 4	Real FDI - Model 5	Real FDI - Model 6

dummy (1 if only one of the two in EA in year t)	0.283	-0.344	-0.093	-1.393***	-0.385	-1.407***
	(0.171)	(0.208)	(0.225)	(0.227)	(0.209)	(0.227)
dummy (1 if both in EA in year t)	0.881***	0.036	0.356	-2.037***	-0.033	-2.054***
	(0.216)	(0.265)	(0.305)	(0.323)	(0.268)	(0.325)
dummy (1 if only one of the two in EU)	0.783**	0.644*	0.699*	0.931**	0.674*	0.937**
	(0.248)	(0.310)	(0.311)	(0.302)	(0.311)	(0.302)
dummy (1 if both in EU)	2.150***	2.177***	2.022***	2.671***	2.246***	2.673***
	(0.272)	(0.374)	(0.402)	(0.397)	(0.377)	(0.399)
Log(General Govt. Debt to GDP, partner)	-0.295***	-0.333***	-0.548***	-0.344***	-0.387***	-0.345***
	(0.077)	(0.081)	(0.090)	(0.076)	(0.084)	(0.077)
Log(Trade to GDP, partner)	-0.195	0.086	0.594**	1.013	0.224	1.390
	(0.166)	(0.196)	(0.206)	(0.632)	(0.203)	(1.121)
dummy (1 if contiguous)	1.642***	0.593***	1.709***	0.745***	0.523**	0.735***
	(0.176)	(0.166)	(0.167)	(0.151)	(0.171)	(0.152)
log_abs_dist	-0.173**	-0.434***	-0.183**	-0.577***	-0.440***	-0.583***
	(0.055)	(0.066)	(0.068)	(0.065)	(0.067)	(0.064)
log(population, reporter)	1.407***	1.253***	1.039***	5.065*	1.311***	1.459
	(0.056)	(0.075)	(0.078)	(2.526)	(0.078)	(4.012)
log(population, partner)	0.781***	1.306***	0.957***	1.400***	1.327***	1.417***
	(0.042)	(0.058)	(0.049)	(0.058)	(0.059)	(0.058)
log_ggbondyield_pt		0.854***	0.883***	0.837***	0.879***	0.868***
		(0.175)	(0.193)	(0.163)	(0.179)	(0.169)
Public bond mkt. Capitalisation to GDP, partner		-0.755***		-0.899***	-0.786***	-0.944***
		(0.112)		(0.106)	(0.113)	(0.107)
Private bond mkt. Capitalisation to GDP, partner		0.394***		0.396***	0.411***	0.391***
		(0.060)		(0.052)	(0.061)	(0.052)
Public bond mkt. Capitalisation to GDP, reporter		-0.078		0.707*	-0.181	0.292
		(0.138)		(0.286)	(0.147)	(0.326)
Private bond mkt. Capitalisation to GDP, reporter		1.526***		0.310**	1.547***	0.206

		(0.071)		(0.103)	(0.070)	(0.112)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.094			
			(0.122)			
Public + Private Bond Mkt Cap. %GDP, Reporter			2.074***			
			(0.136)			
Stock mkt. capitalisation to GDP, partner			0.417***			
			(0.101)			
Stock mkt. capitalisation to GDP, reporter			1.132***			
			(0.125)			
Constant	-0.177	-5.234***	-17.316***	-22.704	-5.122***	-6.526
	(0.927)	(1.206)	(1.544)	(11.580)	(1.239)	(20.906)
R-squared	0.424	0.645	0.575	0.734	0.647	0.735
N	2431	1280	1280	1280	1280	1280
Country dummies				y		y
time dummies					y	y

Table 11 Regression results for flows

FLOWS	Real Debt - Model 1	Real debt - Model 2	Real debt - Model 3	Real debt - Model 4	Real debt - Model 5	Real debt - Model 6
dummy (1 if only one of the two in EA in year t)	2.063***	2.220***	2.425***	1.344***	2.242***	1.369***
	(0.134)	(0.217)	(0.214)	(0.201)	(0.211)	(0.202)
dummy (1 if both in EA in year t)	4.115***	3.688***	4.073***	1.933***	3.743***	1.976***
	(0.182)	(0.266)	(0.262)	(0.295)	(0.260)	(0.300)
dummy (1 if only one of the two in EU)	-0.779***	-1.557***	-1.647***	-0.812**	-1.626***	-0.886**

	(0.183)	(0.306)	(0.294)	(0.291)	(0.301)	(0.293)
dummy (1 if both in EU)	-0.643**	-0.960**	-1.270***	0.527	-1.072**	0.423
	(0.211)	(0.366)	(0.355)	(0.383)	(0.360)	(0.390)
Log(General Govt. Debt to GDP, partner)	-0.018	0.066	-0.059	0.068	0.002	0.077
	(0.065)	(0.082)	(0.081)	(0.075)	(0.085)	(0.076)
Log(Trade to GDP, partner)	0.492***	0.710***	0.585***	0.523	0.737***	0.043
	(0.100)	(0.116)	(0.121)	(0.630)	(0.115)	(0.903)
dummy (1 if contiguous)	1.069***	0.777***	1.174***	0.658***	0.763***	0.679***
	(0.139)	(0.135)	(0.139)	(0.137)	(0.135)	(0.138)
log_abs_dist	-0.156***	-0.035	-0.100	-0.094	-0.022	-0.094
	(0.040)	(0.048)	(0.052)	(0.050)	(0.048)	(0.050)
log(population, reporter)	0.493***	0.511***	0.371***	0.397	0.509***	-0.922
	(0.037)	(0.062)	(0.059)	(2.095)	(0.061)	(2.814)
log(population, partner)	0.364***	0.291***	0.256***	0.356***	0.298***	0.357***
	(0.030)	(0.047)	(0.041)	(0.046)	(0.047)	(0.046)
log_ggbondyield_pt		0.209	0.356	-0.137	0.236	-0.109
		(0.202)	(0.195)	(0.175)	(0.201)	(0.184)
Public bond mkt. Capitalisation to GDP, partner		0.178		0.020	0.230*	0.024
		(0.114)		(0.105)	(0.113)	(0.107)
Private bond mkt. Capitalisation to GDP, partner		0.445***		0.443***	0.476***	0.448***
		(0.054)		(0.050)	(0.053)	(0.050)
Public bond mkt. Capitalisation to GDP, reporter		-0.133		-0.246	-0.082	-0.056
		(0.100)		(0.239)	(0.103)	(0.286)
Private bond mkt. Capitalisation to GDP, reporter		0.697***		-0.097	0.733***	-0.105
		(0.055)		(0.106)	(0.054)	(0.114)

Public + Private Bond Mkt Cap. %GDP, Partner			0.914***			
			(0.117)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.067***			
			(0.105)			
Stock mkt. capitalisation to GDP, partner			0.229*			
			(0.090)			
Stock mkt. capitalisation to GDP, reporter			0.710***			
			(0.084)			
Constant	-0.362	-4.988***	-11.998***	0.511	-5.038***	5.693
	(0.612)	(1.029)	(1.136)	(6.001)	(1.045)	(9.701)
R-squared	0.381	0.512	0.508	0.606	0.522	0.607
N	2886	1237	1237	1237	1237	1237

FLOWS	Real Ptf. Debt - Model 1	Real Ptf. debt - Model 2	Real Ptf. debt - Model 3	Real Ptf. debt - Model 4	Real Ptf. debt - Model 5	Real Ptf. debt - Model 6
dummy (1 if only one of the two in EA in year t)	1.712***	2.106***	2.397***	0.736**	2.114***	0.818***
	(0.161)	(0.265)	(0.264)	(0.226)	(0.260)	(0.232)
dummy (1 if both in EA in year t)	4.200***	4.283***	4.765***	1.554***	4.306***	1.697***
	(0.213)	(0.347)	(0.343)	(0.333)	(0.343)	(0.349)
dummy (1 if only one of the	-0.778***	-1.859***	-1.993***	-0.694*	-1.904***	-0.795*

two in EU)						
	(0.206)	(0.371)	(0.361)	(0.328)	(0.367)	(0.325)
dummy (1 if both in EU)	-0.593*	-1.954***	-2.363***	0.292	-2.050***	0.123
	(0.240)	(0.467)	(0.458)	(0.424)	(0.464)	(0.432)
Log(General Govt. Debt to GDP, partner)	0.057	-0.039	-0.139	-0.081	-0.176	-0.087
	(0.075)	(0.090)	(0.092)	(0.080)	(0.091)	(0.080)
Log(Trade to GDP, partner)	0.239*	0.442**	0.350*	-1.148	0.515***	-0.862
	(0.120)	(0.136)	(0.141)	(0.673)	(0.131)	(0.916)
dummy (1 if contiguous)	1.130***	0.542***	0.996***	0.428**	0.483**	0.440**
	(0.162)	(0.151)	(0.166)	(0.153)	(0.152)	(0.154)
log_abs_dist	-0.002	0.024	-0.051	-0.040	0.031	-0.045
	(0.045)	(0.052)	(0.057)	(0.054)	(0.051)	(0.054)
log(population, reporter)	0.425***	0.339***	0.178*	-1.618	0.349***	2.085
	(0.039)	(0.074)	(0.072)	(2.093)	(0.072)	(3.117)
log(population, partner)	0.463***	0.348***	0.332***	0.461***	0.368***	0.459***
	(0.037)	(0.057)	(0.047)	(0.050)	(0.055)	(0.050)
log_ggbondyield_pt		0.815**	1.029***	0.373	0.886***	0.447
		(0.252)	(0.248)	(0.215)	(0.258)	(0.233)
Public bond mkt. Capitalisation to GDP, partner		0.263		-0.014	0.314*	0.021
		(0.136)		(0.115)	(0.133)	(0.116)
Private bond mkt. Capitalisation to GDP, partner		0.437***		0.439***	0.483***	0.451***
		(0.060)		(0.052)	(0.058)	(0.053)
Public bond mkt. Capitalisation to GDP, reporter		-0.118		-0.011	-0.040	0.170
		(0.112)		(0.253)	(0.117)	(0.321)
Private bond mkt. Capitalisation to GDP, reporter		0.914***		-0.046	0.988***	0.012

		(0.065)		(0.105)	(0.063)	(0.112)
Public + Private Bond Mkt Cap. %GDP, Partner			1.070***			
			(0.136)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.431***			
			(0.124)			
Stock mkt. capitalisation to GDP, partner			0.119			
			(0.112)			
Stock mkt. capitalisation to GDP, reporter			0.842***			
			(0.107)			
Constant	-0.675	-5.246***	-13.894***	11.554	-5.258***	-1.481
	(0.731)	(1.189)	(1.340)	(6.012)	(1.205)	(10.506)
R-squared	0.368	0.472	0.459	0.622	0.495	0.624
N	2457	1165	1165	1165	1165	1165

FLOWS	Real Other Inv. - Model 1	Real Other Inv. - Model 2	Real Other Inv. - Model 3	Real Other Inv. - Model 4	Real Other Inv. - Model 5	Real Other Inv. -- Model 6
dummy (1 if only one of the two in EA in year t)	1.668***	2.006***	2.203***	1.694***	2.023***	1.678***
	(0.134)	(0.187)	(0.187)	(0.208)	(0.186)	(0.210)
dummy (1 if both in EA in year t)	3.667***	3.425***	3.803***	2.758***	3.535***	2.771***
	(0.186)	(0.267)	(0.262)	(0.344)	(0.264)	(0.346)
dummy (1 if only one of the two in EU)	-0.909***	-1.587***	-1.726***	-1.186***	-1.632***	-1.180***

	(0.195)	(0.304)	(0.294)	(0.307)	(0.298)	(0.312)
dummy (1 if both in EU)	-1.132***	-0.896*	-1.225***	-0.107	-1.043**	-0.129
	(0.223)	(0.375)	(0.364)	(0.421)	(0.368)	(0.428)
Log(General Govt. Debt to GDP, partner)	-0.054	0.058	-0.097	0.032	0.012	0.047
	(0.069)	(0.101)	(0.101)	(0.102)	(0.103)	(0.101)
Log(Trade to GDP, partner)	0.794***	1.174***	1.077***	0.009	1.190***	-1.289
	(0.112)	(0.142)	(0.148)	(0.775)	(0.141)	(1.247)
dummy (1 if contiguous)	1.182***	0.873***	1.202***	0.649***	0.851***	0.672***
	(0.154)	(0.166)	(0.175)	(0.175)	(0.168)	(0.176)
log_abs_dist	-0.379***	-0.176**	-0.223***	-0.249***	-0.155**	-0.245***
	(0.044)	(0.059)	(0.062)	(0.064)	(0.058)	(0.064)
log(population, reporter)	0.533***	0.726***	0.609***	0.171	0.724***	-2.213
	(0.040)	(0.071)	(0.067)	(2.747)	(0.070)	(4.066)
log(population, partner)	0.206***	0.191***	0.164***	0.232***	0.178***	0.224***
	(0.031)	(0.051)	(0.043)	(0.052)	(0.051)	(0.053)
log_ggbondyield_pt		-0.083	0.094	-0.245	-0.049	-0.252
		(0.207)	(0.203)	(0.190)	(0.204)	(0.197)
Public bond mkt. Capitalisation to GDP, partner		0.275*		0.221	0.379**	0.236
		(0.136)		(0.127)	(0.135)	(0.128)
Private bond mkt. Capitalisation to GDP, partner		0.609***		0.632***	0.647***	0.641***
		(0.065)		(0.062)	(0.064)	(0.062)
Public bond mkt. Capitalisation to GDP, reporter		-0.141		-1.139***	-0.035	-0.721
		(0.124)		(0.333)	(0.128)	(0.388)
Private bond mkt.		0.607***		-0.060	0.641***	-0.092

Capitalisation to GDP, reporter						
		(0.065)		(0.154)	(0.063)	(0.163)
Public + Private Bond Mkt Cap. %GDP, Partner			1.134***			
			(0.128)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.929***			
			(0.124)			
Stock mkt. capitalisation to GDP, partner			0.359***			
			(0.102)			
Stock mkt. capitalisation to GDP, reporter			0.540***			
			(0.095)			
Constant	-0.669	-7.889***	-14.632***	4.262	-8.390***	15.060
	(0.654)	(1.251)	(1.377)	(8.337)	(1.243)	(14.802)
R-squared	0.342	0.480	0.476	0.533	0.493	0.536
N	2547	1139	1139	1139	1139	1139

FLOWS	Real Equity - Model 1	Real Equity - Model 2	Real Equity - Model 3	Real Equity - Model 4	Real Equity - Model 5	Real Equity - Model 6
dummy (1 if only one of the two in EA in year t)	1.680***	0.577*	0.778***	0.302	0.614**	0.305
	(0.151)	(0.239)	(0.229)	(0.236)	(0.237)	(0.233)
dummy (1 if both in EA in year t)	3.070***	1.327***	1.641***	0.635	1.396***	0.632
	(0.201)	(0.294)	(0.293)	(0.346)	(0.291)	(0.343)

dummy (1 if only one of the two in EU)	-0.704***	0.347	0.261	0.597	0.281	0.576
	(0.200)	(0.359)	(0.327)	(0.332)	(0.358)	(0.332)
dummy (1 if both in EU)	-0.300	1.075**	0.825*	1.705***	0.914*	1.641***
	(0.223)	(0.415)	(0.400)	(0.458)	(0.418)	(0.461)
Log(General Govt. Debt to GDP, partner)	-0.299***	-0.103	-0.077	-0.021	-0.076	0.028
	(0.077)	(0.093)	(0.089)	(0.087)	(0.093)	(0.086)
Log(Trade to GDP, partner)	0.382***	0.486***	0.220	1.665*	0.535***	0.145
	(0.096)	(0.120)	(0.132)	(0.653)	(0.122)	(0.971)
dummy (1 if contiguous)	1.109***	0.401*	1.066***	0.530**	0.430*	0.556***
	(0.162)	(0.166)	(0.164)	(0.161)	(0.168)	(0.164)
log_abs_dist	-0.080	-0.199***	-0.272***	-0.328***	-0.181***	-0.333***
	(0.045)	(0.053)	(0.059)	(0.062)	(0.053)	(0.062)
log(population, reporter)	0.814***	0.696***	0.437***	3.900	0.688***	-0.823
	(0.040)	(0.077)	(0.068)	(2.303)	(0.076)	(3.169)
log(population, partner)	0.524***	0.793***	0.609***	0.799***	0.772***	0.795***
	(0.035)	(0.066)	(0.055)	(0.063)	(0.066)	(0.062)
log_ggbondyield_pt		-0.187	-0.119	-0.382*	-0.177	-0.410*
		(0.199)	(0.200)	(0.184)	(0.200)	(0.190)
Public bond mkt. Capitalisation to GDP, partner		-0.557***		-0.653***	-0.440***	-0.627***
		(0.129)		(0.123)	(0.127)	(0.123)
Private bond mkt. Capitalisation to GDP, partner		0.108		0.137*	0.125*	0.133*
		(0.060)		(0.056)	(0.062)	(0.056)
Public bond mkt. Capitalisation to GDP, reporter		-0.435***		-0.198	-0.316*	0.311
		(0.122)		(0.242)	(0.124)	(0.291)
Private bond mkt. Capitalisation to GDP, reporter		0.849***		-0.025	0.869***	-0.077

		(0.057)		(0.113)	(0.057)	(0.119)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.303*			
			(0.137)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.103***			
			(0.120)			
Stock mkt. capitalisation to GDP, partner			0.532***			
			(0.105)			
Stock mkt. capitalisation to GDP, reporter			1.045***			
			(0.088)			
Constant	-0.992	-1.110	-9.072***	-11.205	-2.021	7.204
	(0.629)	(1.150)	(1.290)	(6.909)	(1.193)	(11.106)
R-squared	0.351	0.429	0.429	0.534	0.440	0.540
N	3138	1268	1268	1268	1268	1268

FLOWS	Real Ptf.Equity - Model 1	Real Ptf.Equity - Model 2	Real Ptf.Equity - Model 3	Real Ptf.Equity - Model 4	Real Ptf.Equity - Model 5	Real Ptf.Equity - Model 6
dummy (1 if only one of the two in EA in year t)	1.734***	0.806***	1.267***	0.773**	0.838***	0.789**
	(0.179)	(0.243)	(0.259)	(0.264)	(0.241)	(0.263)
dummy (1 if both in EA in year t)	3.970***	2.068***	2.955***	2.027***	2.123***	2.073***
	(0.242)	(0.312)	(0.333)	(0.403)	(0.316)	(0.404)
dummy (1 if only one of the two in EU)	-0.732**	0.122	-0.350	0.538	0.036	0.484

	(0.224)	(0.365)	(0.345)	(0.361)	(0.372)	(0.360)
dummy (1 if both in EU)	-1.325***	0.340	-0.737	1.251*	0.174	1.119*
	(0.265)	(0.436)	(0.434)	(0.507)	(0.449)	(0.511)
Log(General Govt. Debt to GDP, partner)	-0.030	0.142	0.009	0.242*	0.106	0.291**
	(0.085)	(0.094)	(0.100)	(0.095)	(0.095)	(0.094)
Log(Trade to GDP, partner)	0.251*	0.395**	0.326*	0.975	0.439**	-0.445
	(0.119)	(0.132)	(0.150)	(0.761)	(0.134)	(1.042)
dummy (1 if contiguous)	0.568**	-0.278	0.530*	0.086	-0.263	0.127
	(0.178)	(0.210)	(0.207)	(0.210)	(0.208)	(0.210)
log_abs_dist	-0.065	-0.228***	-0.216**	-0.329***	-0.215**	-0.336***
	(0.054)	(0.066)	(0.068)	(0.074)	(0.066)	(0.073)
log(population, reporter)	0.792***	0.958***	0.567***	-0.202	0.934***	-3.532
	(0.048)	(0.076)	(0.076)	(2.251)	(0.076)	(3.339)
log(population, partner)	0.538***	0.794***	0.547***	0.779***	0.765***	0.765***
	(0.040)	(0.069)	(0.059)	(0.067)	(0.068)	(0.067)
log_ggbondyield_pt		-0.648**	-0.361	-0.954***	-0.626**	-0.969***
		(0.208)	(0.214)	(0.194)	(0.219)	(0.204)
Public bond mkt. Capitalisation to GDP, partner		-0.573***		-0.713***	-0.420**	-0.655***
		(0.142)		(0.136)	(0.143)	(0.140)
Private bond mkt. Capitalisation to GDP, partner		0.346***		0.380***	0.402***	0.386***
		(0.059)		(0.057)	(0.062)	(0.059)
Public bond mkt. Capitalisation to GDP, reporter		-0.642***		-0.156	-0.526***	0.524
		(0.131)		(0.301)	(0.135)	(0.382)
Private bond mkt. Capitalisation to GDP, reporter		0.991***		0.056	1.035***	0.029

		(0.064)		(0.133)	(0.063)	(0.142)
Public + Private Bond Mkt Cap. %GDP, Partner			0.379*			
			(0.150)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.478***			
			(0.134)			
Stock mkt. capitalisation to GDP, partner			0.408***			
			(0.116)			
Stock mkt. capitalisation to GDP, reporter			1.003***			
			(0.098)			
Constant	-2.216**	-2.930*	-14.312***	1.917	-3.469*	15.069
	(0.748)	(1.275)	(1.465)	(6.830)	(1.396)	(11.604)
R-squared	0.322	0.465	0.420	0.539	0.475	0.544
N	2372	1099	1099	1099	1099	1099

FLOWS	Real FDI - Model 1	Real FDI - Model 2	Real FDI - Model 3	Real FDI - Model 4	Real FDI - Model 5	Real FDI - Model 6
dummy (1 if only one of the two in EA in year t)	1.121***	0.178	0.287	-0.401	0.230	-0.399
	(0.151)	(0.243)	(0.235)	(0.247)	(0.242)	(0.246)
dummy (1 if both in EA in year t)	2.306***	0.731*	0.902**	-0.444	0.820**	-0.436
	(0.204)	(0.311)	(0.309)	(0.370)	(0.308)	(0.368)
dummy (1 if only one of the two in EU)	-0.819***	-0.215	-0.007	0.331	-0.308	0.309
	(0.210)	(0.385)	(0.361)	(0.357)	(0.382)	(0.359)

dummy (1 if both in EU)	-0.265	0.952*	1.117*	1.884***	0.770	1.849***
	(0.233)	(0.452)	(0.445)	(0.483)	(0.453)	(0.487)
Log(General Govt. Debt to GDP, partner)	-0.443***	-0.334**	-0.378***	-0.304**	-0.338**	-0.283**
	(0.082)	(0.106)	(0.102)	(0.095)	(0.109)	(0.095)
Log(Trade to GDP, partner)	0.443***	0.786***	0.535***	1.965*	0.841***	1.301
	(0.099)	(0.133)	(0.148)	(0.786)	(0.135)	(1.218)
dummy (1 if contiguous)	1.456***	0.850***	1.511***	0.750***	0.897***	0.788***
	(0.184)	(0.188)	(0.183)	(0.175)	(0.188)	(0.175)
log_abs_dist	-0.015	-0.154**	-0.209**	-0.283***	-0.128*	-0.282***
	(0.047)	(0.059)	(0.065)	(0.066)	(0.059)	(0.066)
log(population, reporter)	0.772***	0.674***	0.499***	3.638	0.674***	1.271
	(0.042)	(0.089)	(0.080)	(2.561)	(0.087)	(3.570)
log(population, partner)	0.479***	0.876***	0.656***	0.928***	0.857***	0.927***
	(0.036)	(0.074)	(0.061)	(0.073)	(0.075)	(0.073)
log_ggbondyield_pt		0.292	0.428*	0.146	0.374	0.165
		(0.203)	(0.214)	(0.184)	(0.204)	(0.191)
Public bond mkt. Capitalisation to GDP, partner		-0.706***		-0.863***	-0.588***	-0.835***
		(0.132)		(0.127)	(0.133)	(0.129)
Private bond mkt. Capitalisation to GDP, partner		0.096		0.103	0.126	0.107
		(0.079)		(0.071)	(0.080)	(0.073)
Public bond mkt. Capitalisation to GDP, reporter		-0.141		-0.100	-0.024	0.268
		(0.134)		(0.259)	(0.137)	(0.302)
Private bond mkt. Capitalisation to GDP, reporter		0.878***		0.216	0.899***	0.205
		(0.064)		(0.132)	(0.066)	(0.141)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.484**			

			(0.152)			
Public + Private Bond Mkt Cap. %GDP, Reporter			1.229***			
			(0.135)			
Stock mkt. capitalisation to GDP, partner			0.663***			
			(0.123)			
Stock mkt. capitalisation to GDP, reporter			0.933***			
			(0.100)			
Constant	-0.629	-3.184*	-10.714***	-12.554	-4.388**	-4.236
	(0.631)	(1.285)	(1.512)	(7.855)	(1.336)	(13.160)
R-squared	0.308	0.404	0.400	0.533	0.410	0.533
N	2816	1234	1234	1234	1234	1234

Tables with ECM

FLOWS, ECM Full sample	Real FDI - Model 1	Real FDI - Model 2	Real FDI - Model 3	Real FDI - Model 4	Real FDI - Model 5	Real FDI - Model 6
dummy (1 if only one of the two in EA in year t)	0.114***	0.004	-0.000	0.031	0.009	0.018
	(0.029)	(0.050)	(0.048)	(0.069)	(0.051)	(0.072)
dummy (1 if both in EA in year t)	0.102*	-0.020	-0.027	0.025	-0.009	0.003
	(0.042)	(0.068)	(0.064)	(0.116)	(0.070)	(0.123)
dummy (1 if only one of the two in EU)	-0.082*	0.015	0.043	-0.016	0.007	-0.015
	(0.037)	(0.065)	(0.064)	(0.081)	(0.065)	(0.083)
dummy (1 if both in EU)	0.001	0.105	0.148	0.027	0.093	0.032
	(0.044)	(0.085)	(0.085)	(0.125)	(0.087)	(0.130)
Log(General Govt. Debt to GDP, partner)	-0.016	-0.019	-0.028	-0.011	-0.020	-0.012

	(0.016)	(0.026)	(0.027)	(0.027)	(0.026)	(0.027)
Log(Trade to GDP, partner)	-0.011	0.024	0.003	0.156	0.025	0.227
	(0.017)	(0.024)	(0.025)	(0.173)	(0.025)	(0.245)
dummy (1 if contiguous)	0.143**	0.098	0.123*	0.101	0.103*	0.106
	(0.048)	(0.050)	(0.053)	(0.058)	(0.052)	(0.059)
log_abs_dist	0.012	0.016	0.012	0.007	0.016	0.003
	(0.007)	(0.013)	(0.013)	(0.014)	(0.013)	(0.014)
log(population, reporter)	0.032***	0.031*	0.022	0.095	0.033*	0.621
	(0.008)	(0.015)	(0.014)	(0.505)	(0.015)	(0.686)
log(population, partner)	0.026***	0.027	0.026	0.024	0.031	0.027
	(0.008)	(0.021)	(0.021)	(0.024)	(0.021)	(0.024)
log_unempl_P	0.009	0.009	0.013	0.005	0.020	0.019
	(0.023)	(0.037)	(0.038)	(0.040)	(0.038)	(0.043)
L.Residuals	0.040***	0.019*	0.022*	0.019	0.020*	0.020*
	(0.006)	(0.009)	(0.009)	(0.010)	(0.009)	(0.010)
Log(VIX index)	-1.008***	-1.372***	-1.329***	-1.403***	0.000	0.000
	(0.037)	(0.047)	(0.055)	(0.051)	(0.000)	(0.000)
Interaction VIX * real FDI stock	0.316***	0.320***	0.320***	0.319***	0.319***	0.318***
	(0.002)	(0.003)	(0.003)	(0.003)	(0.003)	(0.004)
log_ggbondyield_pt		-0.016	0.004	-0.015	-0.015	-0.007
		(0.037)	(0.039)	(0.038)	(0.036)	(0.038)
Public bond mkt. Capitalisation to GDP, partner		-0.032		-0.032	-0.039	-0.037
		(0.024)		(0.027)	(0.025)	(0.028)
Private bond mkt. Capitalisation to GDP, partner		-0.000		-0.007	-0.003	-0.004
		(0.018)		(0.021)	(0.019)	(0.021)
Public bond mkt. Capitalisation to GDP, reporter		0.004		0.024	0.008	0.068
		(0.024)		(0.042)	(0.024)	(0.052)

Private bond mkt. Capitalisation to GDP, reporter		0.062***		0.156***	0.064***	0.174***
		(0.016)		(0.039)	(0.015)	(0.036)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.028			
			(0.030)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.069**			
			(0.027)			
Stock mkt. capitalisation to GDP, partner			0.042			
			(0.024)			
Stock mkt. capitalisation to GDP, reporter			0.043*			
			(0.021)			
Constant	3.072***	3.896***	3.451***	2.898*	-0.344	-3.408
	(0.152)	(0.252)	(0.302)	(1.354)	(0.213)	(2.412)
R-squared	0.989	0.987	0.987	0.988	0.987	0.988
N	1417	620	620	620	620	620

FLOWS, ECM Full sample	Real Equity - Model 1	Real Equity - Model 2	Real Equity - Model 3	Real Equity - Model 4	Real Equity - Model 5	Real Equity - Model 6
dummy (1 if only one of the two in EA in year t)	0.099***	-0.002	0.018	0.020	-0.003	0.003
	(0.027)	(0.045)	(0.044)	(0.067)	(0.045)	(0.069)
dummy (1 if both in EA in year t)	0.158***	-0.009	0.029	0.038	-0.010	0.004
	(0.041)	(0.056)	(0.058)	(0.108)	(0.056)	(0.113)
dummy (1 if only one of the two in EU)	-0.013	0.081	0.066	0.026	0.083	0.040
	(0.034)	(0.060)	(0.061)	(0.075)	(0.060)	(0.077)

dummy (1 if both in EU)	0.020	0.136	0.108	0.031	0.139	0.057
	(0.040)	(0.072)	(0.076)	(0.111)	(0.074)	(0.115)
Log(General Govt. Debt to GDP, partner)	-0.021	0.003	-0.006	-0.000	0.004	-0.001
	(0.014)	(0.020)	(0.020)	(0.021)	(0.020)	(0.022)
Log(Trade to GDP, partner)	0.017	0.015	0.007	0.116	0.010	0.008
	(0.016)	(0.020)	(0.022)	(0.144)	(0.020)	(0.215)
dummy (1 if contiguous)	0.061	0.023	0.041	-0.003	0.020	-0.002
	(0.045)	(0.039)	(0.041)	(0.046)	(0.041)	(0.046)
log_abs_dist	-0.013	-0.013	-0.005	-0.019	-0.013	-0.020
	(0.007)	(0.010)	(0.011)	(0.012)	(0.010)	(0.012)
log(population, reporter)	0.044***	0.035*	0.021	0.219	0.035*	0.523
	(0.008)	(0.015)	(0.013)	(0.476)	(0.015)	(0.626)
log(population, partner)	0.033***	0.020	0.010	0.019	0.021	0.019
	(0.008)	(0.017)	(0.016)	(0.020)	(0.017)	(0.020)
log_unempl_P	0.001	-0.018	-0.009	-0.006	-0.007	0.006
	(0.021)	(0.031)	(0.031)	(0.035)	(0.032)	(0.037)
L.Residuals	0.043***	0.016	0.021*	0.022*	0.016	0.022*
	(0.005)	(0.010)	(0.009)	(0.010)	(0.009)	(0.010)
Log(VIX index)	-1.080***	-1.659***	-1.645***	-1.687***	0.000	0.000
	(0.036)	(0.042)	(0.050)	(0.046)	(0.000)	(0.000)
Interaction VIX * real equity stock	0.315***	0.324***	0.324***	0.324***	0.323***	0.323***
	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		-0.107**	-0.082*	-0.078*	-0.109**	-0.076*
		(0.033)	(0.035)	(0.035)	(0.033)	(0.037)
Public bond mkt. Capitalisation to GDP, partner		-0.020		-0.013	-0.025	-0.015
		(0.021)		(0.023)	(0.022)	(0.023)

Private bond mkt. Capitalisation to GDP, partner		0.034*		0.028	0.034*	0.032
		(0.015)		(0.020)	(0.016)	(0.020)
Public bond mkt. Capitalisation to GDP, reporter		-0.038		-0.060	-0.039	-0.043
		(0.021)		(0.040)	(0.021)	(0.050)
Private bond mkt. Capitalisation to GDP, reporter		0.043**		0.086**	0.043**	0.092**
		(0.014)		(0.029)	(0.014)	(0.030)
Public + Private Bond Mkt Cap. %GDP, Partner			0.035			
			(0.026)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.031			
			(0.021)			
Stock mkt. capitalisation to GDP, partner			0.019			
			(0.021)			
Stock mkt. capitalisation to GDP, reporter			0.024			
			(0.019)			
Constant	3.218***	4.959***	4.569***	4.004**	-0.270	-1.984
	(0.149)	(0.205)	(0.268)	(1.246)	(0.186)	(2.289)
R-squared	0.989	0.988	0.988	0.988	0.988	0.988
N	1692	675	675	675	675	675

FLOWS, ECM Full sample	Real Ptf.Equity	Real Ptf.Equity	Real Ptf.Equity	Real Ptf.Equity	Real Ptf.Equity	Real Ptf.Equity

	- Model 1	- Model 2	- Model 3	- Model 4	- Model 5	- Model 6
dummy (1 if only one of the two in EA in year t)	0.032	-0.031	-0.002	0.071	-0.036	0.082
	(0.033)	(0.053)	(0.051)	(0.093)	(0.053)	(0.097)
dummy (1 if both in EA in year t)	0.205***	0.036	0.085	0.233	0.051	0.267
	(0.053)	(0.076)	(0.078)	(0.171)	(0.078)	(0.180)
dummy (1 if only one of the two in EU)	0.073*	0.108	0.095	-0.031	0.110	-0.032
	(0.036)	(0.067)	(0.068)	(0.096)	(0.068)	(0.099)
dummy (1 if both in EU)	0.027	0.159	0.130	-0.129	0.145	-0.139
	(0.048)	(0.092)	(0.097)	(0.164)	(0.095)	(0.170)
Log(General Govt. Debt to GDP, partner)	0.010	0.043	0.018	0.040	0.048*	0.044
	(0.016)	(0.022)	(0.023)	(0.025)	(0.022)	(0.025)
Log(Trade to GDP, partner)	0.028	0.044	0.033	0.124	0.041	-0.296
	(0.020)	(0.028)	(0.031)	(0.165)	(0.029)	(0.227)
dummy (1 if contiguous)	-0.018	-0.009	0.021	-0.040	-0.000	-0.041
	(0.040)	(0.041)	(0.043)	(0.047)	(0.043)	(0.048)
log_abs_dist	-0.020*	-0.016	0.000	-0.014	-0.015	-0.014
	(0.008)	(0.013)	(0.013)	(0.016)	(0.013)	(0.016)
log(population, reporter)	0.032**	0.047*	0.016	-0.232	0.044	-0.532
	(0.011)	(0.023)	(0.021)	(0.625)	(0.023)	(0.770)
log(population, partner)	0.032***	-0.006	-0.013	-0.024	-0.011	-0.025
	(0.009)	(0.021)	(0.021)	(0.022)	(0.021)	(0.022)
log_unempl_P	0.024	-0.007	0.021	0.006	0.007	0.004
	(0.028)	(0.040)	(0.040)	(0.051)	(0.041)	(0.054)
L.Residuals	0.040***	0.019*	0.023**	0.026**	0.019*	0.027**

	(0.005)	(0.008)	(0.008)	(0.009)	(0.009)	(0.009)
Log(VIX index)	-0.832***	-1.310***	-1.292***	-1.328***	0.000	0.000
	(0.041)	(0.051)	(0.058)	(0.053)	(0.000)	(0.000)
Interaction VIX * real ptf. equity stock	0.315***	0.316***	0.319***	0.316***	0.316***	0.316***
	(0.002)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		-0.162***	-0.115**	-0.113*	-0.172***	-0.127**
		(0.041)	(0.044)	(0.044)	(0.042)	(0.047)
Public bond mkt. Capitalisation to GDP, partner		-0.017		0.022	-0.017	0.018
		(0.026)		(0.029)	(0.027)	(0.030)
Private bond mkt. Capitalisation to GDP, partner		0.063**		0.047*	0.065**	0.047
		(0.021)		(0.024)	(0.022)	(0.025)
Public bond mkt. Capitalisation to GDP, reporter		-0.081**		-0.184**	-0.072**	-0.141
		(0.027)		(0.063)	(0.027)	(0.082)
Private bond mkt. Capitalisation to GDP, reporter		0.053***		0.047	0.059***	0.028
		(0.016)		(0.035)	(0.017)	(0.037)
Public + Private Bond Mkt Cap. %GDP, Partner			0.050			
			(0.033)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.015			
			(0.027)			
Stock mkt. capitalisation to GDP, partner			0.034			
			(0.024)			
Stock mkt. capitalisation to GDP, reporter			0.029			

			(0.022)			
Constant	2.248***	3.782***	3.297***	4.614**	-0.420	2.926
	(0.175)	(0.263)	(0.335)	(1.562)	(0.256)	(2.492)
R-squared	0.989	0.988	0.988	0.989	0.988	0.989
N	1258	560	560	560	560	560

FLOWS, ECM Full sample	Real Debt - Model 1	Real debt - Model 2	Real debt - Model 3	Real debt - Model 4	Real debt - Model 5	Real debt - Model 6
dummy (1 if only one of the two in EA in year t)	0.158***	0.170**	0.189***	0.124	0.174**	0.111
	(0.025)	(0.055)	(0.055)	(0.072)	(0.055)	(0.074)
dummy (1 if both in EA in year t)	0.196***	0.254***	0.290***	0.151	0.258***	0.124
	(0.041)	(0.072)	(0.074)	(0.115)	(0.074)	(0.121)
dummy (1 if only one of the two in EU)	-0.107**	-0.179**	-0.188**	-0.157	-0.182**	-0.149
	(0.033)	(0.069)	(0.071)	(0.084)	(0.069)	(0.085)
dummy (1 if both in EU)	-0.075*	-0.204*	-0.222*	-0.147	-0.209*	-0.130
	(0.037)	(0.088)	(0.090)	(0.123)	(0.090)	(0.127)
Log(General Govt. Debt to GDP, partner)	0.008	0.033	0.031	0.031	0.032	0.029
	(0.013)	(0.020)	(0.020)	(0.021)	(0.020)	(0.022)
Log(Trade to GDP, partner)	0.010	0.033	0.031	-0.079	0.034	-0.152
	(0.017)	(0.025)	(0.027)	(0.159)	(0.026)	(0.235)
dummy (1 if contiguous)	0.015	0.038	0.057	0.047	0.038	0.050
	(0.051)	(0.045)	(0.047)	(0.052)	(0.045)	(0.052)
log_abs_dist	-0.007	-0.001	-0.004	-0.001	-0.001	-0.001
	(0.007)	(0.011)	(0.011)	(0.013)	(0.011)	(0.013)

log(population, reporter)	0.014*	0.007	0.006	0.751	0.006	0.584
	(0.006)	(0.016)	(0.015)	(0.501)	(0.016)	(0.787)
log(population, partner)	0.013	-0.016	-0.018	-0.021	-0.016	-0.021
	(0.007)	(0.018)	(0.016)	(0.020)	(0.018)	(0.020)
log_unempl_P	-0.001	-0.034	-0.033	-0.016	-0.031	-0.005
	(0.015)	(0.035)	(0.033)	(0.040)	(0.035)	(0.040)
L.Residuals	0.031***	0.014	0.014	0.015	0.016	0.015
	(0.005)	(0.009)	(0.009)	(0.011)	(0.009)	(0.011)
Log(VIX index)	-1.436***	-1.918***	-1.904***	-1.929***	0.000	0.000
	(0.033)	(0.046)	(0.051)	(0.051)	(0.000)	(0.000)
Interaction VIX * real debt stock	0.326***	0.324***	0.324***	0.323***	0.324***	0.322***
	(0.002)	(0.003)	(0.003)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		0.030	0.029	0.033	0.036	0.039
		(0.039)	(0.037)	(0.040)	(0.040)	(0.040)
Public bond mkt. Capitalisation to GDP, partner		0.042		0.043	0.043	0.041
		(0.024)		(0.025)	(0.024)	(0.025)
Private bond mkt. Capitalisation to GDP, partner		0.044*		0.054**	0.045*	0.055**
		(0.018)		(0.021)	(0.018)	(0.021)
Public bond mkt. Capitalisation to GDP, reporter		0.035		0.014	0.038	0.031
		(0.023)		(0.047)	(0.023)	(0.058)
Private bond mkt. Capitalisation to GDP, reporter		0.048***		0.027	0.050***	0.025
		(0.012)		(0.022)	(0.012)	(0.024)
Public + Private Bond Mkt Cap. %GDP, Partner			0.096**			
			(0.029)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.091***			
			(0.023)			
Stock mkt. capitalisation to GDP, partner			-0.000			

			(0.020)			
Stock mkt. capitalisation to GDP, reporter			0.026			
			(0.019)			
Constant	4.251***	5.112***	4.766***	3.370*	-0.893***	-1.923
	(0.140)	(0.231)	(0.290)	(1.404)	(0.212)	(2.826)
R-squared	0.989	0.988	0.988	0.988	0.988	0.987
N	1552	647	647	647	647	647
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Full sample	Real Ptf. Debt - Model 1	Real Ptf. debt - Model 2	Real Ptf. debt - Model 3	Real Ptf. debt - Model 4	Real Ptf. debt - Model 5	Real Ptf. debt - Model 6
dummy (1 if only one of the two in EA in year t)	0.109***	0.161**	0.184***	0.083	0.155**	0.064
	(0.028)	(0.053)	(0.052)	(0.076)	(0.054)	(0.080)
dummy (1 if both in EA in year t)	0.162***	0.309***	0.351***	0.150	0.305***	0.116
	(0.042)	(0.084)	(0.084)	(0.134)	(0.085)	(0.142)
dummy (1 if only one of the two in EU)	-0.082*	-0.210**	-0.206**	-0.111	-0.205**	-0.097
	(0.036)	(0.077)	(0.077)	(0.092)	(0.078)	(0.094)
dummy (1 if both in EU)	-0.051	-0.245*	-0.253*	-0.059	-0.249*	-0.038
	(0.045)	(0.111)	(0.108)	(0.143)	(0.112)	(0.147)
Log(General Govt. Debt to GDP, partner)	0.006	0.013	0.019	0.008	0.006	0.004
	(0.016)	(0.022)	(0.023)	(0.023)	(0.022)	(0.024)
Log(Trade to GDP, partner)	0.000	0.067*	0.050	0.081	0.066*	-0.031

	(0.020)	(0.027)	(0.029)	(0.173)	(0.027)	(0.241)
dummy (1 if contiguous)	-0.004	-0.004	0.033	-0.000	-0.011	-0.003
	(0.050)	(0.045)	(0.048)	(0.054)	(0.046)	(0.055)
log_abs_dist	0.004	-0.001	-0.001	-0.005	0.000	-0.005
	(0.008)	(0.011)	(0.011)	(0.014)	(0.011)	(0.014)
log(population, reporter)	0.022**	0.032	0.016	-0.510	0.032	-0.276
	(0.007)	(0.018)	(0.017)	(0.540)	(0.017)	(0.782)
log(population, partner)	0.008	0.019	0.010	0.029	0.017	0.029
	(0.008)	(0.022)	(0.019)	(0.024)	(0.021)	(0.024)
log_unempl_P	-0.007	-0.012	-0.031	-0.006	-0.002	0.009
	(0.017)	(0.034)	(0.033)	(0.039)	(0.036)	(0.042)
L.Residuals	0.030***	0.033**	0.032**	0.033*	0.033**	0.033*
	(0.006)	(0.011)	(0.010)	(0.013)	(0.011)	(0.013)
Log(VIX index)	-1.222***	-1.654***	-1.638***	-1.635***	0.000	0.000
	(0.038)	(0.050)	(0.055)	(0.057)	(0.000)	(0.000)
Interaction VIX * real ptf. debt stock	0.326***	0.317***	0.317***	0.315***	0.317***	0.315***
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		0.090*	0.077	0.064	0.105*	0.074
		(0.044)	(0.042)	(0.043)	(0.045)	(0.044)
Public bond mkt. Capitalisation to GDP, partner		0.008		-0.010	0.014	-0.010
		(0.030)		(0.032)	(0.030)	(0.032)
Private bond mkt. Capitalisation to GDP, partner		0.026		0.032	0.031	0.037
		(0.019)		(0.023)	(0.020)	(0.024)
Public bond mkt. Capitalisation to GDP, reporter		-0.016		-0.034	-0.011	-0.021
		(0.022)		(0.048)	(0.023)	(0.060)
Private bond mkt. Capitalisation to GDP, reporter		0.073***		0.032	0.077***	0.035
		(0.017)		(0.025)	(0.018)	(0.027)

Public + Private Bond Mkt Cap. %GDP, Partner			0.060			
			(0.035)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.097**			
			(0.030)			
Stock mkt. capitalisation to GDP, partner			-0.006			
			(0.023)			
Stock mkt. capitalisation to GDP, reporter			0.066***			
			(0.020)			
Constant	3.658***	4.375***	3.853***	6.192***	-1.388***	0.179
	(0.171)	(0.279)	(0.336)	(1.458)	(0.241)	(2.774)
R-squared	0.989	0.988	0.988	0.988	0.988	0.988
N	1289	613	613	613	613	613
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Full sample	Real Other inv. - Model 1	Real Other inv. - Model 2	Real Other inv. - Model 3	Real Other inv. - Model 4	Real Other inv. - Model 5	Real Other inv. - Model 6
dummy (1 if only one of the two in EA in year t)	1.121***	1.135***	1.160***	1.290***	1.126***	1.190**
	(0.122)	(0.270)	(0.276)	(0.357)	(0.282)	(0.374)
dummy (1 if both in EA in year t)	1.940***	1.686***	1.759***	2.073***	1.725***	1.912**
	(0.194)	(0.357)	(0.385)	(0.580)	(0.375)	(0.600)
dummy (1 if only one of the two in EU)	-0.803***	-1.113**	-1.038**	-1.065*	-1.122**	-0.980*
	(0.147)	(0.342)	(0.357)	(0.471)	(0.348)	(0.486)

dummy (1 if both in EU)	-1.051***	-0.953*	-0.845	-0.994	-1.059*	-0.909
	(0.175)	(0.416)	(0.441)	(0.739)	(0.435)	(0.767)
Log(General Govt. Debt to GDP, partner)	-0.087	0.189	0.047	0.183	0.178	0.205
	(0.059)	(0.114)	(0.122)	(0.114)	(0.117)	(0.116)
Log(Trade to GDP, partner)	0.432***	0.688***	0.581***	0.023	0.682***	-2.119
	(0.099)	(0.161)	(0.162)	(0.748)	(0.161)	(1.701)
dummy (1 if contiguous)	0.398**	0.457**	0.565**	0.315	0.481**	0.360
	(0.148)	(0.169)	(0.178)	(0.187)	(0.169)	(0.190)
log_abs_dist	-0.160***	-0.076	-0.134*	-0.101	-0.068	-0.107*
	(0.031)	(0.051)	(0.055)	(0.052)	(0.051)	(0.053)
log(population, reporter)	0.222***	0.239***	0.212***	-2.065	0.227**	-7.002
	(0.039)	(0.071)	(0.060)	(3.855)	(0.071)	(6.248)
log(population, partner)	0.022	-0.177	-0.076	-0.088	-0.178	-0.095
	(0.028)	(0.096)	(0.083)	(0.112)	(0.095)	(0.113)
log_unempl_P	0.221**	-0.208	-0.037	-0.295	-0.071	-0.202
	(0.070)	(0.170)	(0.164)	(0.203)	(0.178)	(0.213)
L.Residuals	0.355***	0.274***	0.286***	0.303***	0.272***	0.298***
	(0.032)	(0.052)	(0.052)	(0.063)	(0.051)	(0.062)
Log(VIX index)	-0.912***	-1.411***	-1.142***	-1.467***	0.000	0.000
	(0.126)	(0.215)	(0.242)	(0.226)	(0.000)	(0.000)
Interaction VIX * real debt stock	0.208***	0.212***	0.211***	0.218***	0.210***	0.216***
	(0.011)	(0.017)	(0.017)	(0.018)	(0.017)	(0.018)
log_ggbondyield_pt		-0.003	0.132	-0.008	0.101	0.056
		(0.229)	(0.238)	(0.283)	(0.244)	(0.307)
Public bond mkt. Capitalisation to GDP, partner		0.504***		0.463**	0.523***	0.452**
		(0.147)		(0.169)	(0.143)	(0.166)
Private bond mkt. Capitalisation to GDP, partner		0.485***		0.377***	0.480***	0.394***

		(0.102)		(0.101)	(0.102)	(0.100)
Public bond mkt. Capitalisation to GDP, reporter		0.118		-0.519	0.216	0.015
		(0.138)		(0.433)	(0.137)	(0.469)
Private bond mkt. Capitalisation to GDP, reporter		0.296***		0.296	0.329***	0.238
		(0.080)		(0.187)	(0.080)	(0.206)
Public + Private Bond Mkt Cap. %GDP, Partner			0.818***			
			(0.169)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.414**			
			(0.153)			
Stock mkt. capitalisation to GDP, partner			0.283*			
			(0.125)			
Stock mkt. capitalisation to GDP, reporter			0.155			
			(0.124)			
Constant	1.637*	-2.814	-5.471**	9.149	-8.543***	25.623
	(0.742)	(1.455)	(1.929)	(12.660)	(1.322)	(24.098)
R-squared	0.839	0.799	0.797	0.801	0.801	0.802
N	1177	494	494	494	494	494
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real FDI - Model 1	Real FDI - Model 2	Real FDI - Model 3	Real FDI - Model 4	Real FDI - Model 5	Real FDI - Model 6
dummy (1 if only one of the two in EA in year t)	0.029	0.033	-0.034	0.087	0.036	0.049

	(0.034)	(0.063)	(0.061)	(0.107)	(0.063)	(0.107)
dummy (1 if both in EA in year t)	-0.010	0.058	-0.082	0.138	0.063	0.060
	(0.052)	(0.094)	(0.088)	(0.186)	(0.094)	(0.188)
dummy (1 if only one of the two in EU)	0.046	0.000	0.088	-0.089	-0.004	-0.076
	(0.046)	(0.076)	(0.074)	(0.113)	(0.075)	(0.113)
dummy (1 if both in EU)	0.163**	0.086	0.250*	-0.085	0.080	-0.051
	(0.059)	(0.111)	(0.112)	(0.189)	(0.110)	(0.190)
Log(General Govt. Debt to GDP, partner)	-0.024	-0.032	-0.041	-0.026	-0.033	-0.026
	(0.020)	(0.038)	(0.041)	(0.040)	(0.039)	(0.040)
Log(Trade to GDP, partner)	-0.047	0.060	0.012	0.349	0.054	0.771*
	(0.032)	(0.056)	(0.053)	(0.239)	(0.057)	(0.335)
dummy (1 if contiguous)	0.125**	0.105*	0.139*	0.141*	0.113*	0.149*
	(0.047)	(0.053)	(0.056)	(0.061)	(0.055)	(0.062)
log_abs_dist	0.010	0.030	0.022	0.042	0.033	0.041
	(0.008)	(0.018)	(0.015)	(0.024)	(0.018)	(0.024)
log(population, reporter)	0.067***	0.058*	0.048*	1.181	0.057*	2.981**
	(0.017)	(0.027)	(0.023)	(0.688)	(0.028)	(1.109)
log(population, partner)	0.025	0.024	0.054	-0.002	0.016	-0.019
	(0.014)	(0.041)	(0.043)	(0.050)	(0.043)	(0.051)
log_unempl_P	0.044	0.022	0.028	0.028	0.037	0.056
	(0.030)	(0.049)	(0.051)	(0.050)	(0.050)	(0.051)
L.Residuals	0.035***	0.008	0.020	0.008	0.009	0.010
	(0.008)	(0.013)	(0.012)	(0.014)	(0.013)	(0.014)
Log(VIX index)	-1.103***	-1.354***	-1.306***	-1.423***	-1.425***	-1.520***
	(0.046)	(0.060)	(0.071)	(0.069)	(0.089)	(0.097)
Interaction VIX * real FDI stock	0.318***	0.318***	0.319***	0.315***	0.317***	0.314***
	(0.003)	(0.004)	(0.004)	(0.005)	(0.004)	(0.005)

log_ggbondyield_pt		-0.053	-0.038	-0.034	-0.058	-0.035
		(0.047)	(0.050)	(0.049)	(0.047)	(0.049)
Public bond mkt. Capitalisation to GDP, partner		-0.022		0.006	-0.018	0.015
		(0.039)		(0.053)	(0.041)	(0.053)
Private bond mkt. Capitalisation to GDP, partner		-0.059		-0.070	-0.063*	-0.062
		(0.031)		(0.043)	(0.031)	(0.044)
Public bond mkt. Capitalisation to GDP, reporter		0.015		0.034	0.028	0.168
		(0.038)		(0.091)	(0.039)	(0.118)
Private bond mkt. Capitalisation to GDP, reporter		0.088***		0.224***	0.089***	0.277***
		(0.023)		(0.052)	(0.023)	(0.054)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.103			
			(0.059)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.070			
			(0.038)			
Stock mkt. capitalisation to GDP, partner			0.038			
			(0.030)			
Stock mkt. capitalisation to GDP, reporter			0.043			
			(0.032)			
Constant	3.296***	3.673***	3.555***	-1.334	3.894***	-8.716*
	(0.222)	(0.384)	(0.486)	(1.965)	(0.461)	(3.827)
R-squared	0.989	0.988	0.987	0.988	0.988	0.988
N	818	430	430	430	430	430
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Ptf.Equity - Model 1	Real Ptf.Equity - Model 2	Real Ptf.Equity - Model 3	Real Ptf.Equity - Model 4	Real Ptf.Equity - Model 5	Real Ptf.Equity - Model 6
dummy (1 if only one of the two in EA in year t)	-0.055	-0.061	-0.067	-0.123	-0.074	-0.162
	(0.035)	(0.058)	(0.053)	(0.091)	(0.059)	(0.090)
dummy (1 if both in EA in year t)	-0.008	-0.122	-0.142	-0.250	-0.130	-0.314
	(0.058)	(0.090)	(0.089)	(0.171)	(0.091)	(0.171)
dummy (1 if only one of the two in EU)	0.138**	0.140*	0.156*	0.088	0.154*	0.123
	(0.045)	(0.071)	(0.073)	(0.091)	(0.073)	(0.092)
dummy (1 if both in EU)	0.167**	0.235*	0.268*	0.157	0.256*	0.222
	(0.061)	(0.104)	(0.114)	(0.155)	(0.108)	(0.158)
Log(General Govt. Debt to GDP, partner)	-0.036*	-0.024	-0.053	-0.023	-0.019	-0.017
	(0.017)	(0.025)	(0.027)	(0.028)	(0.027)	(0.029)
Log(Trade to GDP, partner)	-0.026	0.114*	0.041	0.260	0.104*	0.041
	(0.030)	(0.046)	(0.052)	(0.195)	(0.047)	(0.318)
dummy (1 if contiguous)	0.004	-0.033	-0.004	-0.056	-0.035	-0.050
	(0.041)	(0.042)	(0.045)	(0.050)	(0.045)	(0.053)
log_abs_dist	-0.021*	-0.005	0.011	-0.019	-0.006	-0.020
	(0.009)	(0.016)	(0.013)	(0.023)	(0.016)	(0.023)
log(population, reporter)	0.044**	0.085***	0.050*	-0.747	0.080**	-0.431
	(0.014)	(0.024)	(0.019)	(0.651)	(0.026)	(1.003)
log(population, partner)	0.064***	0.033	0.050	0.007	0.030	0.001
	(0.014)	(0.031)	(0.033)	(0.035)	(0.030)	(0.035)
log_unempl_P	0.051	0.075	0.112*	0.118*	0.074	0.131**
	(0.030)	(0.045)	(0.049)	(0.048)	(0.047)	(0.048)

L.Residuals	0.034***	0.011	0.016	0.019	0.010	0.019
	(0.006)	(0.010)	(0.010)	(0.012)	(0.010)	(0.012)
Log(VIX index)	-0.832***	-1.277***	-1.267***	-1.285***	0.000	0.000
	(0.049)	(0.056)	(0.067)	(0.063)	(0.000)	(0.000)
Interaction VIX * real ptf. equity stock	0.318***	0.322***	0.325***	0.323***	0.323***	0.322***
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		-0.061	-0.031	-0.006	-0.071	-0.015
		(0.044)	(0.051)	(0.046)	(0.048)	(0.049)
Public bond mkt. Capitalisation to GDP, partner		-0.009		0.006	-0.015	0.005
		(0.034)		(0.040)	(0.034)	(0.040)
Private bond mkt. Capitalisation to GDP, partner		0.020		0.042	0.021	0.050
		(0.028)		(0.038)	(0.028)	(0.038)
Public bond mkt. Capitalisation to GDP, reporter		-0.083*		-0.013	-0.086*	0.037
		(0.034)		(0.065)	(0.036)	(0.084)
Private bond mkt. Capitalisation to GDP, reporter		0.059**		0.100*	0.058**	0.110*
		(0.020)		(0.041)	(0.020)	(0.045)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.038			
			(0.046)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.011			
			(0.033)			
Stock mkt. capitalisation to GDP, partner			0.031			
			(0.025)			
Stock mkt. capitalisation to GDP, reporter			-0.005			
			(0.033)			
Constant	2.451***	3.135***	3.340***	4.706*	-1.210***	-0.082
	(0.200)	(0.315)	(0.477)	(1.877)	(0.306)	(3.913)

R-squared	0.990	0.990	0.989	0.990	0.990	0.990
N	734	379	379	379	379	379
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Equity - Model 1	Real Equity - Model 2	Real Equity - Model 3	Real Equity - Model 4	Real Equity - Model 5	Real Equity - Model 6
dummy (1 if only one of the two in EA in year t)	0.004	0.019	-0.026	-0.029	0.015	-0.079
	(0.031)	(0.048)	(0.046)	(0.089)	(0.049)	(0.089)
dummy (1 if both in EA in year t)	-0.009	0.006	-0.087	-0.085	-0.003	-0.188
	(0.049)	(0.067)	(0.064)	(0.153)	(0.068)	(0.155)
dummy (1 if only one of the two in EU)	0.106*	0.086	0.144*	0.066	0.094	0.099
	(0.043)	(0.066)	(0.069)	(0.092)	(0.068)	(0.093)
dummy (1 if both in EU)	0.182***	0.144	0.262**	0.114	0.158	0.183
	(0.054)	(0.084)	(0.091)	(0.142)	(0.086)	(0.144)
Log(General Govt. Debt to GDP, partner)	-0.049**	-0.026	-0.038	-0.023	-0.025	-0.022
	(0.015)	(0.029)	(0.031)	(0.031)	(0.030)	(0.031)
Log(Trade to GDP, partner)	-0.027	0.076	0.021	0.193	0.064	0.283
	(0.027)	(0.041)	(0.040)	(0.193)	(0.043)	(0.302)
dummy (1 if contiguous)	0.094*	0.055	0.087	0.057	0.058	0.065
	(0.043)	(0.041)	(0.044)	(0.048)	(0.043)	(0.050)
log_abs_dist	-0.012	0.010	0.005	0.003	0.010	0.002
	(0.008)	(0.014)	(0.011)	(0.020)	(0.014)	(0.020)

log(population, reporter)	0.071***	0.061**	0.046*	0.549	0.059*	1.698
	(0.015)	(0.023)	(0.018)	(0.564)	(0.024)	(0.942)
log(population, partner)	0.058***	0.014	0.047	0.004	0.015	-0.003
	(0.013)	(0.032)	(0.035)	(0.037)	(0.033)	(0.038)
log_unempl_P	0.043	0.015	0.028	0.033	0.025	0.062
	(0.025)	(0.039)	(0.040)	(0.039)	(0.038)	(0.040)
L.Residuals	0.041***	0.007	0.021*	0.013	0.007	0.014
	(0.007)	(0.011)	(0.010)	(0.011)	(0.011)	(0.011)
Log(VIX index)	-1.157***	-1.594***	-1.544***	-1.637***	0.000	0.000
	(0.044)	(0.051)	(0.062)	(0.057)	(0.000)	(0.000)
Interaction VIX * real equity stock	0.315***	0.320***	0.320***	0.320***	0.320***	0.319***
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		-0.098*	-0.085	-0.077	-0.104*	-0.079
		(0.039)	(0.045)	(0.041)	(0.041)	(0.043)
Public bond mkt. Capitalisation to GDP, partner		0.011		0.014	0.007	0.013
		(0.033)		(0.040)	(0.034)	(0.041)
Private bond mkt. Capitalisation to GDP, partner		-0.015		-0.001	-0.016	0.008
		(0.026)		(0.040)	(0.027)	(0.041)
Public bond mkt. Capitalisation to GDP, reporter		-0.021		0.008	-0.016	0.080
		(0.032)		(0.076)	(0.034)	(0.094)
Private bond mkt. Capitalisation to GDP, reporter		0.072***		0.125***	0.071***	0.161***
		(0.017)		(0.037)	(0.017)	(0.041)
Public + Private Bond Mkt Cap. %GDP, Partner			-0.041			
			(0.045)			

Public + Private Bond Mkt Cap. %GDP, Reporter			0.046			
			(0.027)			
Stock mkt. capitalisation to GDP, partner			0.036			
			(0.026)			
Stock mkt. capitalisation to GDP, reporter			0.036			
			(0.027)			
Constant	3.469***	4.331***	4.209***	2.188	-1.176***	-7.740*
	(0.195)	(0.277)	(0.381)	(1.555)	(0.258)	(3.607)
R-squared	0.990	0.989	0.989	0.989	0.989	0.989
N	939	452	452	452	452	452
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Other inv. - Model 1	Real Other inv. - Model 2	Real Other inv. - Model 3	Real Other inv. - Model 4	Real Other inv. - Model 5	Real Other inv. - Model 6
dummy (1 if only one of the two in EA in year t)	0.908***	0.837**	0.970**	0.584	0.795*	0.366
	(0.191)	(0.311)	(0.318)	(0.553)	(0.328)	(0.552)
dummy (1 if both in EA in year t)	1.617***	1.276**	1.553***	0.939	1.257**	0.571
	(0.301)	(0.435)	(0.460)	(0.985)	(0.452)	(0.981)
dummy (1 if only one of the two in EU)	-0.511*	-0.941*	-1.020**	-0.552	-0.924*	-0.388
	(0.198)	(0.372)	(0.385)	(0.615)	(0.377)	(0.611)

dummy (1 if both in EU)	-0.434	-0.705	-0.893	-0.086	-0.792	0.116
	(0.260)	(0.469)	(0.505)	(1.030)	(0.491)	(1.031)
Log(General Govt. Debt to GDP, partner)	-0.074	0.413**	0.204	0.393**	0.455**	0.457**
	(0.074)	(0.140)	(0.153)	(0.147)	(0.141)	(0.150)
Log(Trade to GDP, partner)	0.642***	0.707**	0.601*	0.860	0.639**	-0.074
	(0.162)	(0.232)	(0.251)	(0.886)	(0.237)	(1.326)
dummy (1 if contiguous)	0.371*	0.399*	0.546**	0.293	0.437*	0.352
	(0.165)	(0.192)	(0.209)	(0.217)	(0.195)	(0.222)
log_abs_dist	-0.174***	-0.180*	-0.158*	-0.248*	-0.173	-0.261*
	(0.040)	(0.087)	(0.072)	(0.104)	(0.090)	(0.110)
log(population, reporter)	0.454***	0.376***	0.308***	-1.619	0.334**	-3.149
	(0.068)	(0.107)	(0.088)	(4.647)	(0.112)	(6.200)
log(population, partner)	0.163**	-0.270	-0.274	-0.109	-0.360*	-0.185
	(0.057)	(0.141)	(0.153)	(0.158)	(0.140)	(0.159)
log_unempl_P	0.150	-0.298	-0.107	-0.295	-0.231	-0.216
	(0.114)	(0.205)	(0.191)	(0.257)	(0.204)	(0.255)
L.Residuals	0.365***	0.284***	0.305***	0.324***	0.280***	0.322***
	(0.041)	(0.065)	(0.068)	(0.073)	(0.064)	(0.070)
Log(VIX index)	-0.892***	-1.514***	-1.282***	-1.496***	0.000	0.000
	(0.169)	(0.236)	(0.301)	(0.272)	(0.000)	(0.000)
Interaction VIX * real debt stock	0.206***	0.214***	0.216***	0.218***	0.213***	0.216***
	(0.013)	(0.020)	(0.019)	(0.022)	(0.021)	(0.022)
log_ggbondyield_pt		-0.145	0.043	-0.215	-0.151	-0.241
		(0.255)	(0.286)	(0.290)	(0.266)	(0.302)
Public bond mkt. Capitalisation to GDP, partner		0.428**		0.252	0.489**	0.262
		(0.154)		(0.196)	(0.153)	(0.201)

Private bond mkt. Capitalisation to GDP, partner		0.675***		0.645**	0.697***	0.705***
		(0.160)		(0.201)	(0.163)	(0.205)
Public bond mkt. Capitalisation to GDP, reporter		0.045		-0.191	0.165	0.581
		(0.189)		(0.599)	(0.197)	(0.681)
Private bond mkt. Capitalisation to GDP, reporter		0.350***		0.232	0.368***	0.277
		(0.099)		(0.212)	(0.101)	(0.226)
Public + Private Bond Mkt Cap. %GDP, Partner			1.055***			
			(0.227)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.482*			
			(0.194)			
Stock mkt. capitalisation to GDP, partner			0.288			
			(0.167)			
Stock mkt. capitalisation to GDP, reporter			0.032			
			(0.171)			
Constant	-0.542	-3.238	-5.940*	4.160	-9.026***	4.736
	(1.068)	(1.732)	(2.428)	(15.278)	(1.609)	(21.992)
R-squared	0.838	0.815	0.815	0.814	0.818	0.816
N	646	348	348	348	348	348
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Ptf. Debt - Model 1	Real Ptf. debt - Model 2	Real Ptf. debt - Model 3	Real Ptf. debt - Model 4	Real Ptf. debt - Model 5	Real Ptf. debt - Model 6
dummy (1 if only one of the two in EA in year t)	0.063	0.154**	0.143*	0.025	0.134*	-0.013
	(0.032)	(0.058)	(0.057)	(0.101)	(0.057)	(0.098)
dummy (1 if both in EA in year t)	0.107	0.297**	0.279**	0.033	0.269*	-0.028
	(0.056)	(0.106)	(0.107)	(0.196)	(0.104)	(0.194)
dummy (1 if only one of the two in EU)	0.020	-0.162	-0.148	-0.005	-0.139	0.023
	(0.046)	(0.089)	(0.087)	(0.119)	(0.087)	(0.114)
dummy (1 if both in EU)	0.092	-0.200	-0.181	0.106	-0.168	0.155
	(0.063)	(0.134)	(0.136)	(0.196)	(0.132)	(0.193)
Log(General Govt. Debt to GDP, partner)	0.004	-0.028	-0.020	-0.045	-0.030	-0.042
	(0.018)	(0.029)	(0.033)	(0.031)	(0.030)	(0.032)
Log(Trade to GDP, partner)	-0.044	0.067	0.038	0.325	0.061	0.531
	(0.036)	(0.049)	(0.048)	(0.225)	(0.049)	(0.301)
dummy (1 if contiguous)	0.021	-0.009	0.024	-0.004	-0.020	-0.008
	(0.050)	(0.050)	(0.052)	(0.060)	(0.051)	(0.060)
log_abs_dist	0.001	0.009	0.003	0.012	0.007	0.006
	(0.009)	(0.014)	(0.013)	(0.020)	(0.015)	(0.021)
log(population, reporter)	0.046**	0.067**	0.052*	-0.388	0.069**	1.440
	(0.016)	(0.024)	(0.023)	(0.678)	(0.024)	(1.139)
log(population, partner)	0.027*	0.030	0.035	0.058	0.029	0.054
	(0.013)	(0.033)	(0.036)	(0.040)	(0.033)	(0.040)
log_unempl_P	-0.020	0.021	0.001	0.047	0.023	0.056
	(0.022)	(0.039)	(0.043)	(0.045)	(0.042)	(0.049)

L.Residuals	0.035***	0.034**	0.038**	0.038*	0.033**	0.039*
	(0.008)	(0.012)	(0.012)	(0.015)	(0.012)	(0.015)
Log(VIX index)	-1.252***	-1.576***	-1.565***	-1.563***	0.000	0.000
	(0.050)	(0.065)	(0.075)	(0.073)	(0.000)	(0.000)
Interaction VIX * real ptf. debt stock	0.322***	0.316***	0.317***	0.315***	0.317***	0.315***
	(0.004)	(0.005)	(0.005)	(0.005)	(0.005)	(0.005)
log_ggbondyield_pt		0.140**	0.127*	0.106*	0.137**	0.101*
		(0.051)	(0.051)	(0.050)	(0.052)	(0.051)
Public bond mkt. Capitalisation to GDP, partner		0.034		-0.008	0.034	-0.012
		(0.039)		(0.047)	(0.039)	(0.047)
Private bond mkt. Capitalisation to GDP, partner		-0.007		-0.005	0.000	0.007
		(0.029)		(0.039)	(0.030)	(0.039)
Public bond mkt. Capitalisation to GDP, reporter		0.007		0.135	-0.006	0.084
		(0.025)		(0.076)	(0.028)	(0.096)
Private bond mkt. Capitalisation to GDP, reporter		0.081***		0.051	0.081***	0.077*
		(0.020)		(0.027)	(0.020)	(0.032)
Public + Private Bond Mkt Cap. %GDP, Partner			0.047			
			(0.060)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.099**			
			(0.035)			
Stock mkt. capitalisation to GDP, partner			-0.002			
			(0.029)			
Stock mkt. capitalisation to GDP, reporter			0.031			

			(0.025)			
Constant	3.831***	3.890***	3.689***	4.114*	-1.493***	-7.600
	(0.266)	(0.384)	(0.453)	(1.870)	(0.313)	(3.985)
R-squared	0.990	0.988	0.988	0.988	0.988	0.988
N	759	430	430	430	430	430
Reporter dummies				y		y
time dummies					y	y

FLOWS, ECM Without offshore centres and without LUX/IE/NL/CY/SG/HK	Real Debt - Model 1	Real debt - Model 2	Real debt - Model 3	Real debt - Model 4	Real debt - Model 5	Real debt - Model 6
dummy (1 if only one of the two in EA in year t)	0.107***	0.165**	0.160**	0.149	0.171**	0.133
	(0.031)	(0.057)	(0.059)	(0.095)	(0.057)	(0.094)
dummy (1 if both in EA in year t)	0.179***	0.277**	0.273**	0.225	0.287***	0.206
	(0.052)	(0.085)	(0.088)	(0.178)	(0.086)	(0.177)
dummy (1 if only one of the two in EU)	-0.002	-0.150*	-0.152	-0.162	-0.151*	-0.154
	(0.044)	(0.074)	(0.079)	(0.098)	(0.074)	(0.098)
dummy (1 if both in EU)	0.035	-0.190	-0.188	-0.190	-0.193	-0.173
	(0.053)	(0.102)	(0.108)	(0.165)	(0.102)	(0.167)
Log(General Govt. Debt to GDP, partner)	-0.000	-0.001	-0.004	-0.013	-0.000	-0.011
	(0.016)	(0.027)	(0.029)	(0.029)	(0.028)	(0.029)
Log(Trade to GDP, partner)	-0.017	0.012	-0.020	0.122	0.011	0.448
	(0.032)	(0.044)	(0.046)	(0.194)	(0.046)	(0.280)

dummy (1 if contiguous)	0.022	0.041	0.044	0.024	0.043	0.029
	(0.051)	(0.049)	(0.051)	(0.058)	(0.050)	(0.058)
log_abs_dist	-0.014	0.004	-0.011	0.014	0.004	0.010
	(0.008)	(0.015)	(0.013)	(0.018)	(0.015)	(0.019)
log(population, reporter)	0.041**	0.016	0.017	1.605**	0.016	3.038**
	(0.014)	(0.023)	(0.020)	(0.582)	(0.024)	(1.035)
log(population, partner)	0.029*	-0.002	0.011	-0.013	-0.002	-0.012
	(0.011)	(0.028)	(0.032)	(0.033)	(0.028)	(0.033)
log_unempl_P	-0.007	-0.014	-0.020	0.011	-0.016	0.011
	(0.022)	(0.040)	(0.039)	(0.046)	(0.039)	(0.044)
L.Residuals	0.039***	0.020	0.025*	0.026*	0.021	0.028*
	(0.006)	(0.011)	(0.012)	(0.013)	(0.012)	(0.013)
Log(VIX index)	-1.405***	-1.814***	-1.798***	-1.863***	0.000	0.000
	(0.045)	(0.057)	(0.066)	(0.063)	(0.000)	(0.000)
Interaction VIX * real debt stock	0.322***	0.322***	0.322***	0.322***	0.322***	0.321***
	(0.003)	(0.004)	(0.004)	(0.004)	(0.004)	(0.004)
log_ggbondyield_pt		0.064	0.071	0.084	0.065	0.076
		(0.045)	(0.045)	(0.046)	(0.046)	(0.045)
Public bond mkt. Capitalisation to GDP, partner		0.058		0.071*	0.057	0.065
		(0.030)		(0.035)	(0.030)	(0.035)
Private bond mkt. Capitalisation to GDP, partner		0.014		0.009	0.016	0.013
		(0.028)		(0.037)	(0.029)	(0.038)
Public bond mkt. Capitalisation to GDP, reporter		0.049		0.122	0.051	0.128
		(0.029)		(0.074)	(0.032)	(0.091)
Private bond mkt. Capitalisation to GDP, reporter		0.048***		0.053*	0.051***	0.083**

		(0.013)		(0.024)	(0.014)	(0.027)
Public + Private Bond Mkt Cap. %GDP, Partner			0.075			
			(0.047)			
Public + Private Bond Mkt Cap. %GDP, Reporter			0.089***			
			(0.027)			
Stock mkt. capitalisation to GDP, partner			0.018			
			(0.025)			
Stock mkt. capitalisation to GDP, reporter			-0.007			
			(0.025)			
Constant	4.209***	4.859***	4.820***	-0.560	-0.778**	-11.919**
	(0.231)	(0.307)	(0.390)	(1.701)	(0.263)	(3.625)
R-squared	0.990	0.988	0.988	0.988	0.988	0.988
N	876	453	453	453	453	453
Reporter dummies				y		y
time dummies					y	y

6.4. Calculating financially-weighted effective exchange rates

Lane and Shambaugh (2010) demonstrated that trade-weighted exchange rates are an inadequate guide to understanding the wealth effects of currency movements. They proposed considering the dual role of exchange rates in the international adjustment process: the trade-weighted index influences net exports, while the financially-weighted index operates through the valuation channel.

Using the dataset of Hobza and Zeugner (2014), we derived four sets of weights for calculating financially weighted exchange rates. Following the aggregates included in their dataset, we derived weights for debt-type assets (which are composed of debt portfolio investment securities and other investments) and equity-type assets (composed of foreign direct investment and equity portfolio securities). We derived weights based on the bilateral assets held by each country (this could be easily complemented by considering liabilities or a combination of assets and liabilities). For both debt and equity we derived weights for the pre-crisis period (using the average of 2002-2007) and the crisis period (average of 2008-2012). In all cases we use fixed weights throughout. The time span for which we calculated the REERs is 1990-2014 using annual data[24].

We calculated nominal effective exchange rates (NEERs) and consumer price-based real effective exchange rates (REERs). The exchange rates and consumer price indices are taken from Bruegel’s dataset on trade-weighted nominal and real effective exchange rates[25].

Among the 85 entities, which are included in the dataset of Hobza and Zeugner (2014), we calculated NEERs and REERs for 72 countries. The following 13 entities were left out due to insufficient data: Andorra, Bermuda, 'British West Indies' (BIS definition), Cayman Islands, Guernsey, Gibraltar, Isle of Man, International Organizations & Non-Euro Central Banks, Jersey, Liechtenstein, Macao (China), the Netherlands, Antilles and Serbia. In most cases, consumer prices were missing for a sufficiently long period.

Assets held in the 72 countries comprise, on average, 92 percent of debt assets and 94 percent of equity assets held in the 85 countries that are included in the dataset of Hobza and Zeugner (2014). Therefore, leaving out the 13 entities only slightly reduces the comprehensiveness of our calculations.

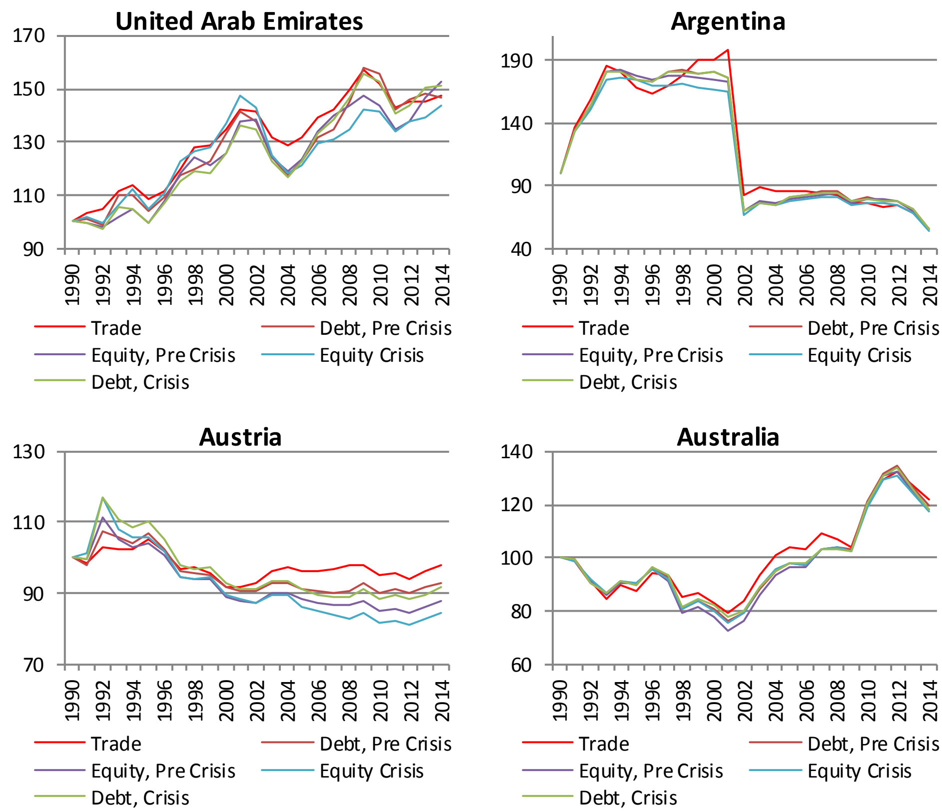
[24] The 2014 exchange rate data is approximated using two data sources: 1. For 32 countries plus the 18 members of the euro area, we used the daily exchange rates of the ECB up to 7 November 2014, assumed that the 7 November rate will be unchanged for the rest of the year and calculated the annual average for 2014. 2. For other countries, we used monthly data from the World Bank Global Economic Monitor, which is available till August 2014: we assumed that the August rates are unchanged for the rest of the year and calculated the annual average for 2014.
For the CPI, we use the IMF's October 2014 World Economic Outlook. For Argentina the WEO includes data till 2013. For 2014, we downloaded monthly data from the World Bank's Global Economic Monitor, which is available till August 2014: for the rest of the year, we assumed that the rate of 12-month inflation will be unchanged and thereby calculated the average annual inflation (which became 17.6%). Therefore, both the 2014 CPI and exchange rate figures (and consequently the REER and NEER figures too) will be revised, though we do not expect major revisions.

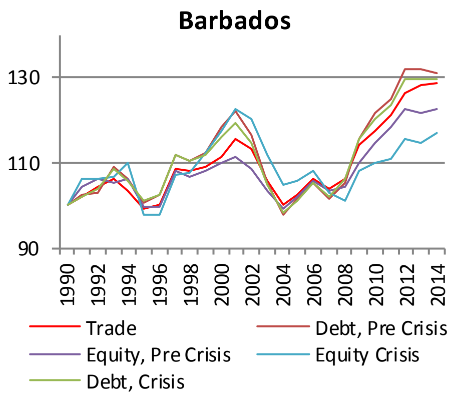
[25] See at: http://www.bruegel.org/datasets/real-effective-exchange-rates-for-178-countries-a-new-database/

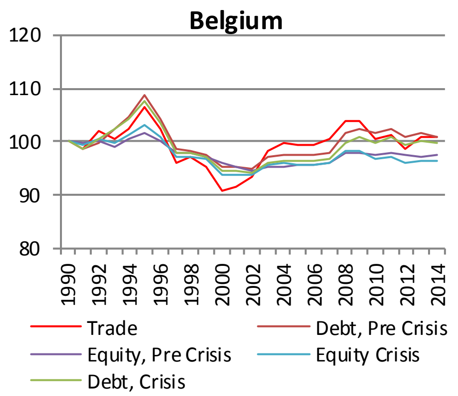
We compare the four series of financially-weighted exchange rates with a trade weighted REER, which are calculated using the same group of 72 countries. We note that trade-weights were derived on the basis of Bayoumi, Lee and Jaewoo (2006), who use a basket that is representative of foreign trade in 1998-2003, a somewhat earlier period than the time period we use for deriving the weights for the financially weighted exchange rates.

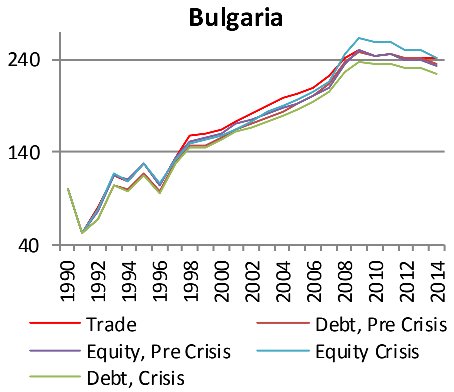
Figure 45 shows the times series of the 5 REERs for the 72 countries. There are numerous cases when trade-weighted and financially-weighted REERs differ quite substantially. In Austria, for example, financially-weighted REERs show a remarkable appreciation relative to the trade-weighted rates in 1992 and more depreciation in recent years. There also exist cases, such as in Australia or Canada, where the differences are minor. With regards to the debt versus equity weighted series, there are some notable differences, such as in China and the Czech Republic, where equity-weighted REERs were less volatile than the debt-weighted REERs, and showed smaller real appreciations. REERs typically do not differ much whether the weights were derived from 2002-2007 or the 2008-2012 stocks, though there are some exceptions, such as Cyprus.

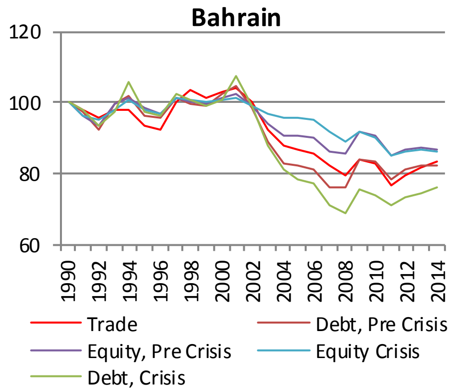
Figure 45 Trade-weighted and financially-weighted real effective exchange rates (based on consumer prices), 1990-2014




Barbados
130
110
90
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Belgium
120
110
100
90
80
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Bulgaria
240
140
40
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Bahrain
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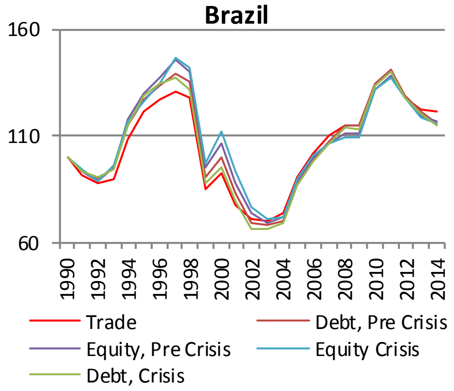
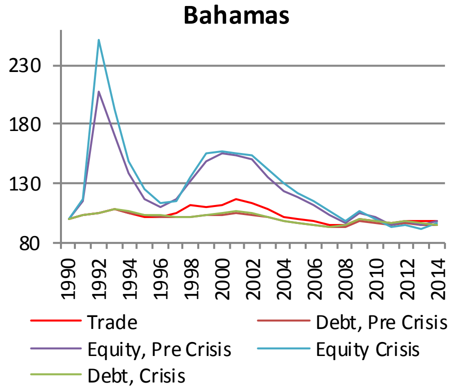
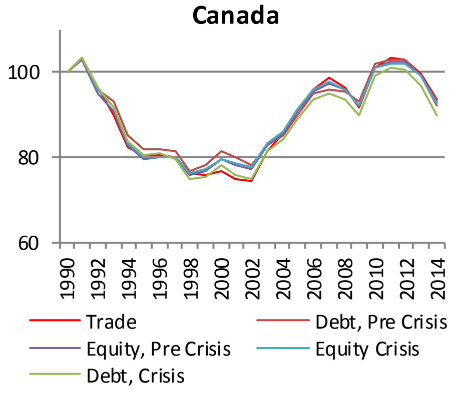
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Brazil
160
110
60
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Bahamas
230
180
130
80
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Canada
100
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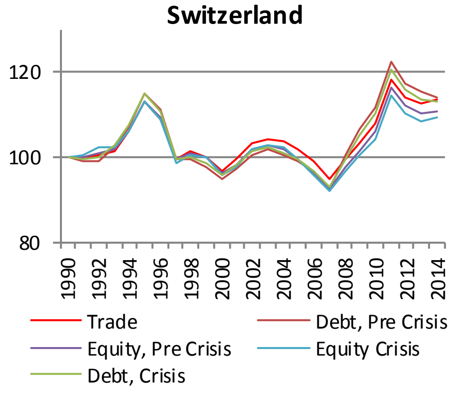
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Switzerland
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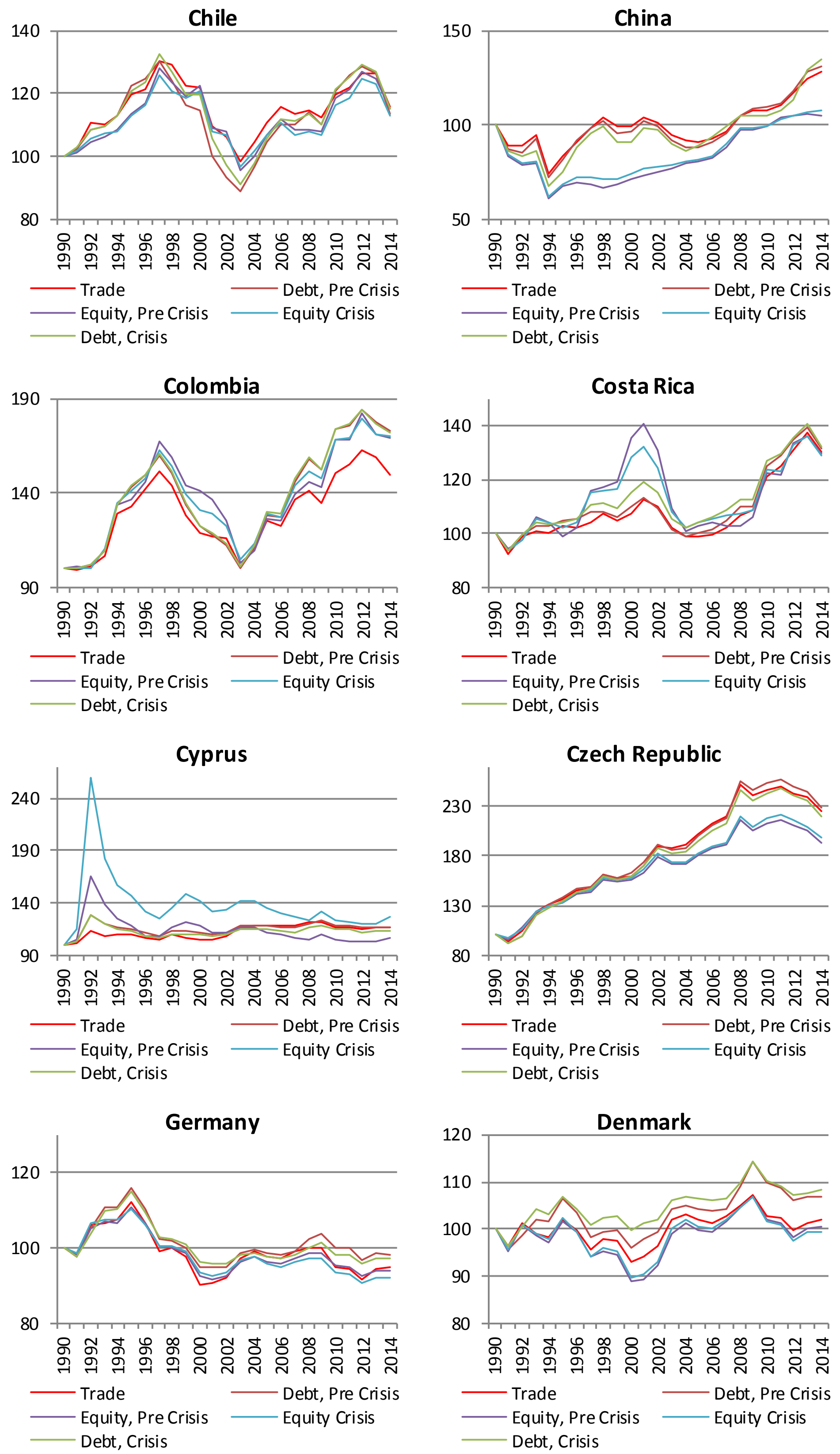
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Chile
140
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1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
China
150
100
50
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
Colombia
190
140
90
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
Costa Rica
140
120
100
80
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
Cyprus
240
190
140
90
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
Czech Republic
230
180
130
80
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
Germany
120
100
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1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis
Denmark
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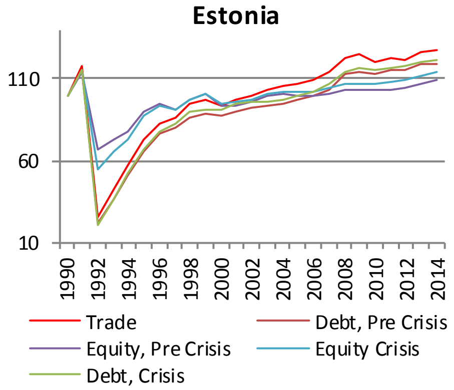
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Estonia
110
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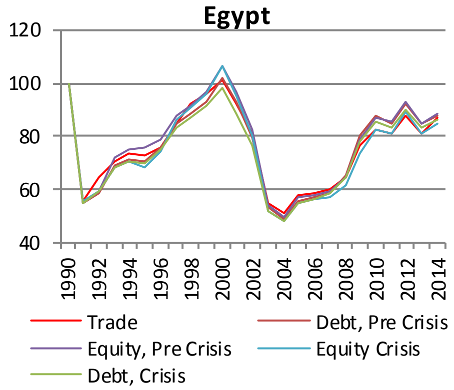
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Egypt
120
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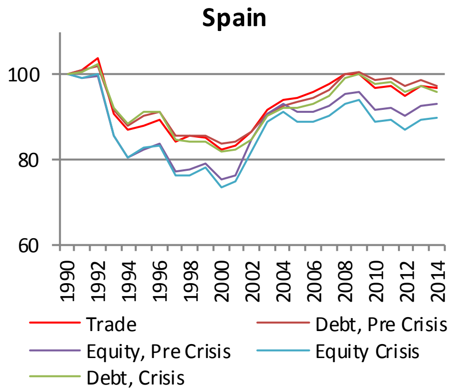
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis


Spain
100
80
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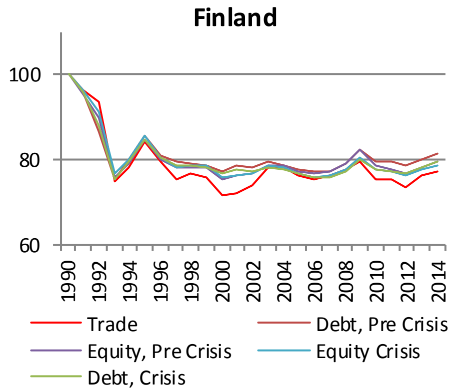
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis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Trade
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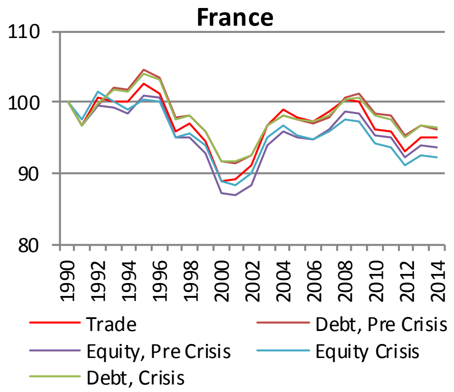
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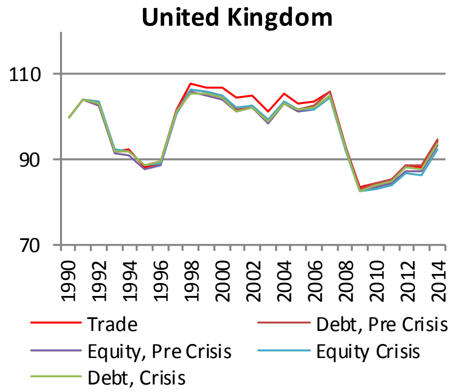
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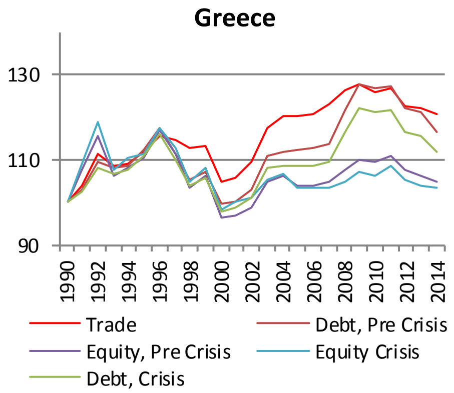
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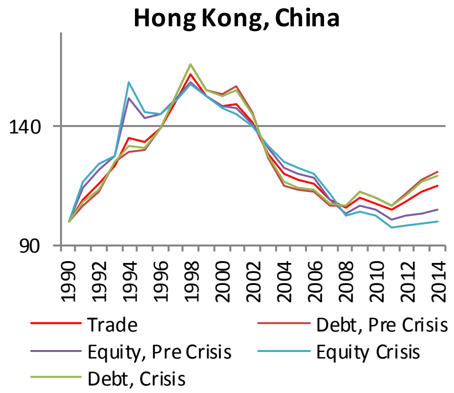
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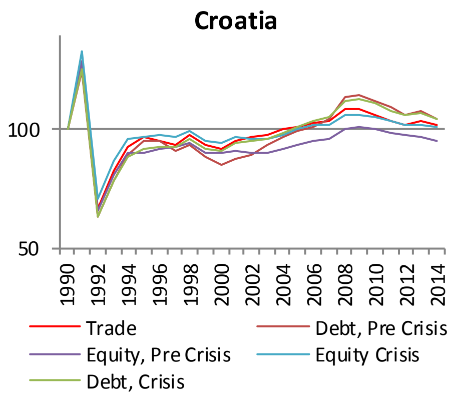
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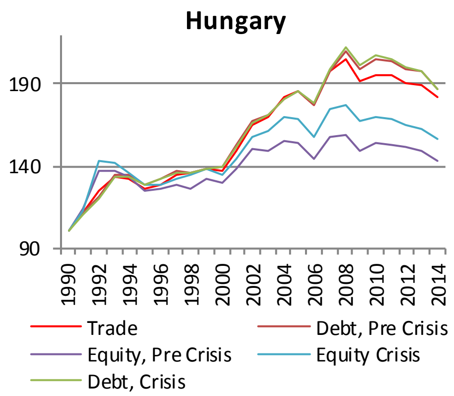
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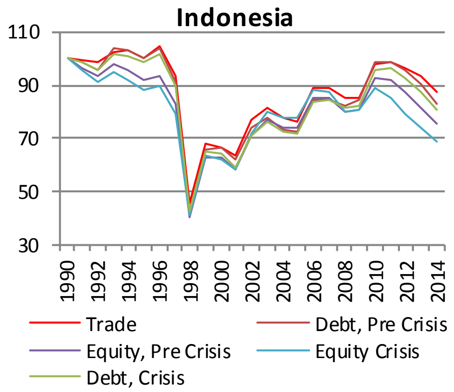
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Equity, Pre Crisis
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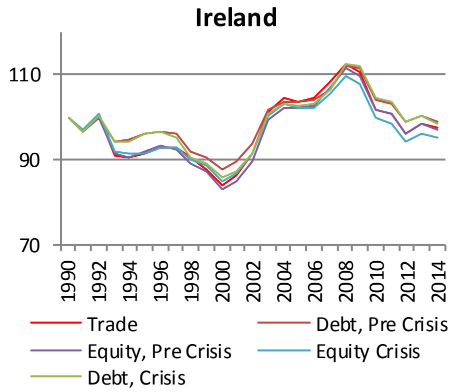
Debt, Crisis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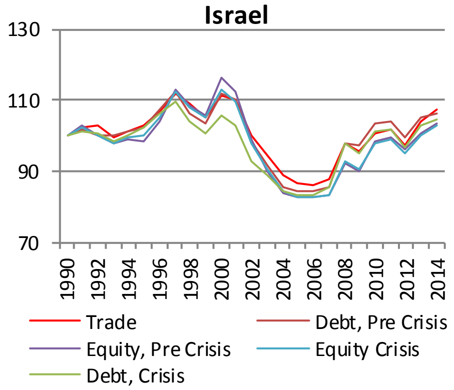
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Trade
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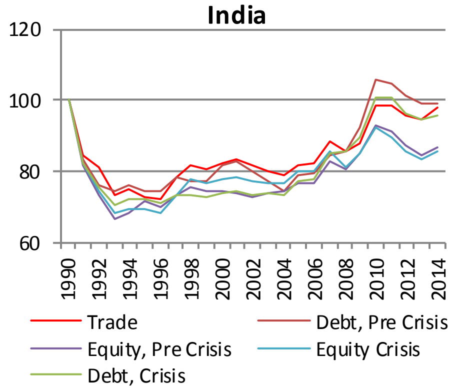
Debt, Crisis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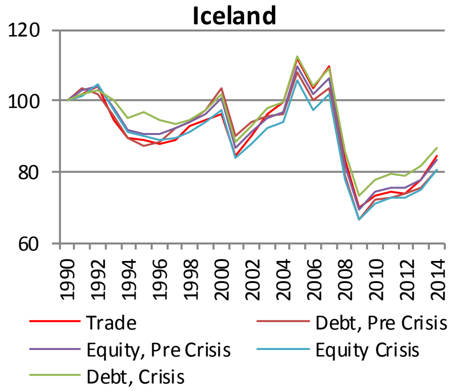
Debt, Crisis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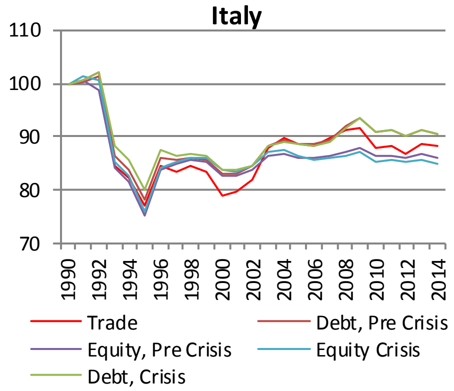
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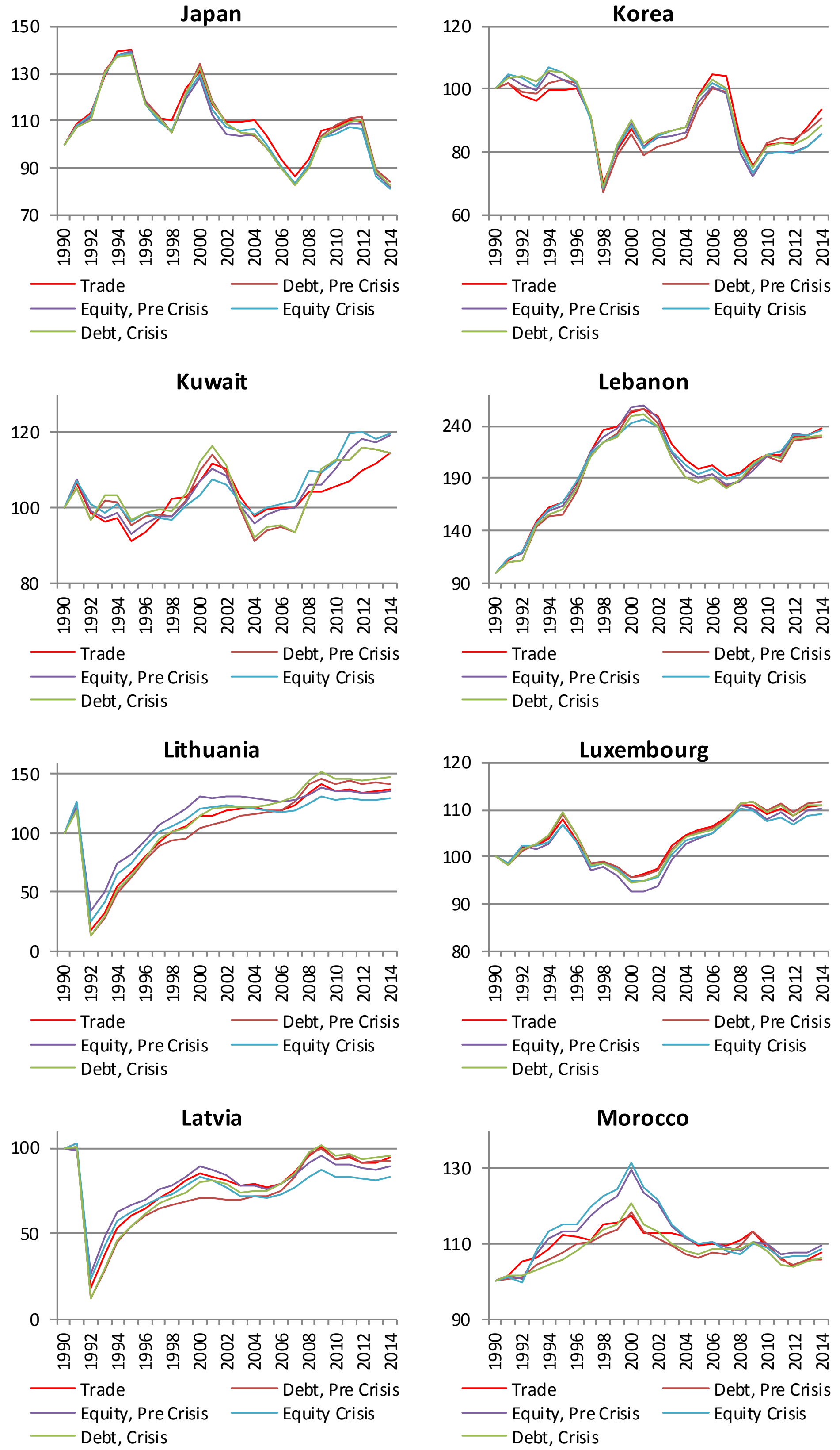
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Lithuania
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Luxembourg
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Latvia
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Trade
Debt, Pre Crisis
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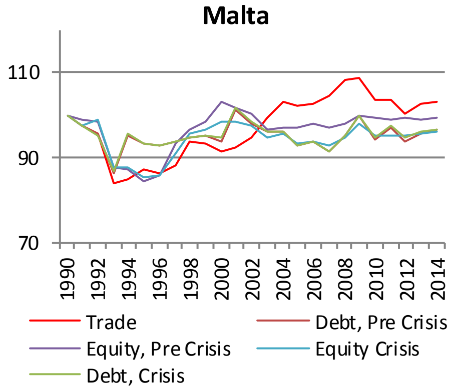
Debt, Crisis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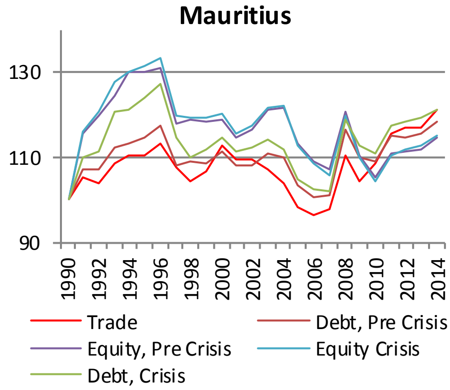
Equity Crisis
Debt, Crisis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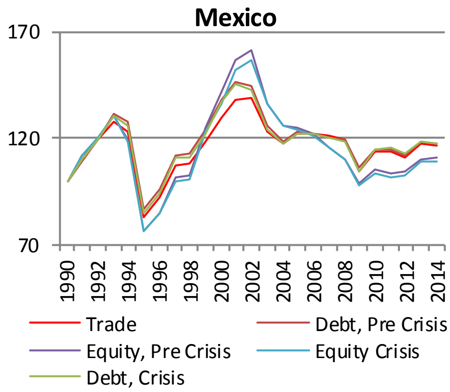
Debt, Crisis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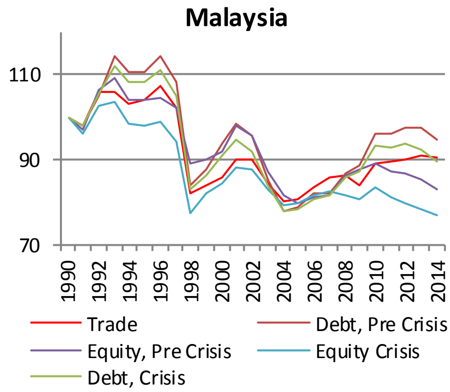
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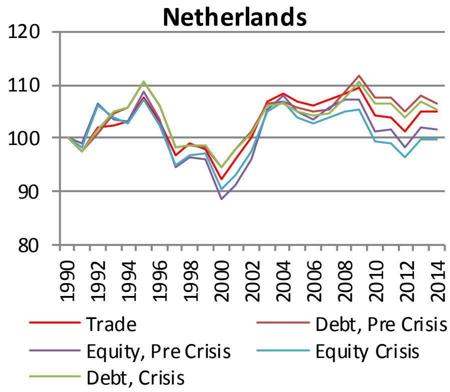
Debt, Crisis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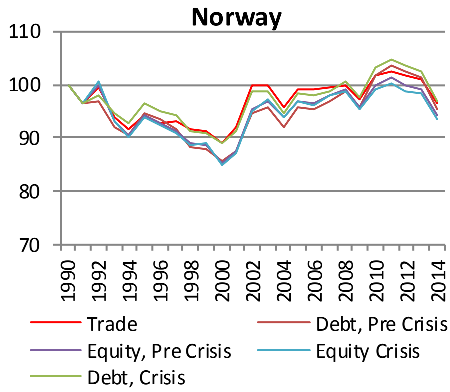
Debt, Crisis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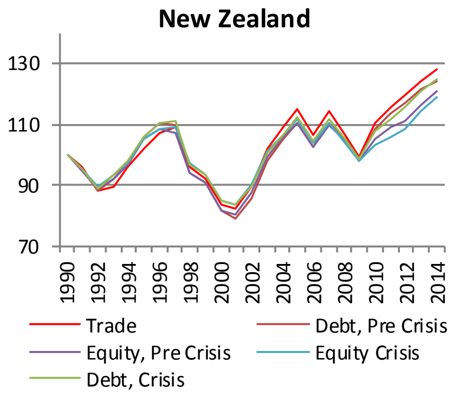
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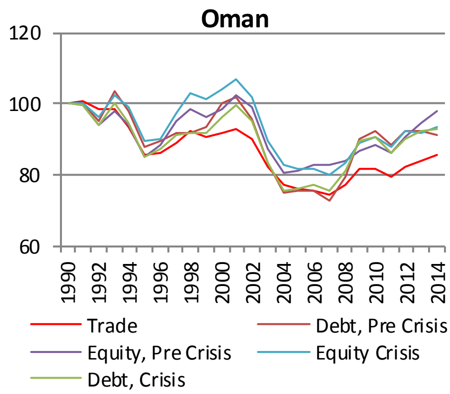
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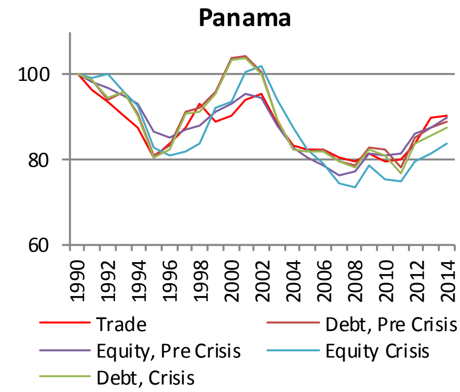
Debt, Crisis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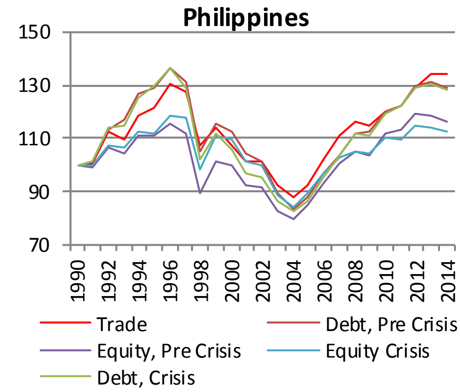
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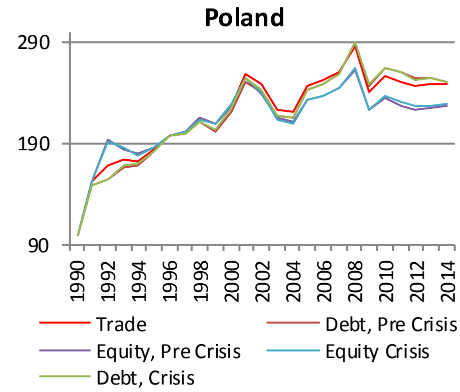
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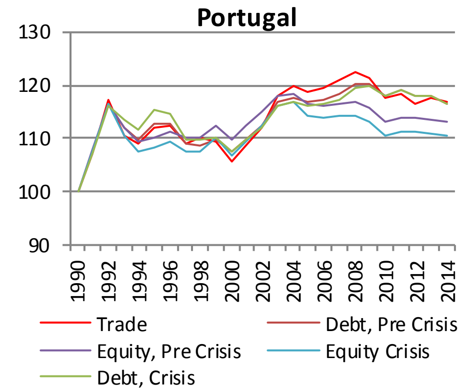
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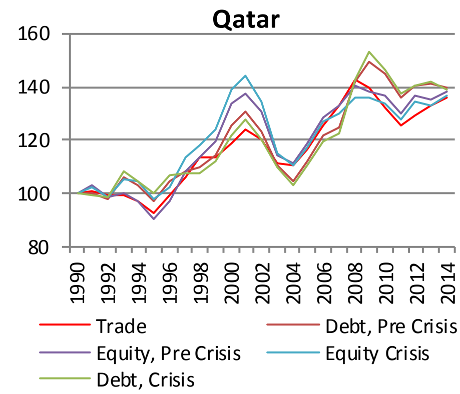
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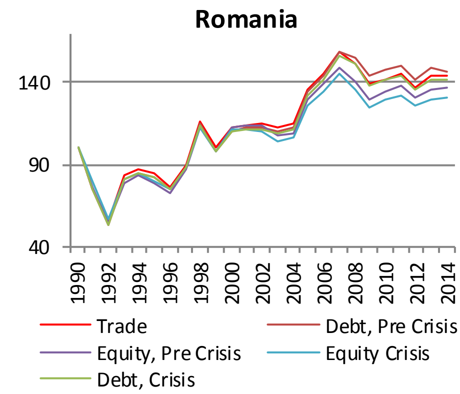
Debt, Crisis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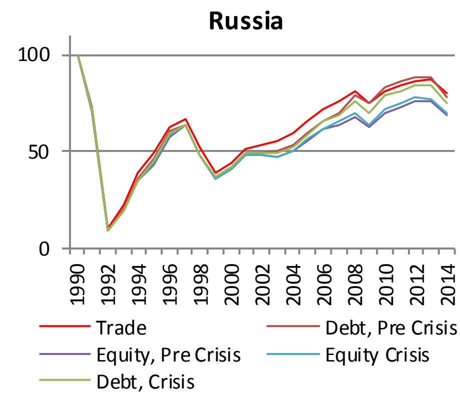
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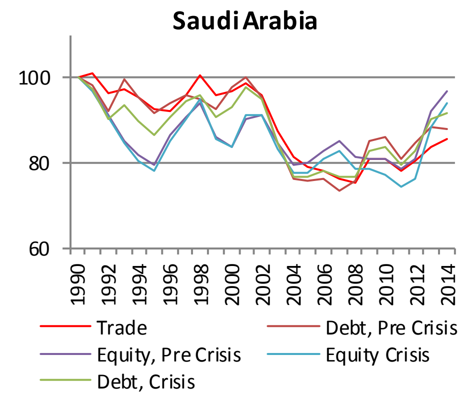
Debt, Crisis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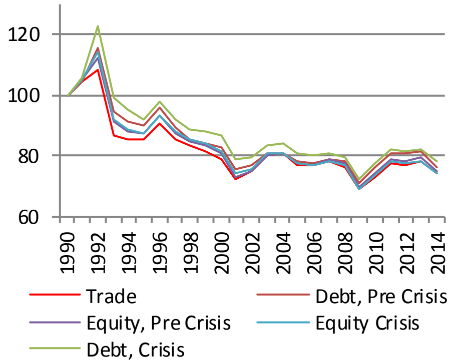
1990 1992 1994 1996 1998 2000 2002 2004 2006 2008 2010 2012 2014
Trade
Debt, Pre Crisis
Equity, Pre Crisis
Equity Crisis
Debt, Crisis

Sweden



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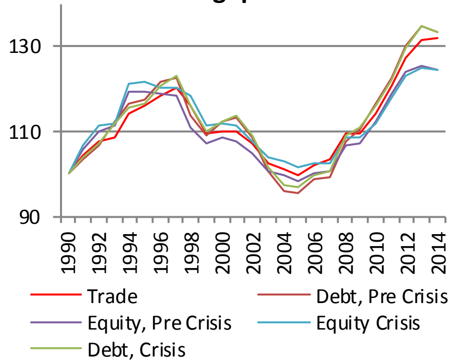

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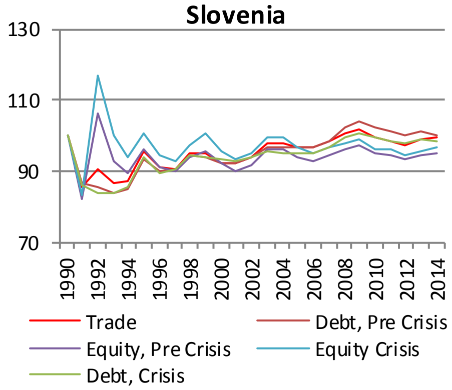

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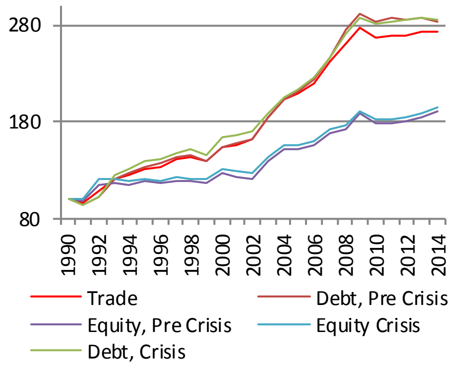

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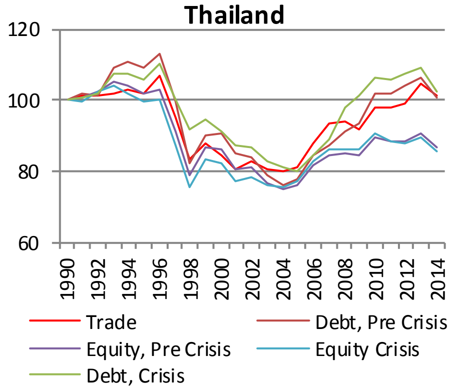

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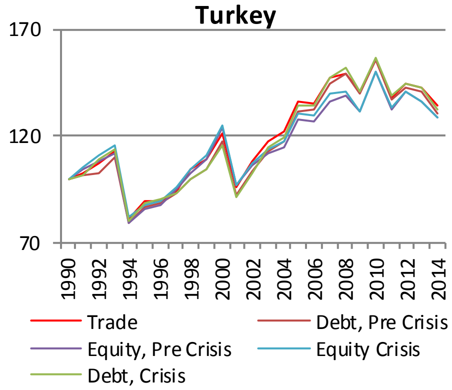

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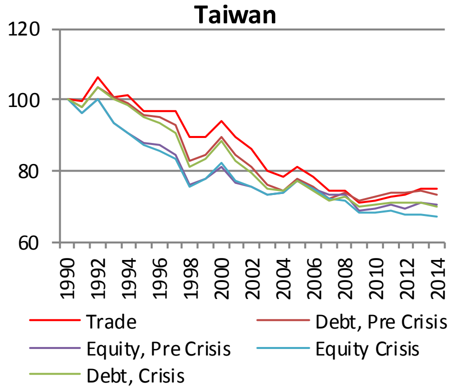
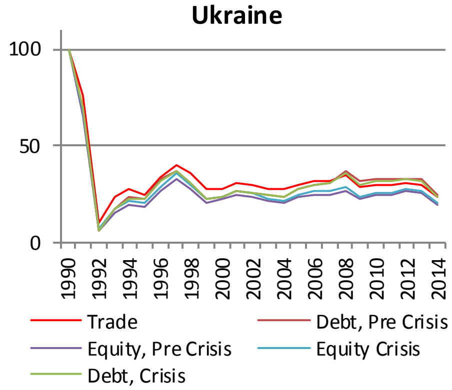
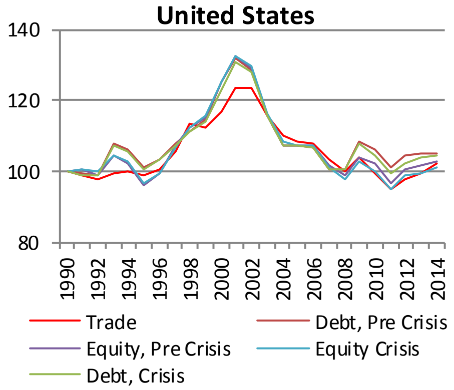
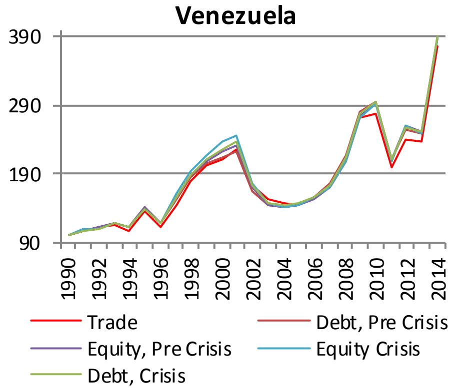
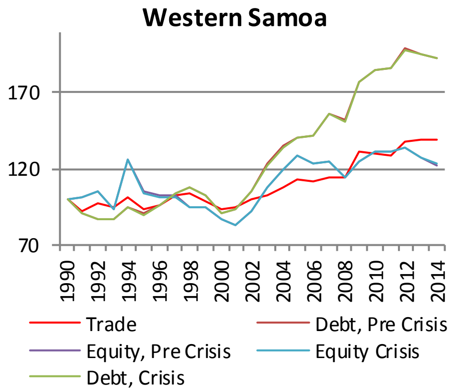


Ukraine









6.5 Calculating financially-weighted government bond yields and spreads

We calculated financially weighted government bonds yields and spreads for 57 countries for which we could find data on government bond yields.

The first step was the collection of comparable government bonds yields at the monthly frequency. We used four major sources:

- Eurostat's 'EMU convergence criterion series - monthly data [irt_lt_mcby_m]' includes 10-year government bond yields for 27 EU member states (there is no data for Estonia, given its low public debt and the lack of 10-year maturity government bonds). The most recent observation is August 2014. The first observation of the dataset is January 1980, but for many countries the time series start much later[26].
- Eurostat's 'Government bond yields, 10 years' maturity - monthly data [irt_lt_gby10_m]', which includes data for the US (January 1974-August 2014), Japan (January 1980-August 2014) and Turkey (January 2005-April 2014).
- From Datastream we collected average monthly 10-year maturity yields for January 1990 (or the first available observation) - August 2014 for the

[26] We note that the Cypriot government bond yield data from Eurostat is suspicious, because after 2008 it is constant for several years with two step-wise changes. Interest rates for all other countries change in every month. Also, for Cyprus there is no major spike during the Cypriot crisis (the interest rate is recorded as staying constantly at 7%, and more recently at 6%). Since a large share of Cypriot assets are held in Greece, the data suggests that Cyprus had a negative spread. The constant 7% and 6% bond yields for Cyprus is suspicious in our view, yet for the time being we kept Cyprus in the database.

following countries: Argentina, Brazil, Chile, China, Colombia, Egypt, Hong Kong, Indonesia, Israel, India, Korea, Mexico, Malaysia, Norway, New Zealand, Philippines, Russia, Singapore, Thailand, Turkey, Taiwan, South Africa.

- The August 2014 version of the IMF's International Financial Statistics includes "long-term government bond yields" for 74 countries. The longest possible range is January 1957 - June 2014. For many countries the most recent data point is April 2014.

We combined these four datasets, giving primary preference to Eurostat data and then to Datastream, as both of these datasets are available till August 2014. For earlier periods we merged IMF data to our database after carefully checking the comparability of Eurostat/Datastream/IMF data for the periods when two or all three sources include data. For European countries the IMF data was identical to Eurostat data.

Altogether, we were able to collect 10-year government bond yields for 57 of 85 countries/territories which are included in the bilateral capital flows dataset of Hobza and Zeugner (2014). Of these 57 countries, data is available from 1978 for 22 countries[27] and from 2001 for 38 countries. We therefore calculated weighted average interest rates for 22 partner countries from 1978 and for 38 partner countries from 2001. We derived the weights from the dataset of Hobza and Zeugner (2014) concerning debt-type assets (which is composed of debt portfolio investment securities and other investments). On average across the 57 countries, the group of 22 countries comprise 78% of the debt assets held in the 85 countries included in Hobza and Zeugner (2014), while the average coverage rate for the group of 38 countries is 86%.

Table 12 lists the countries included in our dataset.

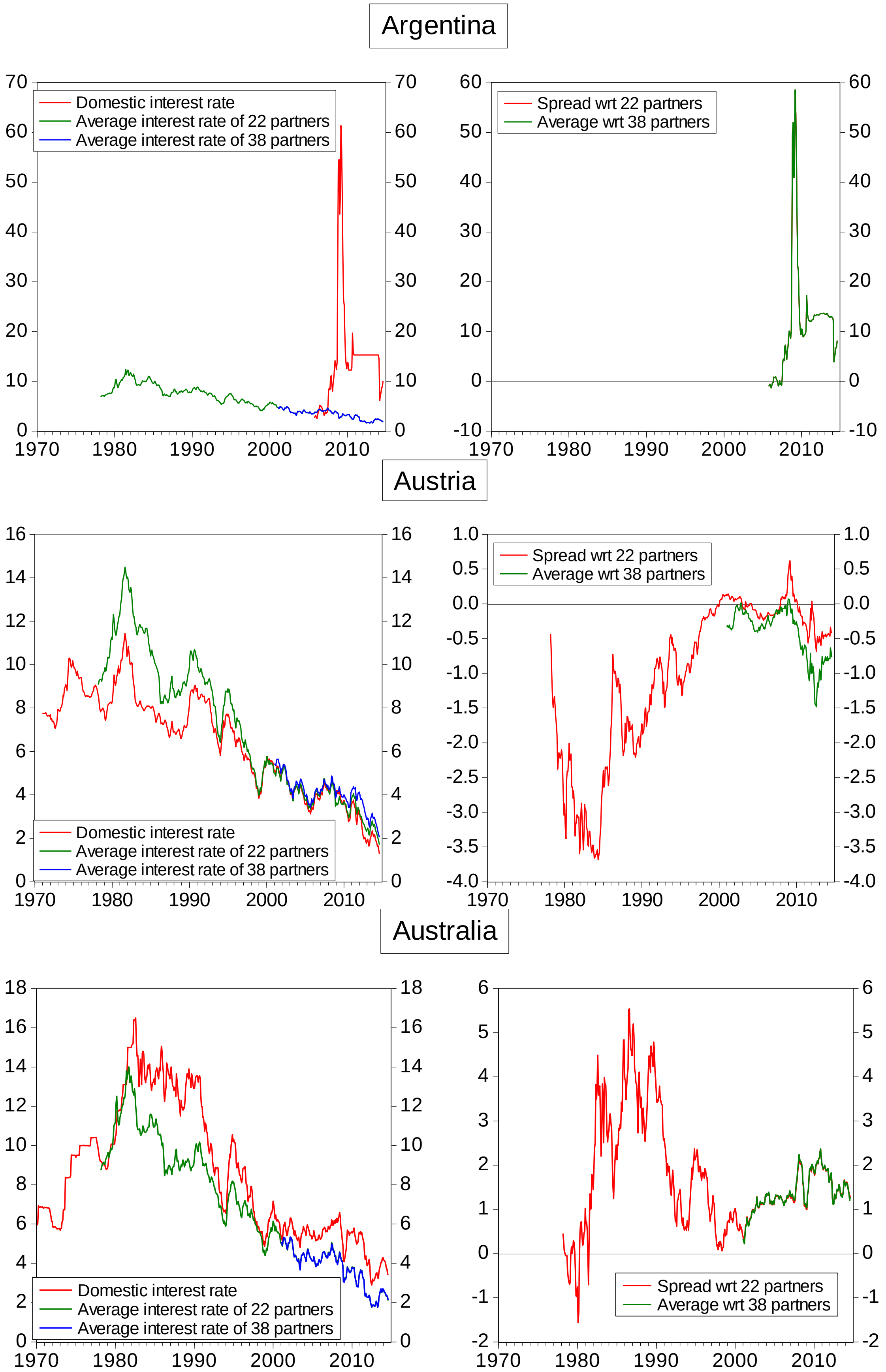
[27] If we were to drop Spain from the group of 22 countries, the average for the remaining 21 countries could be calculated from May 1973, while further dropping Korea form the group, the average for the remaining 20 countries could be calculated from January 1971.

Table 12 The list of the 57 countries included in the bond yield dataset and the lists of the 22 and 38 countries which were used to calculate the weighted average foreign interest rates

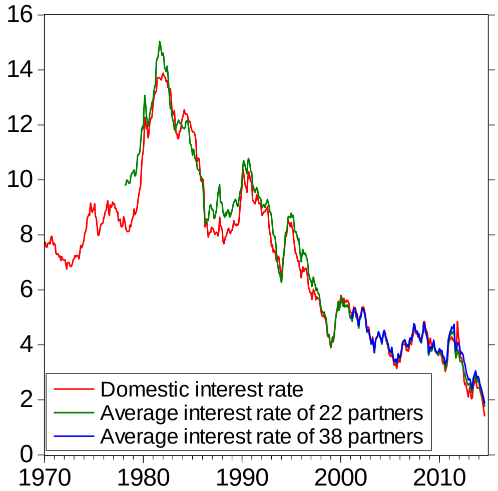
		include in 22 basket?	include in 38 basket?			include in 22 basket?	include in 38 basket?
1	Argentina	0	0	30	Latvia	0	1
2	Australia	1	1	31	Lithuania	0	1
3	Austria	1	1	32	Luxembourg	1	1
4	Belgium	1	1	33	Malaysia	0	0
5	Brazil	0	0	34	Malta	0	1
6	Bulgaria	0	0	35	Mauritius	0	0
7	Canada	1	1	36	Mexico	0	0
8	Chile	0	0	37	Morocco	0	0
9	China	0	0	38	Netherlands	1	1
10	Colombia	0	0	39	New Zealand	1	1
11	Croatia	0	0	40	Norway	1	1
12	Cyprus	0	1	41	Philippines	0	1
13	Czech Republic	0	1	42	Poland	0	1
14	Denmark	1	1	43	Portugal	1	1
15	Egypt	0	0	44	Romania	0	0
16	Finland	0	1	45	Russia	0	0
17	France	1	1	46	Singapore	0	1
18	Germany	1	1	47	Slovakia	0	1
19	Greece	0	1	48	Slovenia	0	1
20	Hong Kong	0	1	49	South Africa	1	1
21	Hungary	0	1	50	Spain	1	1
22	Iceland	0	0	51	Sweden	1	1
23	India	0	1	52	Switzerland	1	1
24	Indonesia	0	0	53	Taiwan	0	1
25	Ireland	1	1	54	Thailand	0	1
26	Israel	0	0	55	Turkey	0	0
27	Italy	1	1	56	United Kingdom	1	1
28	Japan	1	1	57	United States	1	1
29	Korea	1	1				

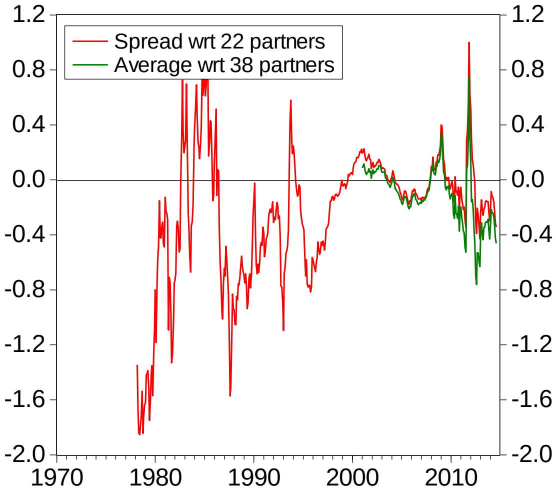
The left-hand panels of Figure 46 show the domestic interest rates and the weighted average foreign interest rates, while the right-hand panels show the spreads.

Figure 46 Financially-weighted government bond yields and spreads

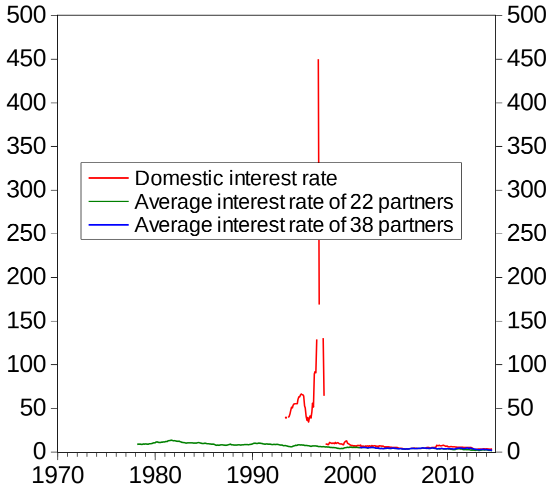


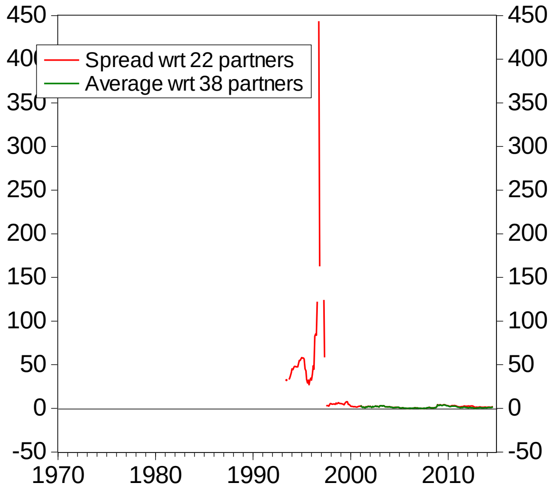
Belgium





Bulgaria





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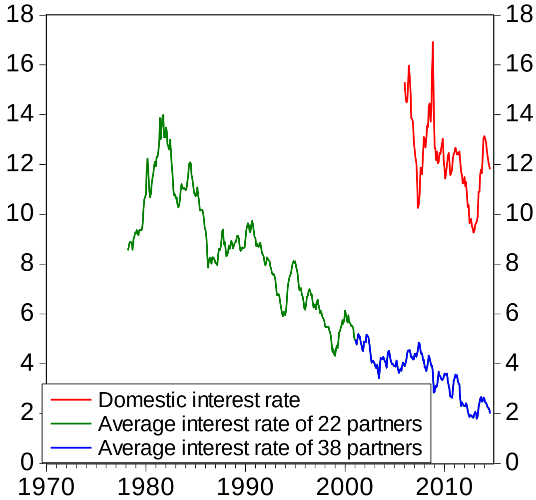

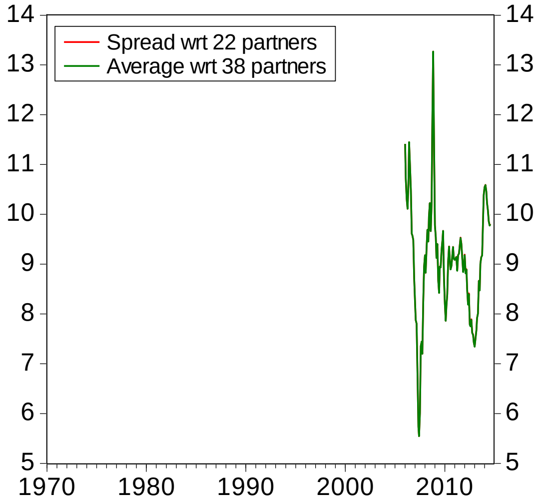

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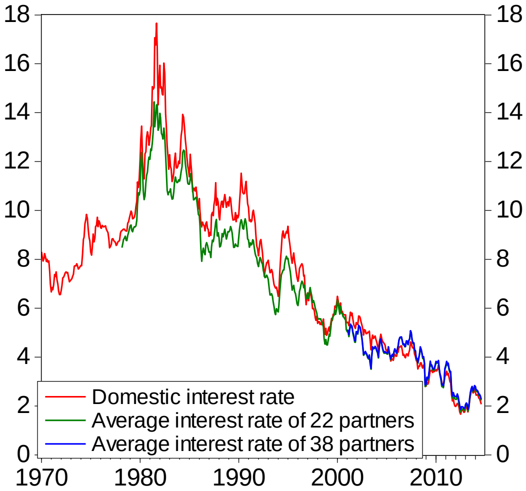

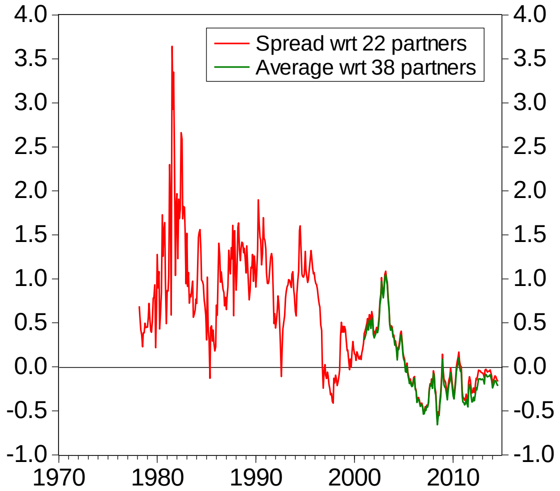

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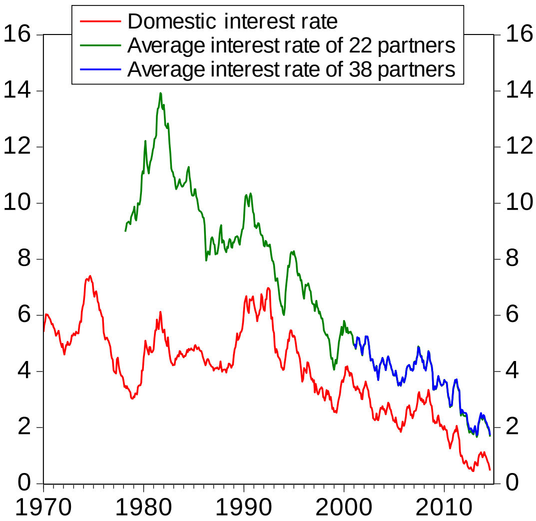

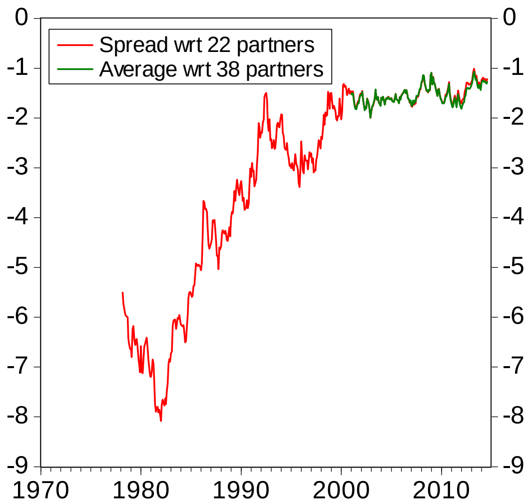

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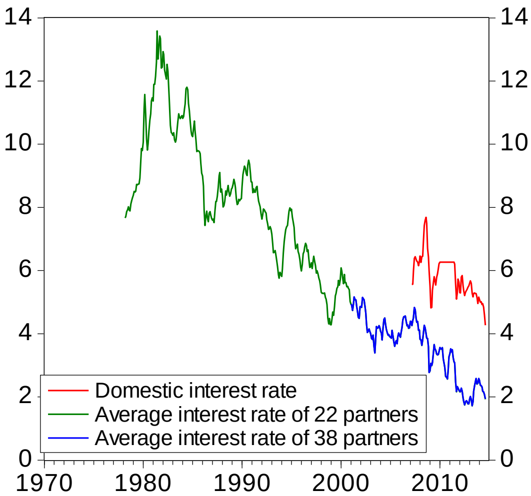

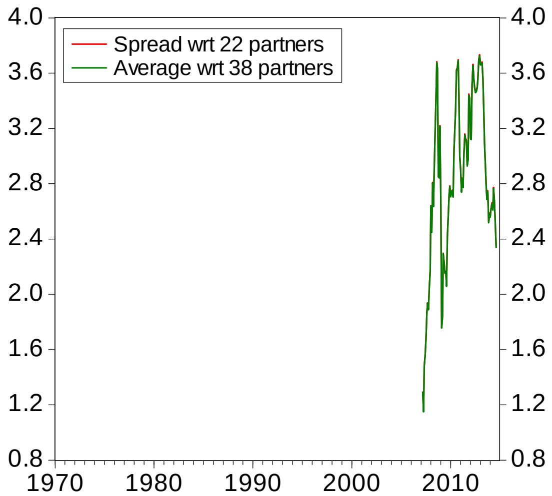

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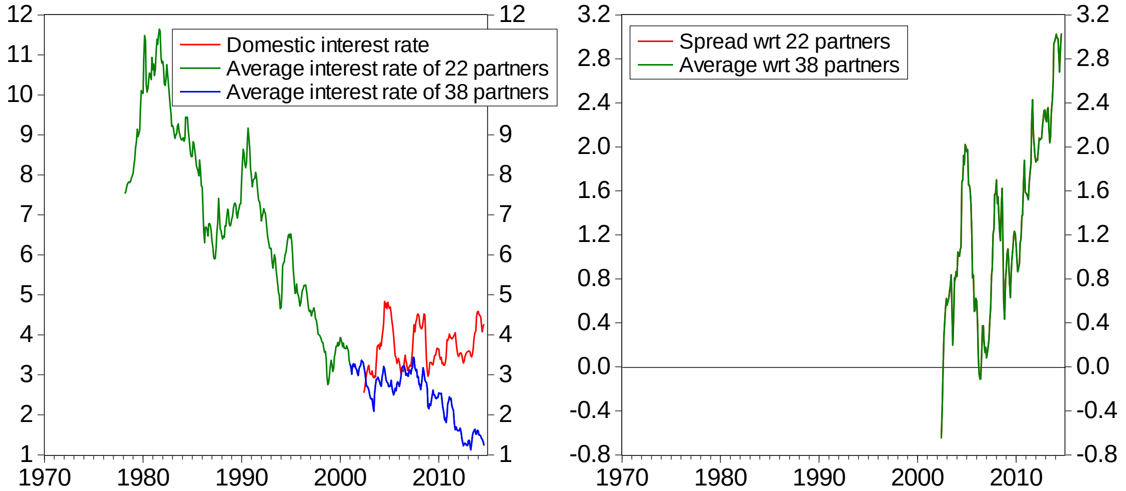

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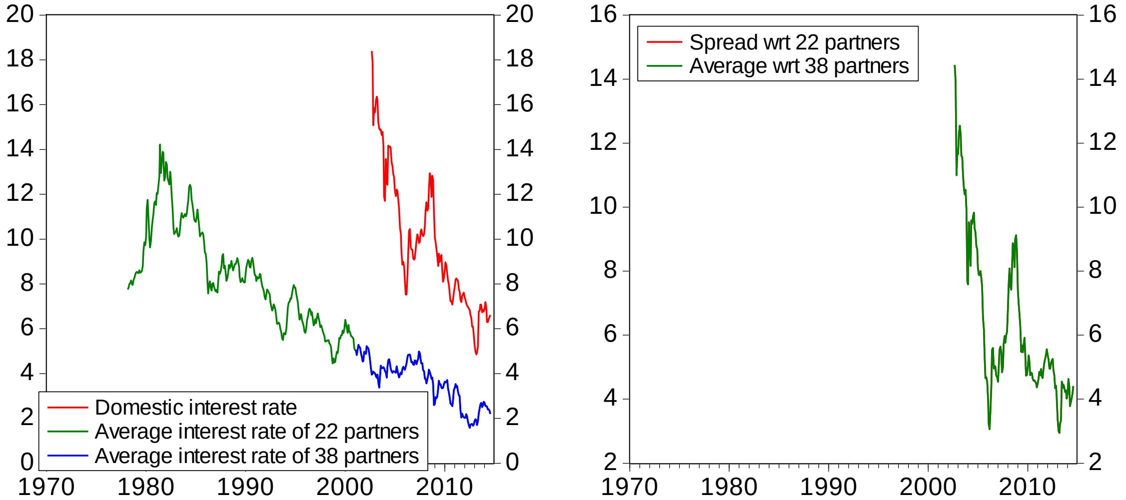

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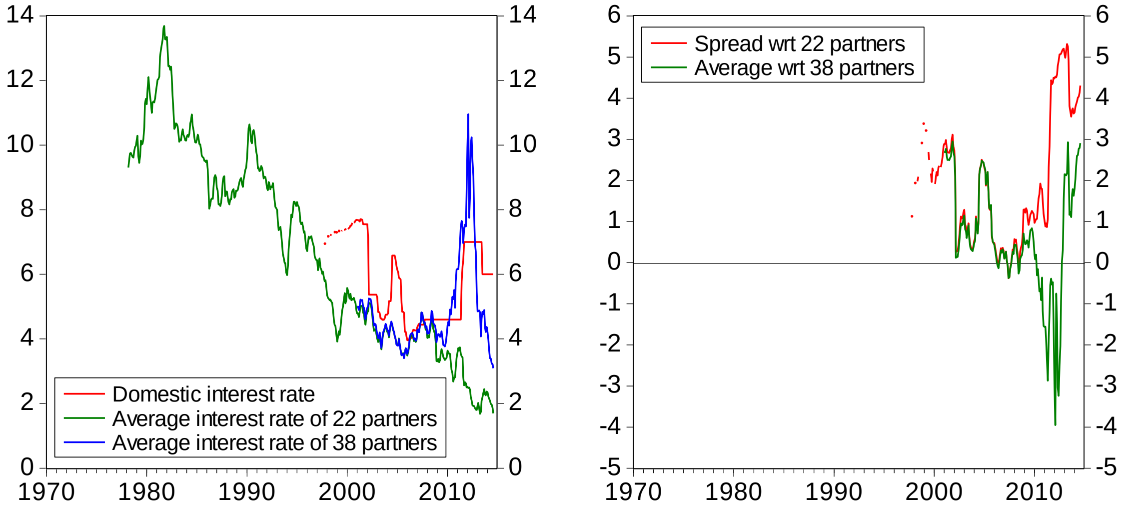

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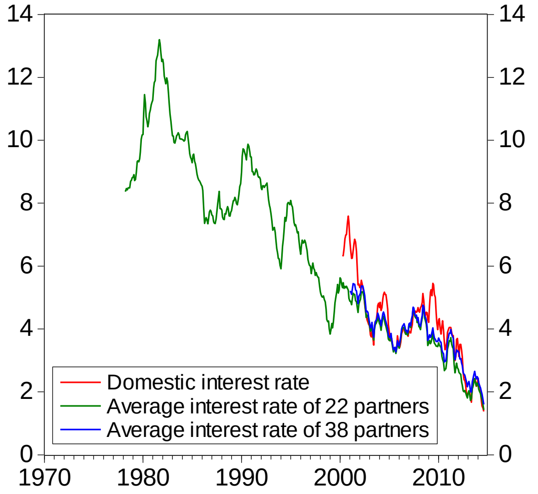

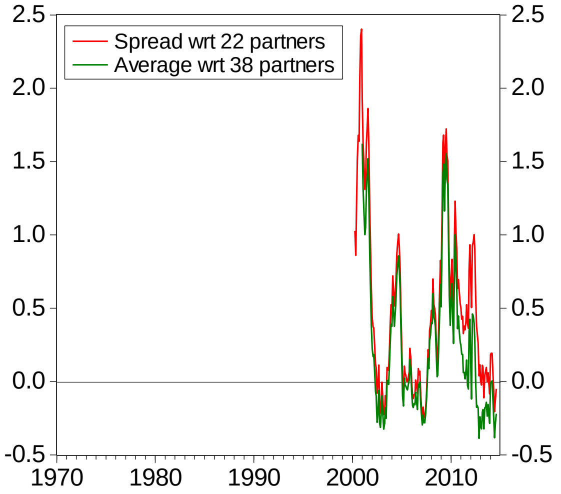

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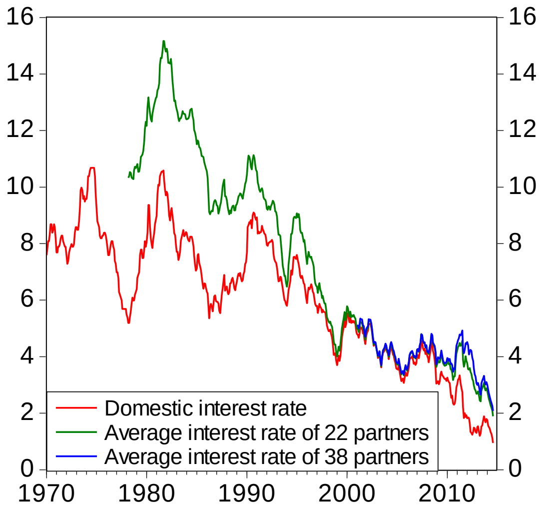

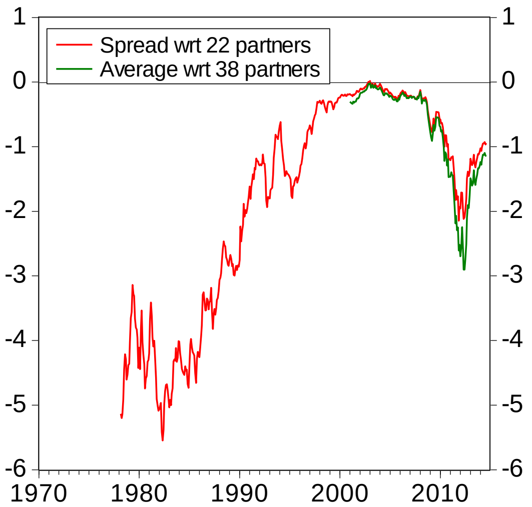

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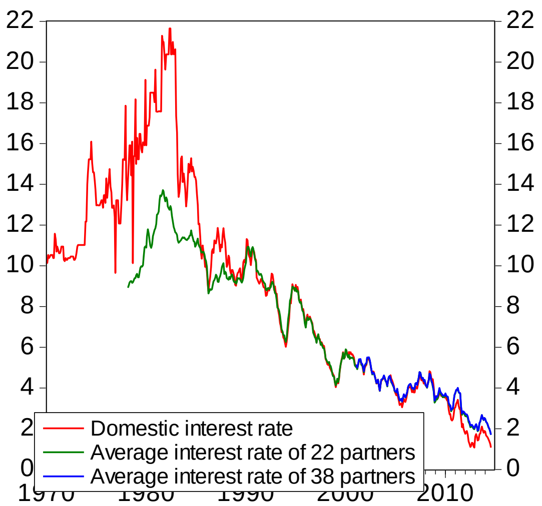

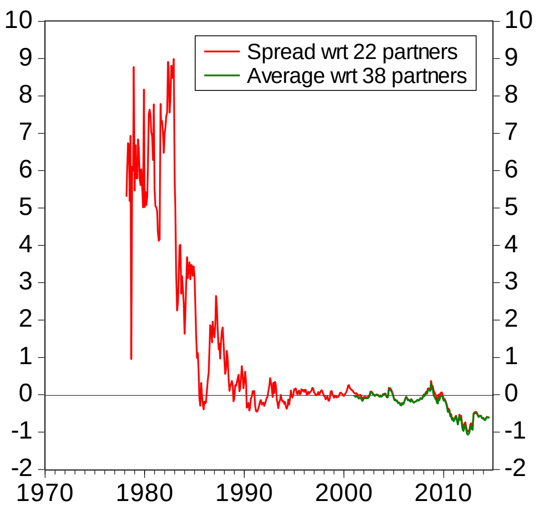

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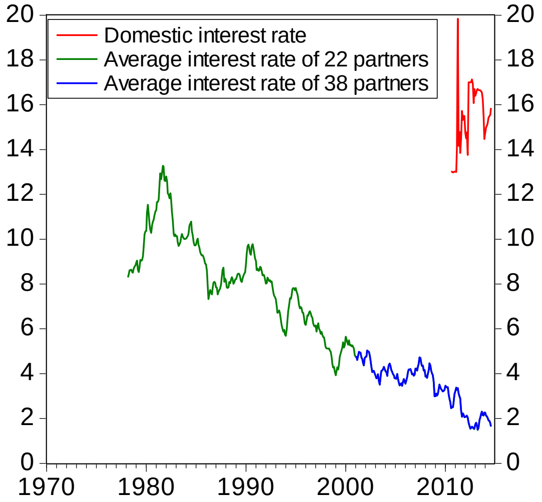

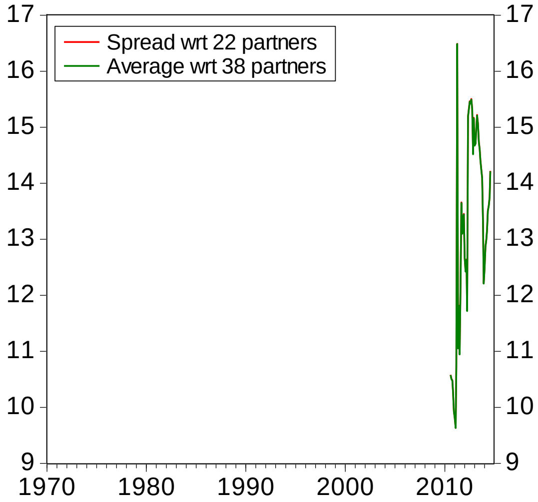

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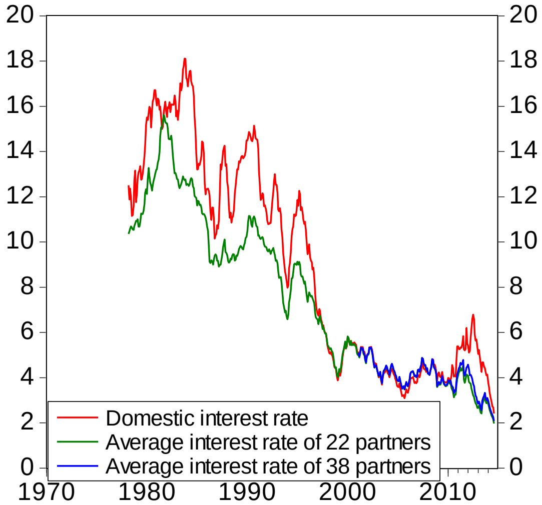

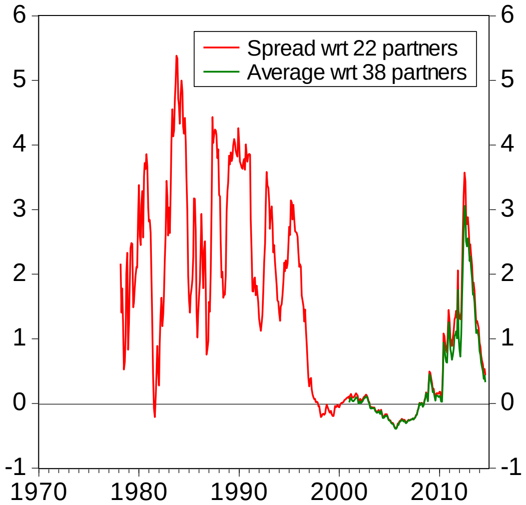

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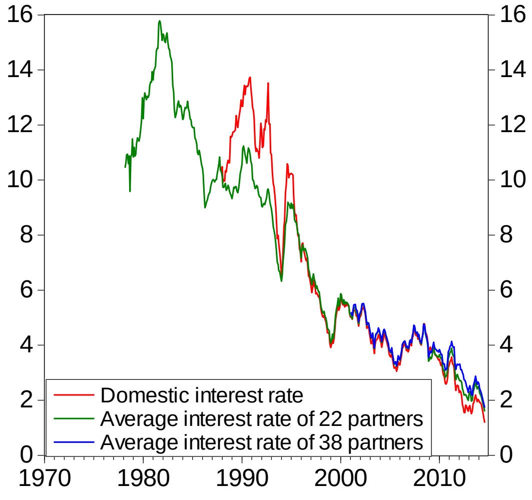

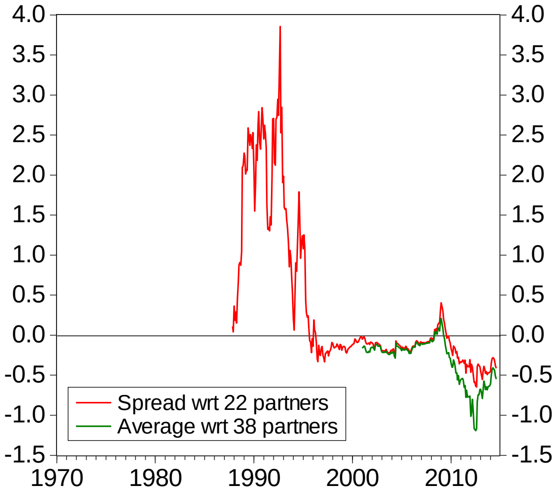

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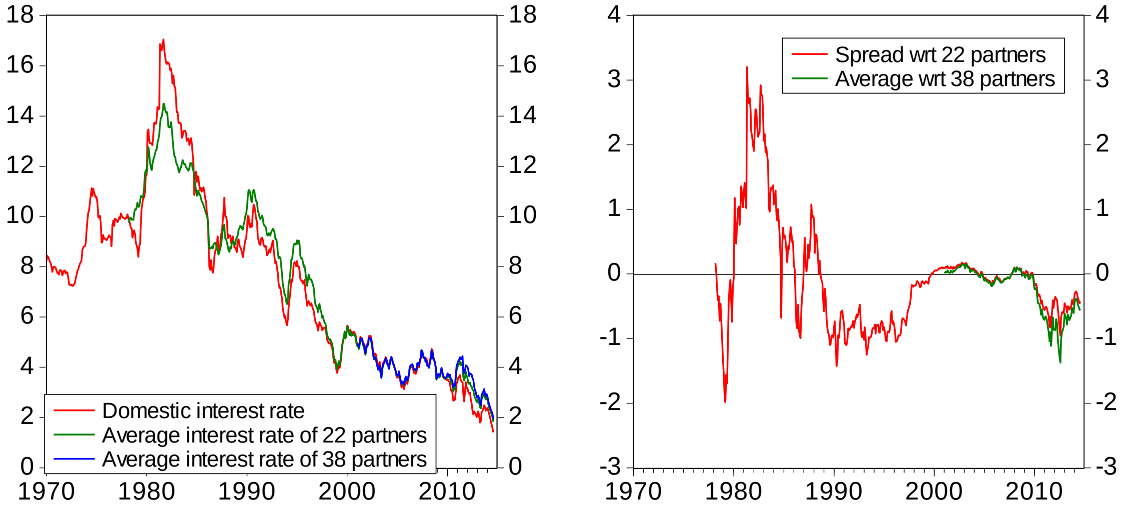

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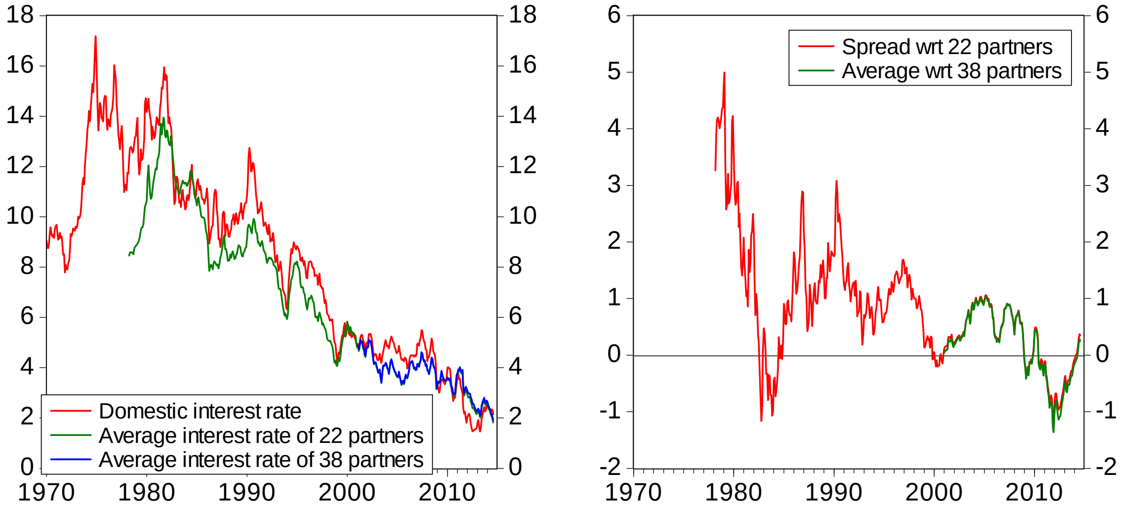

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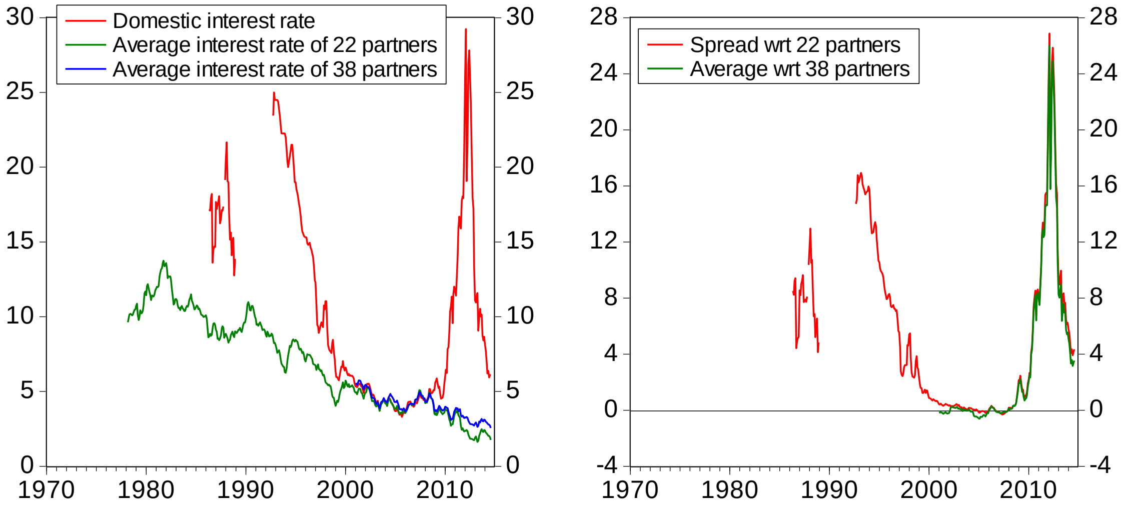

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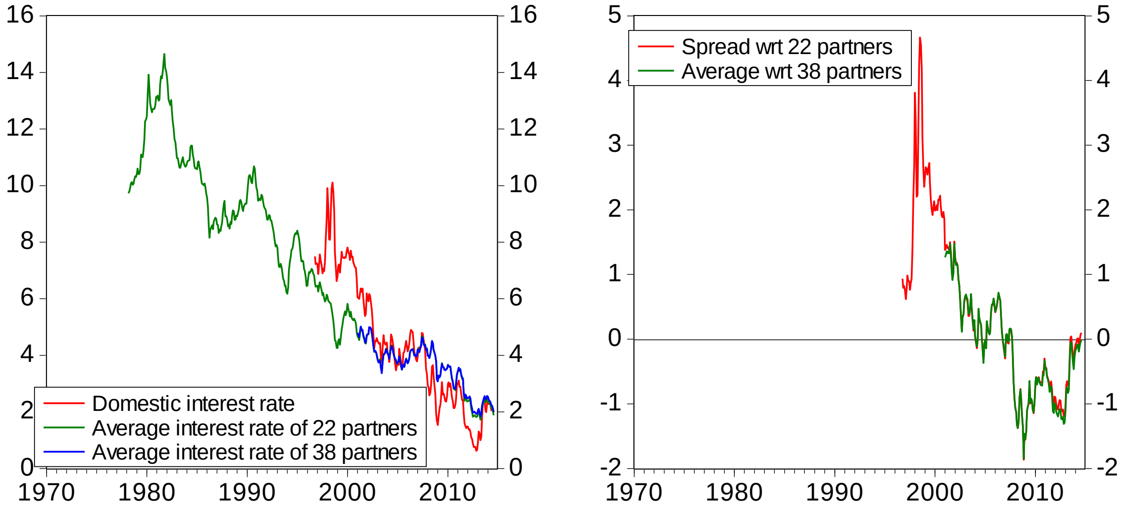

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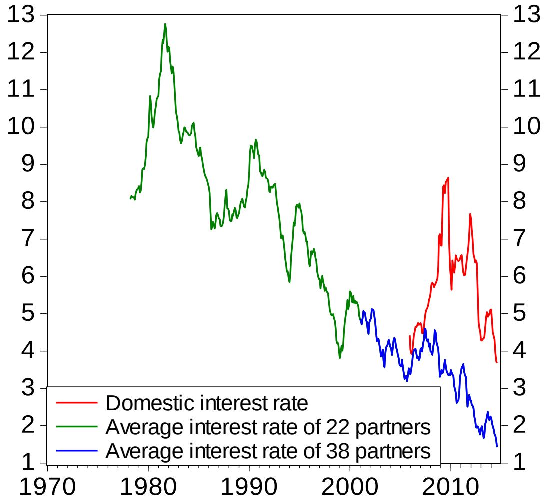

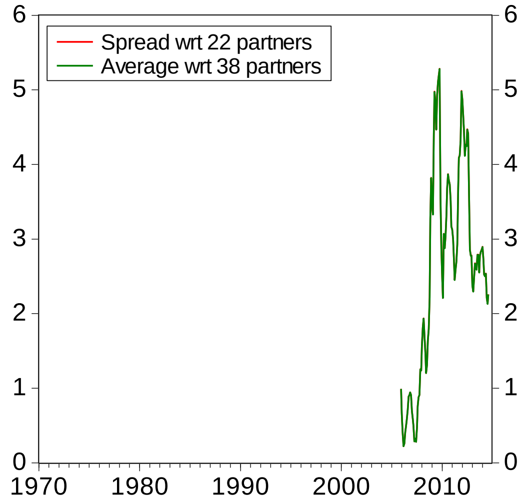

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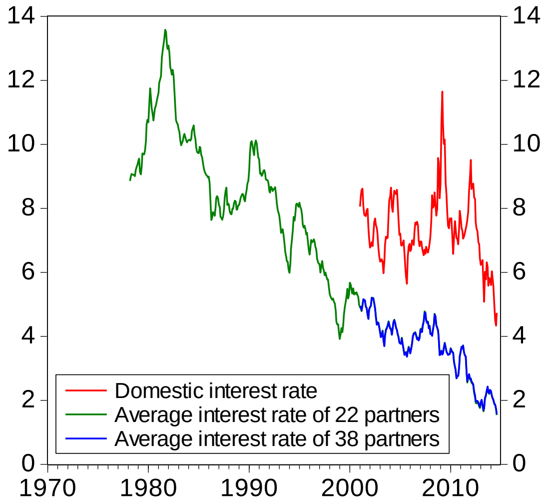

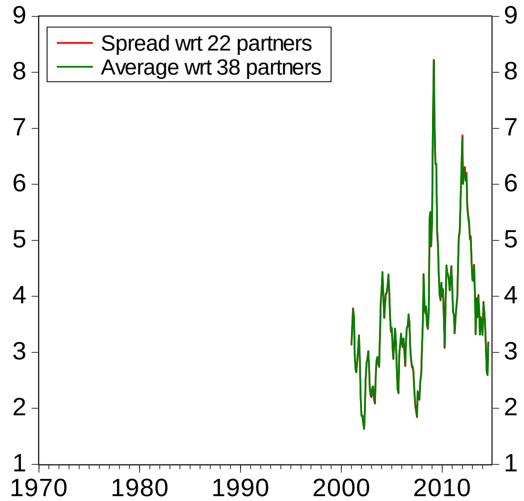

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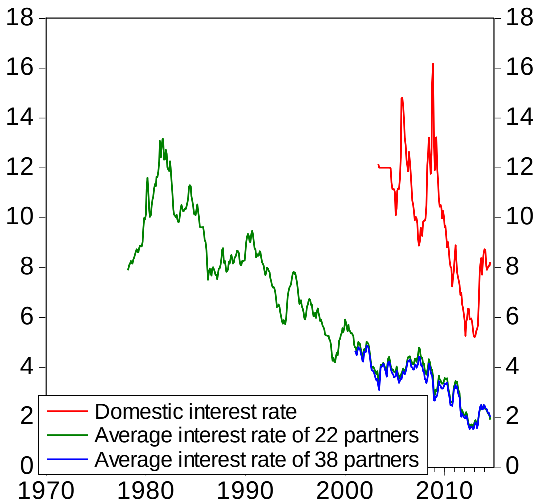

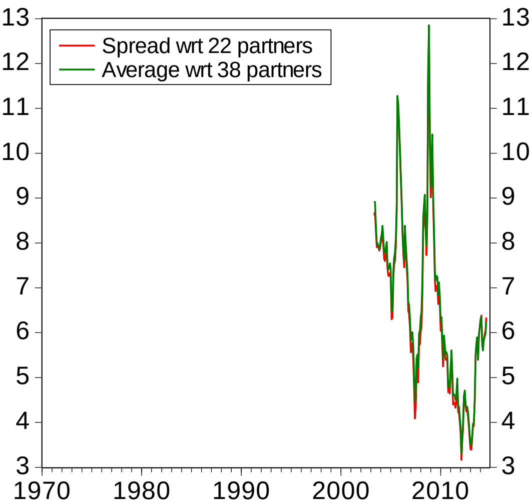

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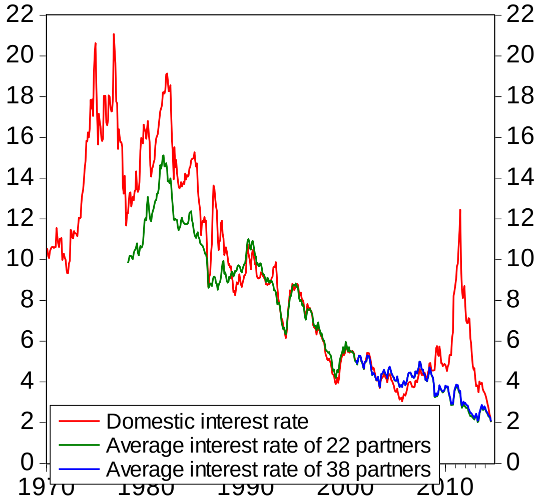

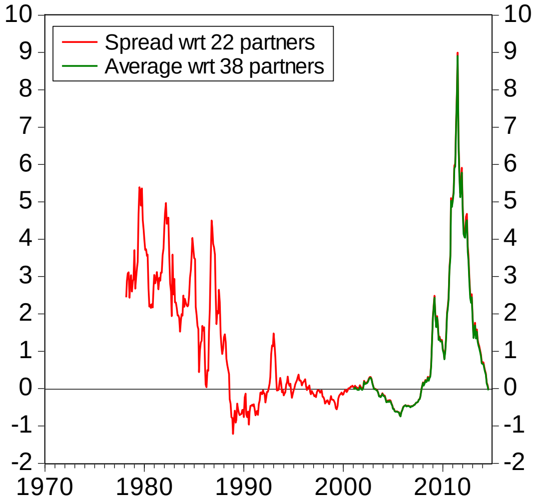

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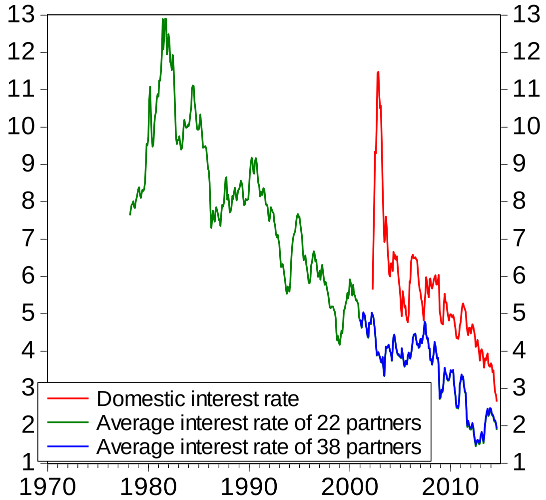

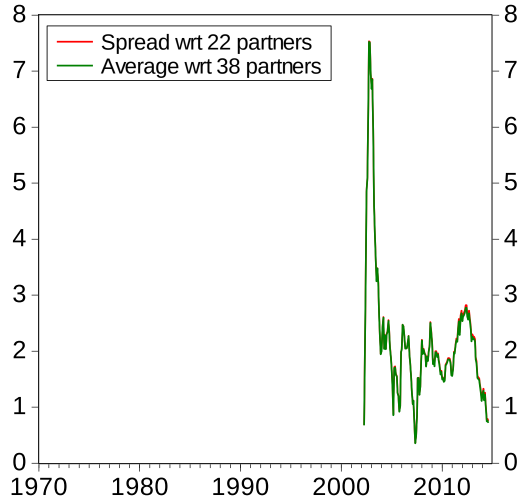

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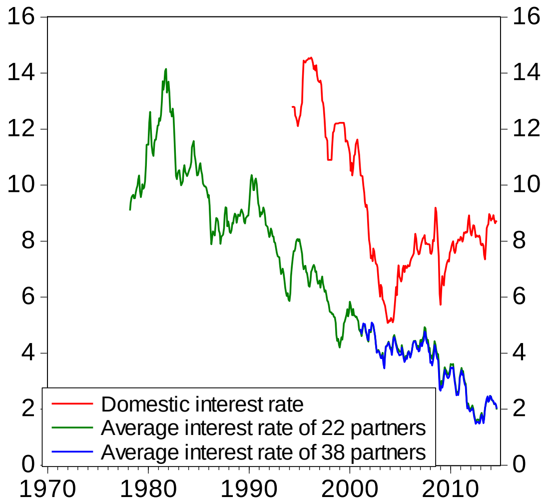

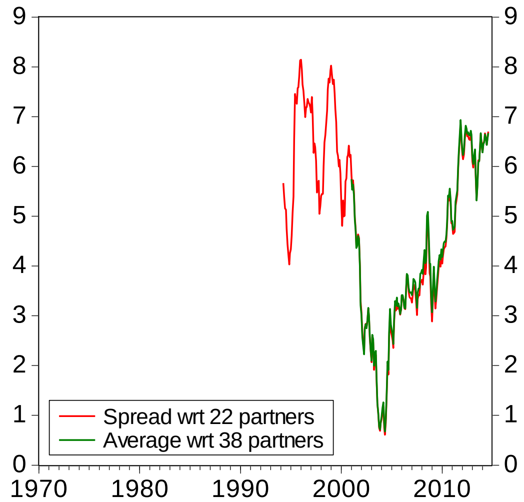

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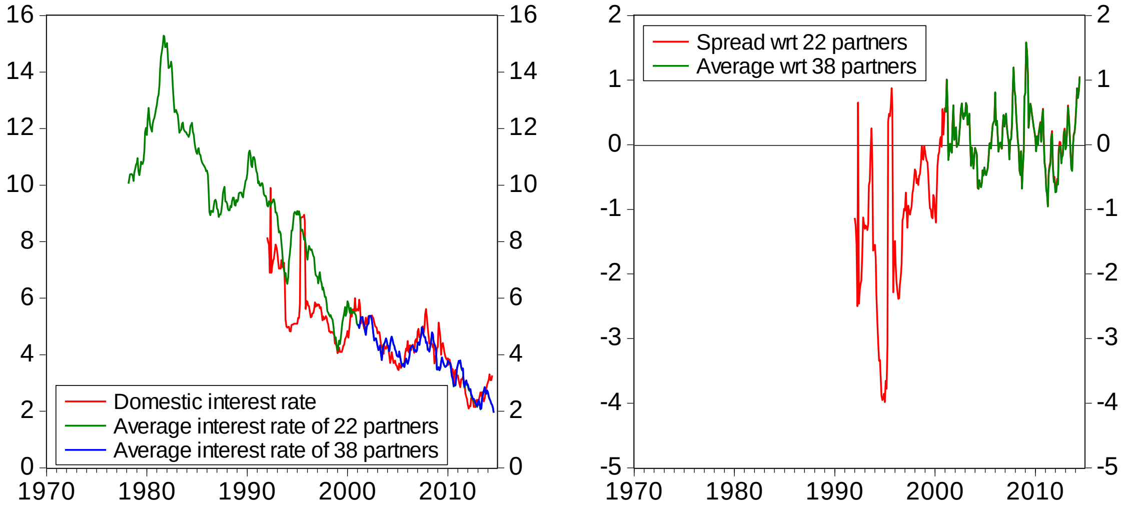

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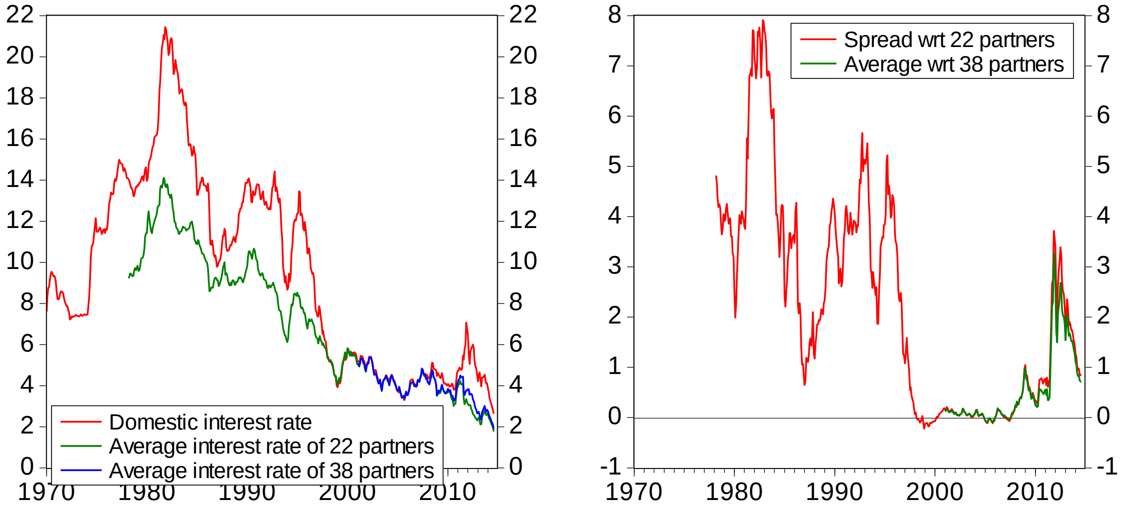

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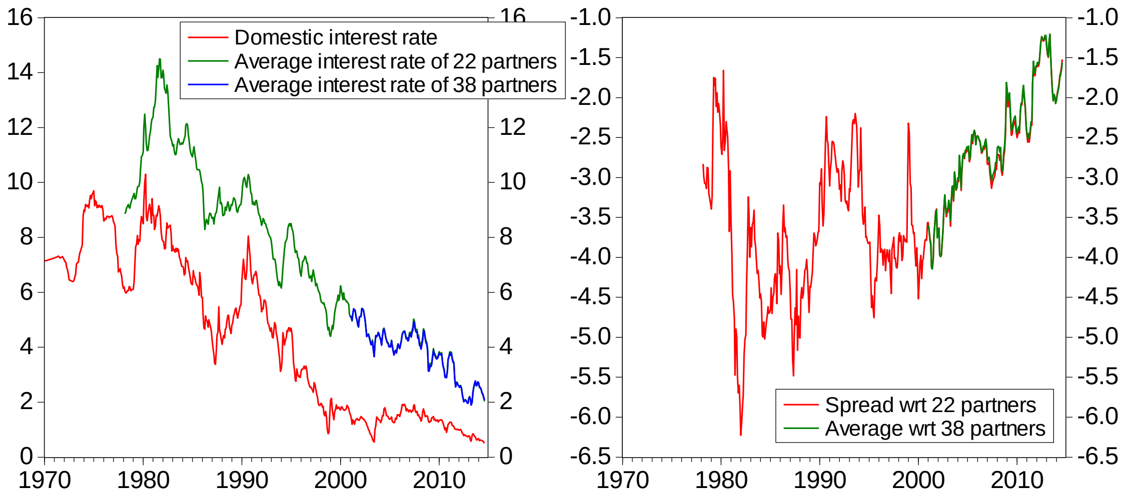

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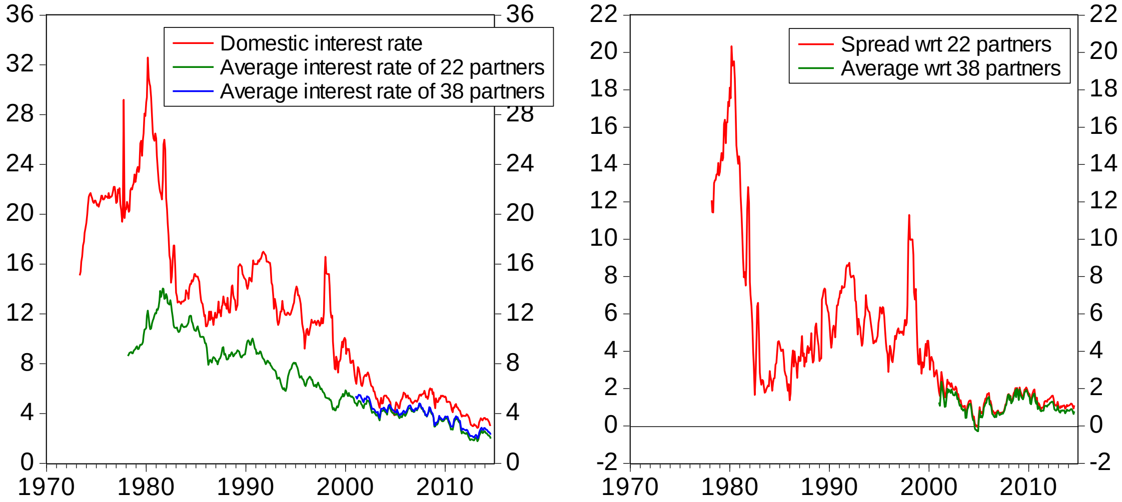

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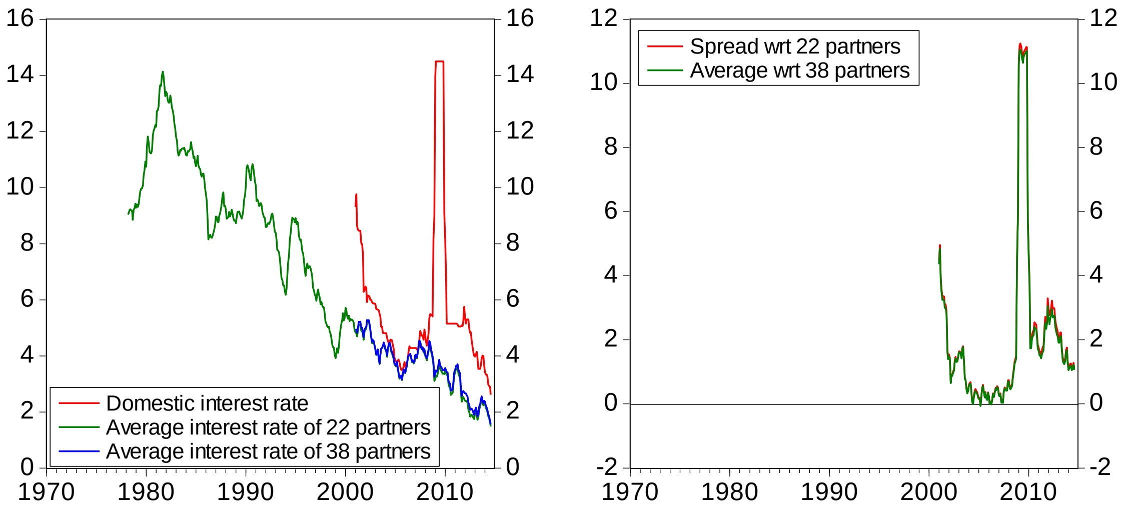
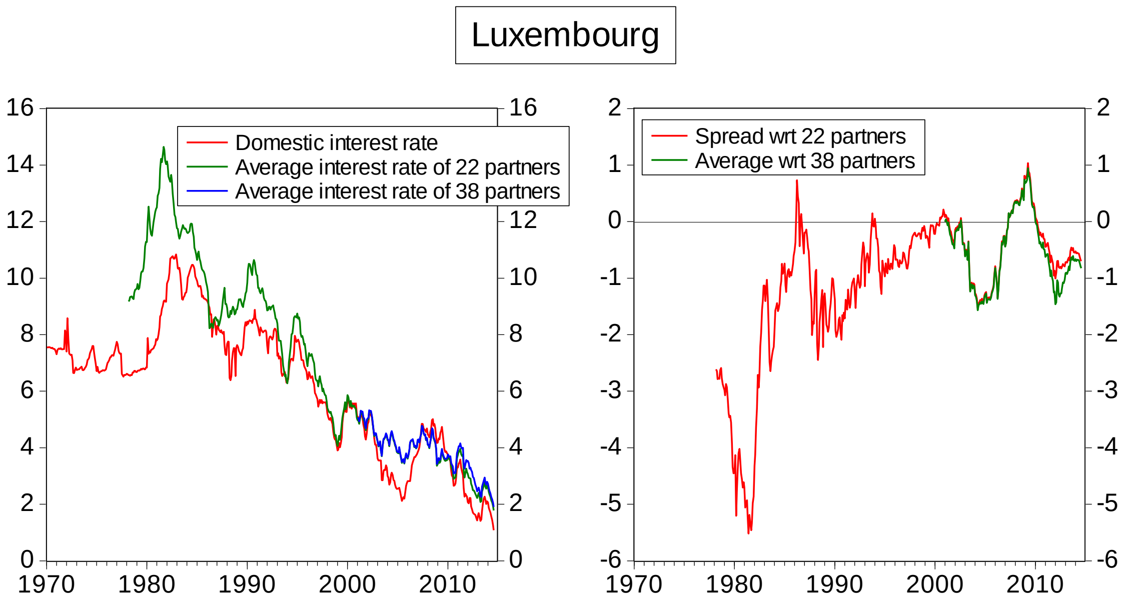
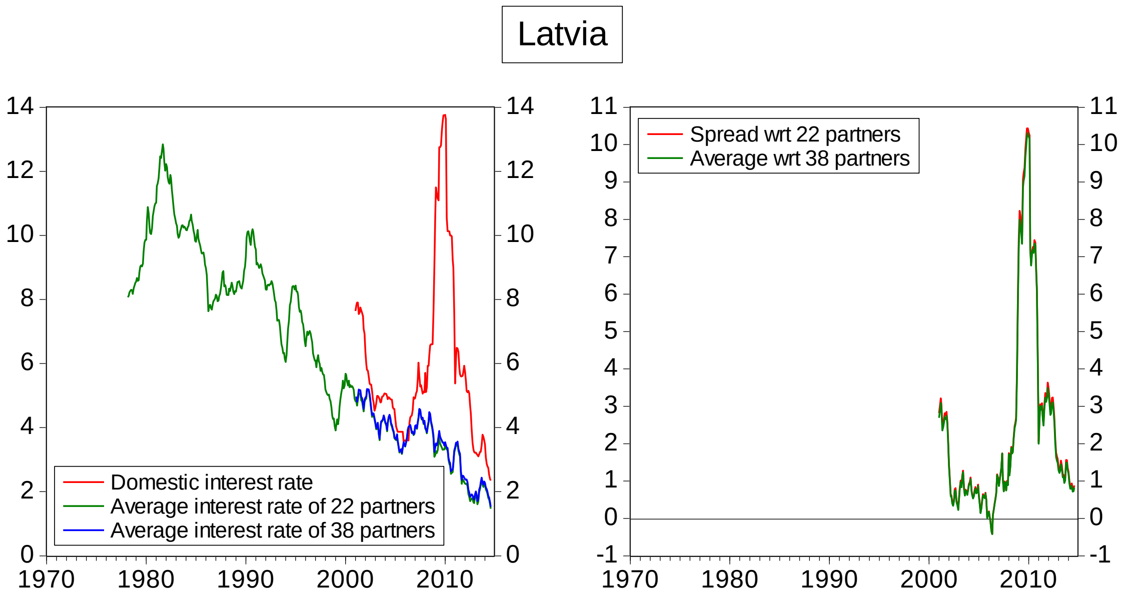



Luxembourg
Domestic interest rate
Average interest rate of 22 partners
Average interest rate of 38 partners
Spread wrt 22 partners
Average wrt 38 partners
1970
1980
1990
2000
2010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Domestic interest rate
Average interest rate of 22 partners
Average interest rate of 38 partners
Spread wrt 22 partners
Average wrt 38 partners
1970
1980
1990
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2010

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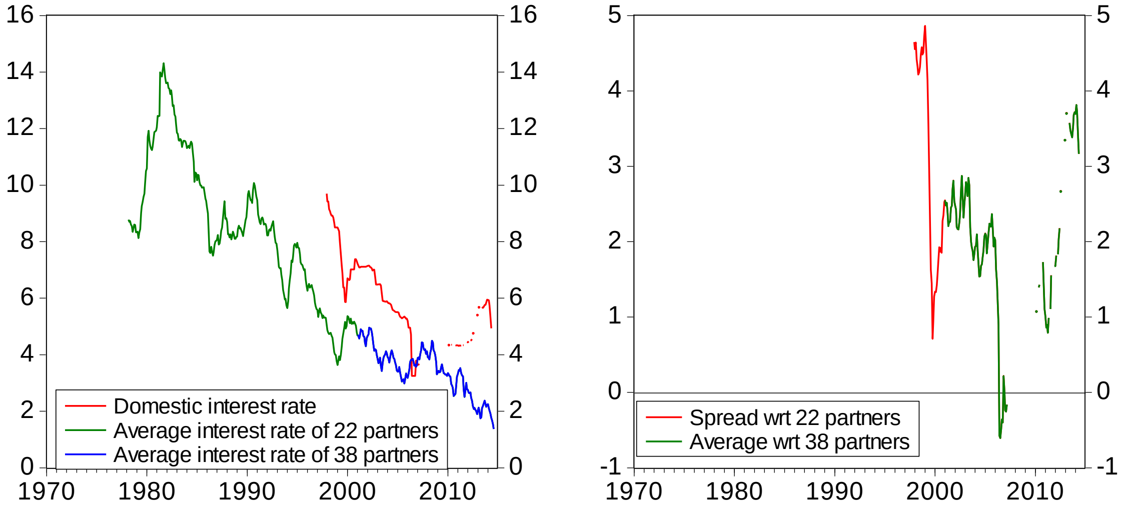

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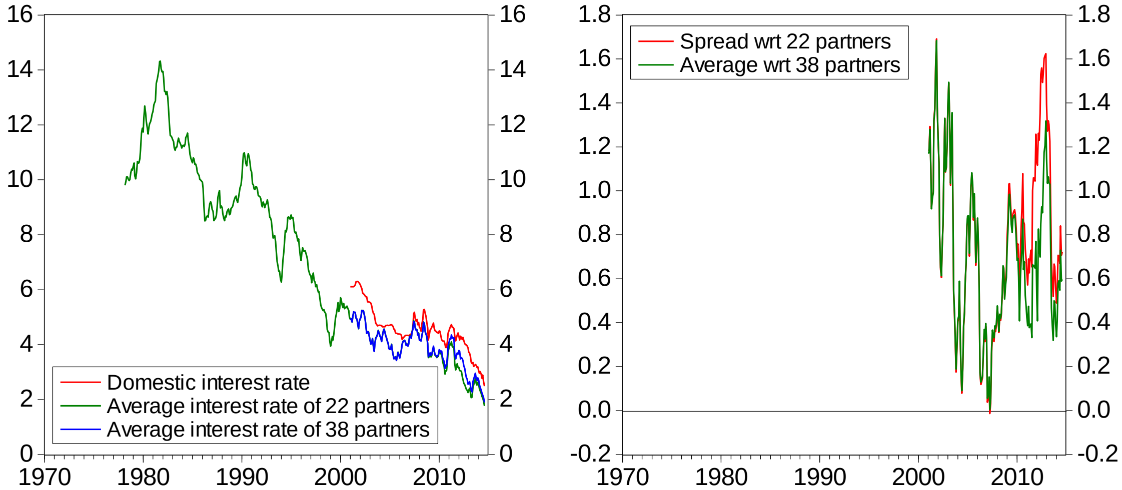

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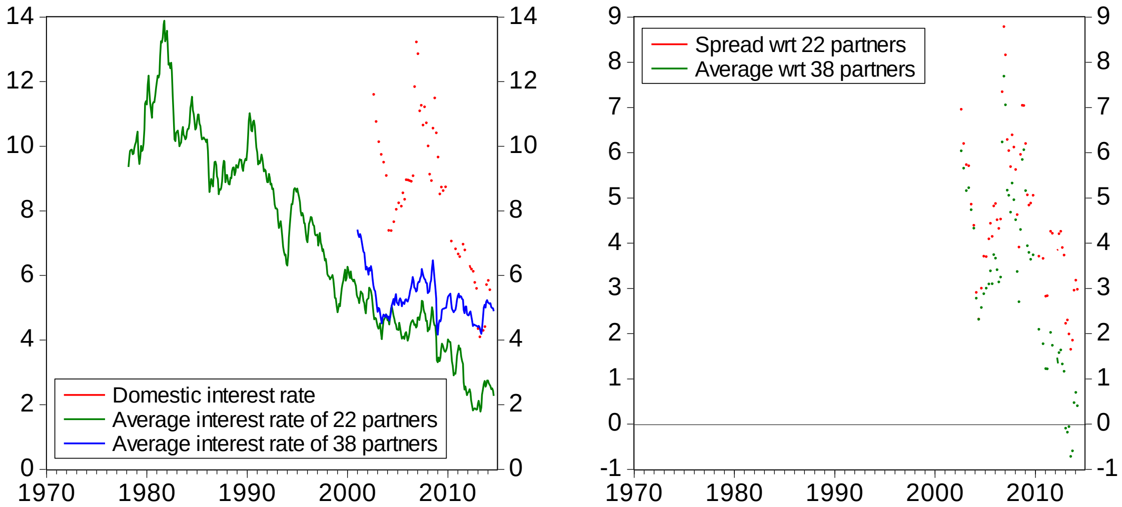

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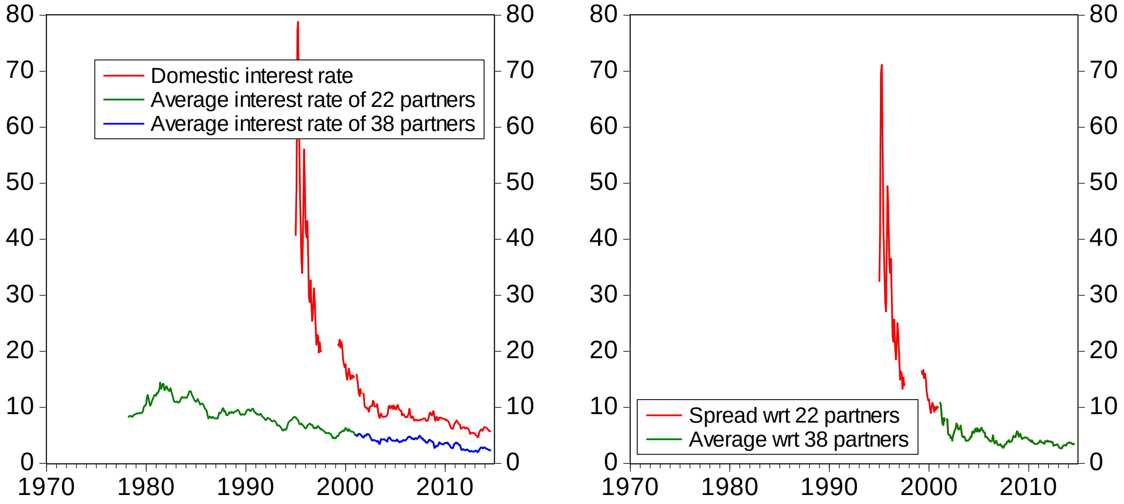

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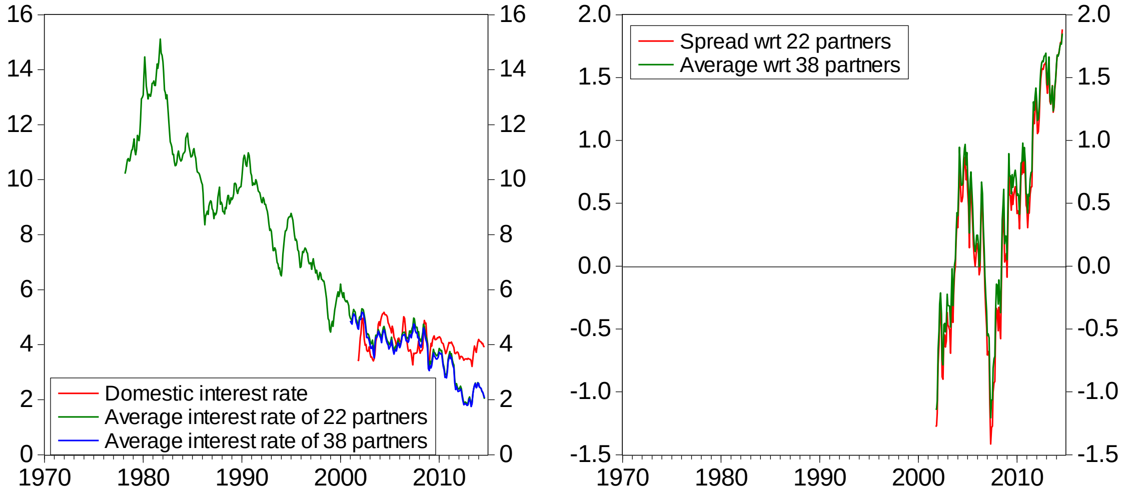

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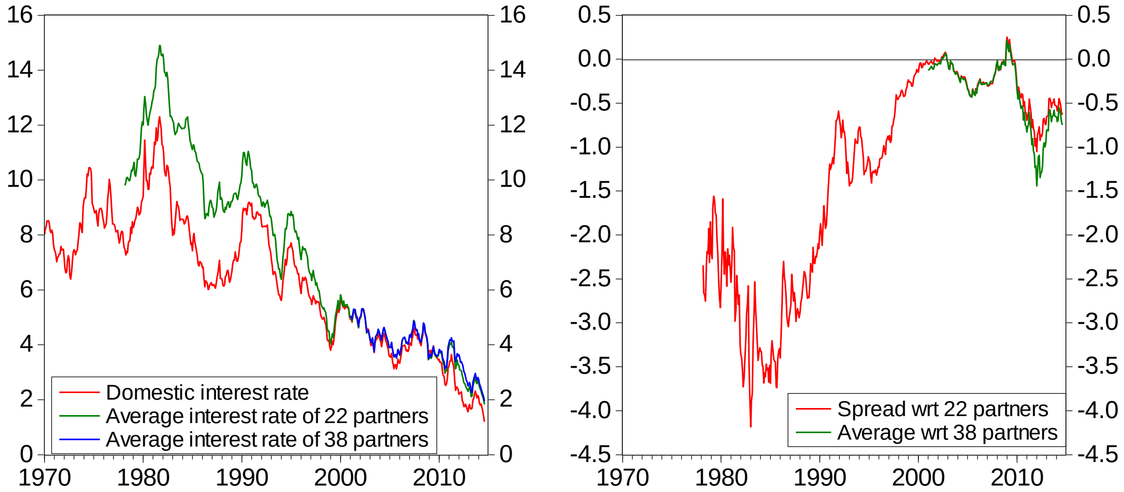

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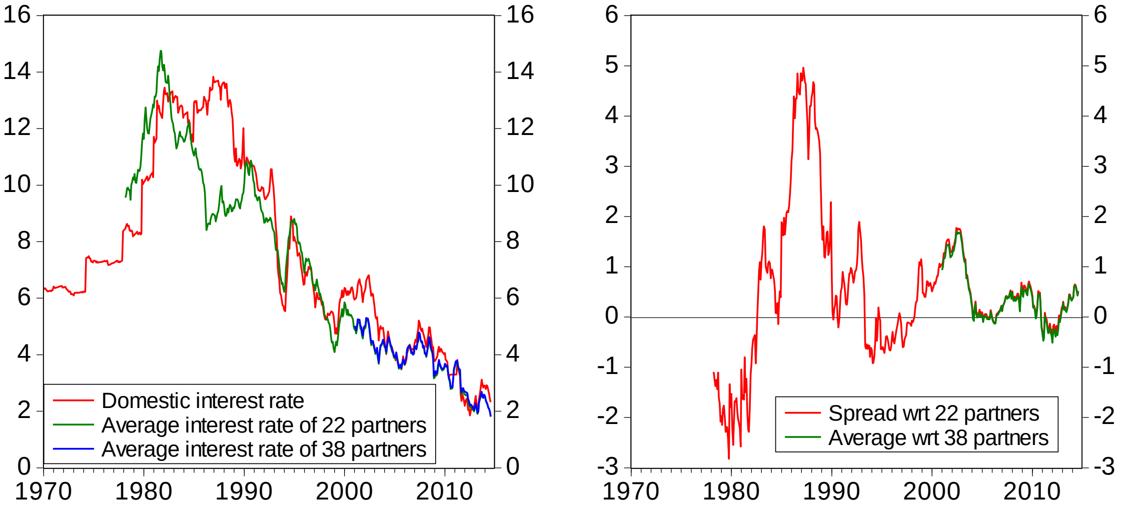

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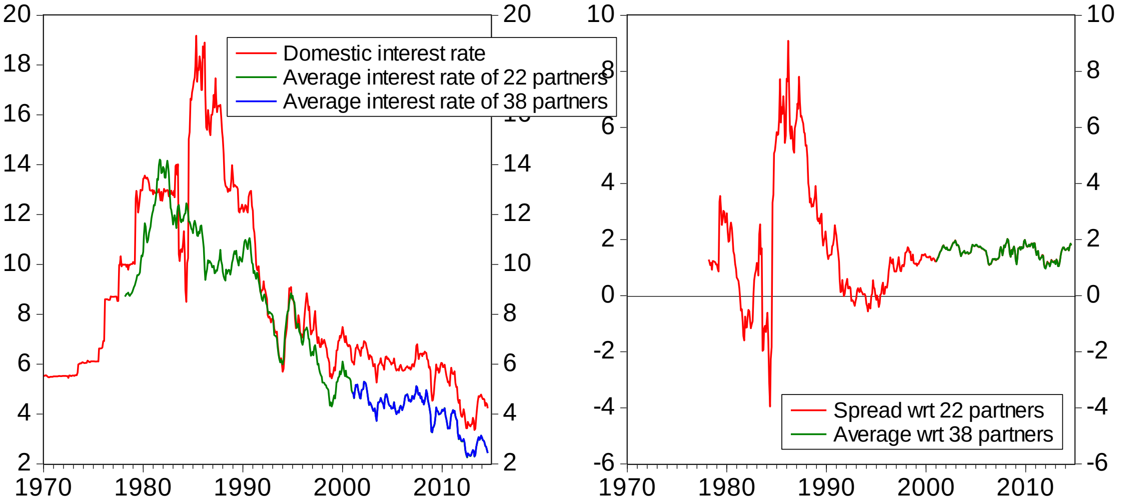

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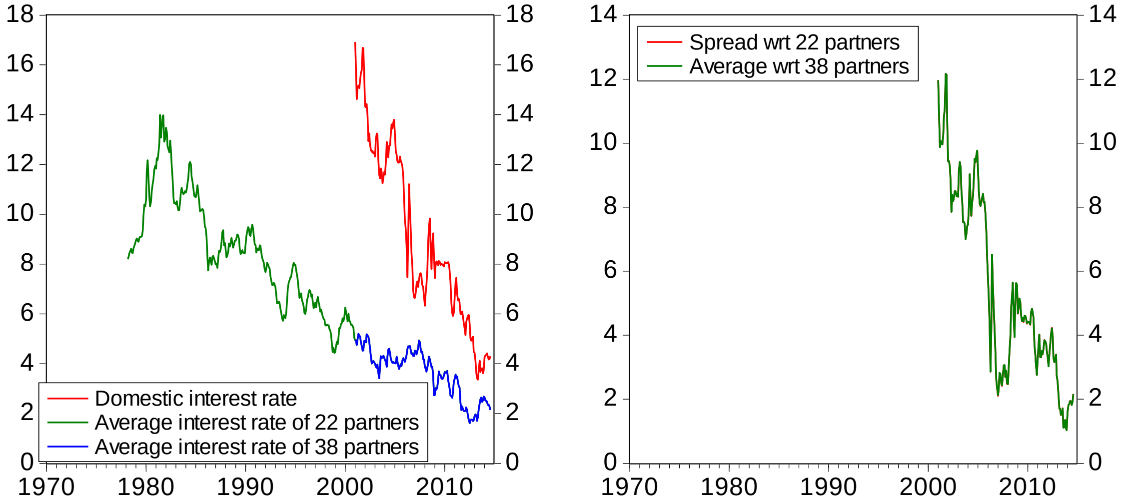

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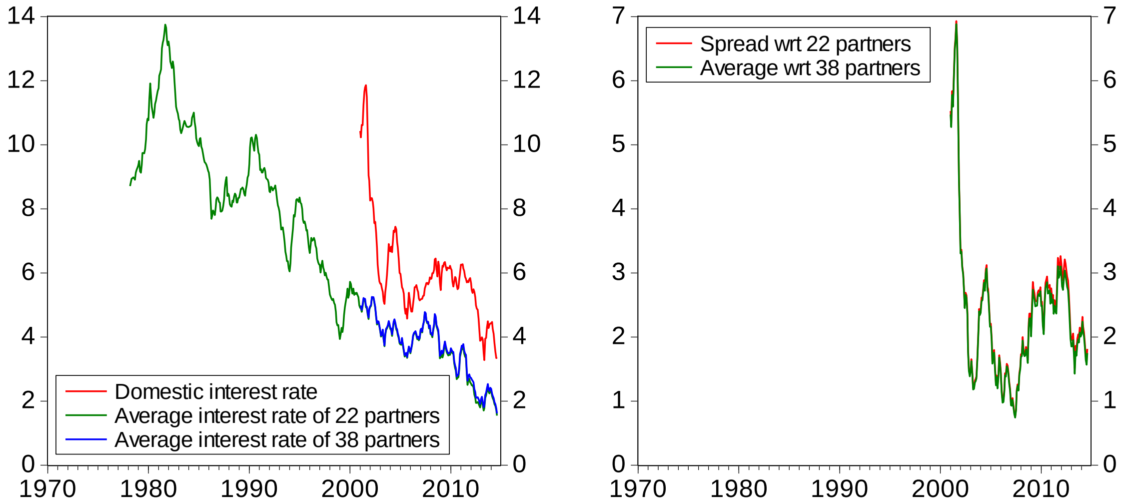

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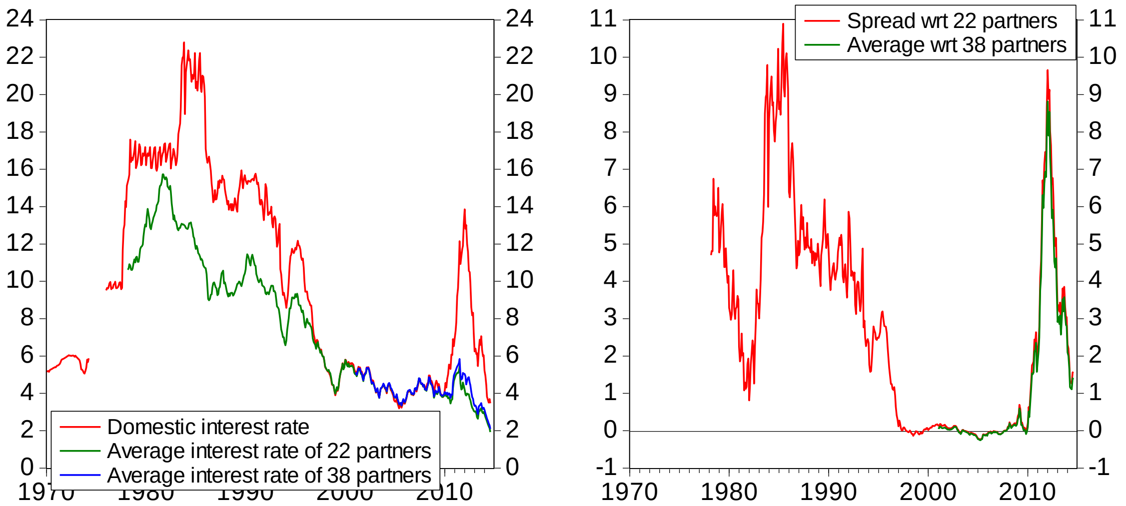

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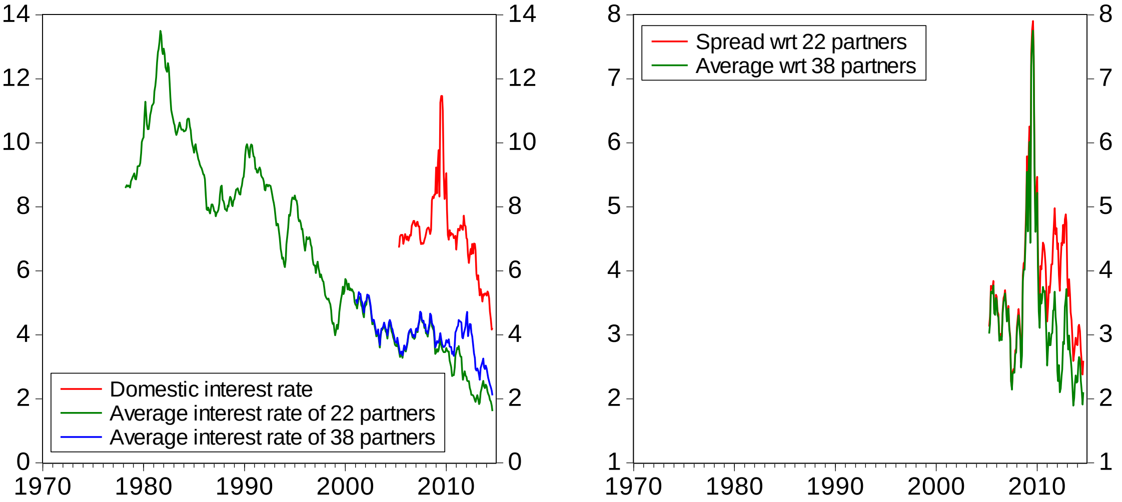

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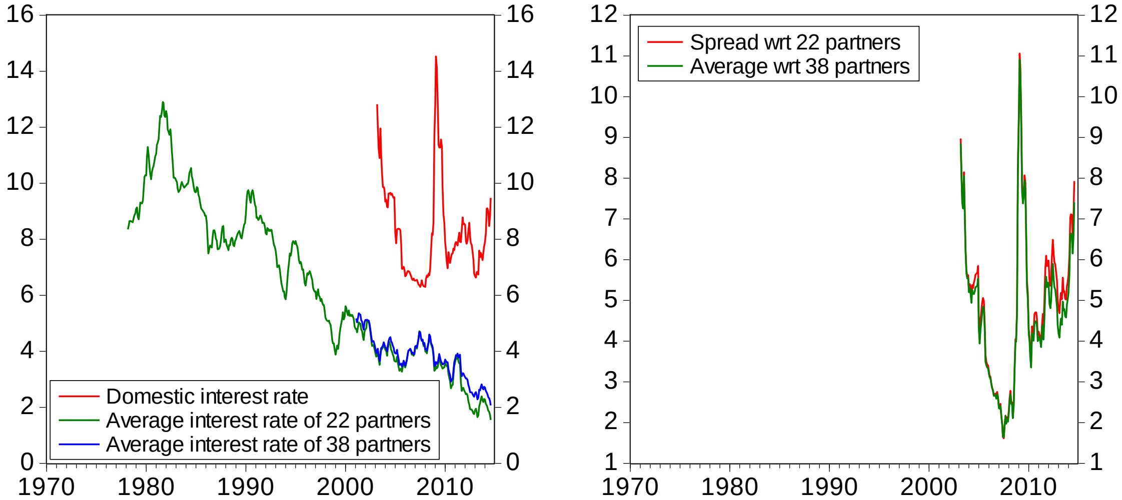

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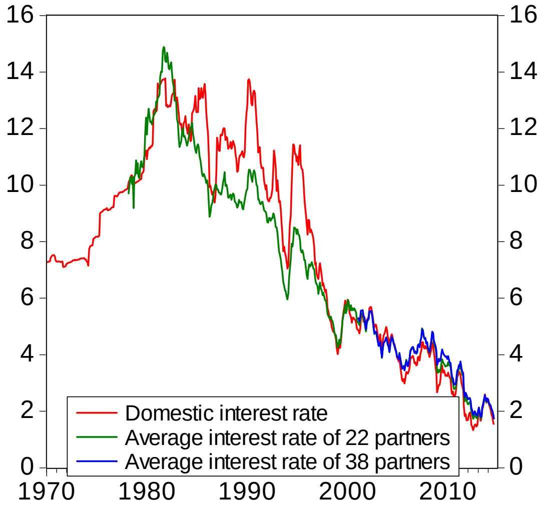

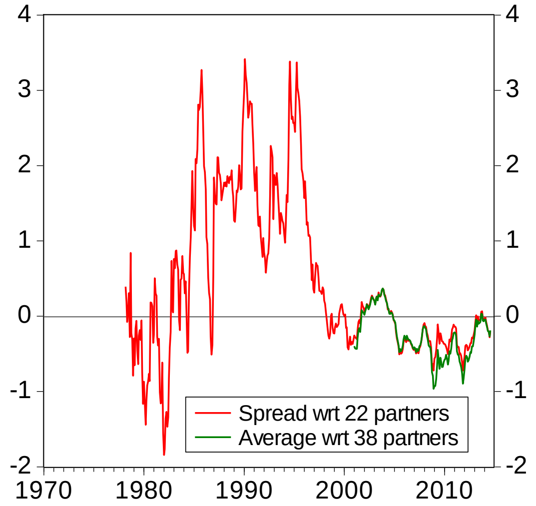

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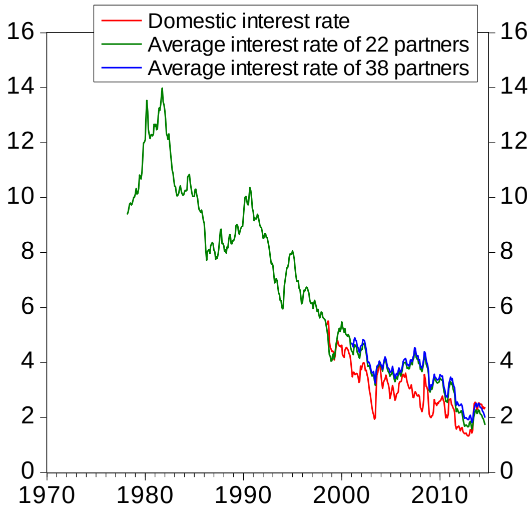

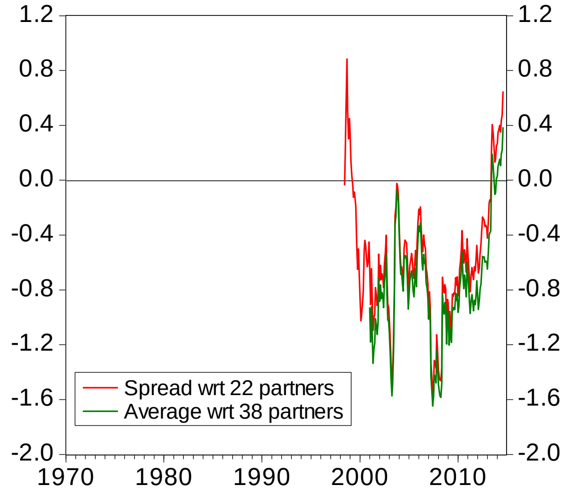

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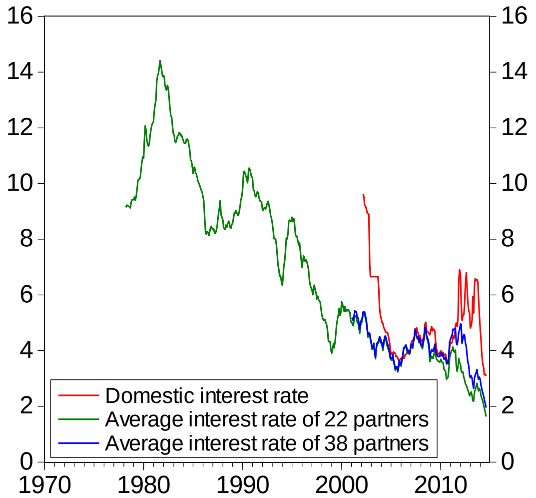

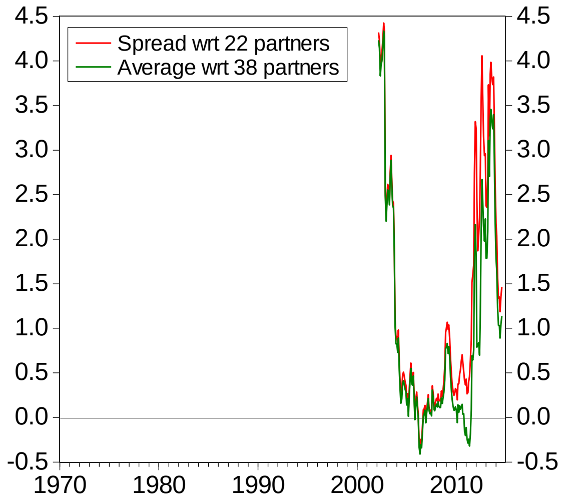

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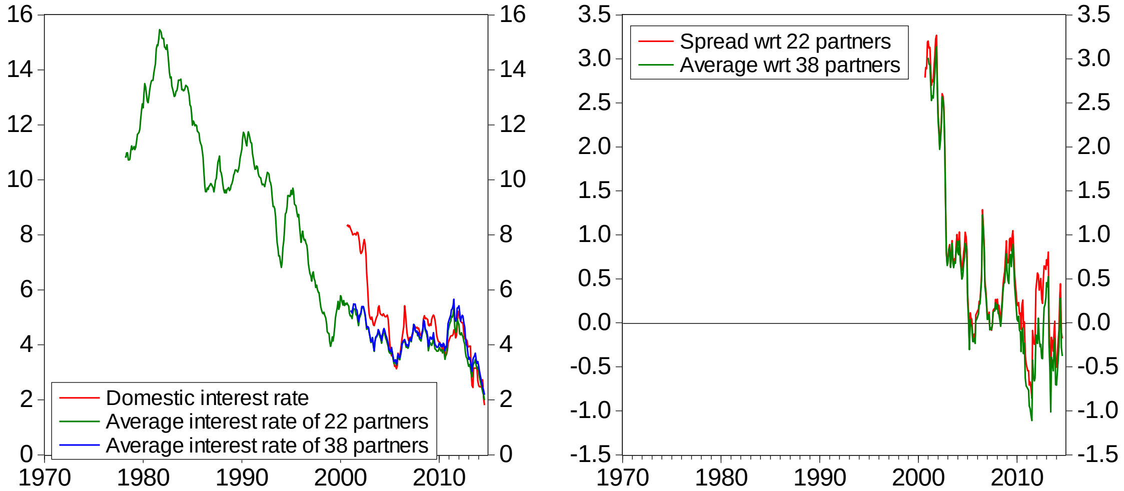

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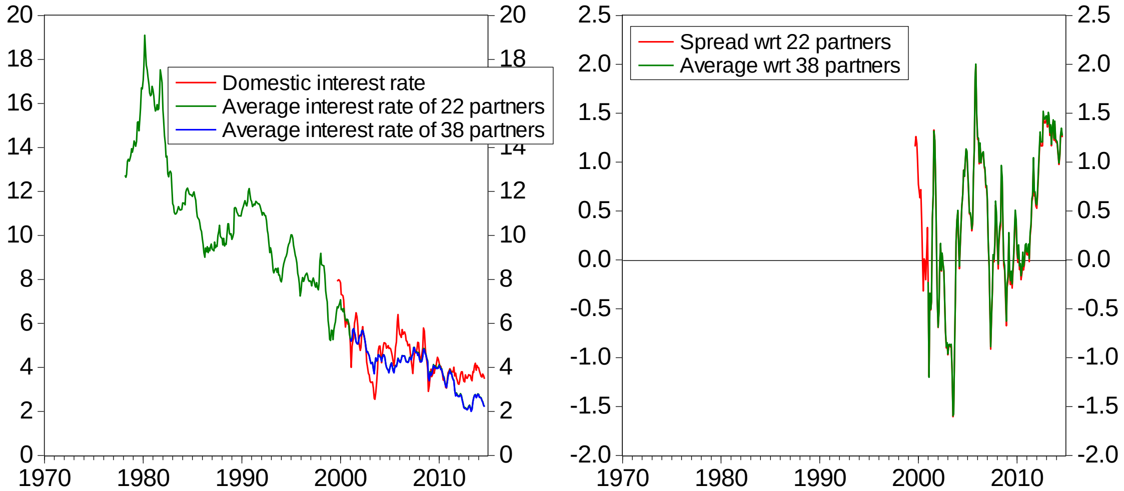

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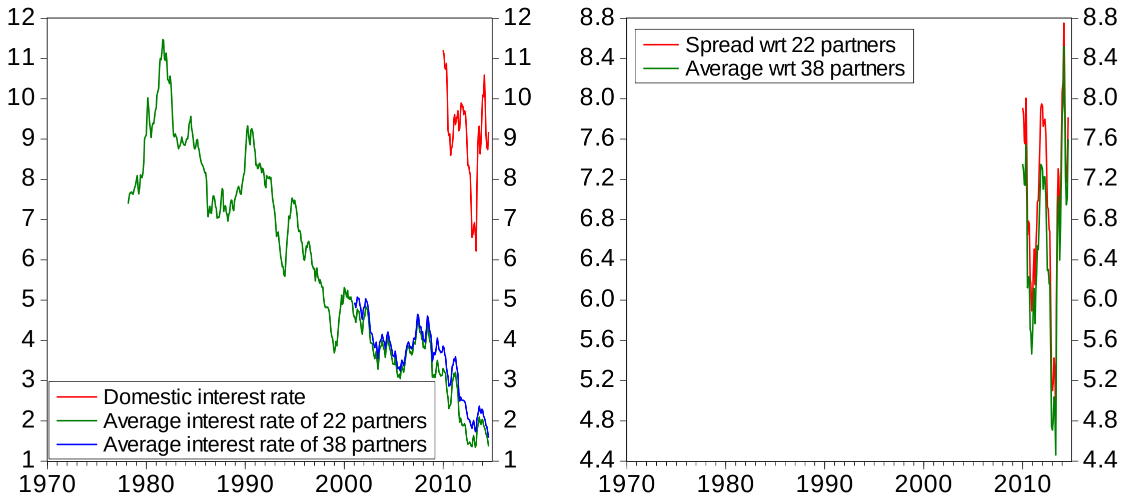

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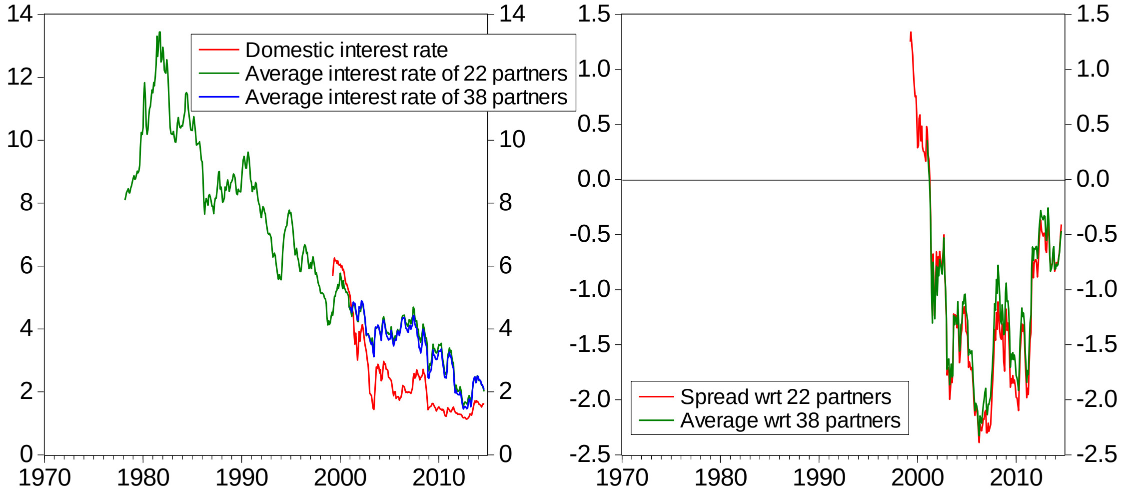

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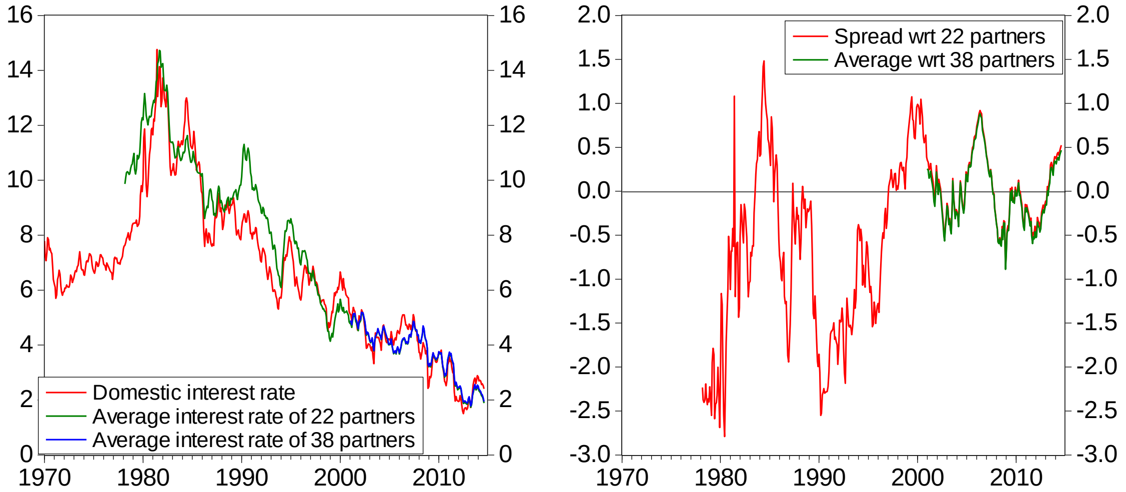

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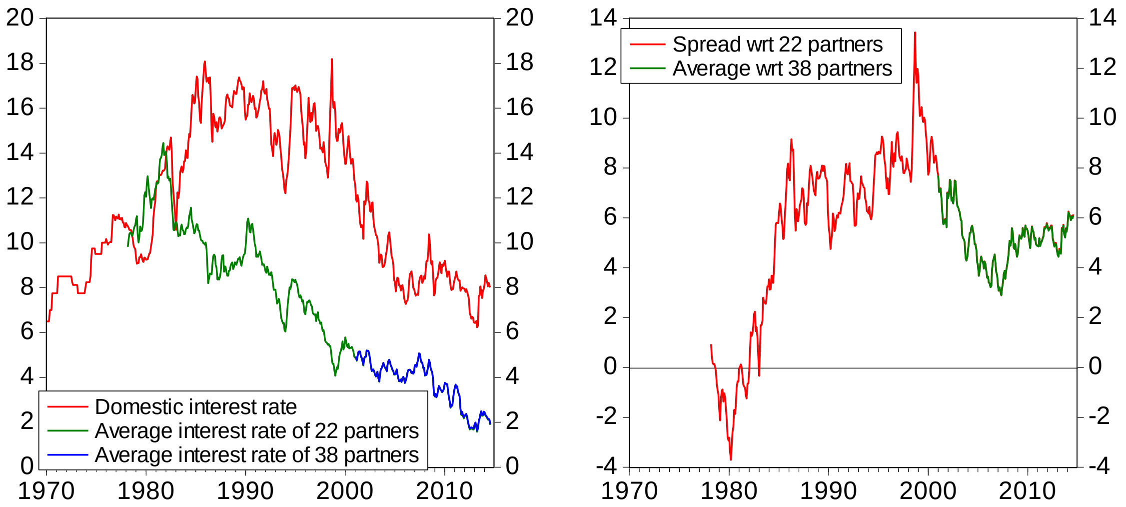
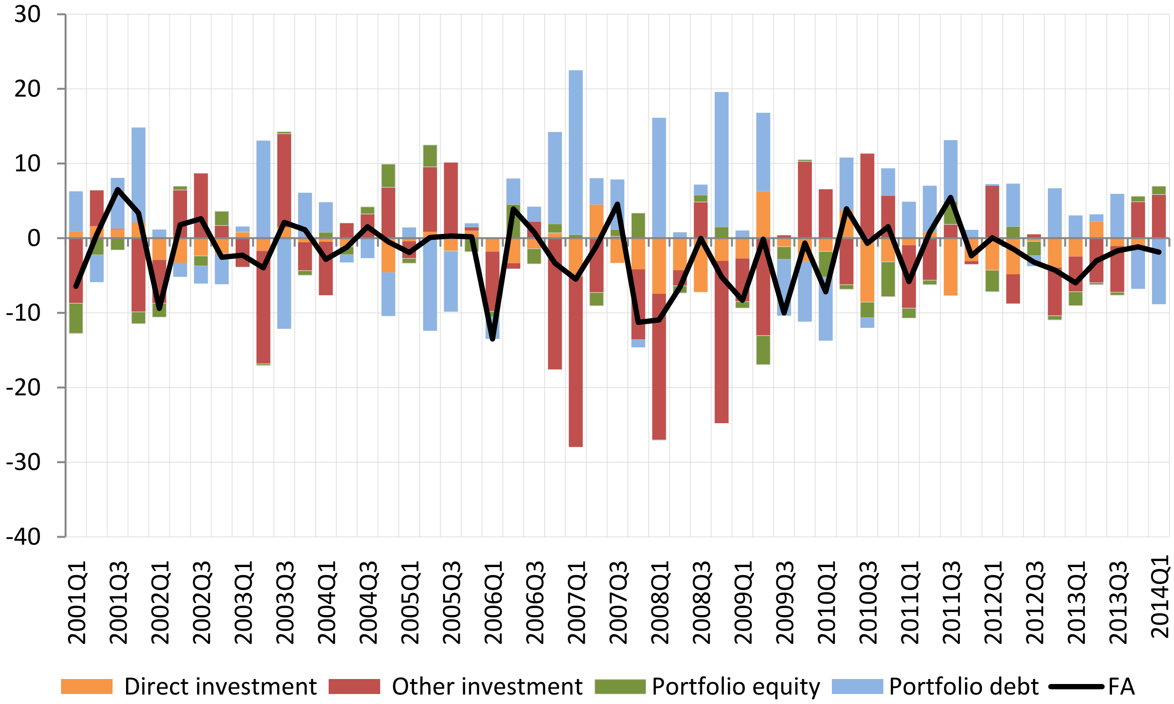


Note: countries are ordered alphabetically according to their 2-digit codes; e.g. Switzerland (code: CH) comes at C and Spain (code: ES) comes at E.

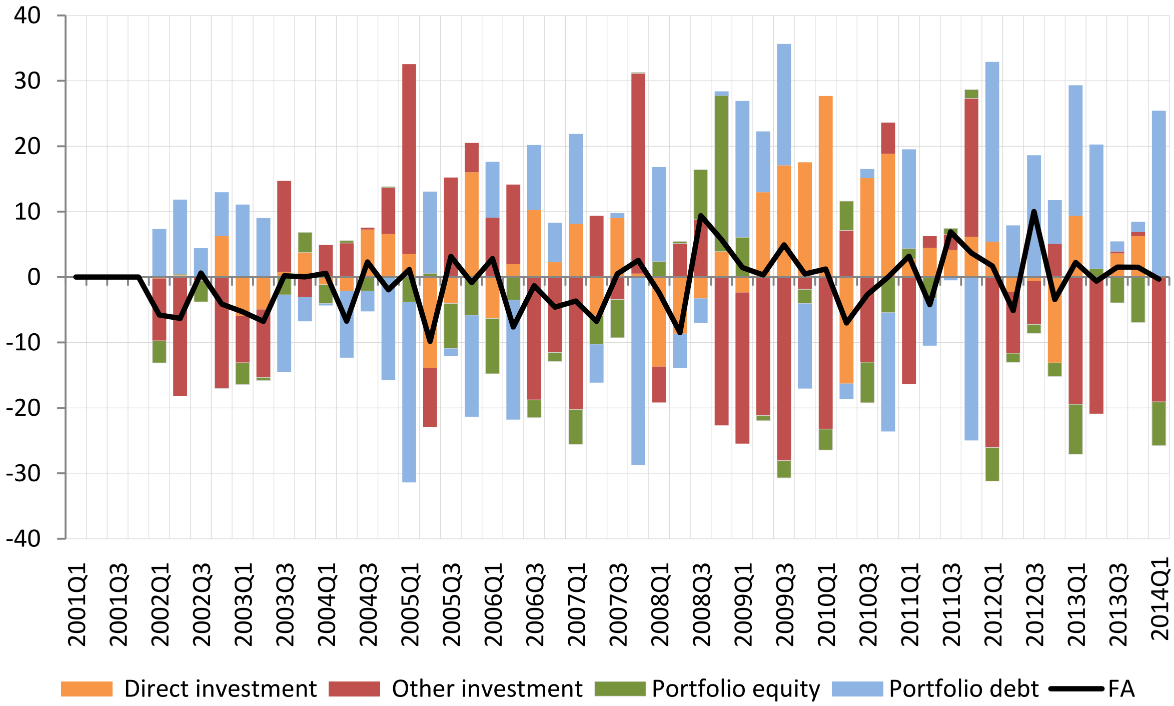
7 Appendix

7.1 Appendix A to Section 4: financial accounts of each EU country

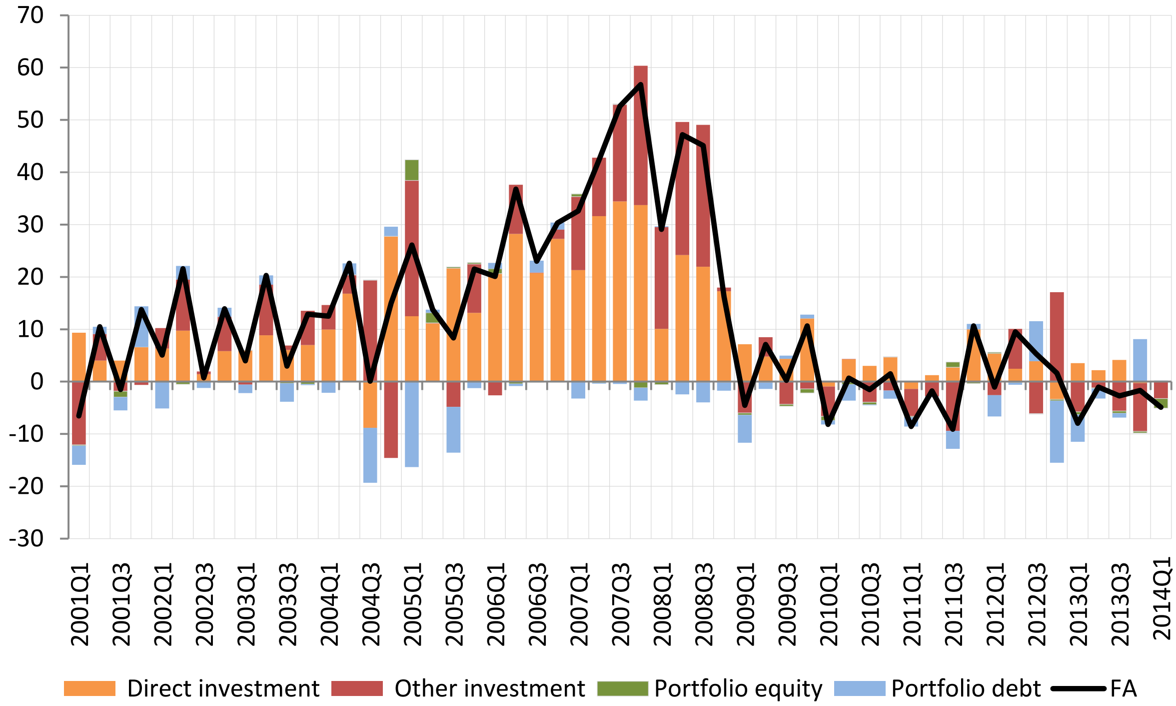
Austria - Financial Account net componets (%GDP)



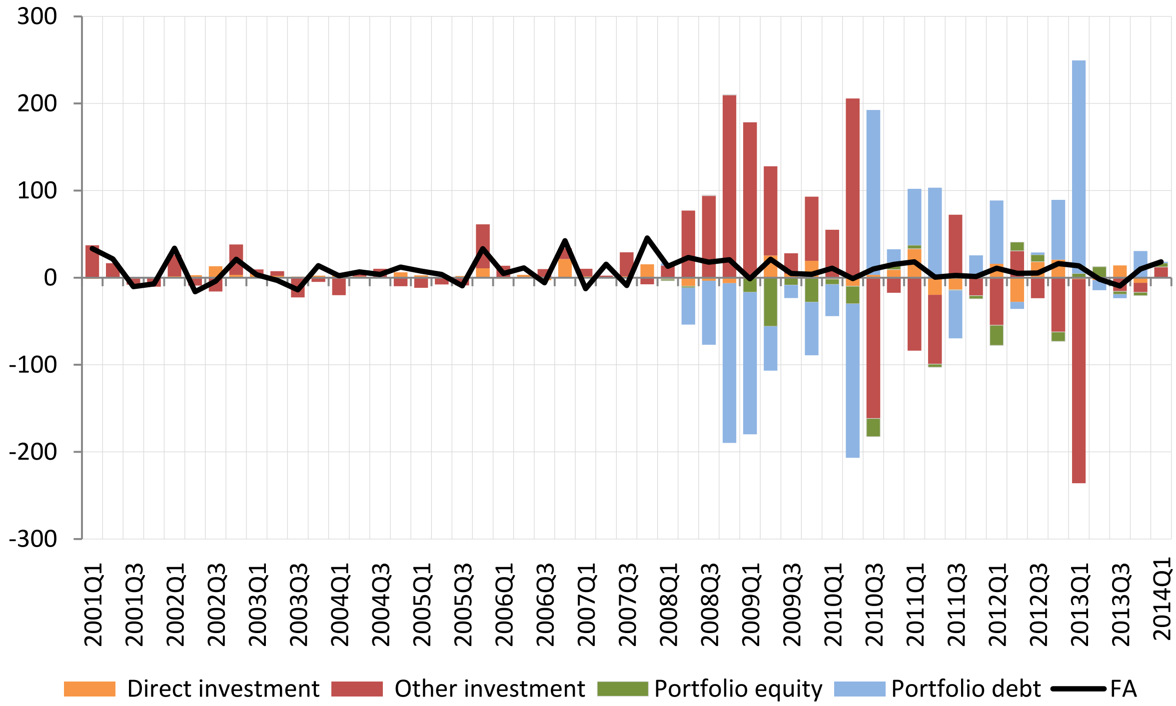
Belgium - Financial Account net componets (%GDP)



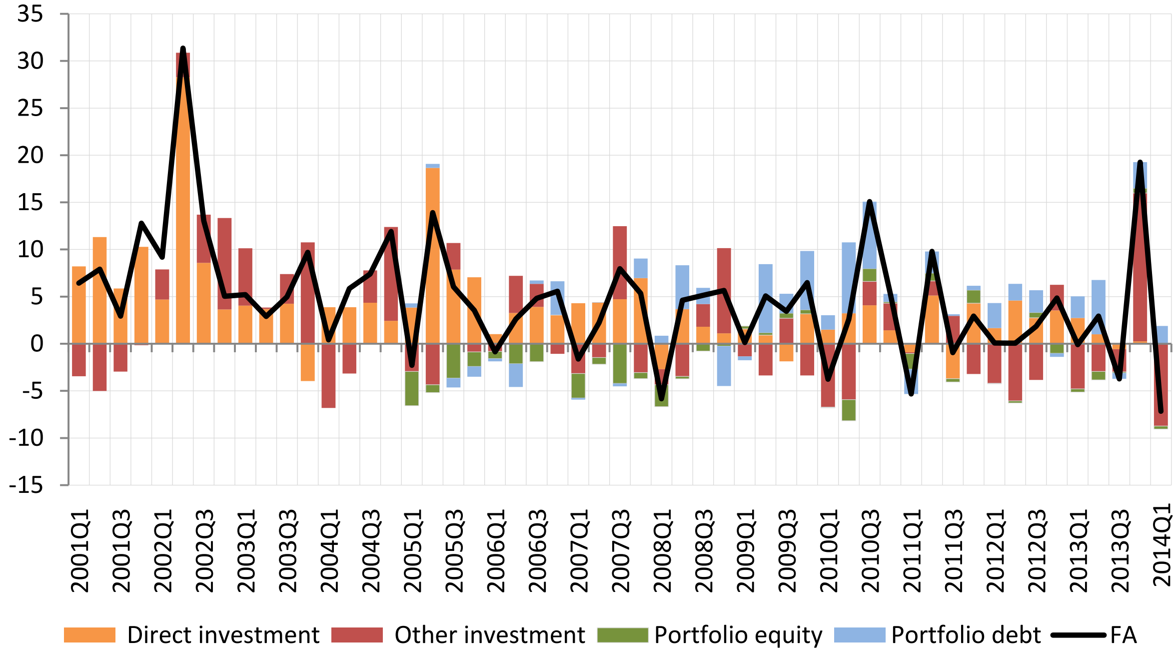
Bulgaria - Financial Account net componets (%GDP)



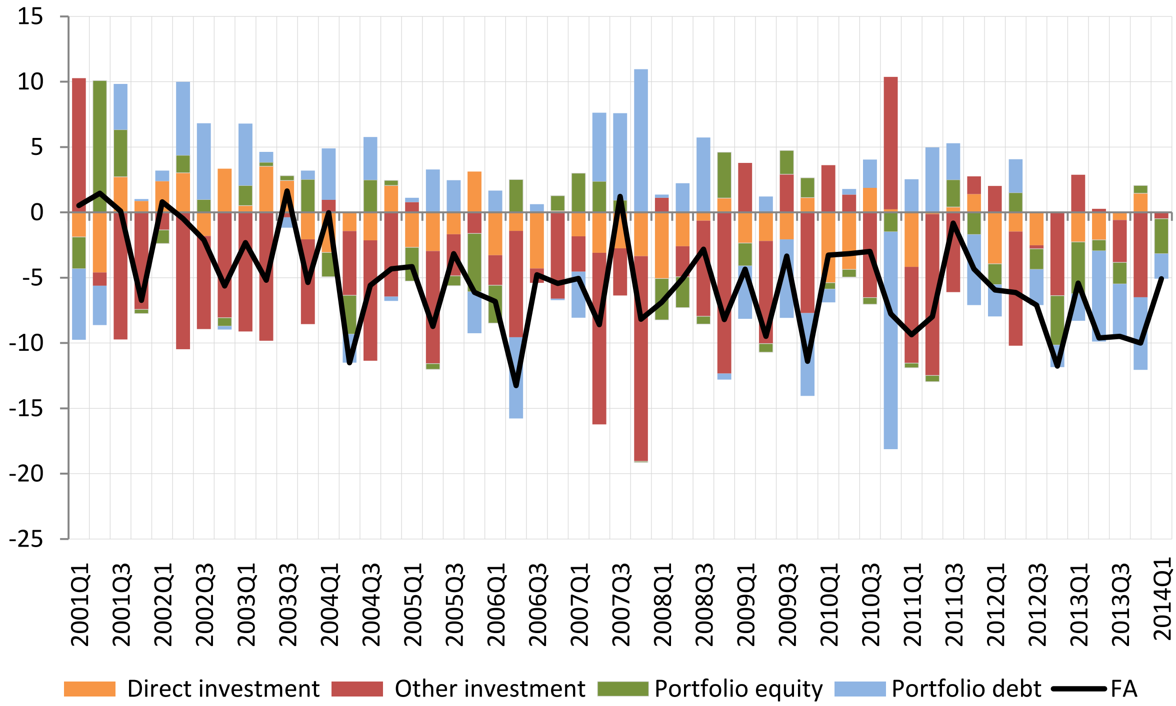
Cyprus - Financial Account net componets (%GDP)

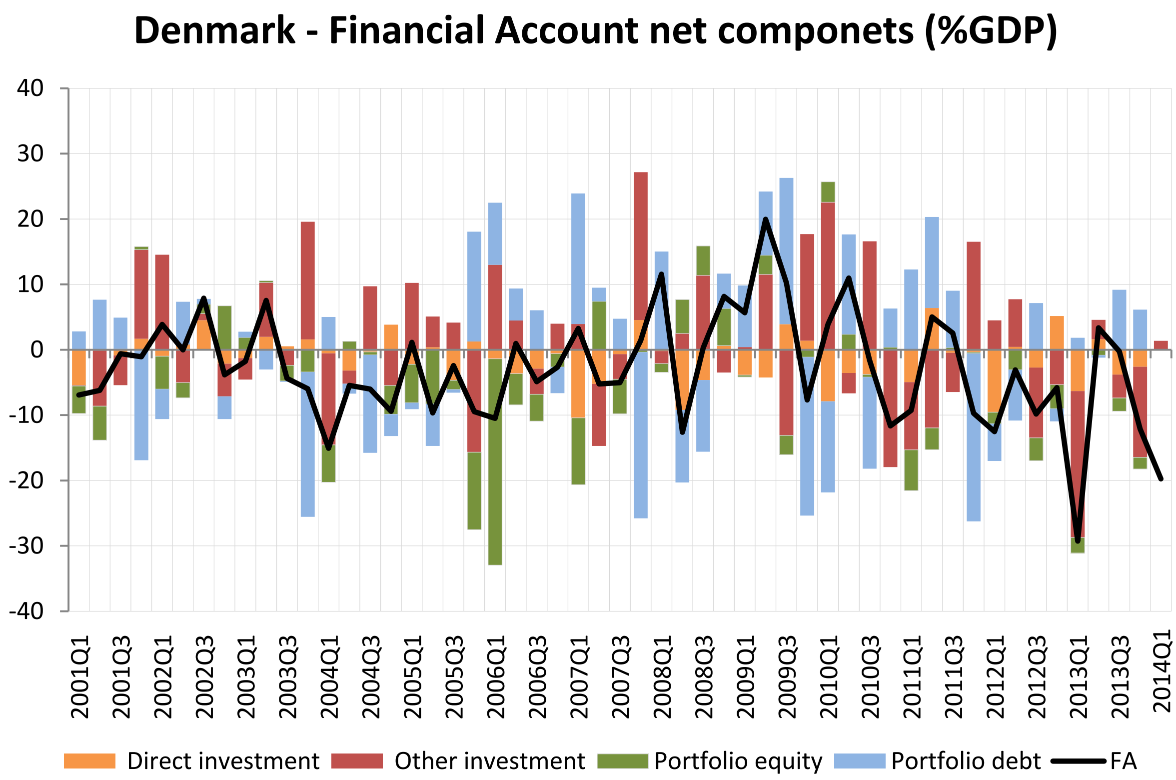


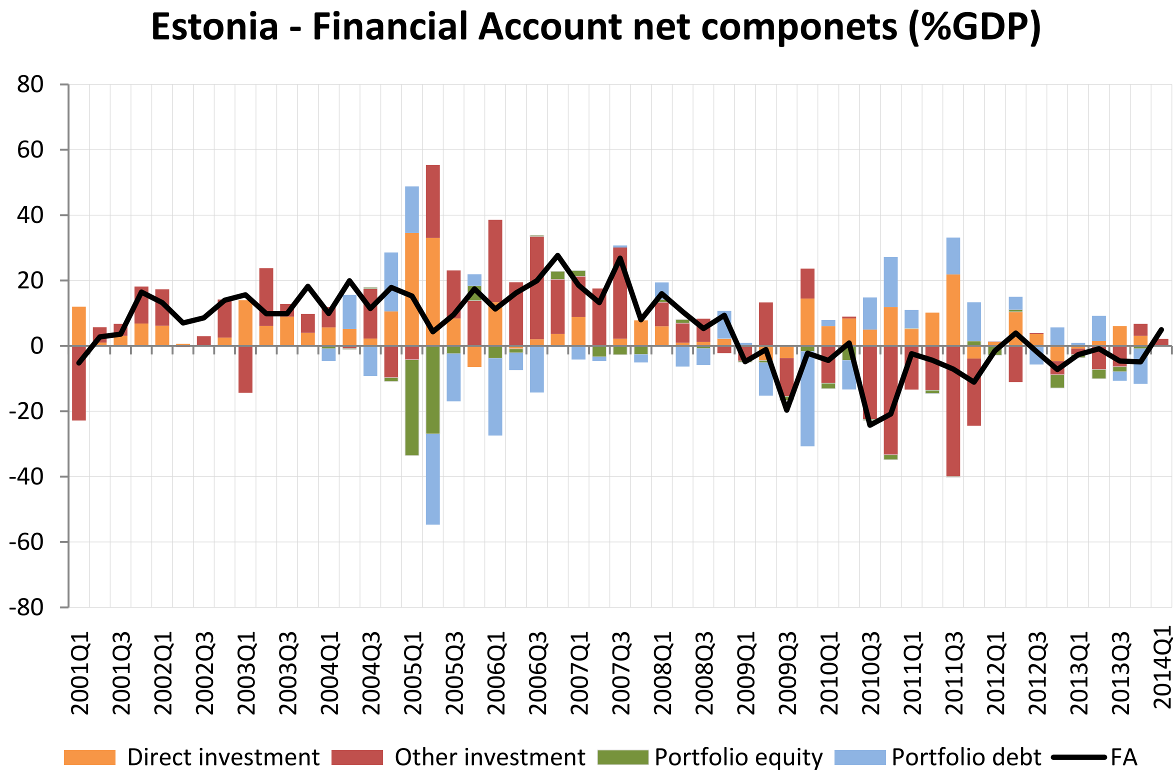
Czech Republic - Financial Account net componets (%GDP)

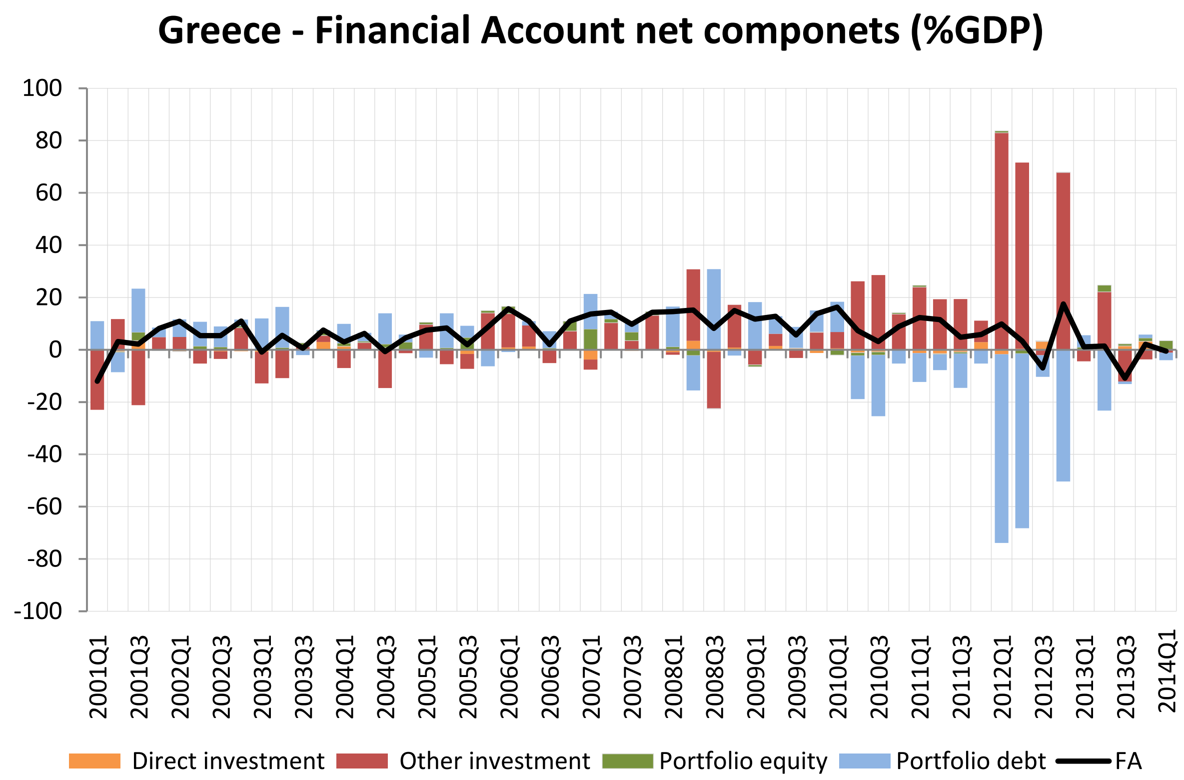


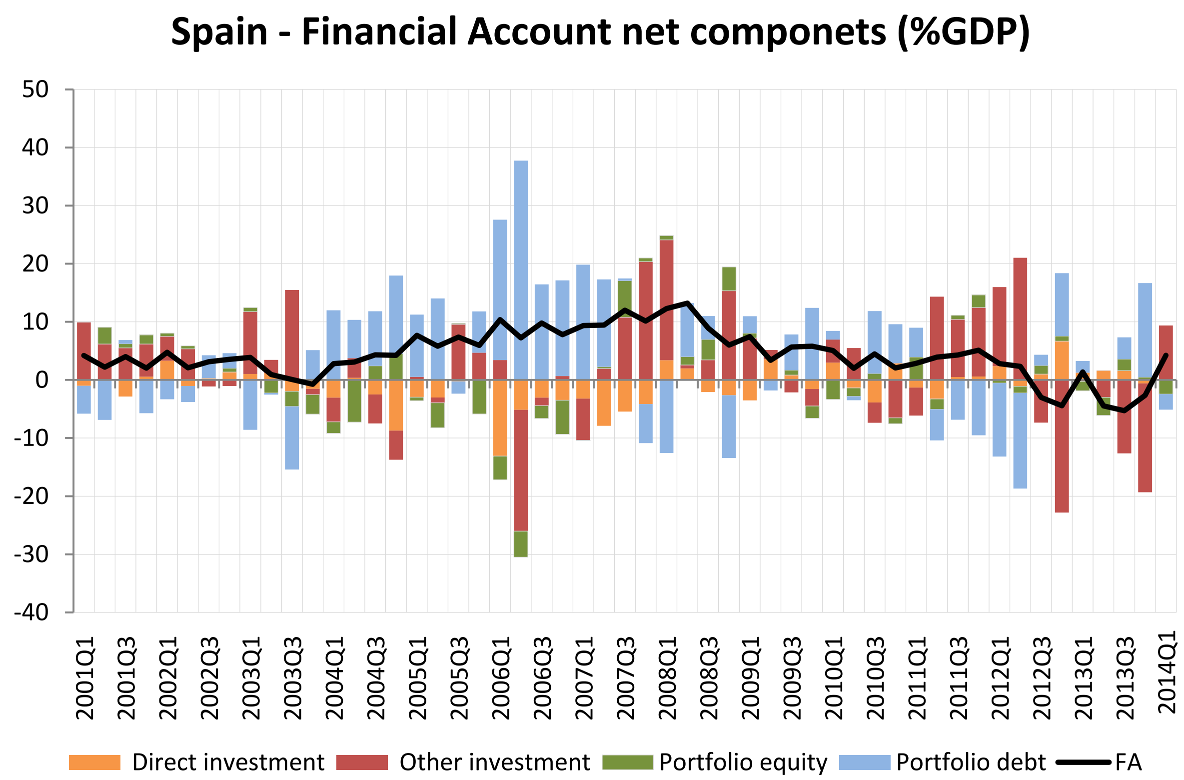
Germany - Financial Account net componets (%GDP)



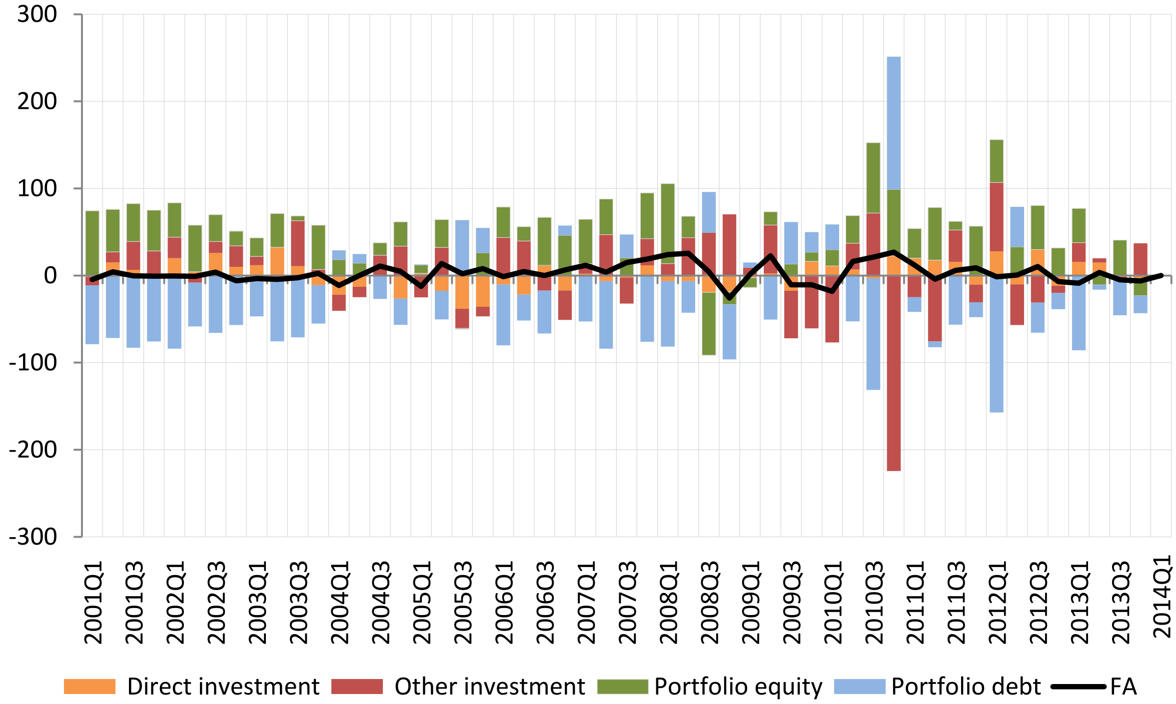

Denmark - Financial Account net componets (%GDP)
40
30
20
10
0
-10
-20
-30
-40
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA


Estonia - Financial Account net componets (%GDP)
80
60
40
20
0
-20
-40
-60
-80
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

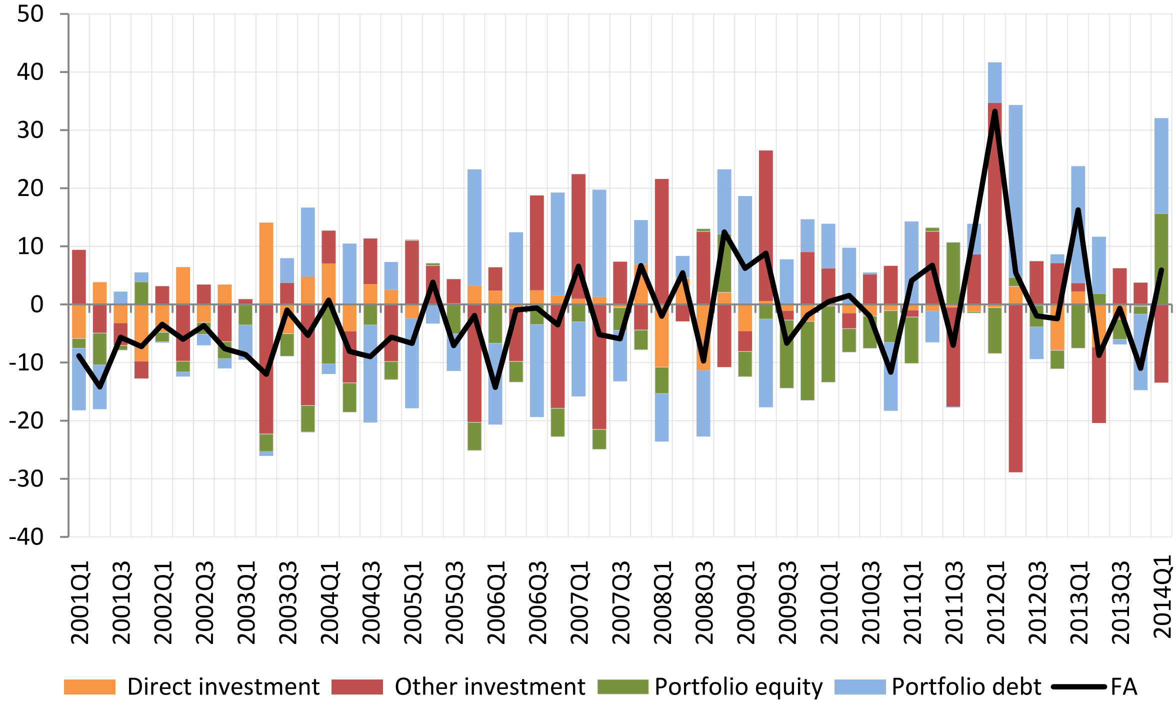

Greece - Financial Account net componets (%GDP)
100
80
60
40
20
0
-20
-40
-60
-80
-100
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

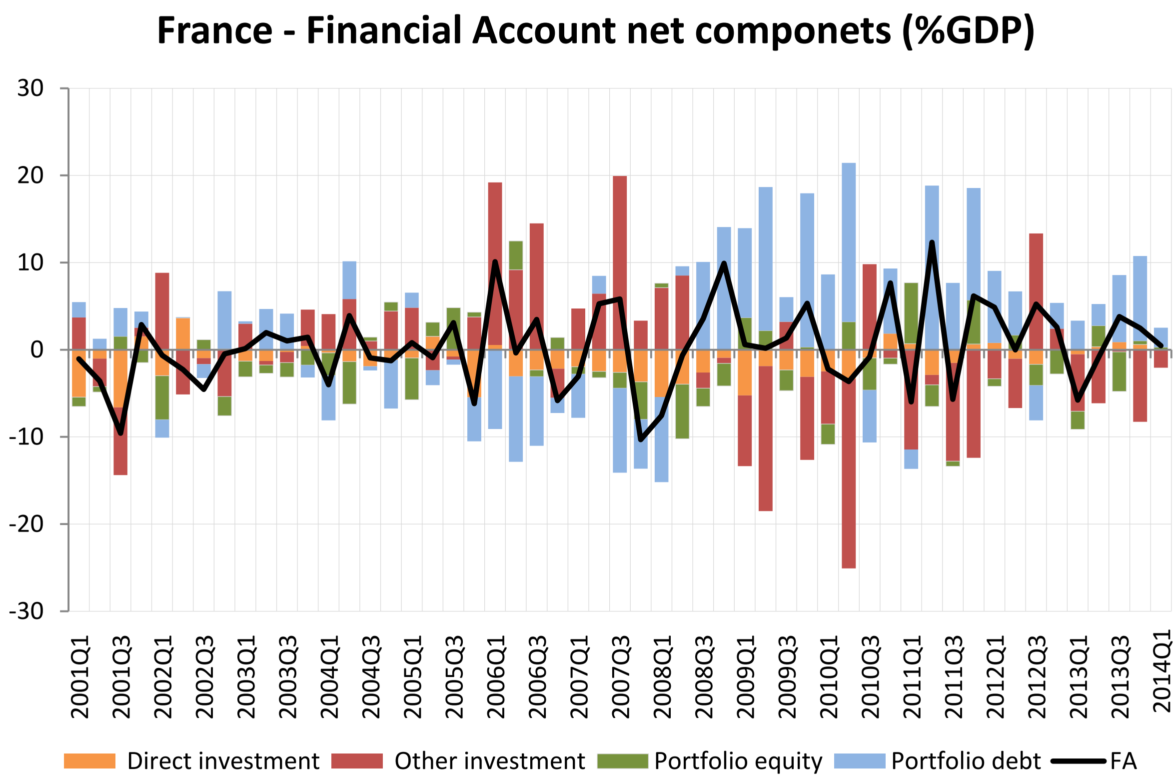

Spain - Financial Account net componets (%GDP)
50
40
30
20
10
0
-10
-20
-30
-40
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

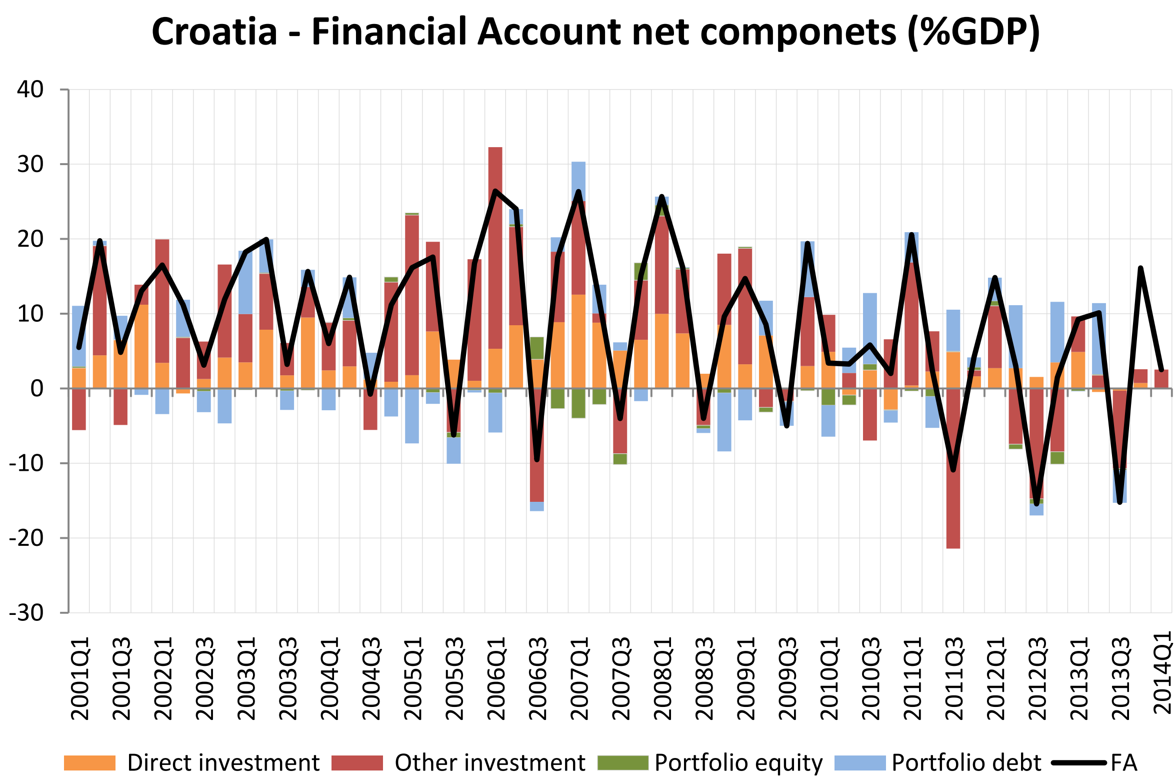
Ireland - Financial Account net componets (%GDP)



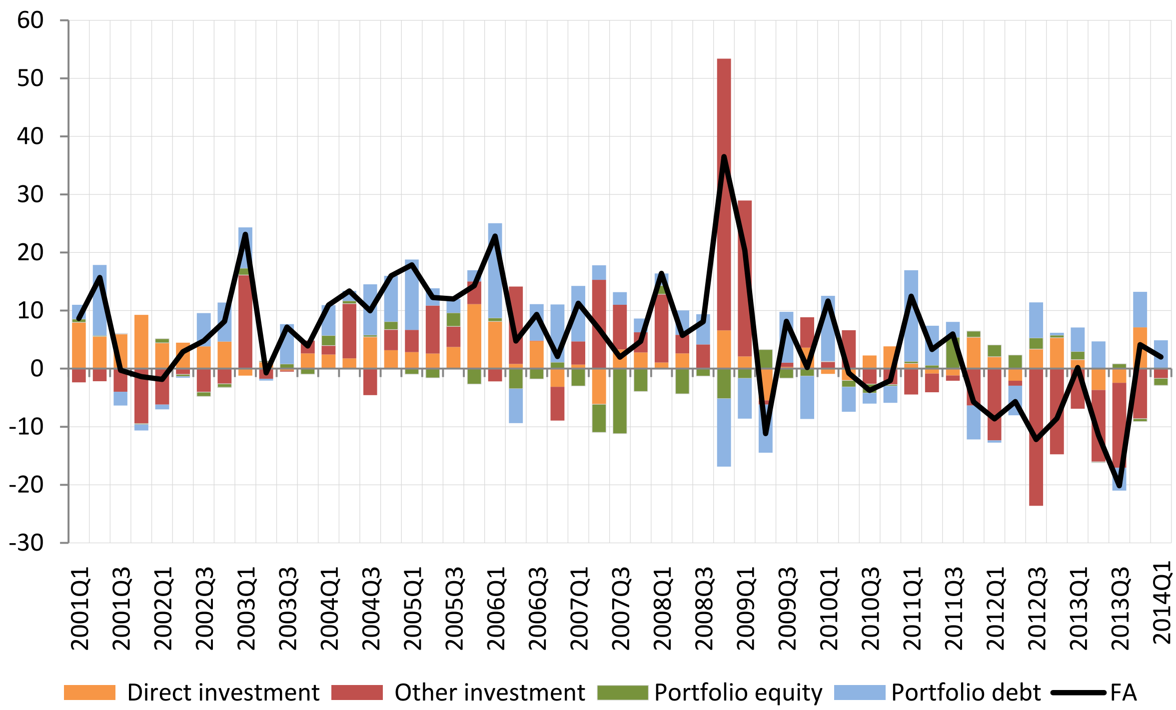
Finland - Financial Account net componets (%GDP)



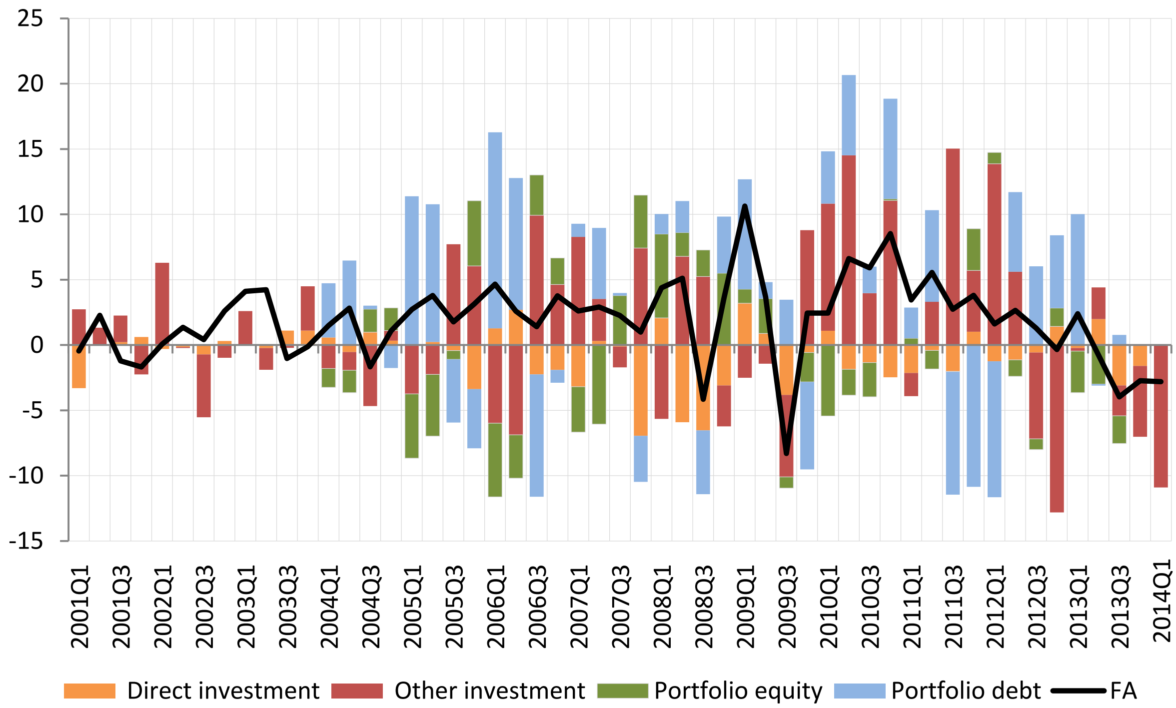

France - Financial Account net componets (%GDP)
30
20
10
0
-10
-20
-30
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

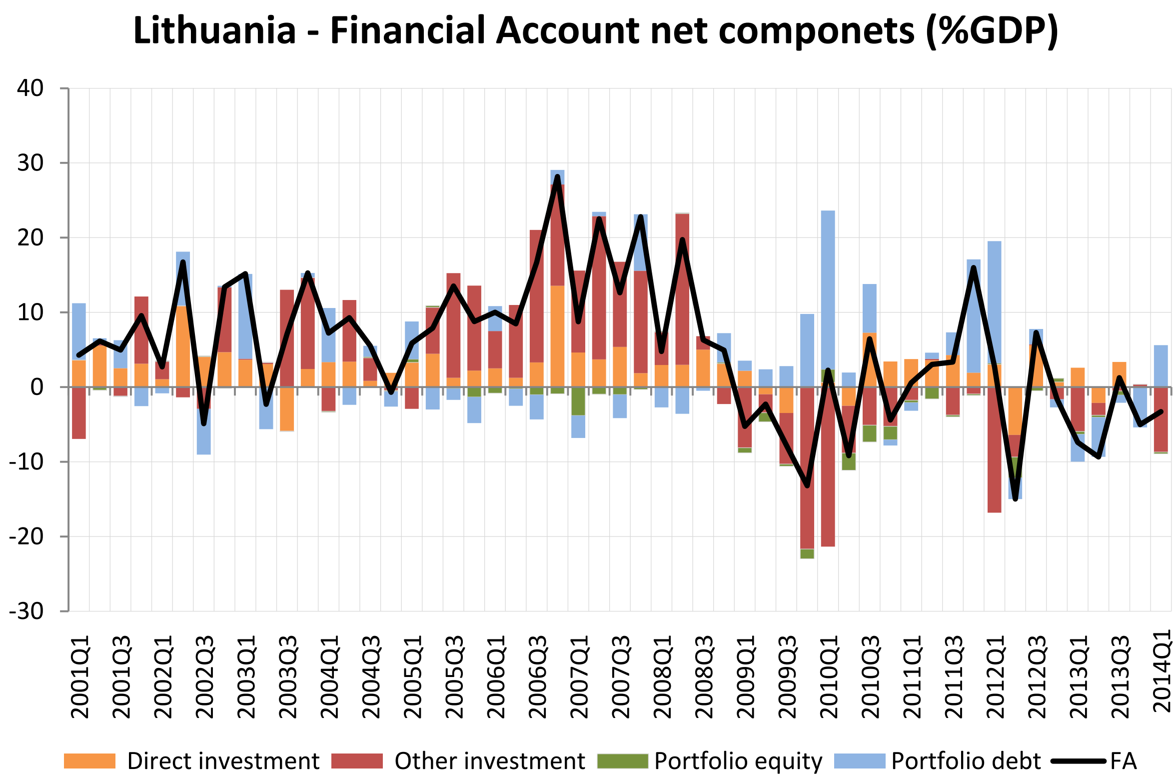

Croatia - Financial Account net componets (%GDP)
40
30
20
10
0
-10
-20
-30
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

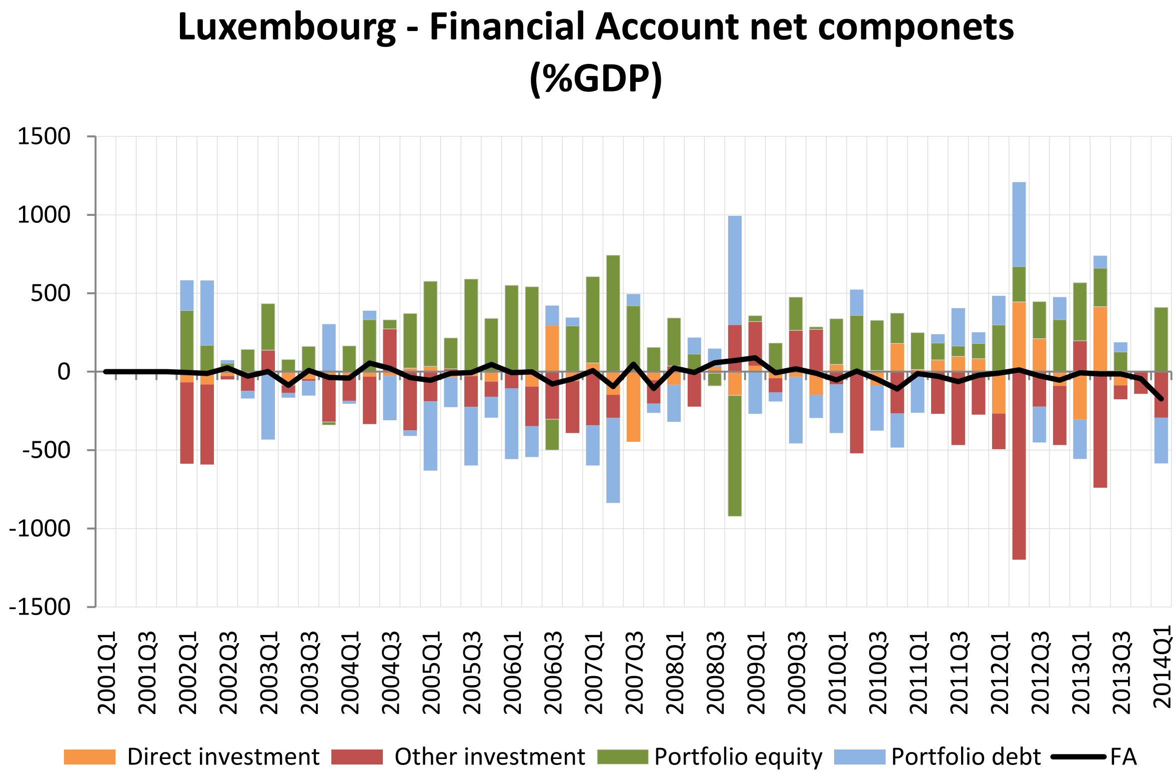
Hungary - Financial Account net componets (%GDP)

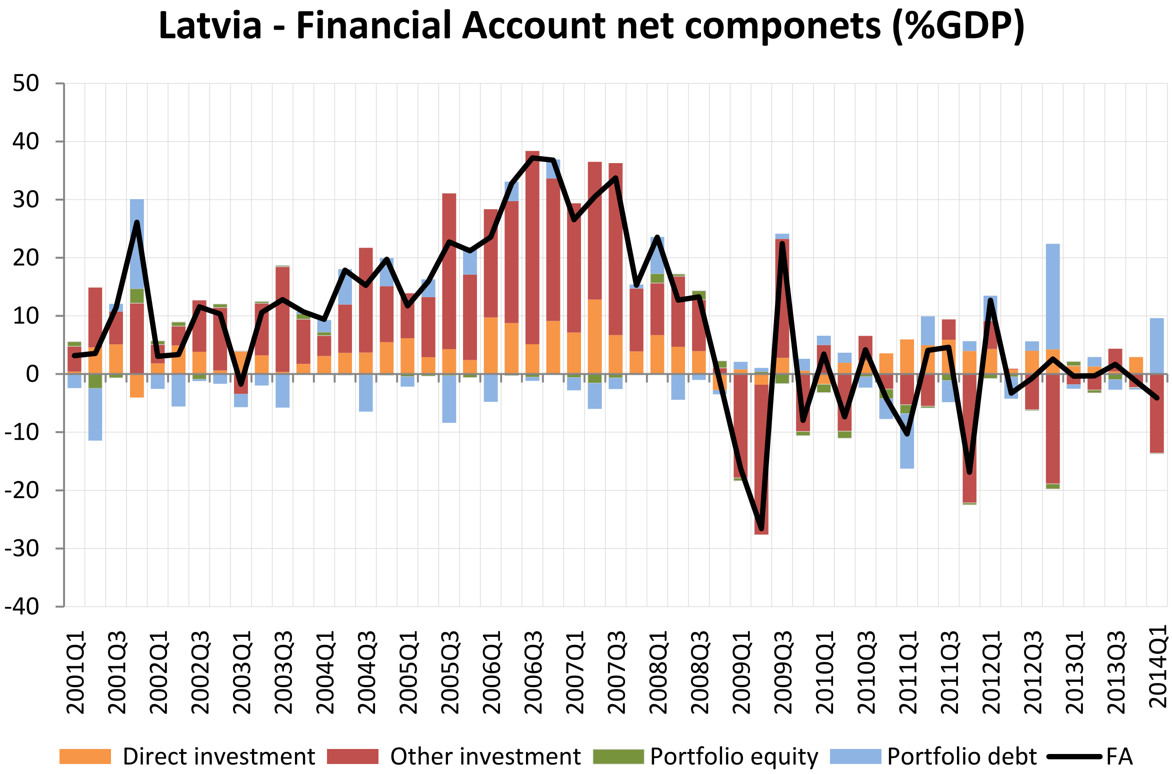


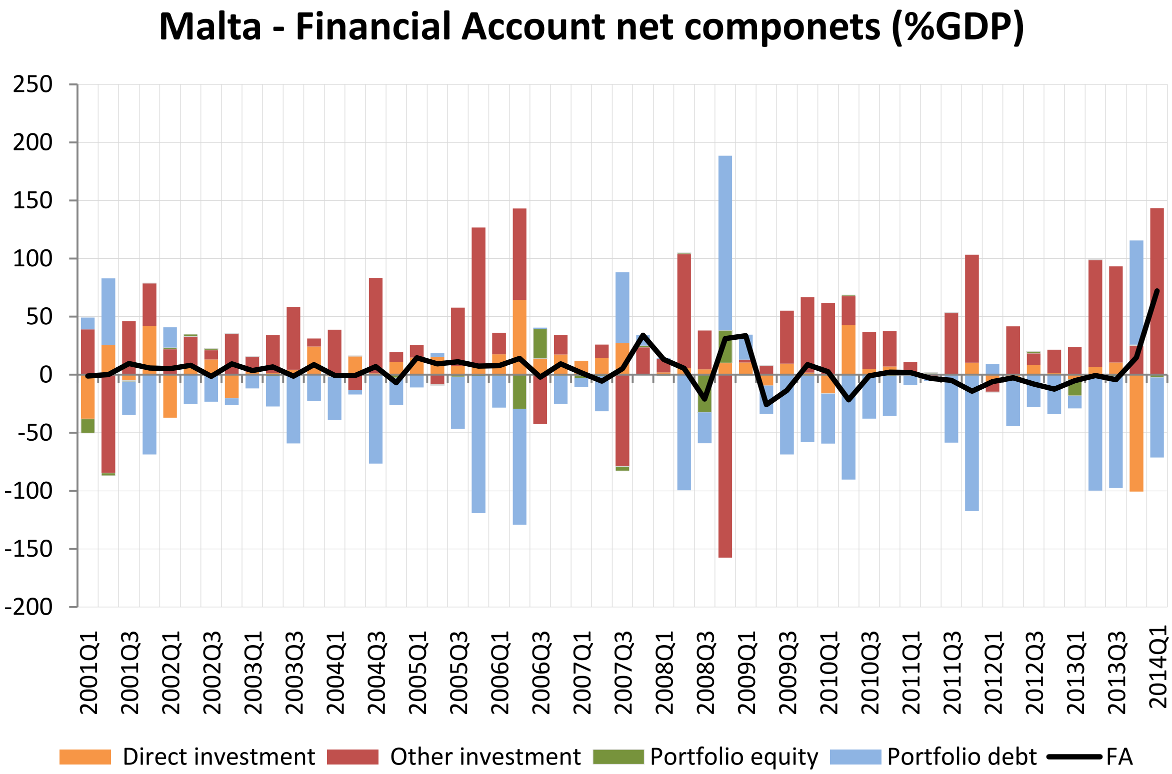
Italy - Financial Account net componets (%GDP)

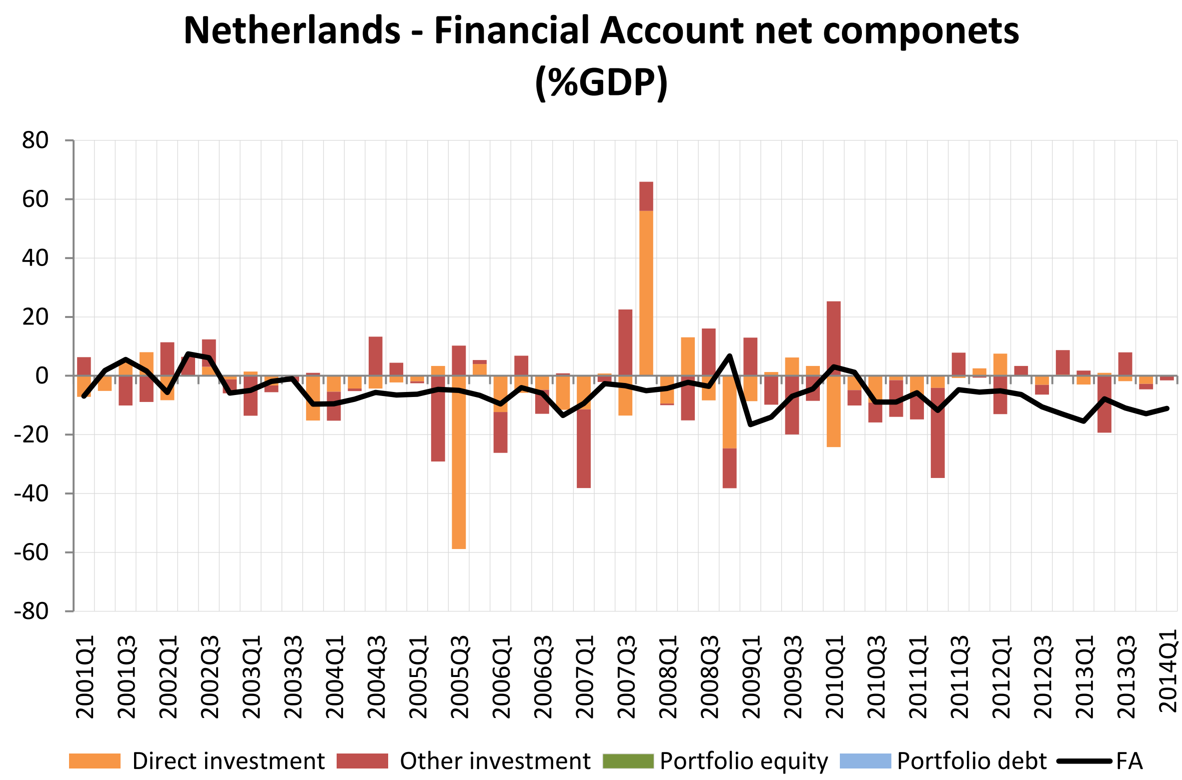


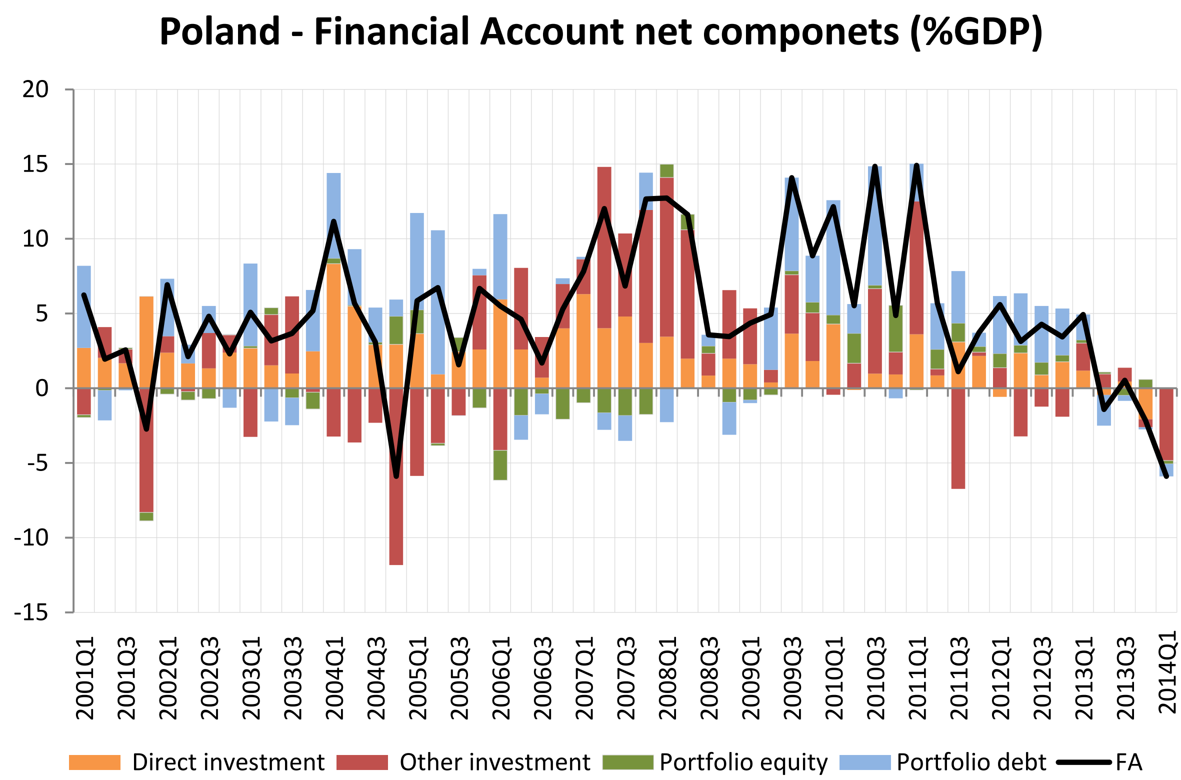

Lithuania - Financial Account net componets (%GDP)
40
30
20
10
0
-10
-20
-30
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

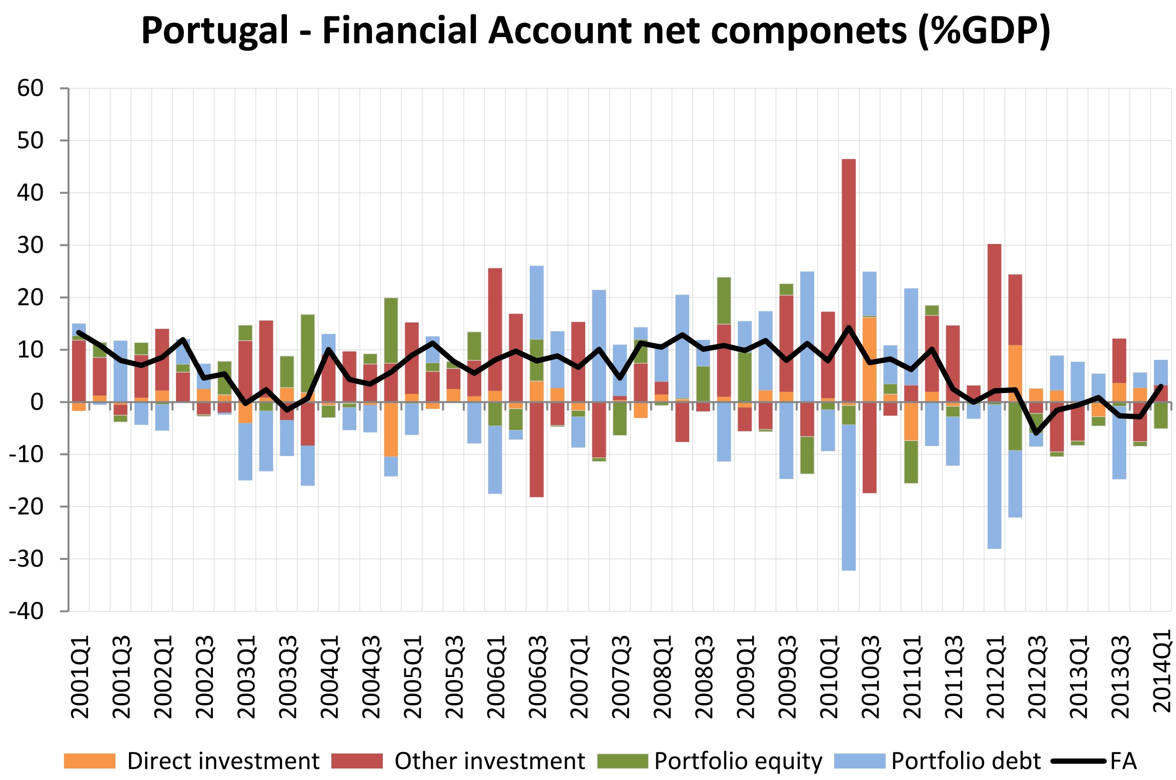

Luxembourg - Financial Account net componets (%GDP)
1500
1000
500
0
-500
-1000
-1500
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

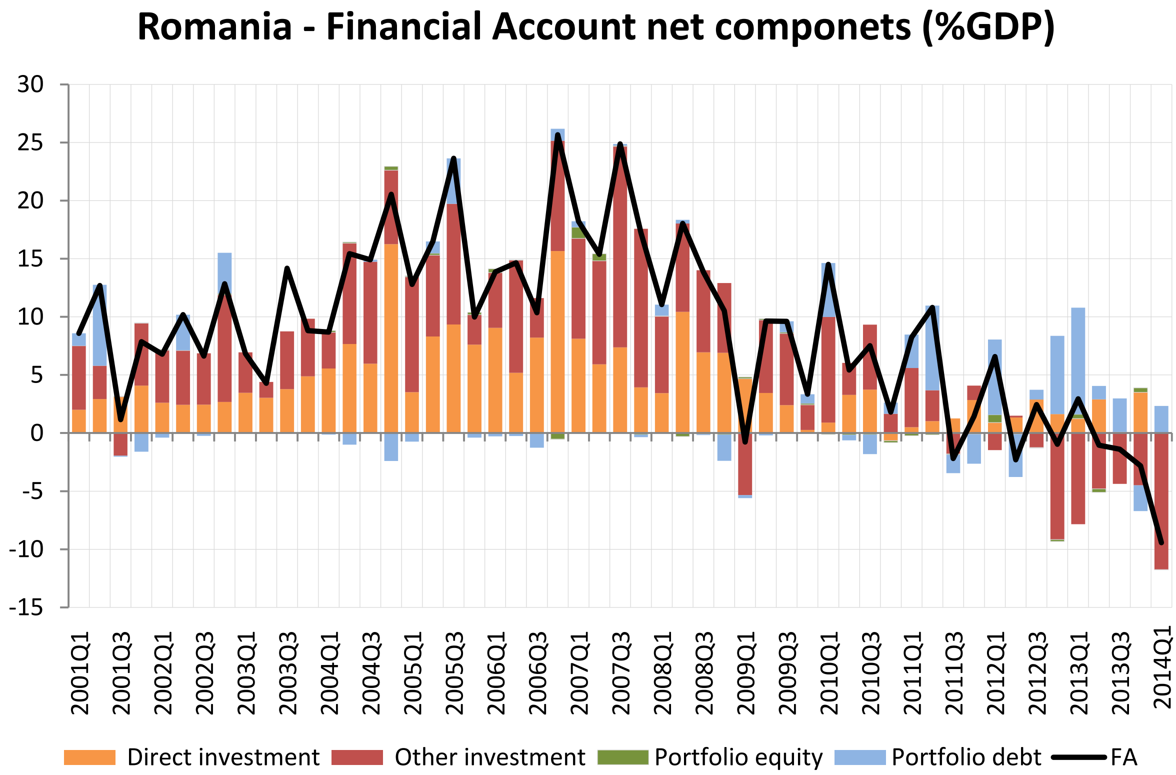

Latvia - Financial Account net componets (%GDP)
50
40
30
20
10
0
-10
-20
-30
-40
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

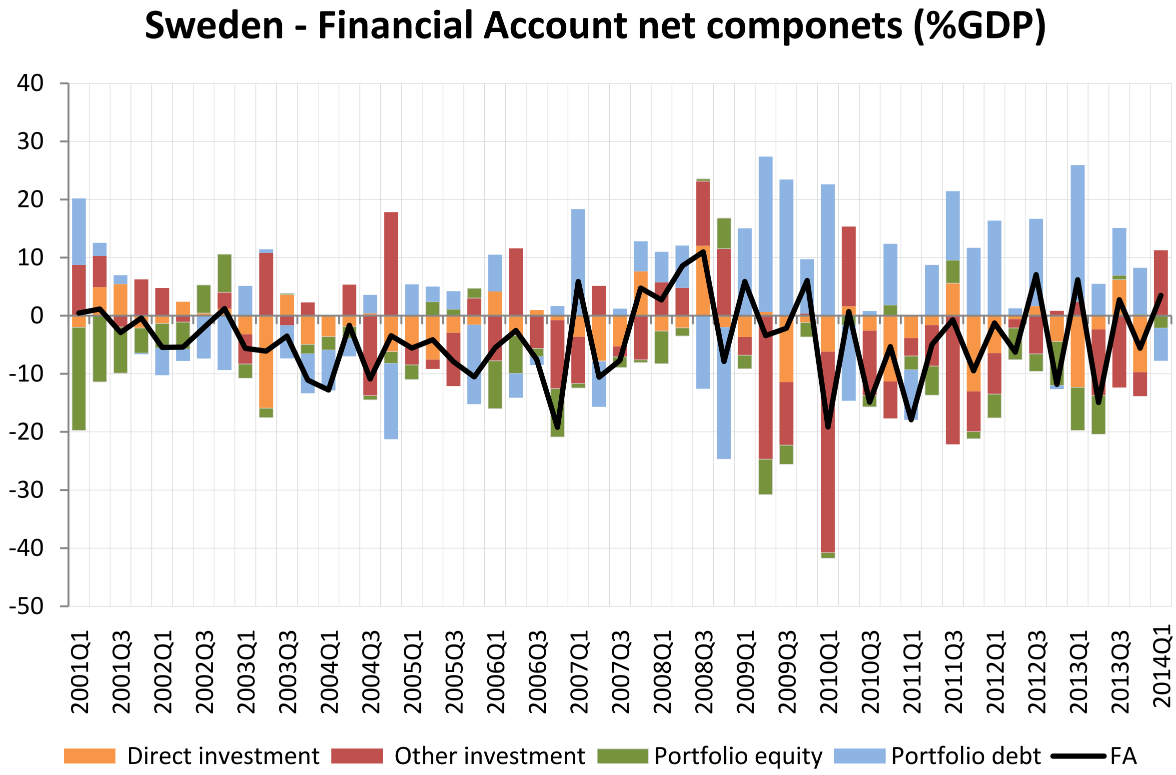

Malta - Financial Account net componets (%GDP)
250
200
150
100
50
0
-50
-100
-150
-200
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

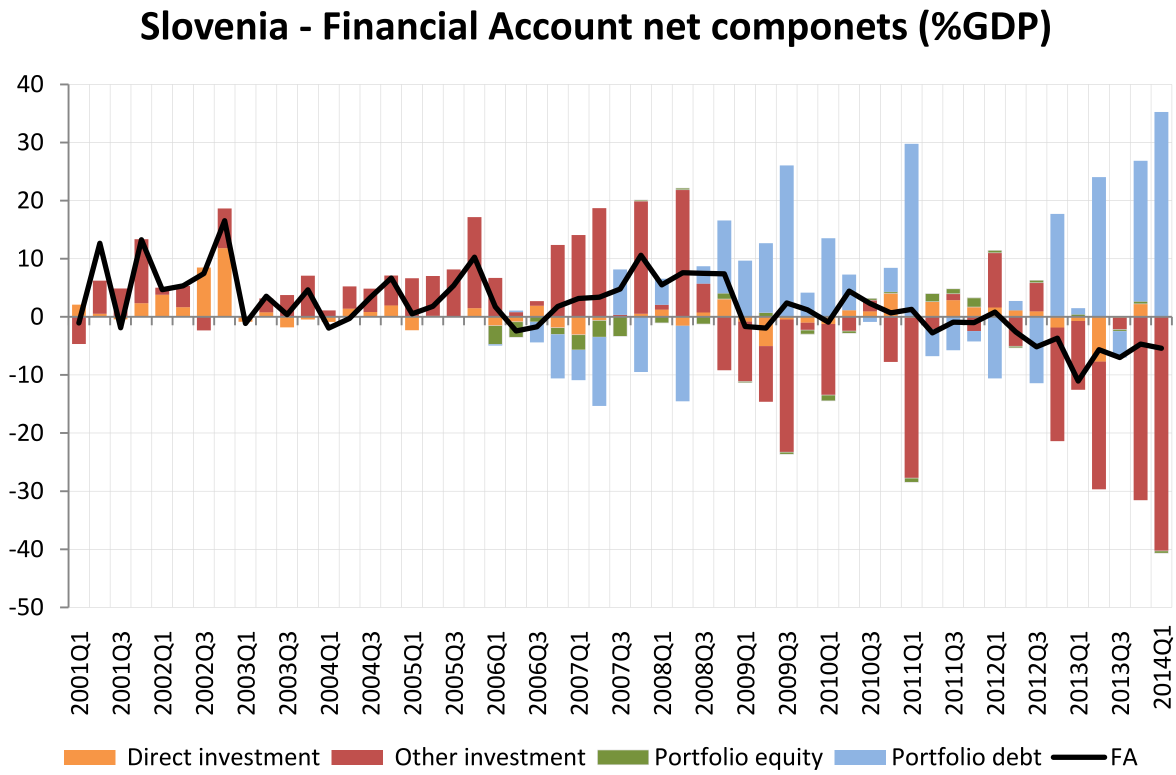

Netherlands - Financial Account net componets (%GDP)
80
60
40
20
0
-20
-40
-60
-80
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA


Poland - Financial Account net componets (%GDP)
20
15
10
5
0
-5
-10
-15
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

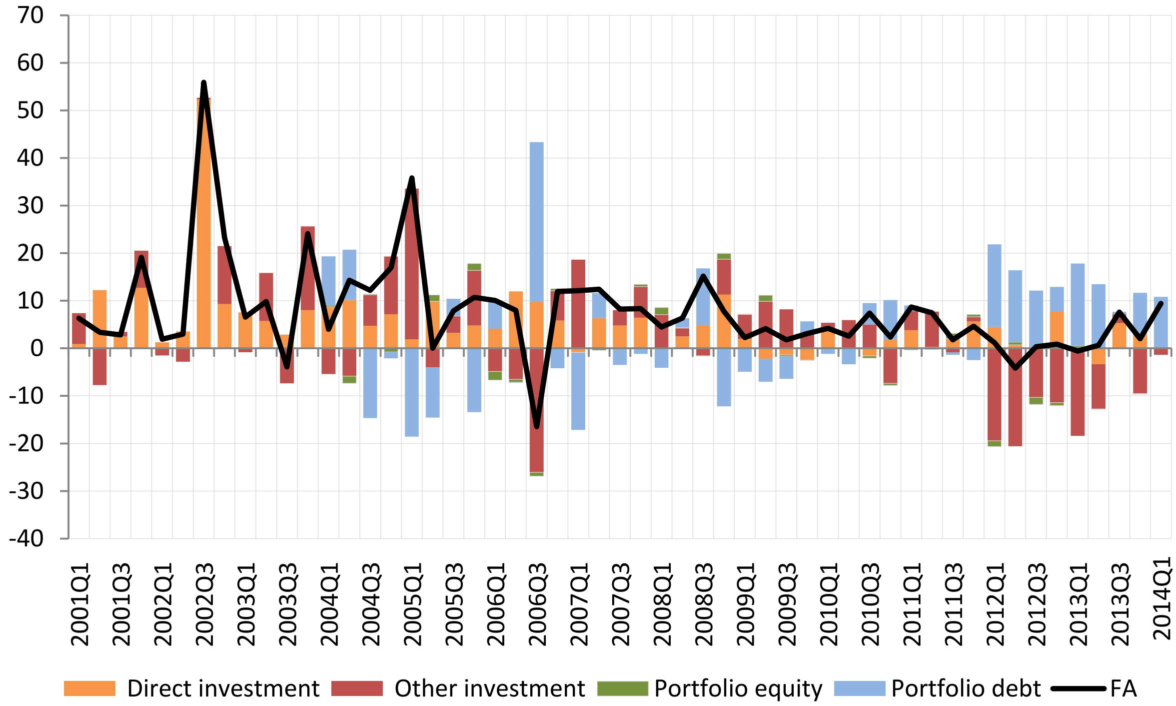

Portugal - Financial Account net componets (%GDP)
60
50
40
30
20
10
0
-10
-20
-30
-40
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA


Romania - Financial Account net componets (%GDP)
30
25
20
15
10
5
0
-5
-10
-15
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

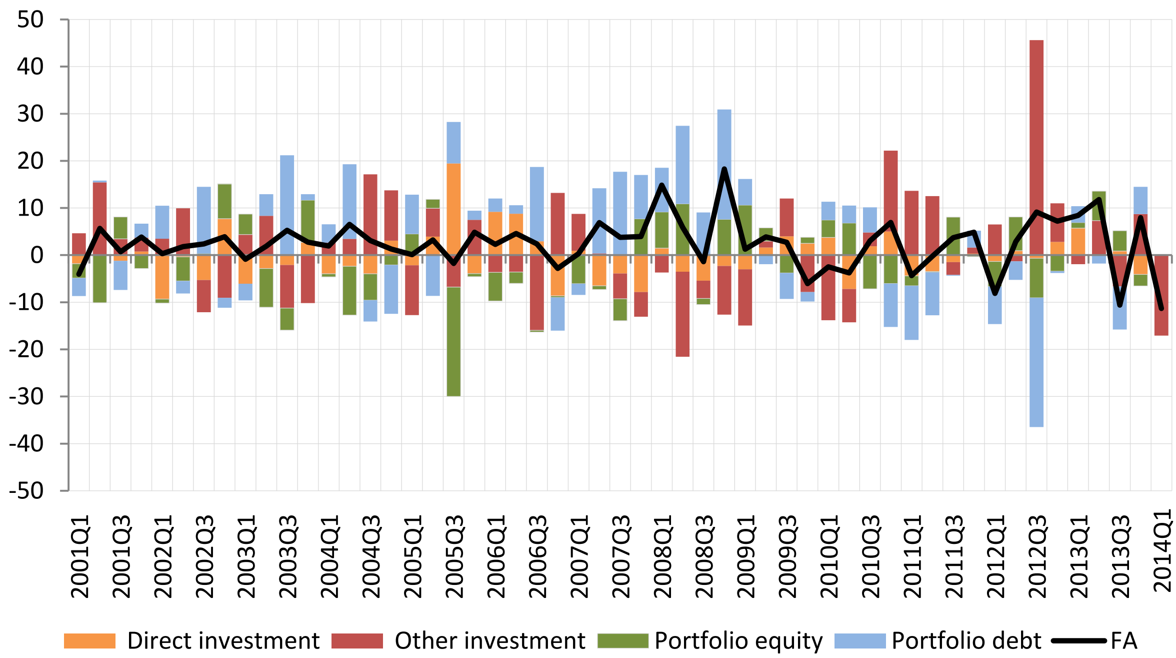

Sweden - Financial Account net componets (%GDP)
40
30
20
10
0
-10
-20
-30
-40
-50
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA


Slovenia - Financial Account net componets (%GDP)
40
30
20
10
0
-10
-20
-30
-40
-50
2001Q1
2001Q3
2002Q1
2002Q3
2003Q1
2003Q3
2004Q1
2004Q3
2005Q1
2005Q3
2006Q1
2006Q3
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
2014Q1
Direct investment
Other investment
Portfolio equity
Portfolio debt
FA

Slovakia - Financial Account net componets (%GDP)



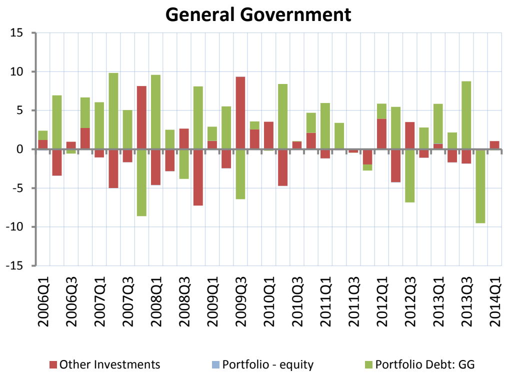
United Kingdom - Financial Account net componets (%GDP)

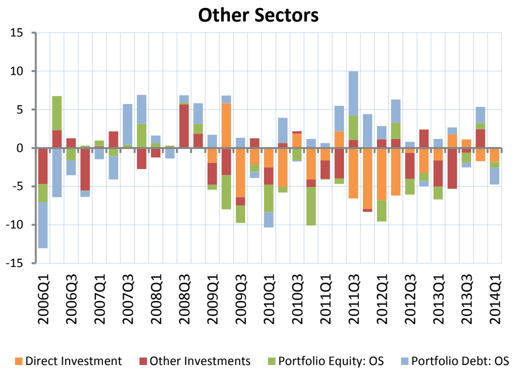


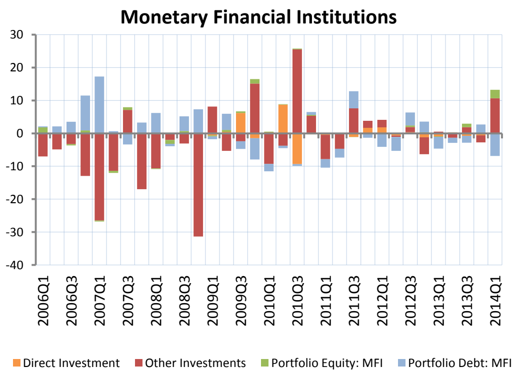
7.2 Appendix B to Section 4: financial accounts by sector of each EU country

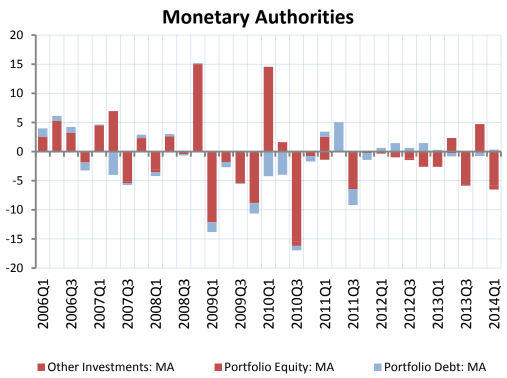
Austria (in % of GDP)

Flows

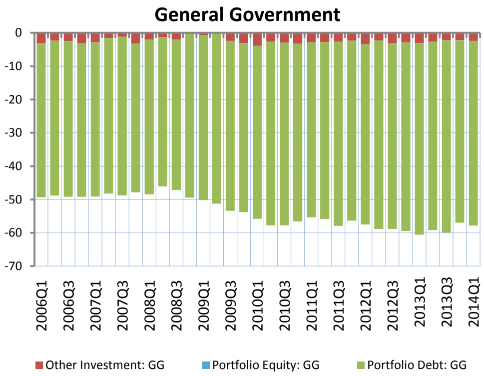


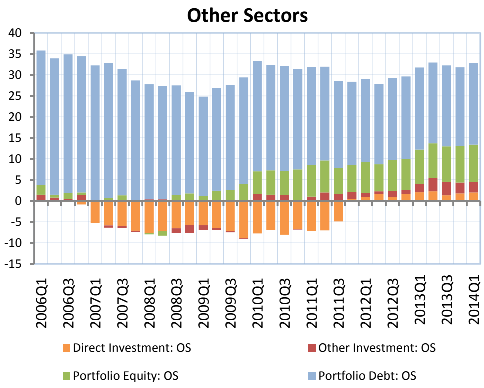


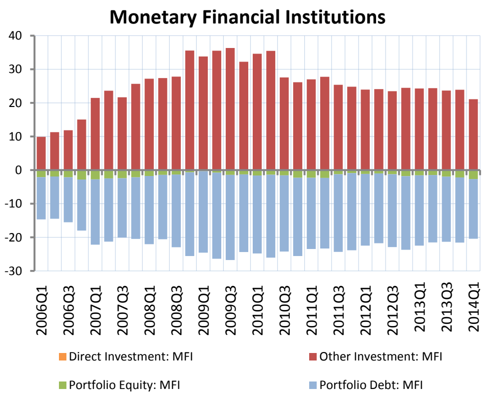


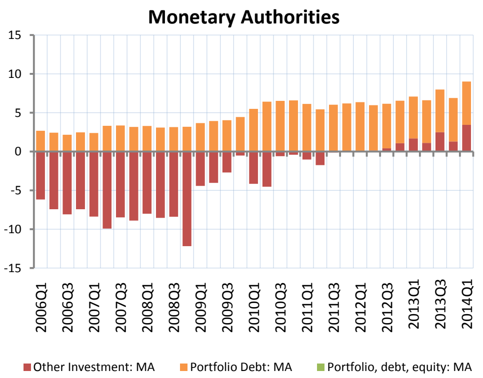


Stocks



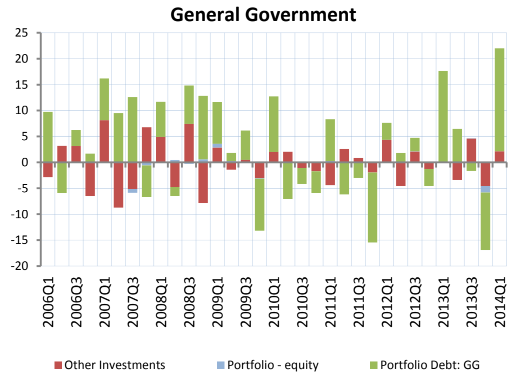


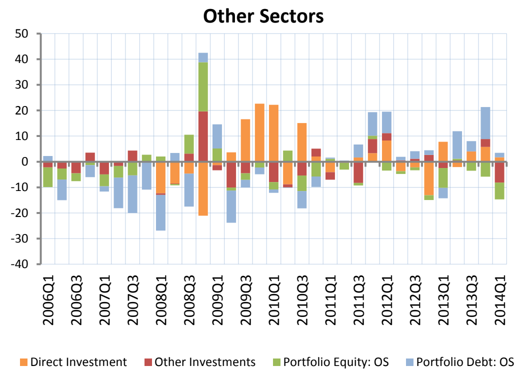


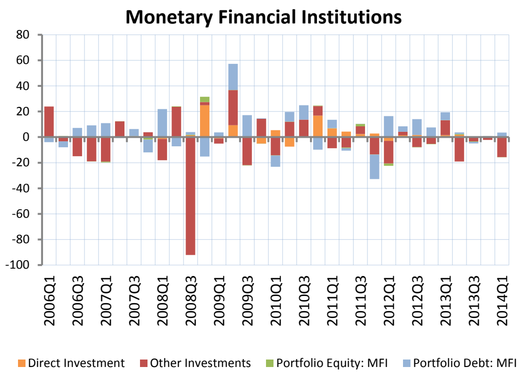


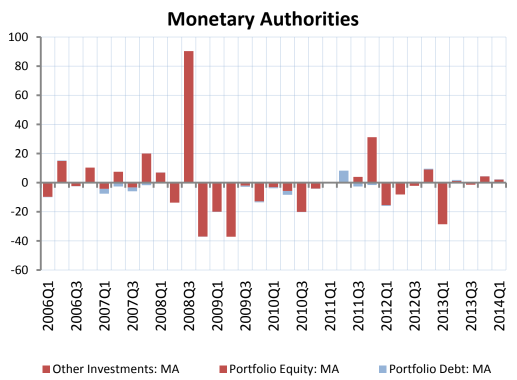
Belgium (in % of GDP)

Flows

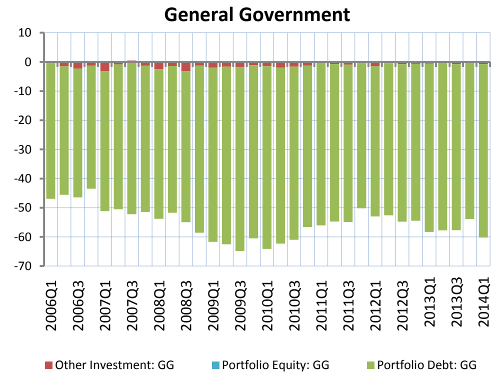


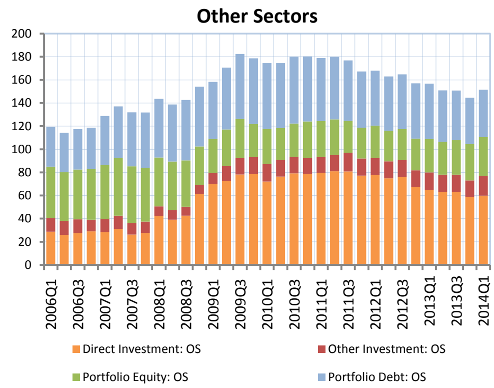


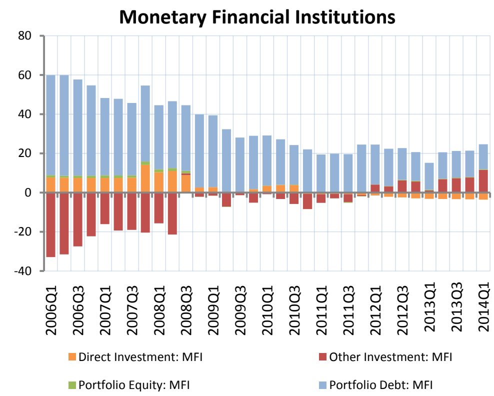


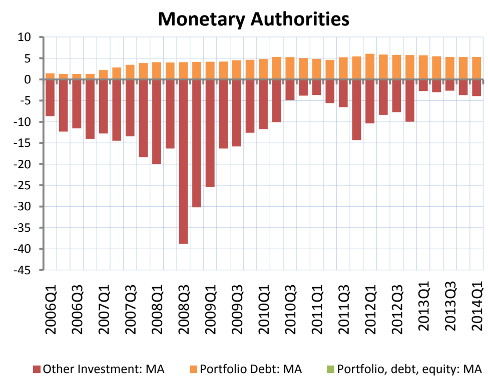


Stocks



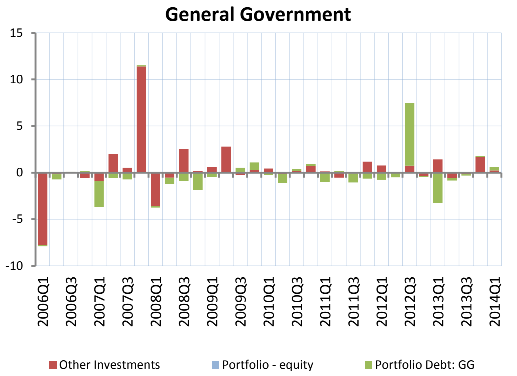


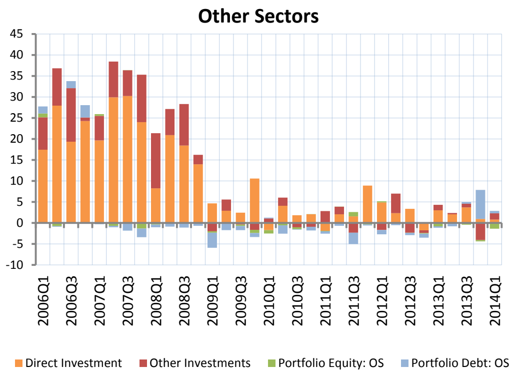


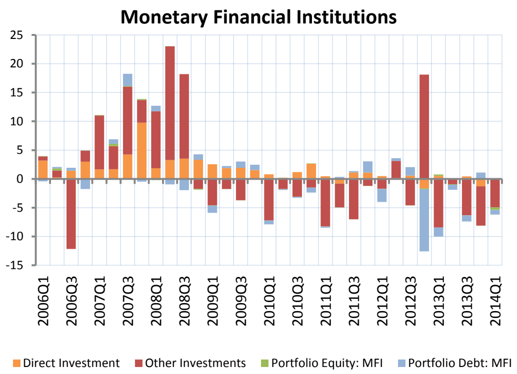


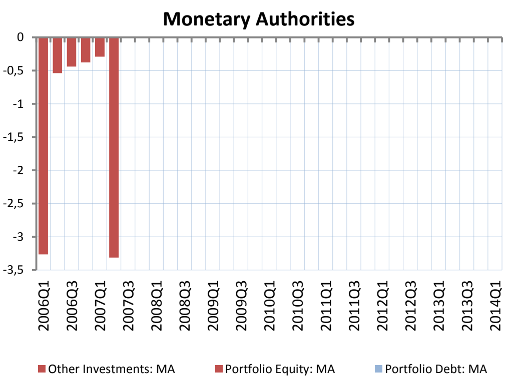
Bulgaria (in % of GDP)

Flows

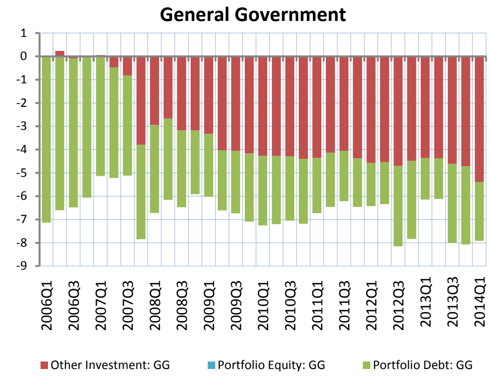


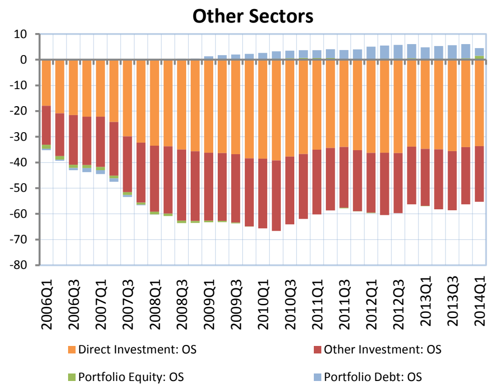


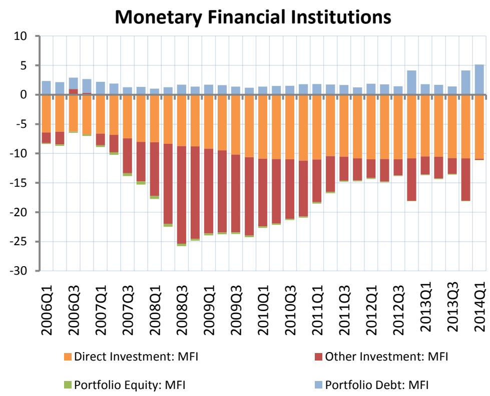


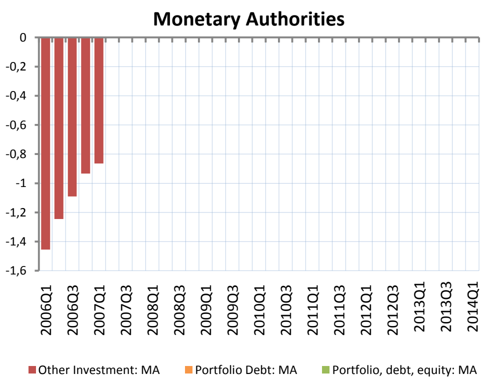


Stocks





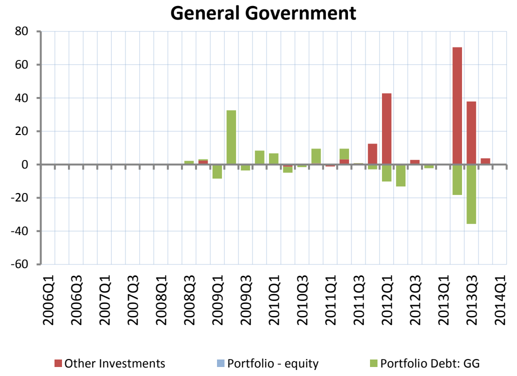


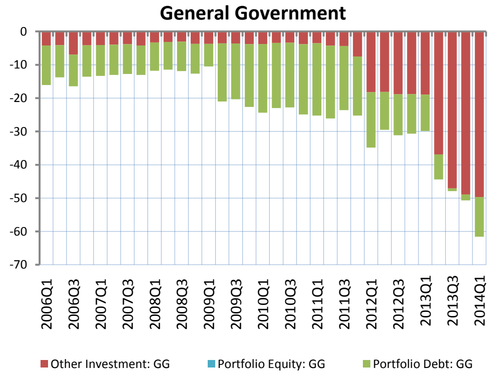


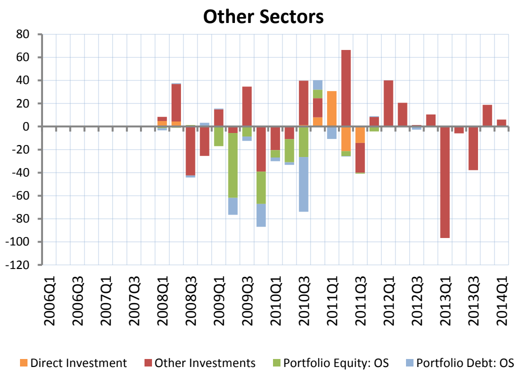
Cyprus (in % of GDP)

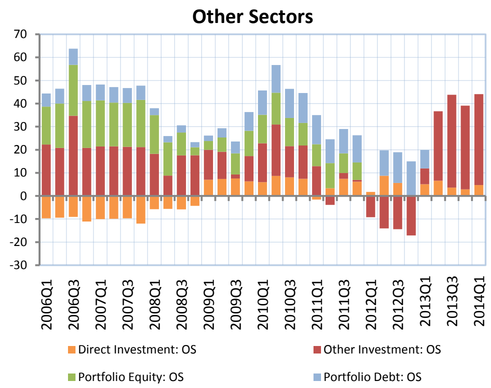
Flows

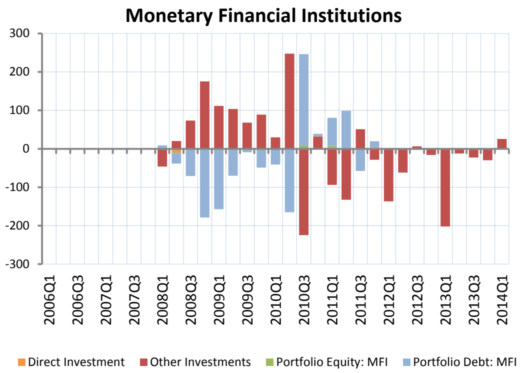
Stocks

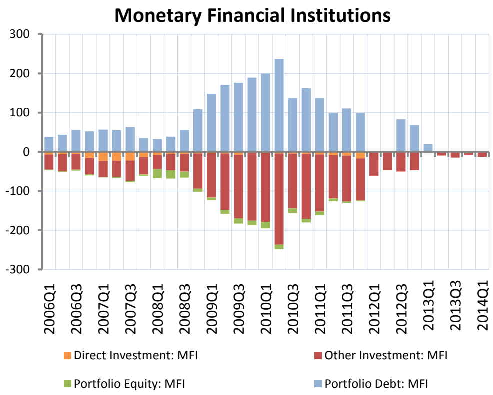


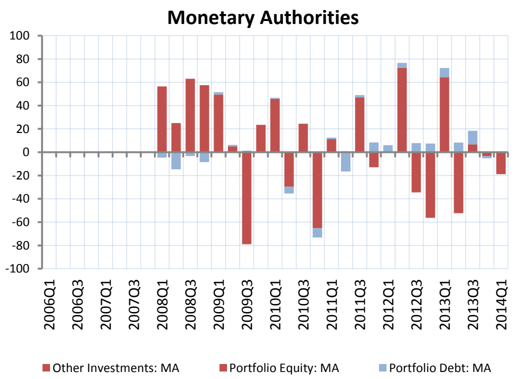


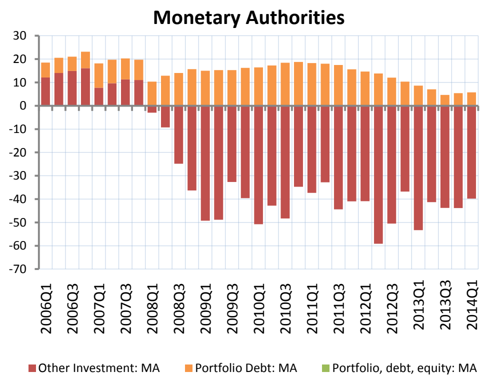








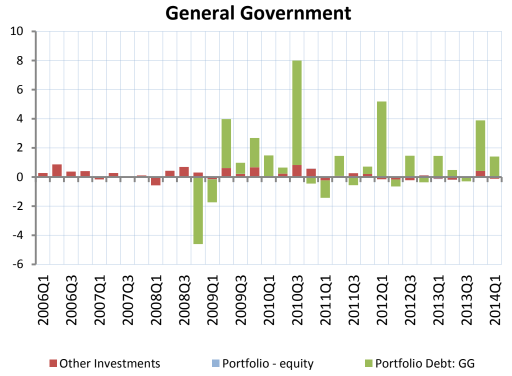


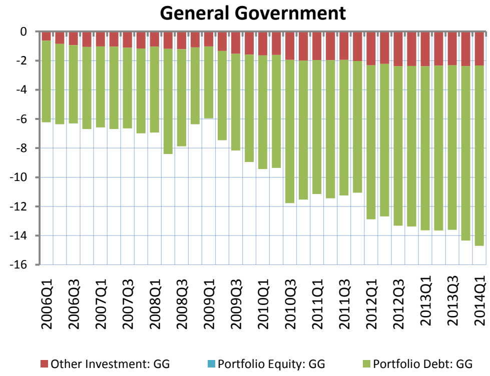


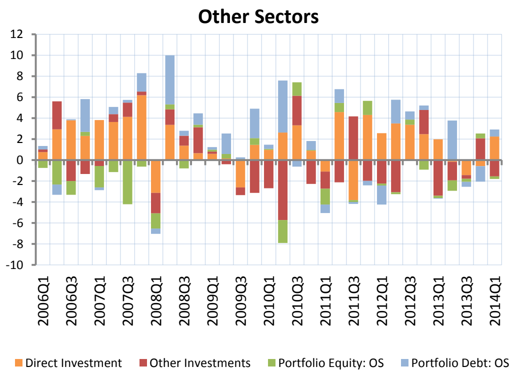
Czech Republic (in % of GDP)

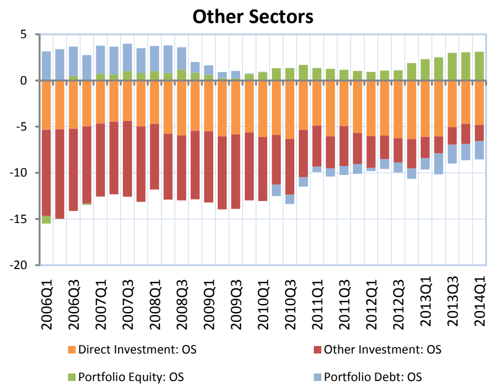
Flows

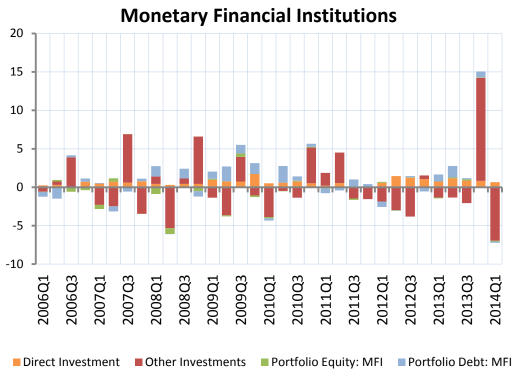
Stocks

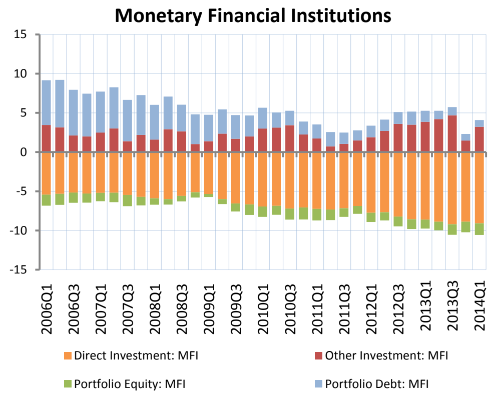


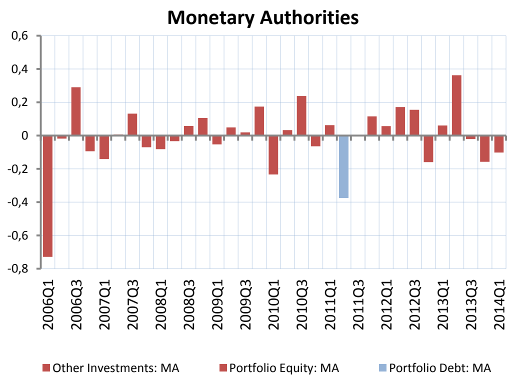


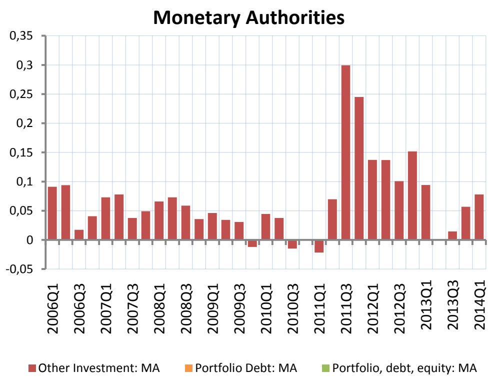








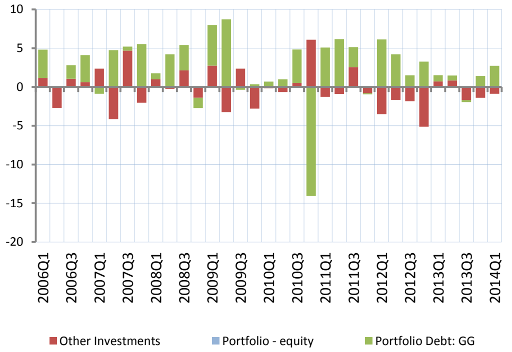




Germany (in % of GDP)

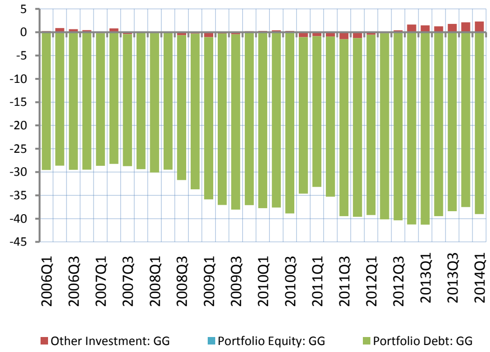
Flows

General Government

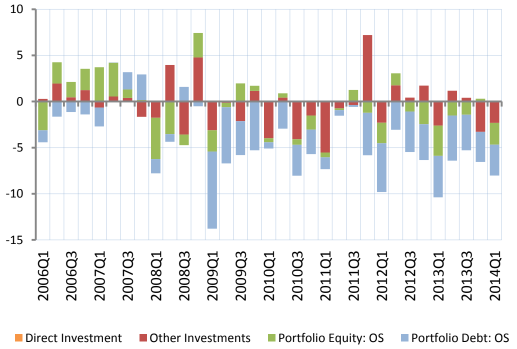


Stocks

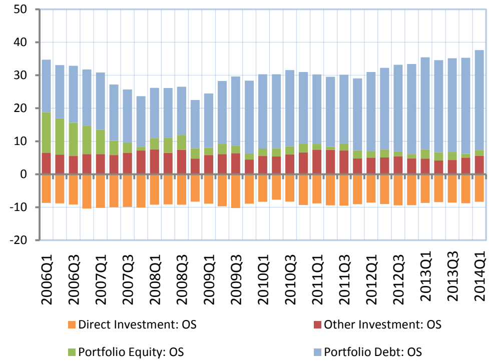
General Government



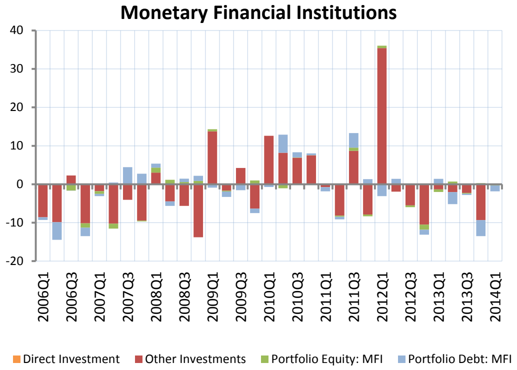
Other Sectors



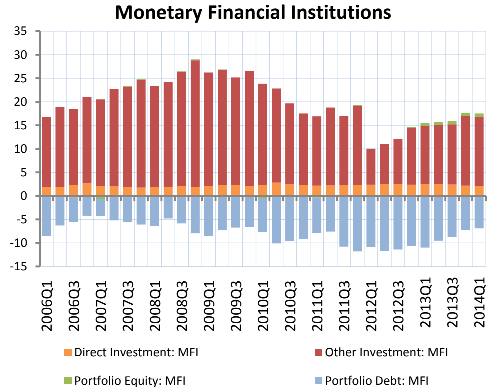
Other Sectors



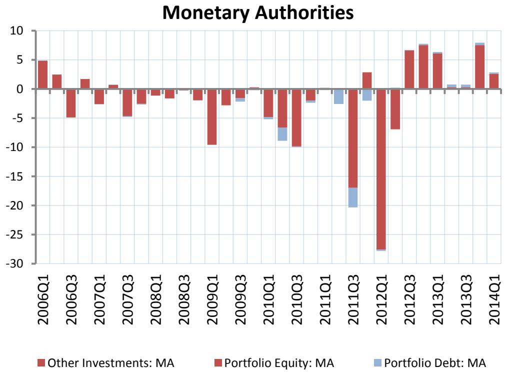
Monetary Financial Institutions



Monetary Financial Institutions



Monetary Authorities



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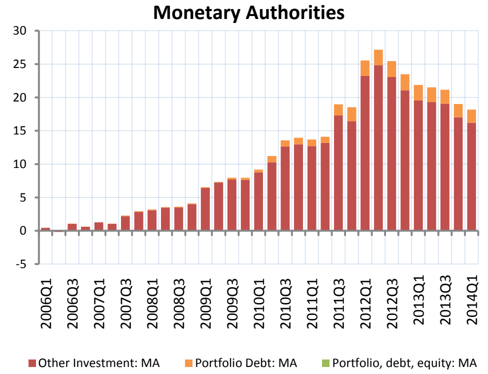
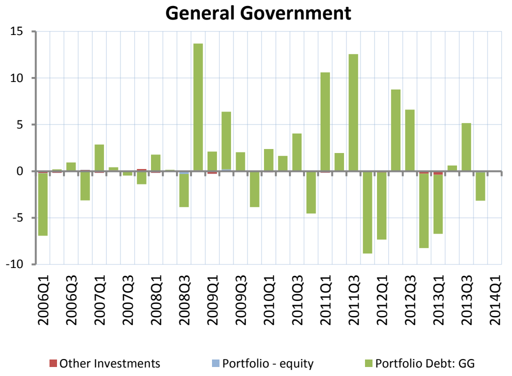
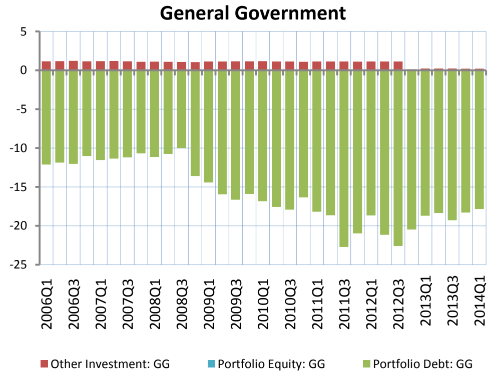


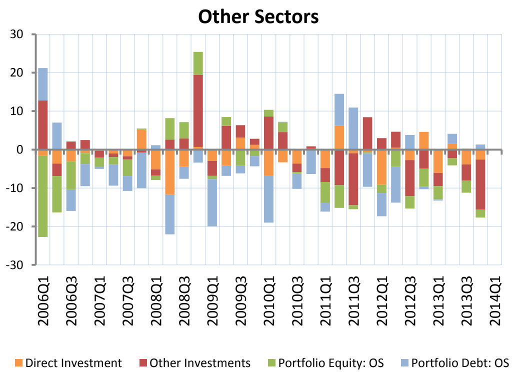
Denmark (in % of GDP)

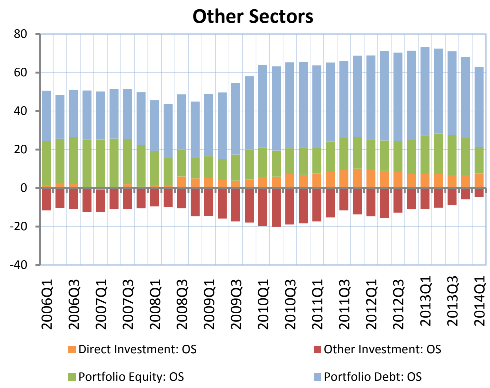
Flows

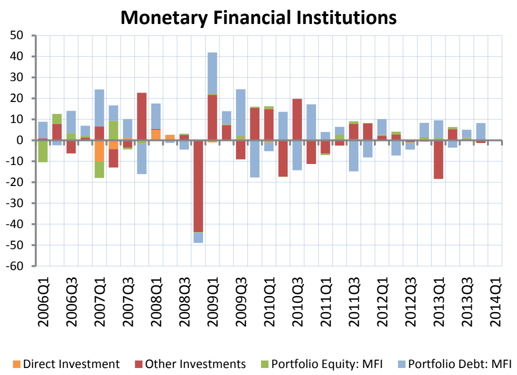
Stocks

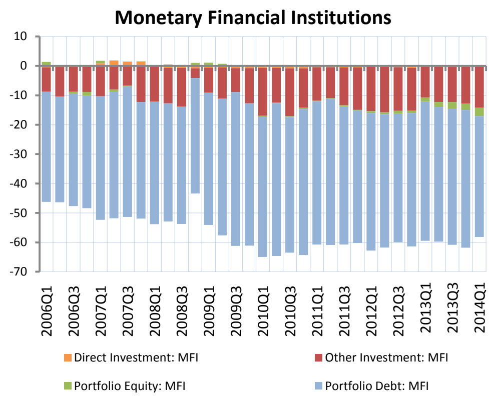


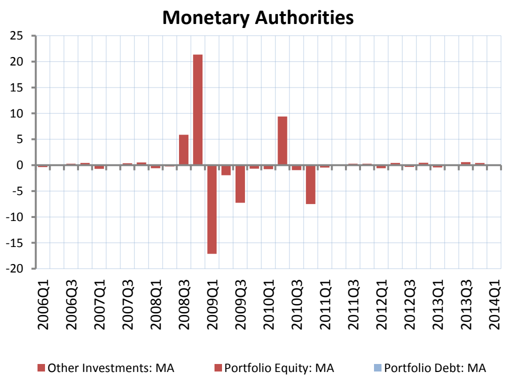


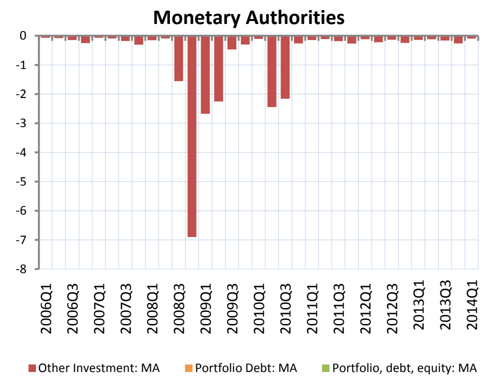






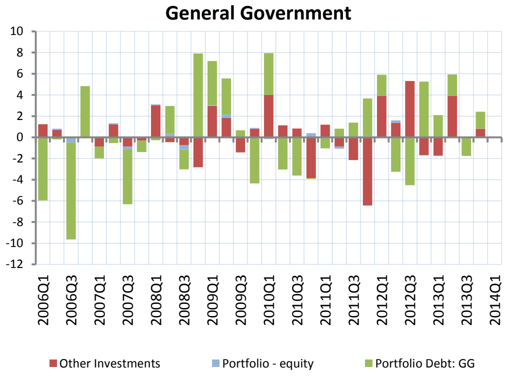


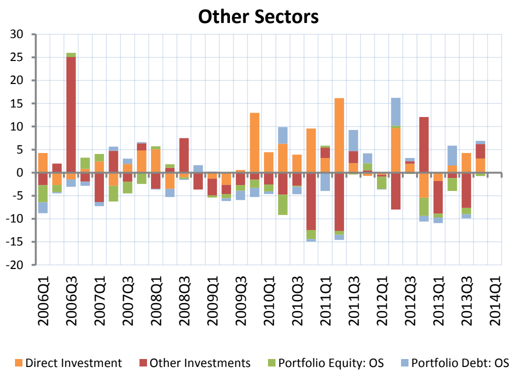


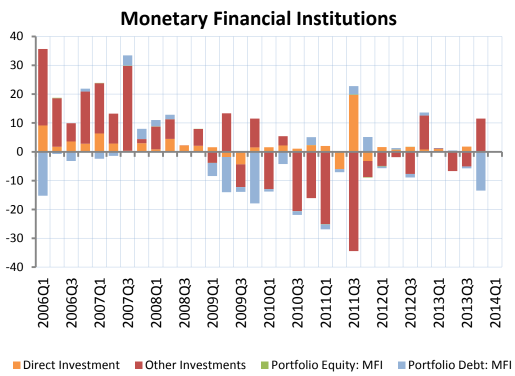


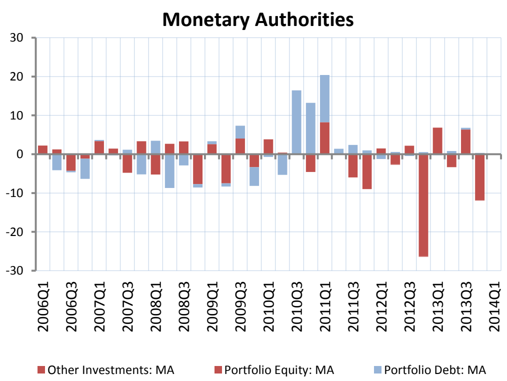
Estonia (in % of GDP)

Flows

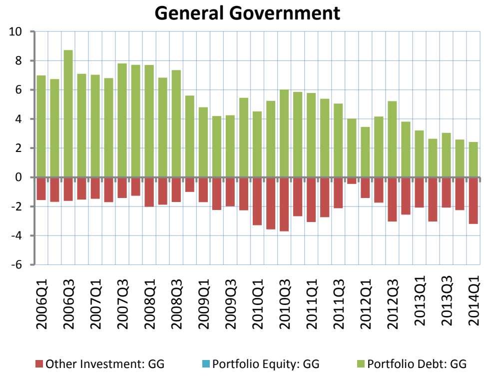


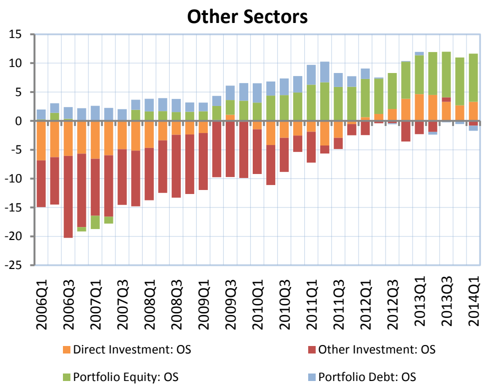


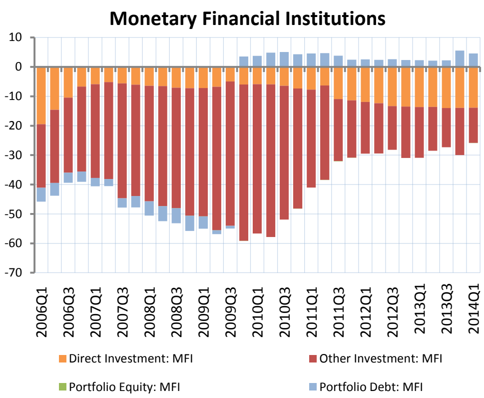


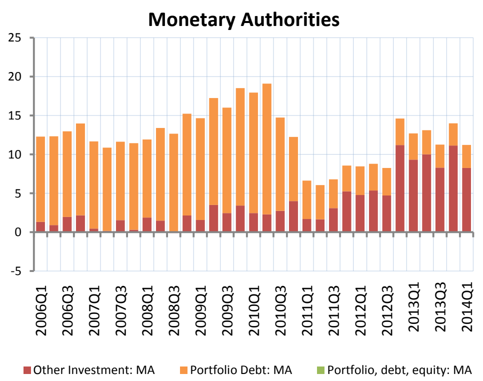


Stocks



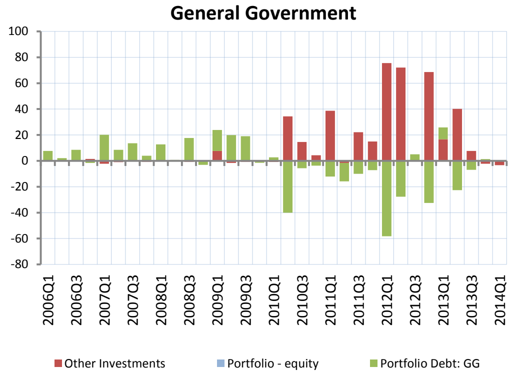


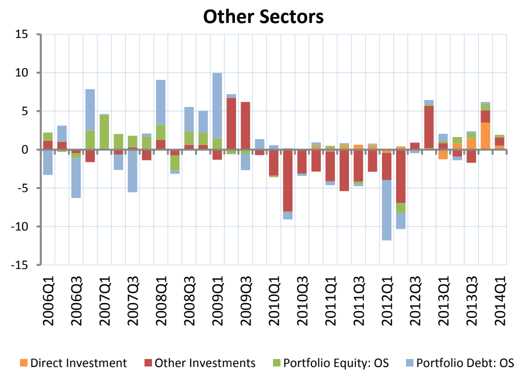


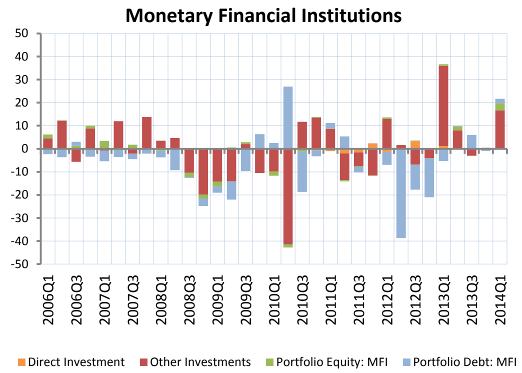


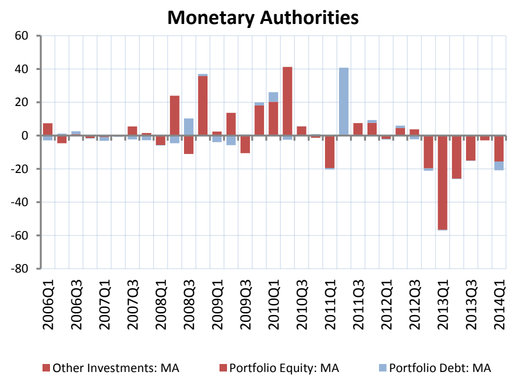
Greece (in % of GDP)

Flows









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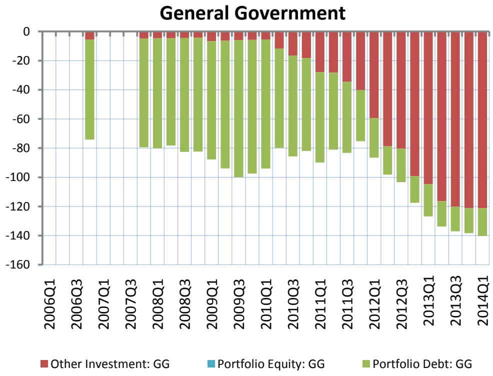
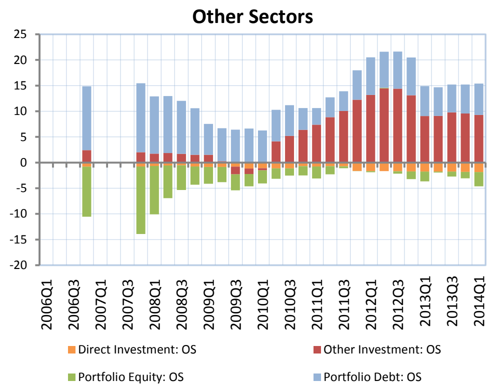
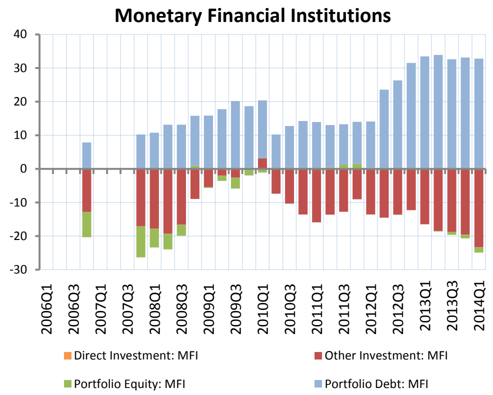
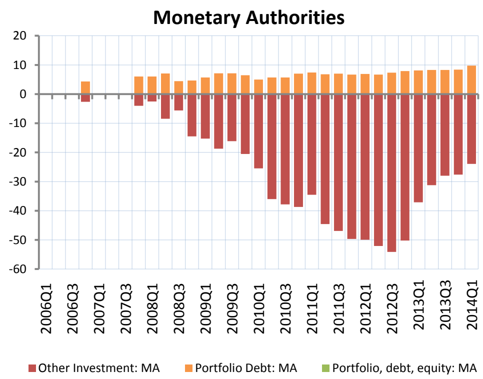


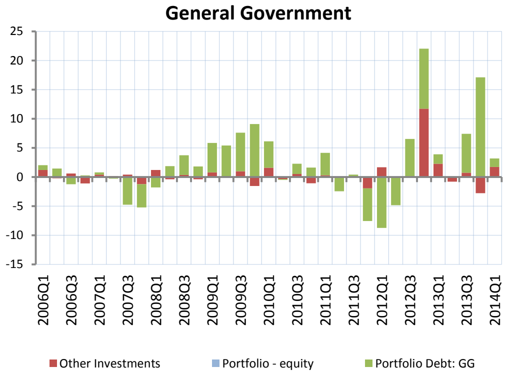


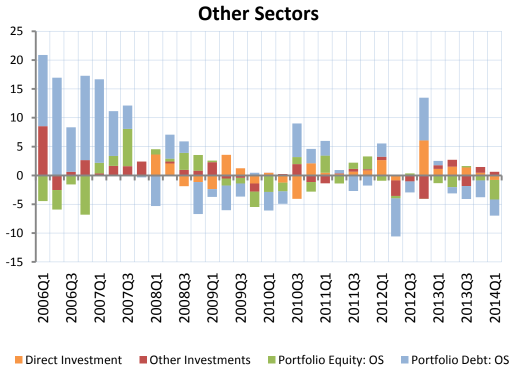


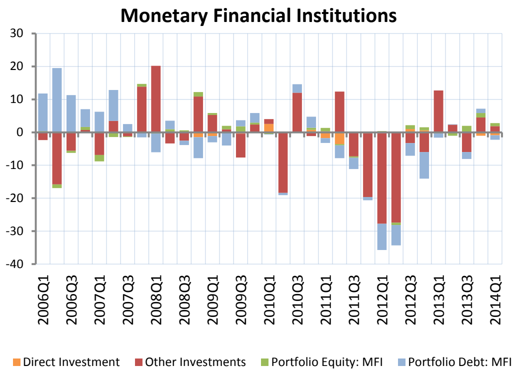


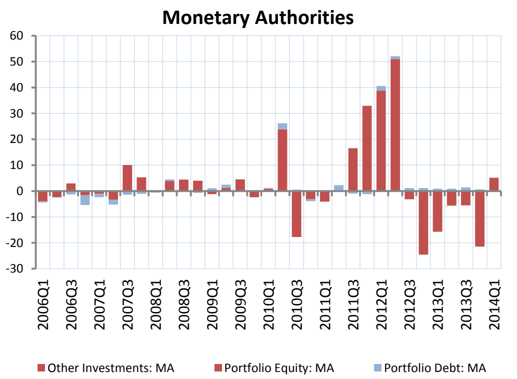
Spain (in % of GDP)

Flows

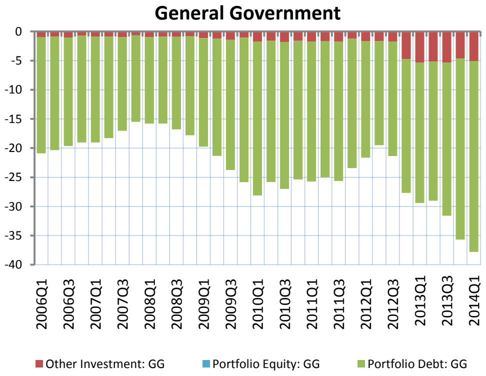


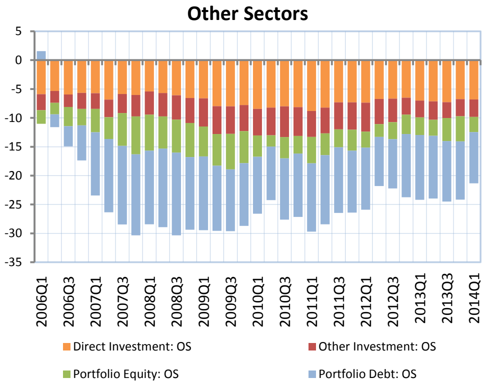


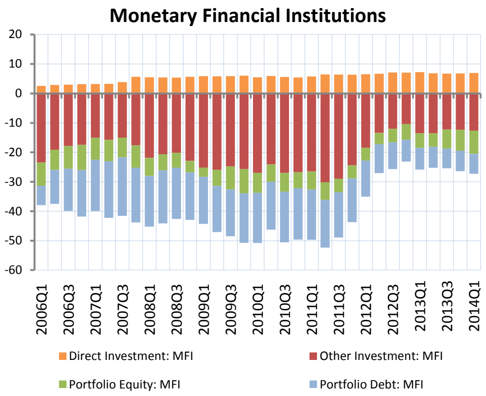


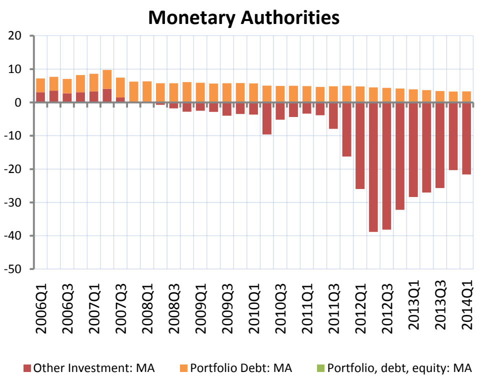


Stocks



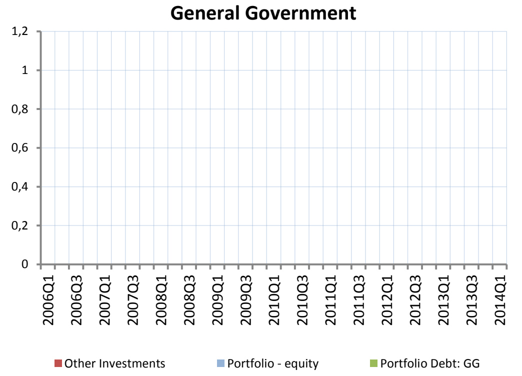


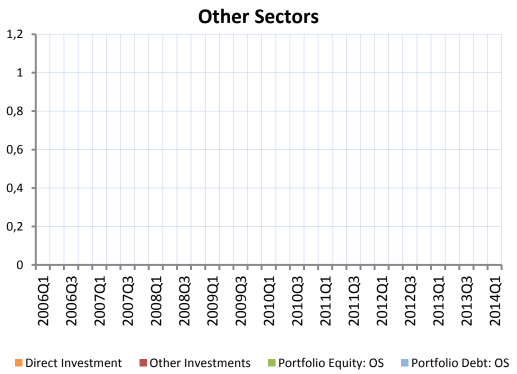


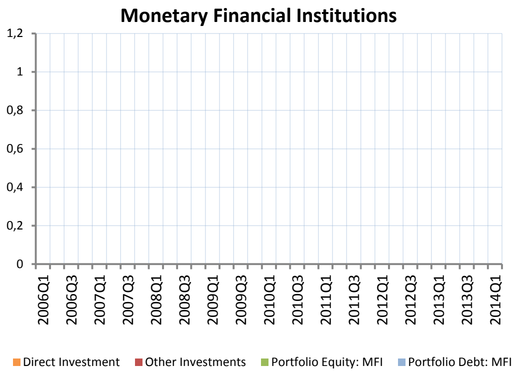


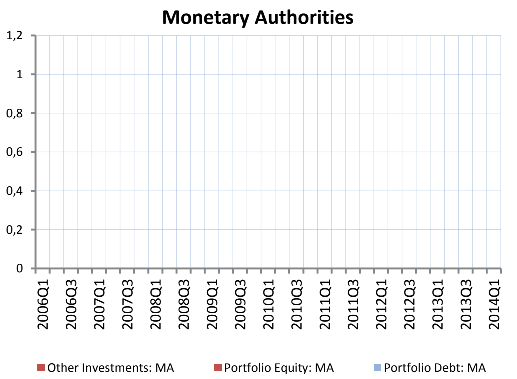
Ireland (in % of GDP)

Flows

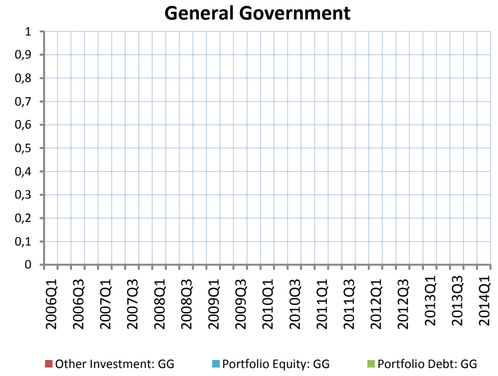


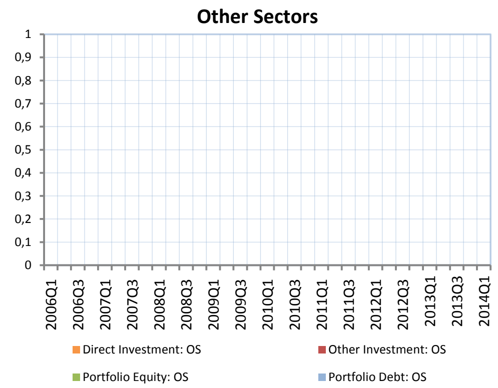


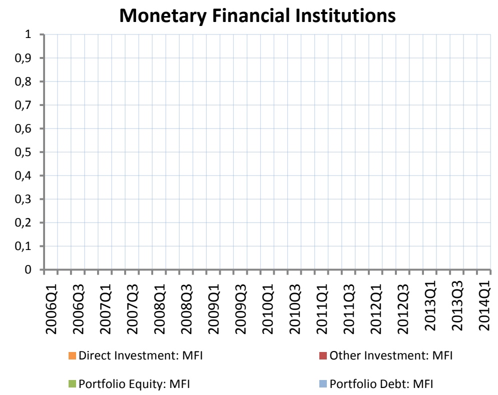


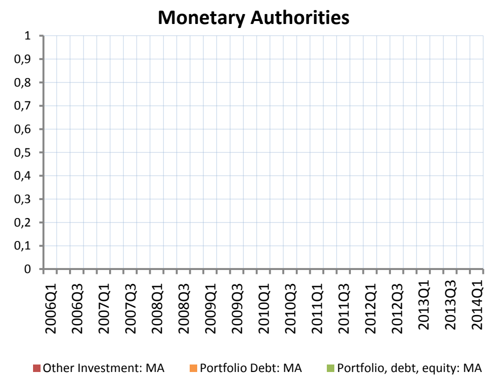


Stocks





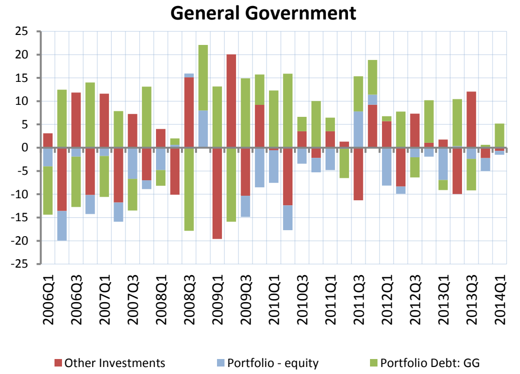


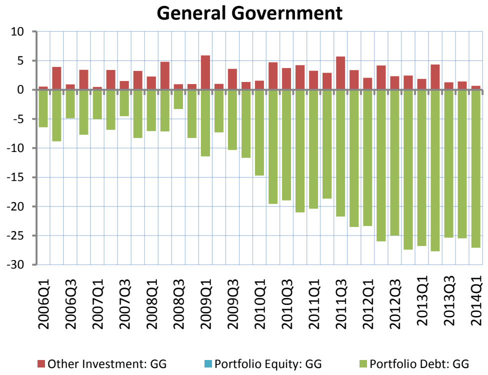


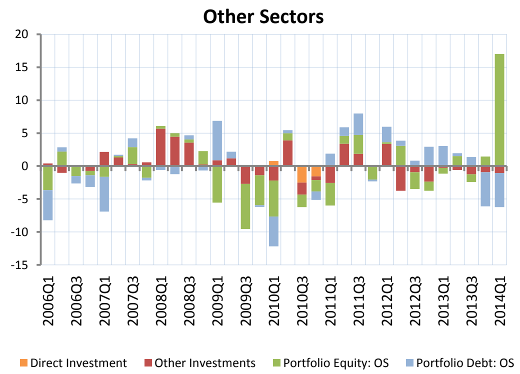
Finland (in % of GDP)

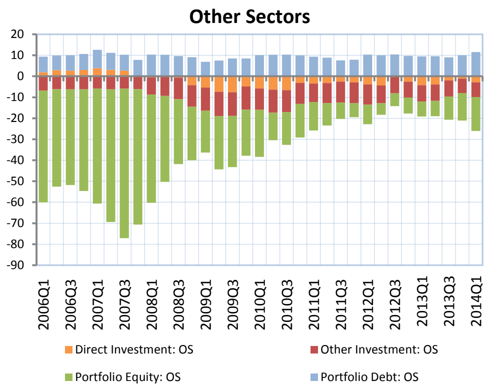
Flows

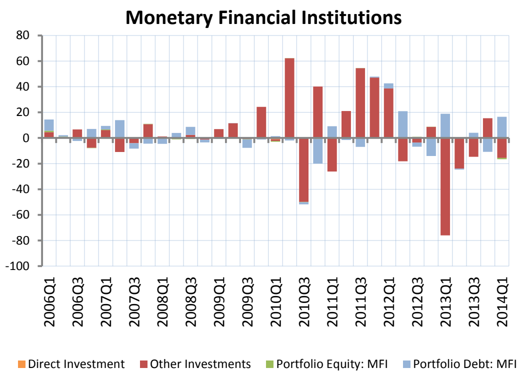
Stocks

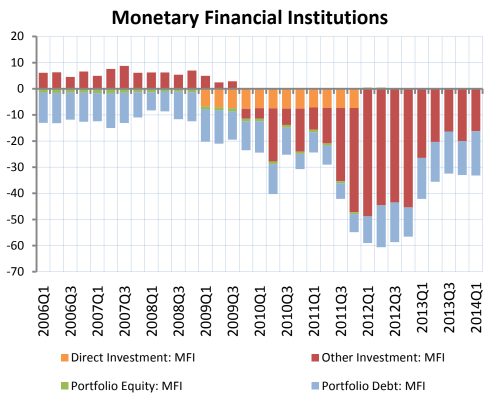


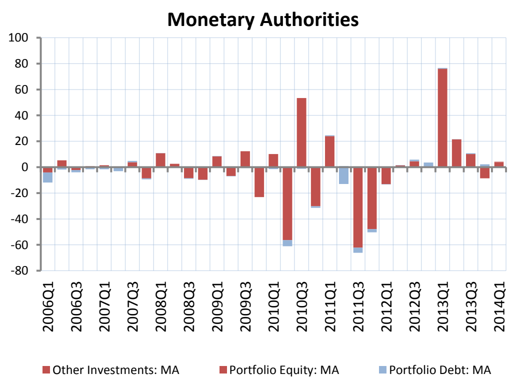


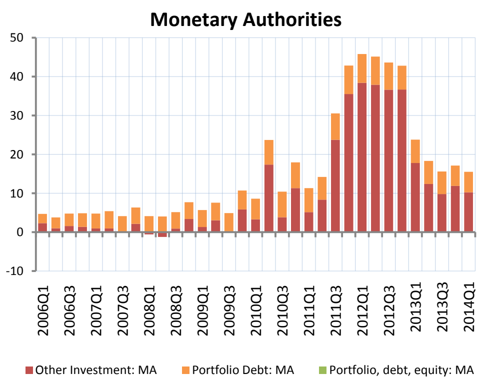






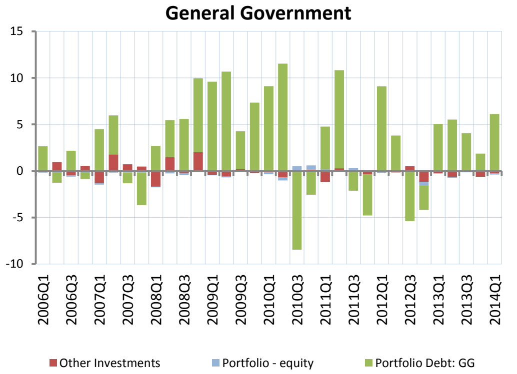




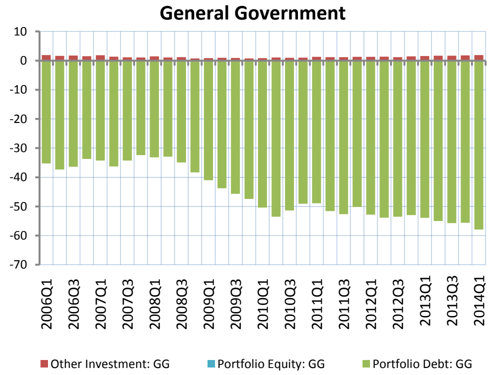


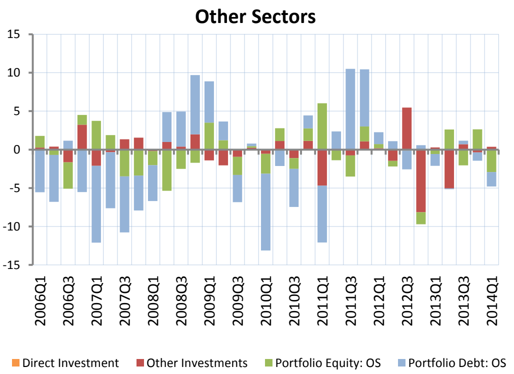
France (in % of GDP)

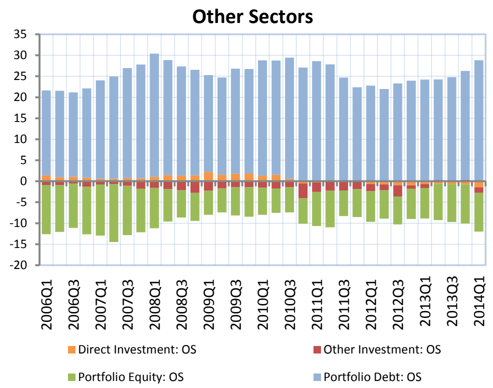
Flows

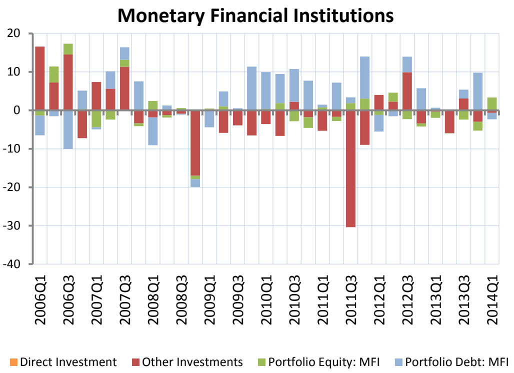


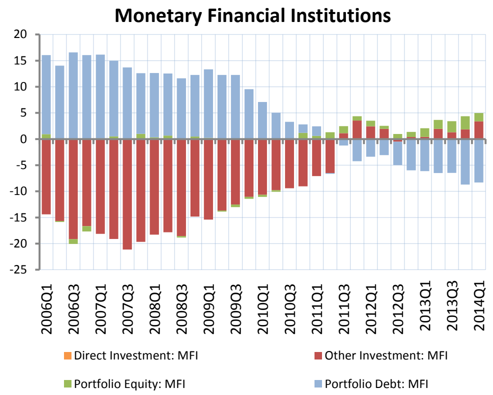
Stocks

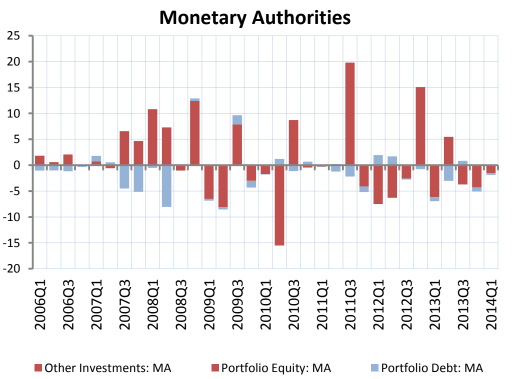


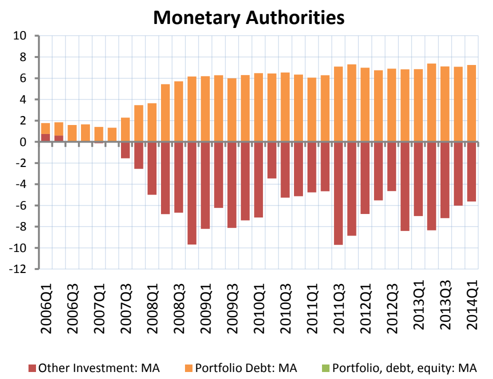








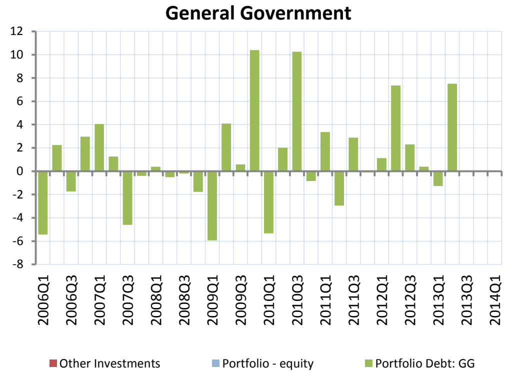


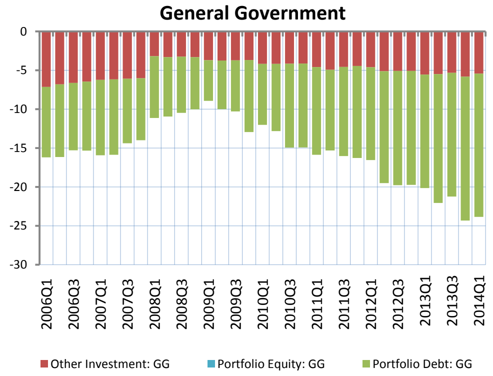


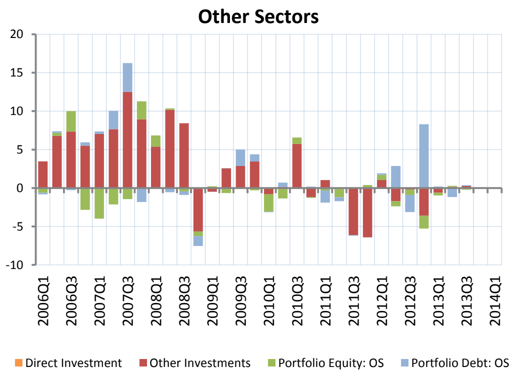
Croatia (in % of GDP)

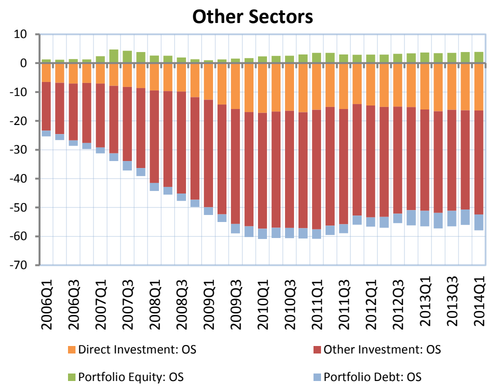
Flows

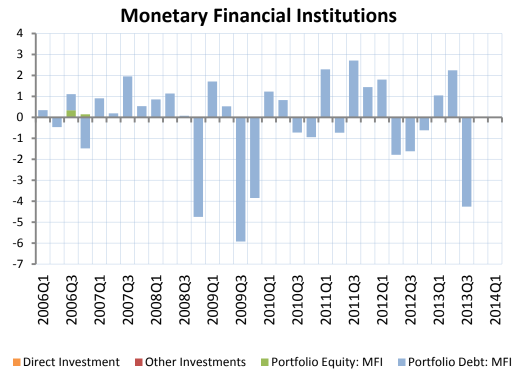
Stocks

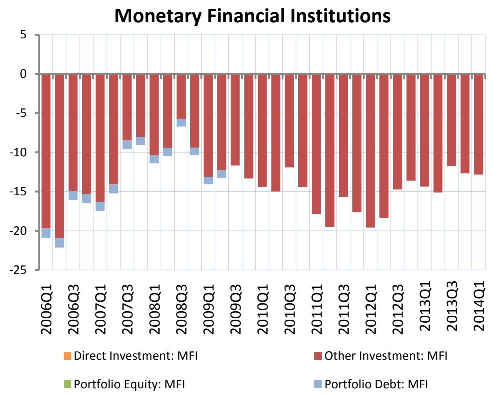


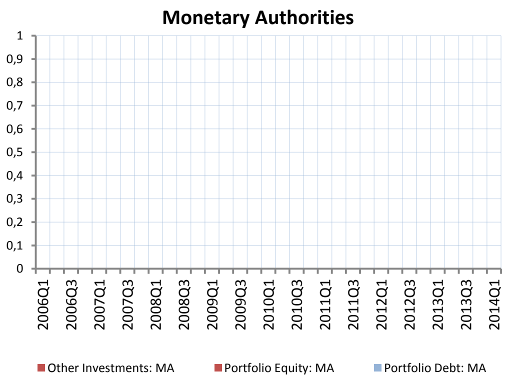


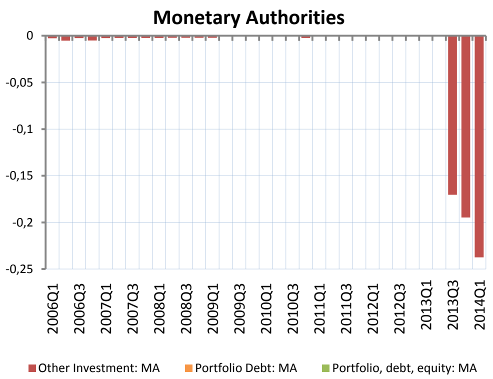






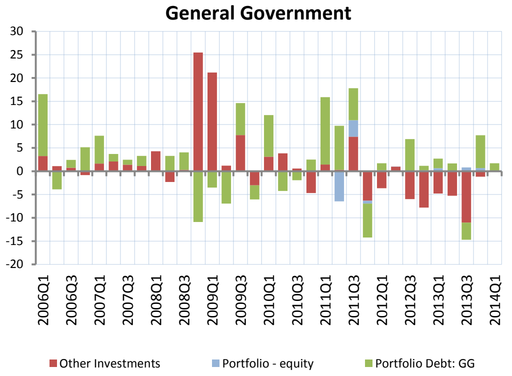


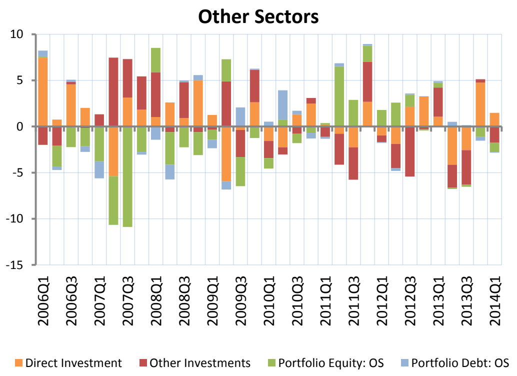


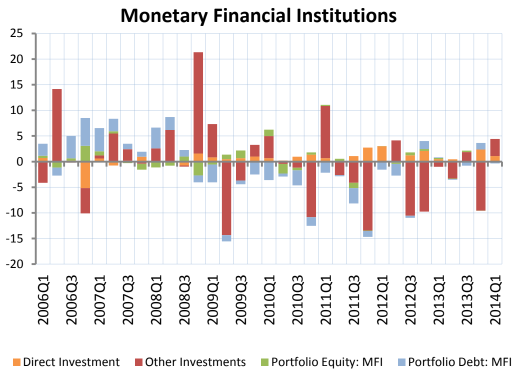


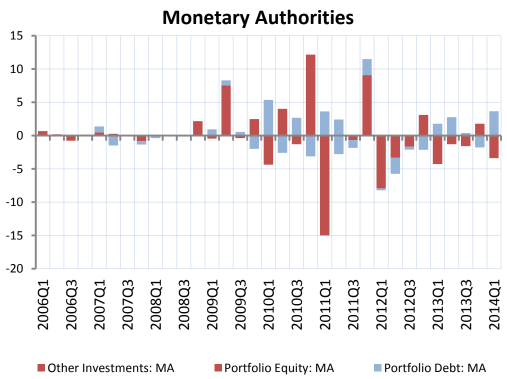
Hungary (in % of GDP)

Flows

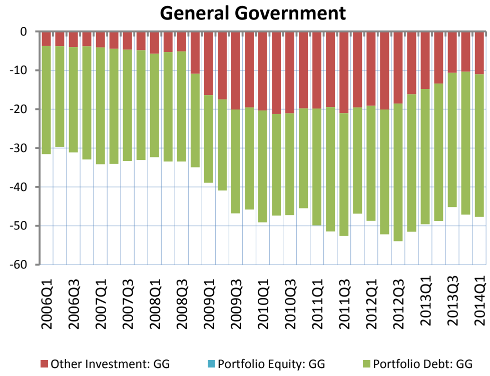


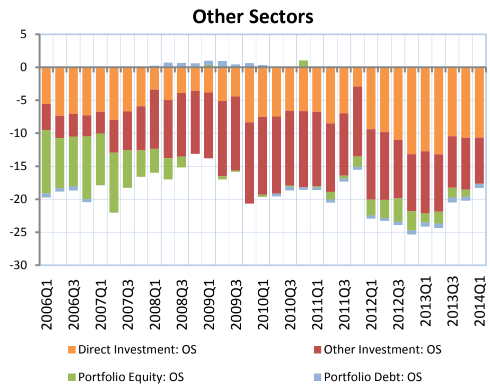


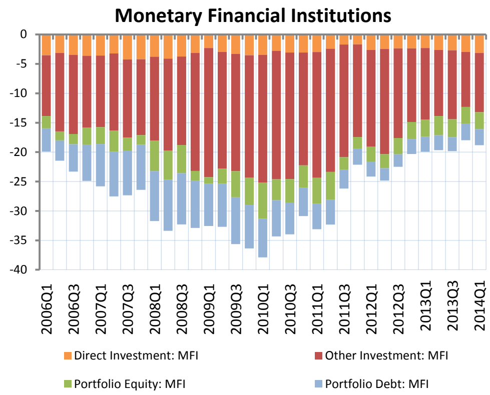


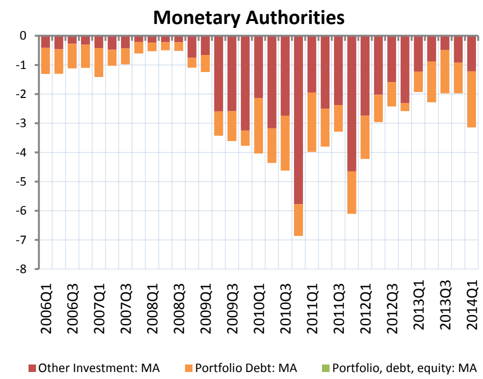


Stocks





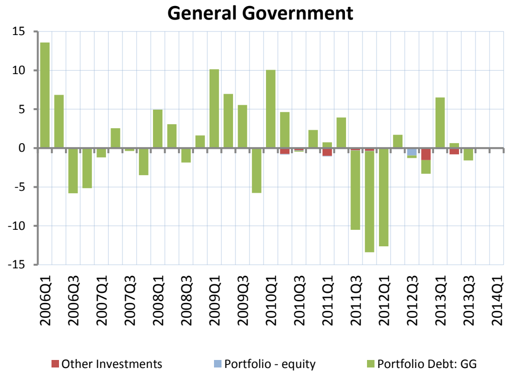


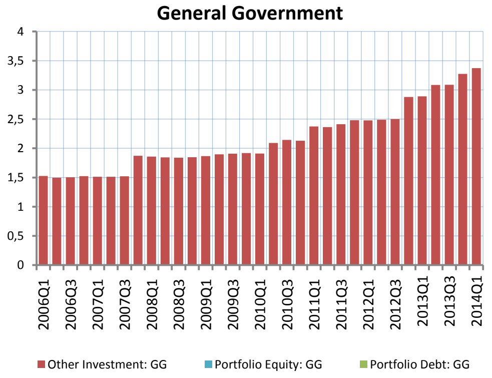


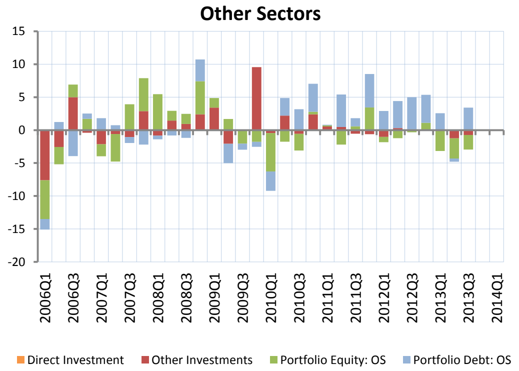
Italy (in % of GDP)

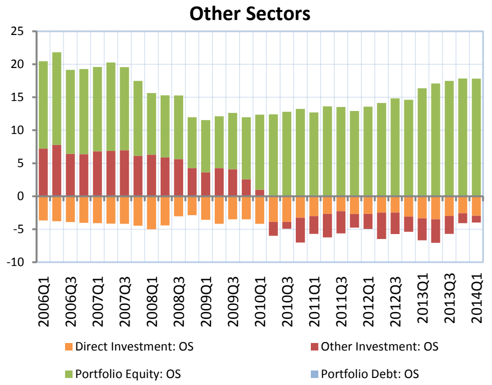
Flows

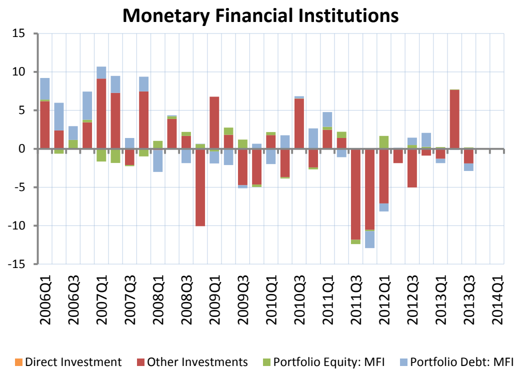
Stocks

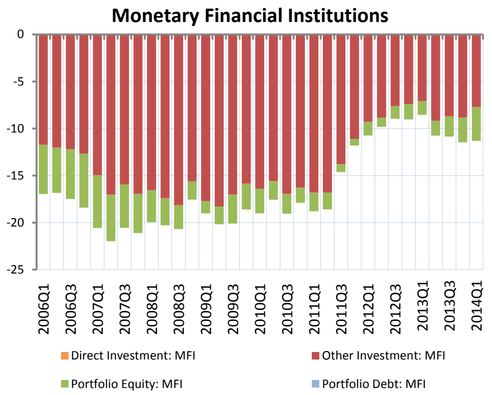


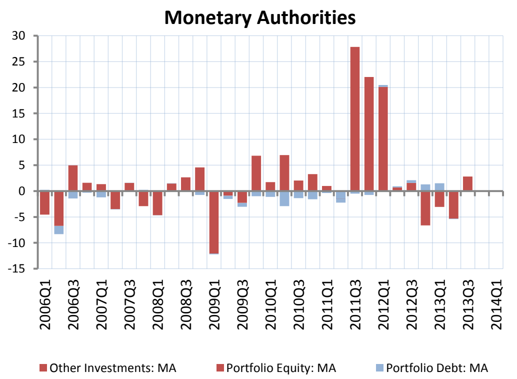


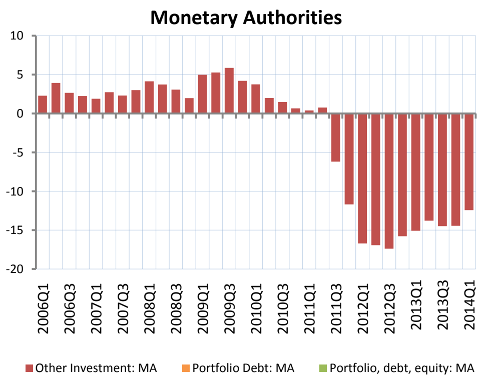






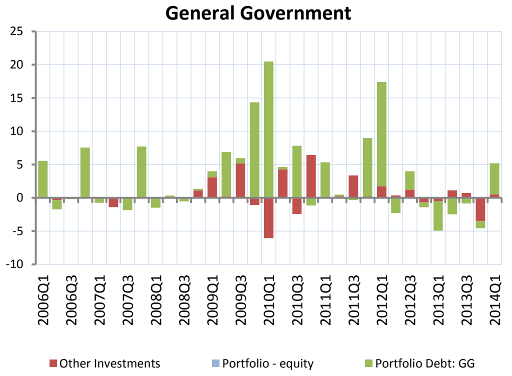


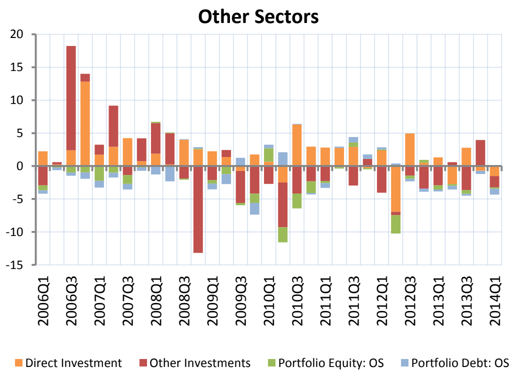


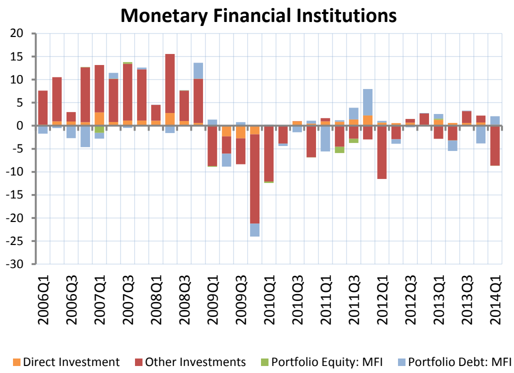


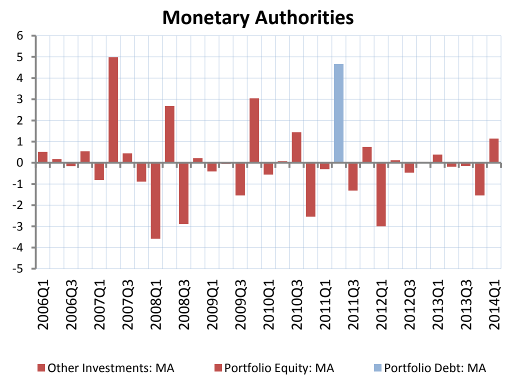
Lithuania (in % of GDP)

Flows

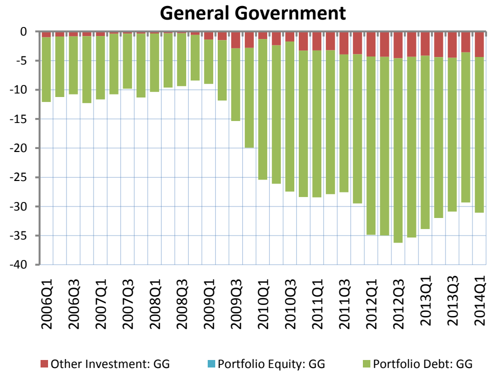


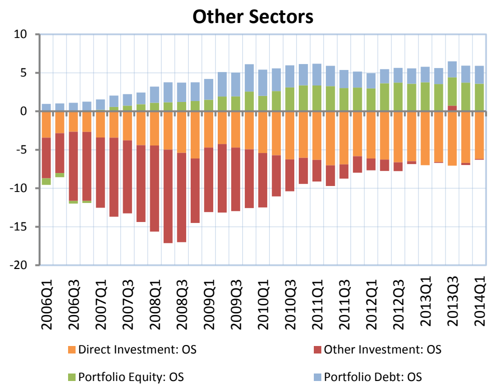


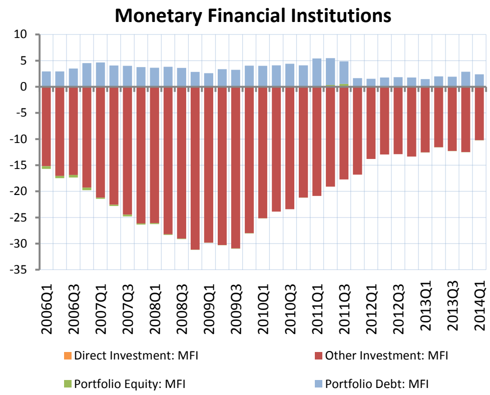


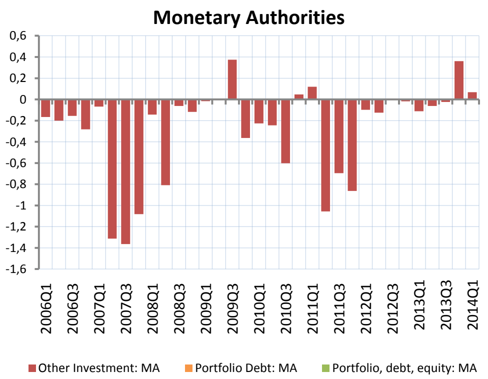


Stocks



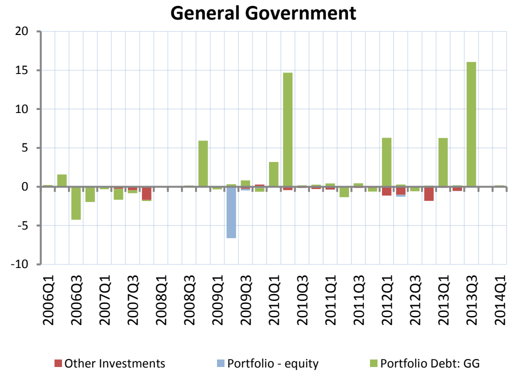


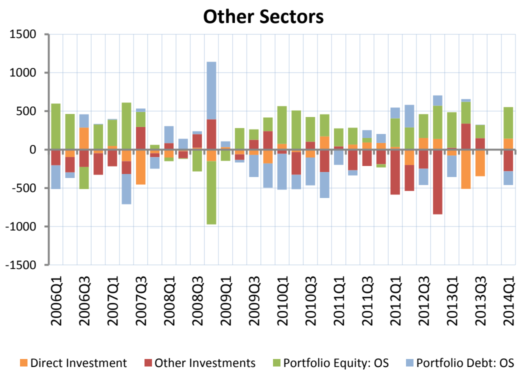


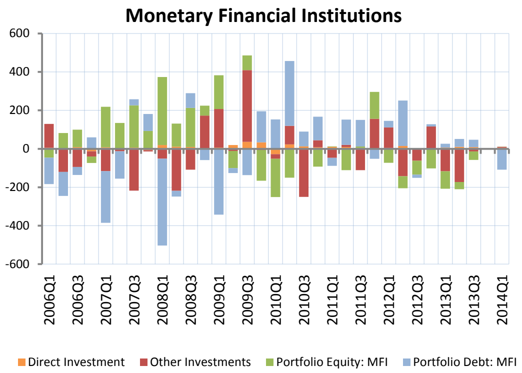


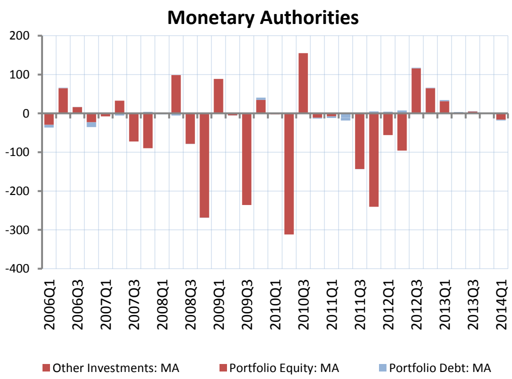
Luxembourg (in % of GDP)

Flows

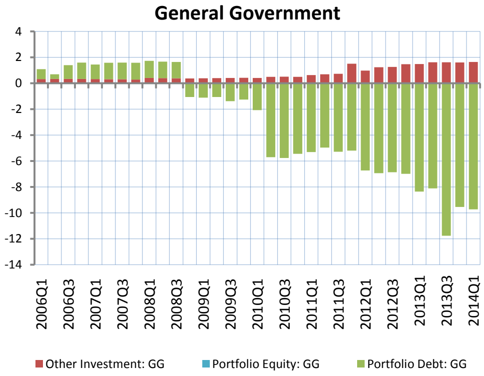


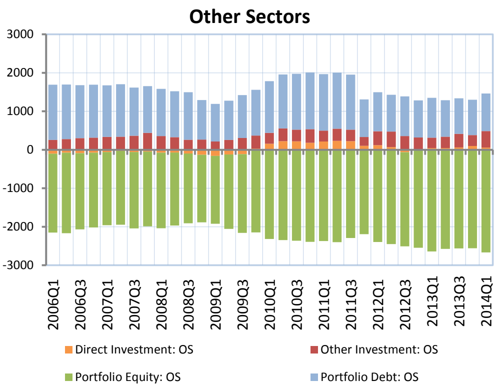


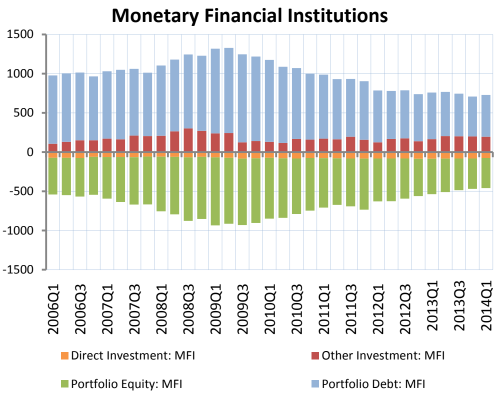


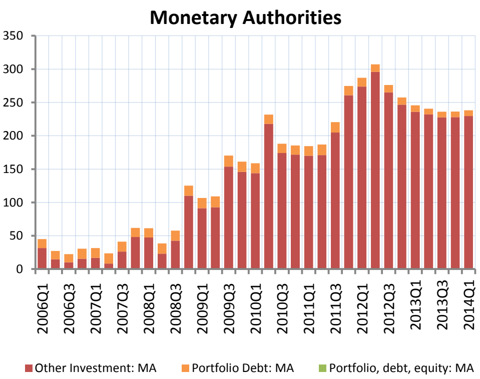


Stocks



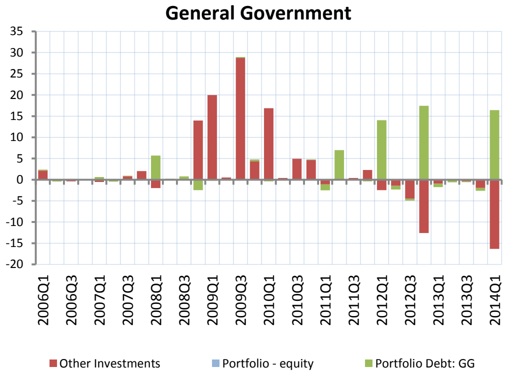


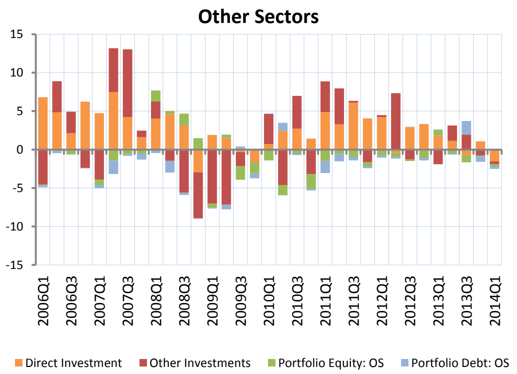


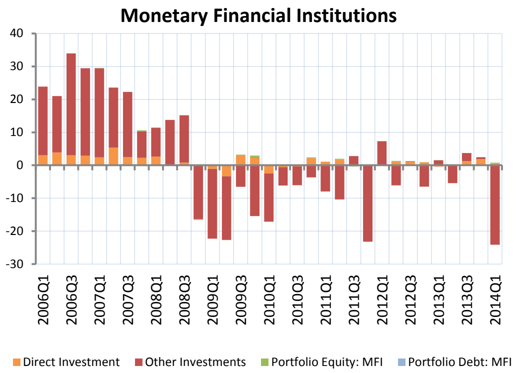


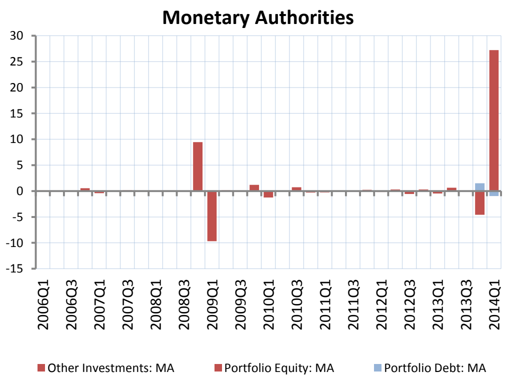
Latvia (in % of GDP)

Flows

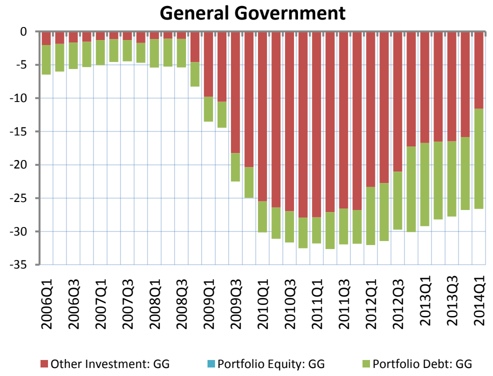


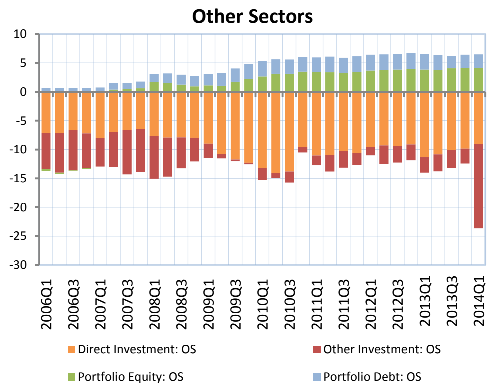


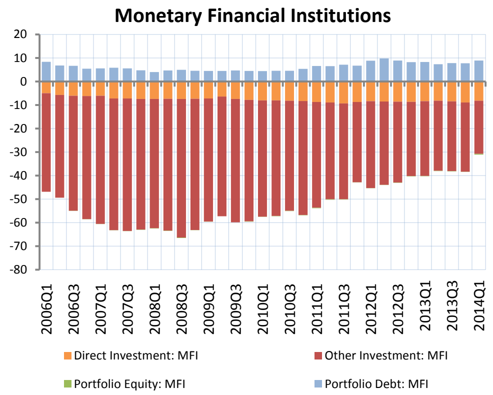


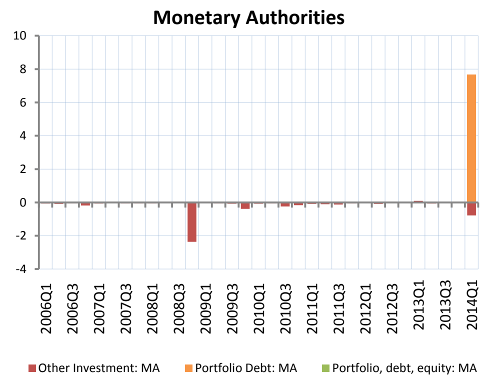


Stocks





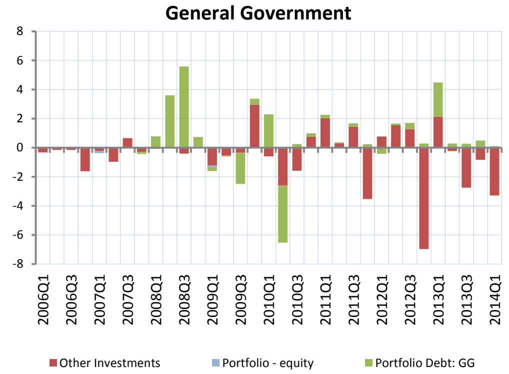


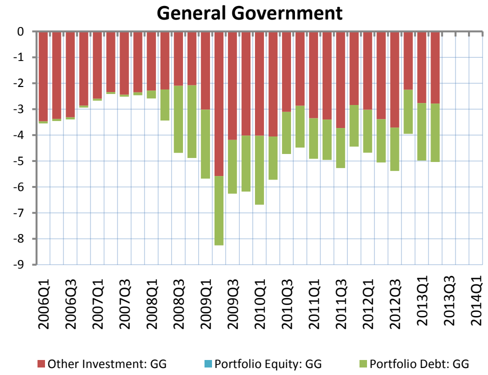


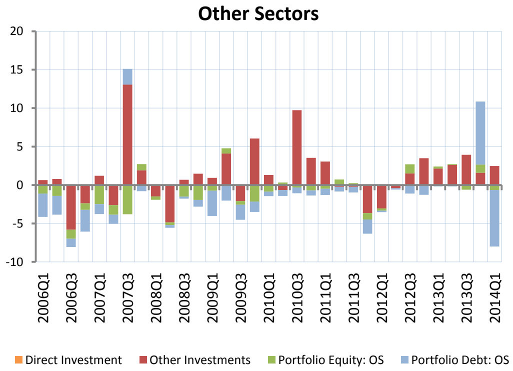
Malta (in % of GDP)

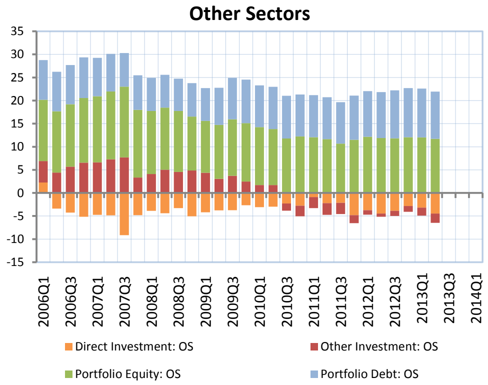
Flows

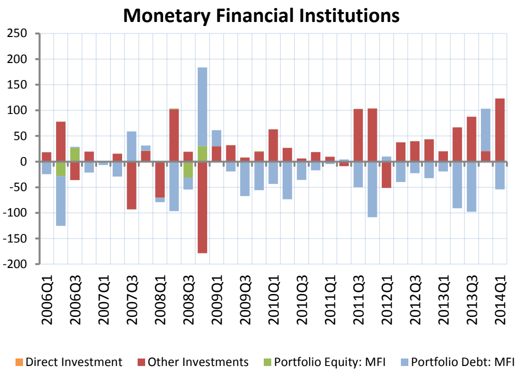
Stocks

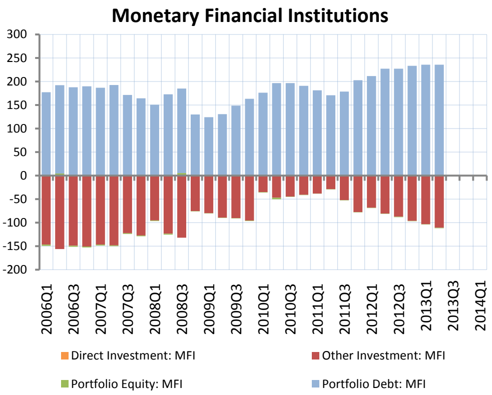


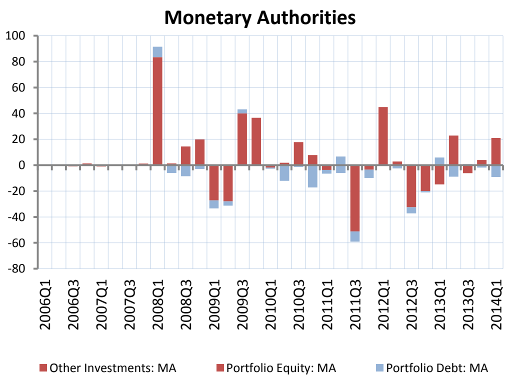


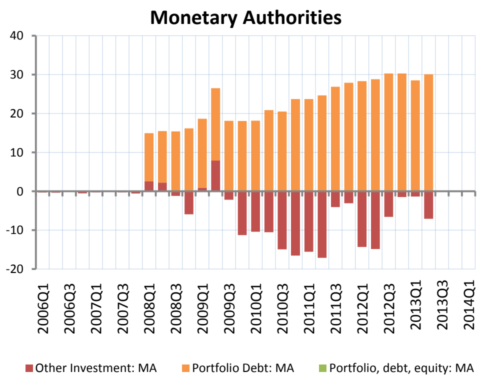








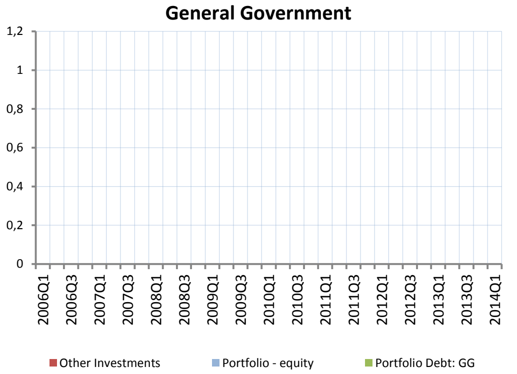


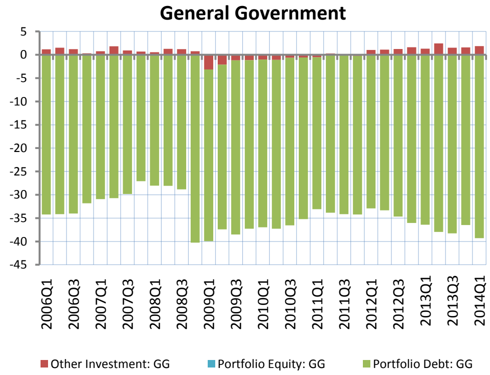


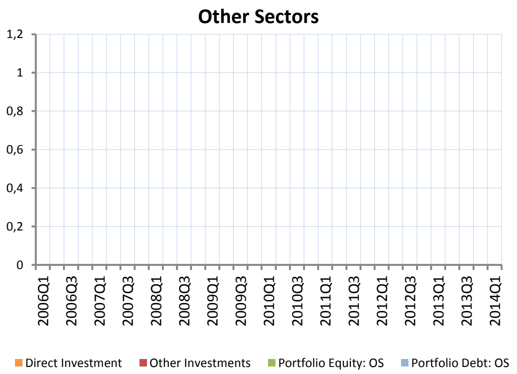
The Netherlands (in % of GDP)

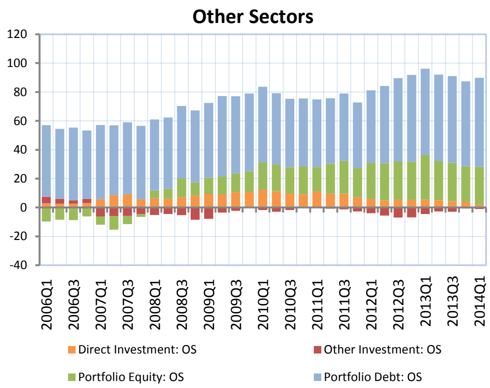
Flows

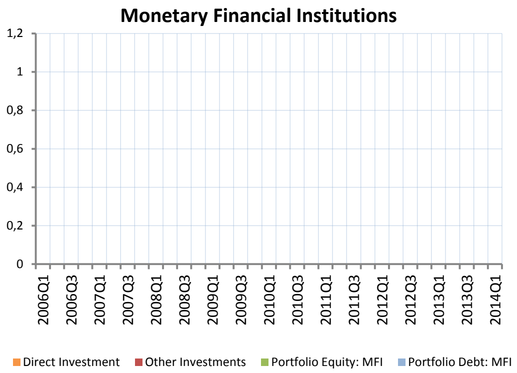
Stocks

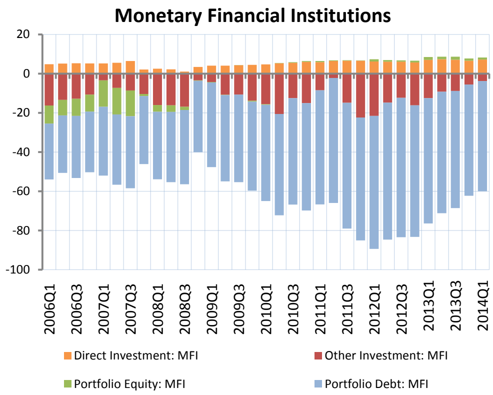


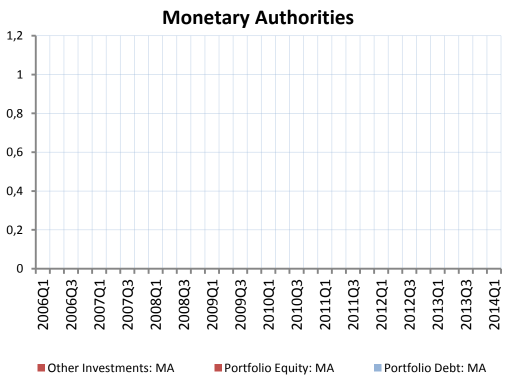


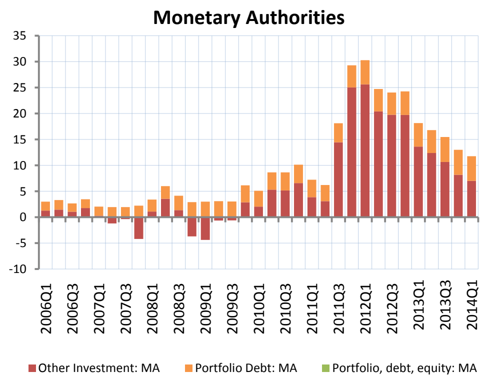






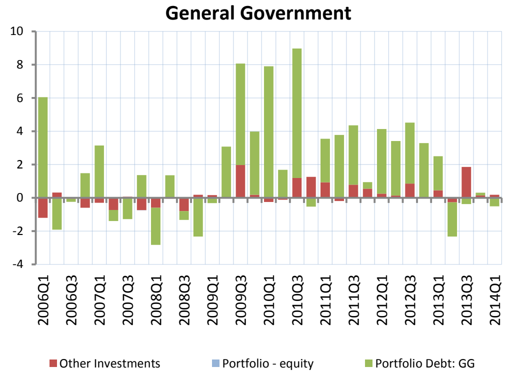




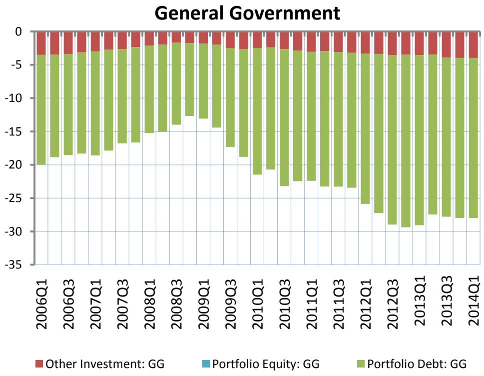


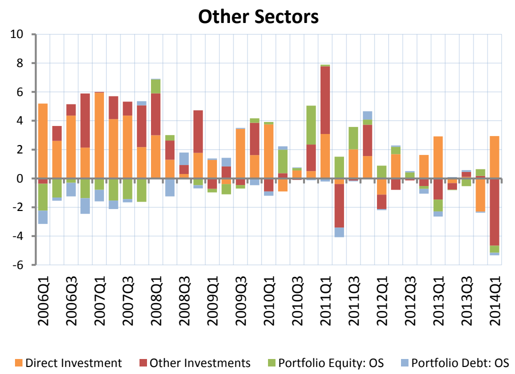
Poland (in % of GDP)

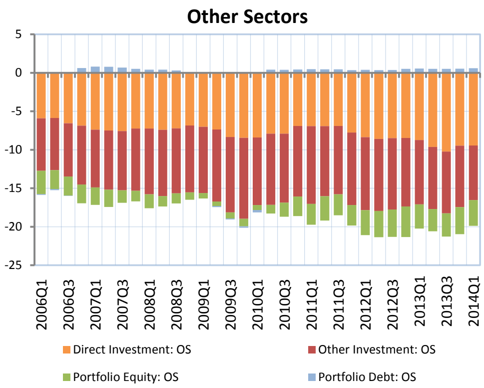
Flows

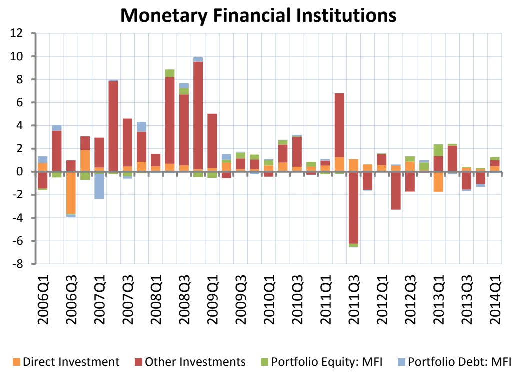


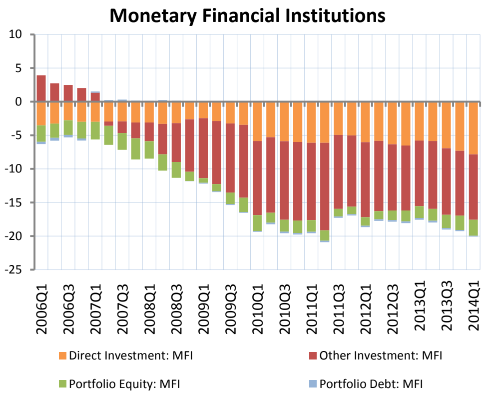
Stocks

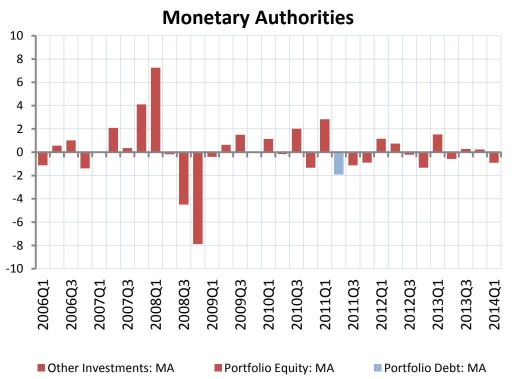


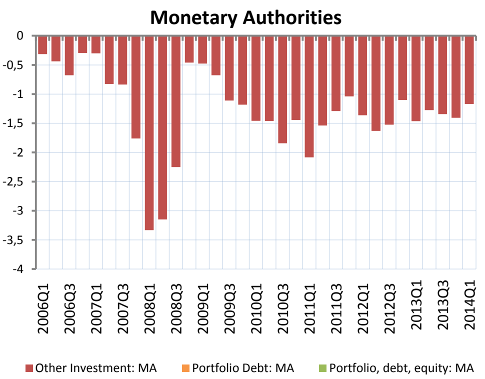






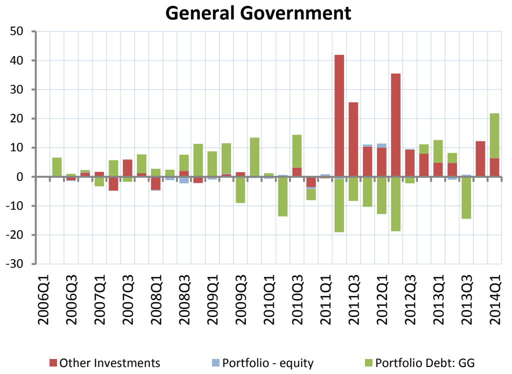




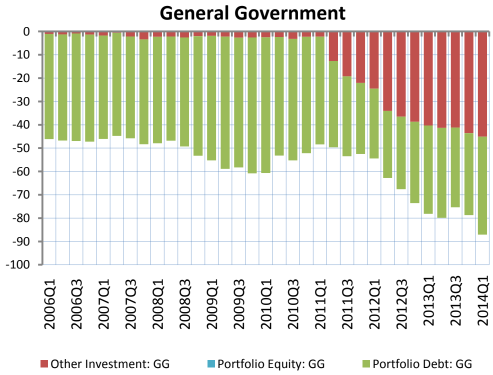


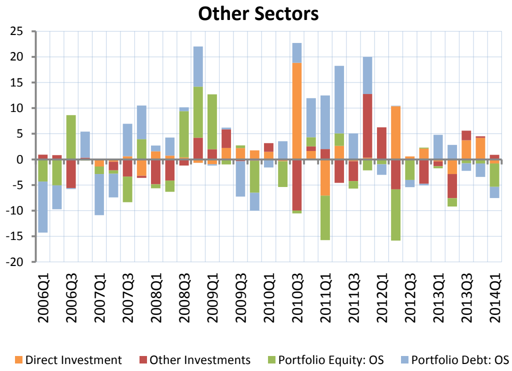
Portugal (in % of GDP)

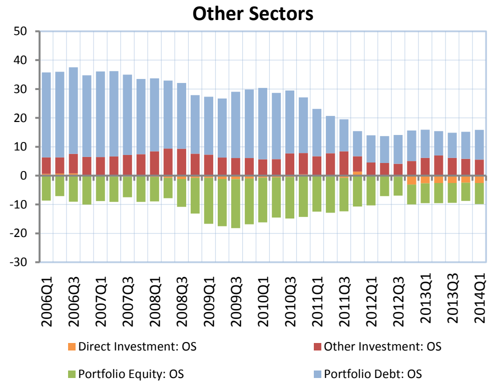
Flows

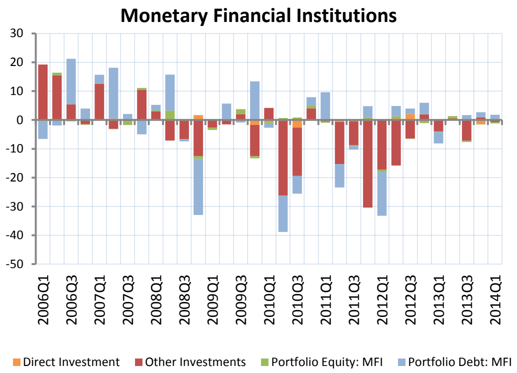


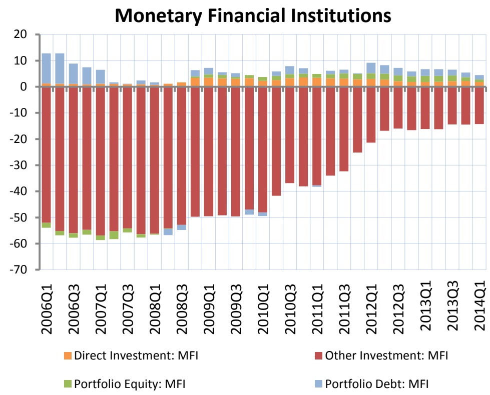
Stocks

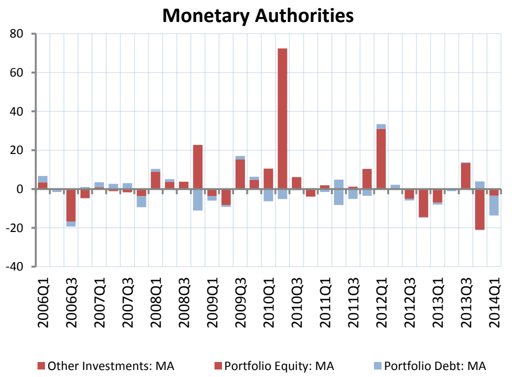


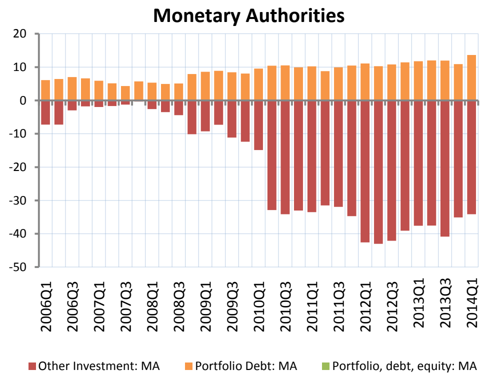






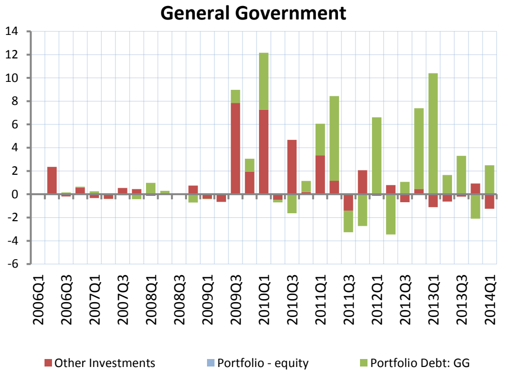


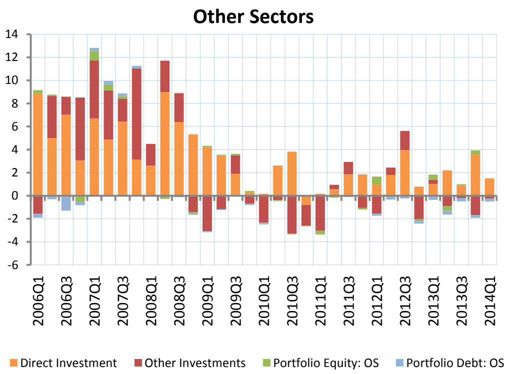


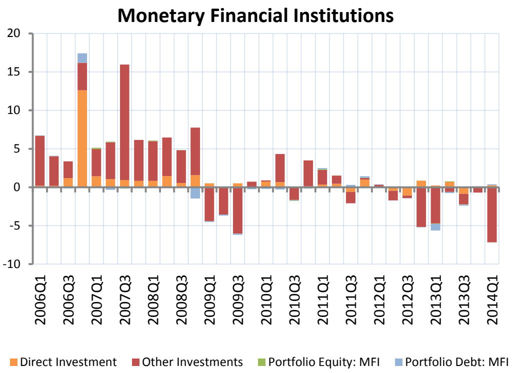


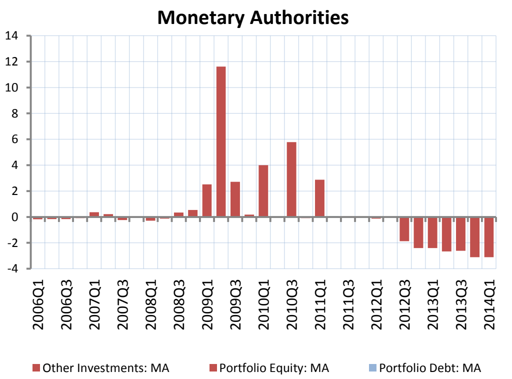
Romania (in % of GDP)

Flows

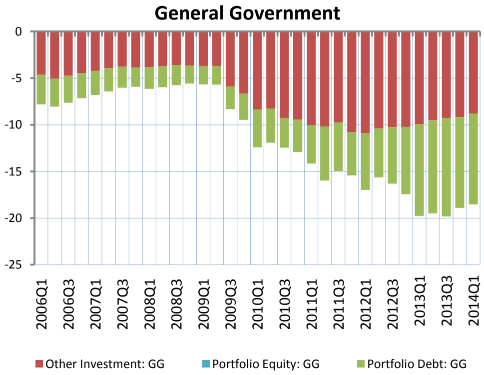


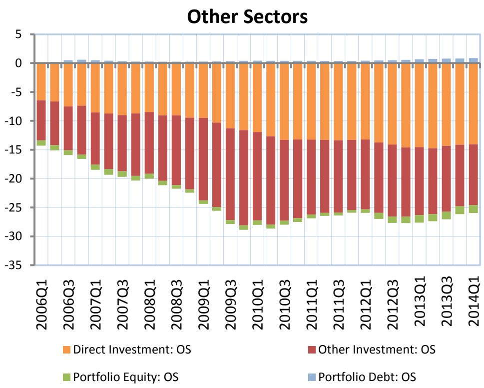


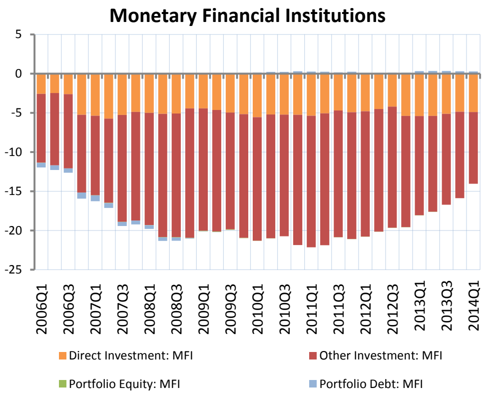


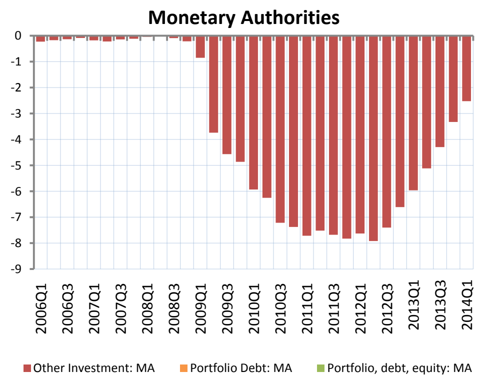


Stocks





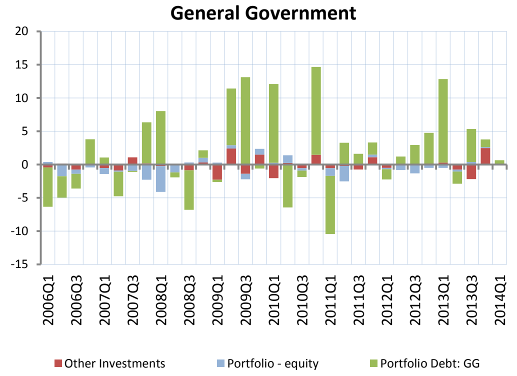


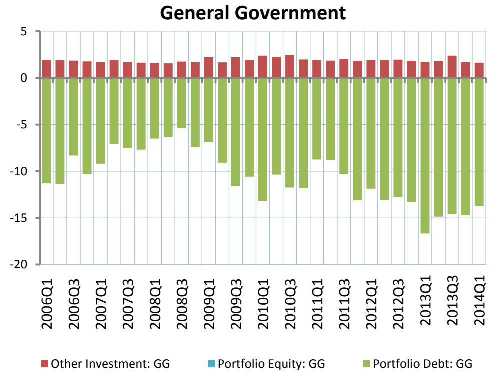


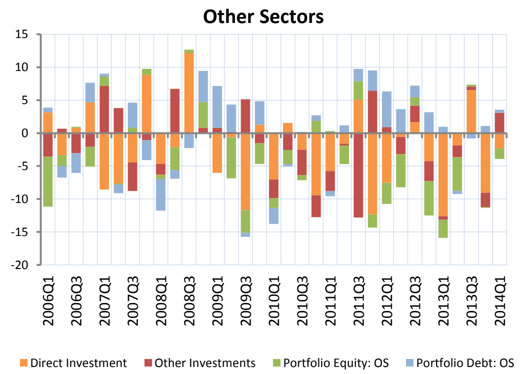
Sweden (in % of GDP)

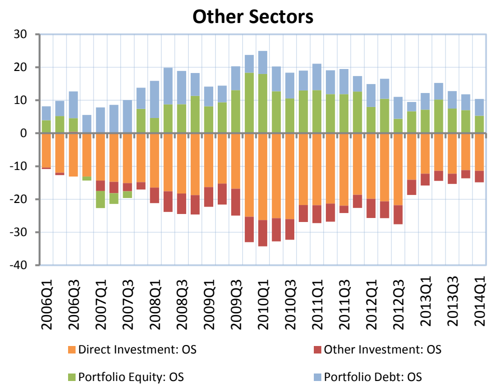
Flows

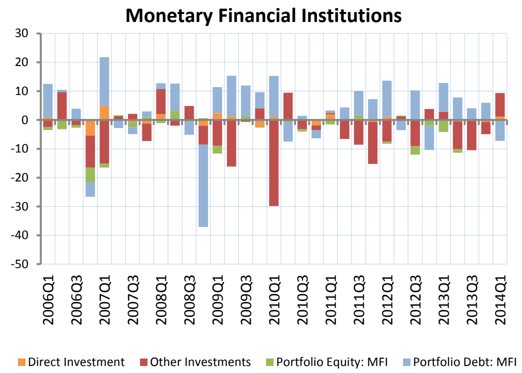
Stocks

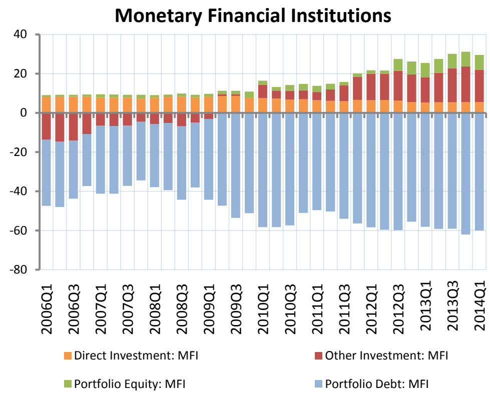


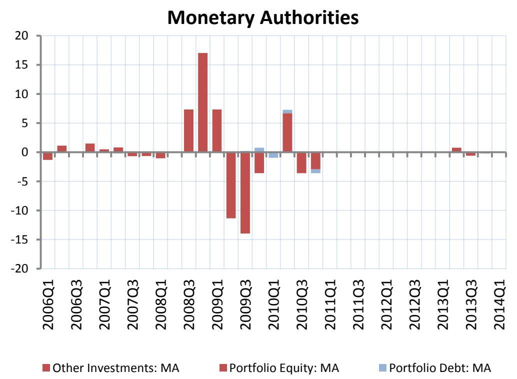


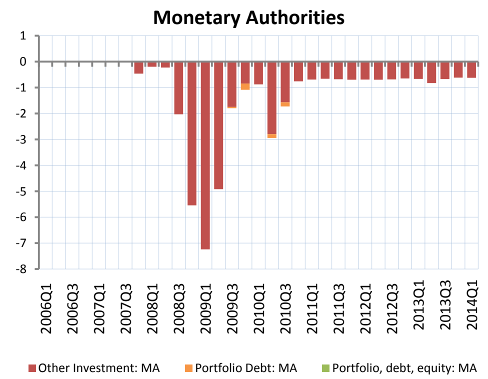






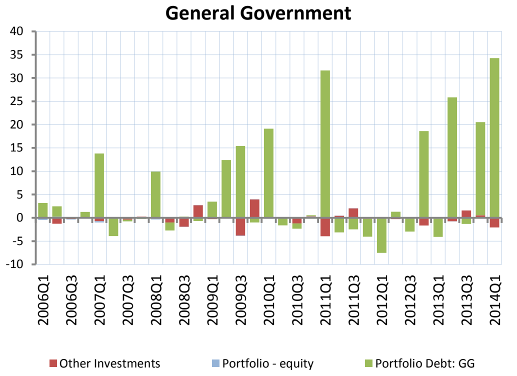


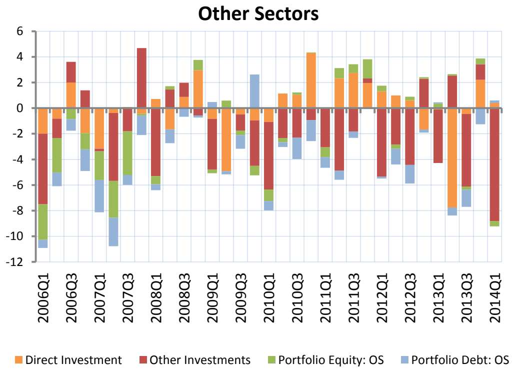


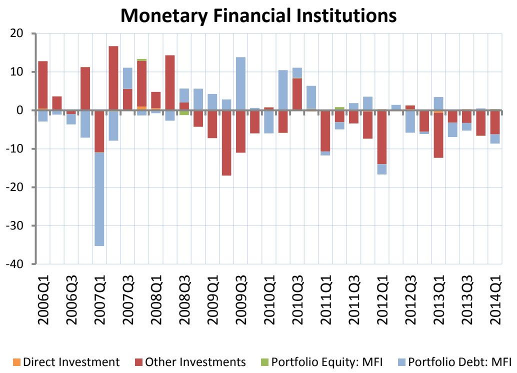


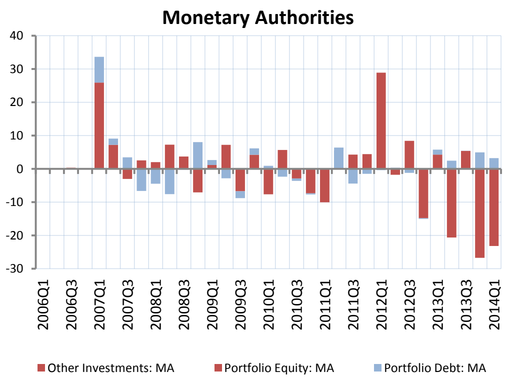
Slovenia (in % of GDP)

Flows









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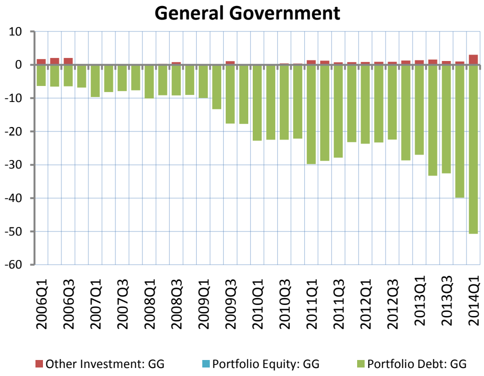
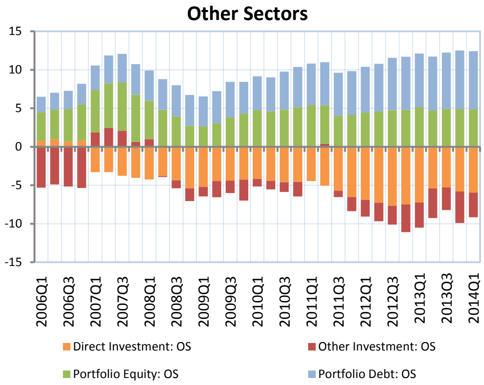
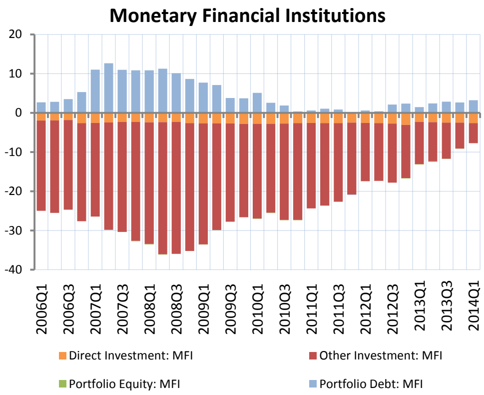
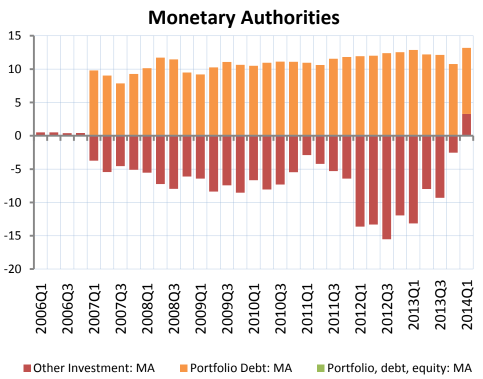


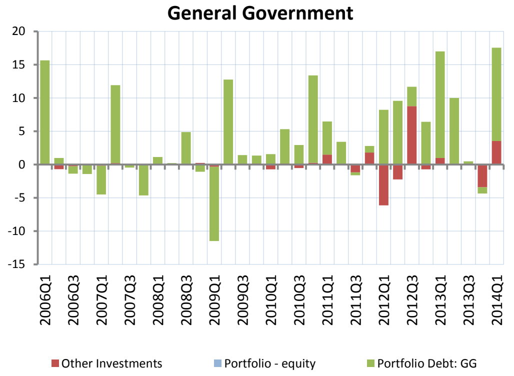


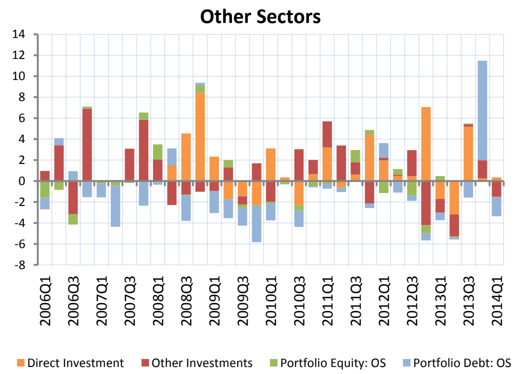


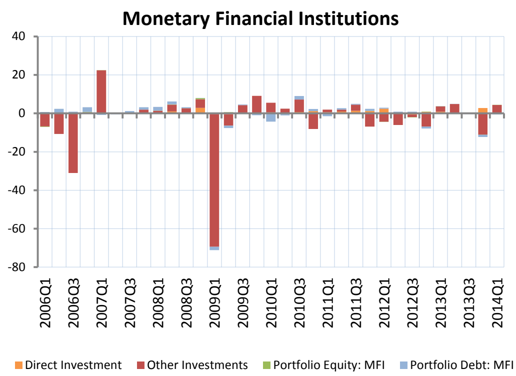


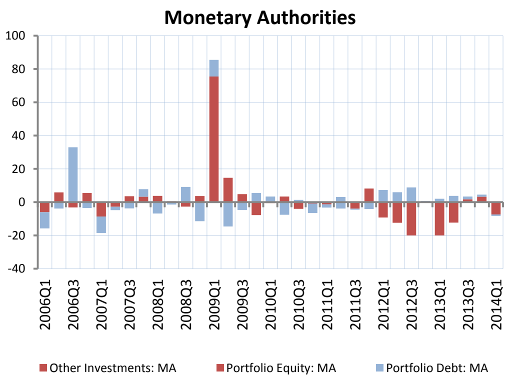
Slovakia (in % of GDP)

Flows









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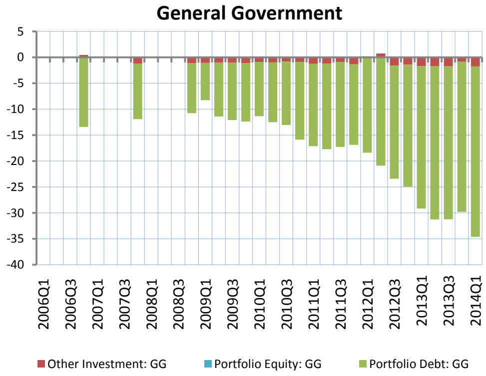
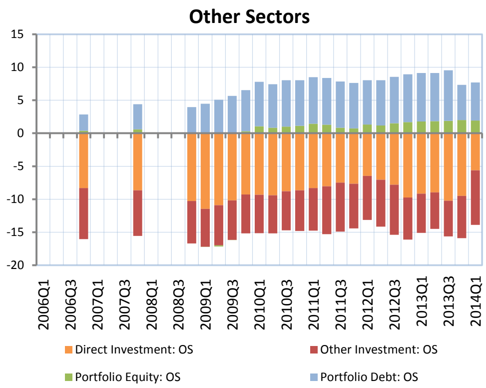
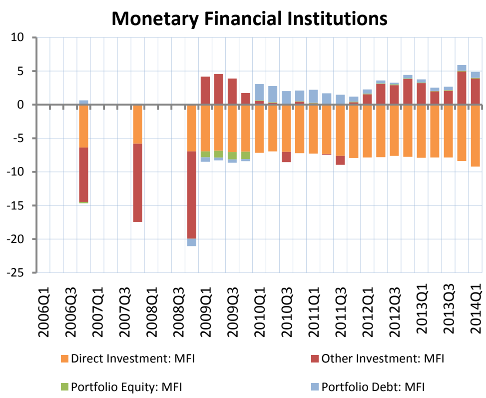
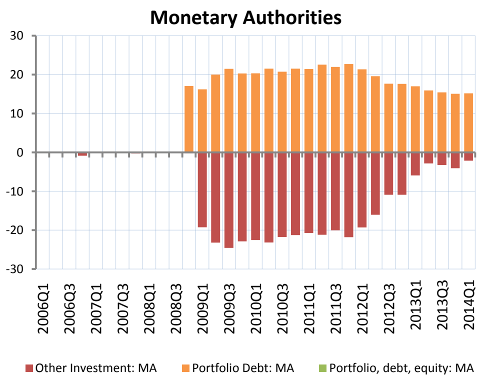


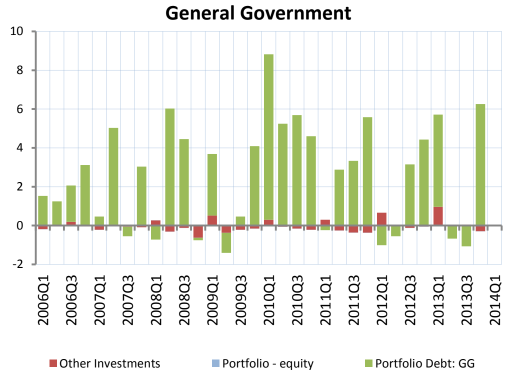


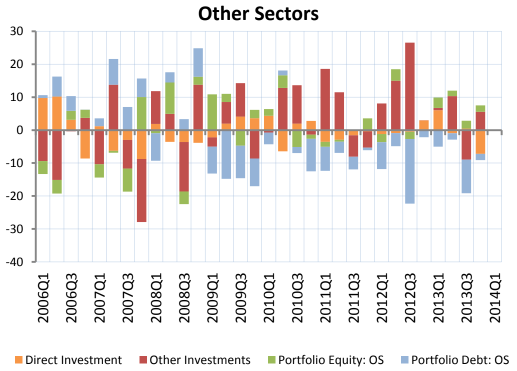


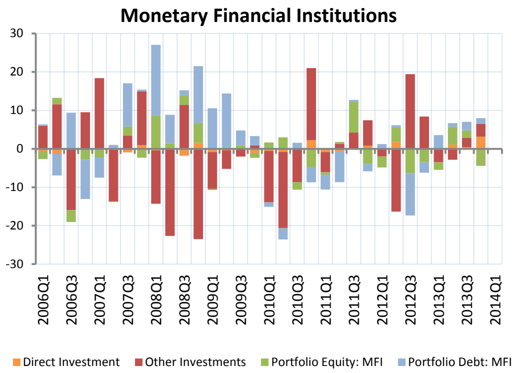


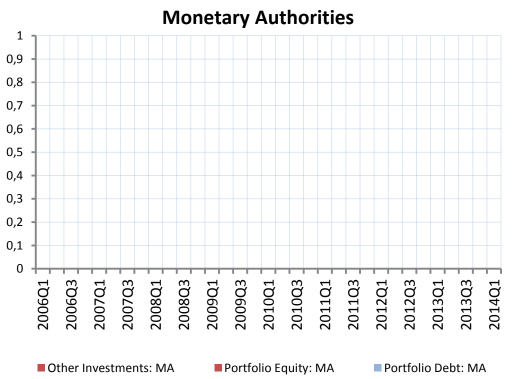
United Kingdom (in % of GDP)

Flows

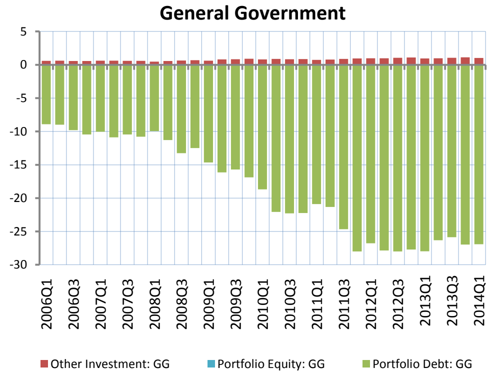


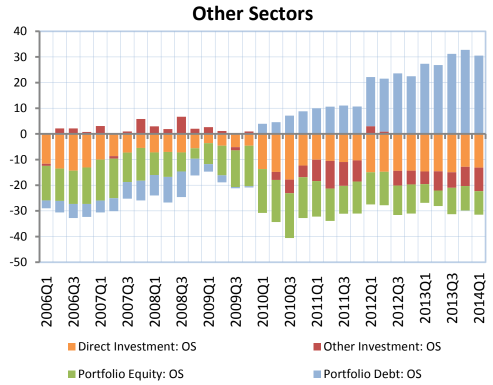


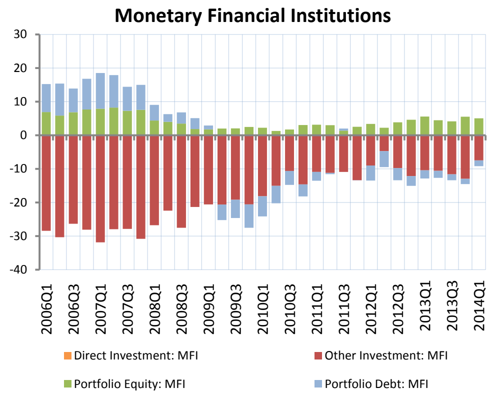


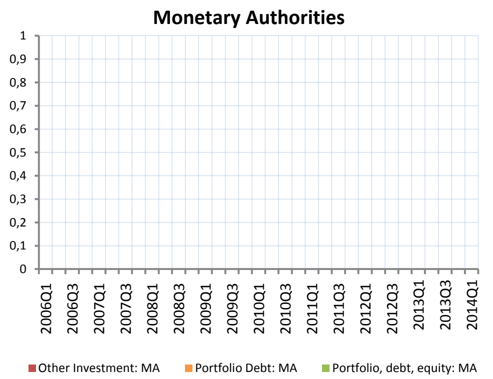


Stocks

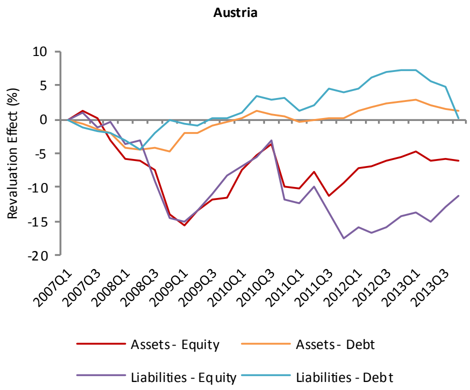


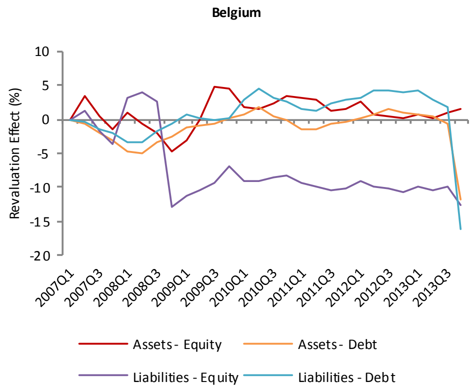


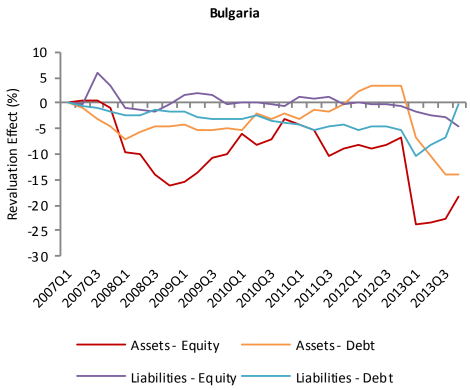


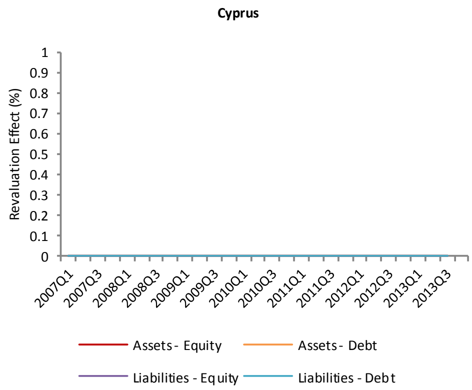


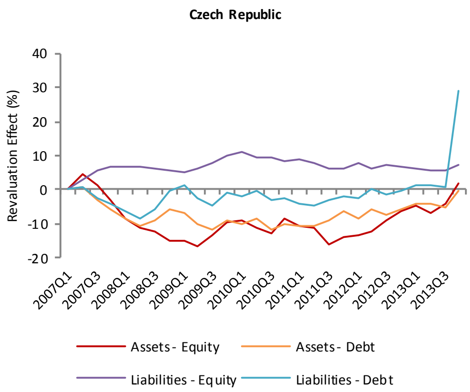
7.3 Appendix to Revaluation Effects

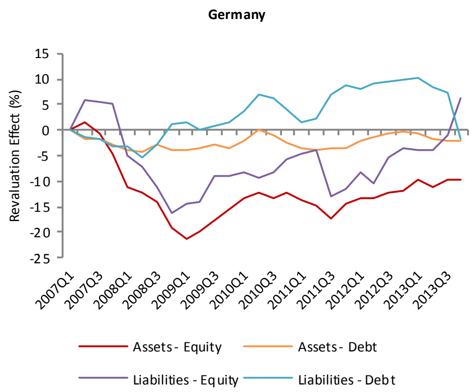


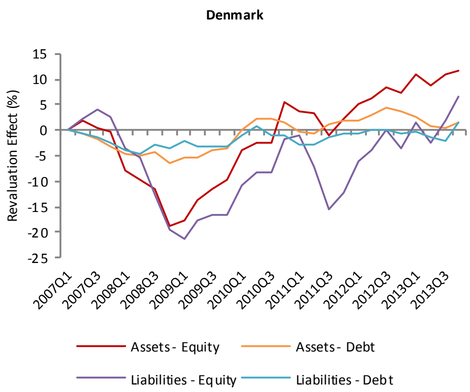


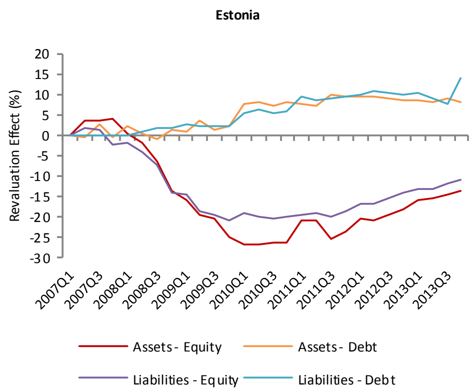


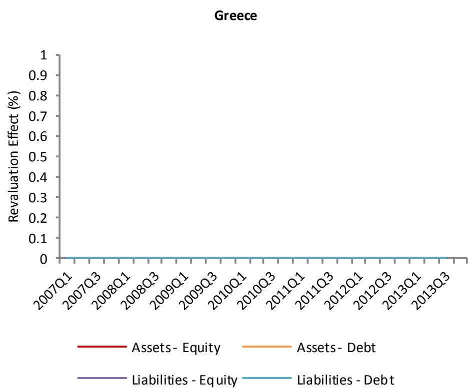


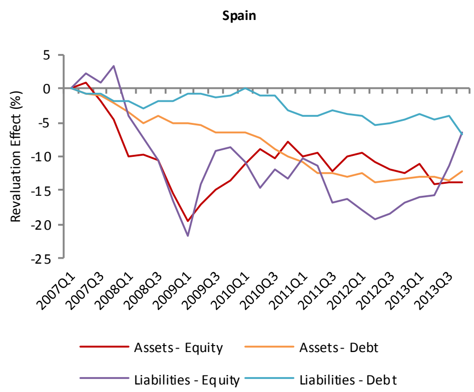


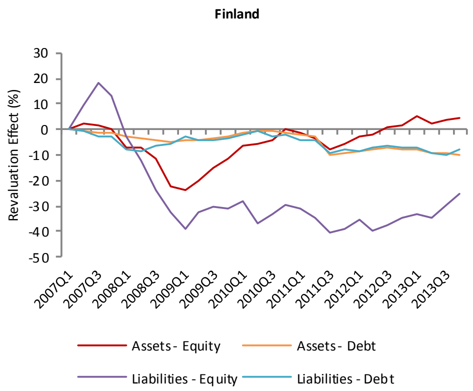


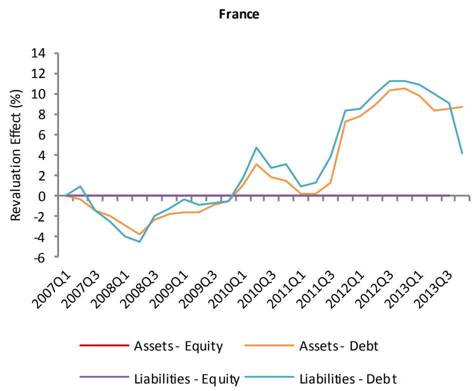


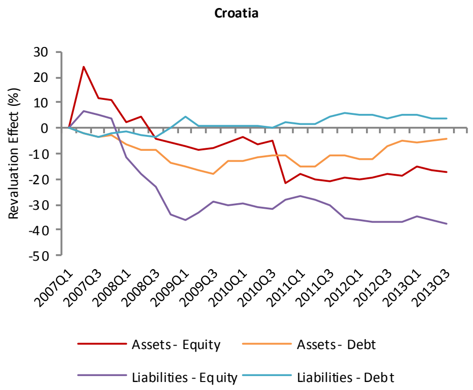


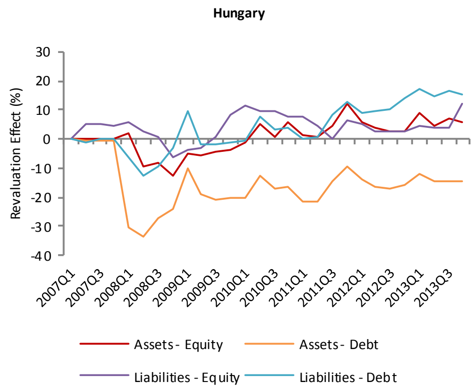

Greece
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

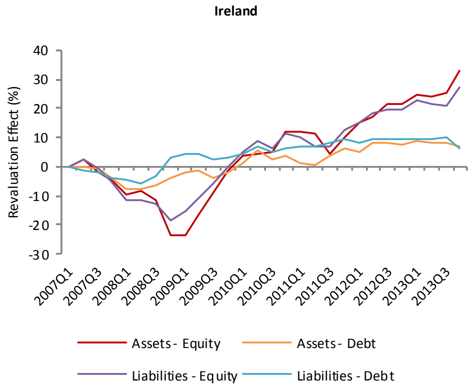

Spain
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

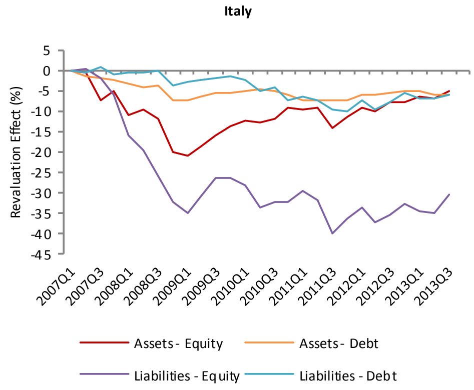

Finland
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

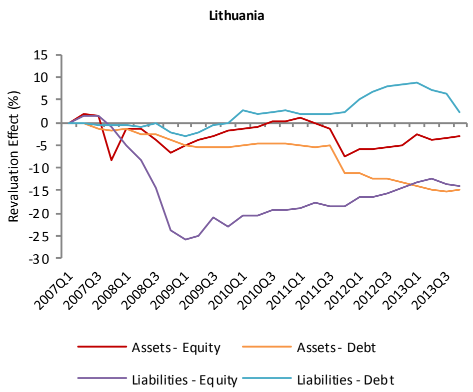

France
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

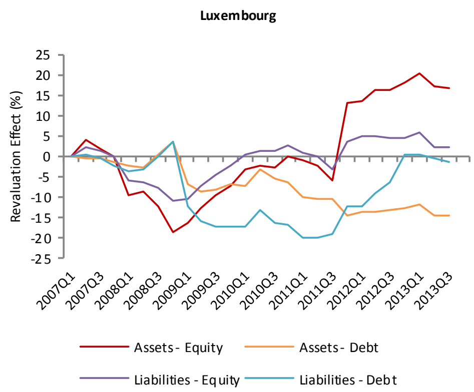

Croatia
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

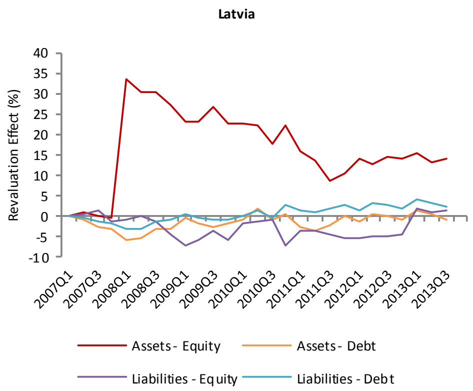

Hungary
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

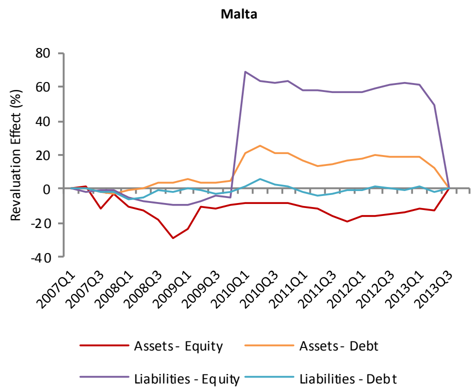

Ireland
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

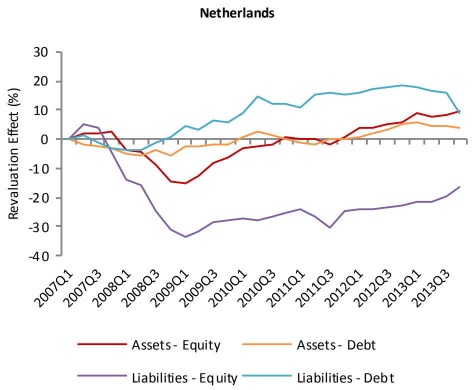

Italy
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

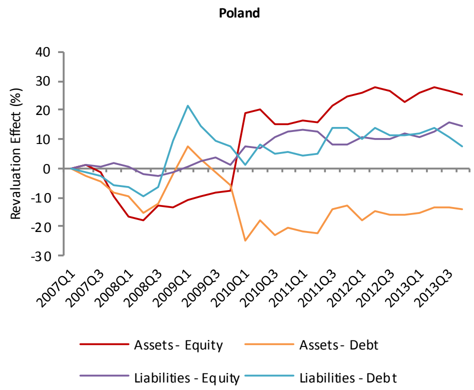

Lithuania
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

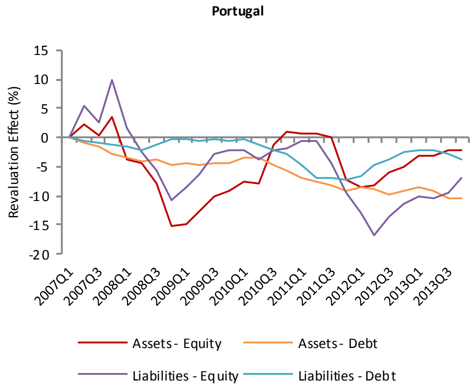

Luxembourg
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

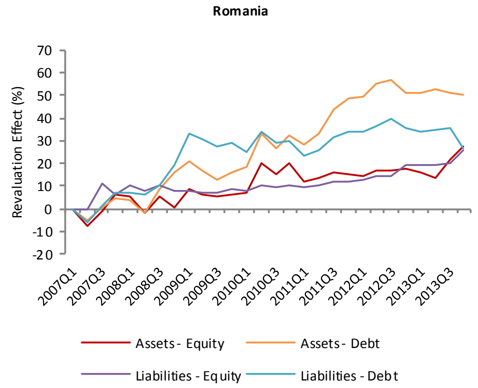

Latvia
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

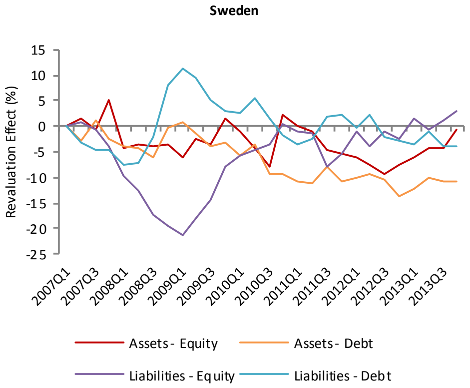

Malta
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

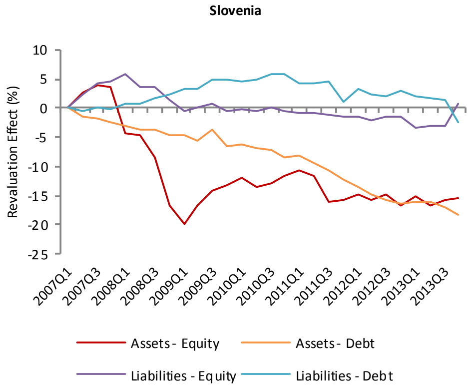

Netherlands
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

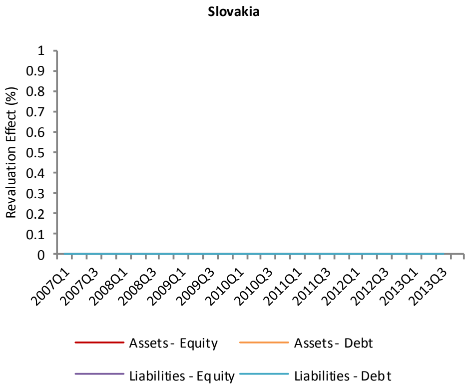

Poland
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

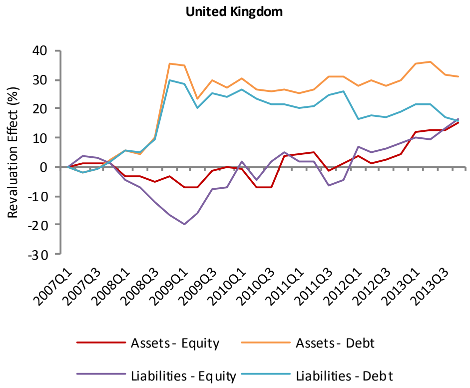

Portugal
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt


Romania
Revaluation Effect (%)
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt


Sweden
Revaluation Effect (%)
15
10
5
0
-5
-10
-15
-20
-25
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt


Slovenia
Revaluation Effect (%)
10
5
0
-5
-10
-15
-20
-25
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt


Slovakia
Revaluation Effect (%)
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt


United Kingdom
Revaluation Effect (%)
40
30
20
10
0
-10
-20
-30
2007Q1
2007Q3
2008Q1
2008Q3
2009Q1
2009Q3
2010Q1
2010Q3
2011Q1
2011Q3
2012Q1
2012Q3
2013Q1
2013Q3
Assets - Equity
Assets - Debt
Liabilities - Equity
Liabilities - Debt

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