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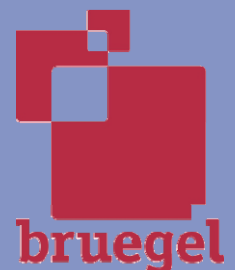
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Analysis of developments in EU capital flows in the global context

*Taking the perspective of the Capital Markets
Union*

**Grégory Claeys, Maria Demertzis, Konstantinos
Efstathiou, Inês Gonçalves Raposo, Alexander
Lehmann, David Pichler**

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Executive summary

- In 2017, the patterns of global imbalances (in terms of capital flows), which developed and became entrenched in 2013-16 (as identified in last year's edition of this report), continued to persist. In short, global imbalances have stopped shrinking and are now concentrated in advanced economies: the main current account surpluses are in the euro area and Japan (while they have decreased significantly in China and oil-exporting countries), whereas the main deficits are in the US, the UK, Canada and Australia. In last year's report, we already highlighted the reasons behind this pattern, chief among them being:
 - the differences between surplus and deficit advanced economies in recovery speed and the corresponding policy responses (in particular in terms of monetary policy);
 - structural changes to the Chinese economy
 - commodity prices, in particular low oil prices
- By 2017, some of these factors appeared to be less relevant as the recovery in the euro area finally accelerated and oil prices began to rise again. Despite these developments, the level and the distribution of imbalances remained broadly unchanged. There was only a slight decrease in surpluses relative to 2015-16, driven by China (and the UK on the deficit side). However, it is possible that the impact of the euro-area recovery and higher commodity prices could materialise with a lag in balance-of-payment statistics.
- The most important medium-term development in the US was that expectations of and then actual monetary policy diverged from the policies of other advanced economies, namely the euro area and Japan. Between 2013 and 2014, markets began to anticipate interest rate hikes in the US, while starting to expect the introduction of a large asset-purchase programme in the euro area. Both happened during the course of 2015. These developments increased domestic and foreign demand for US assets (as they became more attractive from the US and European perspectives). On the other hand, demand dropped for the assets of emerging market economies, into which capital was flowing when rates were at their lower bounds in advanced countries. Coincidentally, the effective exchange rate of the US dollar increased strongly.
- These interest rate differentials persist to date. Expectations about their future path will be a key variable looking forward. The market and US Federal Open Market Committee (FOMC) views are at the time of writing at odds, with the market expecting less tightening than the FOMC, although the former has repeatedly underestimated the pace and magnitude of US monetary policy measures in recent years. Moreover, the potentially stimulating effect of the tax cuts put in place by the current US administration could result in the overheating of a US economy already near full employment. This could thus lead to a quicker/stronger tightening of monetary policy by the Fed. As a result, the interest rate differential with other economies could increase. Finally, another interesting development visible in the recent data is the significant effect of the US Tax Cuts and Jobs Act's (TCJA) 'tax holiday' in relation to the repatriation of profits of US multinationals booked with subsidiaries abroad in the form of dividends.
- In China, there were significant changes in exchange rate policy in 2015 with the objective of internationalising the RMB. These steps coincided with the beginning of the US monetary policy tightening and a fall in the Chinese stock market. The result was a large depreciation of the RMB (both versus the US dollar and versus a basket of currencies), which went hand-in-hand with strong 'private' capital

outflows from China, and resulted in the selling of reserves and the tightening of capital controls by Chinese authorities.

- By 2017, 'private' capital outflows from China had stopped and the accumulation of reserves had resumed. Furthermore, the RMB (versus both the USD and a basket of currencies) appreciated until mid-2018, before its previous gains were wiped out in June and July 2018, mostly as a result of a strong fall in the bilateral exchange rate with the USD, and amid tensions between the two countries over trade policy.
- A sell-off of currencies affected emerging market economies in mid-2018, similar to the 2013 episode known as the 'taper tantrum'. Similarly to 2013, the currency depreciations of 2018 were synchronised across emerging markets. However, despite current account balances not deteriorating across the emerging market spectrum and fundamentals not being worse than in 2013, the magnitude of the depreciations was much larger across the board. Most affected were emerging markets with large current account deficits, financed by 'hot money' and with inadequate reserves.
- The euro area (excluding intra-euro area flows) has been since 2013 the world's leading net exporter of capital. Capital from the euro area has been invested heavily abroad in debt securities, especially in the US, taking advantage of the interest differential between the two jurisdictions. At the same time, foreign holdings of euro-area bonds fell as a result of the European Central Bank's Asset Purchase Programme.
- The combined effect has been a large net outflow from the euro area, and from the EU as a whole, in the portfolio investment category. Although this has continued in recent quarters, the most striking recent development has been related to foreign direct investment. Gross FDI flows, both into and out the euro area and, spiked in 2015, went down in 2016-17, and even became negative in the most recent quarters for which data is available. These fluctuations have been mainly driven by investment flows between the euro area and the US.
- As these outflows from the euro area mainly reflect flows to non-EU countries, they also drive patterns in the EU's consolidated financial account (as a single bloc versus the rest of the world and excluding intra-EU flows). The net financial account balance of the EU relative to the rest of the world remains in surplus. This is the result of a lopsided adjustment of pre-crisis imbalances, with the savings of the EU's surplus countries (e.g. Germany, the Netherlands, Sweden) being recycled into investment in EU deficit countries (e.g. Spain, Greece, Portugal, Ireland). Although the large financial flows to the euro-area periphery and central and eastern European countries have vanished, the capital exports of the 'surplus countries' have increased. Practically every EU country (except France, Romania, Slovakia and the UK) is now running a financial account in surplus or in balance.
- Gross flows from the EU to the rest of the world are relatively stable, but their composition has changed; in particular, the contribution of FDI has fallen because of the reduction in US-euro area FDI flows.
- Intra-EU gross flows picked up in late 2016 and early 2017, but appeared weaker in the second half of 2017 and first two quarters of 2018. In this case too, the fluctuations are a consequence of FDI movements. In general, intra-EU gross cross-border portfolio investment in securities is dominated by equity and, specifically, by investment fund shares. Portfolio debt securities transactions between EU jurisdictions are less important than transactions in other components of the financial account. Even gross flows of other investment are particularly

large and robust, but mainly reflect monetary policy operations in the euro area, rather than inter-bank flows.

- We now turn to the in-depth section of the report on equity financing. Facilitating the financing of European companies through external equity is a central ambition of EU financial regulation, including of the capital markets union. This is justified by macroeconomic vulnerability arising from persistently high corporate sector debt levels, which have not dropped significantly since the financial crisis. In addition, equity investors mobilise within the companies they invest in a number of operational and corporate governance reforms that lift firm productivity.
- The share of listed equity in total balance sheets of EU non-financial enterprises has expanded, though this is limited to the core euro area and to large companies. In terms of net funding flows, listed equity issuance by euro-area companies has dropped sharply in the past two years. By contrast, there has been a rapid expansion of private equity, and overall financing in 2017 was back at pre-crisis levels. A wider range of smaller companies access private equity than access listed shares, though these flows are still concentrated in a small number of EU countries.
- Firm-level data suggests that the use of external equity is still a relatively exceptional financing instrument, used by less than 4 percent of firms in any half year period. The share of firms using external equity has dropped since immediately after the financial crisis, when loan conditions tightened. It is lower for SMEs and in the EU countries in central and south-eastern Europe, and in those euro-area countries that recently experienced macroeconomic instability.
- Firm-level data suggests that EU companies seek to address diminished profitability and increased leverage through external equity, and in doing so they take advantage of improved investor appetite and their own firm's prospects. But perceived financing gaps suggest that availability of equity has not kept pace with growing financing needs. In particular for SMEs, this is a striking contrast to broader financing conditions that have improved amid monetary easing.
- Relative to the UK – as the most advanced equity market – other EU countries are considerably less attractive for private equity investors. There have been no broad improvements in two policy areas that underpin private equity activity: corporate governance and labour market flexibility. As the UK is home to nearly half of the European investor base, which will in the future be outside the single market, there is a clear need to further facilitate the cross-border integration of private equity funding within the EU27.
- Private equity activity in the EU still shows a strong home bias. Fundraising from outside the private equity firm's home base and eventual divestment outside national capital markets have become marginally more significant, but remain quite limited overall. Government agencies still play an important role in funding, and smaller countries remain particularly constrained by local capital markets.

1. Introduction

The aim of this report, like the four reports that preceded it, is to analyse capital movements in the European Union in a global context. The monitoring and analysis of capital movements is essential for policymakers, given that capital flows can have welfare implications. Free movement of capital can enhance welfare if it channels savings towards productive use, but in crisis times, reliance on capital flows can also be a source of vulnerability if those flows transmit shocks across borders and disrupt local financial systems, with far-reaching spillovers into the real economy.

The first two sections are devoted to the monitoring of developments in international capital flows as well as effective and nominal exchange rates. We do not repeat our review of capital flows' key theoretical aspects flows from previous reports (Darvas *et al.* 2015, 2016, 2017 and Claeys *et al.* 2018), but get right into an analysis of global capital flows.

Section 2 presents trends from a global perspective, focusing on large economies and groups of countries that are decisive for the overall picture. We combine up-to-date evidence from balance-of-payments statistics on transactions and stocks of financial assets with an analysis of policy developments, exchange rate movements and current events. We also analyse more closely the groups' current account focusing on the contributions of trade (goods and services) and income balances (primary and secondary).

Section 3 focuses on Europe. While we continue to focus on the euro area because of its unique characteristics, we also pay attention to non-euro area EU countries. However, instead of reporting data for all EU Member States individually, we only analyse the biggest five euro-area countries (France, Germany, Italy, the Netherlands and Spain) and smaller economies with distinct economic structures (Cyprus, Ireland, Luxembourg and Malta). Other countries are combined into five groups (euro area Central Eastern European countries, euro area creditors, euro area debtors, non-euro area Central Eastern European countries and non-euro area Nordics) to facilitate the recognition of key tendencies across the EU. We analyse the different capital flow patterns and developments in international investment positions, including their compositions. Furthermore, we highlight the contributions of different sectors (corporates, households, public) to the current account evolution.

Finally, section 4 reviews the potential of greater equity funding, in particular of private equity; assesses how, following the tightening of bank lending conditions and in the context of still high debt levels, European enterprises have accessed external equity finance; and reviews the country-specific determinants of access to private equity that lie in legal and regulatory regimes.

2. Global trends

2.1. Global imbalances

Box 1: Groups for analysis

As in previous versions of the report (Darvas et al., 2015, 2016, 2017 and Claeys et al. 2018), we divide countries into groups based on common characteristics in order to make the analysis tractable. Our choice of countries still depends on their importance in terms of GDP (i.e. we concentrate on large economies), conditional on reporting their most recent quarterly data. However, in this year's report we made several important changes compared to last year's report groups, in order to capture some major trends. These include splitting the former 'other advanced' and 'other emerging' groups, creating new aggregates, and renaming others.

The resulting groups are (in alphabetical order):

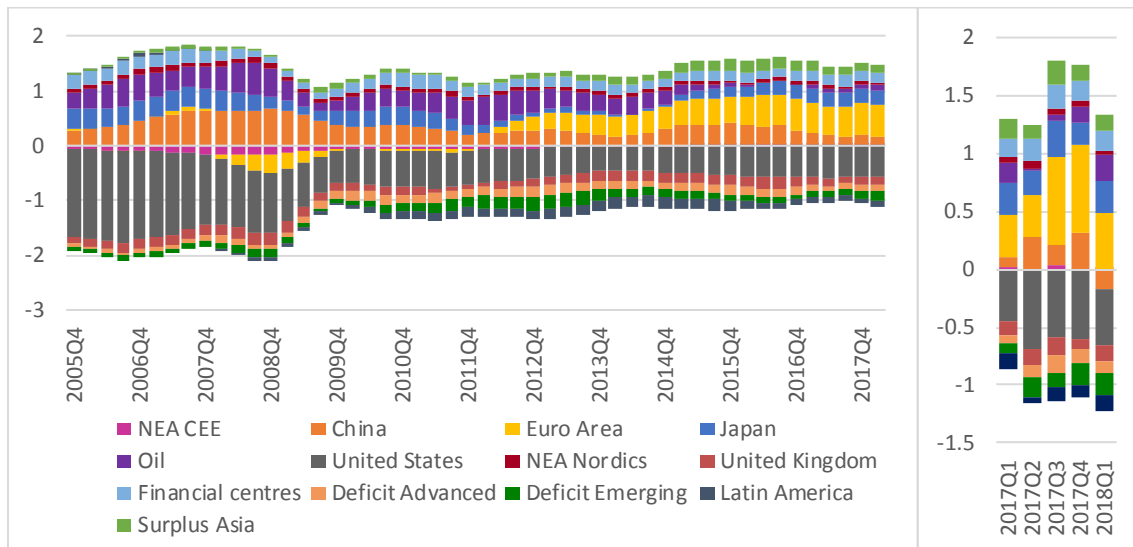
- China
- Deficit advanced economies: Australia, Canada and New Zealand
- Deficit emerging economies: India, Indonesia, South Africa and Turkey
- Euro area (including CEE countries from the euro area: Estonia, Latvia, Lithuania, Slovakia and Slovenia)
- Financial centres: Hong Kong, Singapore and Switzerland
- Japan
- Latin America: Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Mexico and Uruguay
- Non euro-area Central and Eastern Europe (CEE): Bulgaria, Croatia, Czech Republic, Hungary, Poland, Romania
- Non euro-area Nordics: Denmark, Sweden.
- Oil exporters: Norway, Russia and Saudi Arabia
- Surplus Asia: Philippines, South Korea and Thailand
- United Kingdom
- United States of America

2.1.1. Current account imbalances

In an inherently complex system consisting of countless financial transactions and investment decisions, balance of payment statistics serve as a tractable indicator of the cross-border direction of capital flows. In particular, for any given country, the current account balance — the discrepancy between the aggregate gross savings of a country's residents and the level of domestic investment spending — is equal to the accumulation of foreign assets or 'net borrowing' from the rest of the world. Another way to look at the current account is the difference between output and domestic demand; in other words, the sum of the trade balance (net exports) and the income balance.

Regarding the distribution of current account balances across countries, two observations stood out in last year's report. Firstly, imbalances were less acute than in the years prior to the financial crisis, which was a period of large 'global imbalances', but they were higher than in its immediate aftermath. Secondly, there was a shift in imbalances towards advanced economies. This picture remained roughly unchanged over the course of 2017, if not for a slightly moderating trend in the overall levels of imbalances (see Figure 1).

Figure 1: Current account balances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. Both the financial account balance and GDP are measured in USD.

Patterns in the overall distribution of flows persist: capital is mainly exported from the euro area, Japan, global financial centres, China and other surplus countries in Asia (mainly Korea and Thailand) primarily towards the United States and, to a lesser extent, to the UK, deficit advanced economies (Australia and Canada) and emerging economies.

The distribution of current account balances at the end of 2017 reflects a pattern that emerged between 2013 and 2014 and has since become entrenched. Importantly, the euro area’s current account switched from balanced or slightly positive to significantly positive, as the block experienced a ‘double-dip’ recession and implemented a policy mix of simultaneous fiscal consolidation and monetary expansion. In absolute terms, the euro area is now the largest exporter of capital. Together with Japan and China, they make up a group of systemic economies that persistently generate current account surpluses, and represent the vast majority of the aggregate surplus at a global level. Meanwhile, during the same period, the fall in oil prices dwarfed oil exporters’ surpluses from significant levels down to zero. On the flip side, as the US edged towards full employment, it absorbed — together with the UK, Canada and Australia — a larger share of current account surpluses. This was done at the expense of emerging markets, that had attracted an important share of these surpluses since the global financial crisis up to 2013.

In last year’s report (Claeys et al., 2018) we noted that the rotation of imbalances towards advanced economies thus reflected: (i) asymmetries in recovery speed and the corresponding policy responses between surplus and deficit economies, (ii) China’s transition from an investment- to a consumption-driven growth model and (iii) sustained low commodity prices.

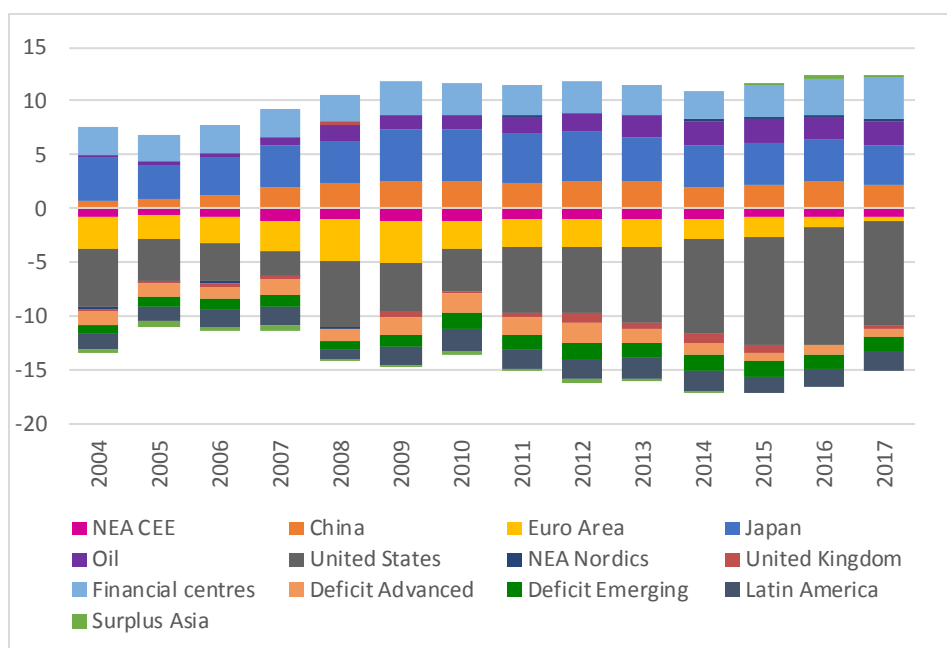
Many of these drivers appeared to be less relevant during the year 2017: the euro area recovery intensified, while oil prices rose again. However, because of the expected lag, the distribution of imbalances has not yet changed significantly. One change is the size of overall imbalances, which appears to be slightly diminishing. On

the surplus side, China’s contribution to surpluses at the world level has decreased in the last two years. Obviously, this means that the global surplus leaned towards the euro area, Japan, financial centres and other countries of Eastern Asia (mainly Korea and Thailand). On the other hand, the global deficit also fell slightly, mostly as a result of the decrease in the UK deficit.

2.1.2. Stock imbalances

The persistence of flow imbalances has pushed net international investment positions to historical extremes. The combined net asset (liability) position of global creditors (debtors) exceeds 10% (15%) of world GDP – the difference between the two results arising from our non-comprehensive coverage of the world economy, but also from errors and omissions in the IMF balance of payment dataset. Global creditors are Japan, global non-EU financial centres (Hong Kong, Singapore and Switzerland), China and oil exporters, in decreasing order. By contrast, the global debtor side is dominated by the US, joined by the emerging markets that run current account deficits. The euro area has visibly reduced the extent of its net foreign liability position, consistent with the sustained current account surpluses it has run in recent years.

Figure 2: NIIP, % of world GDP

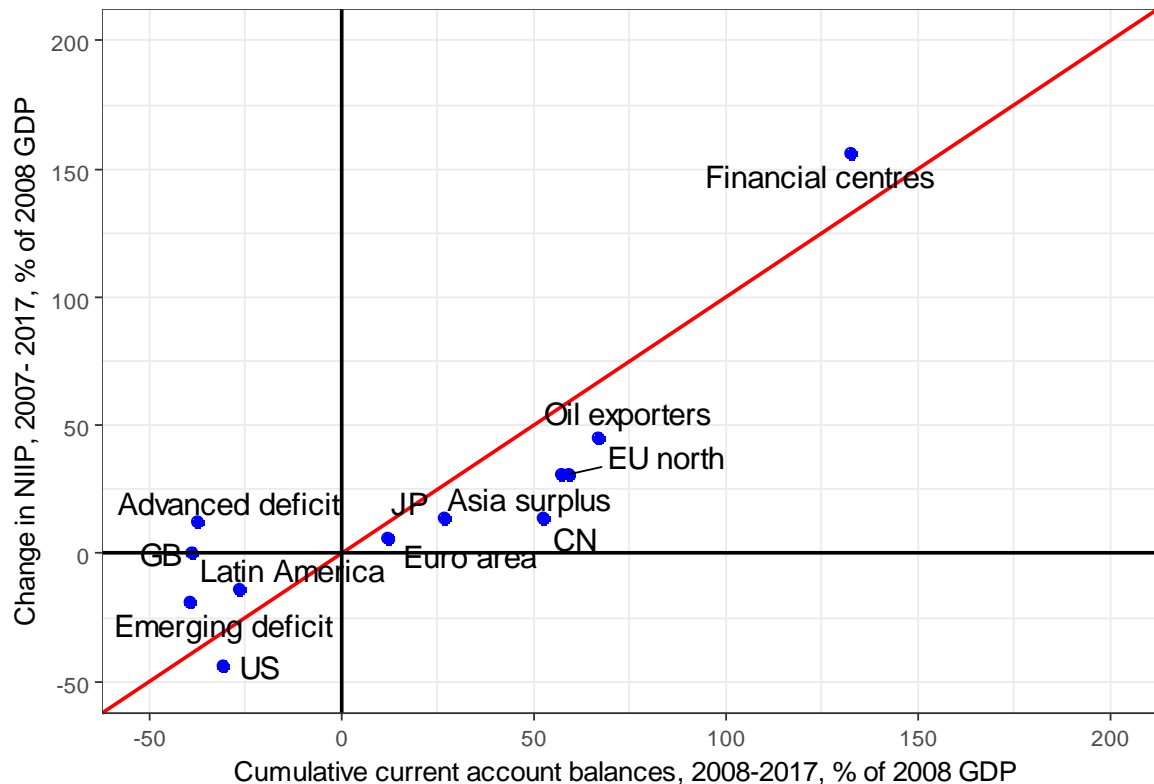


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

However, this consistency between stocks and flows is not observed for all groups. For instance, the net international investment position (NIIP) of the UK has improved significantly in spite of persistent current account deficits, whereas China’s NIIP has stayed roughly constant, although the country runs current account surpluses. This is because the NIIP is not only dependent on current account balances (i.e. flows) but also revaluations due to movements in exchange rates or assets’ market value (i.e. capital gains). Figure 3, plotting cumulative current accounts against the change in NIIP between 2007 and 2017, shows the overall effect of these revaluations on the net foreign asset stock for the individual country groups. In practice, valuation effects resulting from the currency mismatch between foreign assets and liabilities, as well as revaluations made on other grounds (e.g. capital gains), have had a moderating effect on net foreign asset positions throughout this period (i.e. valuation effects were

negative for countries accumulating surpluses i.e. those on the right of the y-axis and below the 45° line, and positive for countries accumulating deficits, i.e. those on the left of the y-axis and above the 45° line). The two exceptions to that rule are the US and the global financial centres: the US NIIP deteriorated more than the sum of its current account deficits, whereas the one of global financial centres combined rose over their cumulative current account surpluses.

Figure 3: Relationship between cumulative current account balance and change in NIIP 2007-2017, % of world GDP



Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The change in the NIIP equals the difference between the end-2017 and end-2007 net positions. The cumulative current account balances is the sum of the current account flows from 2008 to 2017. Both variables are rescaled by the value of nominal GDP in 2008. All variables are measured in USD.

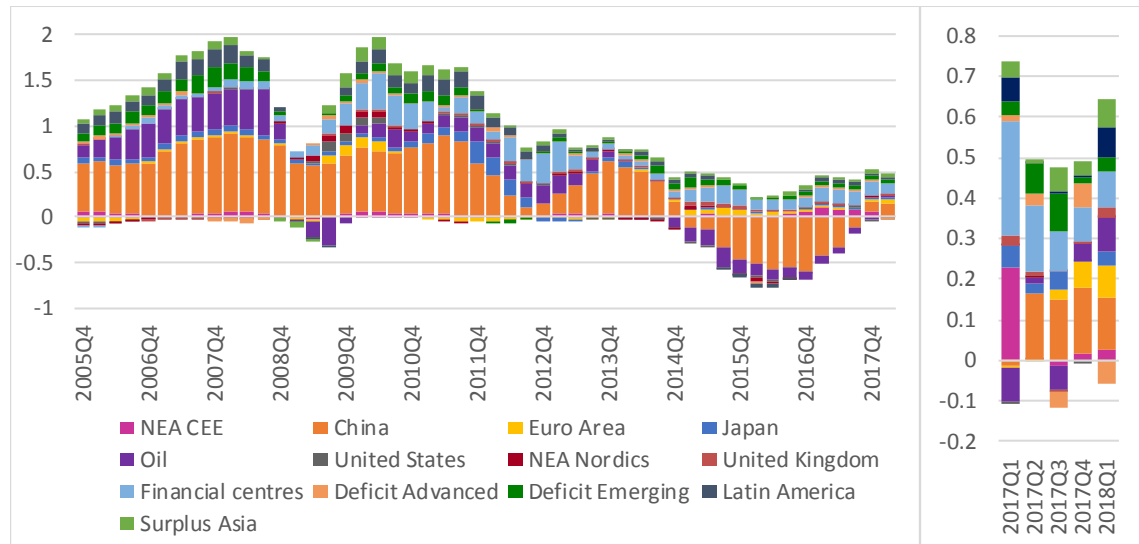
2.1.3. Financial account balances and changes in reserves

In financial terms, the net acquisition of foreign assets implied by current account surpluses can take two forms: cross-border financial investment, as reflected in the financial account, or the accumulation of official reserves. The distinction between the financial account and reserves is analytically important, as the former is, presumably, profit-maximizing financial investment carried out by diverse economic agents responding to diverse incentives, while the latter relates primarily to the actions of the government/monetary authority and reflects primarily policy choices with objectives other than profit.

A large literature has analysed the reasons for such reserve accumulation (such as precautionary reserve accumulation as self-insurance against future capital outflows, the need to build up liquidity buffers, the desire to keep a low currency exchange rate to support export growth, or saving large revenues from commodity sales, e.g. oil

exports) and the consequences of this accumulation (such as welfare losses for reserve-holding countries)¹.

Figure 4: Reserve and related items flows, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. Both the financial account balance and GDP are measured in USD.

The role of reserve accumulation in driving global imbalances has become less important since 2013 (see Figure 4). Last year’s report noted that starting in 2014, China and oil exporters — the world’s foremost reserve accumulating economies at that point — moved away from hoarding and even reduced their reserves significantly. In China, the fall in reserves was due to the People’s Bank of China’s (PBoC) efforts to stabilise the currency value amidst private capital outflows, to avoid a too strong depreciation of the yuan against the US dollar. Oil exporters on the other hand grappled with a large drop in oil prices, resulting in terms-of-trade deterioration and a fall in the trade balance and current account.

The combined effect of these reserve sales resulted in a global unloading of reserves up to and including 2016, and an ensuing reduction of their global stock. However, this trend came to an end in the first quarter of 2017 when China's reserve reduction slowed and then reversed. It is also interesting to note a longer-term trend: the persistent reserve accumulation of reserves in global financial centres (Hong Kong, Singapore and Switzerland) after the global financial crisis.

2.2. United States of America

The US continues to be the world’s largest recipient of cross-border capital flows in net terms, despite significant changes in the domestic and global context.

The aftermath of the financial crisis set the stage for the current divergence between advanced economies, in terms of balance of payments among other things. From 2009 to 2013 the US administration put in place an accommodative monetary policy and a

¹ See for example Angeloni et al (2011).

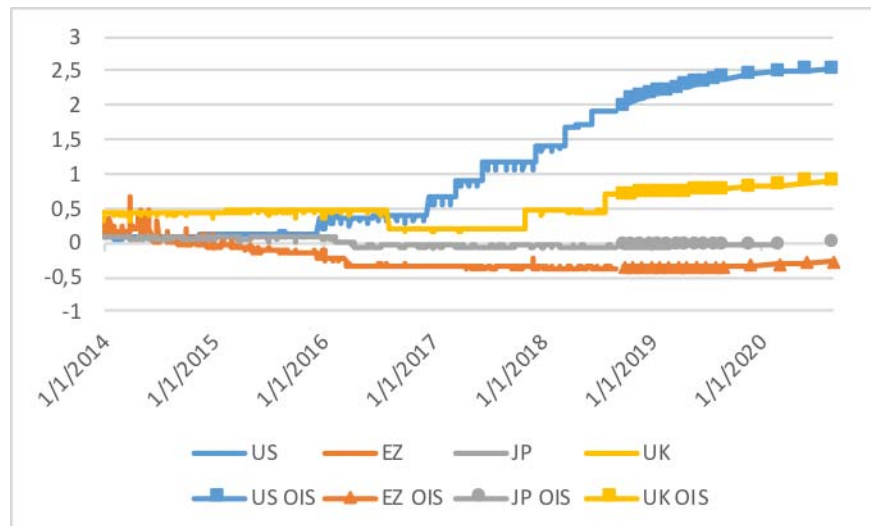
moderate fiscal expansion, whereas the euro area quickly (as soon as 2010 and up to 2014) embarked on a large-scale fiscal consolidation, while the ECB ran a more conservative monetary policy than the Fed (waiting until 2015 to launch its own QE programme).

At the end of 2008, and as the US plunged into recession, the Federal Reserve pursued a zero-interest rate policy. After cutting its policy rate to zero, the Fed also implemented three rounds of quantitative easing (QE): QE1 with unsterilized purchases began in Q1 2009 and went on for a year, while QE2 lasted from Q4 2010 to Q2 2011. The last program, QE3, spanned the last quarter of 2012 and the whole year 2013. By contrast, the ECB did not implement large-scale asset purchases until 2015 and even increased policy rates briefly in 2011.

One important consequence of the cut in the Fed policy rate and the implementation of QE programmes was a yield squeeze in the US, which deterred investors from buying US debt securities, as the fall in portfolio investment inflow suggests. However, the current account balance was largely unchanged during that period despite a one-off reduction post-financial crisis (from 5% down to 2% of US GDP). The effective exchange rate, both real and nominal, remained broadly stable.

The economic recovery proceeded at a faster pace in the US than in other advanced countries, in particular in Japan and in the euro area, which was caught in a double-dip recession due to the debt crisis affecting the euro area periphery. As a result, in 2013-14, investors began anticipating interest rate hikes by the Federal Reserve and the associated interest rate differentials with other advanced economies. This move, which actually started at the end of 2015 (see Figure 5), has been pivotal for capital flows in the US and globally.

Figure 5: Short-term interest rates and expectations as of 31/08/2018



Source: Bloomberg.

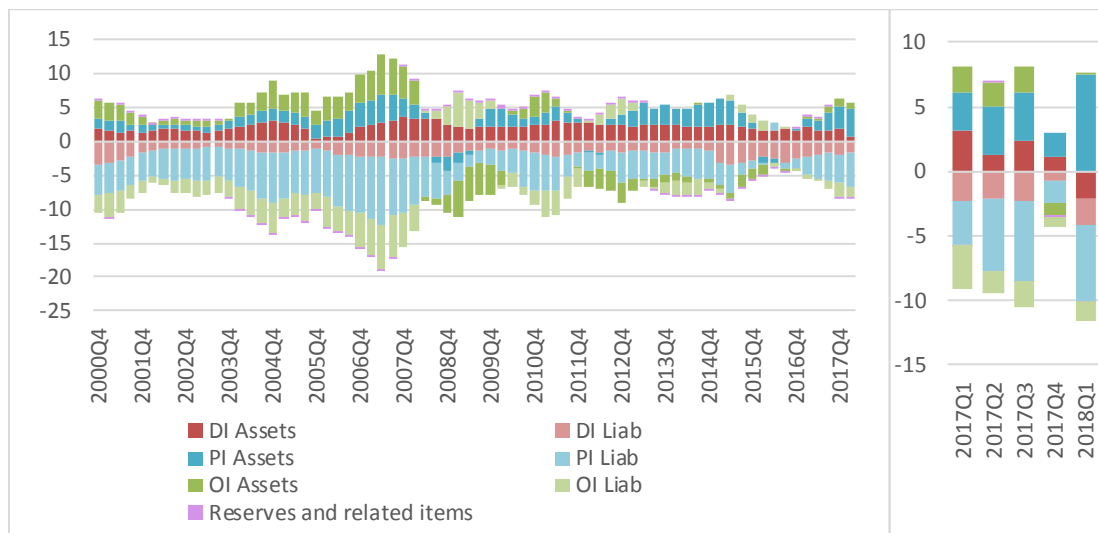
Notes: Effective Federal Funds Rate (US), EONIA (EZ), MUTAN (JP) SONIA (UK). The points correspond to the overnight indexed swaps (OIS) at different horizons.

The decomposition of gross flows between the US and the rest of the world (Figure 6) shows that the biggest change occurred in portfolio investment, whereby both residents' investment in foreign portfolio securities and non-residents' purchases of US securities changed sign in 2014-15. This was the combined result of three main factors. First, domestic investors, in search of higher yields abroad in times of low

interest rates in the US, turned away from emerging markets back to US assets, which was reflected in the lower flow of foreign portfolio assets acquisitions. Second, Eurozone and Japanese investors expanded their purchases of foreign liabilities. As suggested by Setser (2018a), between 2014 and the end of 2017, euro area residents and Japanese non-bank financial institutions combined added about 2 trillion USD worth of foreign bonds to their portfolio and these were primarily US securities. Finally, at roughly the same time, China (mainly, but also oil exporters) liquidated large amounts of foreign exchange reserves, primarily in US dollar. This development offset to some extent the increased demand for US securities.

These patterns coincided with the strong appreciation of the US dollar. Between mid-2014 and the beginning of 2017, the US dollar appreciated (in nominal terms) against a basket of currencies (nominal effective exchange rate – NEER) by about 25% (see Figure 7). The appreciation of the US real effective exchange rate during the same period was of a similar magnitude. To sum it up, renewed US residents’ appetite for domestic securities and foreign demand previously coming from China (official sector selling reserves) compensated by the euro area and Japan (because of the interest rate differential) resulted in an increased demand for US debt portfolio securities and an appreciation of the US dollar.

Figure 6: United States gross financial flows by instrument, % of GDP

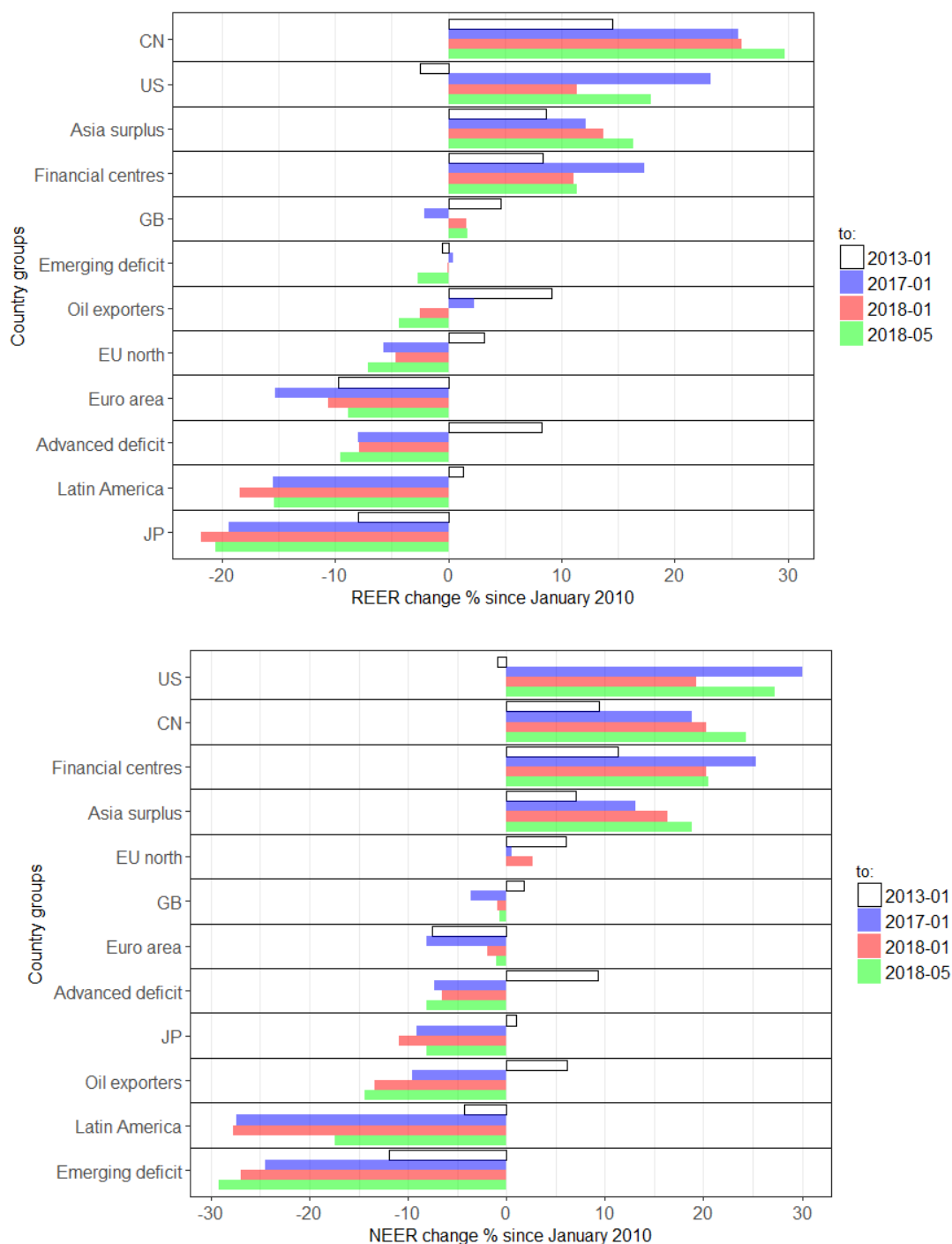


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

Subsequently, monetary policy in the US indeed diverged from that of other major advanced economies. After seven years of targeting a Federal Funds Rate range of 0%-0.25%, the Federal Reserve made its first interest rate hike in December 2015, lifting the band by 25 basis points. Another one followed a year later and three more in the course of 2017; by the end of 2017, the Federal Funds Target Range was 1.25%-1.50%. The Federal Reserve has hiked twice more since then (at the beginning of July 2018, the band stood at 1.75%-2%). Moreover, the Fed started reducing its balance sheet in October 2017 meaning that a higher share of US debt needed to be covered by private demand, from the US and the rest of the world (in September 2018 the Fed’s balance sheet had already been curbed by around 250 billion dollars since October 2017, from a 4.5 trillion dollar high).

Figure 7: Change in REER and NEER by country group



Source: Bruegel based on Darvas (2012) and the Bank of International Settlements Effective exchange rate indices

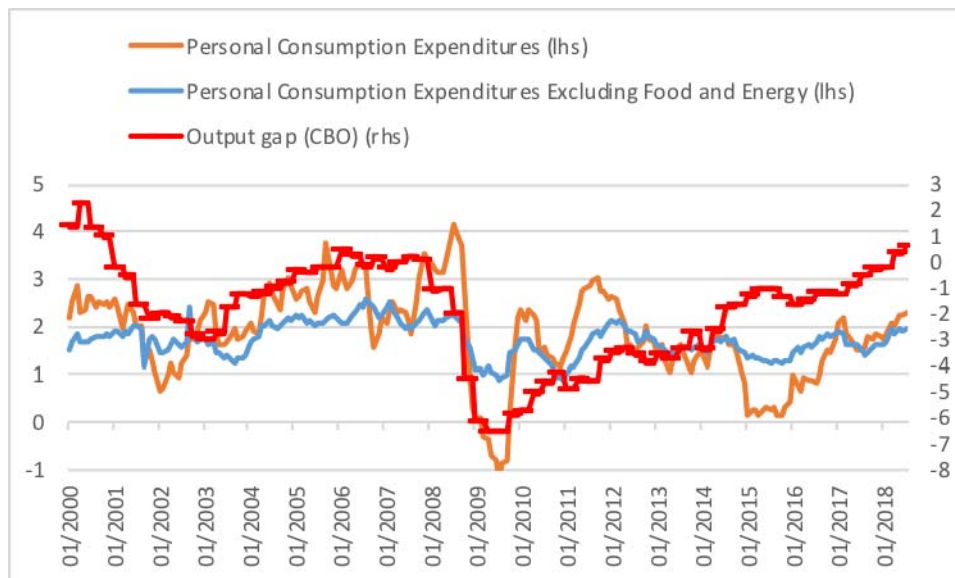
Meanwhile, the value of the US dollar fluctuated around its 2015 level. The appreciation essentially ended by 2015; after a mild correction throughout most of 2016, the nominal effective exchange rate went back to its previous highs in the aftermath of the US presidential elections. Then, in 2017 its late 2016 appreciation reverted and the dollar fell back to its 2015 level. Since 2016, financial account gross

flows have been on the rise, as US investors continued purchasing foreign securities (on the asset side), and reserve sales by the Chinese official sector slowed down and then stopped (on the liability side).

Interest rate differentials vis-a-vis the euro area and Japan and their evolution against expectations will also have a key impact on the flow of capital and exchange rates between advanced economies going forward. If normalisation proceeds faster in the euro area and Japan and interest differential narrow, portfolio investment in the latter might also return home. However, most factors, including interest rate differentials, point to a wider US current account deficit in the short and medium-term.

First, market expectations regarding the future path of policy rates fall short of the Fed's projections. The market is expecting a 50 bps increase in US short-term rates (2.5% from 2%, see Figure 5) by the end of next year, while forecasting constant interest rates in the euro area and Japan during the same period. This view is at odds with the latest FOMC member projection for the Federal Funds target, dating back to June 2018. In particular, with the median FOMC projection at 3.1%, the market is currently expecting the Federal Reserve to tighten less than the Fed itself.

Figure 8: Inflation, core inflation and output gap in the US



Source: FRED database and Congressional Budget Office (CBO).

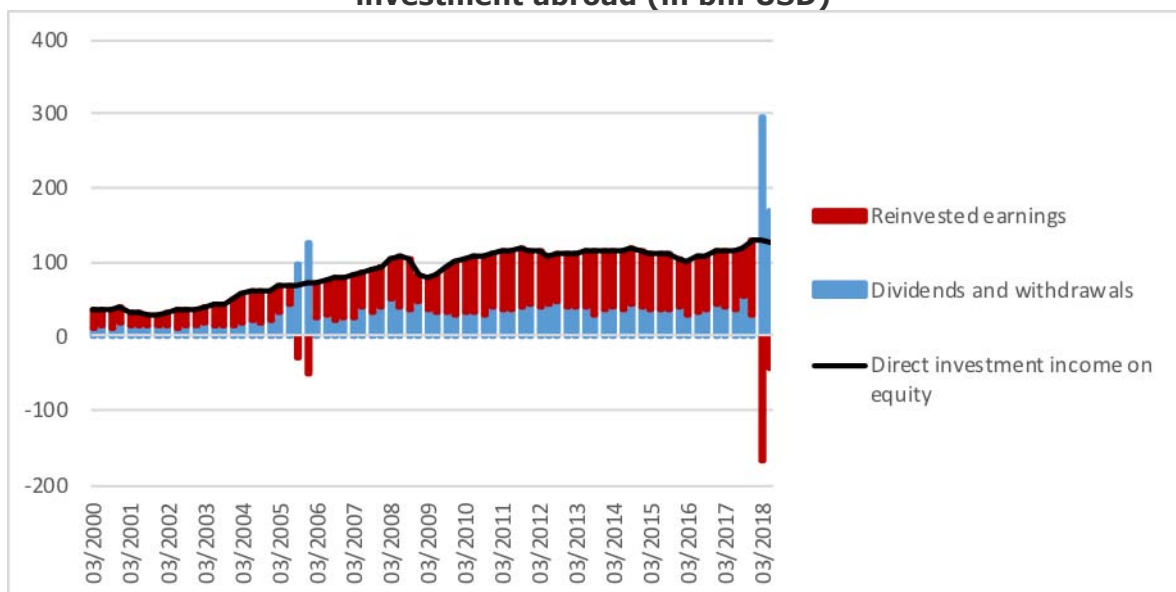
One reason could be that the Fed's view on the pro-cyclical expansionary stance of the US fiscal policy is stronger than the market's. A fiscal stimulus as the economy is near full employment could lead to overheating if the Federal Reserve does not tighten forcefully. Inflation and the output gap currently indicate that the US is near potential and the Fed near its inflation target (see Figure 8). The combination of fiscal expansion and monetary tightening would have a deteriorating effect on the current account balance. Moreover, interest rate differentials would also mechanically affect current account balances through interest expenditure.

Importantly, an increase in the US current account deficit would go against the declared policy objectives of the current US administration to reduce the deficit, and could precipitate the implementation of protectionist policies such as the imposition of trade tariffs.

Another factor that could add to the capital inflows is the repatriation of US multinationals' offshore profits as a result of the recent tax reform. In balance of payment accounting, US multinational enterprises (MNEs) foreign affiliates' profits constitute income from direct investment equity assets abroad and, thus, enter the current account via the income account (i.e. repatriated dividends are considered an inflow of capital to the US). If these earnings are repatriated to the US, they are recorded as dividends and are balanced by an entry in the financial account reflecting the payment. The residual that is not repatriated is accounted for as reinvested earnings, in which case the corresponding entry balancing the accounts is a direct investment asset transaction in the financial account (i.e. reinvested dividends are considered as an outflow of capital from the US).

The 2017 Tax Cuts and Jobs Act (TCJA) 'requires U.S. parent companies to pay a one-time tax on their accumulated earnings held abroad, but generally eliminates taxes on repatriated earnings' (Bureau of Economic Analysis, 2018b) among other provisions. US corporates took advantage of this change in policy to repatriate earnings: 'with the revised statistics for the first quarter of 2018, earnings were \$128.1 billion, with dividends and withdrawals of \$294.9 billion' (Bureau of Economic Analysis, 2018b). In other words, reinvested earnings decreased as affiliates 'redeemed' the direct investment claims of the parent companies, i.e. the accumulated prior earnings, and the residual turned negative (Figure 9). Figure 9 also allows a comparison between the impact of this tax holiday and of the previous one that took place in 2004.

Figure 9: Income on equity, dividends and reinvested earnings, US direct investment abroad (in bn. USD)



Source: Bureau of Economic Analysis

This repatriation of profits had implications for the US' financial account, through the decrease in direct investment assets balanced by associated increases in assets or decreases in liabilities of different investment categories depending on how the payment to parent companies was made. Therefore, the repatriation of profits as dividends had a small effect on the overall current and financial account balances (amounting only to the foreign tax paid on dividends according to Bureau of Economic Analysis, 2018a). On the contrary, it had a sizeable effect on the composition of the financial account balance and gross financial account flows. In Q1 2018, the net

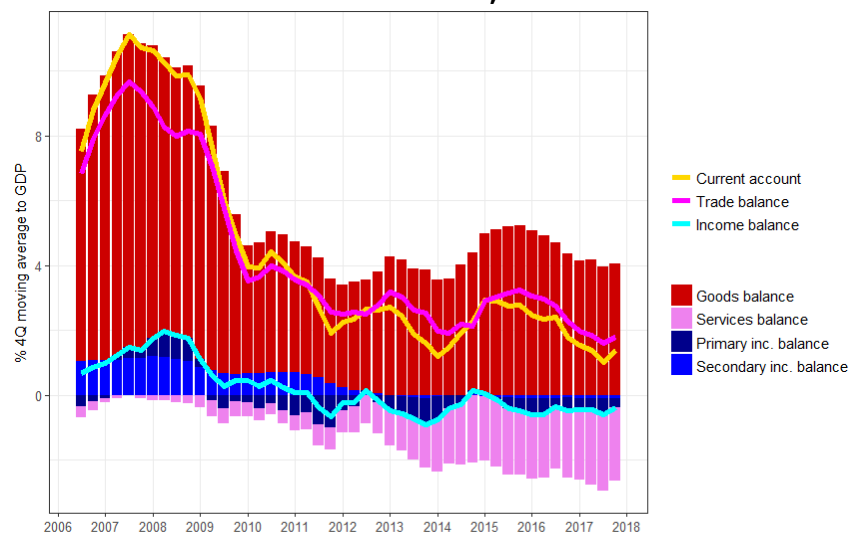
balance of direct investment turned negative to the tune of 4% of US GDP (see Figure 6); this was essentially the result of the decrease in gross direct investment assets. It was also the lowest quarterly net balance in direct investment since 2000, below the -3.4% of Q4 2005 (previous repatriation of profits).

In the EU, one would expect the accounts of countries where US affiliates operate and MNEs book an important share of their profits, i.e. Ireland, Luxembourg and the Netherlands, to mirror the repatriation of profits. However, the corresponding items (dividends and withdrawals; reinvested earnings) in the income accounts of these countries have not changed in the expected direction.

2.3. China

China has been on the opposite end of the US in terms of capital flows, running a very sizeable current account surplus. Nevertheless, the contribution of China to global imbalances has decreased significantly since its 2007 highs. The trade surplus in goods – i.e. the biggest component of the current account – has declined as a share of Chinese GDP from 9% in 2007 to only 2% in 2017. And though China has grown strongly in the same period, the global importance of the Chinese surplus (measured as a share of world GDP, see Figure 1) is nevertheless lower than at the eve and in the aftermath of the global financial crisis (Figure 10). Some caveats should be identified at this point. Firstly, as a share of world GDP excluding China, the fall in the Chinese current account surplus is less impressive. This metric is more representative of the task facing the rest of the world, i.e. the level of Chinese savings that the rest of the world has to absorb relative to its size. Secondly, starting in 2014, the recorded value of service imports corresponding to tourism shot up inexplicably; there is a strong possibility that part of this increase is in reality capital flowing out of China, meaning that the current account balance is actually higher (as suggested by Wong, 2017). What stands out is that despite the currency appreciation (see below), the goods surplus has not really decreased. One reason could be the low price of oil. Another reason could be an increase in the domestic content of Chinese exports, leading to a reduction in the imports of manufactures (see Setser, 2018b).

Figure 10: China trade and income balance, % of GDP



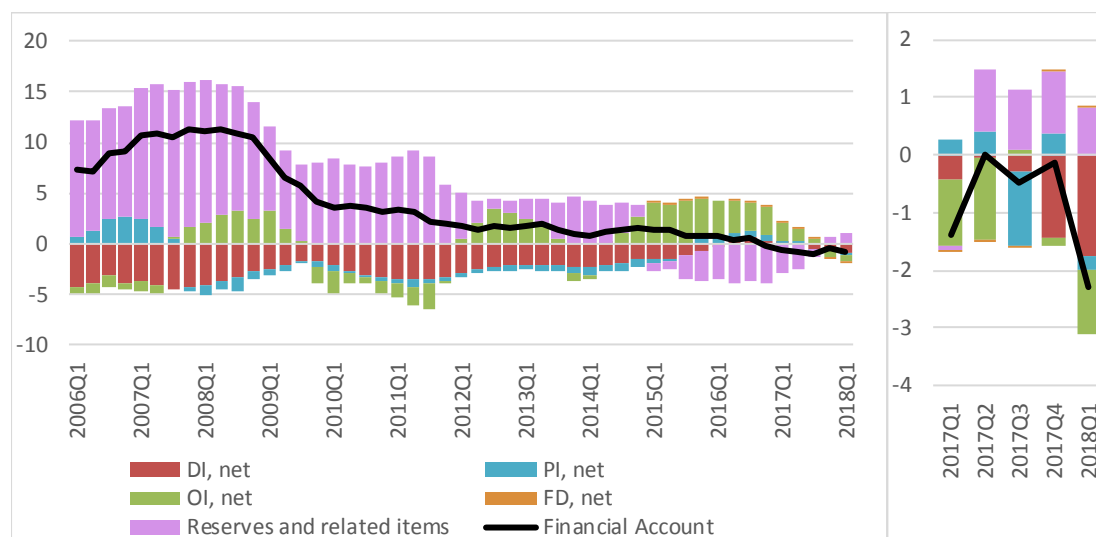
Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The current account equals the sum of the trade balance and the income balance. The trade balance is equal to the sum goods and the services balances, while the income balance to the sum of the primary and the secondary income balances.

Therefore, the decrease in China's current account balance should not be exaggerated. In addition, this decrease might be temporary, as it has been supported by strong credit growth fuelling investment and, to some extent, fiscal deficits that may not be sustainable in the long-run. Finally, the national gross savings rate of China is structurally very high in comparison to similar economies, meaning that Chinese household consumption is still weak. While before 2010 Chinese growth relied heavily on foreign demand – and thus exported a lot savings to the rest of the world – after the global financial crisis domestic investment has to a certain extent replaced exports in supporting aggregate demand. The high levels of investment could result in low returns or losses and ultimately higher financial risks for the Chinese banking system. Either way, through a slowdown of credit or a downright banking crisis, China's current account surplus would increase from its current levels, which in absolute levels means a record high level flow. According to the IMF (2018a) and its External Sector Report, China's current account surplus for 2017 was only moderately stronger than the level suggested by fundamentals and 'desired' policies. This finding is consistent with the European Commission's own assessment (Coutinho et al, 2018). In particular, that level, called norm current account and derived using the IMF's External Balance Assessment (EBA) methodology, was estimated to be 0.2 to 3.2 percentage points of GDP lower than the actual balance China runs, the latter adjusted for the cycle. Importantly, however, according to the IMF model, China's implemented fiscal and credit policies actually contributed to close the gap: if these policies were set to 'desirable' levels, all else equal, the current account balance would rise by 1.6 percentage points of GDP.

Furthermore, China's exchange rate policy is an important part of the story. Since 2008, the decrease in the current account surplus has been supported by a sizeable appreciation of the Chinese renminbi. China has moved to a "managed floating currency exchange rate regime based on market supply and demand with reference to a basket of currencies" (Xiaolian, 2010) since 2005. In practice though, from 2005 to 2015, the Chinese policy targeted the Chinese renminbi-US dollar exchange rate within an interval around a central parity. At the discretion of the authorities, that central parity has been kept stable during some periods and at other times authorities let the renminbi appreciate. Starting in August 2015, however, Chinese authorities announced important steps in reforming the exchange rate policy. Firstly, they made the central parity depend on the closing rate of the previous day. Secondly, in December 2015, they disclosed the China Foreign Exchange Trade System (CFETS) basket of currencies. In 2016, the Chinese renminbi became part of the IMF's basket of Special Drawing Rights (SDR) as a reserve currency. And although China is still a country where the financial account is relatively restricted (see measures in Appendix 1), the efforts to internationalise the currency and make its value more market-determined are to some extent reflected in the modest opening of the financial account captured by the FKRSU measure (Figure 68).

In last year's report, we discussed at length the 2015-16 episode of capital outflow from China that followed these changes in the exchange rate regime. The Chinese renminbi depreciated but the Chinese authorities used a significant share of their reserves and a tightening of capital controls in order to avoid a too quick depreciation of the currency.

Figure 11: China net financial flows by instrument, % of GDP

Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

The balance of payment data (see Figure 11) shows that the aforementioned episode had come to an end by 2017. Throughout the year, the non-reserve part of the financial account saw a net inflow, while Chinese authorities resumed reserve accumulation. Meanwhile the currency recovered its strength in the course of 2017 (and was still in an appreciating path in the first half of 2018). The balance of payments series shows that the depreciation of the Chinese currency coincides with the net flow of "other investment" (OI). Moreover, in last year's report, we also noted the sharp movement of the net FDI balance, from a net inflow to balanced flows. That shift was mainly driven by an increase in direct investment from Chinese residents abroad. We interpreted this as sign of a structural trend in the Chinese economy. However, the latest readings from the balance of payments show that at least part of the rise in outbound FDI was temporary. As Setser (2017b) puts it: "we usually don't think of FDI as 'hot money' but the surge in outflows in late 2015 and the first half of 2016 clearly was driven by speculative bets against the yuan (as at the time the government was encouraging firms to go out, so this was a permitted channel for outflows, and then things got a little out of hand)".

Therefore, by 2017, there was a newfound 'flow' balance in the balance of payments, owing to a combination of: foreign exchange intervention and capital controls, the weakness of the US dollar, the rebound in the Chinese economy – which synchronised the Chinese with the Fed's tightening cycle.

However, this balance might be disrupted in the future: the forward-looking question is what China's response to a US trade war would be and whether it could turn into a currency war. In particular, a weaker renminbi could be used to offset the costs incurred by higher tariffs in what is an asymmetric trade relationship (i.e. retaliation would not be an effective response). After all, China still sits on top of a very large amount of reserves, including a lot of US Treasuries, which has increased during 2017. The selling of US Treasuries in reserves could add significantly to the amount that non-Chinese demand would have to reach, given the shrinking of the Fed balance sheet and the fiscal expansion in the US. From the Chinese perspective, the challenge would be to engineer a depreciation without losing control of exchange rate policy and

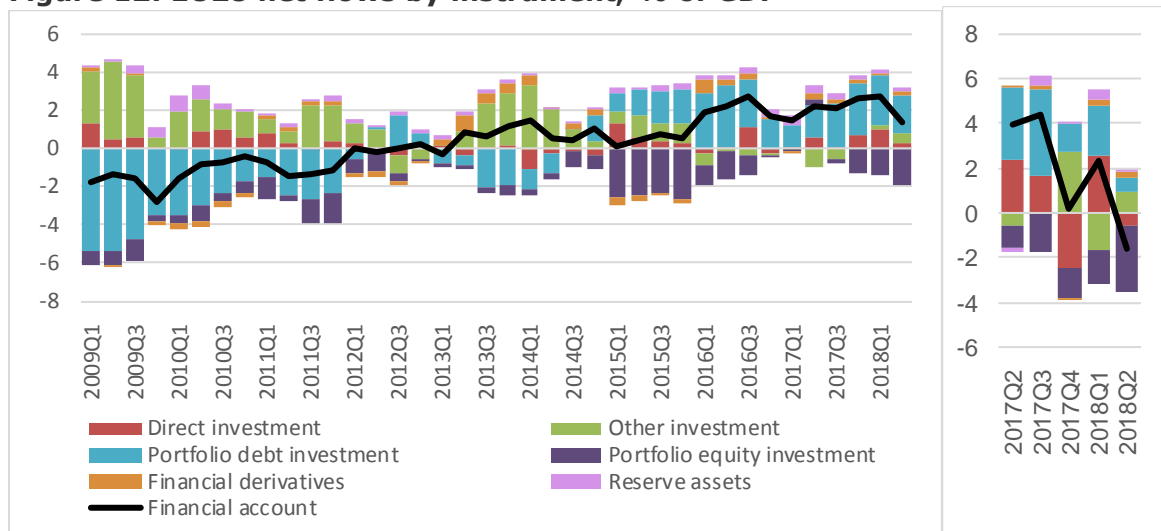
bringing about capital flight. The 2015/16 episode provides some evidence that Chinese authorities are capable of preventing that. Interestingly, the gains the renminbi recorded vis-à-vis the US dollar during the first half of 2018 were wiped out during June 2018.

An alternative response going in the opposite direction would be to sell US Treasuries to pressure the US government. However, this would lead to an appreciation of the renminbi and damage Chinese exports further.

2.4. European Union

The EU is a global player in financial flows due to its role in trade and its status of financial centre – both the euro and the sterling serve as global payment and reserve currencies. Since the crisis, during which some of its most important members experienced a current account reversal, the EU as a whole has exhibited a positive financial account balance (see Figure 12).

Figure 12: EU28 net flows by instrument, % of GDP

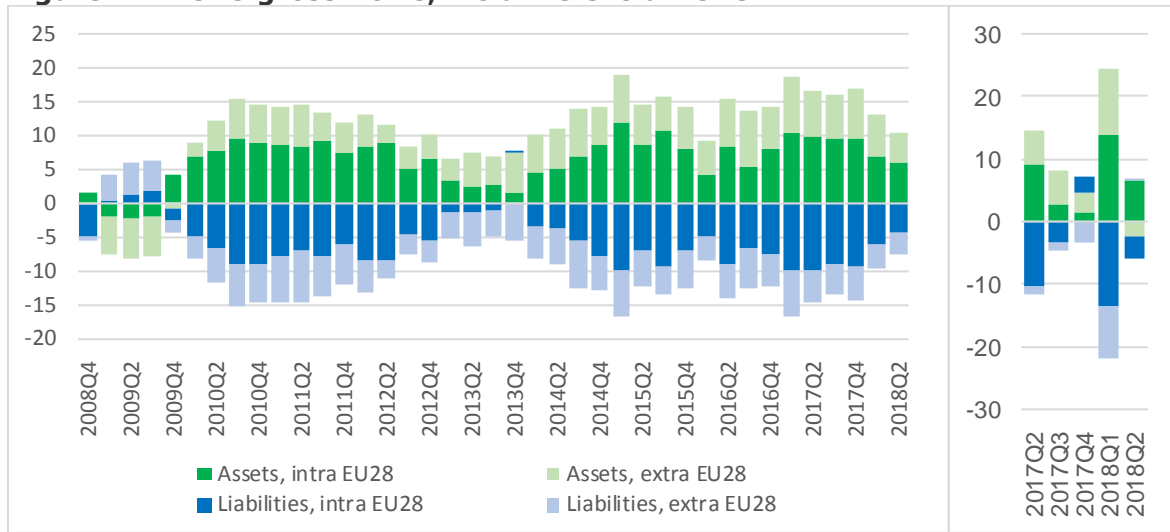


Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR

EU-28 gross flows are primarily flows within the EU, although a significant share of flows takes place with the rest of the world (see Figure 14)

Figure 14: EU28 gross flows, intra- vs extra-EU28

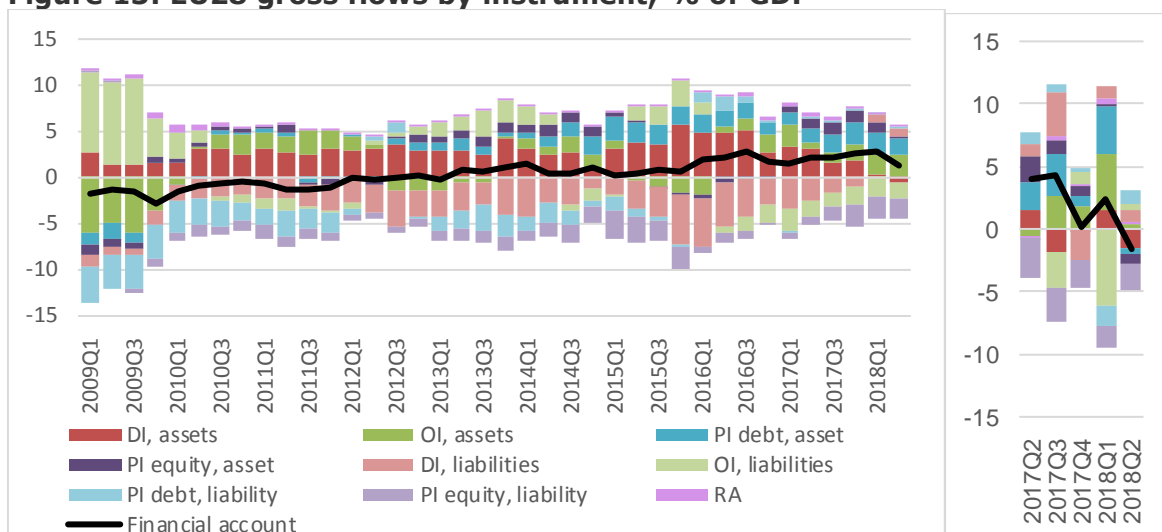


Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR

The overall level of extra-EU28 gross flows in 2017 and at the beginning of 2018 was comparable to the previous years. However, there were notable changes in the composition of these flows. Since 2013, capital had been flowing into and out of the EU28 mainly in the form of FDI and portfolio investment (see Figure 13). In the course of 2017 and the first two quarters of 2018, foreign direct investment flows, both on the asset and on the liability side, fell to zero. During the same period, increased acquisitions of other investment assets and incurrence of portfolio equity liabilities offset this reduction in gross flows.

Figure 13: EU28 gross flows by instrument, % of GDP

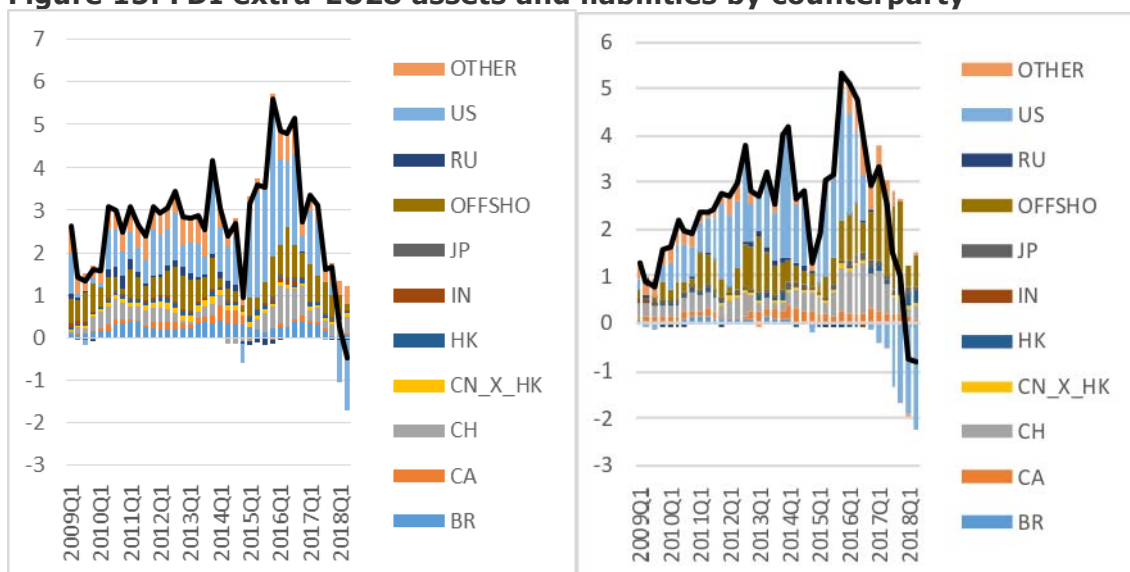


Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Financial derivative gross assets and liabilities are not shown because they are not reported as such. Both the financial account flows and GDP are measured in EUR.

From a geographical point of view, the drop in FDI flows was entirely driven by bilateral flows with the US: flows of FDI assets and liabilities were strongly positive in 2015/16, slowed down in 2017 and began decreasing in 2018 (Figure 15). It is unlikely that this is the effect of the Tax Cuts and Jobs Act provisions, as the timing of the decrease predates that of the TCJA. It is more likely that it reflects the investment risk of MNEs facing protectionist measures.

Figure 15: FDI extra-EU28 assets and liabilities by counterparty

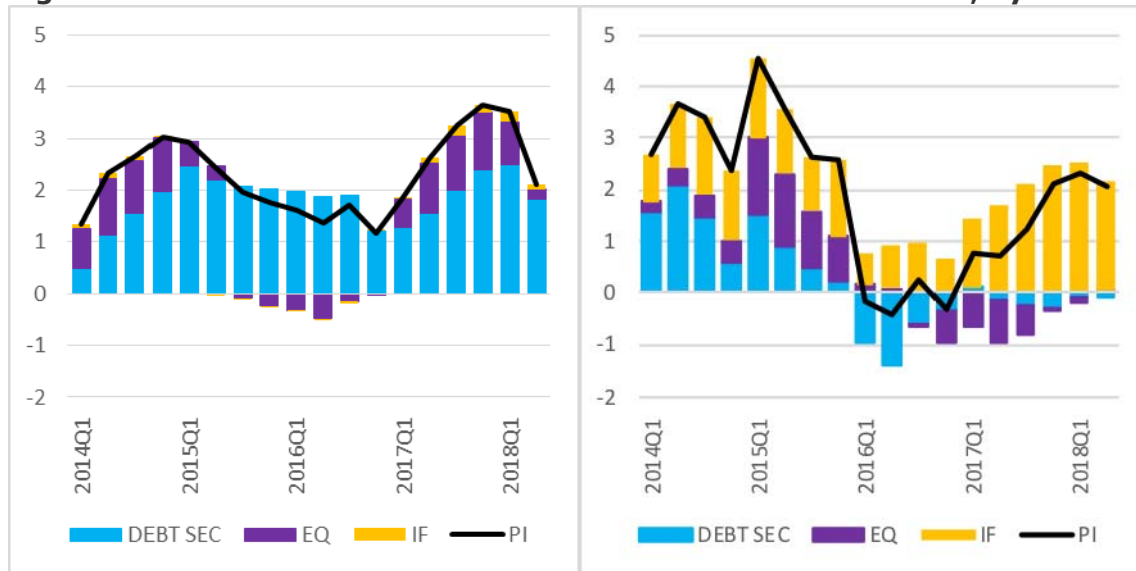


Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: The figure shows a 4Q backward-looking average. RU=Russia, OFFSHO = Offshore Financial Centres (OFC) as defined by Eurostat, JP = Japan, IN = India, HK = Hong Kong, CN_X_HK = China excl. Hong Kong, CH = Switzerland, CA = Canada and BR = Brazil.

Currently, the lack of available Eurostat data does not allow tracking the counterparty in portfolio liabilities. It is, however, possible to observe that the increase in equity liabilities is driven in particular by the acquisition of investment fund shares/units (based in the euro area, as explained below) by foreign investors. Furthermore, the large acquisitions of US debt securities by EU residents since 2014 — a trend that stems from the euro area but also appears in the aggregate EU28 balance of payments — continues unabated (Figure 16).

Figure 16: Portfolio investment extra-EU28 assets and liabilities, by item

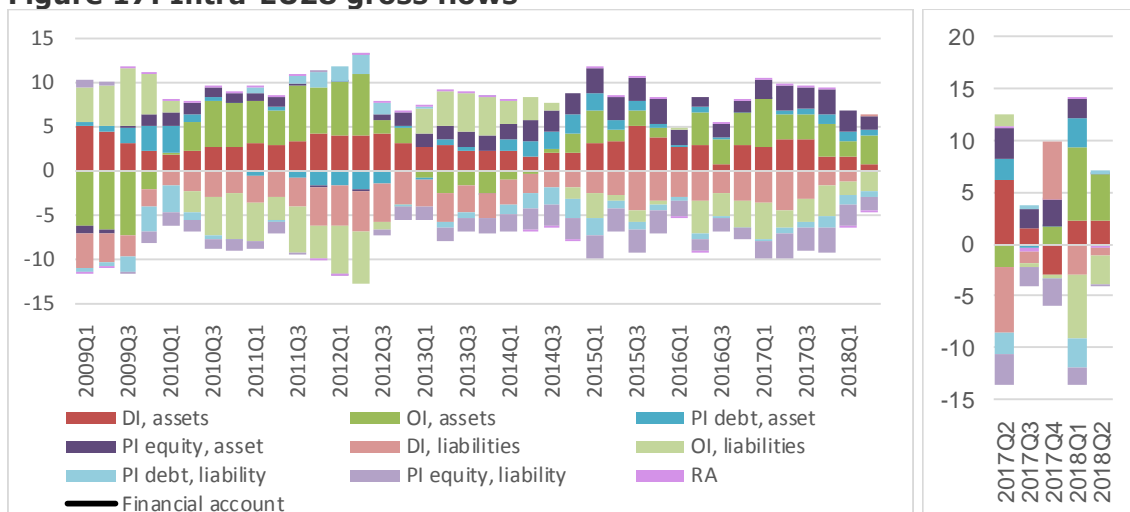


Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: The figure shows a 4Q backward-looking average. PI = portfolio investment, IF = investment fund share/units, EQ = equity, DEBT SEC = debt securities.

Intra-EU flows appear weaker on an annual basis in the first two quarters of 2018 compared to 2016 and 2017 (Figure 17). In this case too, lower FDI accounts for the change. Flows of other investment appear robust since 2015 but mainly reflect monetary policy operations in the euro area, not an increase in interbank flows: flows are recorded almost entirely under the currency and deposit instrument, not loans (Figure 18). Finally, starting in 2015, intra-EU28 gross flows of debt securities have been weak, and equity flows, in particular investment fund shares/units, have gained relative importance in the portfolio investment category (Figure 18).

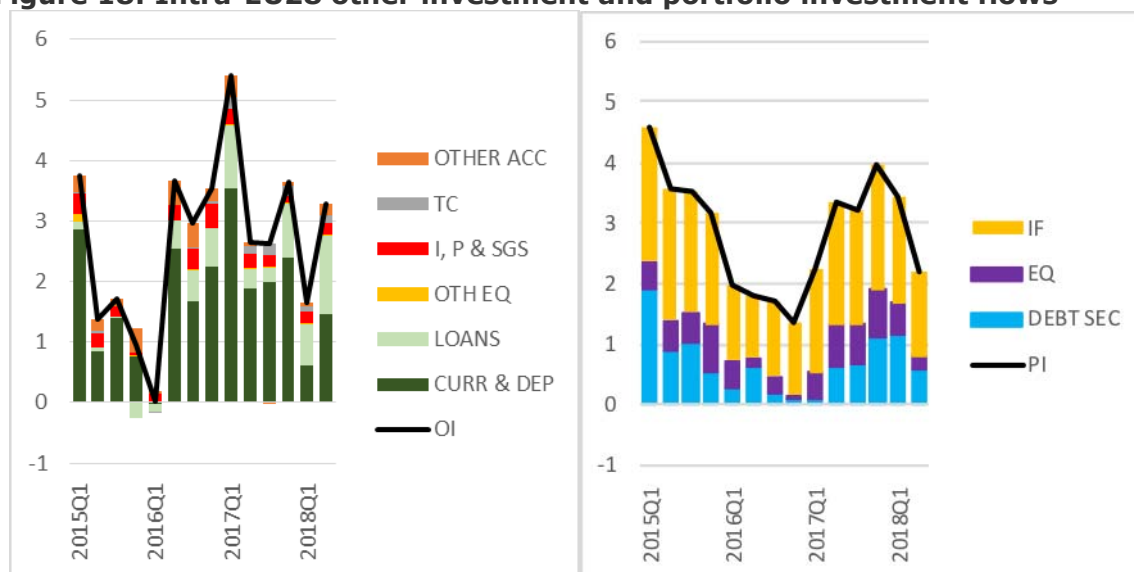
Figure 17: Intra-EU28 gross flows



Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Financial derivative gross assets and liabilities are not shown because they are not reported as such. Both the financial account flows and GDP are measured in EUR.

Figure 18: Intra-EU28 other investment and portfolio investment flows



Source: Eurostat (bop_eu6_q & namq_10_gdp)

Notes: The figure shows a 4Q backward-looking average. OI = other investment, PI = portfolio investment, OTHER ACC= other accounts receivable/payable, TC = trade credit and advances, I, P & SGS = insurance, pensions and standardised guarantee schemes (unavailable; calculated as a residual), OTH EQ = other equity, CURR & DEP = currency and deposits, IF = investment fund share/units, EQ = equity, DEBT SEC = debt securities.

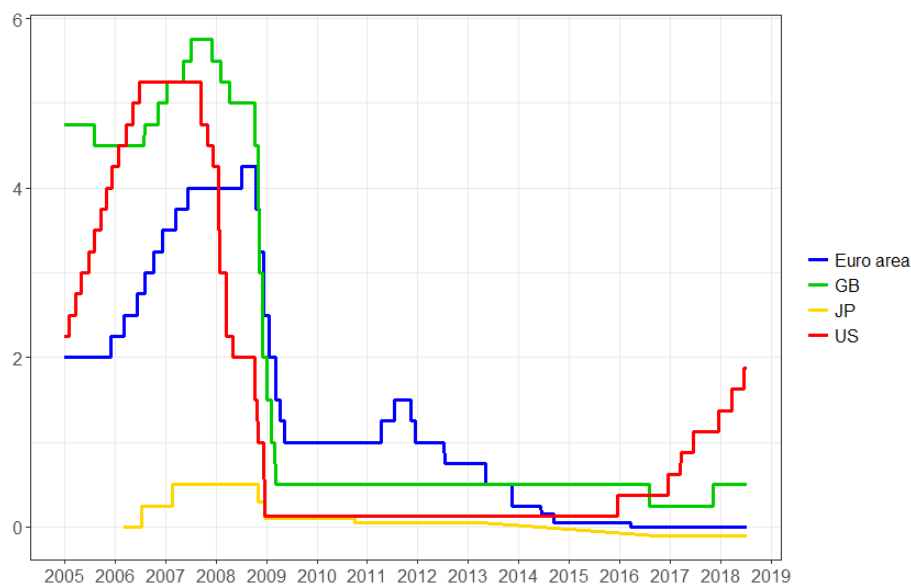
However, it also makes sense to differentiate between components of the EU, e.g. the euro area and the UK, from a global capital flows perspective alongside jurisdictions such as the US or China: monetary policies and, by consequence, currencies and exchange rates matter. Therefore, from this point onward, we limit the discussion in this global section to the euro area (as a whole) and to the United Kingdom (UK) due

to their systemic importance. The remaining country groups (non-euro area CEE, non-euro area Nordics), as well as subsets of the euro area (either sub-groups or individual countries), are analysed at length in the dedicated EU section.

2.4.1. Euro area

The post-financial crisis recovery of the euro area pales in comparison to the one of the US, due to the subsequent sovereign debt crisis and the double-dip recession that the monetary union underwent. During that crisis, several euro area governments implemented significant fiscal consolidation simultaneously while public and private investment remained subdued. As a result, the current account (and financial account) balance of the entire euro area rose from 0% to over 3% of GDP. That increase also reflects an asymmetric adjustment taking place in the euro area, whereby deficit countries improved their balances while surplus countries – notably Germany and the Netherlands – continued to run strong surpluses.

Figure 19: Central banks' monetary policy rates



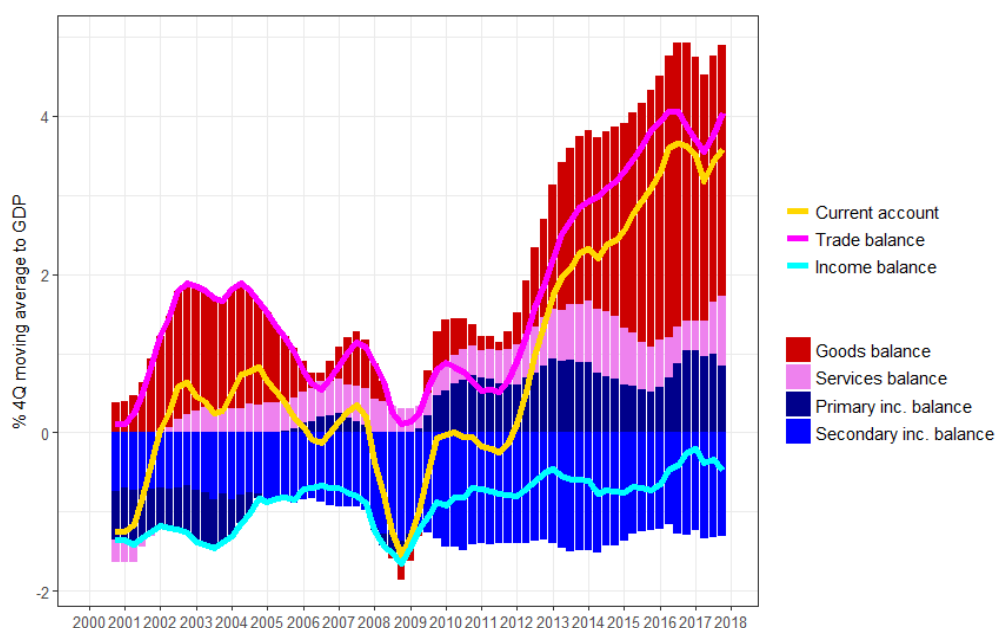
Source: Bank of International Settlements, Policy rates

In the period following the sovereign debt crisis, inflation remained well below the “under, but close to, 2%” target of the European Central Bank (ECB), with the threat of deflation creeping up dangerously. This led the ECB to implement a number of measures. Firstly, it gradually reduced its policy rates (see Figure 19), and at -0.4 percent its deposit rate is even in slightly negative territory. The ECB also very quickly provided long-term lending to European banks with favourable conditions. Since 2013, the ECB has provided forward guidance on the future path of its policy interest rates. Finally, the ECB has put in place a diversified asset purchase programme (APP) that originally included Asset Backed Securities (ABS) and covered bonds, but was vastly expanded in 2015 with the inclusion of sovereign and European supranational bonds (PSPP) and, later, of corporate and local government bonds.

With a subdued domestic demand and a depreciation of the euro in real terms, the trade balance – and by consequence the current account – of the euro area grew substantially during and in the aftermath of the double-dip recession. Meanwhile, on the financial side, private investors in Europe started investing strongly in bonds from

the rest of the world in 2014. And at the same time, coinciding with the advent of the APP, non-residents decreased their holdings of euro area debt securities. Foreign investors might have lost interest in euro-area debt markets because of the low euro-area government and corporate bond yields. In this context, Hüttl and Merler (2016) looked at the impact of quantitative easing on sovereign debt holdings in the euro area. They found that increases in central banks holdings of sovereign debt are offset by decreases in holdings of other institutional sectors. In Germany and France in particular, non-resident holdings are diminishing.

Figure 20: Euro Area trade and income balance, % of GDP



Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The current account equals the sum of the trade balance and the income balance. The trade balance is equal to the sum goods and the services balances, while the income balance to the sum of the primary and the secondary income balances.

However, the euro-area recovery that started in 2013 accelerated in 2017, and expectations about future growth and inflation improved. The NEER of the euro appreciated strongly in 2017 and the first half of 2018 (and the real exchange rate followed suit). Further, despite the political risk coming from multiple elections across the monetary union, balance of payments flows showed little change.

As a result of the recovery and the decrease in deflation risk, the ECB has announced after the meeting of the Governing Council in June 2018 that – after four years of QE, one expansion (in size), three extensions (in duration), and several changes to the programme’s rules – it anticipated that the net asset purchases would end at the end of 2018 (after 4 months of reduced purchases between September and December).

Regarding interest rates, the ECB has not yet committed to rate hikes but the timing of the future increases is becoming more precise as the ECB went from saying that rates were expected to remain at their present levels “for an extended period of time” (in April 2018) to “at least through the summer of 2019” (in June 2018), hinting that rates could rise at the end of 2019. As a result, financial markets and ECB watchers are now expecting the first rates hikes since 2011 for next year.

This future tightening of the ECB's monetary policy will undoubtedly impact the external accounts of the euro area, as the desynchronization of monetary policies and business cycles between the euro area and other regions – and in particular with the US – that prevailed in recent years (see Figure 19) will finally end.

Nevertheless, there are also significant differences among euro area countries as regards their cyclical position, fiscal space and external accounts. We defer a more detailed discussion of the euro area and its internal disparities to the European section.

2.4.2. The UK

With regards to the UK, as noted already in last year's report, the Office of National Statistics (ONS) carried out important revisions of its national accounts and balance of payments statistics in 2017 that have resulted in substantial changes in the data. In this year's report, these revisions are all taken into account.

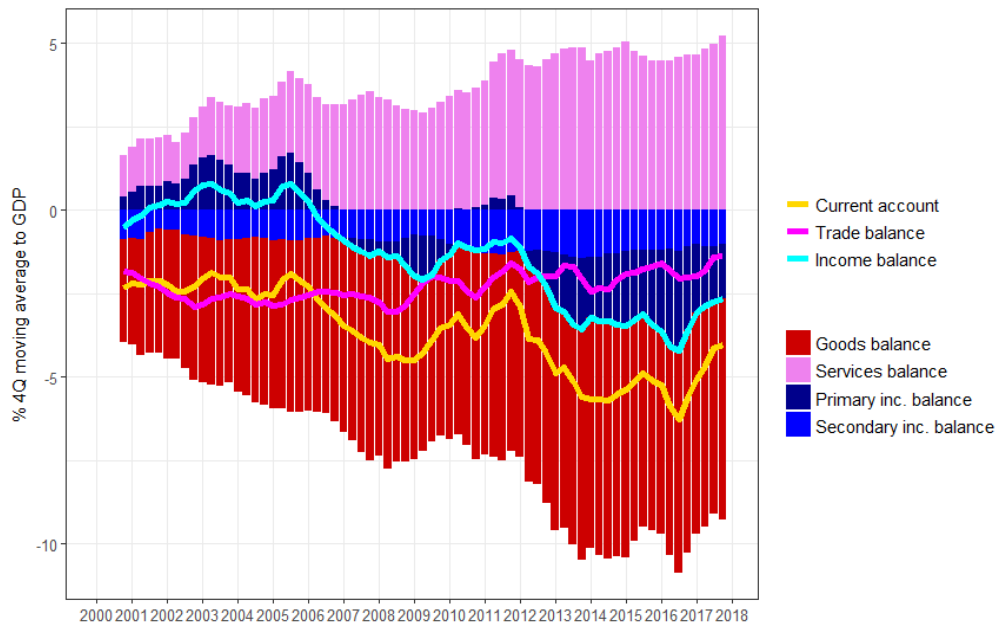
During the past decade, there have been two episodes of strong GBP nominal depreciation. The first one took place between mid-2007 and end-2008 and was linked to the global financial crisis. The second one transpired over the course of 2016 and is related to the Brexit referendum and its consequences. The value of the British pound against a basket of currencies has since stabilised to the level prevailing roughly from 2009 to 2013. The period from 2013 to end-2015 was a period of relative British pound strength, mainly vis-à-vis the euro. In real terms, the exchange rate has followed a similar pattern except for the 2009-to-2013 interval, when the REER appreciated despite nominal stability due to the inflation differential with the euro area.

Yet, the trade balance has remained roughly constant in terms of GDP for almost two decades (around -2% of GDP). Although this hides the divergence between an ever-growing trade in services surplus and trade in goods deficit (approximately +5% and -7% of GDP respectively in 2017), the variation in the UK current account balance has mainly stemmed from its income balance, in particular the primary income balance (investment income balance). It is also worth noting that the ONS (2018) has identified sizeable discrepancies between its own trade in services statistics and those of its trading partners, that may amount to overestimating the services surplus.

In fact, the UK current account deficit peaked at 6% (annualised) in the third quarter of 2016 – the aftermath of the referendum on EU membership – as a result of the largest primary income deficit since 2000. The primary income deficit jumped from balance to a 3% of GDP deficit over the course of 2012 and then reached 4% of GDP in 2016. The deterioration of investment income balance is linked to the fall in returns earned by UK residents on their foreign direct investment abroad (ONS, 2017) and has driven decline in the current account since 2012 (IMF, 2016). Moreover, the decrease in returns throughout 2016 took place despite the depreciation of the GBP, which has played a mitigating role by increasing the relative value of income earned to income paid due to the currency mismatch of assets and liabilities.

In the year that followed (by the end of 2017), the current account balance improved by 2 percentage points of GDP, mainly thanks to a rapidly improving income balance (the trade deficit also somewhat receded in the last two quarters for which data is available, see Figure 21).

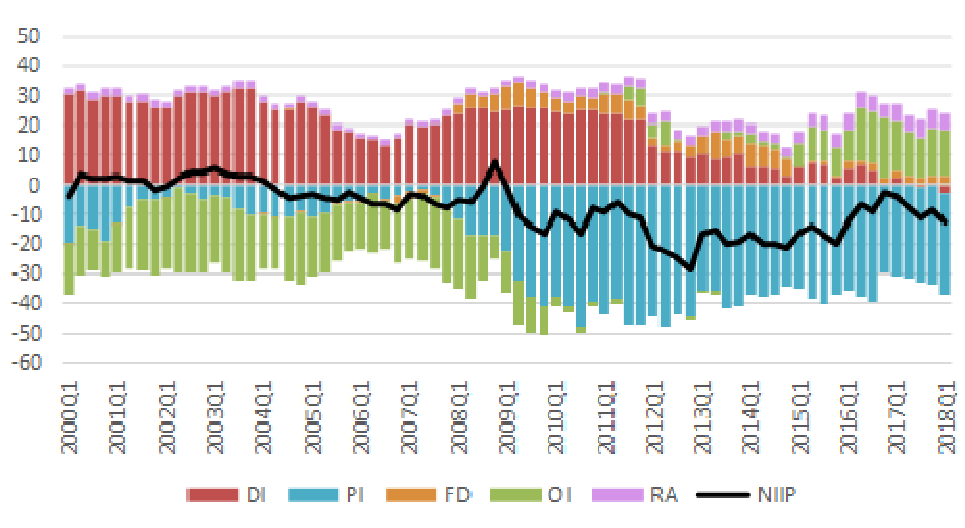
Figure 21: United Kingdom trade and income balance, % of GDP



Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The current account equals the sum of the trade balance and the income balance. The trade balance is equal to the sum goods and the services balances, while the income balance to the sum of the primary and the secondary income balances.

The impact of the GBP's depreciation is also visible in the net international investment position of the UK, which jumped closer to balance in spite of high current account deficits. Although the net foreign asset position of the UK is not very imbalanced, the gross (assets and liabilities) international investment positions are large relative to the size of the UK economy, reflecting its role in global financial intermediation. In addition, there is a strong currency mismatch in the aggregate balance sheet of the UK as its residents borrow from the rest of the world in GBP (pound-denominated liabilities) and lend in foreign currencies (FX-denominated assets). Therefore, strong, uniform depreciations of the GBP can have an outsized impact on the income balance, as well as on the valuation of foreign assets and liabilities positions.

Figure 22: United Kingdom international investment position by instrument, % of GDP

Notes: Both the NIIP positions and GDP are measured in USD

Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

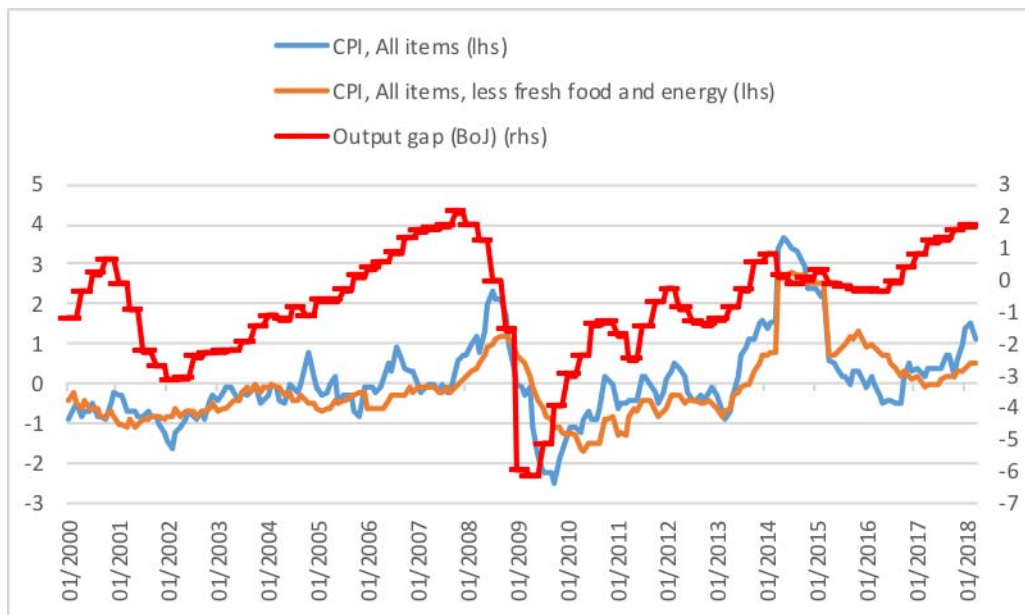
The result of the referendum on EU membership and the possibility of a 'hard Brexit' was – and still is – expected to affect the UK's economic performance. In the aftermath of the referendum, the Bank of England (BoE) reduced its official Bank Rate to 0.25%, down 25 basis points from the level it has maintained since March 2009 (as part of a package of BoE measures). Furthermore, the Bank of England decided to purchase a stock of sterling non-financial investment-grade corporate bonds, issued by firms making a material contribution to the UK economy of up to £10 billion, and of UK government bonds by £60 billion, both financed by the issuance of central bank reserves (Bank of England, 2016). However, the UK economy has outperformed the initial outlook, prevailing after the initial impact of the expectations shock. As Darvas (2017) remarks, confidence indicators in the post-referendum UK have evolved in a similar way to those in Germany, especially in the goods sector, but less so in the services sector. Moreover, there have been two policy interest rate hikes since then: a first one in November 2017, undoing the previous decrease, which also happened to be the first hike since July 2007, and a second one in August 2018. Nevertheless, the vulnerability of the UK economy to the future relationship with the EU persists. As long as the negotiations' outcome is uncertain, expectations can quickly change and affect the country's economic performance.

2.5. Japan

Japan has experienced essentially zero price inflation for decades (Figure 23). Over the last few years, the Bank of Japan (BoJ) substantially expanded its policy toolkit with a view to reaching its inflation target of 2%. The Japanese central bank introduced its version of QE, dubbed Quantitative and Qualitative Easing (QQE) in April 2013. Since then, the BoJ has kept QQE in place, which resulted in a huge increase in its balance sheet, and complemented it with further actions. Initially, in Q1 2016 the interest rate on excess reserves was cut and turned negative (-0.1%) for the first time. Then, in late 2016, the BoJ announced its QQE with Yield Curve Control program. As part of its strategy, the BoJ also committed to overshooting the 2% inflation target, in order to increase inflation expectations. A by-product of persistently low inflation is Japan's REER depreciation, which – measured since the end of 2009 –

is the largest observed among our groups of countries, even though in nominal terms the Japanese currency declined only by a fraction of that real depreciation. Following the Fukushima earthquake in March 2011, Japan's trade balance (about 1% GDP in 2010, and hovering between 1% and 2% before the financial crisis) swung to deficit. The larger trade deficit, together with a decline in global risk aversion, the widening of the expected interest rate differential with the U.S., and "Abenomics", led to a substantial depreciation of the NEER in 2012/13 (Botman et al., 2013). The fall in Japan's nominal effective exchange rate continued until 2015.

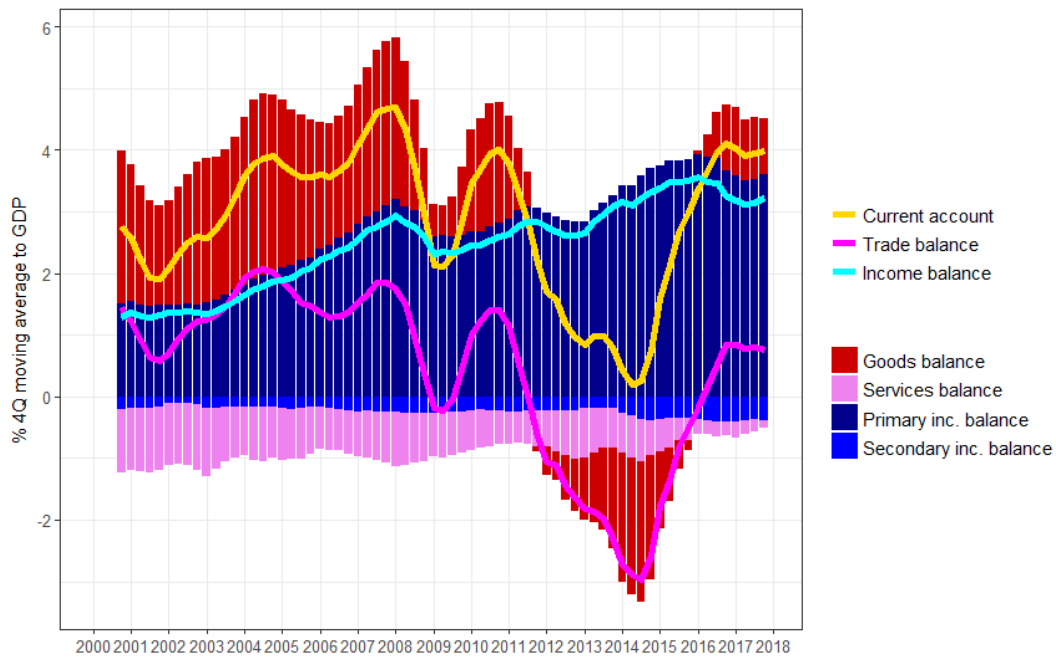
Figure 23: Inflation, core inflation and output gap in the Japan



Sources: Japan Statistics, Bank of Japan

As can be seen in Figure 24, the trade balance subsequently started to increase and rose back to a surplus. However, the Japanese current account is peculiar in that the surplus is predominantly made up of a large positive income balance (exceeding 3% in 2017).

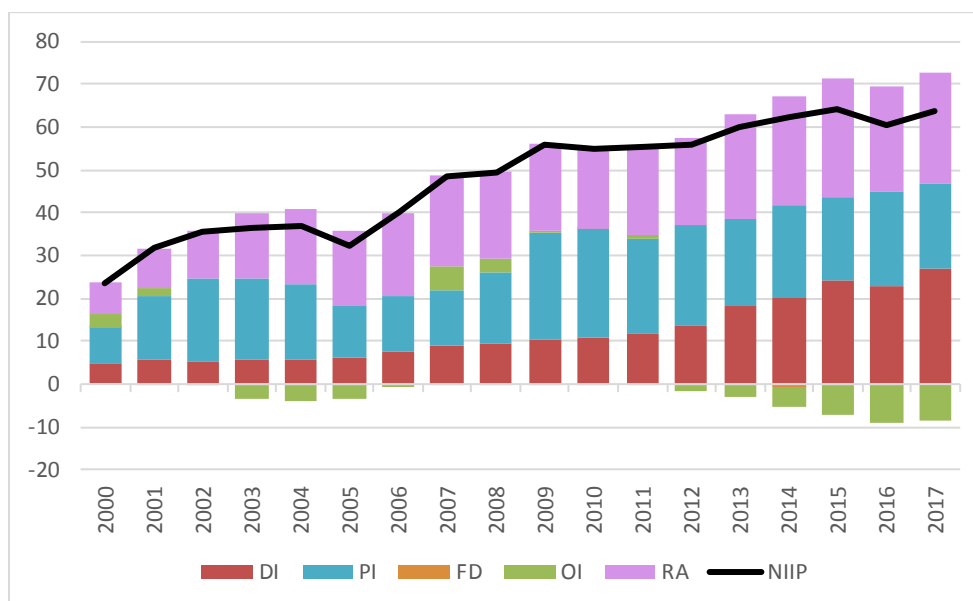
Figure 24: Japan trade and income balance, % of GDP



Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The current account equals the sum of the trade balance and the income balance. The trade balance is equal to the sum goods and the services balances, while the income balance to the sum of the primary and the secondary income balances.

Japan is the world's foremost net creditor, with foreign assets exceeding foreign liabilities by more than 60% of its GDP in 2017. Moreover, Japan's NIIP has been on a rapidly increasing trajectory (it was close to 30% in 2005, see Figure 25) and the income balance, which includes the investment income balance from foreign investment, appears to be tracking this trend.

Figure 25: Japan international investment position by instrument, % of GDP

Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

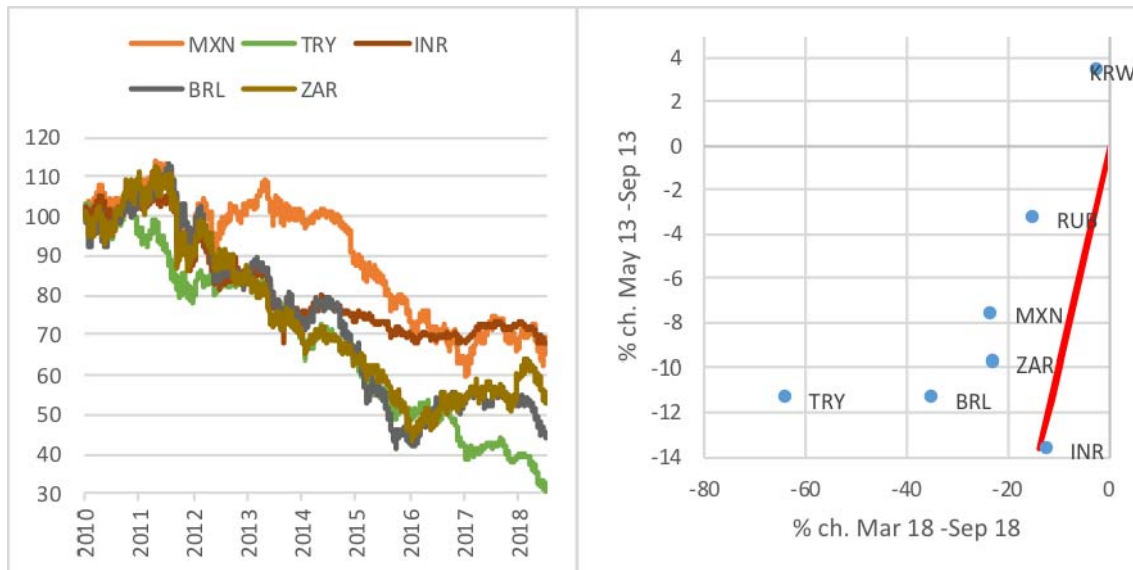
2.6. Emerging economies

In the course of the first half of 2018, several emerging market economies' currencies depreciated sharply against the US dollar. For many currencies the magnitude of the 2018 sell-off was worse than the so-called 2013 'taper tantrum' (as can be seen in Figure 26). In particular, the nominal depreciation vis-à-vis the US dollar was far worse for the currencies of Argentina and Turkey, but also of South Africa, South Korea, Russia and Brazil.

In a typical boom-bust cycle, countries experiencing strong, sustained capital inflows then often face sudden stops of these flows, accompanied by large depreciations, current account reversals and economic downturns. Such cycles often spread across groups of countries, either because their economic fundamentals are correlated, or sometimes because an overall market dynamic develops regardless of fundamentals.

The recent turbulence in emerging markets, thus, requires attention. In this section we treat emerging markets in more detail and, in particular, assess them in terms of their vulnerability to the kind of crises described above. Of course, as these emerging economies face diverse circumstances, it also makes sense to analyse them on a case-by-case basis. Although we assess risks to individual countries by looking at the cross-section, the groups used in the global imbalances section fit the different situations of various emerging markets as a first approximation, so we keep this structure and tackle each group in more detail sequentially.

Figure 26: Exchange rate of various emerging market currencies vs. USD



Source: Bloomberg

Notes: Spot rates, indexed to 100 at 1 January 2010. The currency corresponding to each series serves as the base currency, i.e. the series shows the USD value of 1 unit of that currency. In other words, a positive (negative) change indicates currency appreciation (depreciation) vs. the USD. The red line denotes the 45-degree diagonal. MXN = Mexican Peso, TRY = Turkish Lira, INR = Indian Rupee, BRL = Brazilian Real, ZAR = South African Rand, KRW = Korean Won, RUB = Russian Ruble, THB = Thai Baht.

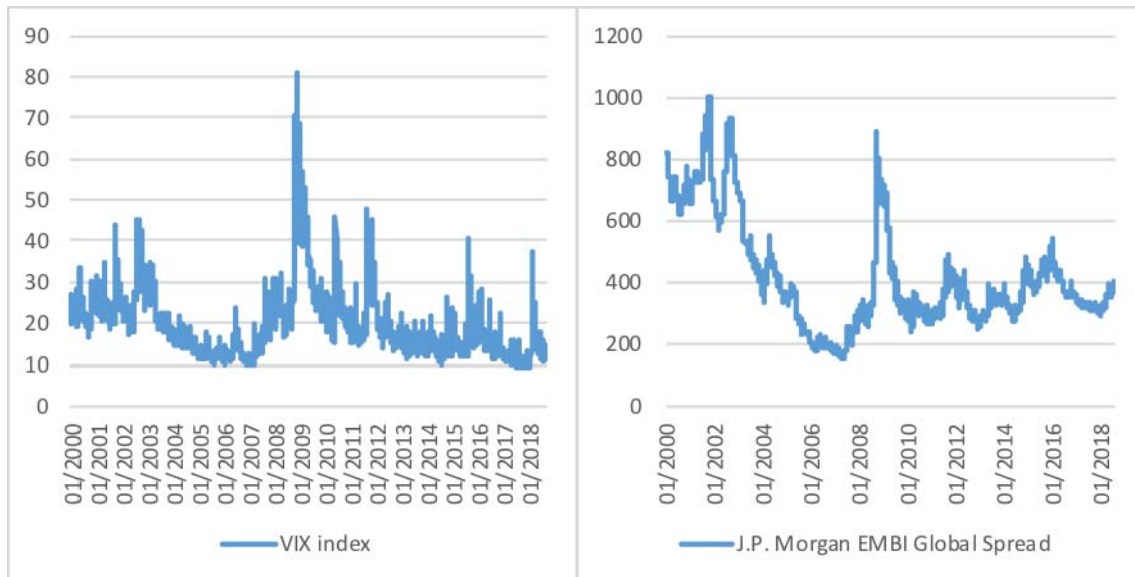
2.6.1. Emerging deficit economies and Latin America

There are common factors affecting emerging markets. Specifically, the tightening of financing conditions, and in particular the tightening of the US monetary policy by the Federal Reserve, were at the heart of the 'taper tantrum' episode in 2013. Similarly, rising interest rates in the US and the prospect of similar hikes in the future elsewhere in advanced economies could be one reason behind the more recent emerging market sell-off. Apart from tightening financing conditions, other common – or 'push' – factors include attitudes towards risk at the global level.

Nevertheless, the market currently expects little volatility, as the VIX index suggests; and although the JP Morgan Emerging Market Bond Index (EMBI) spread (over US treasuries) has slightly spiked recently, the increase is in line with levels observed in the past under normal market conditions (see Figure 27). Moreover, as stressed in the previous sections, advanced economies are not expected to tighten simultaneously.

In addition to global push factors, risks to emerging markets also arise due to country-specific factors. Such factors include, for example, the country's financing needs, the composition of external flows and the adequacy of the level of foreign exchange reserves.

Figure 27: VIX index and JP Morgan EMBI spread (in bps)

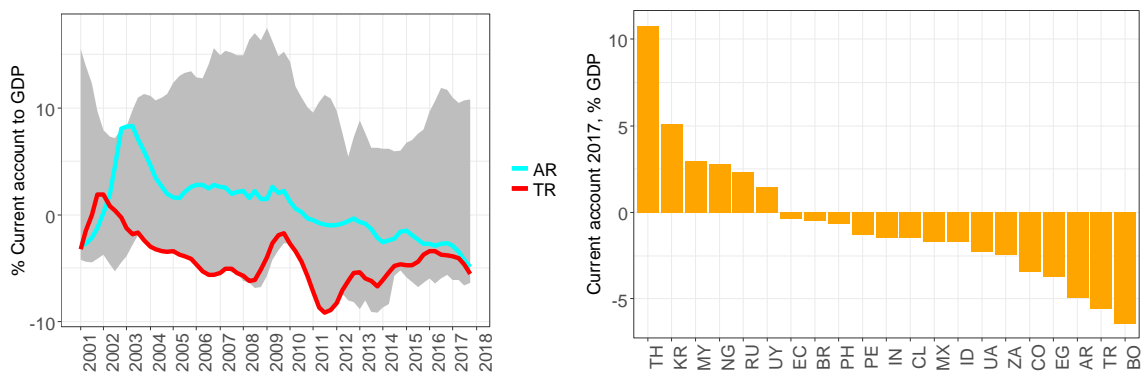


Source: Bloomberg

The external funding need – i.e. for countries running current account deficits – is the most obvious factor. The cross-section of emerging markets’ current accounts shows that these economies are relatively heterogeneous on this count (see Figure 28). Contrary to 2013, when the entire range of current account balances deteriorated simultaneously, in the current setting we observe a divergence between certain groups of countries (the ones defined previously). On the one hand, countries of Latin America and other large emerging economies, such as Turkey, South Africa, Indonesia and Mexico, were in the current account deficit territory last year. On the other hand, several Asian economies (Korea, Malaysia and Thailand) and oil producers (e.g. Russia, Nigeria) recorded surpluses in 2017.

Moreover, the countries most intensely affected by the 2018 sell-off, namely Argentina and Turkey, were among the most exposed countries on this dimension (see Figure 28). Other countries running large current account deficits include Bolivia, Egypt, Colombia and South Africa.

Figure 28: Current accounts in emerging markets



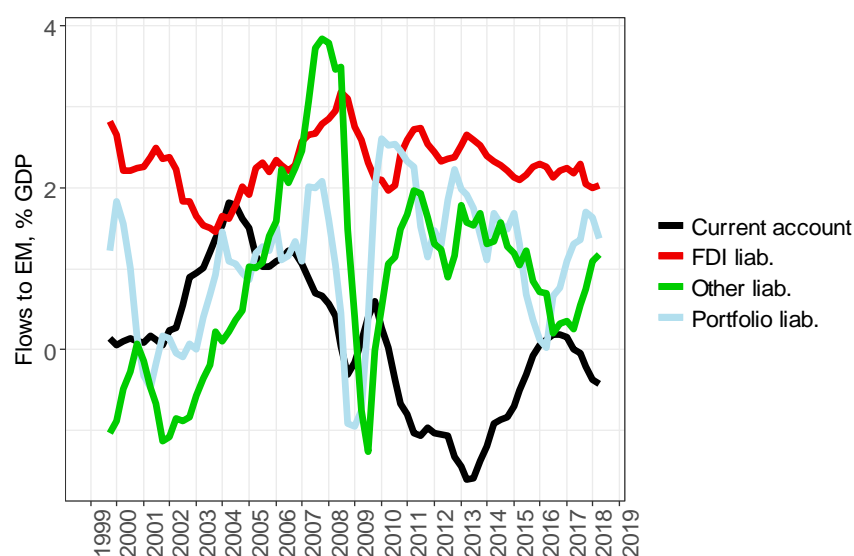
Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Quarterly data, transformed using a 4-quarter backward-looking moving average. The grey area represents the max/min range of current account balances to GDP. TH =Thailand, KR = South Korea, MY = Malaysia, NG = Nigeria, RU = Russia, SA = Saudi Arabia, UY = Uruguay, EC = Ecuador, BR = Brazil, PH =

Philippines, PE = Peru, IN = India, CL = Chile, MX = Mexico, ID = Indonesia, UA = Ukraine, ZA = South Africa, CO = Colombia, EG = Egypt, AR = Argentina, TR = Turkey, BO = Bolivia.

But not all financial flows are equal. Historically, even though FDI flows are relatively stable, the financing needs (i.e. current account deficits) of emerging markets are covered mainly by inbound flows of 'hot money', i.e. portfolio and other investment claims. This dichotomy can be seen in Figure 29. In addition, this chart allows us to track several post-crisis developments affecting emerging markets: 1) the search for yield and the associated capital inflows due to accommodative monetary policies in advanced countries up to 2012; 2) the 2013 'taper tantrum' and subsequent US interest rate hikes; and 3) the spillovers from China in 2015. It also shows that the intensification, starting in 2016 and peaking in 2017, of 'hot money' flows is the cause of the recent troubles in emerging markets.

Figure 29: Current account and composition of liabilities to emerging markets



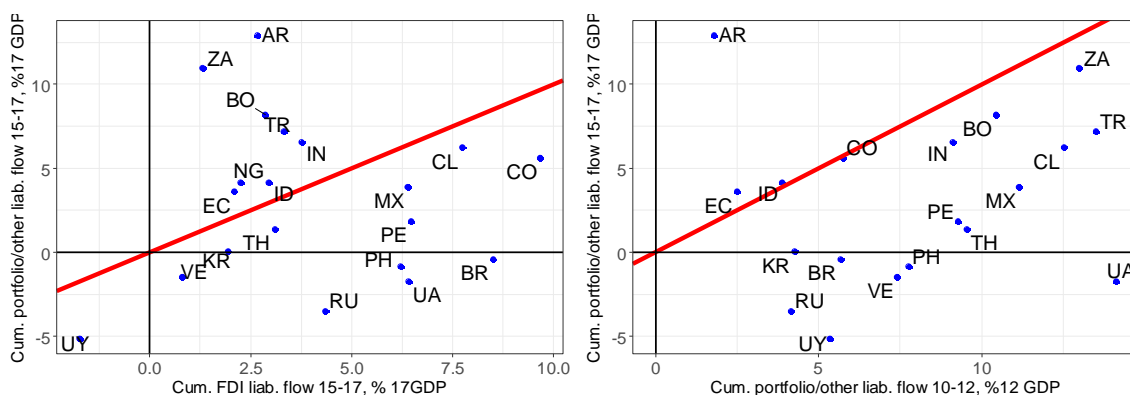
Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Quarterly data, transformed using a 4-quarter backward-looking moving average.

Coming back to flows that are more prone to capital flights, it is clear that several countries with large financing needs also had strong increase of 'hot money' claims and little FDI inflows in the past two years (Figure 29). These countries are Argentina, South Africa, Bolivia and Turkey. On the contrary, Colombia's current account deficit appears to be largely covered by FDI flows, making its position less risky than the former group of countries. More generally, Colombia and other large economies of Latin America including Brazil, Chile and Mexico, currently exhibit either relatively small financing needs, enough FDI financing, or both.

Argentina appears to have faced very particular circumstances that are not pervasive in Latin America. The distinctiveness of the Argentinian case is even clearer when comparing the portfolio and other investment claims acquired by non-residents between 2015 and 2017 to those acquired by non-residents in the two years preceding the 2013 taper tantrum episode (Figure 30). In all other countries, the magnitude of inflows (as a share of GDP) was at most as large now as it was then and in the vast majority of cases substantially smaller. By contrast, in Argentina, the inflow of capital prone to flights has been four times larger than in 2010-12 (13% compared to 2.5%).

Figure 30: Portfolio and other liabilities flows into Emerging Markets 2015-17 % GDP, vs. FDI liabilities flows (left) and 2010-12 (right)

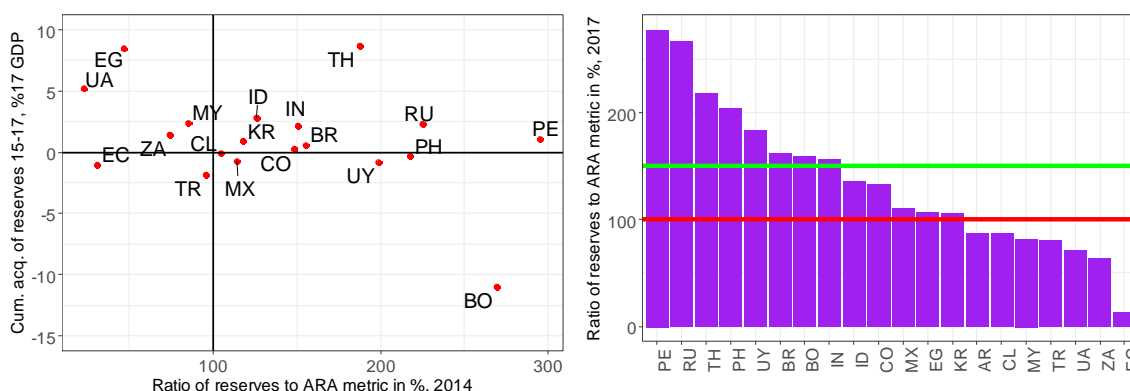


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The red line denotes the 45-degree diagonal. TH =Thailand, KR = South Korea, NG = Nigeria, RU = Russia, UY = Uruguay, EC = Ecuador, BR = Brazil, PH = Philippines, PE = Peru, IN = India, CL = Chile, MX = Mexico, ID = Indonesia, UA = Ukraine, ZA = South Africa, CO = Colombia, AR = Argentina, TR = Turkey, BO = Bolivia.

Finally, it is also useful to evaluate the risks emphasised above against the buffer provided by foreign exchange reserves. One way to do that is consider the IMF 'Assessing Reserve Adequacy' metric, which compares actual reserve assets against an adequate benchmark. This benchmark is calculated as a weighted average of three country variables: 100% of short-term debt, 20% of broad money (M2 aggregate), and 3 months of imports. Reserves are considered adequate if they range between 100% and 150% of the metric. However, many vulnerable emerging economies fall below 100% of the metric (as can be seen in Figure 31), in particular Argentina, Turkey and South Africa. Moreover, the left panel shows that Turkey, for instance, actually unloaded reserves in the past two years despite its reserve being below the adequacy threshold.

Figure 31: Reserve adequacy in emerging markets



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The red line denotes reserves at 100% of the ARA metric, the green at 150%. TH =Thailand, KR = South Korea, RU =Russia, UY = Uruguay, EG = Egypt, EC = Ecuador, BR = Brazil, PH = Philippines, PE = Peru, IN = India, CL = Chile, MX = Mexico, ID = Indonesia, UA = Ukraine, ZA = South Africa, CO = Colombia, AR = Argentina, TR = Turkey, BO = Bolivia.

Of course, other crucial factors also contribute to the emerging market sell-off: depreciation spilling over from China, geopolitical risks, energy prices, and trade tensions, among others. The particular policy response of governments also matters: we review the particular developments in Argentina and Turkey, the two most severe cases so far, in more depth below.

Based on the evidence presented, we can reach a set of conclusions. First, the emerging market sell-off of 2018 – as of September 2018 – is more severe than the 2013 ‘taper tantrum’ in terms of the magnitude of the depreciations, even though the fundamentals look better. Second, the repercussions of the sell-off were the strongest for the cases identified as most vulnerable based on conventional metrics, namely Argentina and Turkey. South Africa and some smaller Latin American economies (e.g. Bolivia, Ecuador) also face high risks. Finally, the sell-off seems to be subsiding thanks to the different pace of monetary normalisation in advanced economies, which made tightening financing conditions less acute than if it had been synchronised. However, if true, it also shows that it will pose very serious risks to emerging economies when it eventually takes place.

Argentina

Argentina’s current account balance, which for years was in surplus or in small deficit, widened quickly in recent years. In 2017, the current account deficit reached 5% of GDP, a level that exceeded the largest deficits observed in the eve of the 2001 Argentinian crisis. From a financial flow perspective, the financing needs of Argentina have been met by a strong inflow of portfolio (debt) investment. On an annualised basis, the portfolio net inflow has been above 5% of GDP in the whole of last year. In recent years, the stock of US dollar-denominated bond liabilities has risen sharply, and government deficits have been the most significant component of this borrowing.

Due to a shift in market sentiment, and given Argentina’s vulnerabilities, the country faced severe pressures on the peso, a higher sovereign risk premium, and short-term liquidity risks. Monetary policy was tightened in April/May, and the policy rate rose from 27.25% to 40% within weeks. By mid-May, authorities sought assistance from the IMF. On 7 June 2018, the government of Argentina and the IMF reached a staff-level agreement for a 3-year Stand-by Arrangement (SBA) to the tune of USD 50 billion, which was approved by the Executive Board of the IMF on 20 June 2018. In light of unexpectedly adverse international market conditions, as of mid-September, the programme’s finetuning is still under discussion between Argentinian authorities and the IMF.

There are similarities with the 2001 crisis, but there are also significant differences. First, this time, the exchange rate regime of Argentina is floating, not a currency board as in 2001. Second, and related to the first point, the Argentinian banking sector is not dollarized. As a result, a depreciation of the peso compatible with external rebalancing would not pose a threat to the banking system, as it did back in 2001. Fiscal consolidation is a key aspect of the Argentinian SBA. The government has agreed to return to primary balance by 2020 from a primary deficit of 4.7% of GDP in 2017 (IMF, 2018b).

Turkey

Turkey runs the largest current account deficit as a share of GDP among the emerging market economies covered in this report (-5.5%). Moreover, Turkey is a large energy importer: correcting for the fuel balance, the current account balance would improve to -1.8% of GDP. In 2017, the IMF (2018c) assessed Turkey’s current account (at -5.6 % of GDP) as weaker by 4 pp. than the level suggested by fundamentals and desirable

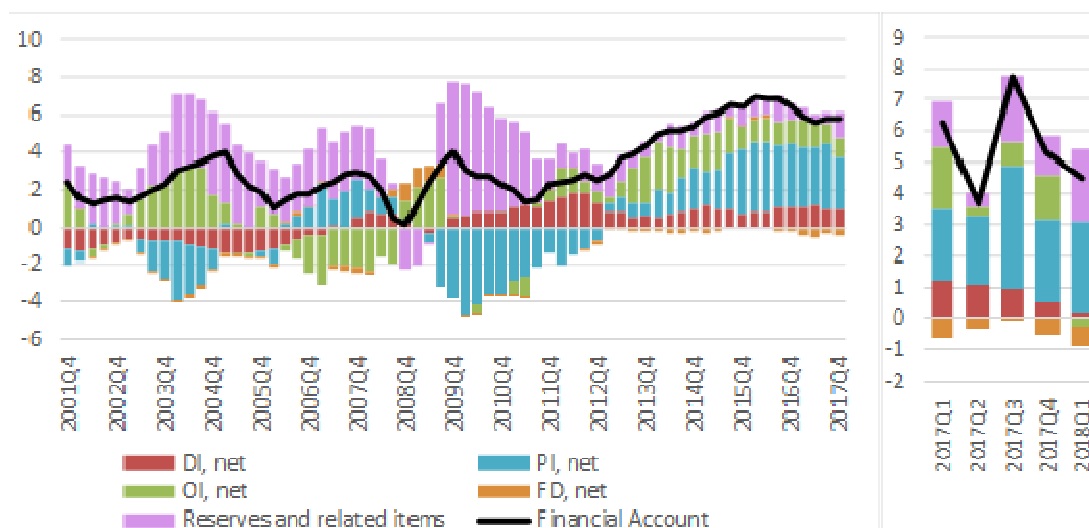
policies. Dependence on large external funding and oil imports, in a context of US dollar strength, rising oil prices and turbulence in emerging markets, do not bode well.

As underlined by Setser (2018c), the Turkish financial system is heavily dollarized: saving is done in US dollars, non-residents lending in foreign currency (mostly to firms, not the government) whereas households borrow in Turkish lira. Turkish banks thus transform a surplus of foreign currency funding into lira funding. One way in which they carry out this transformation is by meeting their lira reserve requirement with the central bank by posting foreign currency, meaning that part of the central banks foreign currency reserves is borrowed from the banks. This is important, as Figure 31 shows that reserves are below the IMF's adequacy ratio, making the position of Turkey precarious. Gross international reserves stood at about 13% of GDP in 2017 when short-term external debt was at 21%.

The Turkish lira has lost two thirds of its value vis-à-vis the US dollar since 2015 (as of mid-September 2018). Political risk has also played a role, as large slides took place in the aftermath of the 15 July 2016 referendum and the run-up to the general elections of 2018. The upheaval of 2018 led the Central Bank of the Republic of Turkey to raise the policy rate from 8% to 16.5% on 1 June to 17.75% on 6 June and then to 24% on 14 September. Elections were held in Turkey on 24 June, marking the transition to a presidential system. Going forward, the tension between depreciation and political calls for interest rate reductions could be a challenge for monetary policy. More generally, Turkey grapples with a concoction of low foreign exchange reserves relative to short-term external foreign currency debt, corporate external financing needs and a depreciating currency, and potentially rising Turkish interest rates that will affect credit provision and, therefore, growth.

2.6.2. Surplus Asian countries

Figure 32: Surplus Asia financial account balance, % of GDP



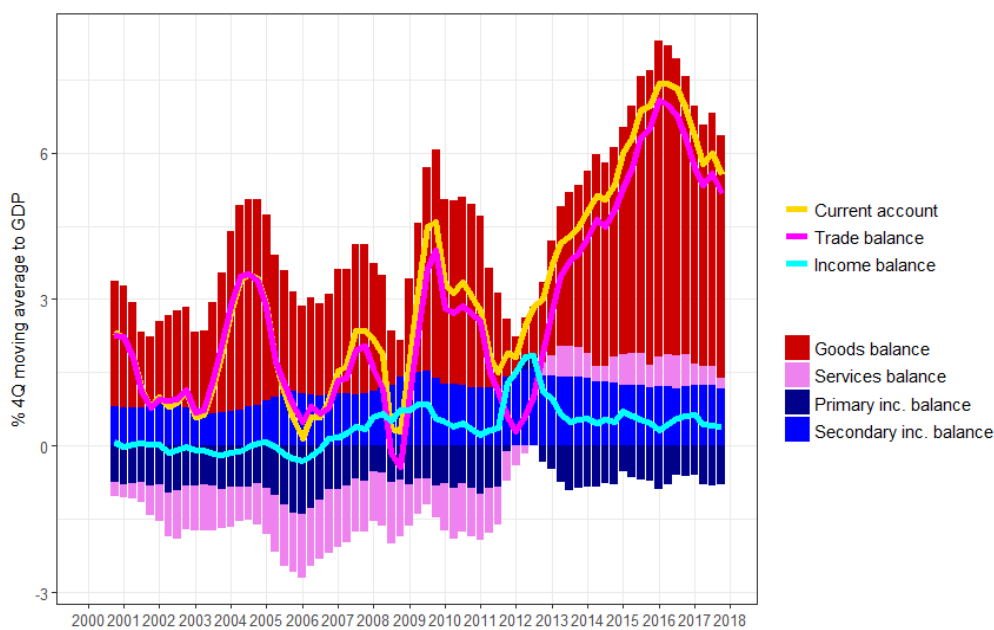
Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

Korea and Thailand have exceptionally large surpluses relative to the size of their economies. According to the IMF (2018a)'s estimations, Thailand had a substantially stronger current account surplus in 2017 relative to what would be justified by its fundamentals and by desirable policies. For Korea, the IMF estimates that the current

account balance should have been 1.6 percentage points below what it was in 2017 (5.1% of GDP). A significant share of this gap is due to the policies implemented. In particular, fiscal policy seems to be playing a crucial role in both countries: the fiscal balance gap – the actual vs. ‘desirable’ fiscal balance – is 2.5% of GDP in Korea and 0.9% in Thailand. In other words, Korea and Thailand are following an overly tight fiscal policy that contributes to excessive surpluses. Moreover, insufficient health spending in Korea adds to the imbalances by pushing households to save more. Fiscal expansion and a more generous safety net could counteract these excessive private savings. However, these countries see little reason to change their policies, since in the current economic environment, their large trade (and current account) surpluses function as an engine of growth.

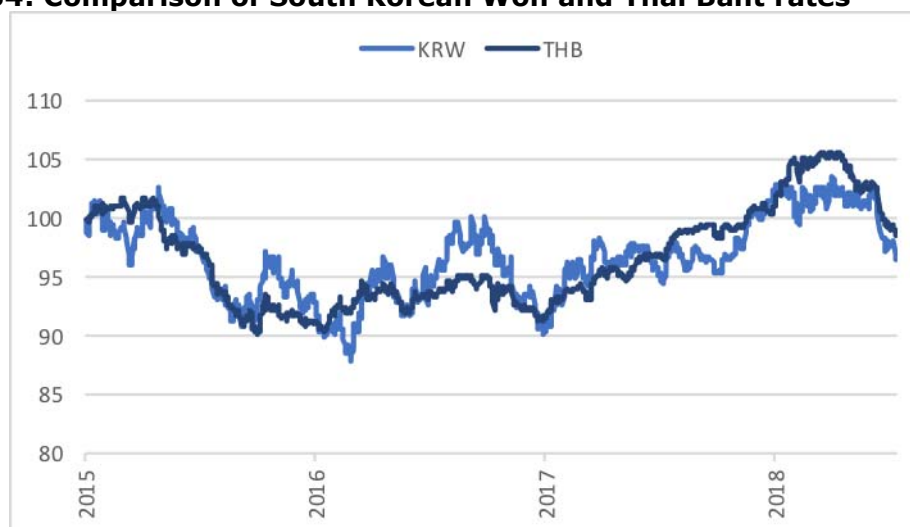
Figure 33: Surplus Asia trade and income balance, % of GDP



Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: The current account equals the sum of the trade balance and the income balance. The trade balance is equal to the sum goods and the services balances, while the income balance to the sum of the primary and the secondary income balances.

Large trade surpluses bring the discussion to another type of policy that could also contribute to large current account surpluses: foreign exchange intervention. More specifically, these countries are engaging in competitive ‘non-appreciation’, intervening on the foreign exchange market to contain market upwards pressure on their currency, but letting their currencies depreciate in times of weakness. As shown by Figure 31, between 2015 and 2017, both countries engaged in substantial foreign exchange interventions despite their excessive current account surpluses and adequate reserve stocks. Moreover, some of these economies’ interventions are hidden in ‘private’ capital flows in the balance of payments statistics (as noted by Setser, 2017c). In Korea, social security funds buy foreign assets in a ‘diversification’ push. This leads to financial stability risks: if unhedged, it is a lot safer if the foreign asset purchases needed to sustain an undervalued exchange rate come from the central bank or other government authority.

Figure 34: Comparison of South Korean Won and Thai Baht rates

Source: Bloomberg

Notes: Spot rates, indexed to 100 at 1 January 2015. The currency corresponding to each series serves as the base currency, i.e. the series shows the USD value of 1 unit of that currency. In other words, a positive (negative) change indicates currency appreciation (depreciations) vs. the USD.

Of course, maintaining an undervalued currency is not the only rationale for accumulating reserves. For example, foreign asset purchases may have been a sensible policy in the aftermath of the 1997 Asian crisis, when there was a need to rebuild reserves and the level of short-term external debt was still high. But this is no longer the case: Thailand is well above the reserve adequacy metric of the IMF, and Korea is comfortably in the 'safe zone' (see Figure 31).

2.7. Global banking

Darvas et al. (2016) pointed out that global gross capital flows continue to be subdued compared to the pre-crisis period primarily because of lower (and at times reversed) gross flows of other investments, which mostly include cross-border deposits and loans. Moreover, Claeys et al. (2018) documented the widespread down-sizing of cross-border balance sheets of banks across many jurisdictions, using the locational banking statistics (LBS) of the BIS. Although stronger in key European financial centres, namely Switzerland and the UK, cross-border exposure reduction was evident elsewhere, including outside Europe. One interpretation, thus, links this phenomenon to financial de-globalization.

The evidence provided in previous years' reports, using the LBS dataset from the BIS, can still be found in appendix 2 of this report (by country and country groups). The analysis provided in these previous reports is not repeated here. However, in this year's edition, it is worth noting that the LBS are based on the balance of payment definition of residence, which has two important implications. Firstly, locational statistics include positions and flows between the head office and foreign affiliates, such as subsidiaries and branches. Secondly, they do not treat a foreign affiliate's local lending and funding as cross-border assets and liabilities respectively. An alternative perspective is the consolidated view, which consolidates intra-group flows and positions but regards local banking of foreign-owned affiliates as cross-border banking. Using the consolidated banking statistics (CBS) from the BIS in Darvas et al. (2016), we noted that from a consolidated perspective, the reduction of gross foreign

banking claims is much more concentrated geographically. Namely, while claims of EU banks declined significantly since 2007-08 (and even halved for euro area banks), claims of non-EU banks (after some volatility in 2007-09) continued to increase even after 2009.

McCauley et al. (2017) combine both datasets (LBS and CBS) and show that the contraction of cross-border capital flows, and in particular other investment flows and international banking, is more a European phenomenon rather than a global one. In fact, they suggest that the contraction in lending at the global level can be interpreted as a cyclical deleveraging of European banks' large global operations, rather than as a broad-based financial deglobalisation. In particular, they show that the nationality of the bank's parent drives the cross-border retrenchment and not its location. Emter, Schmitz and Tirpak (2018) also find that retrenchment was mostly linked to source country factors, and especially the level of non-performing loans (NPLs). Indeed, EU and other European banks faced with credit losses and deteriorating asset quality (NPLs) at home cut cross-border exposures, and mainly interbank lending, displaying a disproportionate home bias (McCauley et al. 2017 and Emter, Schmitz and Tirpak, 2018).

These findings are in line with the evidence that foreign banks, with more domestic and core funding (i.e. not cross-border, interbank and foreign currency liabilities) are a more resilient source of funding (Claessens, 2017 and McGuire and Von Peter, 2016). Moreover, Temesvary and Banai (2017) find for CEE countries that subsidiary and parent capitalization boosted lending, in particular during and after the crisis, and that the ratios of NPLs hindered lending growth. They conclude that purging banks of NPLs and enhancing regulatory coordination is of paramount importance. Finally, as McGuire and Von Peter (2016), they also show that bank health should be evaluated at the group level, and argue for the inclusion of parent bank traits in countercyclical capital buffer calculations.

But several years have gone by since the financial crisis and cross-border banking activity in the EU is still subdued, with few exceptions, as explained in the subsequent EU section. The role of policy has received considerable attention in the literature. Monetary expansion across advanced economies and the strengthening of prudential policies, in particular the role of regulatory arbitrage, have been the main motivations. Bremus and Fratzscher (2015) find that expansionary monetary policy in source countries encourages cross-border lending. The claim that regulatory arbitrage is an important driver of cross-border bank flows post-crisis receives support by Bremus and Fratzscher (2015), who find that the strengthening of the supervisory authorities' power and independence also encouraged credit outflows from source countries, with the exception of the euro area. Emter, Schmitz and Tirpak (2018) corroborate the crucial importance of prudential policies. Tighter domestic prudential policies appear to be spilling over (i) by limiting cross-border banking for the overall EU sample, possibly due to higher costs at home; (ii) and by increasing flows in the euro area sub-sample, due to diversification incentives from concentration and interbank exposure limits. On the other hand, a tighter host country regulation affects cross-border banking by incentivizing the use of foreign branches (regulated by the home authorities) instead of direct cross-border lending.

3. A closer look at Europe

The previous section assessed capital flows and international investment positions from a global perspective, presenting data on the EU as a whole, and more particularly on the euro area and on the UK, jurisdictions that matter strongly from a global perspective (given the international role of their currencies and central banks). However, Europe is heterogeneous and it is important to analyse the different patterns coexisting within the Union. In this section, we take a closer look at countries and groups of countries of the European Union. Instead of reporting data for all 28 EU Member States, we use some country groups to facilitate the detection of key trends across countries.

First, we report and discuss data separately for specific EU countries, namely large Member States: France, Germany, Italy, the Netherlands and Spain. Note that, while the UK is still a member of the EU, the lengthy analysis provided in the global section is not repeated here. Neither do we group together with other Member States countries whose cross-border balance sheets are large relative to the size of their economies (Cyprus, Ireland, Luxembourg and Malta).

Secondly, groups for the remaining countries are constructed mainly on the basis of two medium to long-term salient determinants of capital flows: per capita income and reserve currency status (euro vs. non-euro). The resulting non-reserve currency EU groups, i.e. high income/no reserve currency status and low income/no reserve currency status, are the EU groups excluded from the discussion of the global section (non-euro area Nordics and non-euro area Central and Eastern Europe (CEE) respectively). Finally, the low income/reserve currency country group is further broken down into two, reflecting the date in which they joined the EU and the euro area, as well as the implications that that timing has had for their capital account liberalisation and adoption of a reserve currency.

As a result, we consider the following countries and country groups:

- **France, Germany, Italy, the Netherlands and Spain**, analysed individually due to the size of their economies;
- **Euro area (EA) 'creditor' countries**: Austria, Belgium and Finland as a group;
- **Euro area (EA) 'debtor' countries**: Greece and Portugal as a group;
- **Euro area Central and Eastern Europe (CEE)**²: Estonia, Latvia, Lithuania, Slovakia and Slovenia as a group;
- **Non-euro area Central and Eastern Europe (CEE)**: Bulgaria, Czech Republic, Croatia, Hungary, Poland and Romania as a group;
- **Non-euro area Nordics**: Denmark and Sweden as a group;
- **Cyprus, Ireland, Luxembourg and Malta**, analyzed individually due to the large size of cross-border flows and NIIPs relative to the size of their economies.

This partition reflects strong within-group similarities in cross-border flows and NIIPs, that help analyse and monitor developments in a succinct yet comprehensive way. Richer countries tend to have a positive or balanced NIIP (they are net creditors) while poorer countries have large negative positions (they are net debtors). It is worth noting that these groups also coincide with pre-crisis (2000-2008) current account

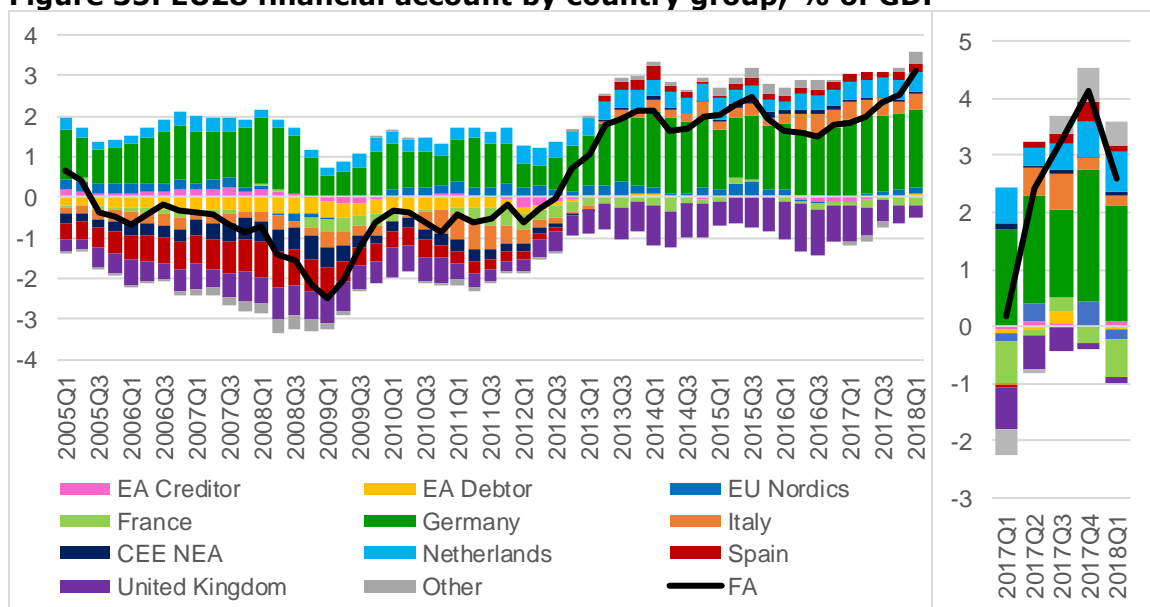
² We also note that five CEE countries and Cyprus and Malta joined the euro area: Slovenia in 2007, Cyprus and Malta in 2008, Slovakia in 2009, Estonia in 2011, Latvia in 2014 and Lithuania in 2015. We include these countries in the CEE group, and not in the euro-area debtor or creditor groups, because the first twelve euro-area members were characterised by special developments since their early entry to the euro area.

developments: in net debtor countries the current account balance as a share of GDP was on average below -2 percent of GDP, whereas in net creditor countries the opposite was true. Such correspondence between pre-crisis deficit/non-deficit countries and current net debtor/creditor countries makes sense, given that current NIIPs are to a large extent the legacy of pre-crisis capital flows.

While countries included in a particular group have major similarities, there is still a degree of heterogeneity within most groups. However, increasing the number of groups further would risk losing sight of key trends by focusing on country-specific details. Moreover, charts plotting balance of payment aggregates for each EU country separately are included in the annex of this report and serve to complement and refine the group analysis. Data source for all charts presented in this section is the 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 instrument presented by the group's GDP (in order to display ratios commensurate with annual GDP, that is, quarterly flows are divided by quarterly GDP, while stocks are divided by annual GDP).

On aggregate, the net financial account balance of the EU vis-à-vis the rest of the world remains in surplus. This is the result of a lopsided adjustment of pre-crisis imbalances, whereby the savings of the EU's surplus countries (e.g. Germany, the Netherlands, Sweden) were recycled into investment in EU deficit countries (e.g. Spain, Greece, Portugal, Ireland). Although large financial flows towards the euro area periphery and CEE countries disappeared, capital exports of 'surplus countries' increased, if anything. Practically every EU country (except France, Romania, Slovakia and the UK) is now running a surplus or in-balance financial account. In short, savings of EU residents are being channelled away from the EU into extra-EU assets.

Figure 35: EU28 financial account by country group, % of GDP



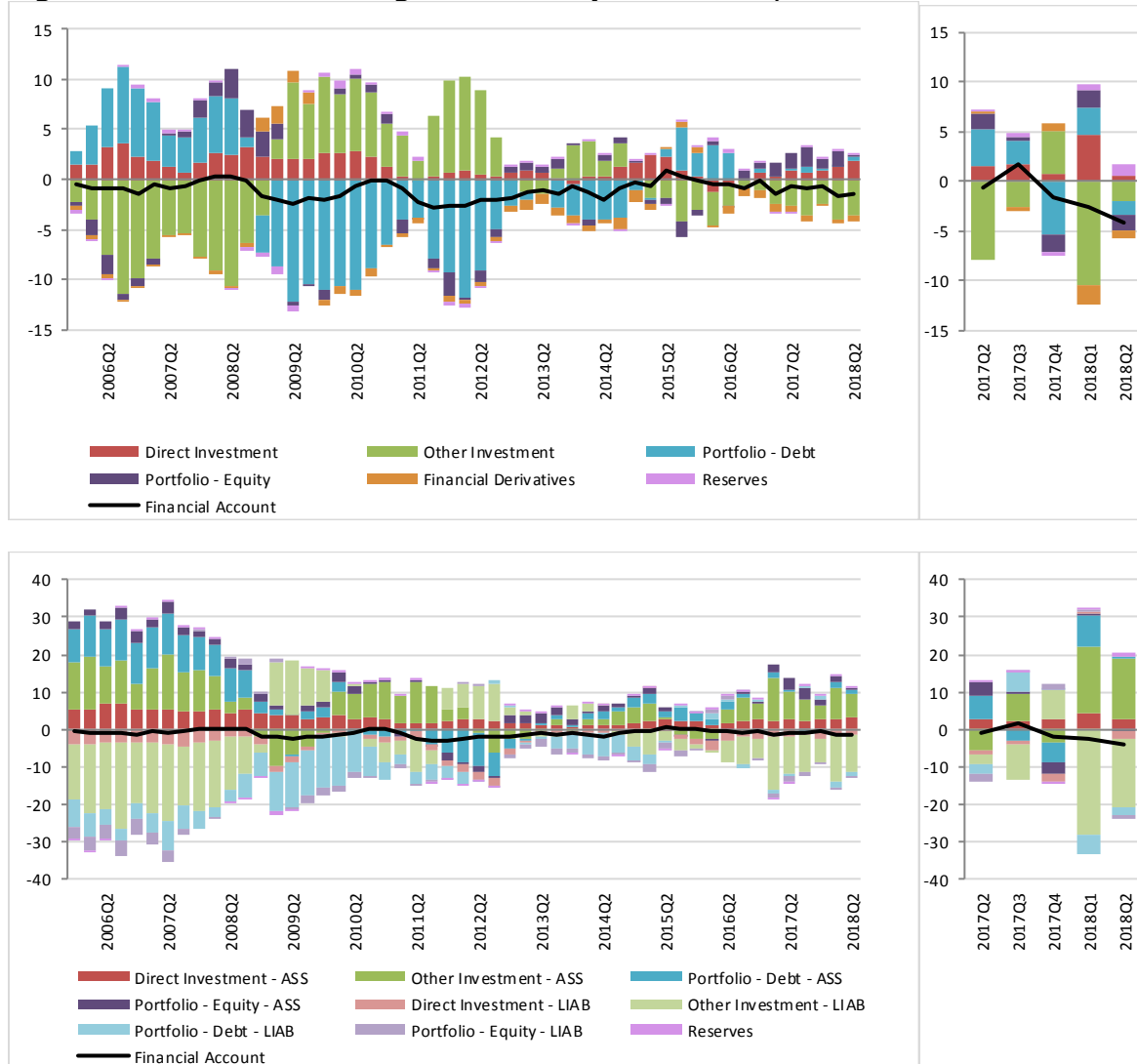
Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: EU28 financial account is calculated as the sum of all individual countries' financial account. 'Other' includes Cyprus, EA CEE, Ireland and Malta. Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

3.1. France

France's net financial account has remained slightly negative for the past decade. As can be seen from the decomposition of its underlying components, net portfolio and other investment flows balance each other, switching from inflow to outflow in distinct phases. This is most visible, for instance, in the reversal of net other investment flows (mostly composed of bank loans) from outflows before the crisis to inflows in the 2008-12 period. Since 2012, the most striking stylized fact has been the significant reduction of magnitude of the net flows by type of investment.

Figure 36: France net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

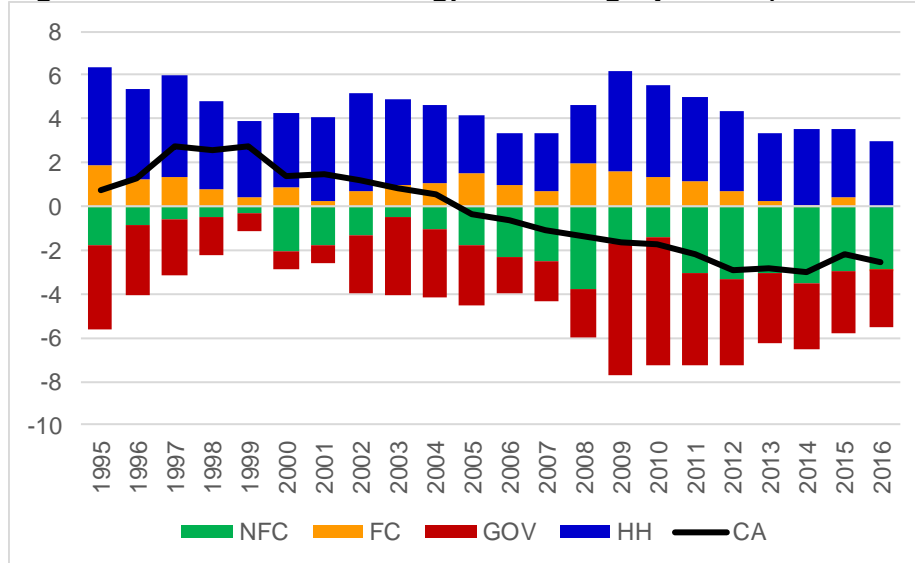
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

This large decrease is even clearer in gross flows. This is due to France's major role in intermediating capital flows from surplus countries towards debtor countries before the crisis, according to Hobza and Zeugner (2014a, 2014b). Note also that on a gross

basis, capital flows between France and the rest of the world have been increasingly dominated by other investment in the recent quarters.

France was the only major country of the euro area recipient of capital from the rest of the world in 2017. Apart from larger government deficits, the savings-investment balance in the private sector remained largely unaltered by the crisis, with households remaining net savers and NFCs net borrowers from the rest of the world (see Figure 37). The main component of the financial account deficit remains the net inflow of other investment, while activity – captured by the increase in foreign asset holdings and incurrence of new liabilities to non-residents – in these investment categories remained as strong as in 2016.

Figure 37: France net lending/borrowing by sector, % of GDP



Source: Eurostat (nasa_10_nf_tr & namq_10_gdp)

Note: NFC – non-financial corporations, FC – financial corporations, GOV – general government, HH – households and non-profit organisations

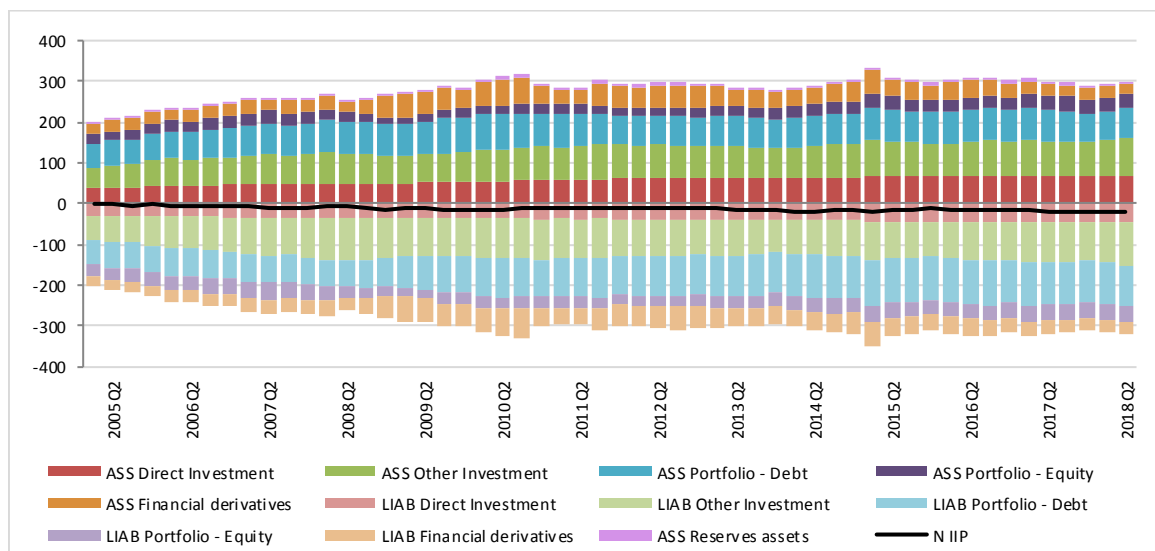
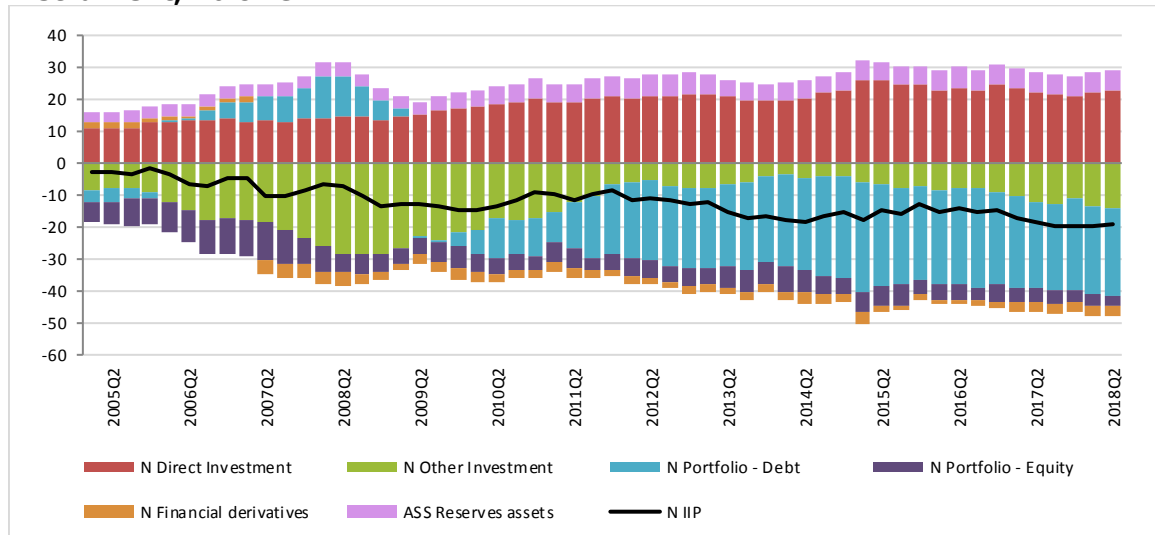
The main element driving the overall picture is the French banking sector. Strong gross flows are mainly the result of French banks’ activity, which are unique in the euro area with regards to their cross-border activity at this juncture, primarily intermediating flows in the other investment category (i.e. loans). In net terms, the result is a moderate inflow which forms the core of the financial account deficit.

Two flows work in the opposite direction. Firstly, and more importantly, the non-government, non-MFI sector is a net lender to the rest of the world, accumulating foreign portfolio securities (split between debt and equity) and sending FDI abroad. Secondly, with the advent of the PSPP, government debt purchases by non-residents faded away, and in the last two years, foreign holdings of government bonds actually decreased. Meanwhile, gross flows between the Banque de France and the rest of the world remained quite small and broadly in balance between assets and liabilities.

France’s NIIP position has deteriorated slowly but continuously since 2005, and now amounts to roughly 20% of its GDP (see Figure 38). The most important component is outstanding portfolio debt liabilities (driven by an increase in public sector external debt), followed by other investment liabilities (driven by banks liabilities), whose importance has been curbed in the last 6 years, reflecting a deleveraging process in the financial sector. However, this moderately negative net position conceals

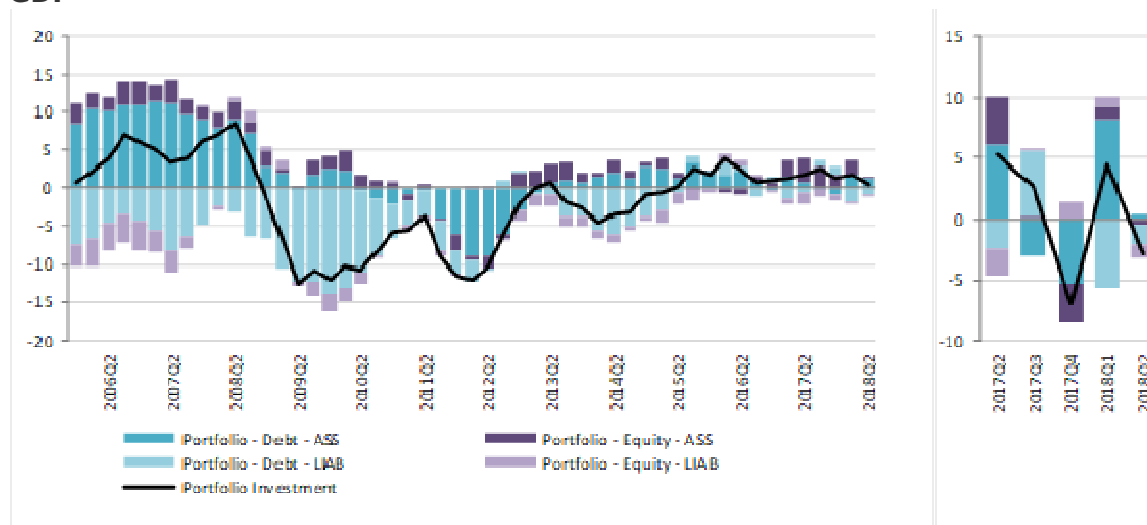
significant gross positions, due in particular to the global activities of French financial institutions.

Figure 38: France net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

As in the case of some other countries of the euro area (and in particular of 'debtors', see below), there is a shift from debt towards equity in the decomposition of France's portfolio investment flows (see Figure 39). For one thing, in the course of 2017, the net balance of portfolio debt was practically zero, such that the net portfolio outflow corresponded to the net outflow of portfolio equity. For another, as a result of strong acquisitions of foreign equity assets by residents, gross portfolio flows are mostly equity-related.

Figure 39: France's gross portfolio investment flows sub-components, % of GDP

Source: Eurostat (bop_c6_q & namq_10_gdp)

Note: data is smoothed using a 4Q lagged moving average

3.2. Germany

Germany has persistently reported net financial outflows since 2001. The 'double-dip' recession in the euro area, owing to the global financial crisis and the debt crisis affecting the euro area periphery temporarily lowered its financial account balance from 2009 to 2012. However, since then, outflows have quickly returned to pre-crisis levels relative to GDP – exceeding 5% since 2013 – before stabilizing around 8-9% in recent years (see Figure 40).

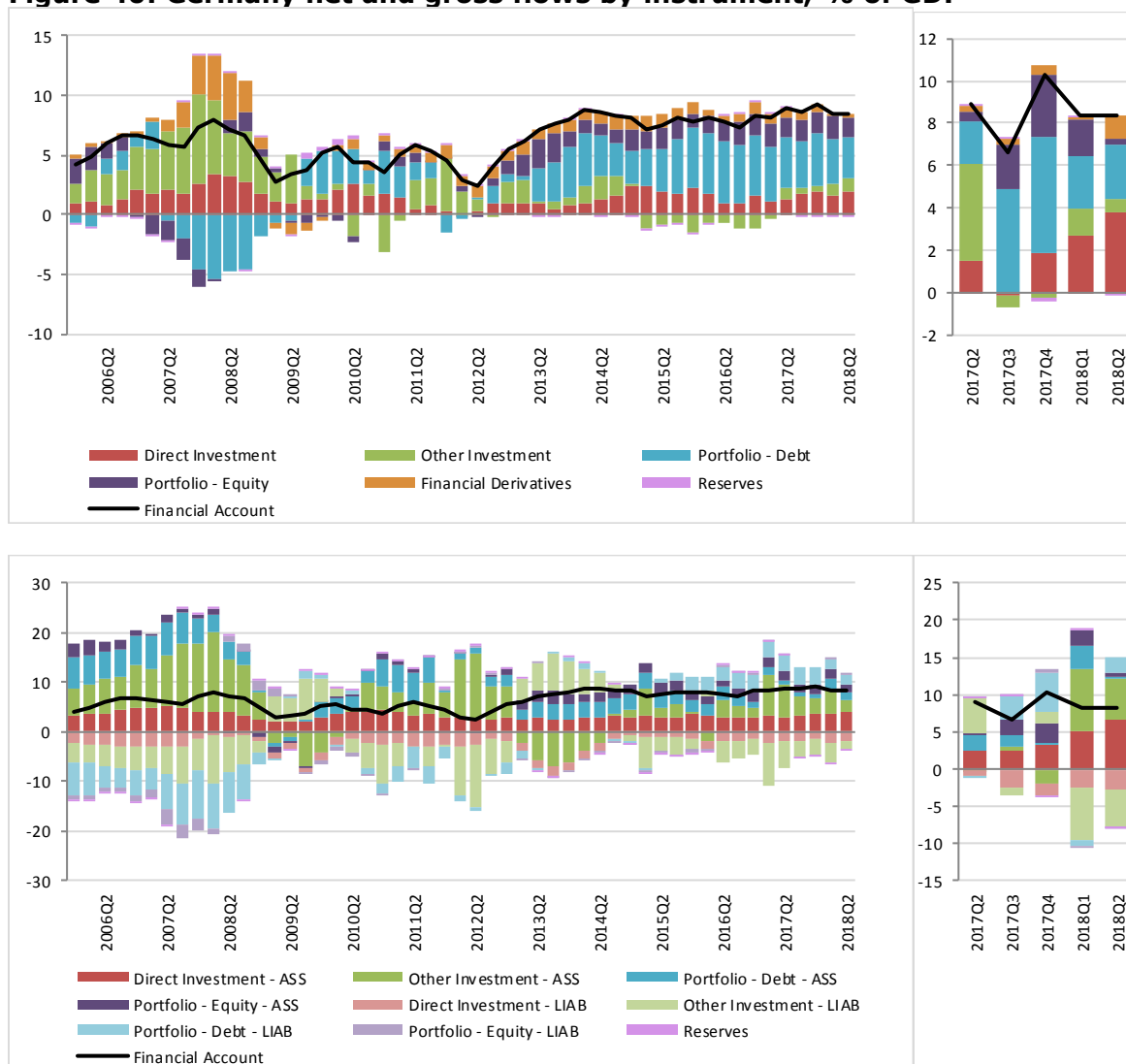
The major element driving these flows are portfolio debt flows. Up to the beginning of 2015, the net outflow of portfolio debt investment was the result of German residents' acquisition of substantial amounts of foreign debt securities while incurring virtually no new liabilities. Coinciding with the introduction of the asset purchasing programme of the ECB is a reversal in relative contributions: the positive balance in portfolio net transactions is driven by the reduction in portfolio debt securities held by non-residents.

Thus, with the exception of MFIs other than the central bank, all remaining institutional sectors of the German economy are accumulating claims to the rest of the world. Three key factors drive this outcome. First, investment in foreign securities (both equity and debt) by the non-government, non-MFI sector partly accounts for the growth in gross assets. On the contrary, FDI flows into and out of Germany are essentially balanced. This can be interpreted in conjunction with the sectoral savings-investment balances, where in absolute numbers household saving remains the main source of the German surplus, although the increase in the surplus has mainly come from the NFC sector (see Figure 41). Second, the Bundesbank is accumulating a net claim on the Eurosystem, accounting for the remaining gross asset flow. And last, but not least, non-resident holdings of German sovereign debt securities are reducing gross liabilities in the portfolio debt category because of the PSPP. On the other hand, despite recording a modest increase in other investment funding from abroad the gross cross-border activity of MFIs in the last two years is rather subdued.

The link to QE is supported by several studies. Schlepper, Hofer, Riordan and Schrimpf (2017) maintain that the impact of QE is particularly acute in Germany where

sovereign bond scarcity has driven up prices. Boermans and Keshkov (2018) highlight that asset purchases by the Eurosystem leads to a stronger concentration in the investor base; this is due to the fact that institutional investors have a strong home-bias and are generally unwilling to sell their holdings; by contrast, foreign investors are more inclined to sell their sovereign bonds holdings benefitting from higher prices.

Figure 40: Germany net and gross flows by instrument, % of GDP



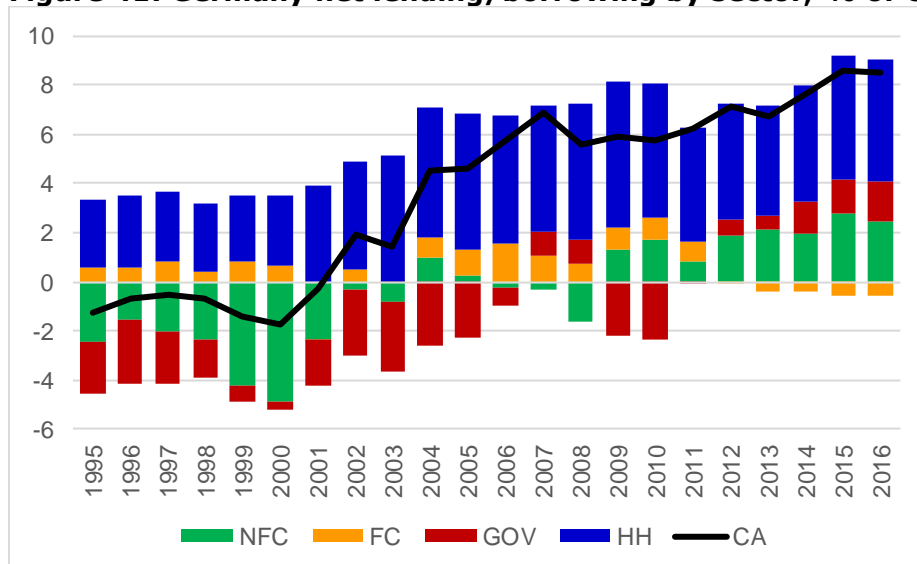
Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

The extended period of time of current account surpluses both before and after the crisis has resulted in the accumulation of a large stock of external assets. In terms of composition, Germany's net asset stock is mostly accounted for by other investment (the most important part of it being cross-border bank loans and Target2) and direct investment. The net portfolio position has switched from negative to positive in recent years, driven by the contribution of both equity and debt securities. The sustained net

outflow of portfolio debt noted above eliminated the associated net negative position, which had previously bottomed in 2012Q2 at the height of the euro crisis.

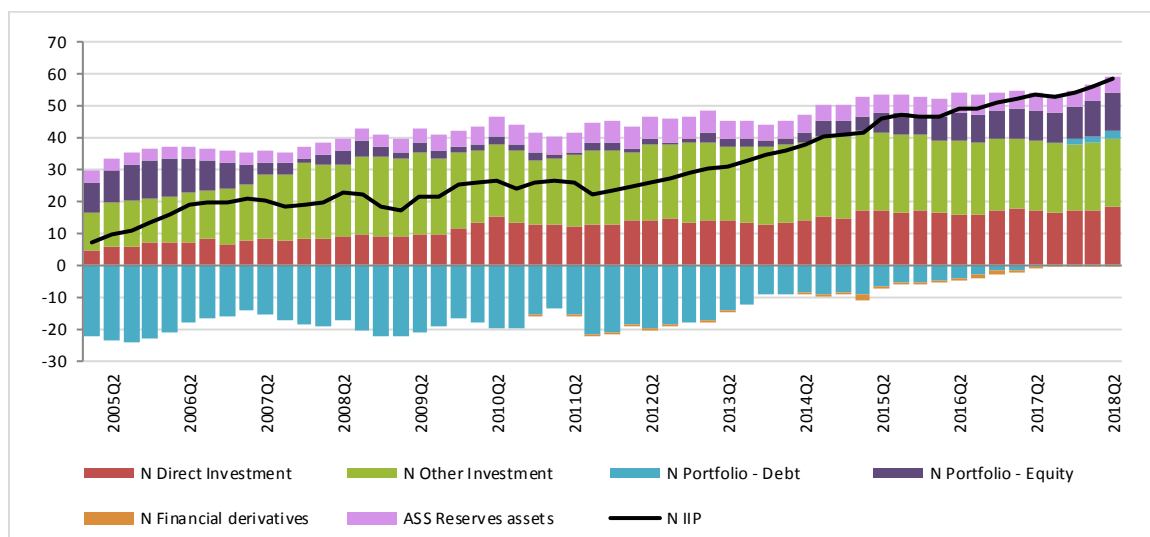
Figure 41: Germany net lending/borrowing by sector, % of GDP

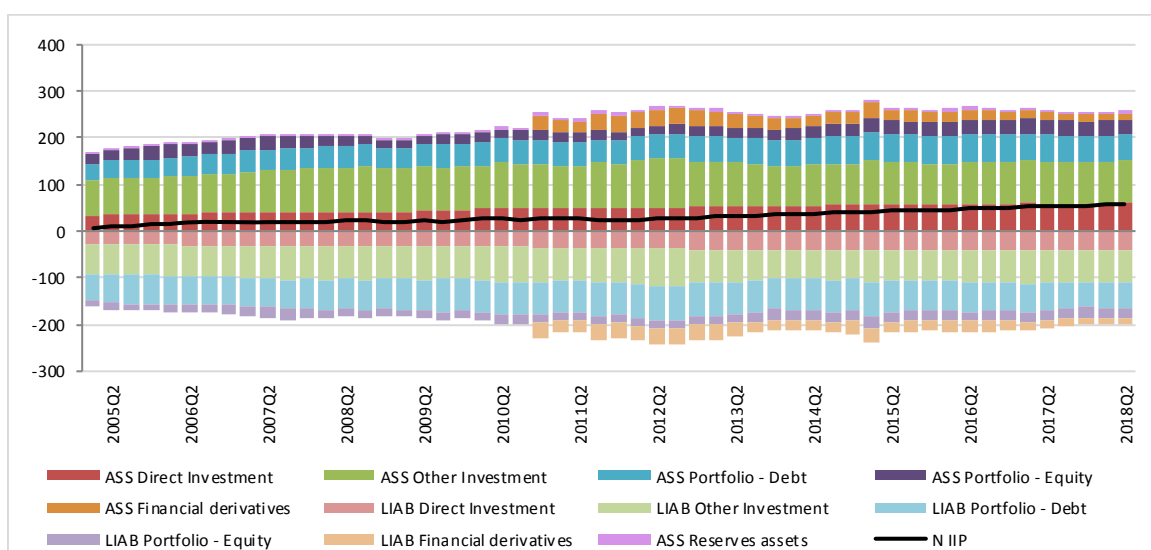


Source: Eurostat (nasa_10_nf_tr & namq_10_gdp)

Note: NFC – non-financial corporations, FC – financial corporations, GOV – general government, HH – households and non-profit organisations

Figure 42: Germany net and gross international investment position by instrument, % of GDP

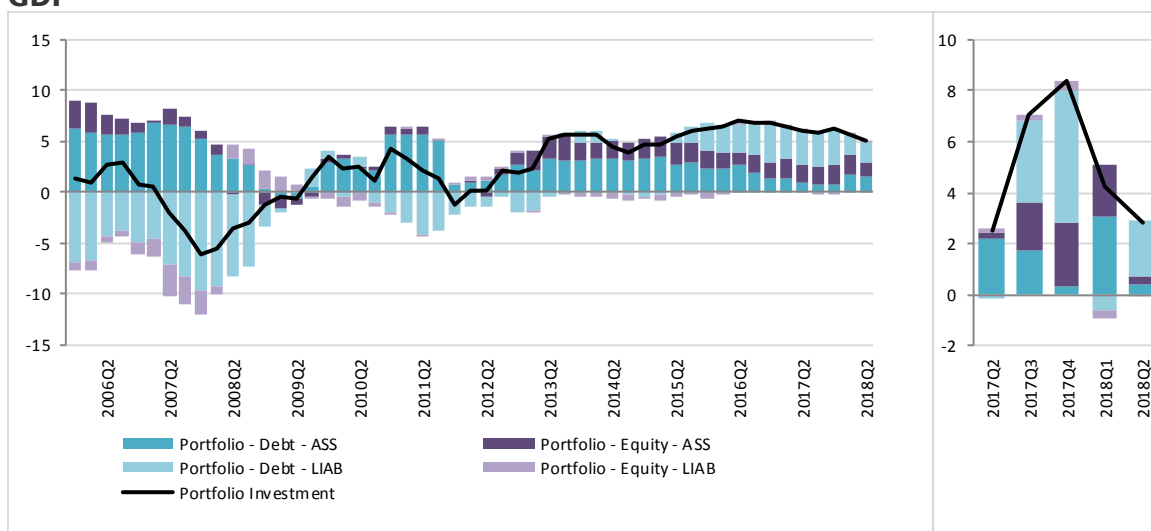




Source: Eurostat (bop_iip6_q & namq_10_gdp)

The patterns with regards to portfolio investment observed for the euro area as a whole are not reflected in the German accounts. In fact, for the last year, the gross components of portfolio investment were roughly constant.

Figure 43: Germany gross portfolio investment flows sub-components, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Note: data is smoothed using a 4Q lagged moving average

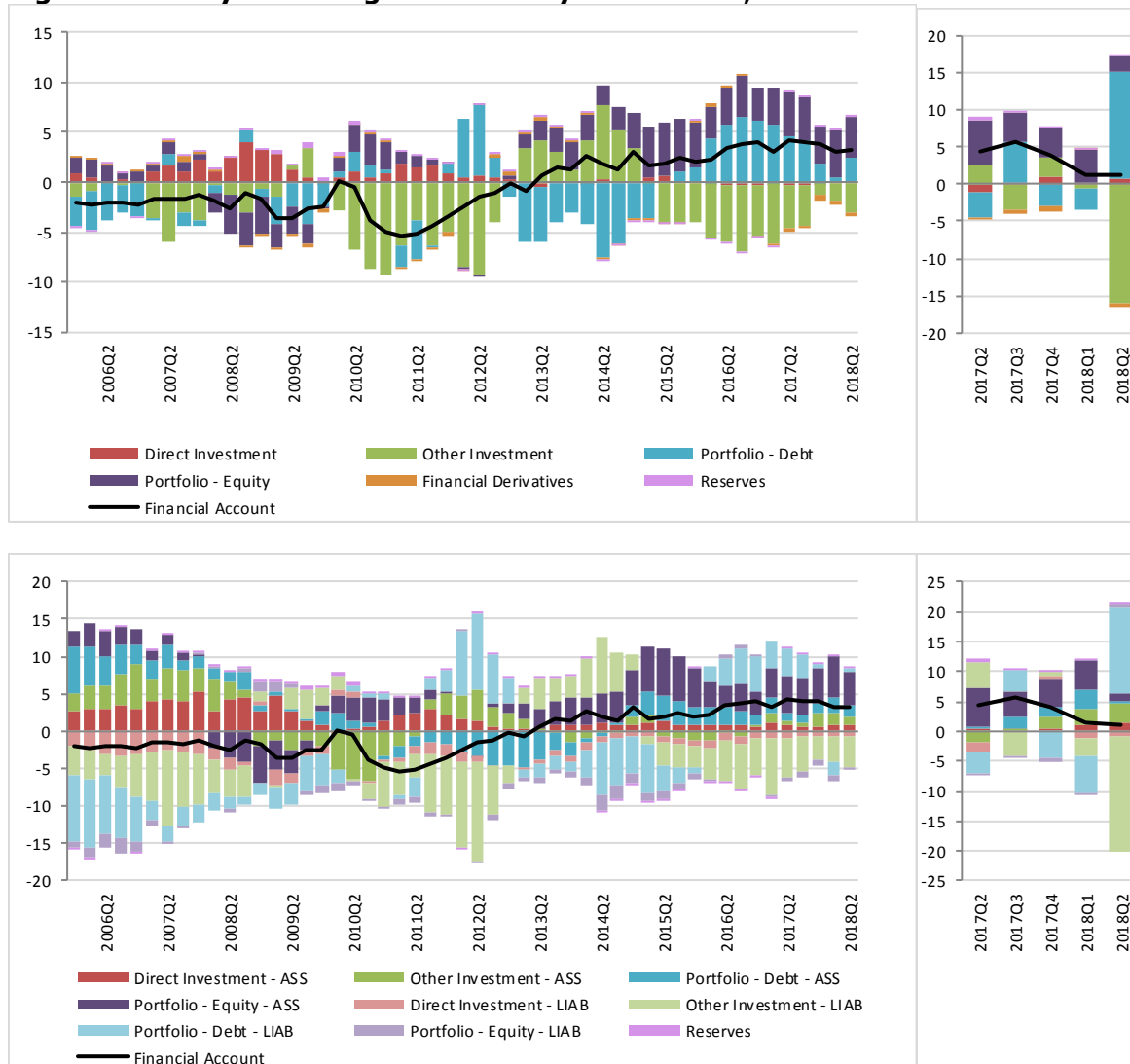
3.3. Italy

The net position of Italy's financial account shows that after being a net importer of capital for a long time, the country has become a net exporter of capital since the end of 2012.

Italian gross flows were well below the size characterising a country like France for instance and show similar fluctuations to those observed in euro area 'debtor' countries (see below). Asset and liability flows first receded after 2008, then a reversal

of portfolio (debt) liabilities financed by other investment liabilities occurred in the course of 2012, followed by relative stabilisation in the past three years.

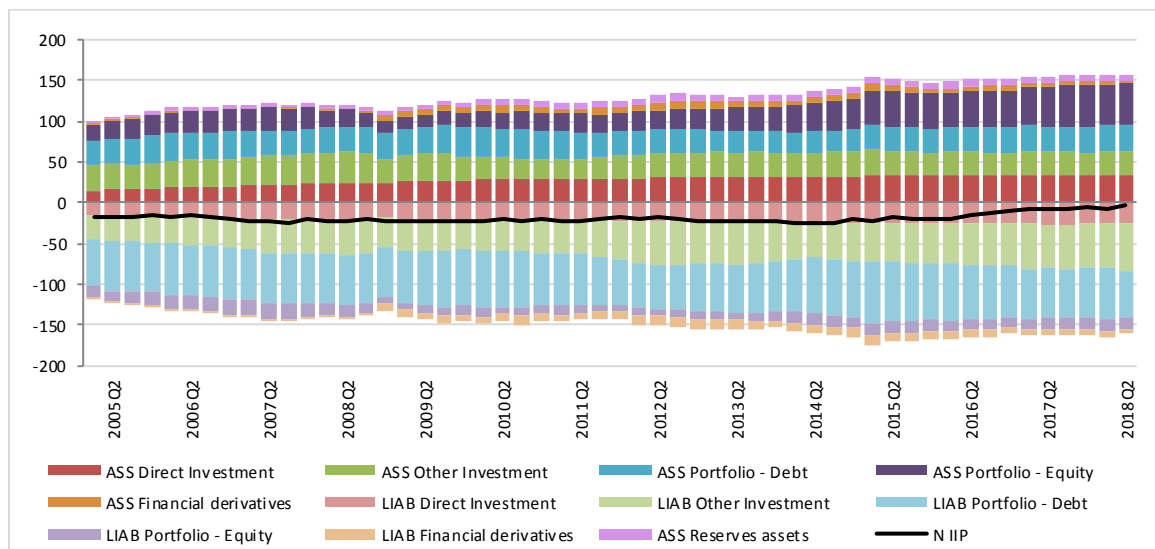
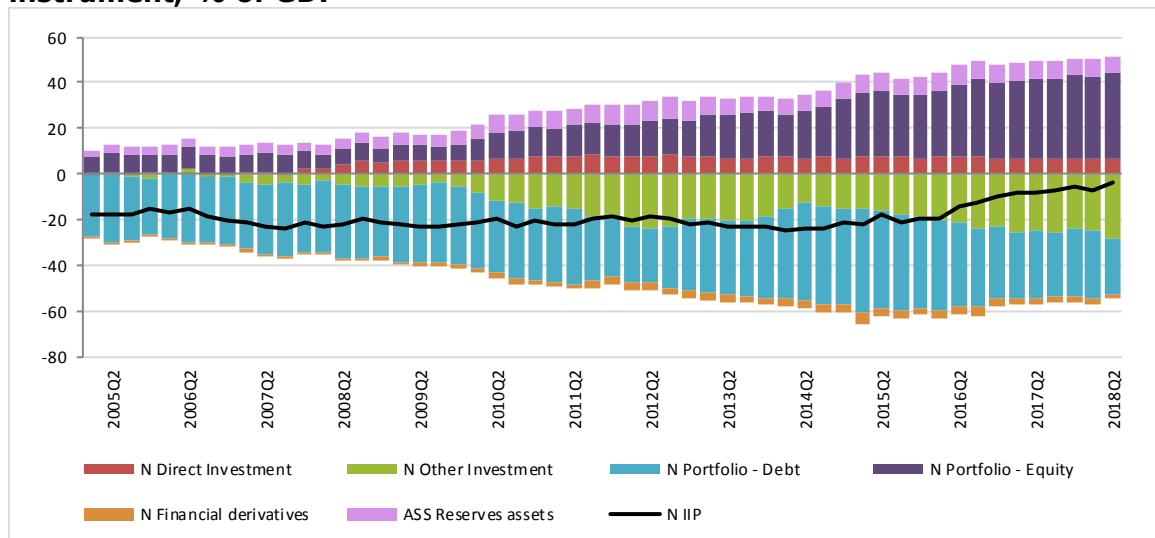
Figure 44: Italy net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

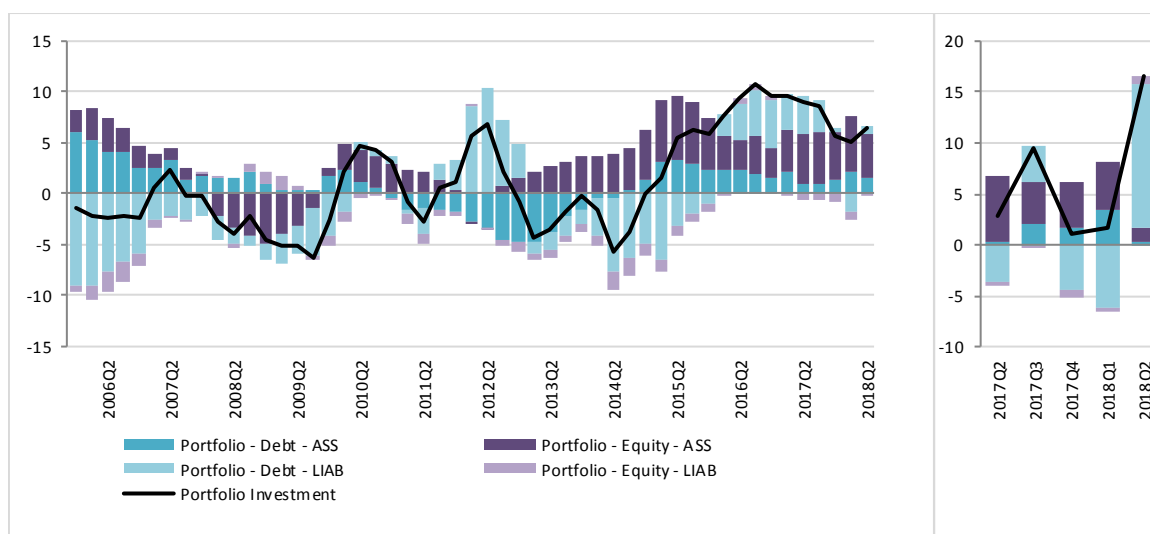
Figure 45: Italy net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

In terms of sectoral contributions, the non-MFI, non-government sector is a net investor abroad, strongly adding foreign equity securities to its portfolio, while the PSPP has led to a decrease in Italian government bond holdings by the rest of the world too, from 2015 onwards. In that sense, the evolution of debt portfolio investment liabilities in Italy closely resembles the trend in euro area debtor countries. In addition, however, Italian banks saw non-residents reduce their holdings of Italian bank portfolio debt in 2016, the main culprit being the troubles and eventual liquidation of Veneto Banca and Banca Popolare di Vicenza, and the upheaval it caused. The BIS locational banking statistics (see Figure 47) also show that banks located in Italy have seen their cross-border funding decline in 2016 and 2017.

Figure 46: Italy's gross portfolio investment flows sub-components, % of GDP

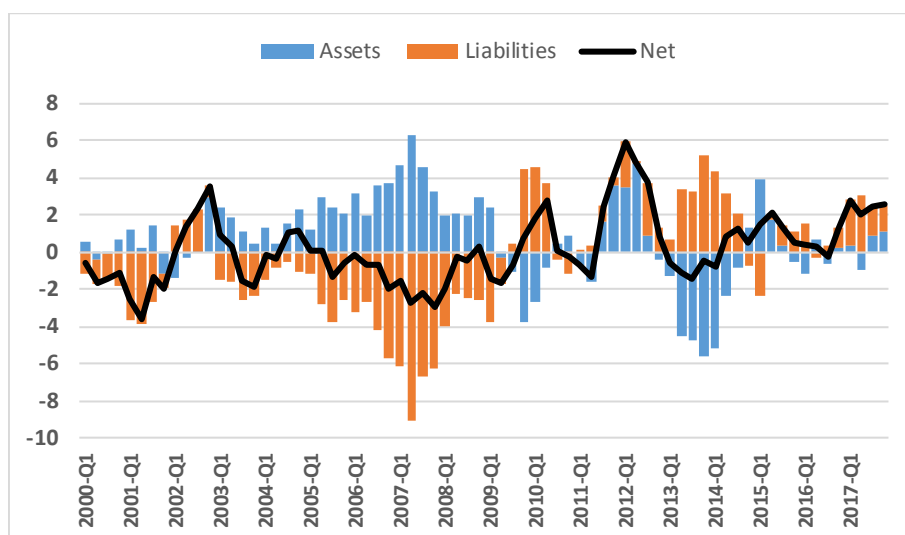


Source: Eurostat (bop_c6_q & namq_10_gdp)

Note: data is smoothed using a 4Q lagged moving average

Excluding the portfolio investment category, gross flows of direct investment remained subdued following the pattern of persistently low levels witnessed since 2012. In the other investment category, Banca d'Italia is accumulating significant liabilities to the Eurosystem, partly balancing the overall net flow.

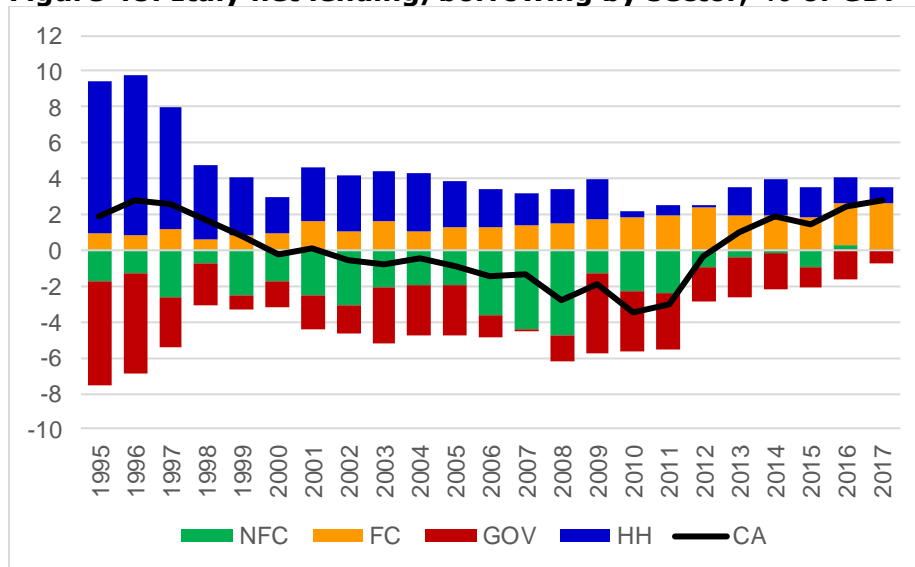
Figure 47: Italian bank's cross-border flows, % of GDP



Source: BIS Locational Banking Statistics

Note: data is smoothed using a 4Q lagged moving average

Concerning its NIIP, Italy has a negative but improving position; what is most significant though is the radical change in composition that took place over the last 10 years (Figure 45). It is the exact opposite of the switch in the French NIIP, with outstanding portfolio debt liabilities gradually being replaced by other investment liabilities.

Figure 48: Italy net lending/borrowing by sector, % of GDP

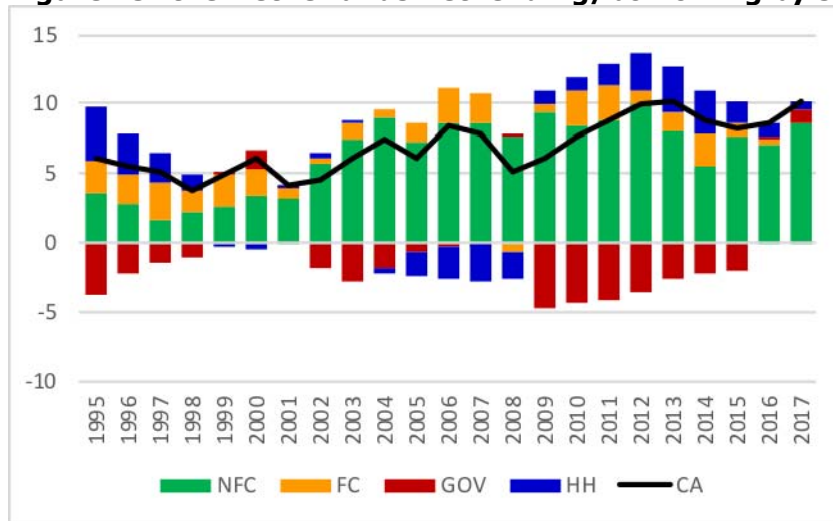
Source: Eurostat (nasa_10_nf_tr & namq_10_gdp)

Note: NFC – non-financial corporations, FC – financial corporations, GOV – general government, HH – households and non-profit organisations

3.4. The Netherlands

The Dutch economy has persistently been generating excess savings and exporting them to the rest of the world for more than three decades. From a real economy point of view, these capital exports reflect a robust trade surplus in goods (including in natural gas) and in services.

From a savings-investment balance perspective, excess savings originate mainly from the non-financial corporate (NFC) sector. Savings in this sector have driven the overall increase in savings in the last twenty years and continue unabated. They are the result of Dutch-based multinational corporations (MNCs), which tend to distribute only a low share of their profits (European Commission, 2018a). The household sector also contributed significantly to the total amount of excess savings, as a result of the deleveraging that took place in the aftermath of falling housing prices and of the increase in mandatory contributions in the second pillar of the pension system (see details in IMF, 2018a). The largest share of these savings is held by pension funds, which invest mostly in foreign securities (European Commission, 2018a). Nevertheless, as Figure 49 shows, household savings have decreased in the last two years.

Figure 49: the Netherlands net lending/borrowing by sector, % of GDP

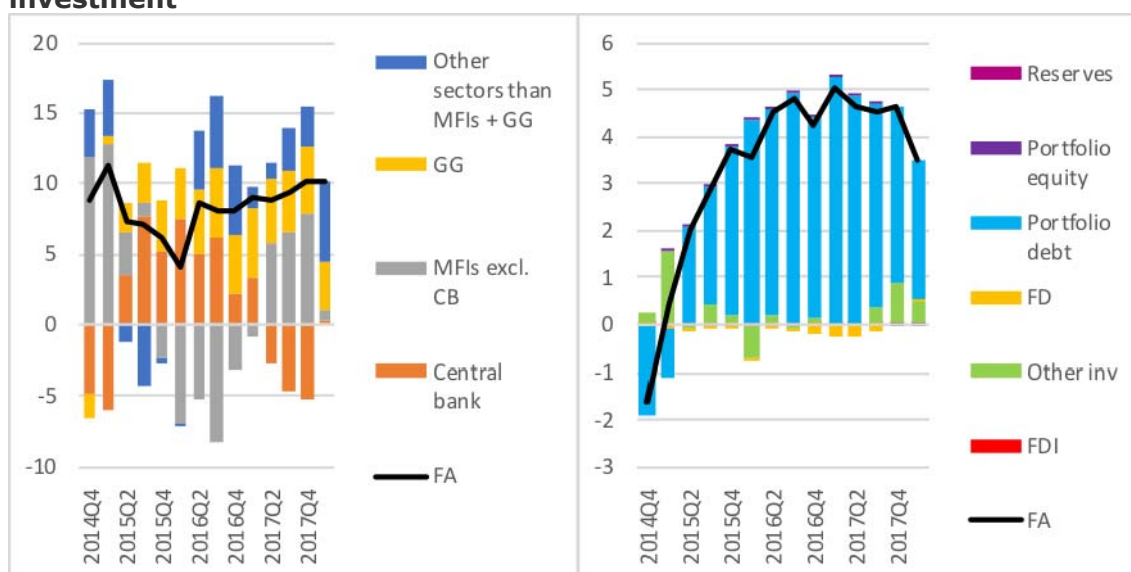
Source: Eurostat (nasa_10_nf_tr & namq_10_gdp)

Note: NFC – non-financial corporations, FC – financial corporations, GOV – general government, HH – households and non-profit organisations

Switching to the financial account perspective, the current account surplus has mainly financed net FDI outflows in the last decade. Behind this net export of FDI are large and persistent gross FDI flows, in both directions (32% of GDP inward flows and 42% outward flows in 2017). As with net savings, large gross transactions involving affiliated companies based in the Netherlands are due to the activity of large MNCs based in the country, as well as the role of the Netherlands as a transit country for FDI. According to the European Commission (2018a), one reason for this activity is that “foreign large NFCs hold mostly intra-group debt, on which interest is being charged by one group company to another. This suggests that debt is being used for tax reasons, as MNEs can use debt shifting to lower their tax burden via increased interest payments to other group companies”. IMF (2018a) also notes that corporate profits are roughly at par with FDI outflows.

As far as sectoral contributions to the financial account balance go in the last two years, the overall surplus can be attributed to the sum of two balances: that of households, NFCs and non-bank financial corporations on the one hand; and that of the general government on the other (Figure 50). The net claims of the central bank tend to move in the opposite direction and cancel out claims in the MFI (banking sector). In the last two years, gross cross-border transactions of Dutch-based banks (both assets and liabilities) have remained relatively muted.

Figure 50: the Netherlands, net financial account surpluses by institutional sectors and general government net financial account by category of investment



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average. Both the financial account flows and GDP are measured in EUR.

Gross flows are dominated by FDI flows among NFCs, as described above. But changes in the portfolio investment category have gained importance lately in driving the overall picture. The biggest change has come from the reduced holdings of general government portfolio debt securities from the rest of the world. Beginning in 2015, portfolio debt claims of non-residents on the general government are diminishing at an average rate of 5 percentage points of GDP per year, leaving little doubt that this results from the PSPP of the ECB (Figure 50). Moreover, an exceptionally strong net inflow of portfolio equity (to the residual sector, i.e. households, NFCs and FCs excluding banks) was recorded in 2015, resulting from both a fall in foreign securities acquisitions and strong formation of new equity claims on Dutch residents.

Finally, the large and persistent outflows of capital from the Netherlands have generated a NIIP that has gradually grown from a moderately negative net position to a substantially positive one. The NIIP is split between a net positive position in the FDI category, to the tune of 134% of GDP, and a smaller net negative one in portfolio debt. In the remaining categories, assets and liabilities are roughly matched. As with flows, gross positions, both assets and liabilities, are quite substantial relative to country GDP (43% and 33% on average in 2017) driven by FDI stocks.

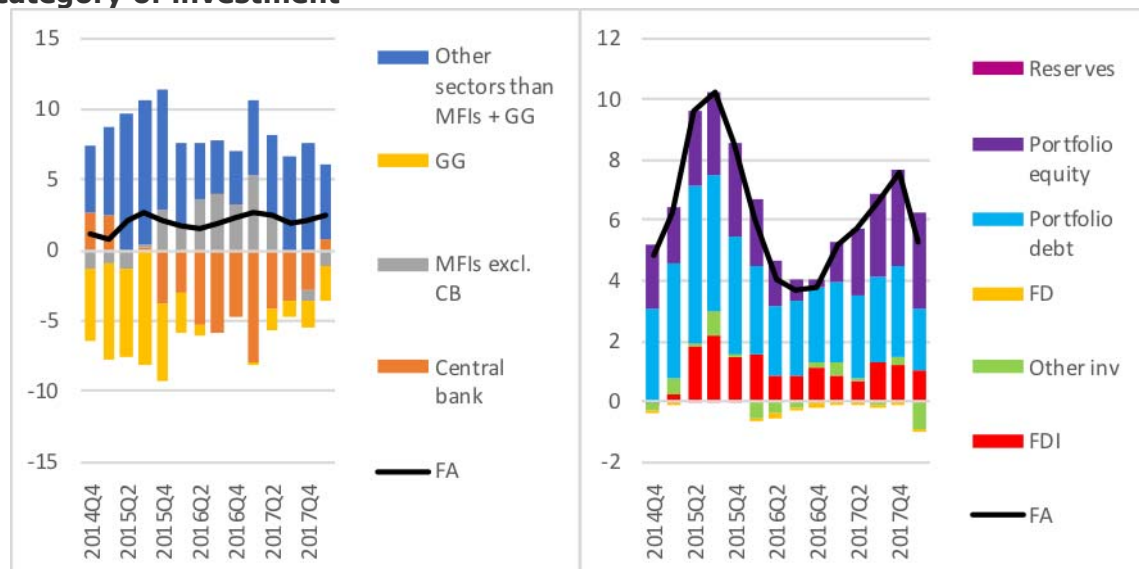
3.5. Spain

The balance of cross-border flows in and out of Spain is responding to the external deleveraging process, and should continue to do so in the following years. Before the financial crisis, Spain was the destination of significant debt portfolio flows from abroad, that financed domestic investment (and in particular residential investment) and pushed the financial account balance as low as 10% in 2008. The result of these inflows has been a large external debt position vis-à-vis the rest of the world, whose size relative to the Spanish economy grew fast as the country experienced a 'double-dip' recession.

The adjustment on the real side of the economy was large but appeared to be complete by 2017. After years of wage and price compression, the Spanish trade balance improved substantially, thanks primarily to a strong increase in exports, resulting in sustained current account surpluses in recent years. Further, since 2009, the NFCs and household sectors, i.e. the sectors that financed investment through capital inflows, have dramatically altered their behavior and become net savers.

This external deleveraging of the private sector is also reflected in the financial account statistics, but the picture of the last two years is more nuanced. While it is true that corporates (non-financial and financial other than banks) and households have been cutting back their cross-border debt liabilities, they have done so incrementally and slowly: from 2007 to 2017, the gross reduction of debt portfolio liabilities of these sectors never exceeded 5% on an annualized basis and in the last two years it has essentially stopped. Instead, they have been strongly acquiring foreign assets and in particular portfolio equity securities (Figure 51). The combined outcome of these two changes is that portfolio investment category is not simply switching from inflows to outflows, but also increasingly from debt to equity. In short, the recent Spanish picture shows that sectors other than the general government and the MFIs are major investors in foreign assets, particularly equity securities. It is also worth mentioning that robust gross FDI flows involve Spanish corporates as well. In addition, the cross-border activity of Spanish banks is modest, and the banking sector has had a relatively negligible contribution to the overall evolution of net, and even gross, cross-border flows after 2012.

Figure 51: Spain, net financial account surpluses by institutional sectors and other sectors than MFIs and the general government net financial account by category of investment



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average. Both the financial account flows and GDP are measured in EUR.

On the other hand, the government sector in general (central bank and general government) has had a clear impact between 2013 and 2017. It has been accumulating liabilities towards non-residents in two distinct phases (Figure 51). First, foreign investors heavily bought government debt securities (on an annualized basis, purchases ranged from 6% to 10% of Spanish GDP). This followed the stabilization

during the euro area crisis in 2012 and a sell-off in the years that preceded it. Then, as the PSPP began in 2015 these purchases essentially stopped. The net result of the Banco de España's participation in the APP has been to incur net liabilities to the rest of the world. This net result arises from a combination of rising liabilities in the other investment category (i.e. TARGET2 claims by the Eurosystem) and rising assets in portfolio debt securities, partly offsetting the former. Interestingly, owing to its participation in the supranational leg of the PSPP, the Banco de España was a significant buyer of debt securities from non-residents³.

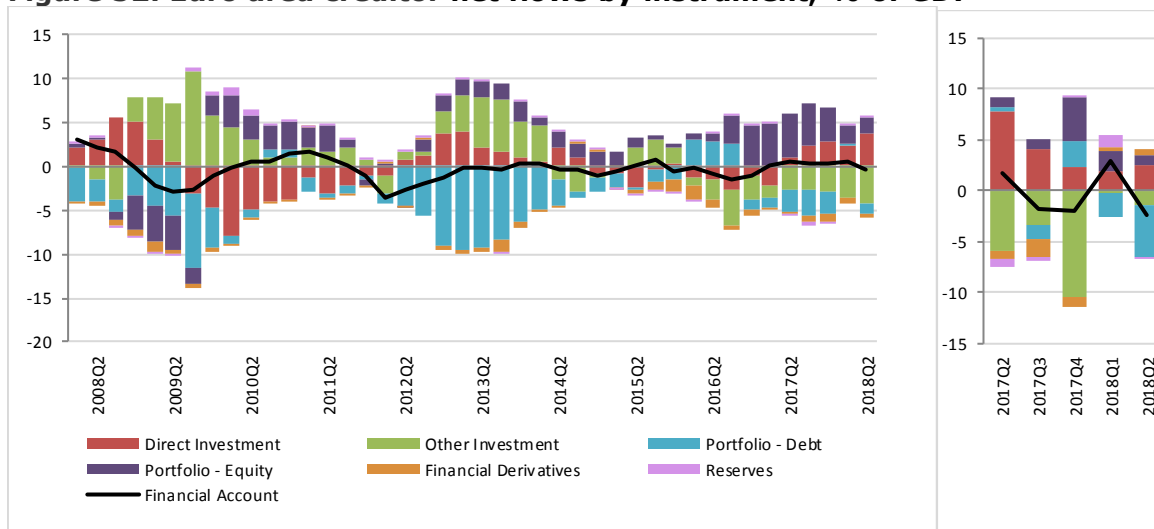
In conclusion, the latest patterns in cross-border flows described above have spilled over to the Spanish NIIP. Despite its still substantial negative position, Spain's net external liability has stabilized in recent years, although not in line with the cumulative surpluses that the economy has generated. As noted by the European Commission (2018b), two observations are worth mentioning about the international investment position of Spain. First, the reduction of the NIIP, slower than suggested by net flows, can be attributed to valuation changes, and in particular to the appreciation of the euro. Second, the increase in the proportion of equity instruments (as emphasized in the flows above) in total external liabilities has reduced external funding risks, as did the change in the composition of external indebtedness towards central bank liabilities.

3.6. Euro area 'creditor' countries: Austria, Belgium, Finland

Countries classified as euro area creditor countries (Austria, Belgium and Finland) have been net capital lenders to the rest of the world for the last decade at least. In recent years, the decomposition of the group's net international investment position changed structurally. While the foreign direct investment position was balanced in 2008, it accounts now, together with portfolio equity investment, for most of the surplus. This increase has been balanced by inflows of other investment and portfolio debt investment which kept the NIIP stable around 20% of GDP. The reduction in other investment is driven to a great extent by the financial sector and can partly be explained by its retrenching of foreign holdings. For example, before the crisis, resident banks increased the issuance of non-domestic loans, but recently the home bias increased significantly leaving countries more susceptible to domestic shocks.

³ See Banco de España (<https://www.bde.es/webbde/es/estadis/infoest/a0701e.pdf>)

Figure 52: Euro area creditor net flows by instrument, % of GDP



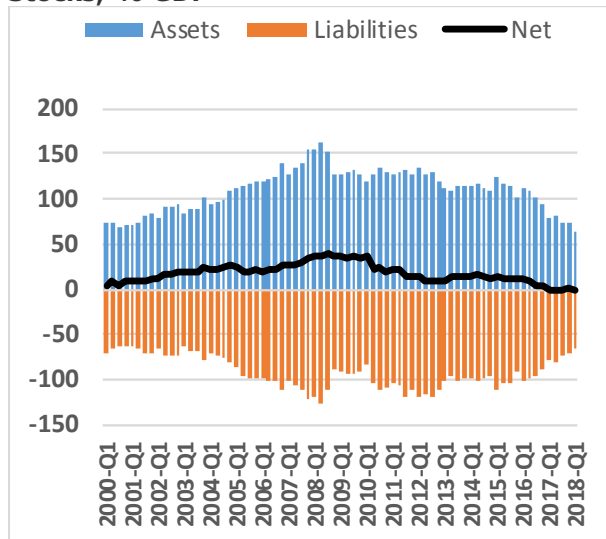
Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

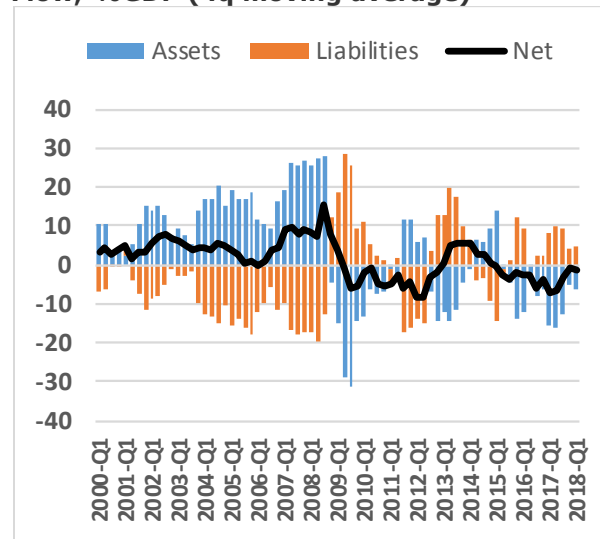
It is worth noting that the net financial account remained nearly balanced for Austria and Belgium, while Finland experienced large capital inflows both in 2012 and 2016, which explains the dips visible in Figure 52.

Figure 53: Euro area creditor bank's cross border stock and flows, % of GDP

Stocks, % GDP



Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

3.7. Euro area 'debtor' countries: Greece and Portugal

As far as the balance of payments is concerned, Greece's and Portugal's situations before the crisis and in its immediate aftermath have been very similar. Both countries took in large capital inflows from abroad that financed their current account (and government) deficits, leading to a large increase in net external liabilities. They also both resorted to financial assistance programmes when foreign investors withdrew their funds and underwent dramatic internal devaluations, which have resulted today in small and stable surpluses in their current accounts. The main driver of adjustment in the savings-investment balance was fiscal consolidation. However, there are also major differences in the direction that the two countries have taken especially since 2015 when, contrary to Greece, Portugal left its financial assistance programme.

In Greece, cross-border financial flows were nearly balanced in 2017, while gross flows were larger. However, digging into the components of the financial account reveals large disparities between institutional sectors of the Greek economy that distort the aggregate picture.

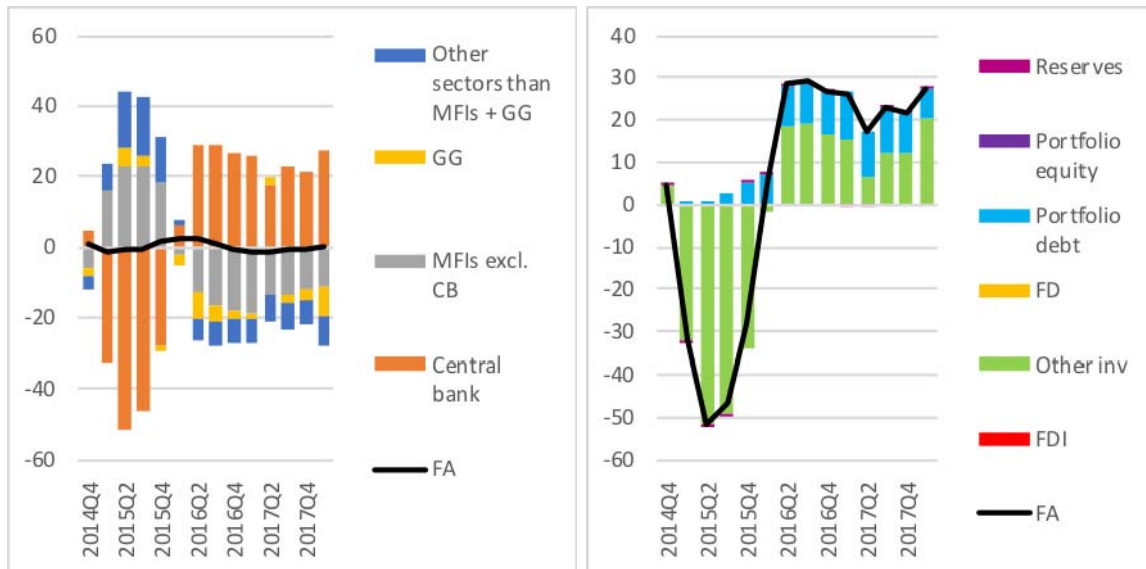
First, with the exception of the Bank of Greece, all institutional sectors are net recipients of foreign capital (Figure 54). However, the net inflow observed for the rest of the Greek economy is not the result of foreign capital investing in the country, but a product of the residents' reduction of foreign asset holdings. The drop in foreign assets is not surprising, considering that capital controls imposed in mid-2015 have yet to be fully lifted. The largest drop in assets comes from Greek banks (falling by -20% of GDP in 2017) and in particular their declining holdings of foreign portfolio debt securities. Note that, as part of earlier recapitalizations, Greek banks held bonds issued by the EFSF which qualify for purchase by the ECB as part of the APP⁴. Meanwhile, sectors other than MFIs and the general government are also recording steady drops (on average by 5 percentage points of GDP per year) in foreign other investment claims, which are mainly deposits.

Second, new liabilities are not incurred in general, with two minor exceptions: financial assistance, captured as other investment, is flowing into the government sector, while inward FDI flows picked up in 2017 (but they remain scant, representing only 2% of GDP).

Finally, note that while Greek securities are excluded from the PSPP, the Bank of Greece still participates in the Eurosystem's programme execution. Thus, the Bank of Greece has been accumulating portfolio debt securities (as in Spain) to the tune of 10% of GDP since 2015, which essentially make up all of the new assets acquired by Greek residents (Figure 54). At the same time, its external liabilities are diminishing fast, by virtue of the reduction in the Eurosystem liquidity extended to the Greek banks via the Bank of Greece (ELA in 2015).

⁴ See <http://www.ekathimerini.com/208191/article/ekathimerini/business/ecb-starts-buying-efsf-issued-bonds-held-by-greek-banks-offering-capital-gains>

Figure 54: Greece, net financial account surpluses by institutional sectors and central bank net financial account by category of investment

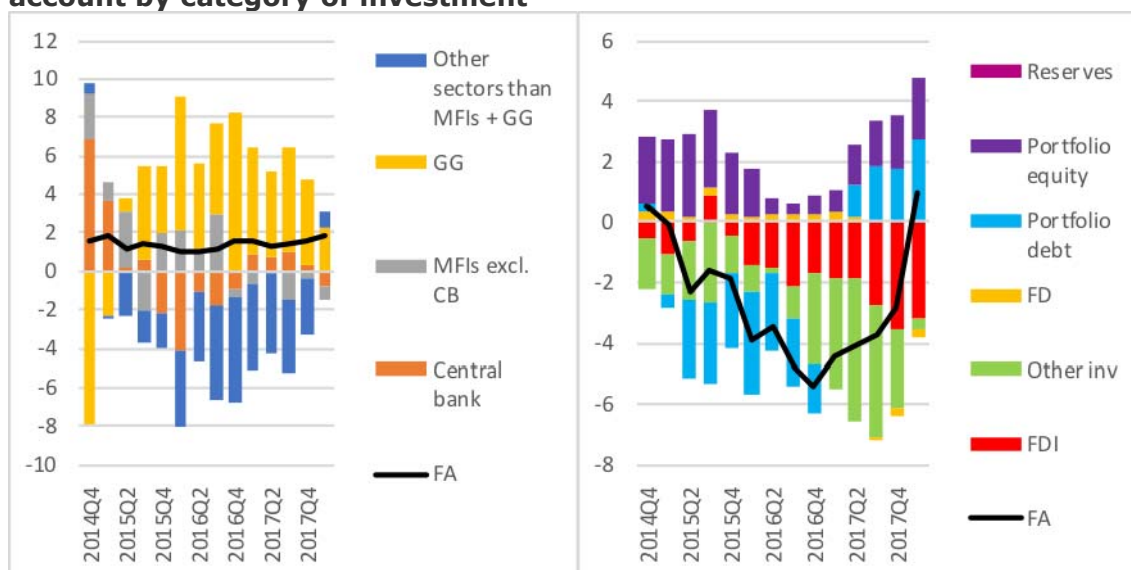


Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average. Both the financial account flows and GDP are measured in EUR.

The recent picture in Portugal is considerably different: net capital exports to the rest of the world were maintained for a fifth consecutive year (1.6% of GDP in 2017) and trends in composition have crystalized since 2015. Net outflows of portfolio investment, mainly in the form of debt, more than offset inflows, mixed between FDI and other investment. In summary, contrary to Greece, the net impact of flows through the central bank is irrelevant for the overall picture. Moreover, other sectors other than the government and banks have been net recipients of capital flows from abroad. Finally, external liabilities of the general government have been falling, thus offsetting inflows (Figure 55).

Figure 55: Portugal, net financial account surpluses by institutional sectors and other sectors than MFIs and the general government net financial account by category of investment



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average. Both the financial account flows and GDP are measured in EUR.

In more detail, the Bank of Portugal's cross-border transactions follow the typical pattern of buying securities for monetary purposes while also accumulating a Eurosystem liability; but in net terms, the two flows balance out. Meanwhile, the residual sector (NFCs, households and financial corporations excluding banks) have increased their holdings of foreign assets, first because, as in Spain, they have become buyers of foreign securities (split between debt and equity securities, Figure 55) and second because, unlike in Greece, foreign deposits have stopped decreasing. However, corporates continued to receive strong FDI inflows, which have outweighed the increase in assets. Last but not least, the government's reduction of external liabilities is mainly due to the repayment of financial assistance, rather than the reduction of cross-border holdings of debt.

3.8. Euro-area Central and Eastern Europe

Although the five countries in this group (Estonia, Latvia, Lithuania, Slovakia and Slovenia) did not join the euro area simultaneously, they share three features as regards their cross-border capital flows and foreign asset positions.

First, all these countries ran large current account deficits before the financial crisis, that subsequently became surpluses. However, the timing of the capital flow reversal was not the same in all five cases. In 2007, in the eve of the crisis, the pace of foreign capital net inflows was notably higher in the Baltics (representing 14.5% of GDP in Estonia, 19.6% in Latvia, 12.7% in Lithuania) than in Slovakia and Slovenia (4.8% and 3.0% of GDP respectively). In the latter set of countries, inflows intensified in 2008 (rising to 9.1% and 8.9% of GDP respectively) and only gradually abated over time. By contrast, the reversal of capital flows was much more abrupt in the Baltics; Latvia even had to resort to a financial assistance programme at the end of 2008.

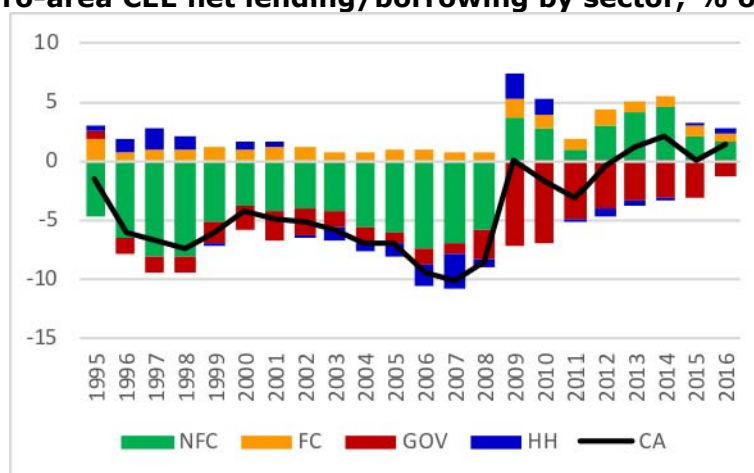
Second, the large pre-crisis capital inflows financing current account deficits (with the exception of Slovakia) were mostly in the other investment category, in particular

cross-border loans to banks. As a result, they generated a large negative other investment position vis-a-vis the rest of the world. The first phase of the post-crisis period (roughly 2009 to 2014) in all of these countries was, thus, dominated by the cross-border deleveraging of these banks. As a result, negative international positions have been shrinking in all countries.

Third, a large part of these countries' external liabilities takes the form of FDI. The Baltics and Slovakia have stable stocks of FDI liabilities that range from 30% to 60% of GDP, whereas Slovenia's stock has gradually increased in recent years to 20% of its GDP. However, inflows of FDI have diminished in importance in recent years, across the board.

In these countries, government deficits (if deficits were run at all) were modest in the pre-crisis period and net borrowing from the rest of the world was due to the non-financial corporate sector, as did the overall adjustment post-crisis.

Figure 56: Euro-area CEE net lending/borrowing by sector, % of GDP



Source: Eurostat (nasa_10_nf_tr & namq_10_gdp)

Note: NFC – non-financial corporations, FC – financial corporations, GOV – general government, HH – households and non-profit organisations

As bank deleveraging came to an end, new trends emerged in the last two years:

In the Baltics, the central banks' participation in the Eurosystem's APP distorts the financial account overall picture. Specifically, it inflates gross flows and gives rise to large and opposing net balance effects in portfolio investment (surplus) and other investment (deficits). In detail, net acquisitions of portfolio debt assets from abroad reached decade-highs due to gross purchases of national central banks for the purposes of the APP, also accounting for the vast majority of gross flows from the Baltics to the rest of the world. At the same time, central banks also incur significant gross liabilities in other investment.

Excluding cross-border transactions of the central banks and focusing on the rest of the economy, flows between the Baltics and the rest of the world are broadly balanced. Neither are there significant imbalances among the remaining sectors. Gross assets acquisitions are strong in Estonia and Lithuania, driven by sectors other than the general government and MFIs, but actually decreasing in Latvia, where shrinking foreign assets of the banking sector more than offset acquisitions by the said sector.

Non-financial corporates in all three countries still attract foreign capital, in the form of gross flows of FDI liabilities.

The central bank sector influence on the composition of flows is less relevant in the cases of Slovakia and Slovenia. In Slovakia, the financial account balance went into a deficit of roughly 5% of GDP in the last two years, largely as a result of net inflows to the general government sector and other sectors than MFIs and the general government. It is worth mentioning, however, that large one-off gross flows (approaching 60% of GDP) in both directions were recorded in the last quarter of 2017 in the other investment category. These flows were due to transactions by the national central bank.

The same goes for Slovenia, where the central bank sector's sectoral financial account balance has been virtually zero in the last two years. The financial account surplus, at 5% of GDP, is mostly accounted for by the MFI sector. However, Slovenian banks' large-scale cross-border deleveraging has come to an end and outflows have taken the form of acquisitions of foreign portfolio debt assets instead.

3.9. Non-Euro area Central and Eastern Europe

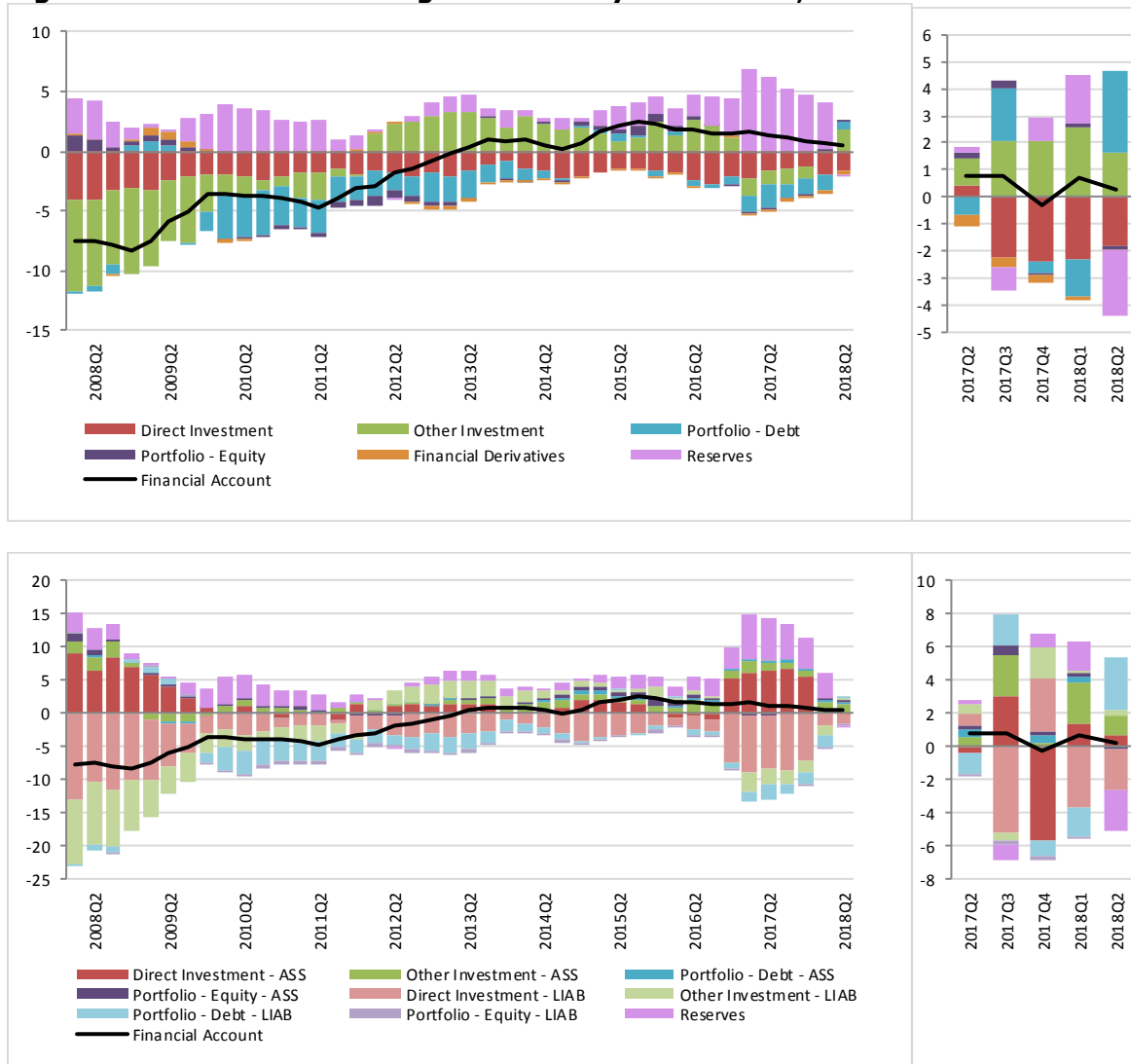
Non-euro area Central Eastern European (NEA CEE) countries have experienced significant inflows of capital for an extended period of time, mainly in the form of direct investment, with capital moving 'downhill', mostly from developed EU15 countries to less developed NEA CEE countries as highlighted by Becker et al. (2010). Parallel to this development, credit to the private sector increased rapidly before the crisis in the region, fuelling a credit boom (Darvas and Szapáry, 2008). However, by the end of 2011, other investment started outflowing, reflecting a massive withdrawal of banking funds from the region. Non euro-area CEE turned into a net exporter of funds by 2013Q1, a trend which still ongoing today.

The comparison with what happened in the euro area 'debtor' countries is striking. These countries experienced significantly larger current account deficits before the crisis than non-euro area CEE countries, but the correction during the crisis, was slower than in NEA CEE countries, in particular thanks to the provision of ECB liquidity and financial assistance. This allowed a smoother adjustment of the external position than what occurred in NEA CEE countries. These 'other investment' outflows continued until 2016. Since then, the net financial account in the NEA CEE stabilized somewhat, and the region has seen falling net capital outflows.

However, reserve accumulation offsets the renewed capital inflow in NEA CEE countries. The acquisition of reserve assets was exceptionally strong in the Czech Republic in the course of 2017Q1. Having capped the exchange rate with the EUR at 27 CZK per EUR for more than 3 years, the Czech central bank intervened heavily to defend it as foreign capital flowed into the country, in the form of portfolio and other investment. A week later, the cap was lifted.

In terms of gross flows, in the NEA CEE, FDI constituted the bulk of inflows before the crisis together with other investments (which included bank loans). In the post-crisis period, the magnitude declined dramatically in the CEE. The official balance of payments data shows a very large, one-off spike in both direct investment assets and liabilities of roughly equal size for Hungary in 2016Q4, offset partially with an inverse transaction in 2017Q4. We could not find an explanation for this outlier, though it is worth noting that it is not captured in the balance of payments statistics of the Hungarian central bank. Coming back to the NEA CEE, in 2017, inflows and outflows of capital were roughly balanced.

Figure 57: NEA CEE net and gross flows by instrument, % of GDP

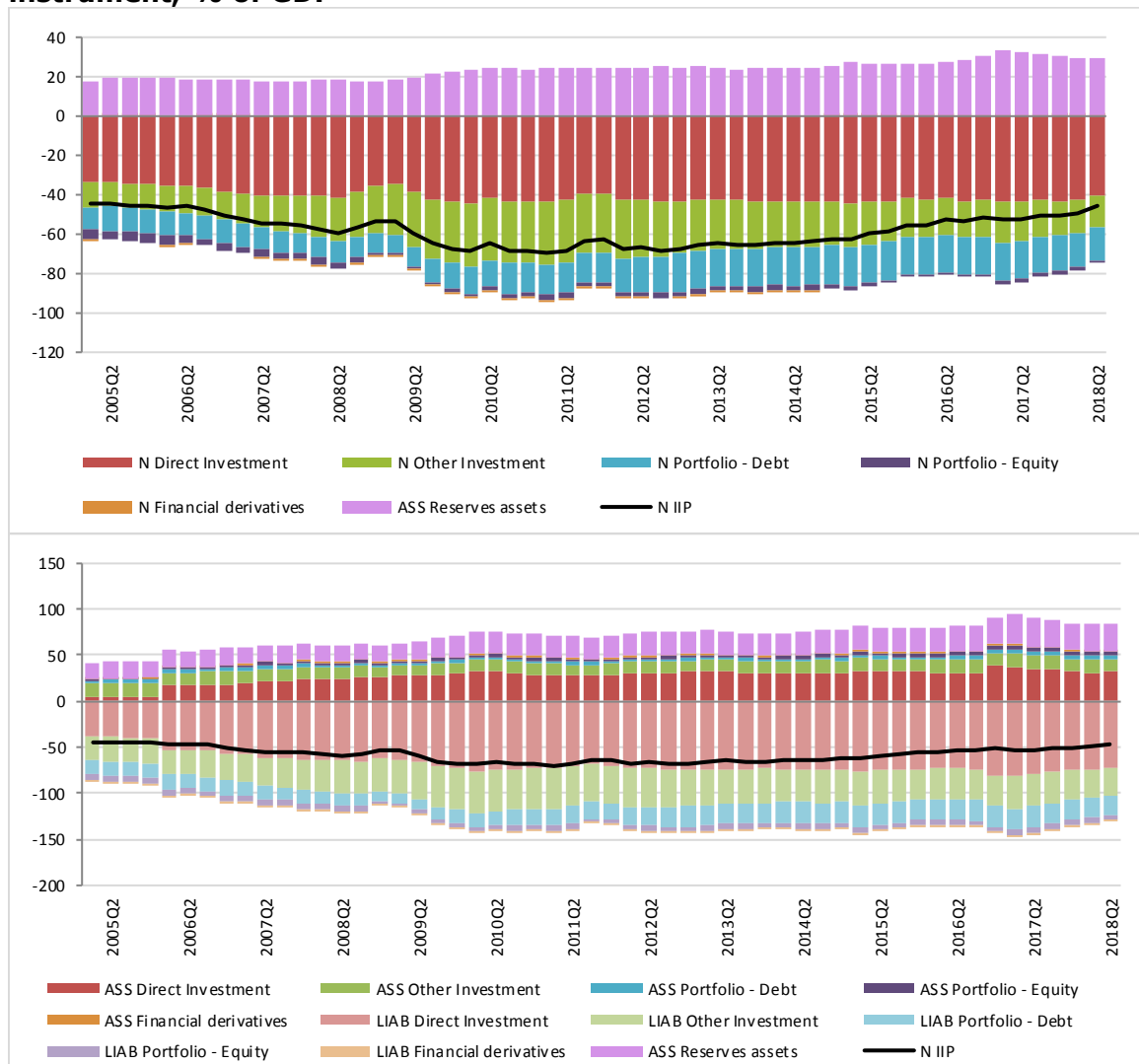


Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

As far as NIIPs are concerned, NEA CEE countries stand out, with a large negative NIIP that exceeded 70 percent of GDP at the end of 2009 and that has slightly decreased since then and is now around 50% of GDP (see Figure 58). NEA CEE countries exhibit net liabilities in all instruments (except reserves) and more than half of their NIIP liabilities are direct investment, while portfolio debt and other investment (including bank loans) constitute the remainder. It is noteworthy that their net other investment liabilities decreased from almost 20 percent of GDP by the end of 2009 to less than 10 percent of GDP today, suggesting that foreign banks decreased significantly their exposure to the region.

Figure 58: NEA CEE net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

3.10. Non euro-area Nordics: Sweden and Denmark

Denmark and Sweden may have their own currencies, but the countries differ in their monetary policies's degree of independence: as the Danish Krone is required to fluctuate within +/-2.25% of the central rate (7.46 to the euro), the Danish monetary policy operates under this additional constraint.

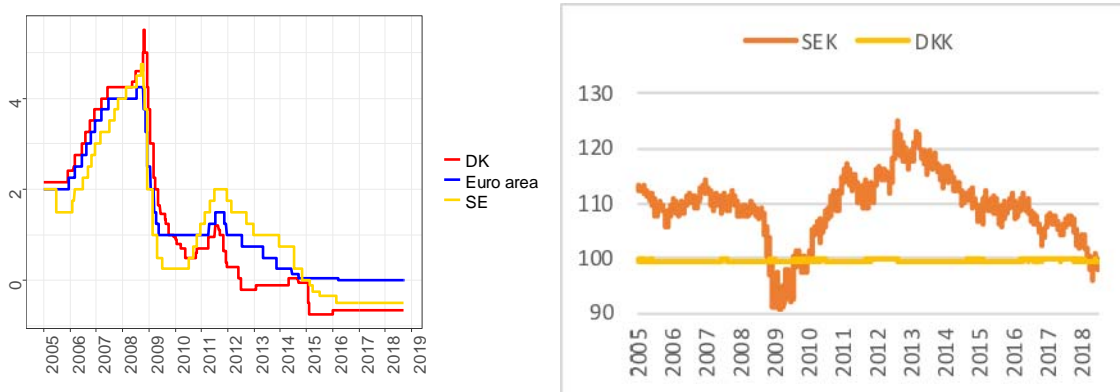
The financial account balances of Denmark and Sweden tend to be on the surplus side, though this is not always the case. In Denmark, the improvement in the net balance was one-off, from zero to 5% of GDP in 2012. On the other hand, Sweden has a longer history of capital exports of similar magnitude but also more volatility as in the last decade, its financial account balance has reversed sign in three instances: in 2008/09, 2013 and more recently in 2016.

The first reversal episode occurred amid increasing inflows of capital mainly from the euro area in a movement of flight to safety. This issue was so pressing for Denmark that the Danish central bank also massively intervened on the exchange rate market

in order to prevent the krone from appreciating and to maintain the stability of its monetary peg with the euro. This is clearly visible in the rise of exchange rate reserves in 2008 and 2009.

The policy interest rates in both countries are negative since 2012 in Denmark (at -0.65% at mid-September 2018) and 2015 in Sweden (at -0.50% at mid-September 2018) (see Figure 59). The co-movement between the Swedish policy interest rates and Swedish currency-euro exchange rate is particularly strong and can be roughly divided into three phases: (i) the decrease in interest rates in the aftermath of the global financial crisis and the flight to safety which led to a depreciation (2008/09); (ii) the period of policy rate hikes, positive rate differentials vis-à-vis peers and currency appreciation (2010/14); and (iii) decreasing, ultimately negative rates, and depreciation again (2015/17).

Figure 59: Non euro-area Nordics Central Banks' policy rates vs ECB rate and exchange rates vs EUR



Source: BIS, Bloomberg

From the real economy perspective, a higher household net savings trend is visible in both countries. Particularly in Sweden, historically positive households' net savings ballooned in the aftermath of the crisis. Fiscal deficits at the time offset that trend to some extent. The two countries differ in behaviour of non-financial corporations. Corporate savings in Denmark increased from 2007 to 2015 and are since slowly falling. On the other hand, Swedish companies increased investment instead.

Playing a central role in the Nordic banking cluster, the Swedish banking sector intermediates significant cross-border investment flows, and makes up most of the gross asset and liability flows in the country, though the two tend to balance. In the second phase mentioned above, i.e. when interest rates were higher and the currency was appreciating, banks visibly raised portfolio debt funding from abroad and matched this by lending cross-border (other investment). As the IMF (2013) notes, "unlike most European banking systems, Swedish banks have increased their cross-border banking claims after the crisis", which "could be explained by the fact that the Swedish banking sector did not experience a systemic banking crisis" and "seems to be driven by the increased lending to Nordic countries". The IMF (2018a) also notes that "given their size and funding model, Sweden's large banks remain vulnerable to liquidity risks stemming from global wholesale markets even though banks have improved their structural liquidity measures in recent years". We note that in 2017, Nordea, the largest bank based in Sweden until then, moved its headquarters to Finland. Although it is too early to tell, this move may have implications for the balance of payment series in both countries. A similar picture emerged for Danish

banks in the years 2015/17, although the component gross flows were of smaller magnitude. In this case too, the Danish central bank intervened to maintain the exchange rate stable.

In addition, foreign investors strongly bought into Swedish government debt securities in 2009 (up to 8% of GDP on an annualised basis) and more moderately between 2012 and 2016 (averaging 3% of GDP). Portfolio debt inflows in general disappeared shortly after interest rates moved into negative territory. Negative interest rates also appear to have resulted in sales of Danish debt securities in 2015/16 by non-residents.

Turning to stocks, Denmark's and Sweden's NIIPs have continuously increased since 2005, moving from a negative to a significantly positive stock of net external assets today. However, despite persistent current account surpluses, the NIIP of Sweden is notoriously low, suggesting there are potential measurement issues beyond the valuation effects.

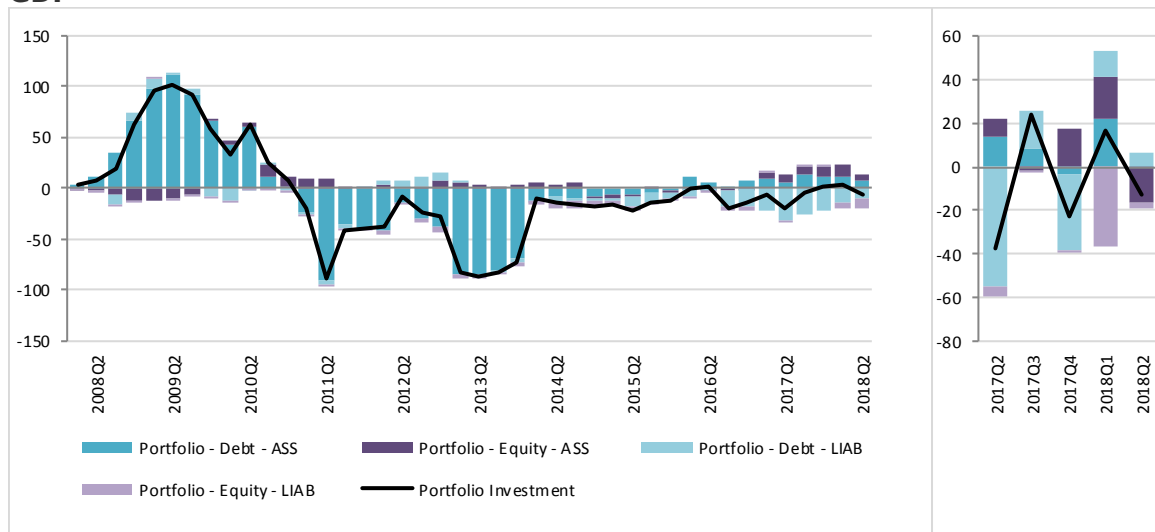
3.11. Cyprus, Ireland, Luxembourg and Malta

3.11.1. Cyprus

After years of cross-border debt assets and liabilities reduction, inflows and outflows in both portfolio debt and equity have increased in the past two years in Cyprus (see Figure 60). It is worth noting that the rating agency Standard and Poor's has upgraded Cyprus' sovereign credit rating to investment grade (BBB-) after keeping the rating at 'junk' for more than six years. Therefore, Cypriot sovereign bonds became eligible for the ECB's PSPP, which will continue until the end of 2018 according to ECB communication. Therefore, the holding of Cypriot sovereign debt securities by foreign investors could decrease.

Furthermore, Cypriot banks downsized their cross-border balance sheets substantially following the 2013 crisis and subsequent bail-in (see Figure 61). Banks have also made substantial efforts over the past years to deleverage and reduce their stock of non-performing loans (Central Bank of Cyprus, 2018).

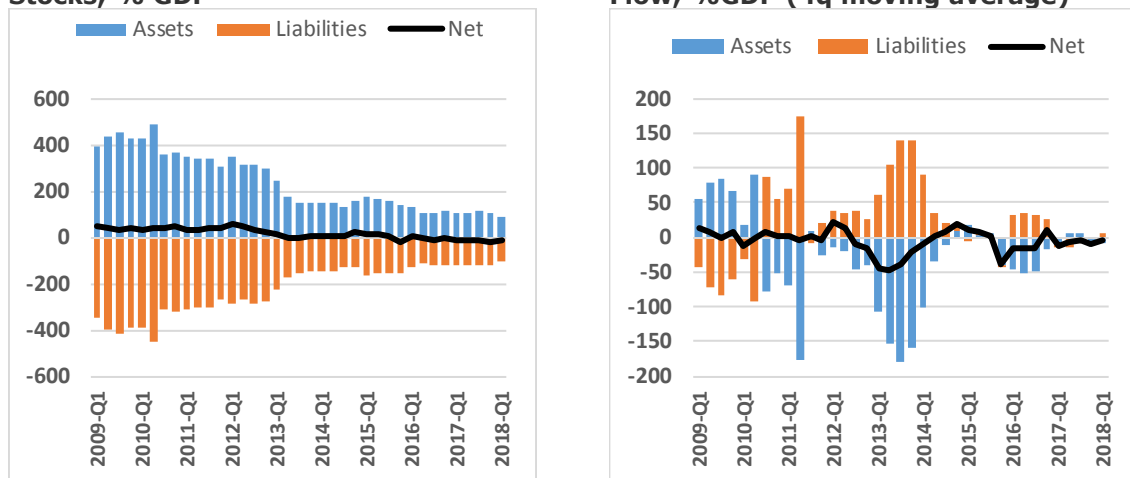
Figure 60: Cyprus gross portfolio investment flows sub-components, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Note: data is smoothed using a 4Q lagged moving average

Figure 61: Cyprus bank's cross border stock and flows, % of GDP
Stocks, % GDP **Flow, %GDP (4q moving average)**



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

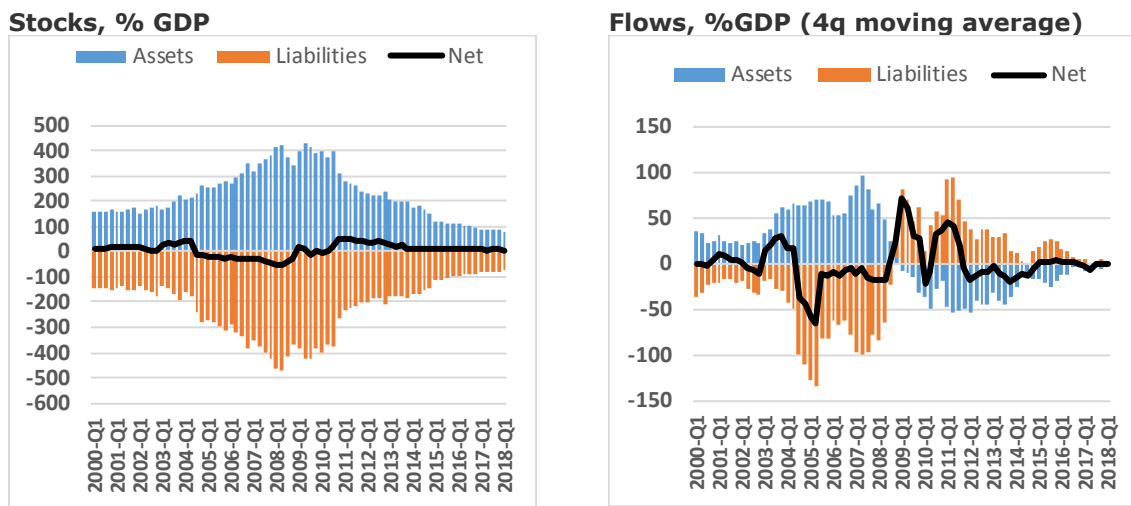
3.11.2. Ireland

Foreign-owned multinational enterprises (MNEs) play an important role in the Irish economy and therefore complicate the interpretation of capital flows, since changes in data may be due to the activities of a single/few companies. As highlighted by the IMF (2017) “understanding underlying trends in the [Irish] BOP would require more granularity in trade data on financial services and royalties, MNE income (on- versus off-shore) and portfolio flows, and related-party financial flows, with NIIP calculations calling for a breakdown of IP assets and liabilities and associated dividends and profits”.

As shown in Figure 62, recent developments in the banking sector indicate that Irish banks have stopped their foreign assets and liabilities reduction. After their exposure peaked in 2010, Irish banks now hold assets abroad representing 80% of the country's GDP (i.e. only 25% of what it represented in 2010); flow data indicates that this process has stalled.

Brexit clearly poses a strong external risk to the Irish economy and its financial sector, assuming an economic slowdown in the UK after its divorce comes into effect. However, this negative impact might be mitigated by its attractiveness for foreign investors who seek access to the single market. Davies, Siedschlag and Studnicka (2016) suggest that Ireland is a natural alternative to the UK for investors seeking to maintain EU access, given the common language and similarities in the legal context and business environment. As the authors highlight in a more recent paper (Davies, Siedschlag and Studnicka, 2018), especially non-EU countries consider relocating their business to Ireland.

Figure 62: Ireland bank's cross border stock and flows, % of GDP



Source: BIS Locational Banking Statistics

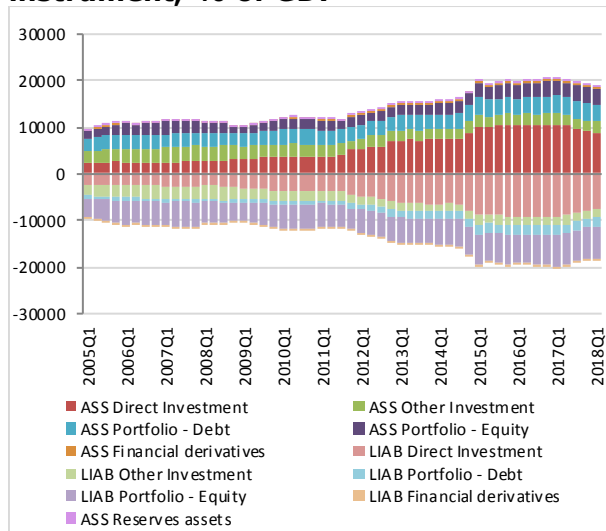
Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

3.11.3. Luxembourg

The country plays a crucial role as an intermediary for global capital flows. As highlighted in Claeys et al (2018) Special Purpose Entities (SPEs)⁵ in Luxembourg account for more than 90% of FDI stocks, explaining that gross cross-border flows are 10-15 times higher than its GDP.

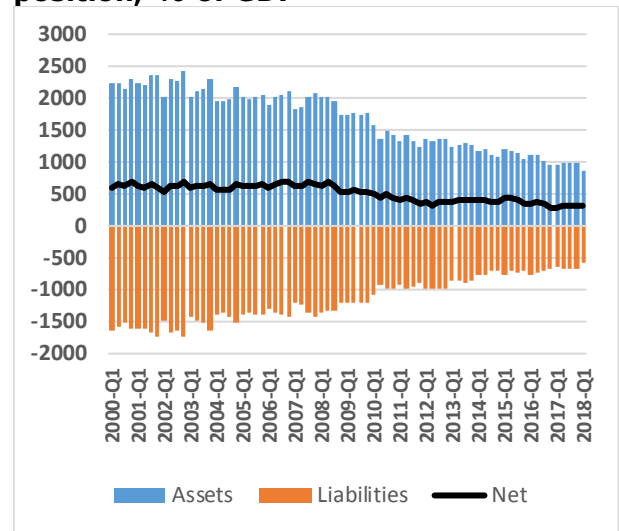
⁵ Eurostat defines SPEs as a) legal entity ultimately controlled, directly or indirectly, by a parent not resident in the reporting economy, which b) has no or few employees and c) its core business frequently consists of group financing or holding activities and usually do not undertake significant production. (Eurostat, 2016).

Figure 63: Luxembourg gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

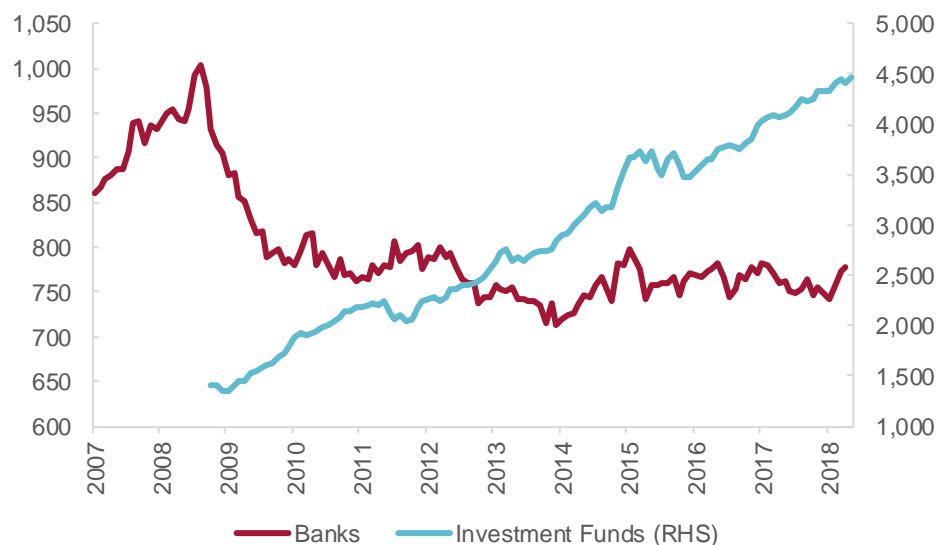
Figure 64: Luxembourg's banking sector gross international investment position, % of GDP



Source: BIS Locational Banking Statistics

In absolute terms, Luxembourg has recently overtaken Germany as the largest holder of financial cross-border assets in Europe. Overall, these have almost doubled compared to 2008 levels (see Figure 63). This is due to the fact that, after a short period of contraction in 2009, Luxembourg did not follow the European trend of a foreign financial exposure reduction but rather expanded both inflows and outflows. As the IMF Article IV report (2017) suggests, the surge in financial cross-border flows after the financial crisis was driven by a huge influx of investment funds assets, which more than doubled since then (see Figure 65).

As Figure 65 shows, the general increased activity of investment funds stands in sharp contrast with the national banking sector which, similar to most euro area countries, deleveraged significantly after 2007. Exposure to foreign assets has halved since the beginning of the balance sheet reduction, but flow data now suggests that this process has stopped.

Figure 65: Assets of Luxembourgish banks and investment funds, EUR billion

Source: Banque Centrale du Luxembourg

Given its financial sector business model and its small open economy nature, the external risks faced by the Luxembourgish economy are significant.

First, due to the low interest rate environment, insurance companies are avidly searching for yields abroad to meet fixed return targets promised in the high-return pre-crisis period (Deutsche Bundesbank, 2017). As a result, these dynamics could make Luxembourg's financial sector vulnerable to global shocks and changes in monetary policy.

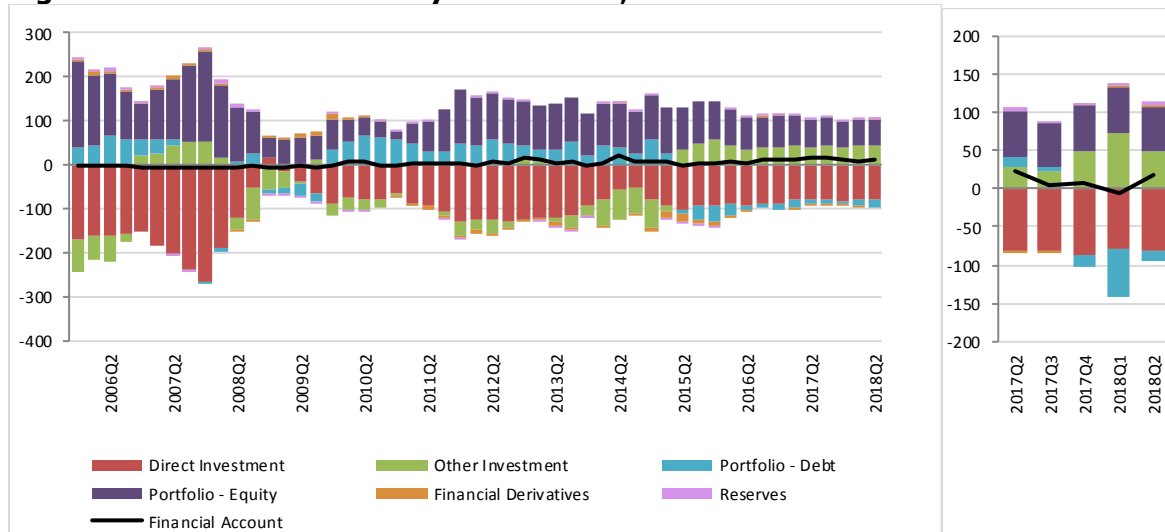
Second, Brexit entails various risks, but also opportunities for Luxembourg. The UK is an important trading partner, especially in financial services, and Brexit could disrupt Luxembourg's delegation model for portfolio management of investment funds. On the other hand, Luxembourg could also benefit from relocation of financial institutions. Several insurance companies and a few banks have already announced relocation of activities to Luxembourg. The Brexit process may also have implications for the location of financial activity required within the EU to enjoy passporting rights.

3.11.4. Malta

Malta has managed to attract a significant number of multinational companies, especially before the global financial crisis and, as a result, has emerged as a capital lender to the rest of the world with a current NIIP of 60% of GDP. Its financial account shows that its external liabilities are mainly composed of foreign direct investment in the form of inter-company lending as well as liabilities of offshore institutions (IMF, 2018d). Portfolio outflows, mainly in the form of equity, counterbalance the direct investment inflows as indicated in Figure 125.

Since 2010 the financial account has been positive with few exceptions. The decomposition of the flows is rather stable considering foreign direct investment and equity portfolio investment. However, while Malta was accumulating debt security assets until the end of 2015, outflows recently shifted towards other investment.

Figure 66: Malta net flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

4. Changing financing patterns in European enterprises

4.1. Introduction

The funding of European companies is characterised by a bias towards debt and against external equity. Obstacles to externally provided equity arise because of the preferential tax treatment of debt, but also because of barriers in the corporate governance of companies, which complicate the direct involvement of minority shareholders in companies. There is a broader conservatism among providers of capital as households are risk averse and favour bank deposits rather than capital market instruments, possibly because of inadequate financial literacy (European Commission, 2017).

This realisation was one reason for the Capital Markets Union action plan proposed by the European Commission in 2015. The first results from the action plan include the new regime for venture capital funds, a simplified prospectus regulation and the new securitisation framework (Sapir, Véron and Wolff, 2018). Ongoing work by the Commission at the time of writing focuses on the rules related to listing on public equity markets and how these rules could be made more proportionate to the needs of SMEs.

As a period of extraordinary monetary easing in the euro area comes to an end, facilitating equity finance could address the balance-sheet vulnerabilities of highly leveraged firms.

The involvement of outside investors, in particular of private equity, could raise firm performance and productivity, because such investors are known to upgrade operational efficiency and governance standards within the firms they invest in. Moreover, there is a need to overcome the segmentation of national financial markets in the EU that is evident both in financing through equities and in bank lending.

Against this background, this in-depth section will examine the use of external equity by EU companies⁶. We will examine the roles of listings on public markets, which are limited to well-established and larger companies, and of private equity, which is available to a wider range of companies. While net funding from listed equity is rapidly shrinking, there appears to be much more dynamism in private transactions. These trends justify our focus on regulatory frameworks to facilitate private equity.

A first objective (section 4.2) is to review the potential for greater equity funding and in particular private equity. This potential lies in reduced leverage, and the associated firm-specific and macroeconomic benefits. Moreover, there are benefits in terms of operational and governance reforms that are associated with improved firm performance and productivity growth. In section 4.3 we then assess how, after the tightening of bank lending conditions and in the context of continuing high debt levels, European companies have accessed external equity finance. Our empirical work is based on a firm-level survey that gauges conditions of access to different forms of financing. In section 4.4, we review the country-specific legal and regulatory regimes and how they determine access to private equity. To what extent have national

⁶ External equity is understood as that provided by external investors, unrelated to the firm, i.e. excluding owner finance through retained earnings, and employee shareholdings.

reforms created more receptive regimes and has capital market integration fostered more liquid equity finance within EU member states? Section 4.5 concludes and presents the main implications for policy.

4.2. The potential of equity finance

In the immediate aftermath of the European financial crisis, credit standards applied by banks tightened considerably (ECB, 2017). Since then, the drastic reduction in the ECB's policy interest rates, and the more recent quantitative easing have of course improved funding conditions. The ECB's corporate sector purchasing programme applies to bonds of highly rated companies, though lower financing costs have benefited a wider range of companies, including unrated or highly risky ones.

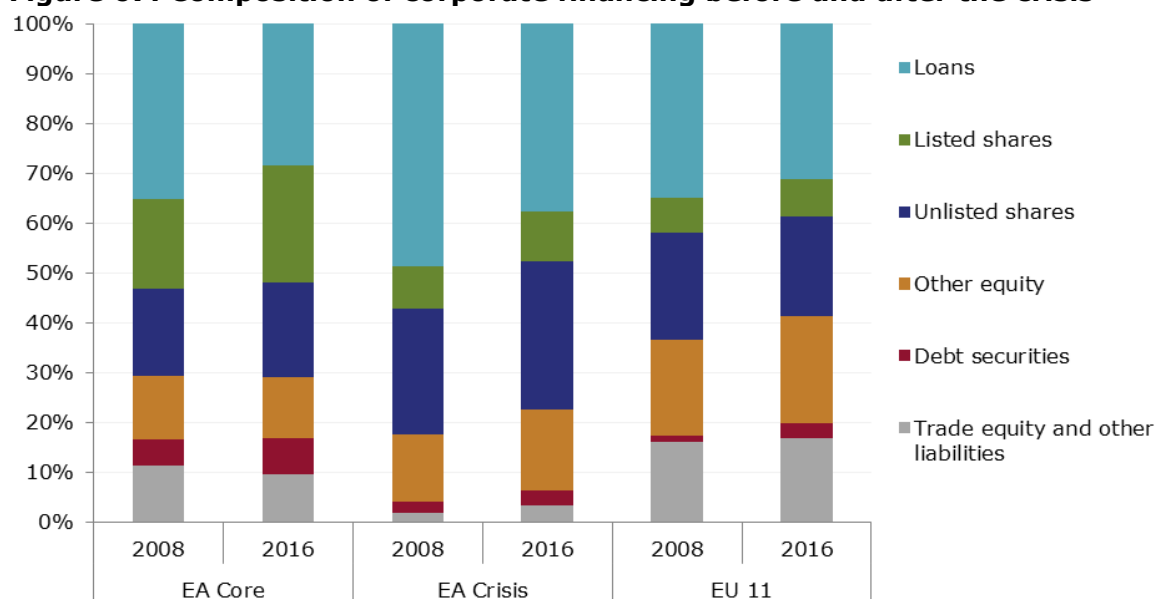
4.2.1. Trends in European equity finance

Have the European banking and financial crisis and the subsequent regulatory easing in relation to capital market funding already changed financing patterns?

Figure 61 shows the composition of funding of EU companies, categorised according to three country groups: six euro-area core countries, six euro-area countries that have been affected recently by financial crises, and the eleven countries in central and south eastern Europe that joined the EU in 2004 and after⁷. This of course omits the United Kingdom from the analysis, though we feel this market is subject to unique trends within highly developed capital markets.

For the corporate sectors in all three country groups, the share of bank loans relative to aggregate balance sheets has declined, most clearly in the euro-area crisis countries. In the euro-area core this decline has largely made up for by more significant funding from both listed and unlisted equity. A similar pattern is evident in the euro-area crisis countries, though as their corporate sectors experienced protracted credit and financing constraints, external equity is less significant. As deleveraging progressed, own equity and retained earnings became more prominent. In the EU11 countries of central and south eastern Europe, the contraction in bank lending appears more muted, and these countries show the least re-alignment in financing patterns.

⁷ The composition of the country groups is the following: EA Core is composed of Netherlands, France, Germany, Austria, Belgium and Finland. EA Crisis comprises Spain, Italy, Cyprus, Portugal, Ireland and Greece; EU-11 includes Bulgaria, Czech Republic, Estonia, Latvia, Lithuania, Croatia, Hungary, Poland, Romania, Slovenia and Slovakia.

Figure 67. Composition of corporate financing before and after the crisis

Source: Bruegel based on Eurostat.

Looking at funding flows, net issuance of listed equity by non-financial euro-area companies was estimated at €16.5 billion in 2017, representing a roughly 9 percent drop from the previous year⁸. Even though gross issuance has not declined significantly, in the current context of low bond yields and a high equity premium, share buybacks by established listed firms have been at a record high. Another explanation for the decline in IPOs is the reduction in the number of SMEs listing on public markets (AFME, 2017). IPOs are dominated by larger firms, and overall the share of first-time issuance remains low when compared to other markets, such as the US and UK (European Commission, 2017).

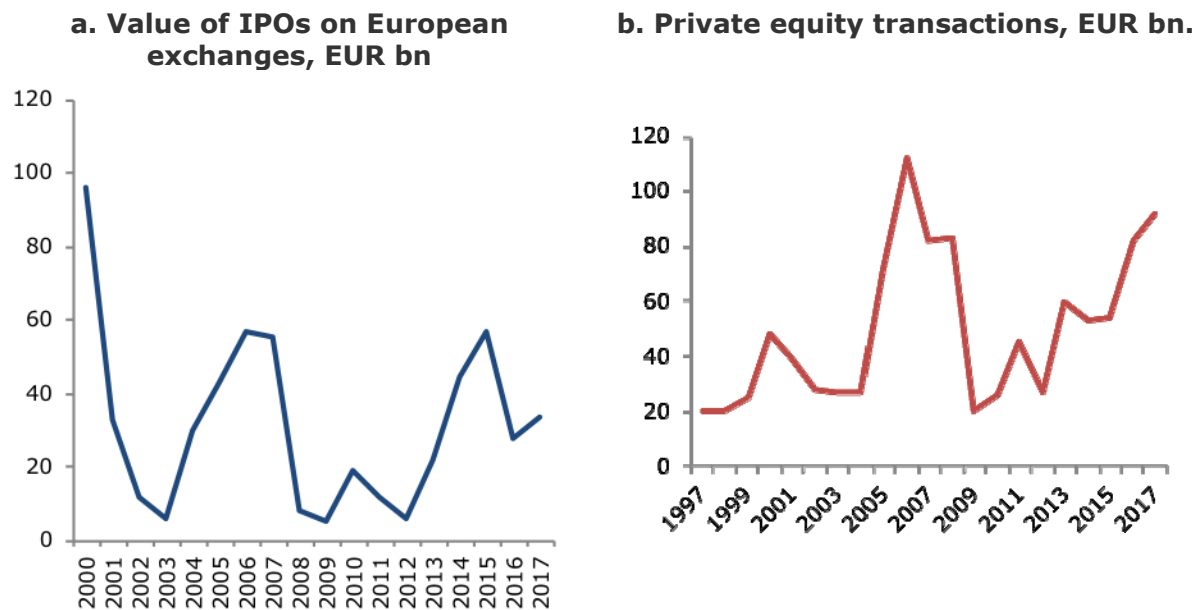
This contrasts with much greater dynamism in *private* equity transactions. According to industry statistics, in 2017 about €71.7 billion of what was invested by this sector in European companies⁹. This represented a sharp increase over the previous year, returning investment flows to just under their peak ahead of the financial crisis. Net of divestments, this represented a flow of about €29.3 billion into the European corporate sector. Even once the significant UK private equity investment is subtracted, this seems to exceed the figures for euro-area net public issuance. Figure 62 contrasts the developments in the two components of equity finance.

Private equity investors have also funded a larger number of firms, and the vast majority (87 percent) were SMEs. Investment flows were nevertheless quite concentrated within a small number of countries, with the UK and Ireland, France and the Benelux region representing over one half of the total investment. In the EU11, Poland, Romania and Hungary appear to be the only significant investment locations, though even in Poland, where firms attracted the greatest volume of investment among the EU11 countries, inflows of about 0.2 percent of GDP are minuscule relative to the more developed private equity destinations in Europe.

⁸ Data from ECB, available here.

⁹ Figures from Invest Europe.

Figure 62. Trends in public and private equity transactions



Source: AFME

Source: Invest Europe

Note: Data relate to all of Europe, and industry aggregates, i.e. including a small amount of non-EU portfolio companies.

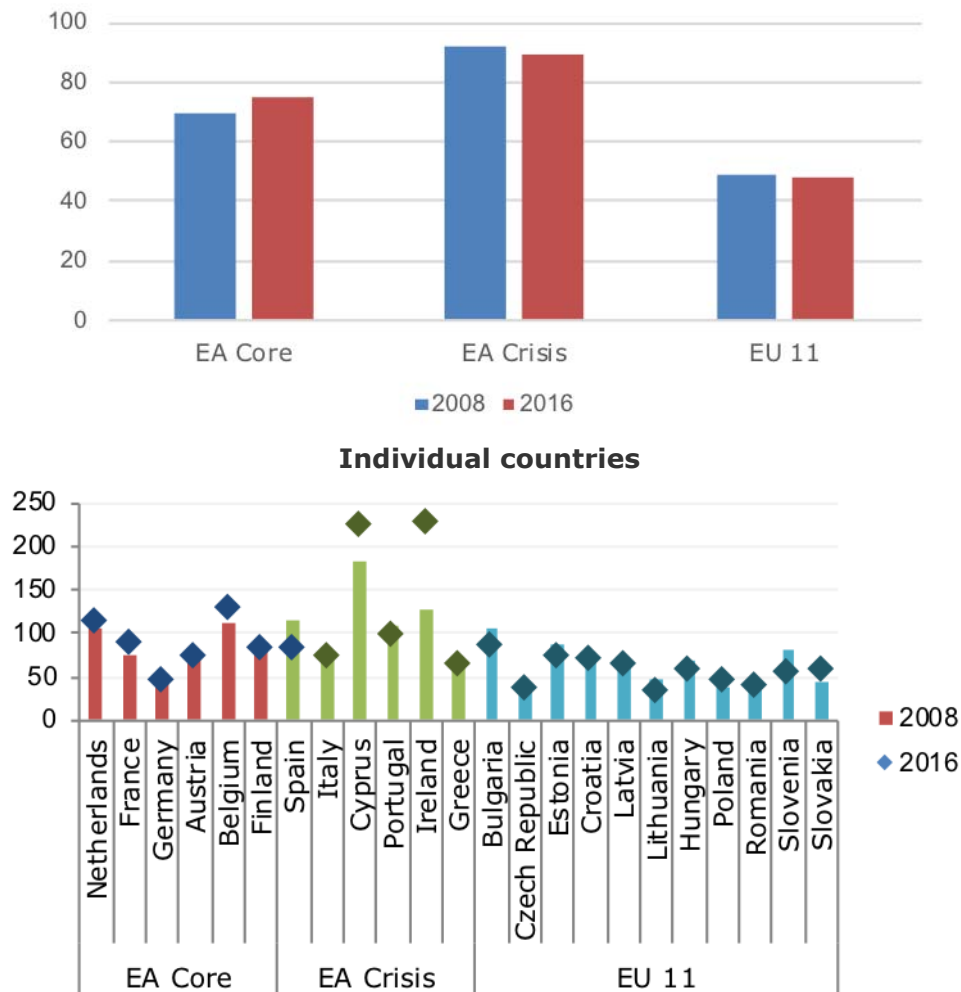
4.2.2. Addressing vulnerabilities from excess debt

It is clear that these relatively limited flows of equity financing will be inadequate to make a dent in the excess corporate leverage that continues to be a legacy of the financial crisis.

In its Macroeconomic Imbalances Procedure the European Commission at time of writing identifies 12 countries as featuring excessive private debt. Cecchetti *et al* (2011) identified a threshold at 90 percent of GDP beyond which corporate debt would be detrimental for growth. Deleveraging needs in excess of 20 percent of GDP were estimated for a number of euro-area countries, in order for them to return to historical debt ratios (European Commission, 2013).

As Figure 63 shows, aggregate corporate debt ratios have not markedly declined since 2008, and have in fact increased slightly in the euro-area core countries. A large number of countries with corporate debt ratios in excess of 90 percent of GDP, or those which have recently witnessed increases in debt ratios, are not significant recipients of either private or listed equity.

Figure 63. Corporate debt before and after the crisis, percent of GDP
Country groups



Source: Eurostat.

4.2.3. Private equity and its impact on firm performance

Given the absence of a significant equity market for smaller companies, unlisted or private equity is the most likely form of equity financing for the largest number of EU firms. The rest of this report will focus on this component. A brief look at the business model of these investors underlines the ambiguous effect on debt, but also the benefits in terms of firm performance through the involvement of private equity investors. Private equity caters to three distinct types of company:

- The key targets of private equity investors are companies that are growing but are capital-constrained. These companies have a proven commercial concept and a track record. Private equity investors will acquire significant stakes and take these firms into a further growth phase, for instance by assisting in their expansion to international markets¹⁰.

¹⁰ In PE data this is considered buyout and accounts for up to 71.4 percent of the total PE investment in Europe in 2017 (Invest Europe, 2018).

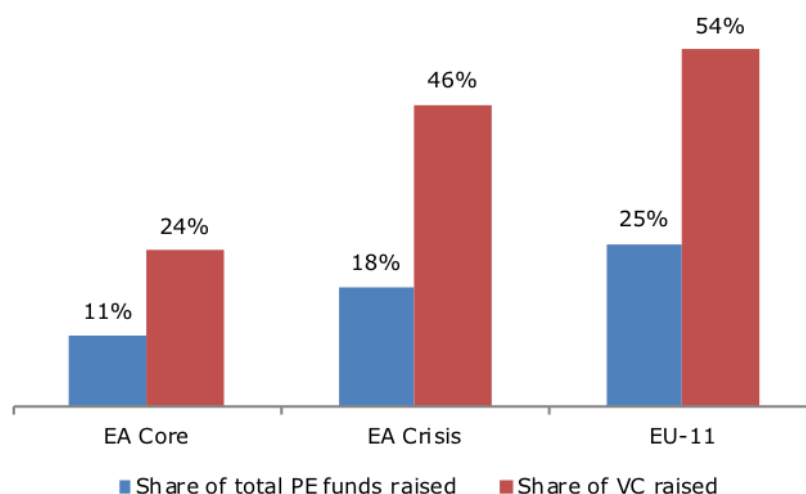
- Another subset of private equity funds is turnaround investors that target companies that might be stagnating but which have considerable inefficiencies that can be addressed through a programme of operational and financial restructuring. Investors might inject senior debt, in addition to equity. While such investors could be particularly suitable for the significant number of European companies with excess debt, this type of investment is as yet relatively uncommon.
- A third type of private equity targets highly innovative companies. Venture capital remains a small though much sought after sub-sector of the private equity industry. Venture capital investors have the risk appetite and have developed distinct tools to cater to firms that have technology that is yet not ready for commercial application and for which returns are highly uncertain. There is little collateral against which a bank could lend.

While private equity is the principal instrument to inject equity into smaller companies, it should be acknowledged that so-called buyout investors regularly increase leverage in the companies they invest in. Overall, empirical studies nevertheless confirm that private equity-backed firms are less likely to fail (Frontier Economics, 2013).

A private equity fund collects commitments from a range of institutional and private investors. Pension funds are the main investor type. These so-called limited partners will be tied to the fund for up to ten years. This explains the unusually long investment horizons in implementing new business plans. Venture capital is significantly tied to government agencies, especially in the less advanced EU11 countries or where government agencies have compensated for the reduction in private-sector venture capital, as in the euro-area crisis countries (see Figure 64)¹¹.

Unlike the dispersed investors in a listed company, private equity funds are very actively engaged in the firm's management. Private equity funds are best known for their restructuring of the operations of the companies they invest in. Value is created through a programme of cost cutting and repositioning the product and company in the marketplace. This goes hand-in-hand with reforms in firm management, as managers will be subject to more stringent performance targets. The private equity business model is therefore not suitable in cases in which poor corporate governance or other obstacles to the engagement of minority investors complicate operational and governance change.

¹¹ http://europa.eu/rapid/press-release_MEMO-18-2764_en.htm.

Figure 64. Share of funds raised from government agencies, 2017

Source: Bruegel based on Invest Europe.

There is now an extensive empirical literature that substantiates the positive effects of private equity on the performance of investee firms (e.g. Frontier Economics, 2013). These effects are particularly strong when private equity investors lift credit constraints, as opposed to merely focusing on operational restructuring. This was the context for the study by EBRD (2015) on the impact of private equity in emerging Europe, based on data for investee firms from over 100 funds. Based on a comparison with a peer group of companies, there was clear evidence that operating revenues rose more strongly in companies that attracted private equity investment. Overall, labour productivity increased by a third more than in the control group, suggesting that additional capital expenditure raises operational efficiency.

4.3. Tracking external equity finance in European enterprises

4.3.1. The SAFE Survey of financing conditions

A detailed picture of the changing patterns of companies' access to finance emerges from the ECB and European Commission survey on the access to finance of enterprises ('SAFE survey')¹². This is the most comprehensive data source on corporate financing and on perceptions of financing options in the EU. In total, firm-level data for 11,200 companies across all the EU members can be utilised.

That said, a limitation is that firm-level characteristics are sparse and qualitative responses prevail. The survey is based on respondents' perceptions, and the overall quantitative importance of individual financing items is hard to discern.

A second problem arises from the limited panel nature of the data. The sample composition varies considerably from one survey run to the next. While many firms have responded to multiple waves of the survey, very few have answered consecutive

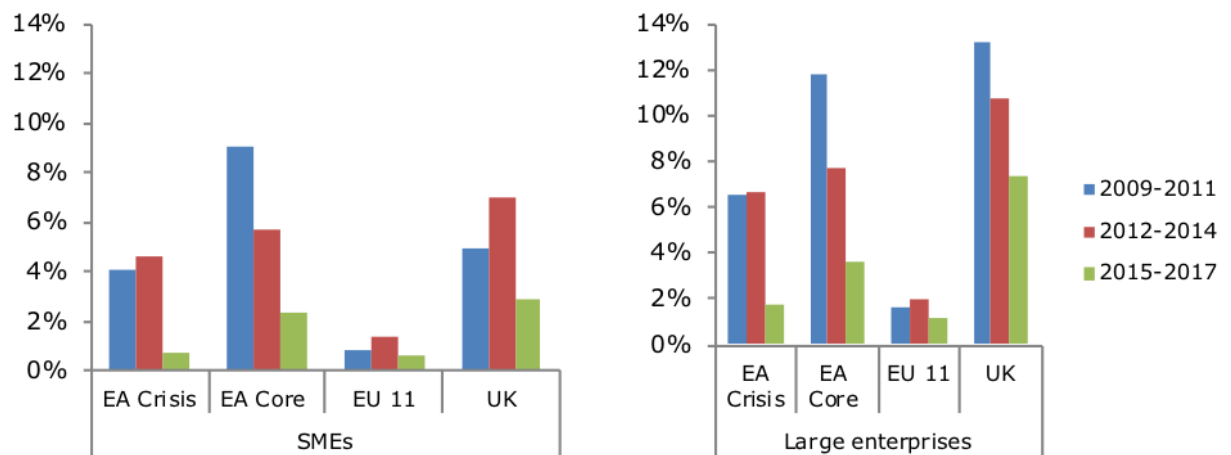
¹² The European Commission publishes annual results for every EU country since 2013. In addition to the global survey, the ECB publishes semi-annually a subsection of the survey which draws on Eurozone respondents only. The survey covers firms of all sizes and provides data on the financing conditions and instruments used by SMEs. It assesses access to eleven different sources of financing, including issuance of equity capital. In addition, a section of the questionnaire reveals firms' responses on financing needs, and their perception of availability of different instruments.

surveys (Osiewicz and Pérez-Duarte, 2011; Ozturk and Mrkaic, 2014). We will therefore only examine the cross-sectional dimension of the data.

Issuance of equity

Figure 65 shows the shares of respondents that have accessed external equity in the previous half year. This could be listed or private equity, though given the predominance of SMEs it is primarily the latter. It is striking that this share dropped sharply between the immediate crisis aftermath of 2009-11 and the most recent three-year period. As would be expected, the shares of SMEs have been consistently lower than the shares of large companies, and there has been less use of external equity in euro-area crisis countries than in core countries, and less still in the EU11 countries.

Figure 65. Share of respondents that have accessed external equity in the half year prior to the survey¹³



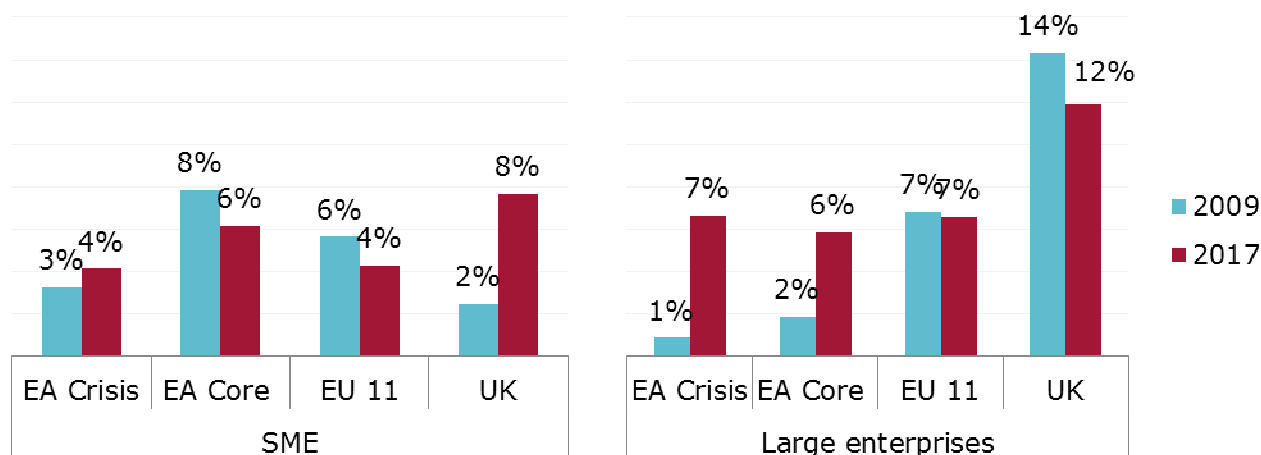
Source: Bruegel based on question Q4 of the SAFE survey "Are the following sources of financing relevant to your enterprise, that is, have you used them in the past or considered using them in the future? If "YES", have you used this type in the past 6 months? [Equity capital]".

Relevance of equity finance

The extent to which respondents access equity financing can be compared to the importance firms attach to it. When firms are asked which type of external financing they would prefer most, a much higher proportion of respondents identify equity than the proportion that has drawn on it (Figure 66). Between 2009 and 2017 this share went up for large companies in euro-area crisis and core countries. In the EU11 it was at a similar level as in the euro area. For SMEs, a small drop was evident between 2009 and 2017 in the core euro-area countries and the proportion of SMEs expressing a preference for equity was much higher than the proportion actually using it.

¹³ EA Crisis countries include Spain, Portugal, Greece, Italy, Cyprus and Ireland. EA Core is composed of Netherlands, France, Germany, Austria, Belgium, Finland and Luxembourg. EU 11 is Bulgaria, Croatia, Hungary, Czech Republic, Poland, Romania, Estonia, Slovenia, Slovakia, Lithuania and Latvia. Country groups represent weighted averages based on 2009 GDP.

Figure 66. External equity as preferred type of finance

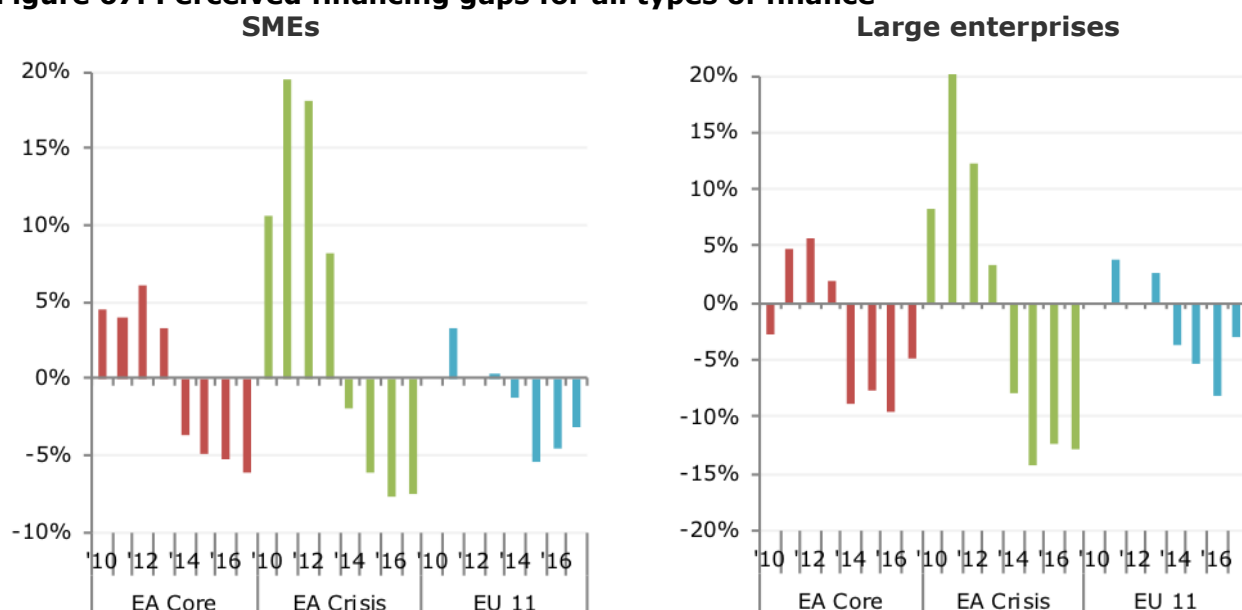


Source: Bruegel based on question Q20 of the SAFE survey ("If you need external financing to realise your growth ambitions, what type of external financing would you prefer most? Equity capital").

Perceptions of financing gaps

Another way to put actual financing into context is to assess the responses of firms on perceived financing gaps. The ECB has produced a composite measure that is based on perceptions of changes in needs and availability of different types of financing. A large value suggests a large number of firms perceived growing gaps, or simultaneously saw increased needs and reduced availability over the previous six months. Analysis by the ECB (2017) showed easing financing conditions for the euro area as a whole once responses for five financing instruments are averaged, which we also see for our country groups (Figure 67).

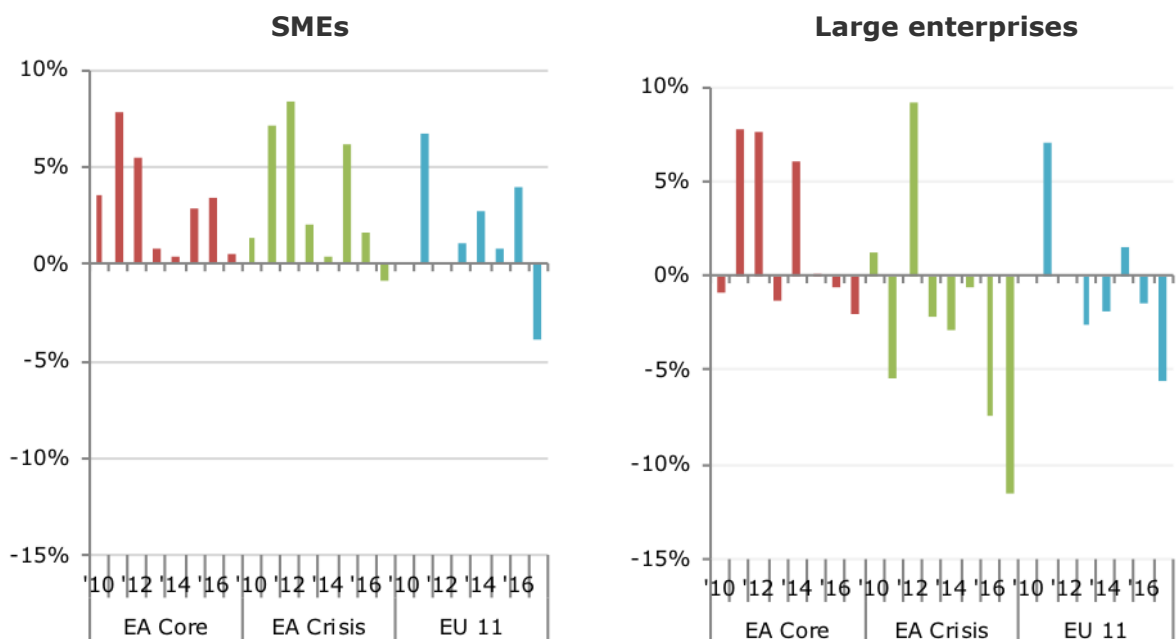
Figure 67. Perceived financing gaps for all types of finance



Source: Bruegel based on SAFE microdata. The financing gaps are aggregated for the country groups computing GDP-weighted averages.

A different picture emerges when only the equity finance component is assessed (Figure 68). For SMEs there has been a predominant perception of *tightening* availability in all three country groups. For large companies there has been a slight easing in euro-area crisis countries and the EU11, and no discernible trend in the euro-area core. Although external equity represents a lower share of the overall financing of firms, at least for SMEs this is a striking contrast to the overall financing conditions depicted in **Figure 67** and also the ECB survey of bank lending conditions. Despite the need to address post-crisis excess debt, neither SMEs nor large companies have reported a marked and consistent easing in equity availability when compared to perceived needs.

Figure 68. Perceived financing gaps for external equity



Source: Bruegel based on SAFE microdata. A positive value denotes that the change in financing needs exceeds that in availability. A negative value denotes that the change in financing needs is less than the change in availability.

4.3.2. Firm-level determinants of access to equity finance

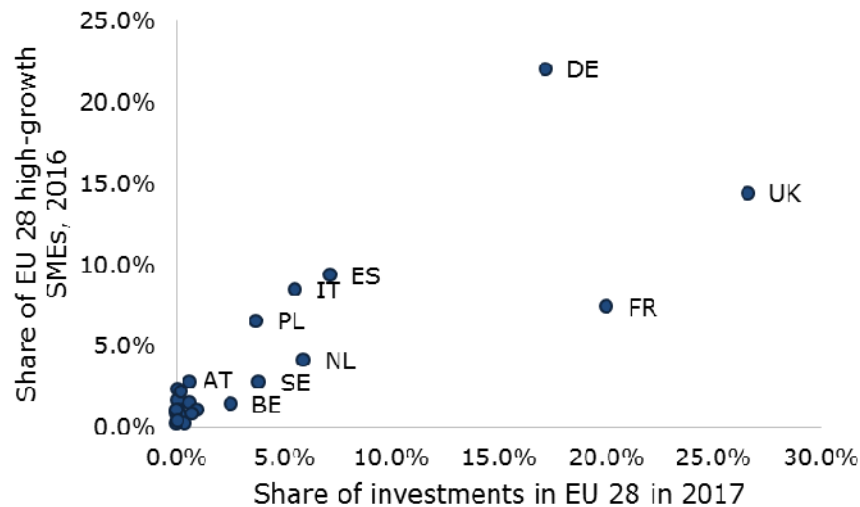
The extent to which firms access market-based funding – and external equity in particular – will be a function of both firm-level characteristics and regulatory and other country-specific factors. The distribution of firm-level characteristics will of course determine the observed levels of equity finance.

Specifically, based on the well-known “pecking-order theory” of Myers and Majluf (1984), firms should prioritise financial instruments according to their respective costs. External equity would be more costly than bank loans or bond-based finance given, for example, the more onerous disclosure requirements or the higher compensation demanded for higher risk, both of which will be particularly burdensome for small companies. In addition, certain types of owners will be more resistant to

additional equity participants, including from private equity¹⁴. Other variables that have been confirmed in the empirical literature on the financing choices of European SMEs are firm age, business sector, growth rates and profitability (Lawless *et al*, 2015; Psillaki and Daskalakis, 2009).

In their taxonomy of SME financing patterns, Moritz *et al* (2016) identified firms with greater equity access as younger, more innovative and with greater growth expectations. A simple correlation between country shares of the number of European high-growth firms and the share of private equity activity confirms this intuition (Figure 69).

Figure 69. Private equity investments and share of high-growth EU28 SMEs



Source: Bruegel based on Invest Europe and Eurostat.

To assess these factors in the SAFE survey on financing conditions, we ran a simple test for firm-specific determinants of external equity finance. Our choice of variables was limited by the nature of the SAFE database and the sparse information on firm characteristics (variables are listed in Appendix 3). We can control for firm size and leverage, employment and turnover, though balance-sheet data is not available.

Our dependent variable is a measure of the perceived change in the gap between the need for, and availability of, external equity – the so-called equity-financing gap which was shown in Figure 68. We ran an OLS regression of this gap on firm characteristics, controlling for country differences. Our empirical approach is similar to that employed by Ferrando and Mulier (2013), who estimated a multilinear regression using the change in the financing gap as a dependent variable, including a number of firm characteristics and country dummies as regressors. Their approach, however, focused on a composite measure of all types of external financing, whereas we are interested in seeing if their findings are confirmed for the particular case of equity financing.

Pooling data from the six surveys in the last three years gave us more than 2,800 observations covering all EU countries. A statistically significant effect was found for leverage and profitability of the company. A decrease in profit and an increase in leverage are associated with an increase in the equity financing gap. This confirms the

¹⁴ It is estimated that 85 percent of all European companies are family businesses (European Parliament, 2014/2210(INI)).

intuition that firms seek to address reduced financing from retained earnings, and excess leverage, by seeking greater external equity finance. In addition, we found that changes in investor appetite and the deterioration of the prospects of individual companies move the equity financing gap in the expected direction. The fact that no significant effect of firm size can be found (also in other specifications) is in line with Ferrando and Mulier (2013). Appendix 4 presents the main regression results.

4.4. Regulatory reform and capital market integration

The relative costs of equity finance can be affected by a range of macroeconomic variables and credit conditions (Deutsche Bundesbank, 2018 and S&P, 2018). Masiak *et al* (2017) identified as determinants the inflation rate, inflation volatility, unemployment rate, tax rates, GDP per capita and GDP growth rates. These determinants seem particularly relevant for SMEs (De Jon *et al*, 2008; Psillaki and Daskalakis, 2009).

But equity finance will also be influenced by the policy framework – in particular in terms of the engagement by minority investors and their capacity to restructure a company – and by the depth and sophistication of the local capital market. We look at each area in turn.

4.4.1. Regulatory conditions that determine private equity flows and their evolution in Europe

Private equity firms operate globally from a small number of home bases but are normally lightly regulated within the host countries of the firms they invest in. Nearly half of the European industry is located in the UK. Yet, the regulatory and business environments in the home countries of investee companies of course affect companies' willingness to commit capital and the subsequent performance of the investee company.

We turn to established indicators that gauge the attractiveness of countries to equity investors, and the regulatory conditions that determine the level of equity investment. Groh *et al* (2010) surveyed the literature in an attempt to find the parameters that determined an equilibrium in the levels of national private equity flows. Groh *et al* (2010) also constructed a country attractiveness index, which has closely tracked actual flows and currently covers 125 countries¹⁵.

The private-equity specific index (which excludes venture capital-type funding) is computed based on five components:

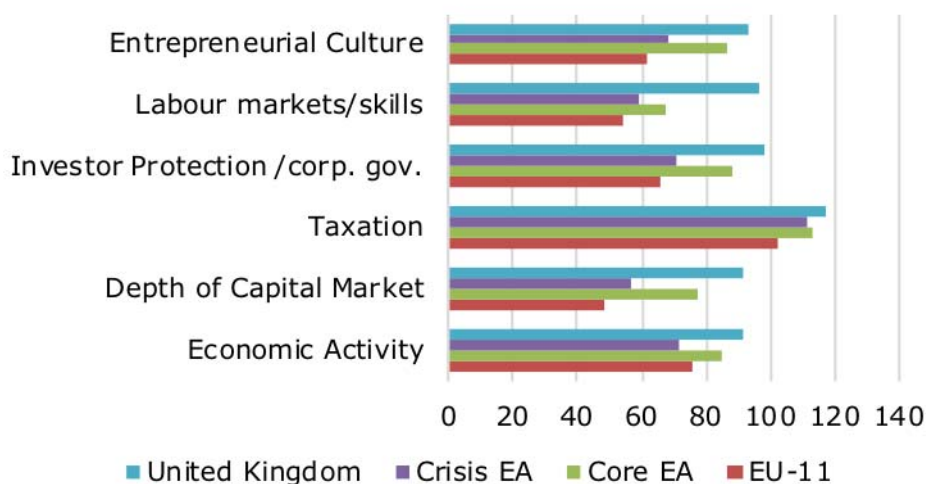
1. Economic activity, reflecting the observation that all components of equity financing are highly pro-cyclical;
2. Depth of the capital market, given the need for investors to exit their investments in the local market (which is given a weight of 43 percent);
3. Investor protection, reflecting corporate governance, security of property rights and legal enforcement.
4. Indicators of labour-market flexibility and corruption.
5. Entrepreneurial culture and investment opportunities, which is proxied through corporate R&D (though this has a relatively minor weight of only 6 percent).

¹⁵ The latest data is available in Groh *et al* (2018), which also demonstrates the close correlation between the index and actual flows, including for the venture capital sub-component.

When looking at later-stage private equity that excludes the venture capital component, incentives for equity financing in the tax system and the quality of tax administration were excluded from the construction of the index. In practice, countries with low taxation levels often do not attract sizable private equity flows, while more advanced countries with higher taxes have developed vibrant equity financing segments. This is the case even though taxes on dividends and capital gains and the level of corporate taxation influence the financing mix and decisions on business entry. However, these aspects and tax incentives appear more relevant for firm entry decisions and the venture capital segment¹⁶.

Figure 70 shows the key components of the attractiveness index for the three country groups and the UK. Relative to the UK as the most advanced private equity market, core euro-area countries fall short on both the depth of local capital markets and the human and social environment, for which labour-market rigidities seem to have been the key determinant. Inadequate corporate governance standards seem to be an additional factor. The euro-area crisis countries and the EU11 countries consistently fall behind both the UK and the euro-area core, especially in terms of capital market depth and entrepreneurial culture.

Figure 70. Components of the private equity attractiveness index



Source: Private equity and venture capital attractiveness index (Groh *et al*, 2018).

Figure 71 shows the evolution between 2014 and 2018 of two important aspects of these framework conditions.

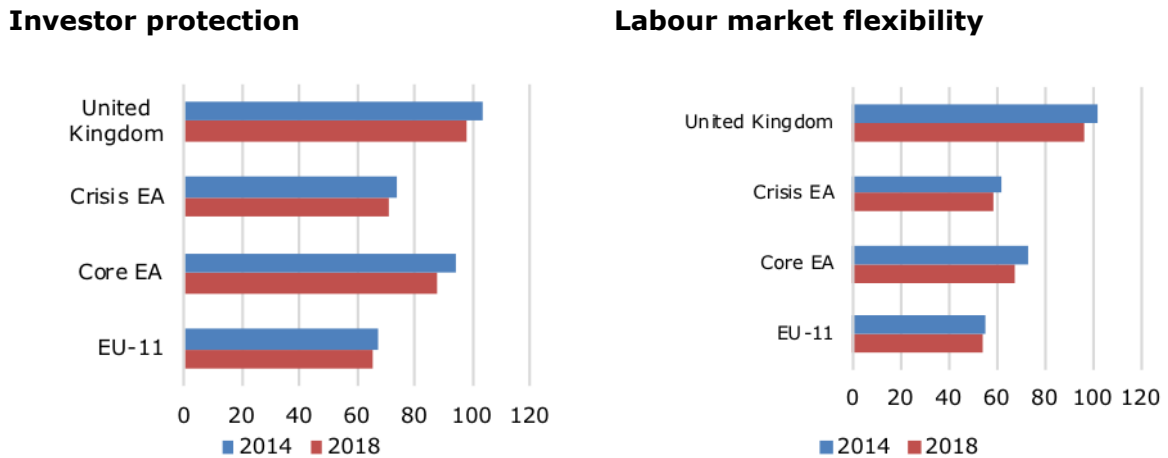
- Investor protection and corporate governance. This is an index composed of a number of measures of the quality of the judiciary and of the legal regime as it affects minority shareholders and creditors’ capacity to enforce collateral. This index shows a slight deterioration in absolute terms in all three country groups. When the three country groups are compared to the rest of the world in the ranking of over 126 countries, each has dropped back slightly, while the UK has retained rank 7 worldwide.

¹⁶ Figure 22 of AFME (2017) provides a survey of tax incentives for SME and start-up investment in Europe.

- Labour-market rigidities, which is a composite of four measures of labour-market flexibility compiled by the World Bank¹⁷. This aspect is relevant to equity investors when they engage in operational restructuring. Again, this component of the attractiveness index has deteriorated in all three country groups, which have not advanced in the worldwide ranking.

Economic activity and the depth of local capital markets explain the bulk of private equity activity (about 63 percent in the index constructed by Groh *et al*, 2010). The legal regime for investor protection and corporate governance, and labour market flexibility, account for only about a third of that index, though these are policy areas that could be addressed to provide a more conducive environment for investors.

Figure 71. Selected components of the private equity attractiveness index in 2014 and 2018



Source: Private equity and venture capital attractiveness index (Groh *et al*, 2018).

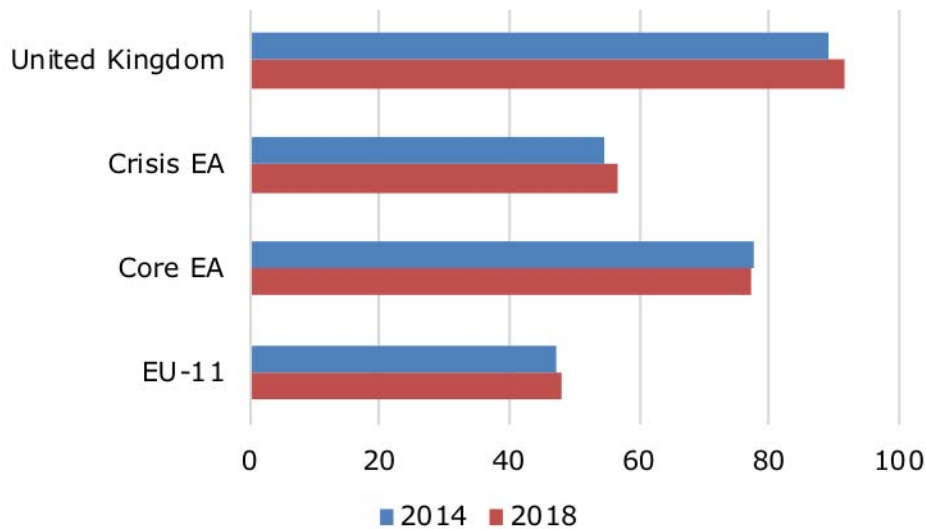
4.4.2. Home bias and local capital market depth

Liquidity in local capital markets and access by non-resident investors is another determinant of private equity activity. Local market liquidity is needed for the eventual exit from an investment; this appears to be particularly important for venture capital investment in younger firms. Bank-centric financial systems have therefore been less successful in attracting private equity. Apart from inadequate market liquidity, the lack of market infrastructure and expertise among local market participants seems to explain a lower level of activity (Black and Gilson, 1998).

Figure 72 shows the latest scores for capital market depth in the private equity attractiveness index constructed by Groh *et al* (2010)¹⁸. The averages for country groups show only minor differences, with the only exception being the euro-area crisis countries, where capital market activity has revived.

¹⁷ The index is in fact composed in equal measures of labour market indices and a corruption perception index, though it is assumed that variability in the latter is limited within the EU.

¹⁸ The index is based on equity market capitalisation and issuing activity, as well as credit markets and infrastructure indicators.

Figure 72. Depth of capital markets, 2014 and 2018

Source: Private equity and venture capital attractiveness index (Groh *et al.*, 2018).

This focus on capital market development as a determinant of private equity activity might be misleading where countries integrate with larger financial markets surrounding them, as will ultimately be the case within the EU capital markets union. However, the integration of national private equity markets within the EU appears to be limited so far.

European private equity firms remain overwhelmingly dependent on funding from investors within their home countries. The share of funding attracted from European investors outside the home has marginally increased since the immediate aftermath of the financial crisis, though overall this share barely exceeds one fifth (**Table 1a**)¹⁹. The increase in the share of European funding is most evident in the euro-area core countries, and the share is highest in the EU member states of central and south-eastern Europe, which of course suffer from a very limited domestic investor bases.

Equally, in terms of exiting investments, **Table 1b** shows that private equity funds continue to depend largely on national investors within their home bases as ultimate owners of assets. The share of assets divested outside the home base is low at about 17 percent for the three country groups in aggregate, and increased only marginally in the most recent four-year period.

¹⁹ According to Invest Europe, in larger funds above €1 billion, domestic investors are less significant and non-EU investors play a more dominant role, accounting for almost two thirds of fund raising.

Table 1. Home bias in fundraising and divestment by European private equity firms

	a. shares of funds raised from domestic investors and EU investors outside the private equity firm's home base in total funds raised				b. shares of foreign divestment in total divestment by private equity firms	
	domestic		EU outside the fund's home base		2010-13	2014-17
	2010-13	2014-17	2010-13	2014-17		
Average of three groups	56.6	56.8	16.2	20.4	15.5	17.2
EA Core	59.7	59.9	17.6	19.7	17.0	19.2
EA Crisis	47.2	39.7	5.0	22.0	8.2	10.0
EU-11	10.9	26.5	49.7	43.0	30.0	18.2

Source: Invest Europe. Table 1b is constructed as 'foreign divestments by local private equity firms' over total divestments (no data for European divestments are available).

As in other asset classes, a strong home bias can be observed in EU private equity activity. It is not surprising that the fund managers who exercise control seek to invest in firms in close proximity. However, fund raising by private equity funds could benefit from a much larger pool of institutional investors from across Europe, and national capital markets need not limit the ultimate divestment and discourage exposures. The figures in **Table 1** underline that to date there has been very little progress in overcoming the limitations of national capital markets and investor pools.

The cross-border distribution of investment funds within the EU is regulated by the Alternative Investment Fund Managers Directive of 2011 (the AIFMD). The European Commission in early 2018 published proposals for a directive and a regulation on the distribution of collective investment funds which are designed to further ease the cross-border distribution of funds²⁰. The industry is concerned that this overarching law does not sufficiently reflect the nature of equity funds, where investors often exert much closer guidance over fund managers than is the case for retail funds.

The fragmentation of the EU private equity market will likely be further aggravated by Brexit. The UK is home to about 20 percent of Europe's private equity firms, and accounts for half of the funding raised by the European industry.

4.5. Conclusions

External equity finance is rapidly shifting from public markets to private transactions. This is explained by the extraordinary monetary easing that has reduced the costs of debt finance and other tax disincentives that have led large companies to retire a growing share of listed equity. By contrast, smaller companies that are strongly growing or have promising prospects, increasingly seek funding through private equity transactions. As these investors bring governance and operational improvements as part of a long-term engagement, private equity is a highly desirable funding instrument in terms of reviving tepid productivity growth and redressing excess leverage.

This elevated role of private equity transactions clearly raises questions of whether the EU regulatory agenda is still well aligned with market developments. Surprisingly, we found no evidence that the overall improvement in financing conditions in the euro

²⁰ <https://eur-lex.europa.eu/legal-content/EN/ALL/?uri=COM:2018:0092:FIN>

area has been reflected in equity finance. In fact, equity finance has become relatively less accessible. Moreover, national policies have not really facilitated the engagement of these investors. Broad indicators of corporate governance, investor protection and labour-market flexibility do not show improvements in most EU countries, which have fallen back in an international ranking.

Lack of liquidity and expertise in national capital markets also explains the very limited cross-border integration of equity finance. Fund managers will always seek proximity to their investees as that is the essence of an investor class that is closely involved in management and strategy. But the cross-border integration of fundraising for private equity firms could be much greater. Facilitating the cross-border integration of equity investment should be a clear focus of the capital markets union agenda. This will be a particular challenge as the UK, which is home to nearly half of the European private equity industry, is set to exit the single market and will develop a separate regulatory regime.

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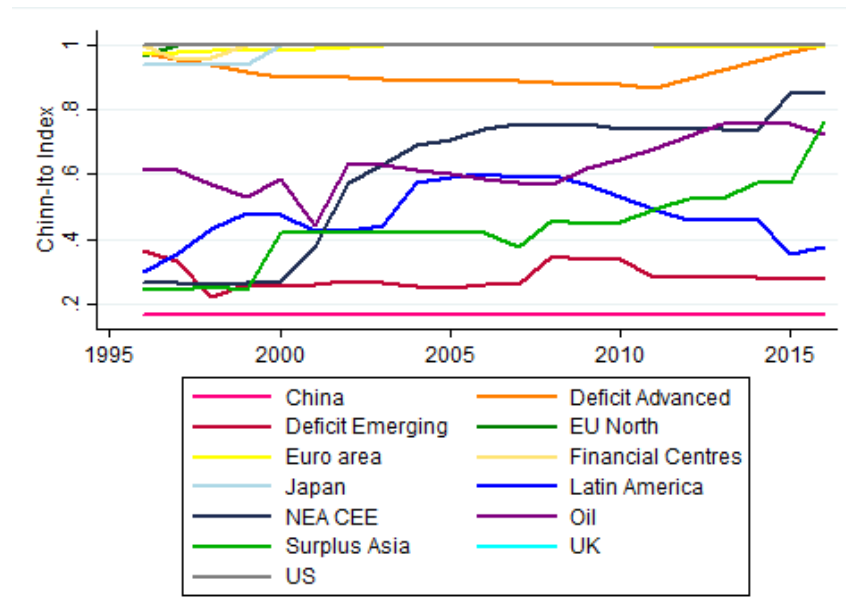
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6. Appendix 1: Capital controls and financial account openness

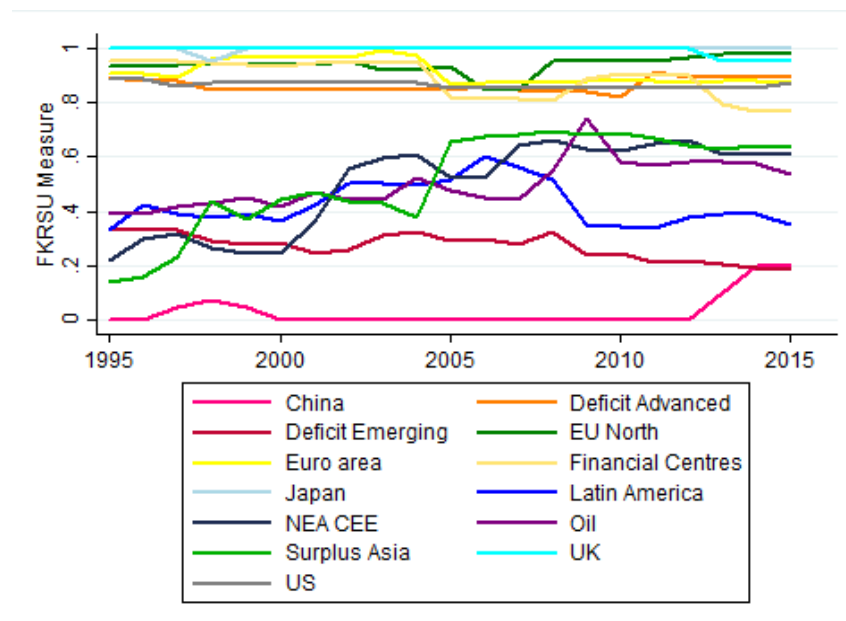
Figure 67: Chinn-Ito index, regional groups (1996-2016)



Source: Bruegel based on Chinn-Ito (2006) updated in 2018, World Economic Outlook (WEO), April 2018

Notes: Larger index values indicate more openness. Weighted (by nominal GDP) arithmetic average of individual Chinn-Ito indices

Figure 68: FKRSU average, regional groups (1995-2015)



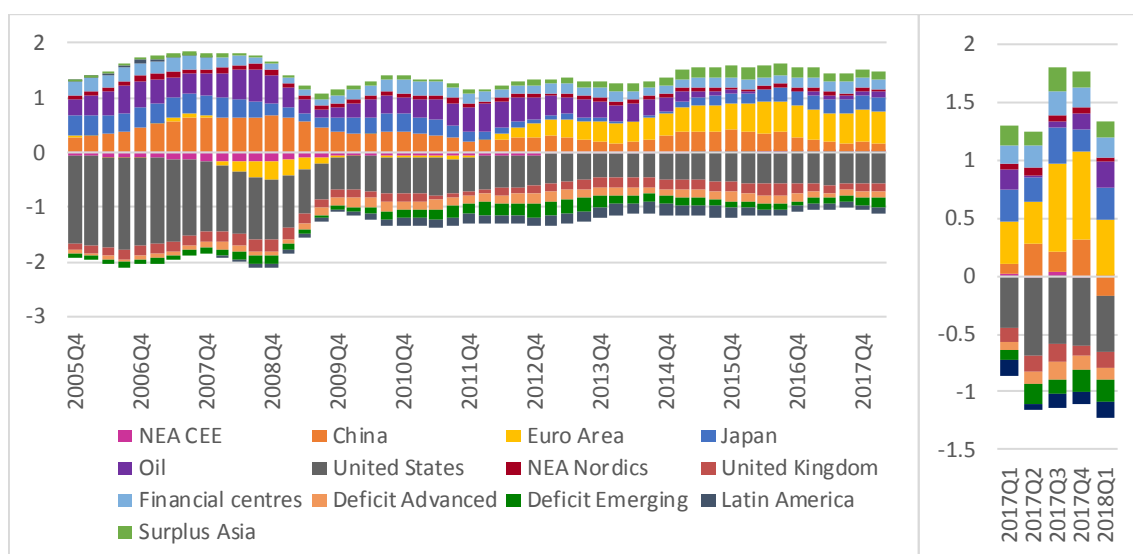
Source: Bruegel based on Fernandez et al. (2016), World Economic Outlook (WEO), April 2018

Notes: Larger index values indicate more openness. In the first stage, inflow and outflow measures for all asset categories are aggregated for each country, using a simple arithmetic average. In the second stage, we aggregate using a weighted (by nominal GDP) arithmetic average of the resulting overall indices.

7. Appendix 2: Country and regional groups: fiches

7.1. Global Trends

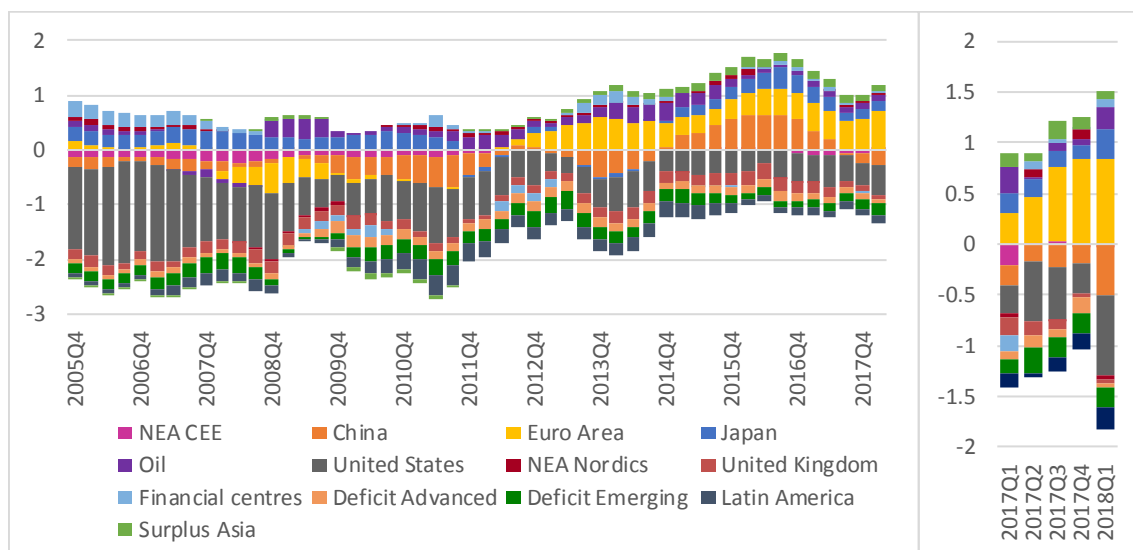
Figure 69: Current account balances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. Both the financial account balance and GDP are measured in USD.

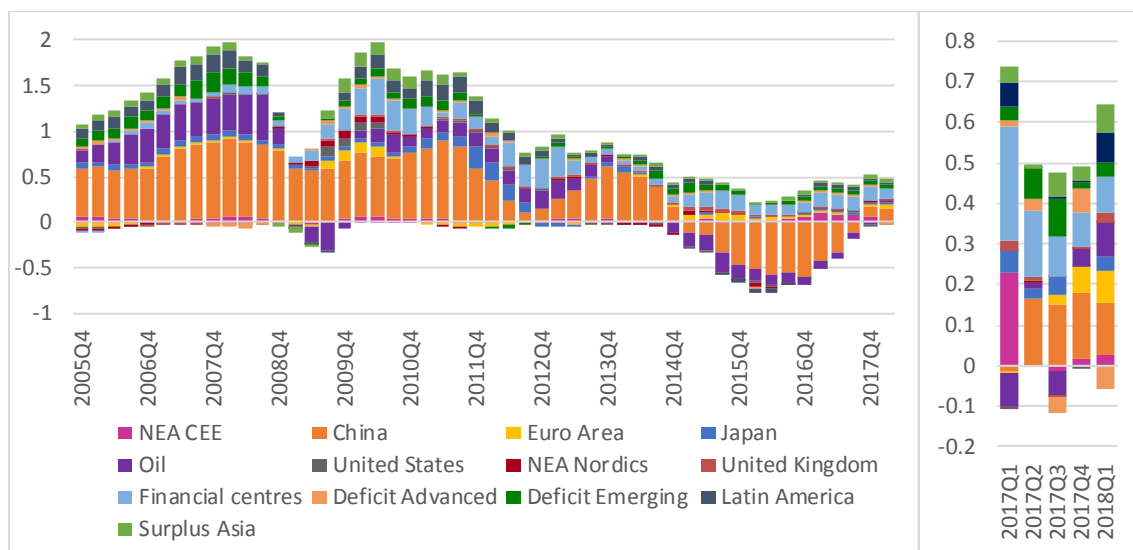
Figure 70: Financial account balances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. Both the financial account balance and GDP are measured in USD.

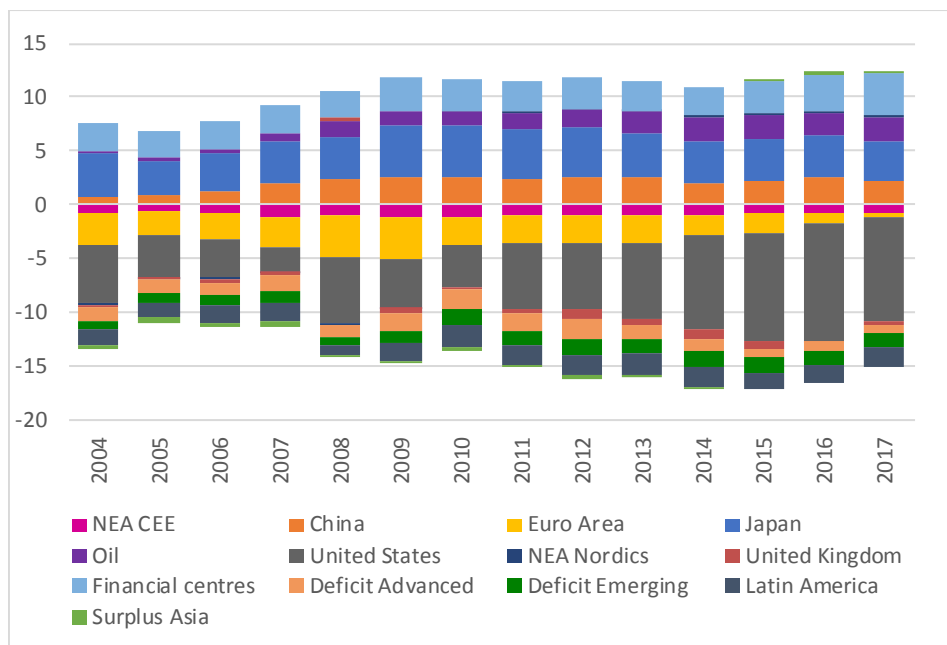
Figure 71: Reserves and related items, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

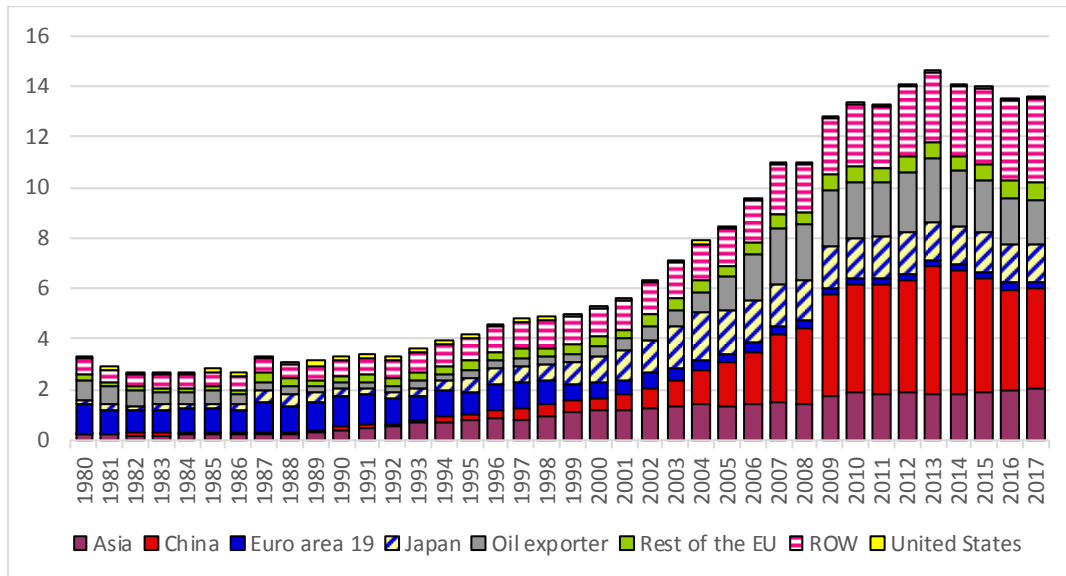
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. Both the financial account balance and GDP are measured in USD.

Figure 72: NIIP, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

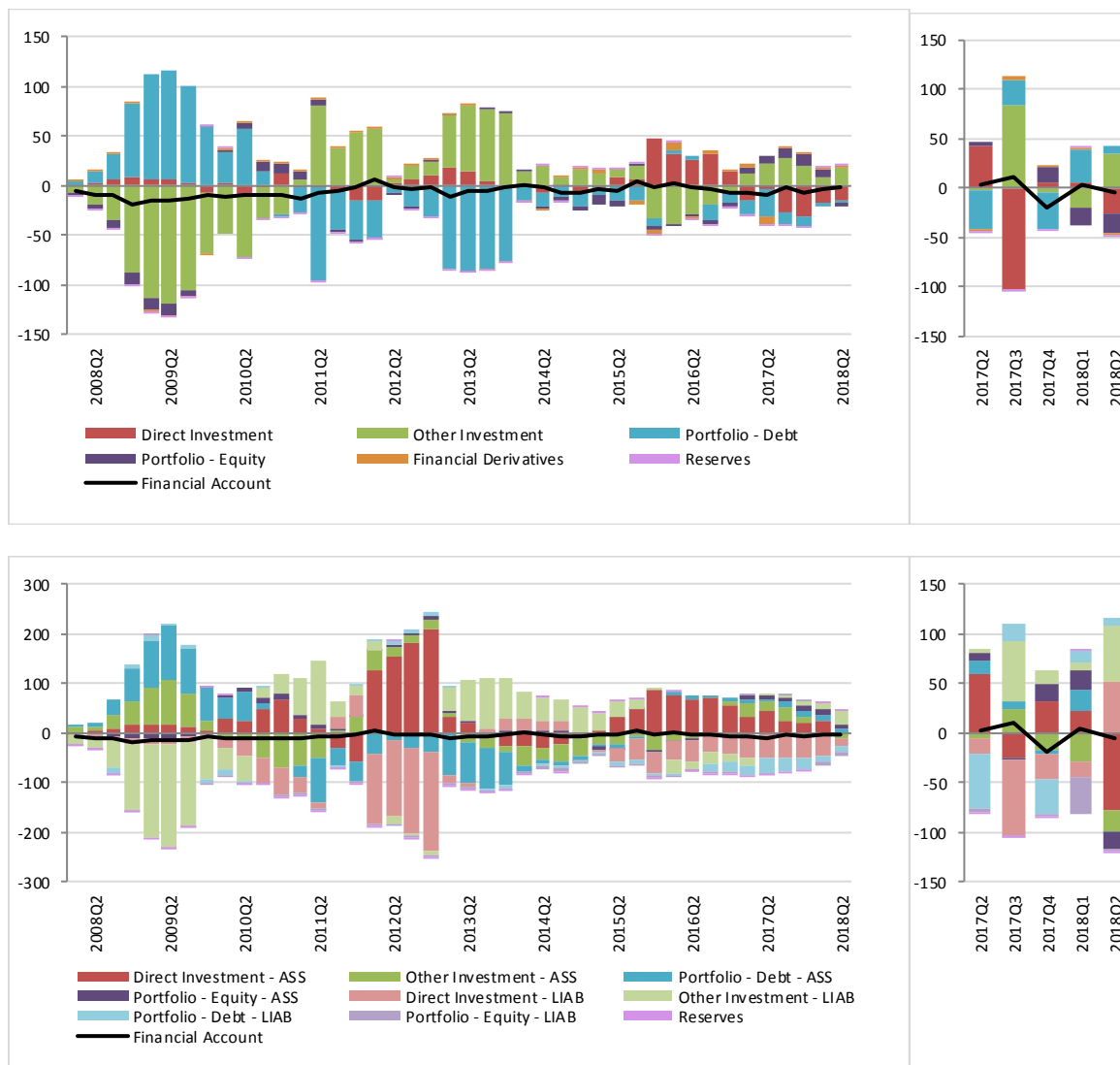
Figure 73: Foreign exchange reserves, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

7.2. Europe

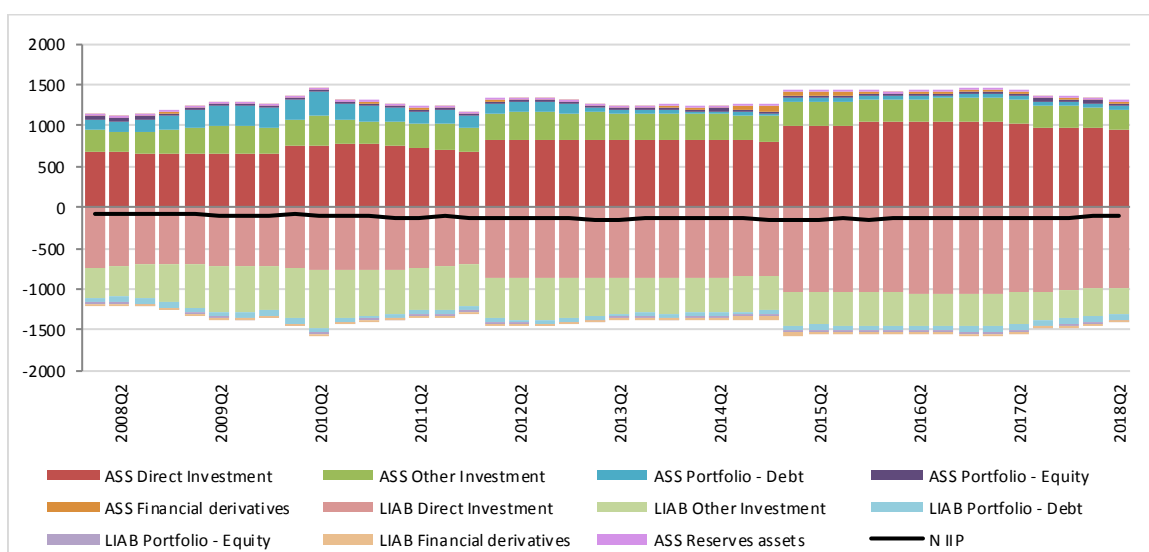
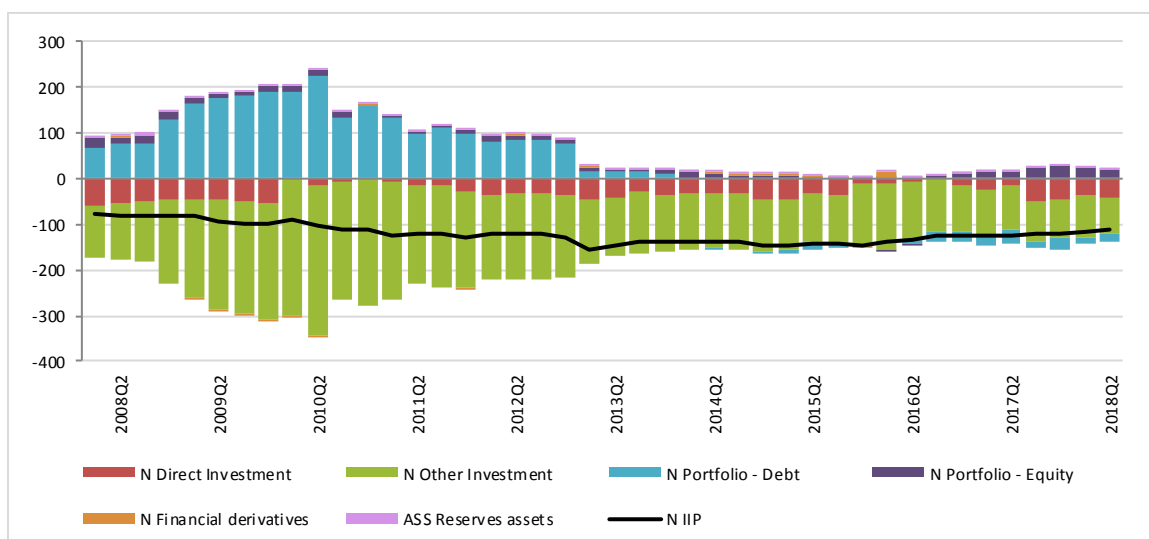
Figure 74: Cyprus net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

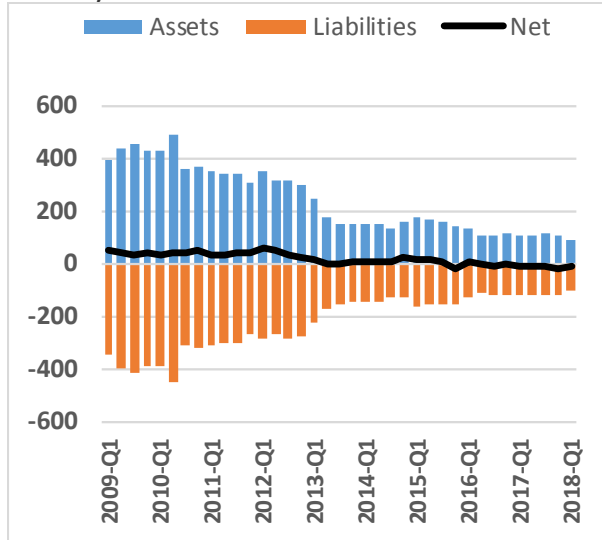
Figure 75: Cyprus net and gross international investment position by instrument, % of GDP



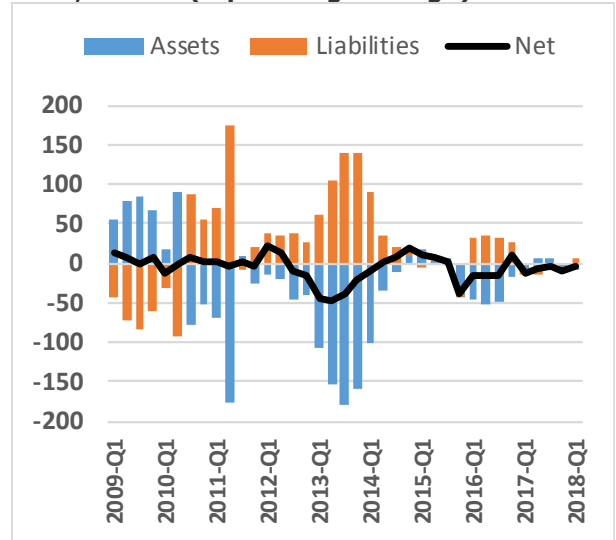
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 76: Cyprus, BIS LBS

Stocks, % GDP



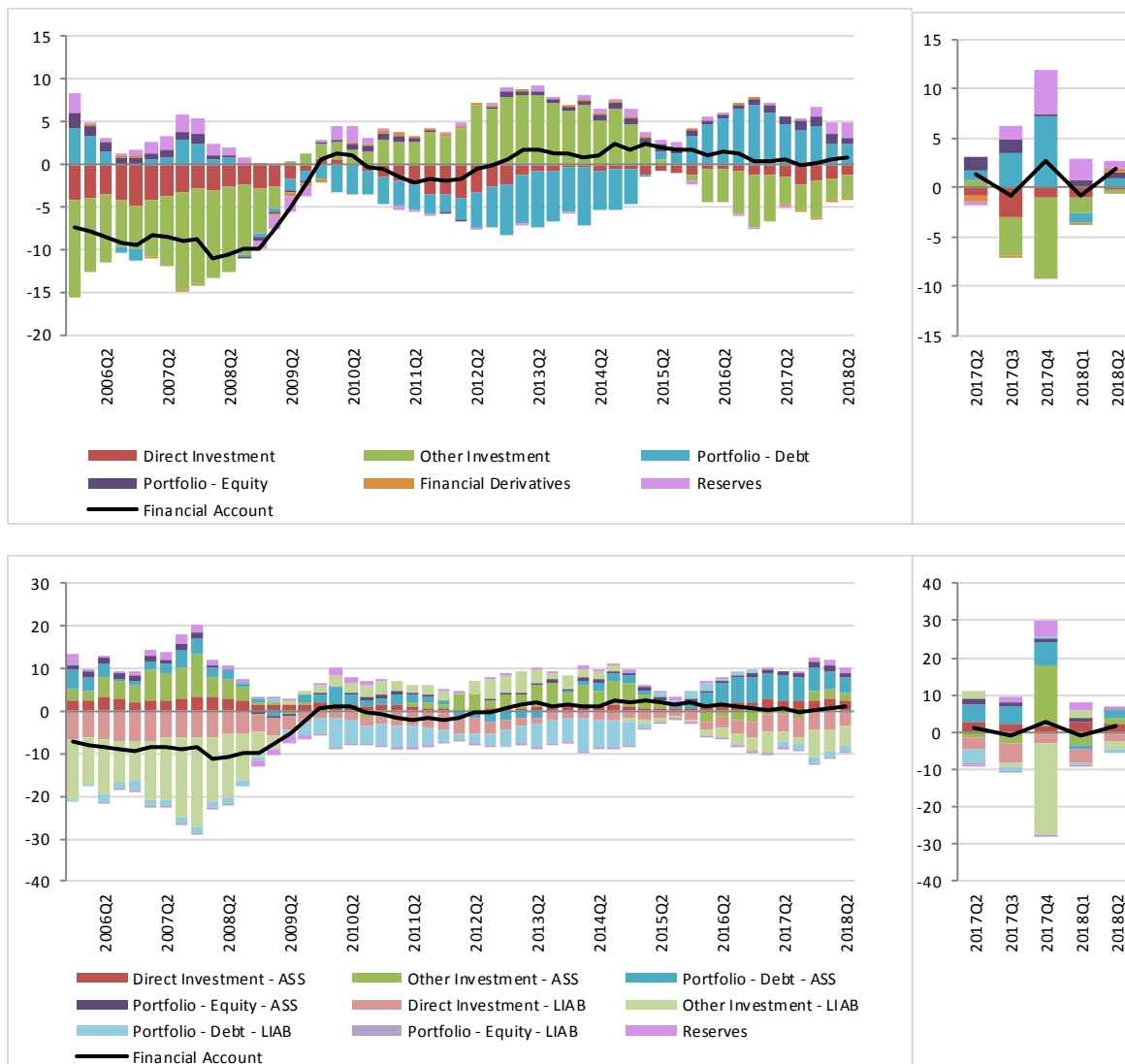
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

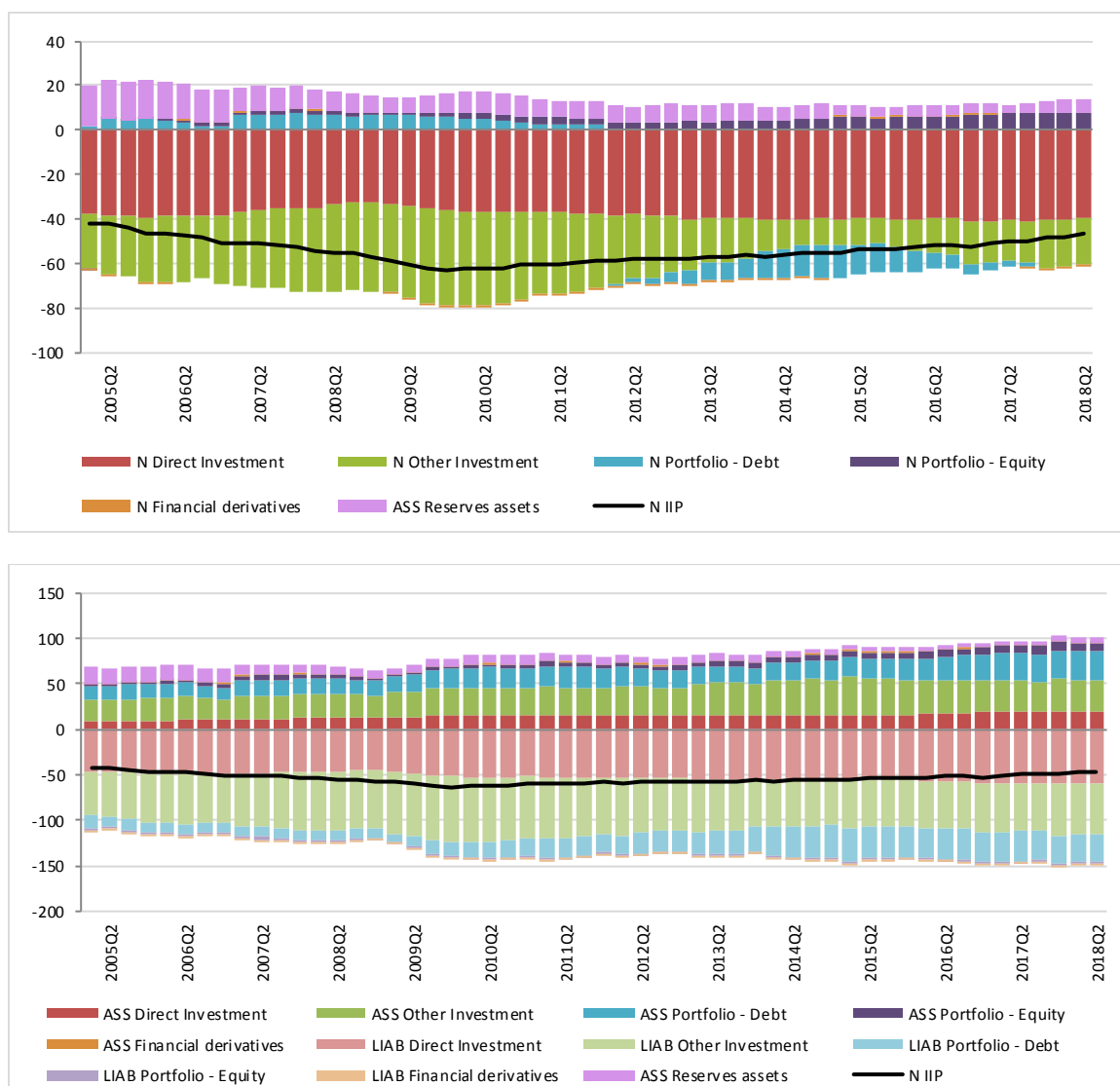
Figure 77: Euro area CEE net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

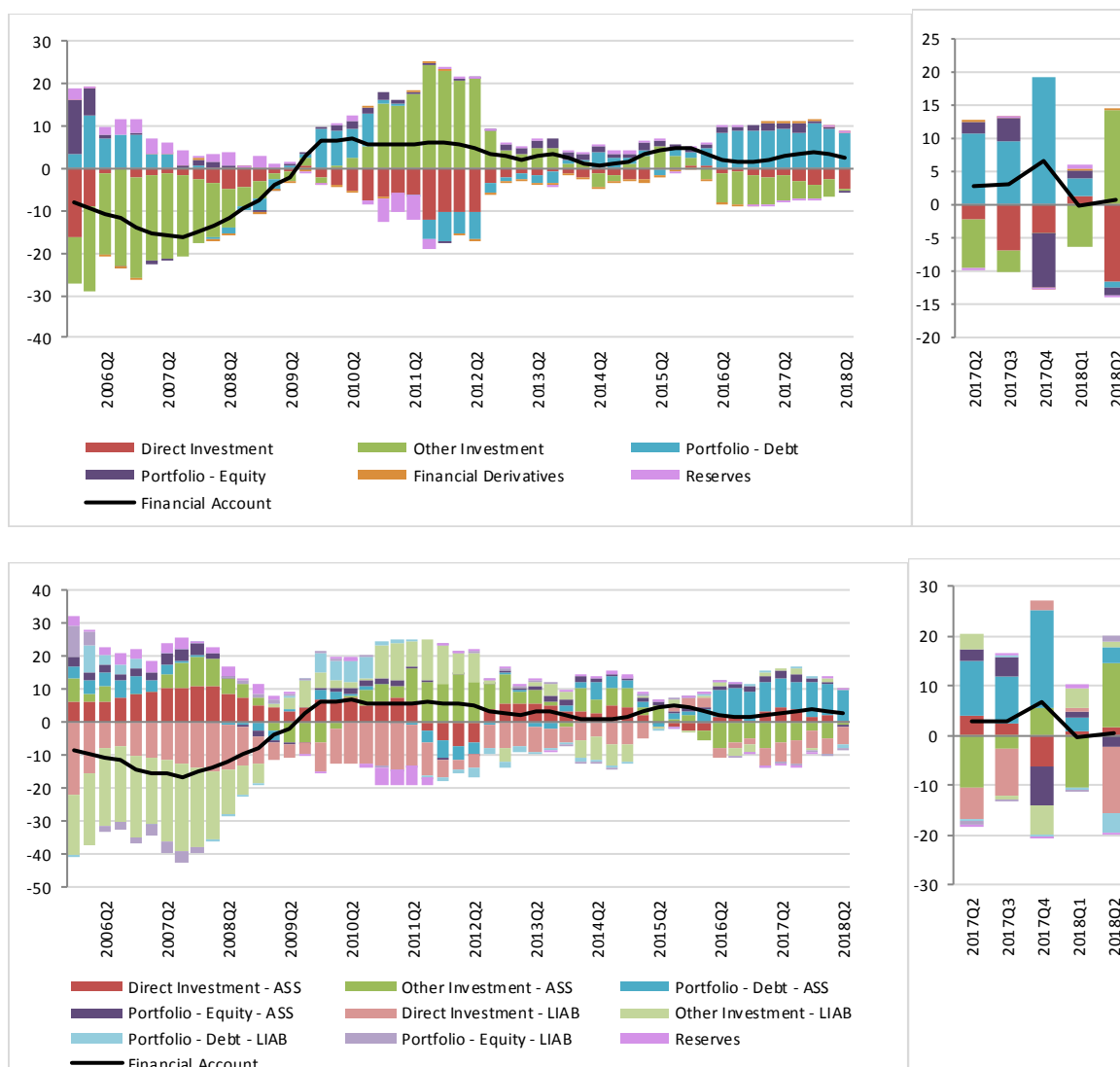
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 78: Euro area CEE net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

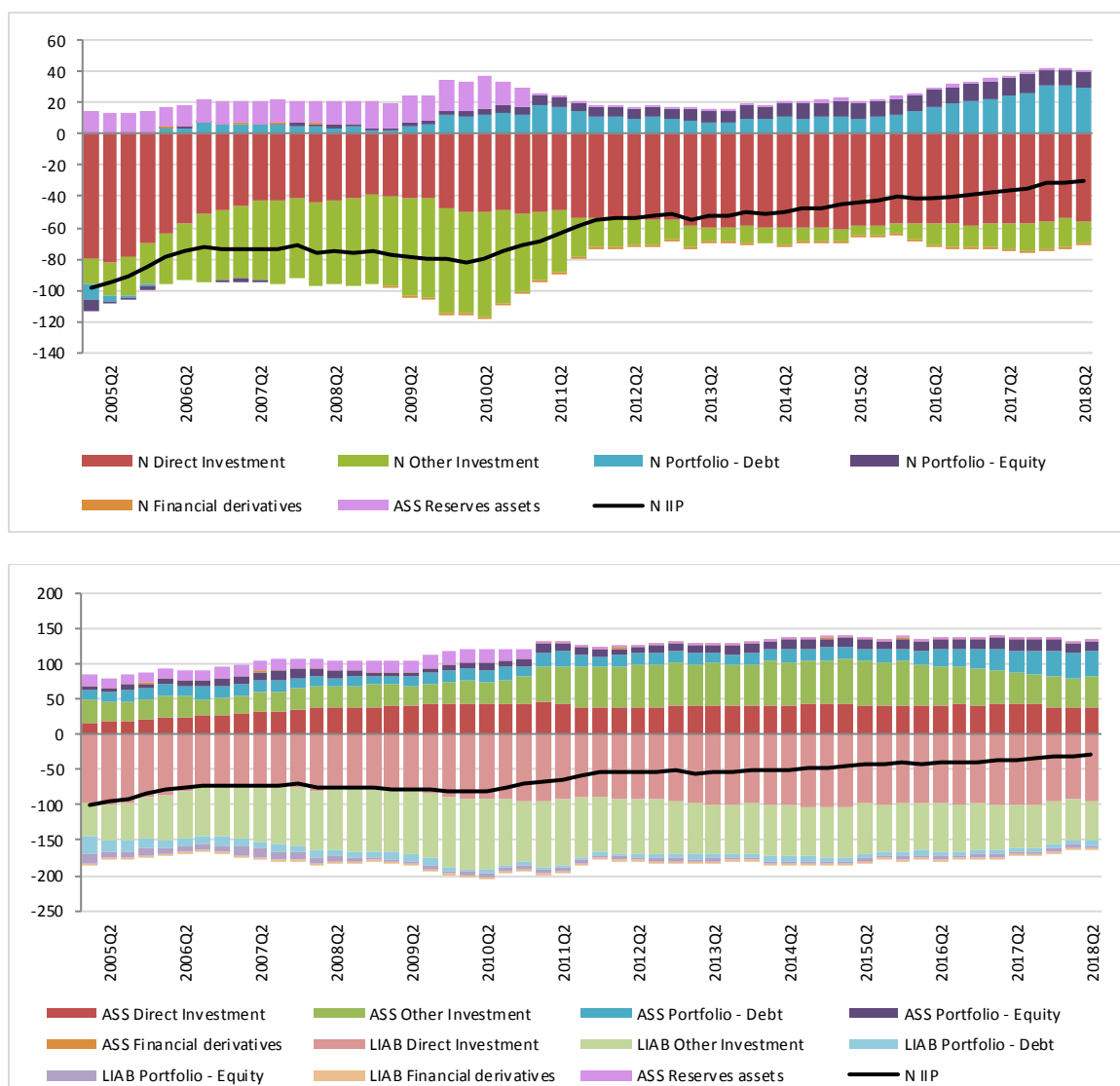
Figure 79: Estonia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

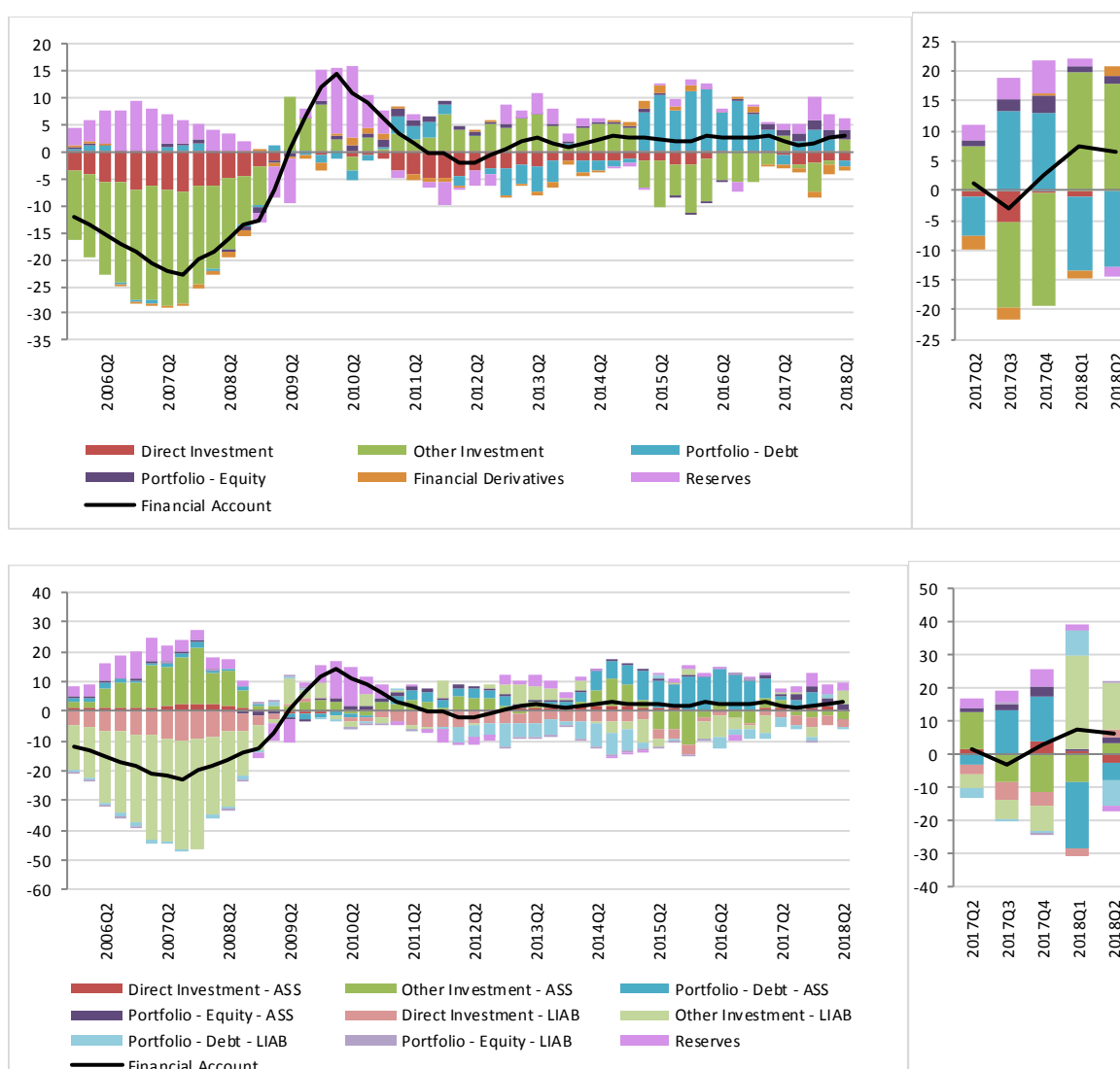
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 80: Estonia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

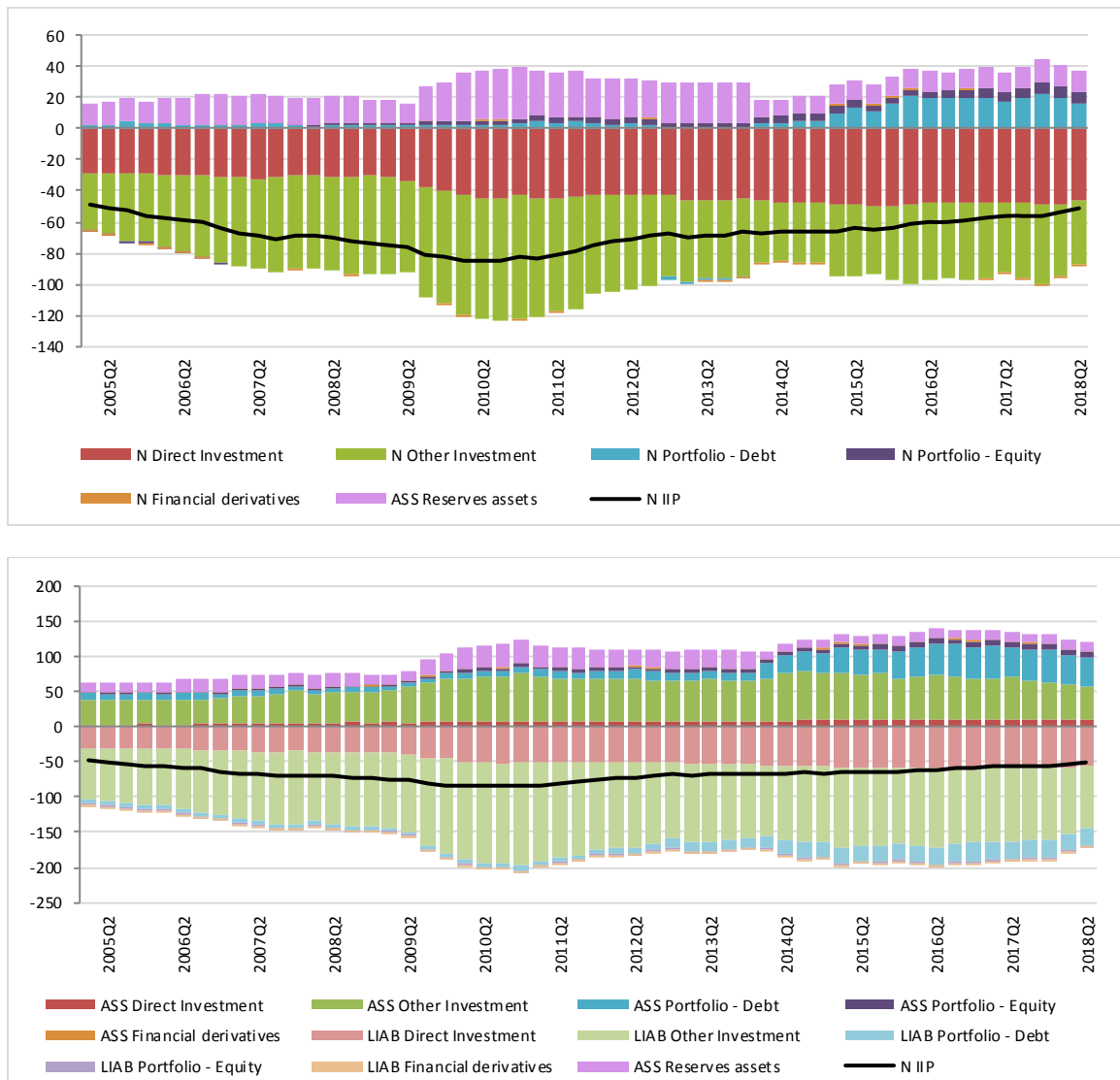
Figure 81: Latvia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

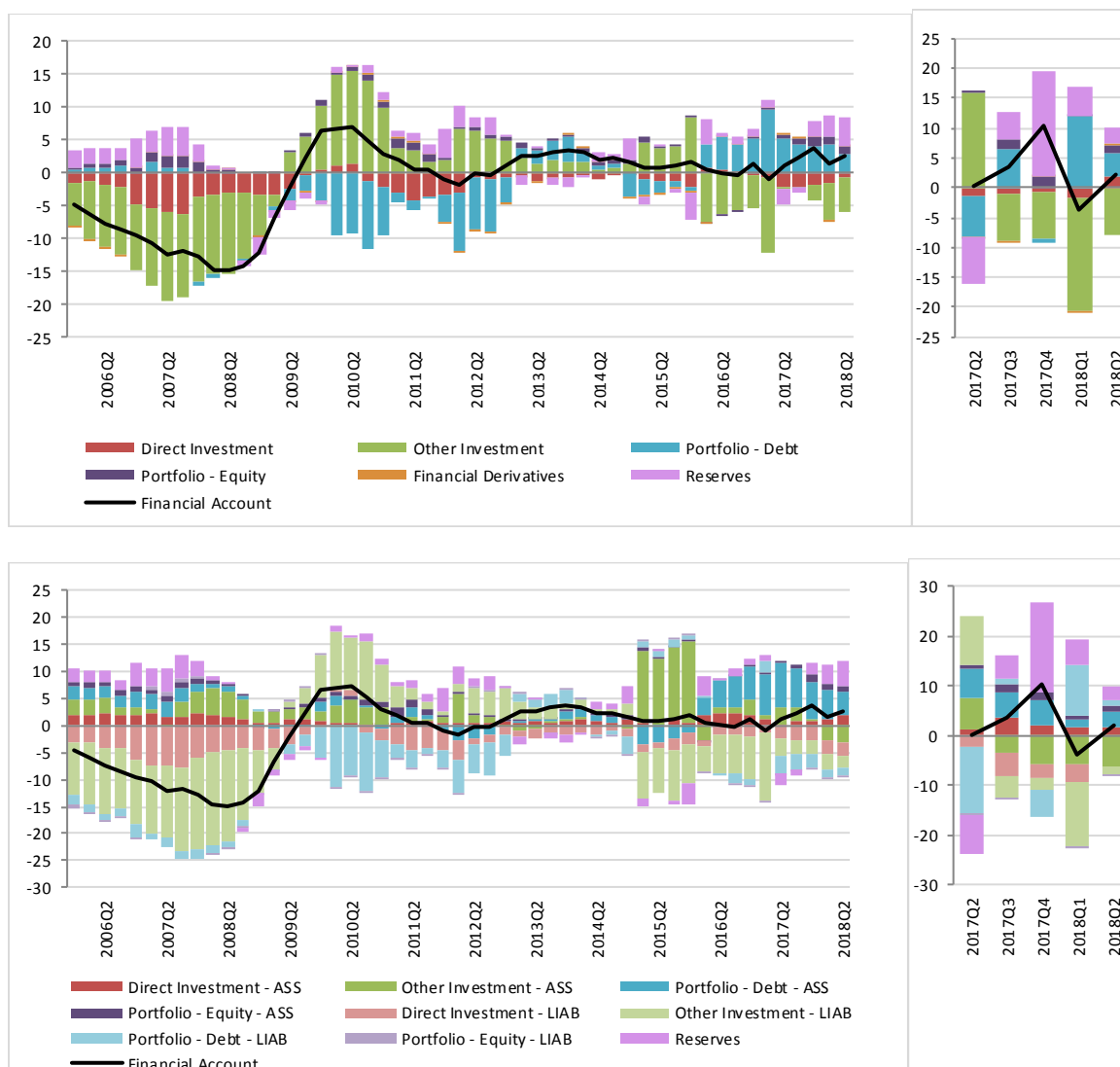
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 82: Latvia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

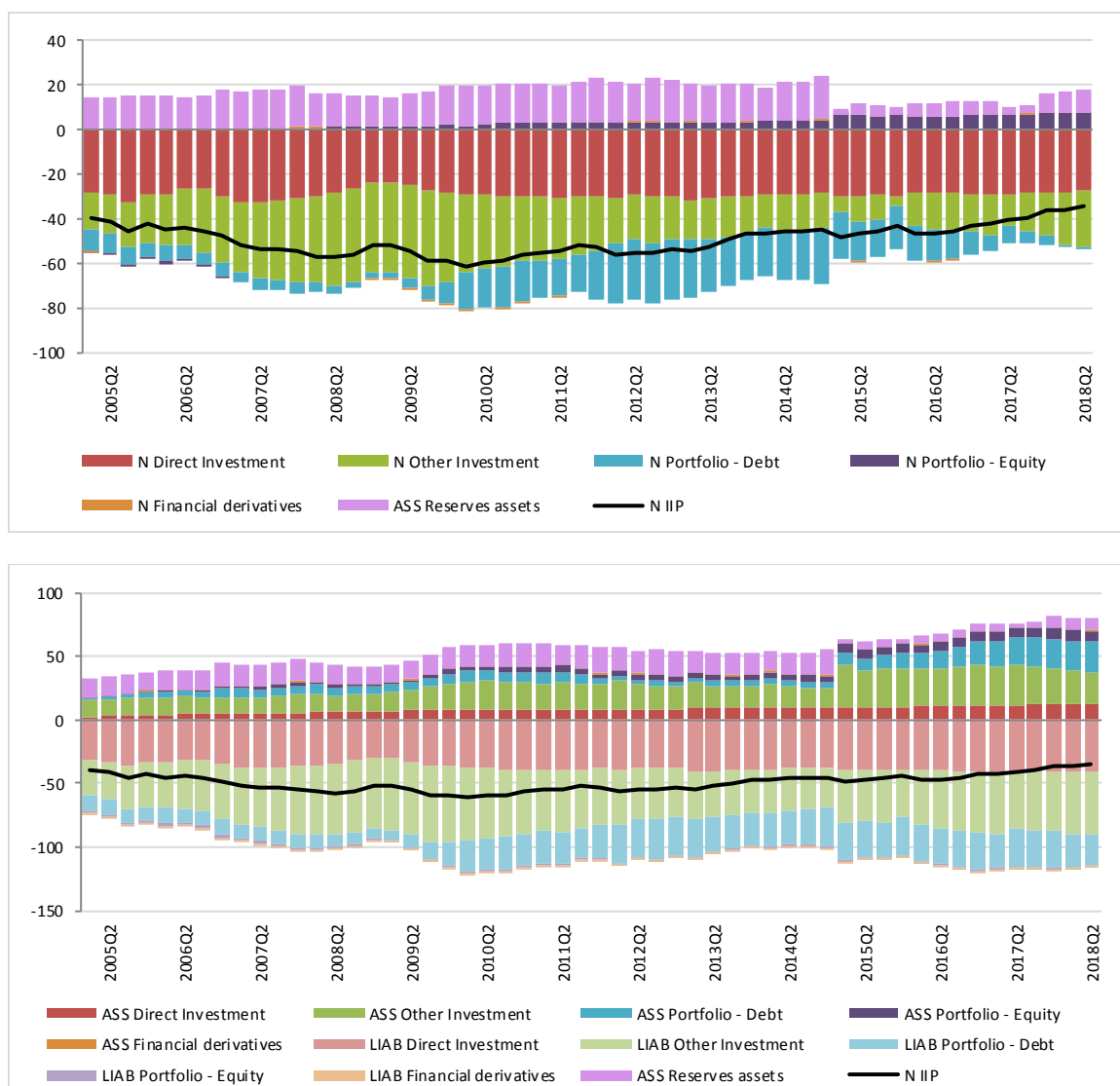
Figure 83: Lithuania (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

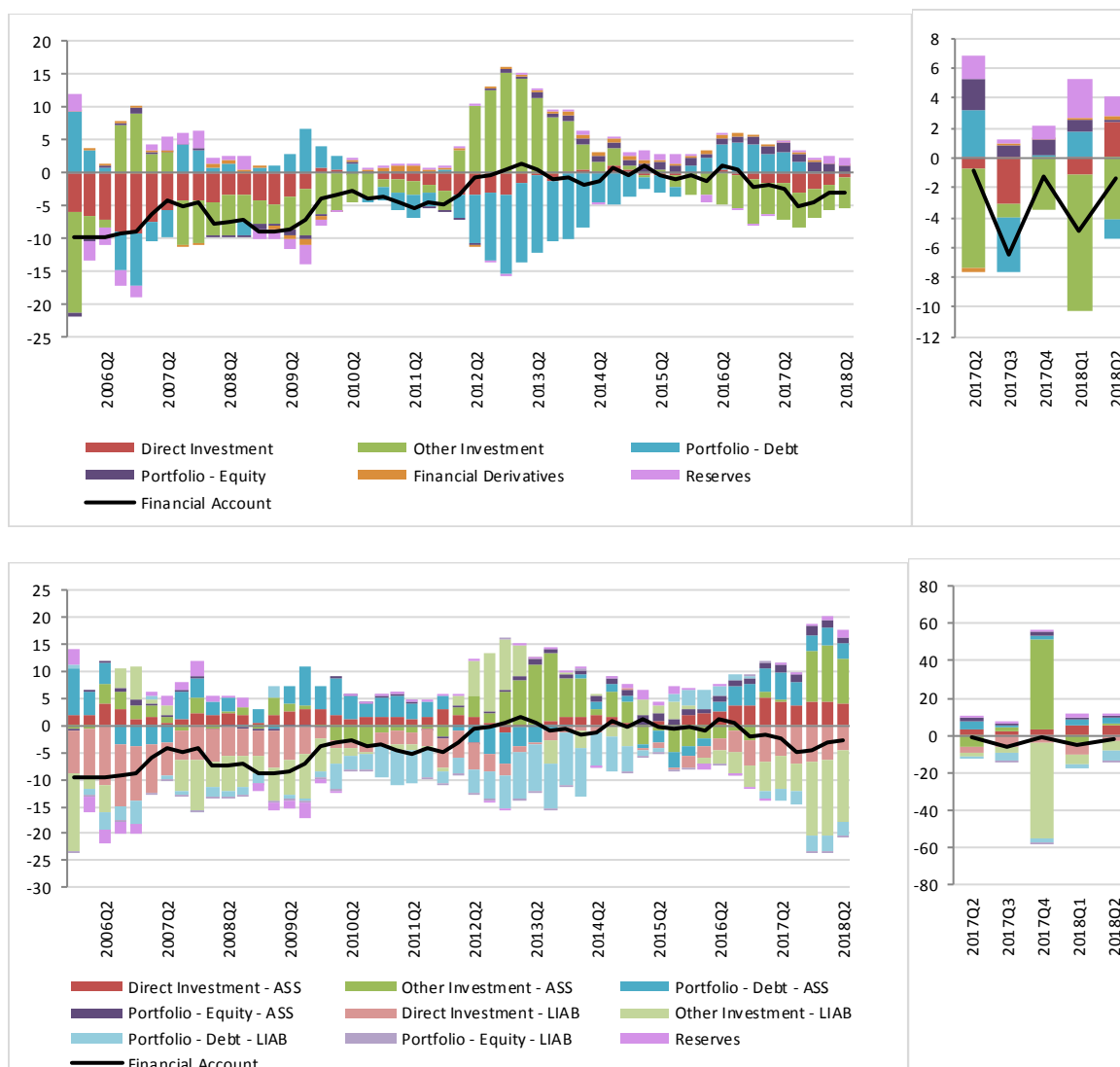
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 84: Lithuania (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

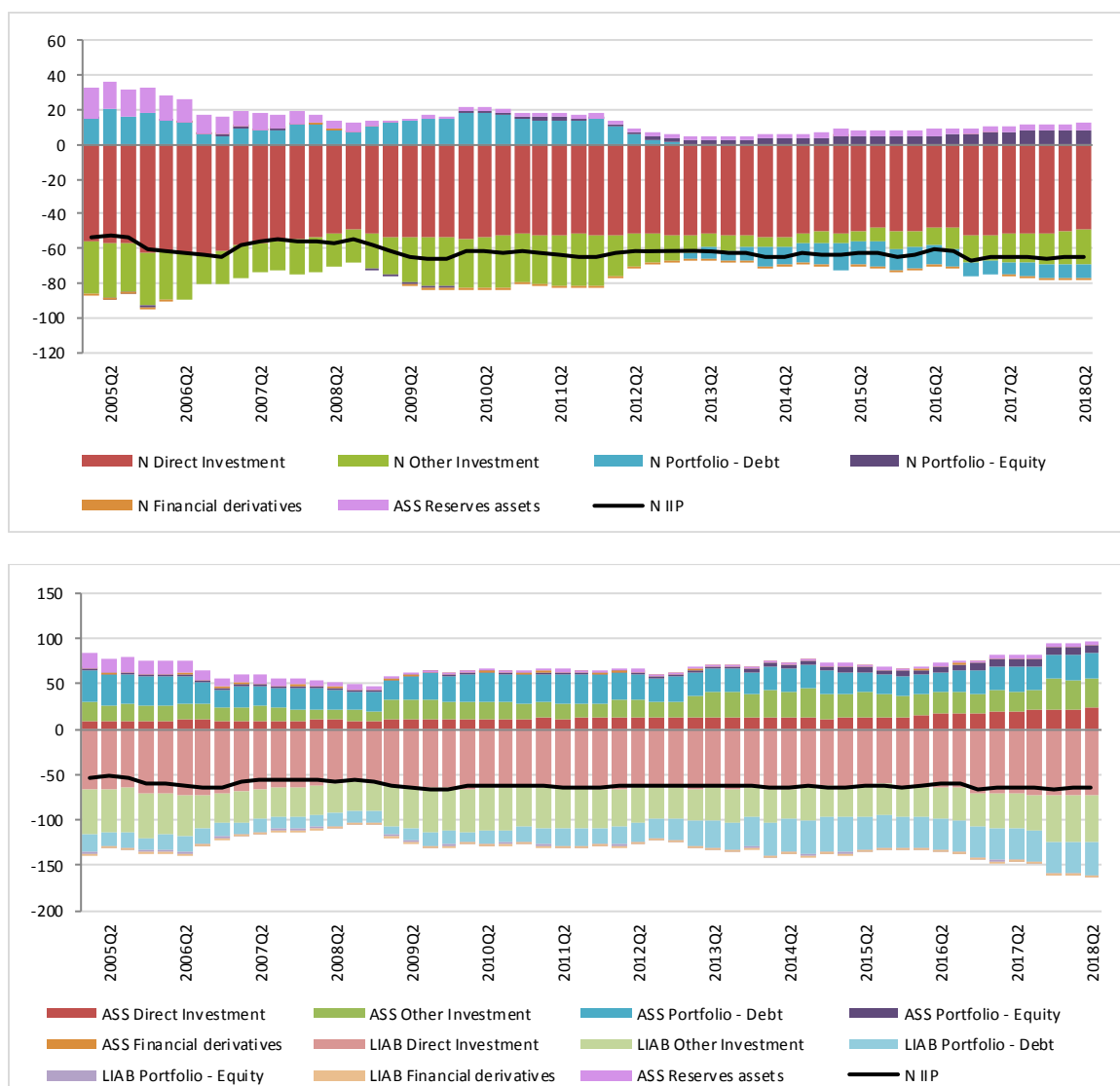
Figure 85: Slovakia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

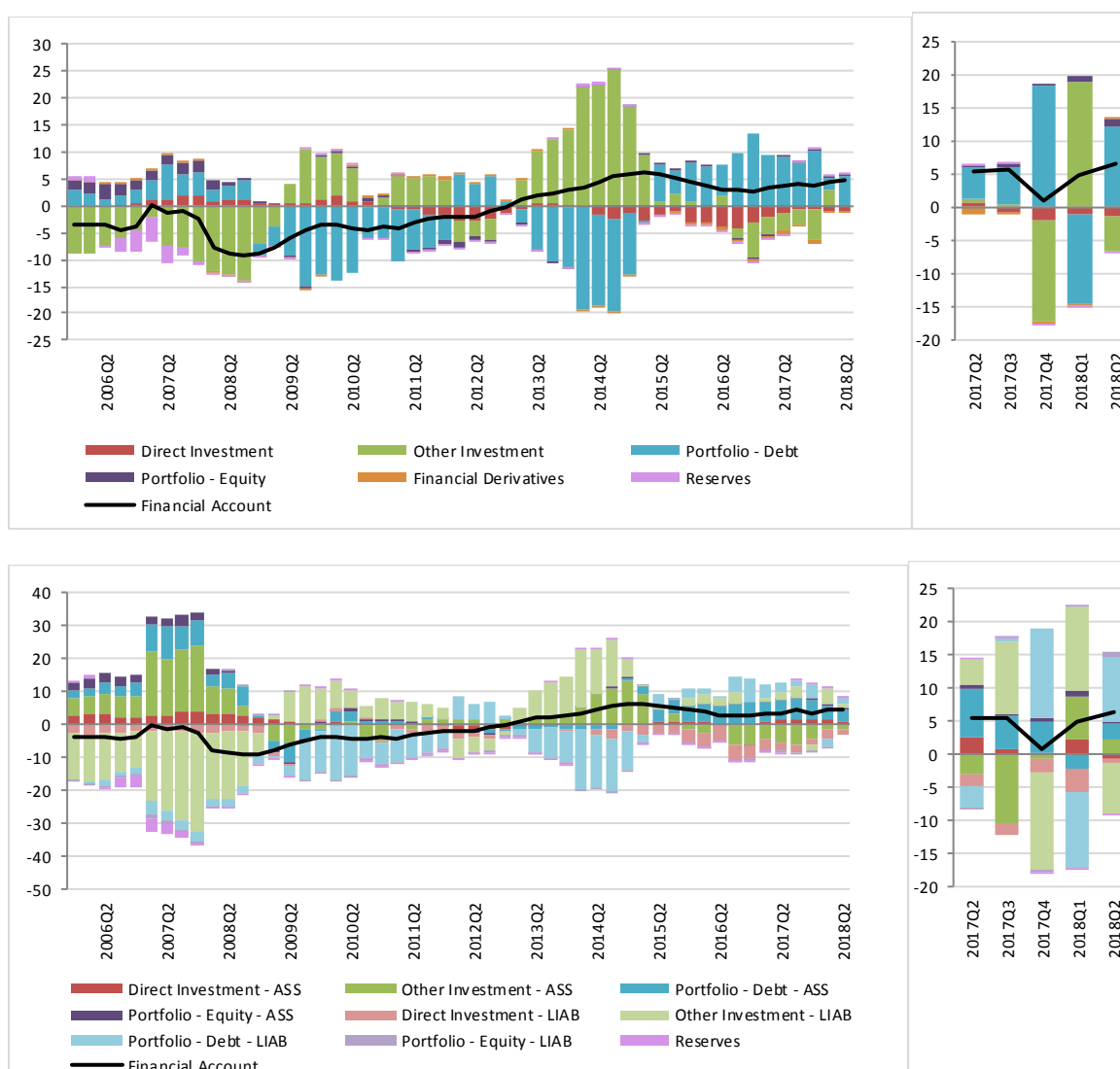
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 86: Slovakia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

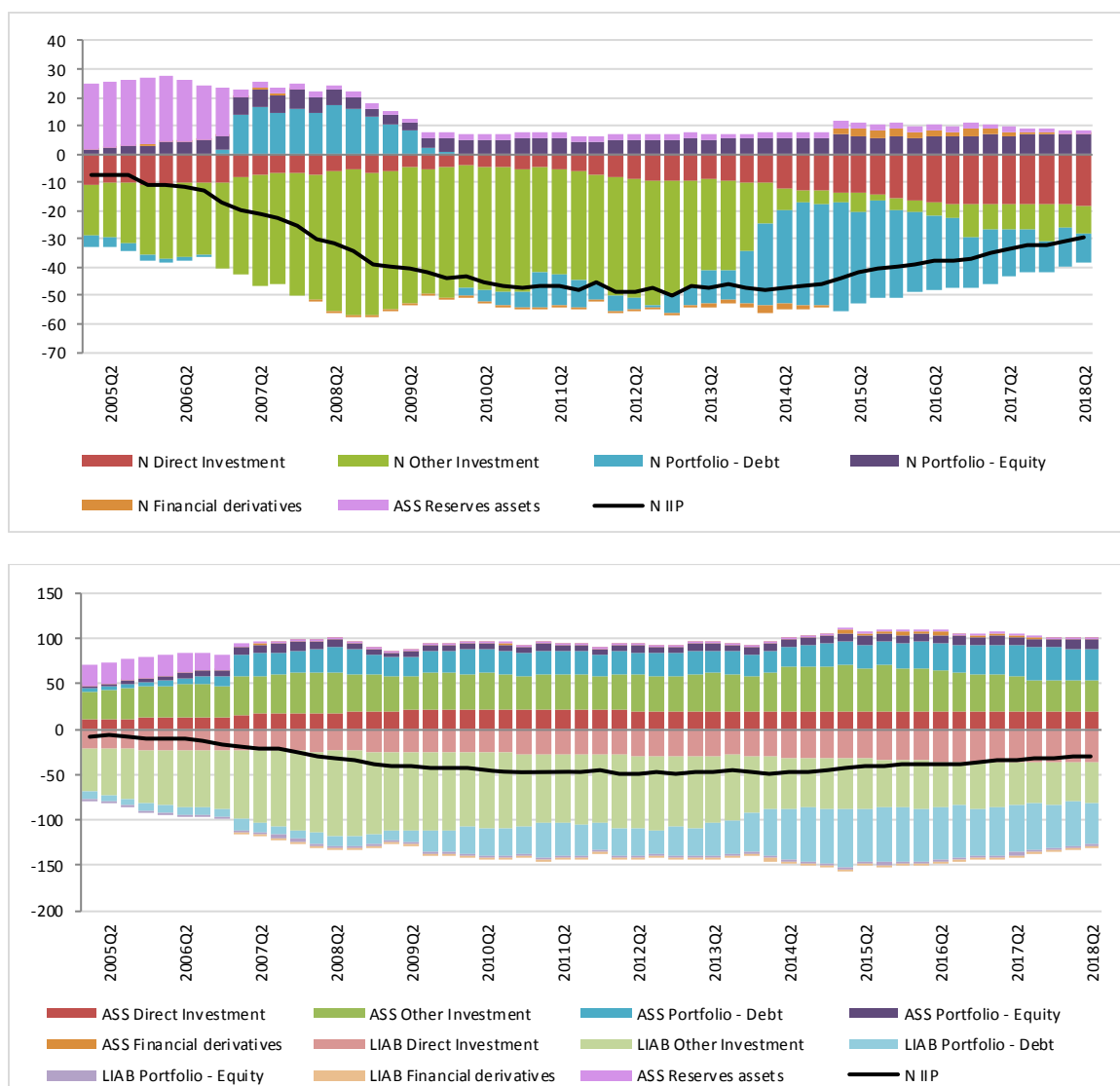
Figure 87: Slovenia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

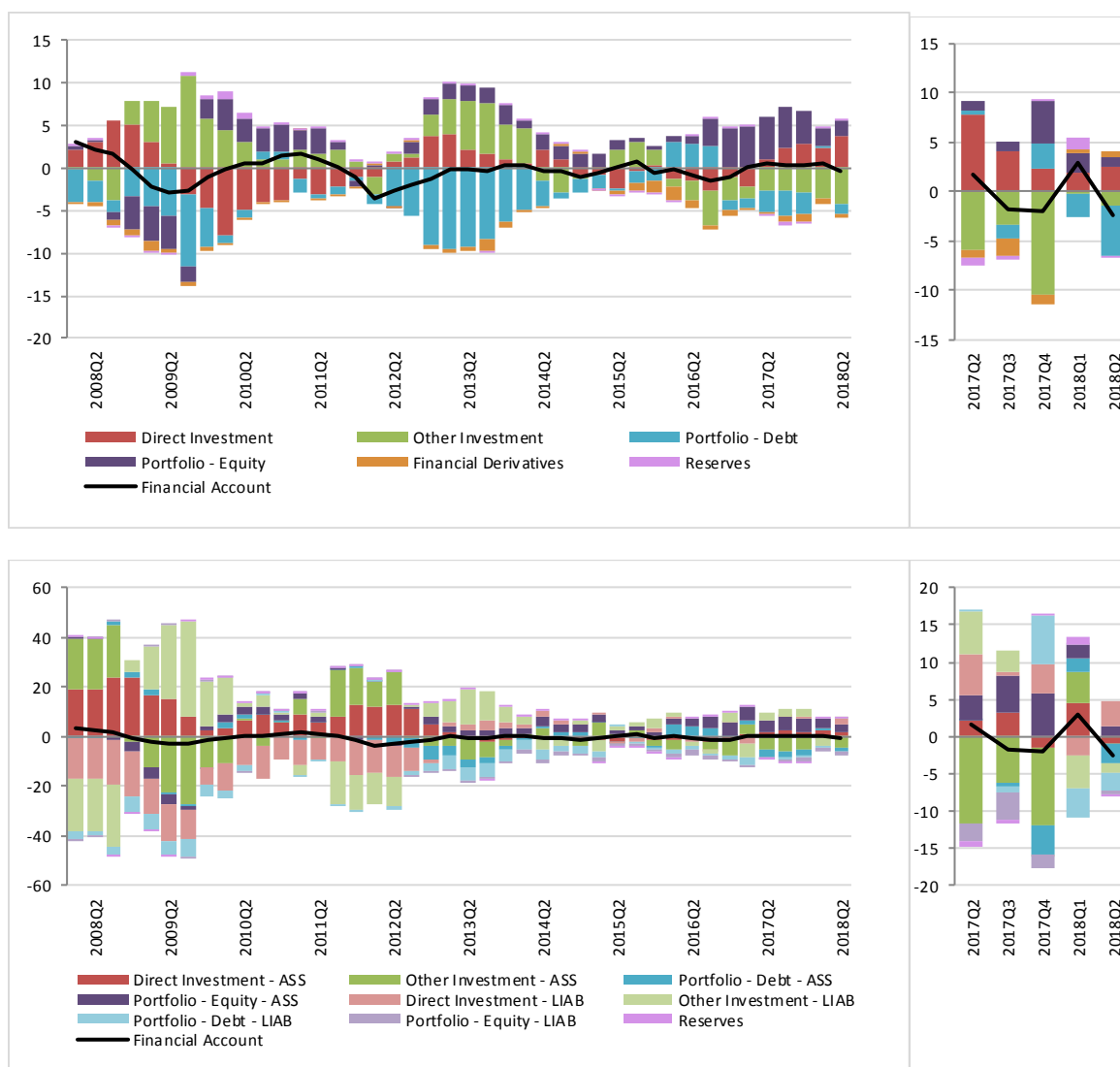
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 88: Slovenia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

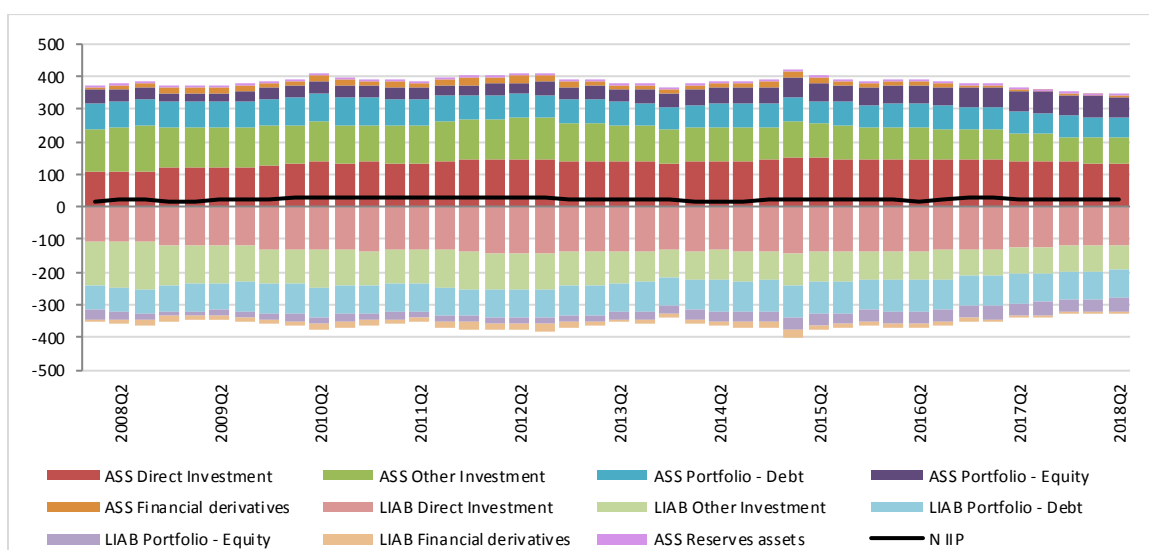
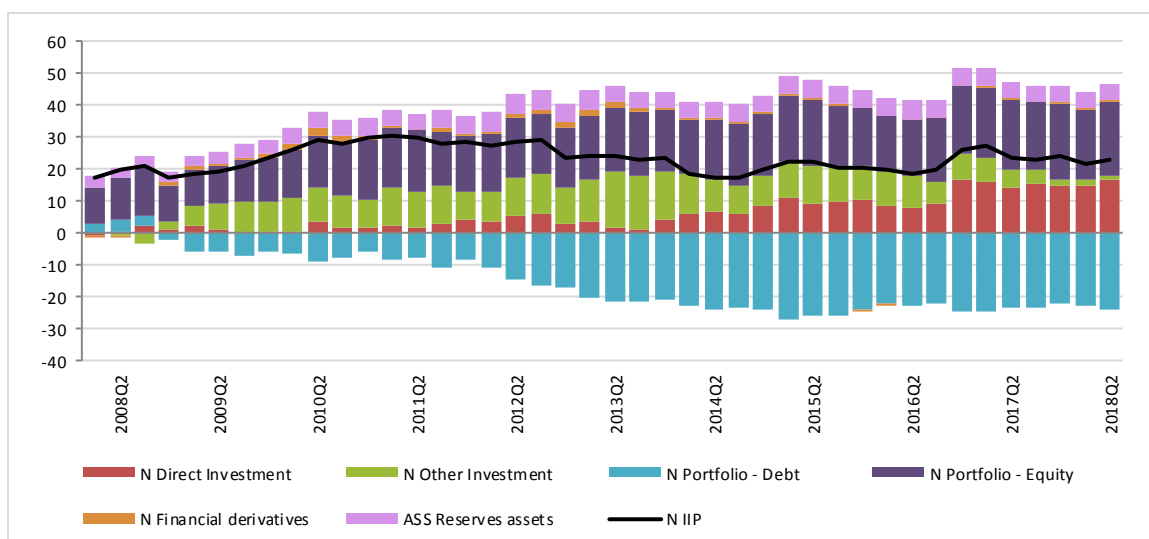
Figure 89: Euro area creditor countries net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

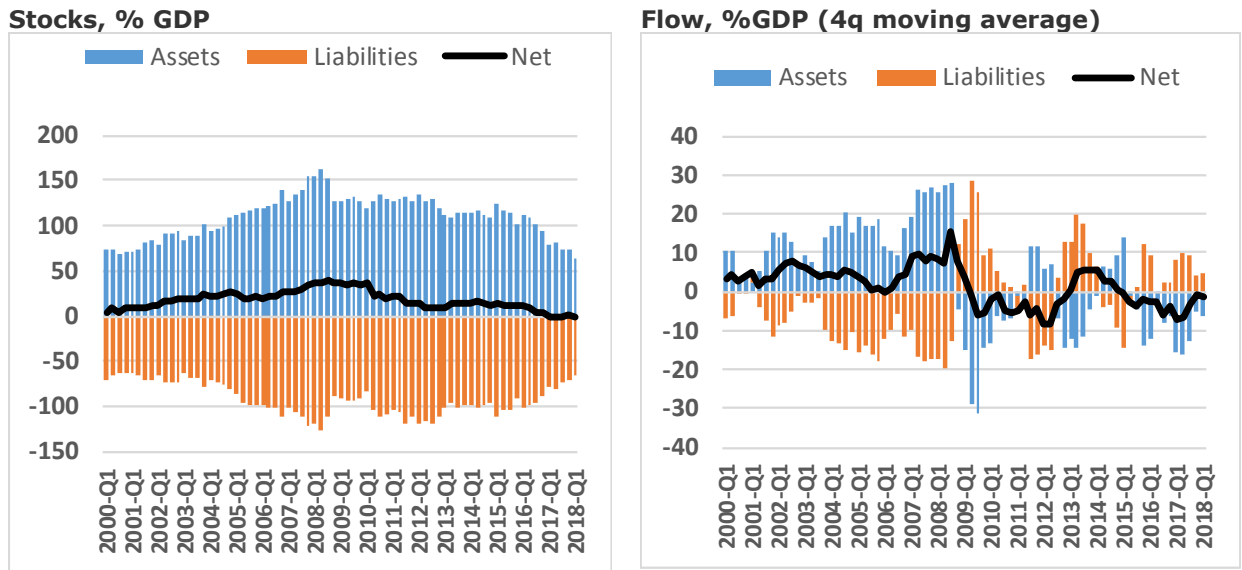
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 90: Euro area creditor countries net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

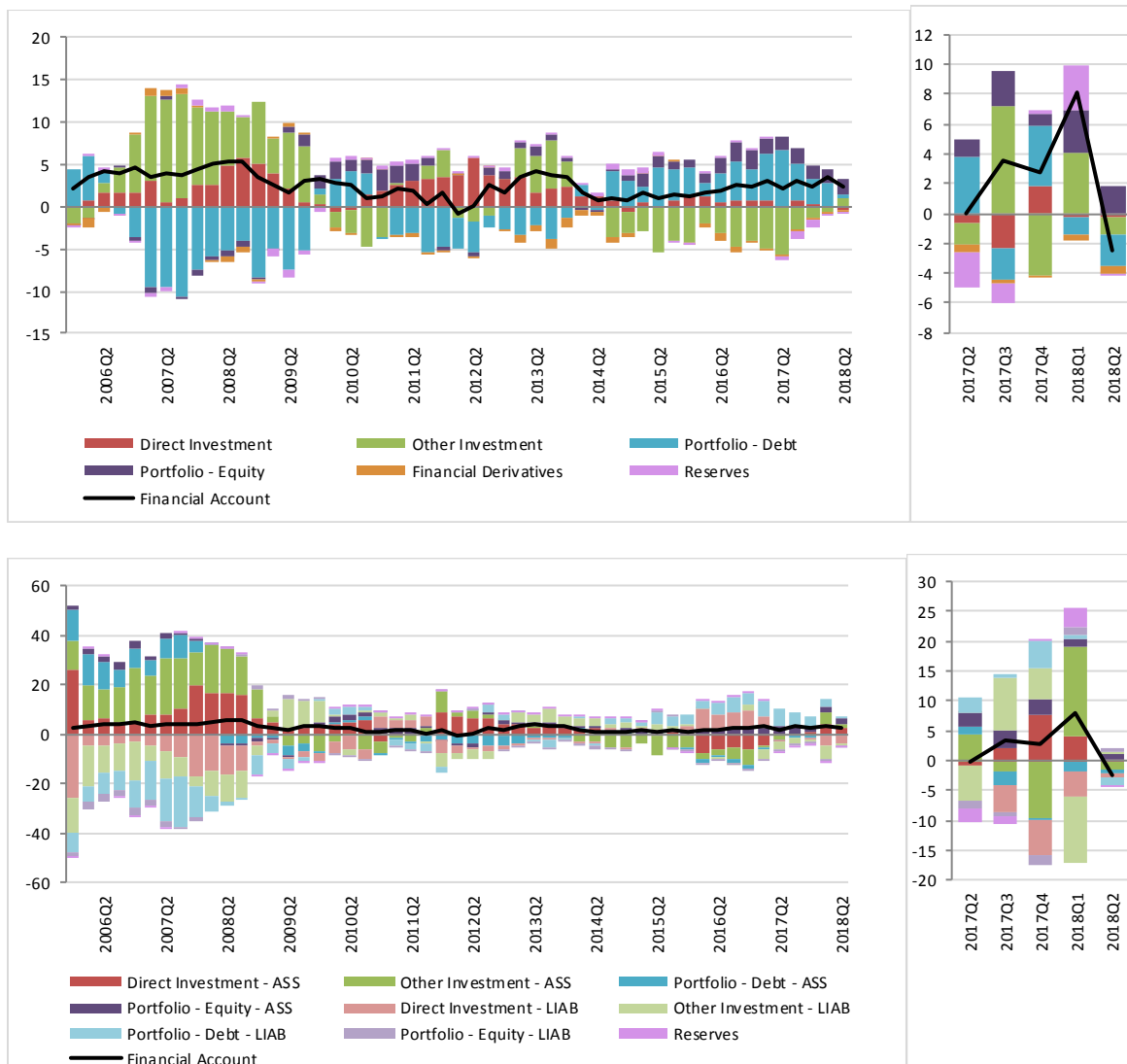
Figure 91: Euro area creditor countries, BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

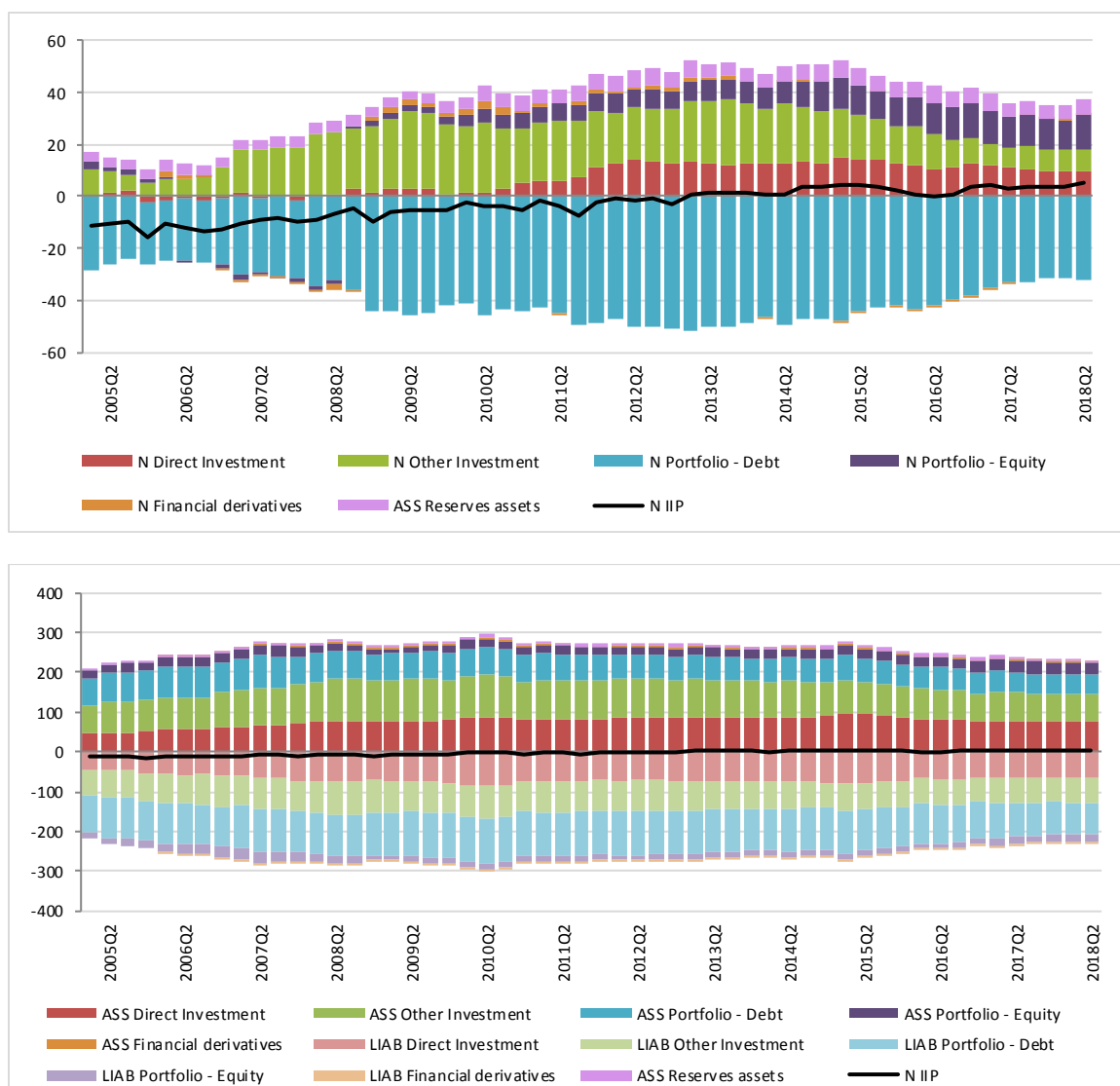
Figure 92: Austria (euro area creditor) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

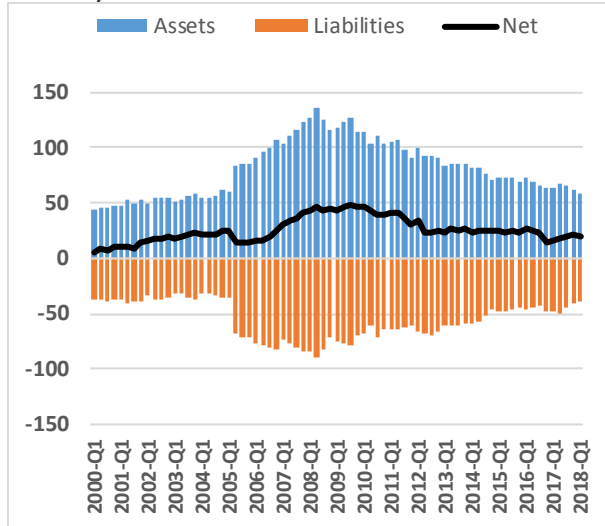
Figure 93: Austria (euro area creditor) net and gross international investment position by instrument, % of GDP



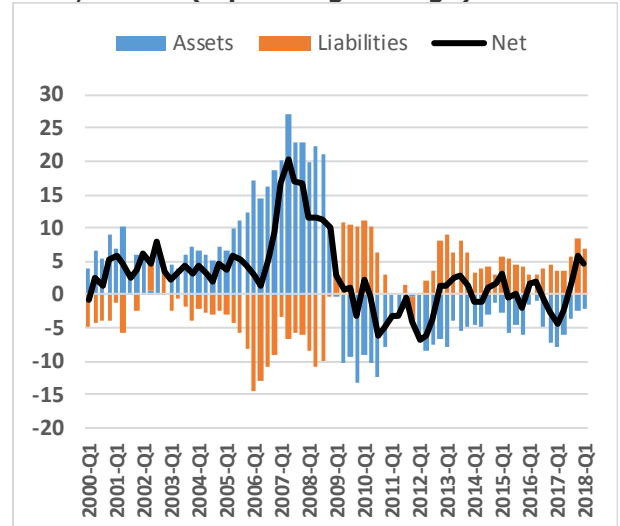
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 94: Austria (euro area creditor), BIS LBS

Stocks, % GDP



Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

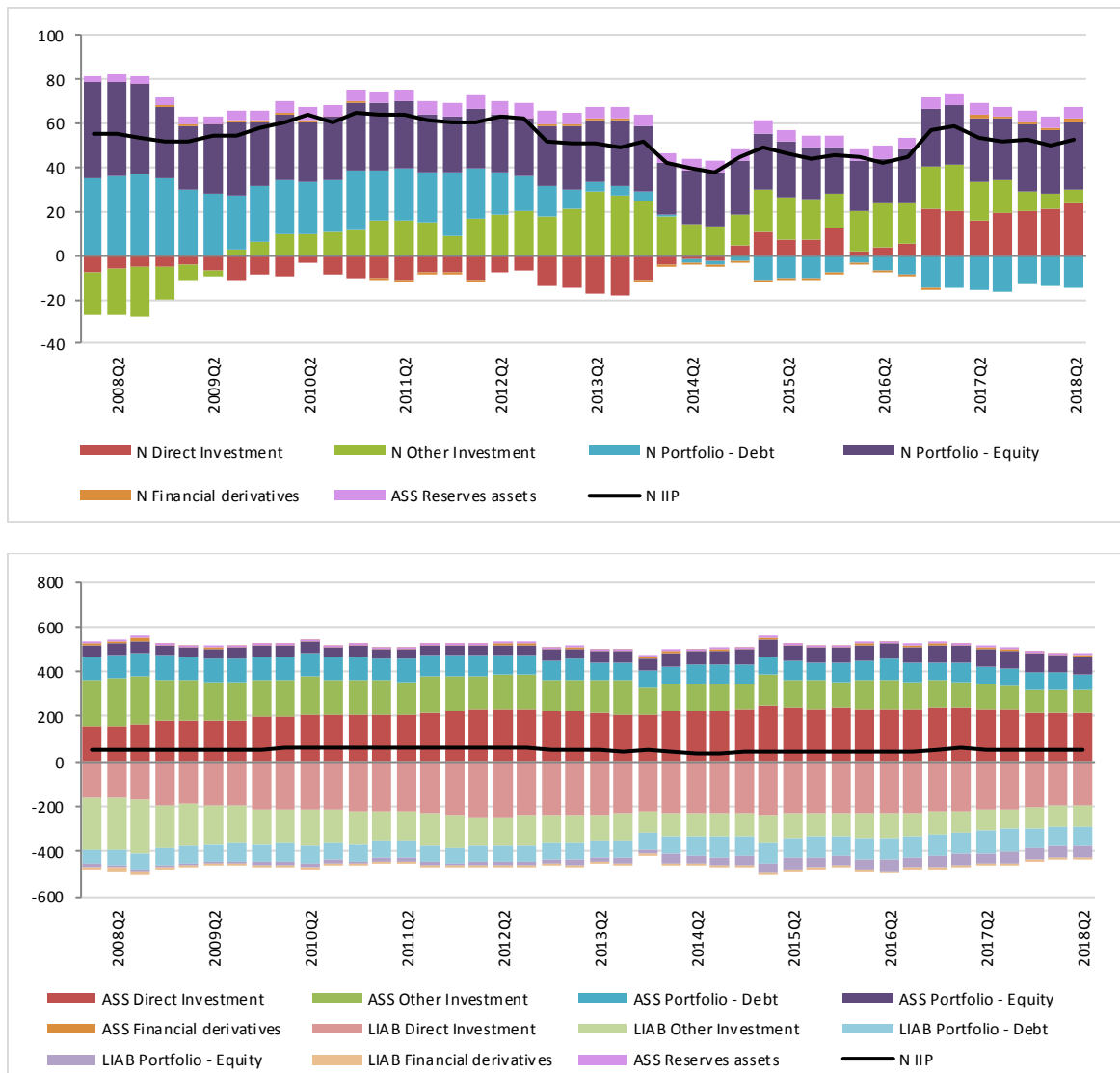
Figure 95: Belgium (euro area creditor) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

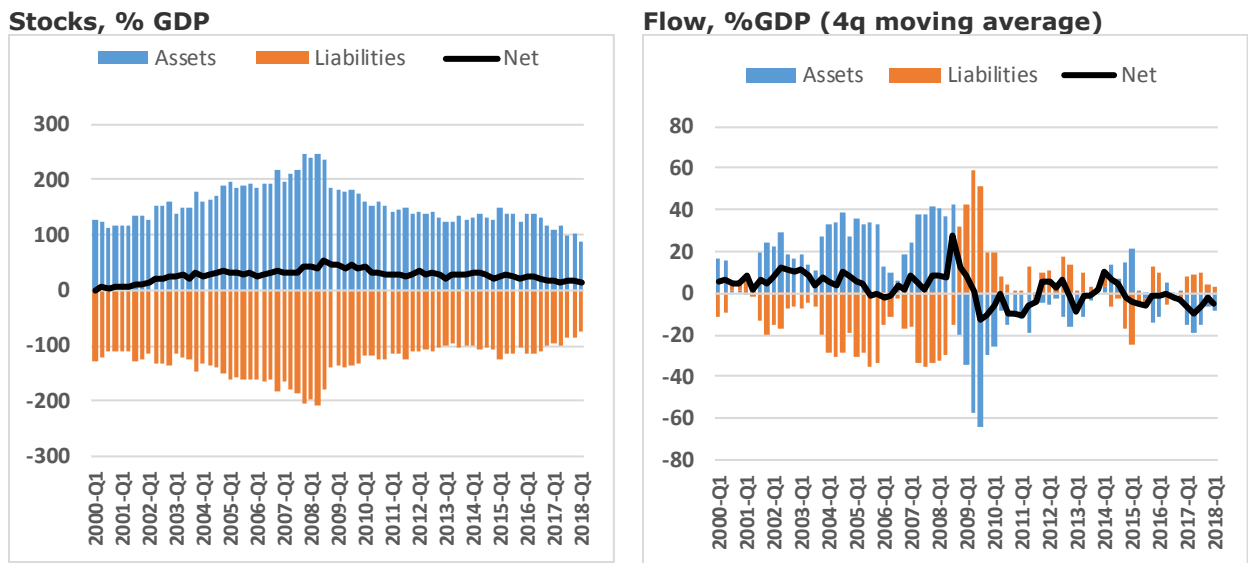
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 96: Belgium (euro area creditor) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

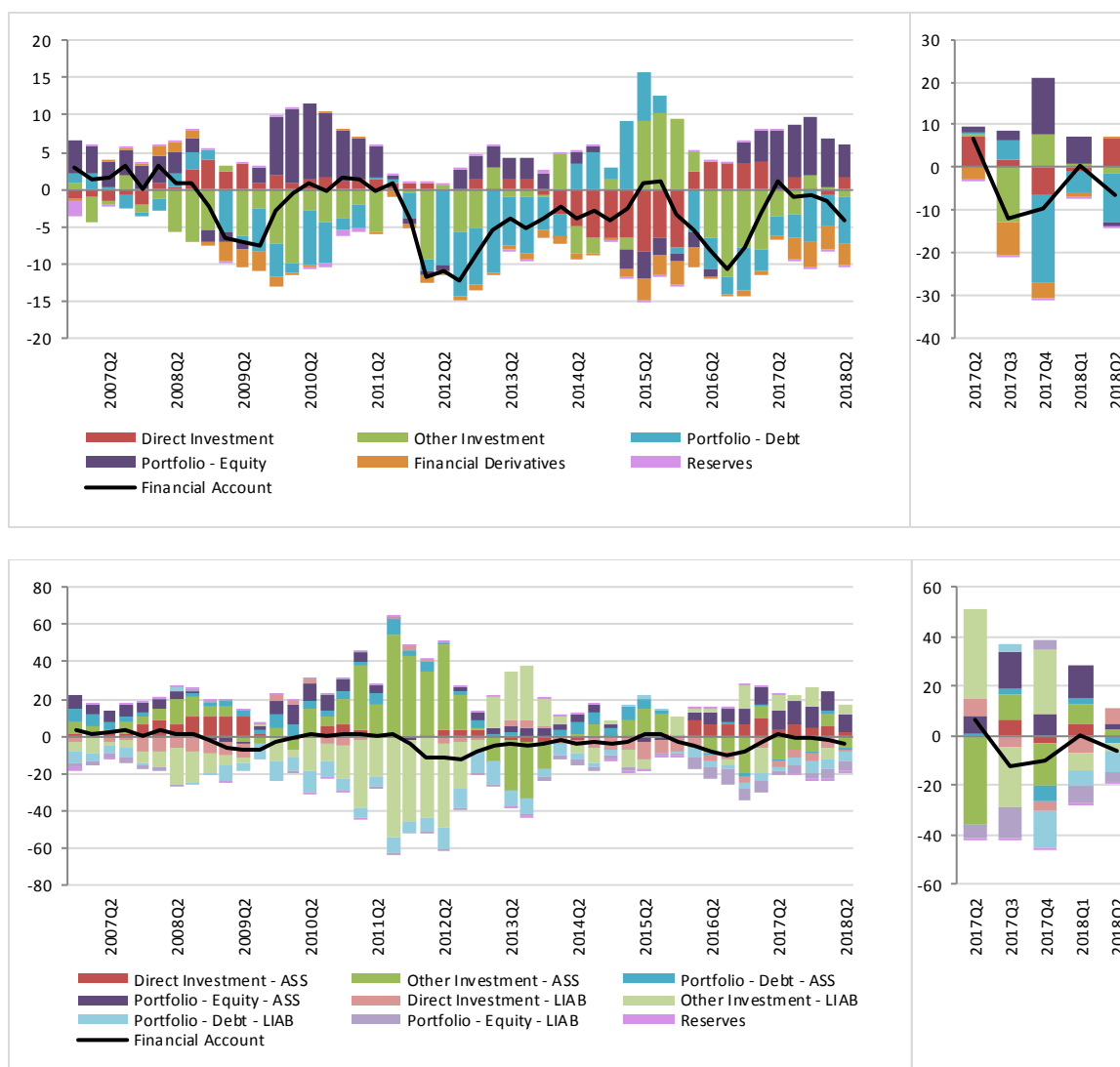
Figure 97: Belgium (euro area creditor), BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

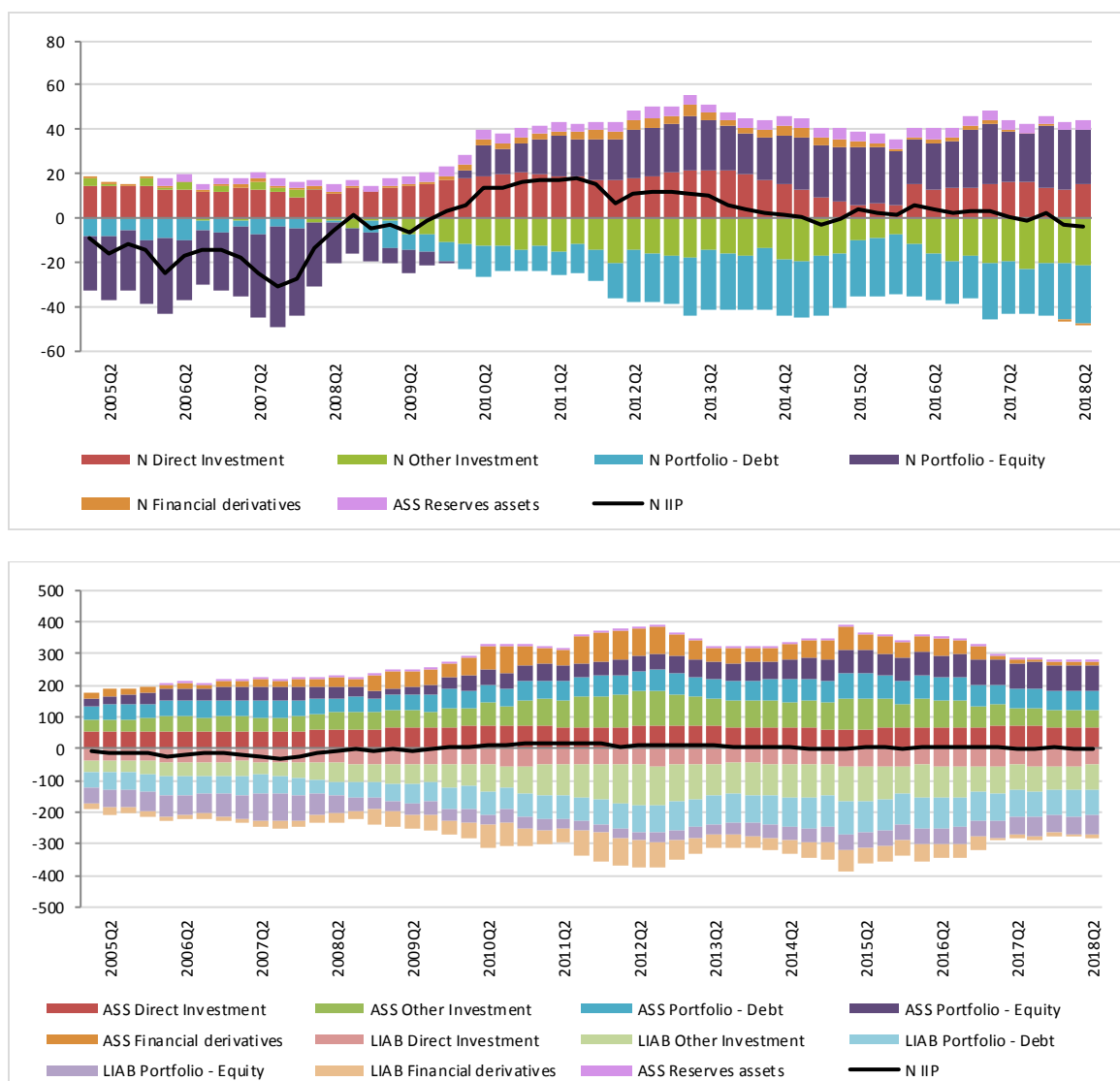
Figure 98: Finland (euro area creditor) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

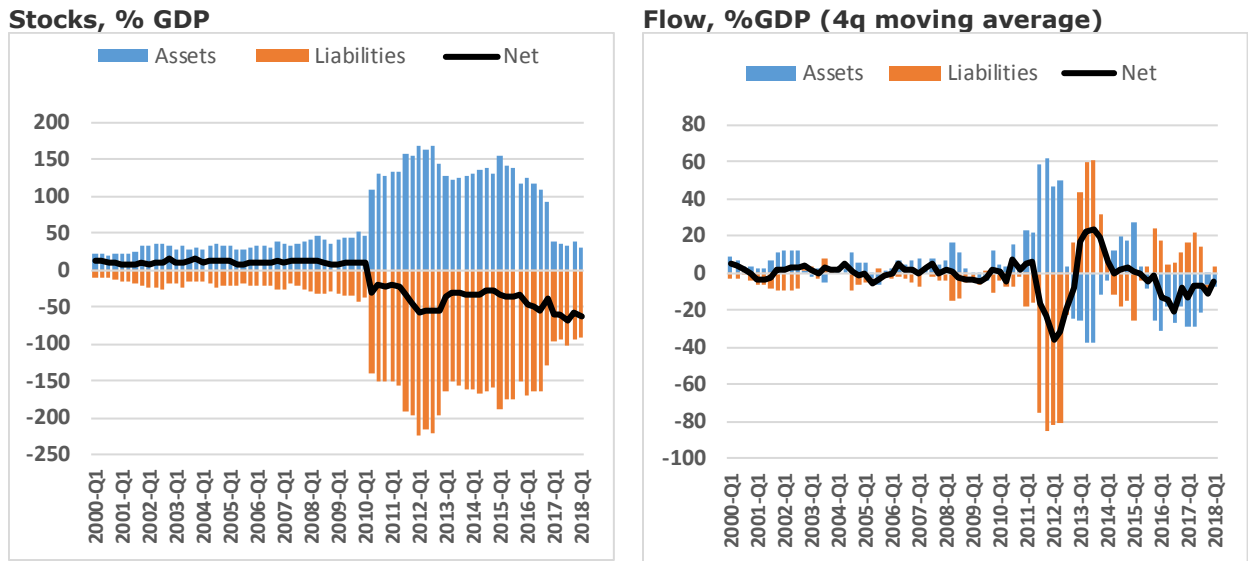
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 99: Finland (euro area creditor) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

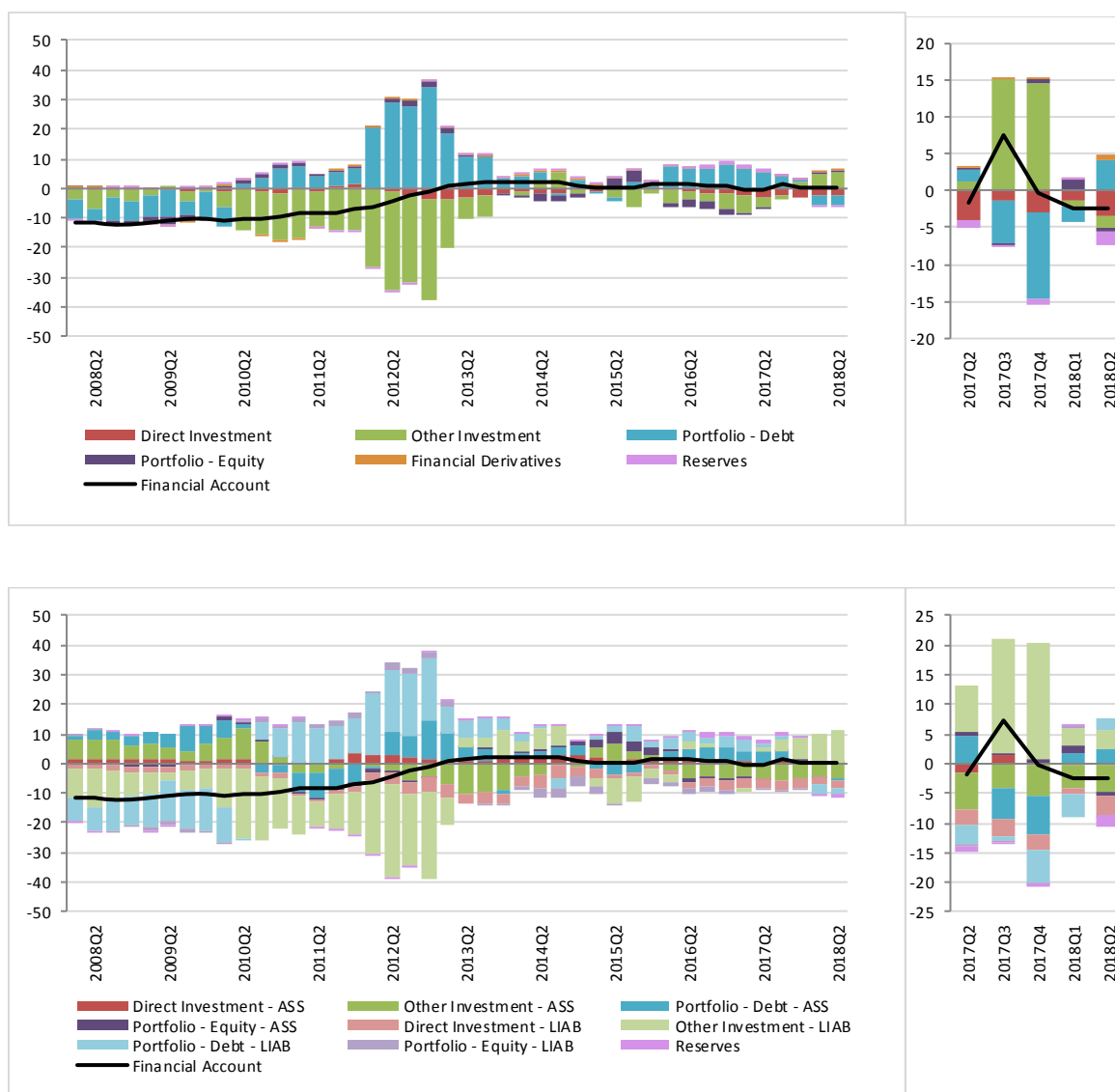
Figure 100: Finland (euro area creditor), BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

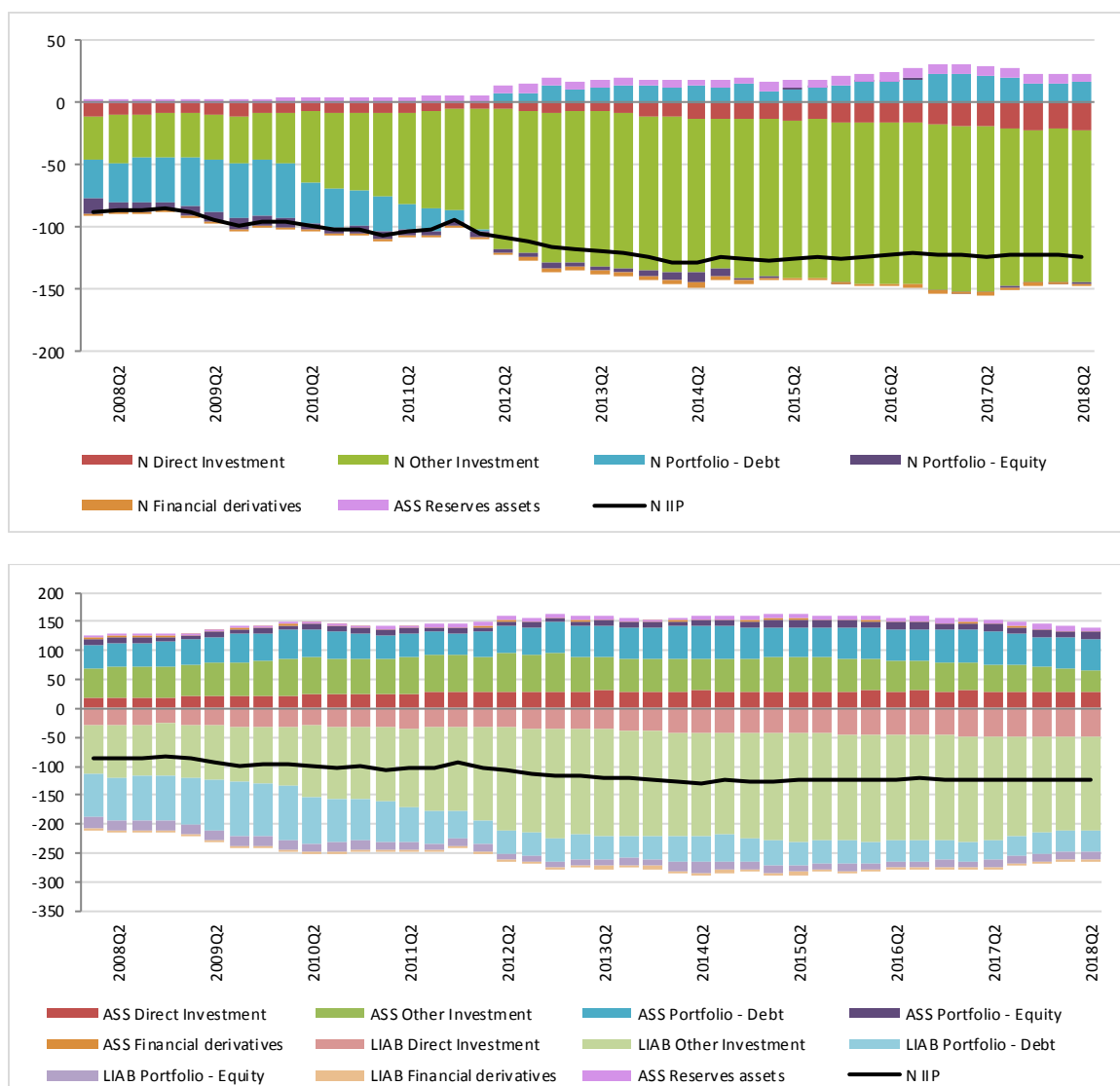
Figure 101: Euro area debtor countries net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

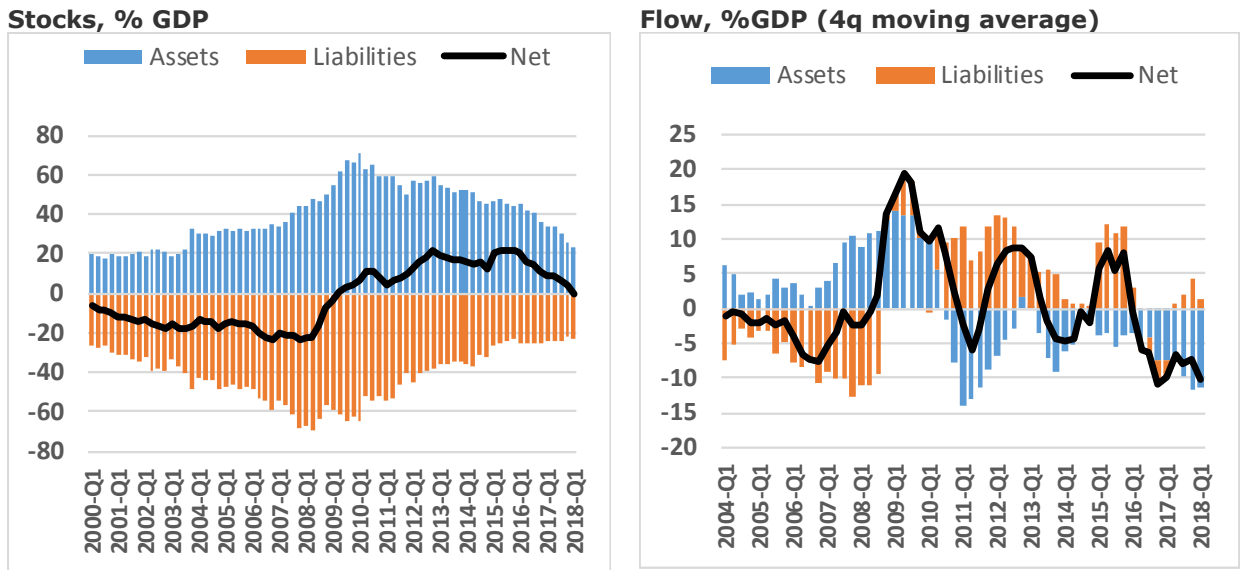
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 102: Euro area debtor countries net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

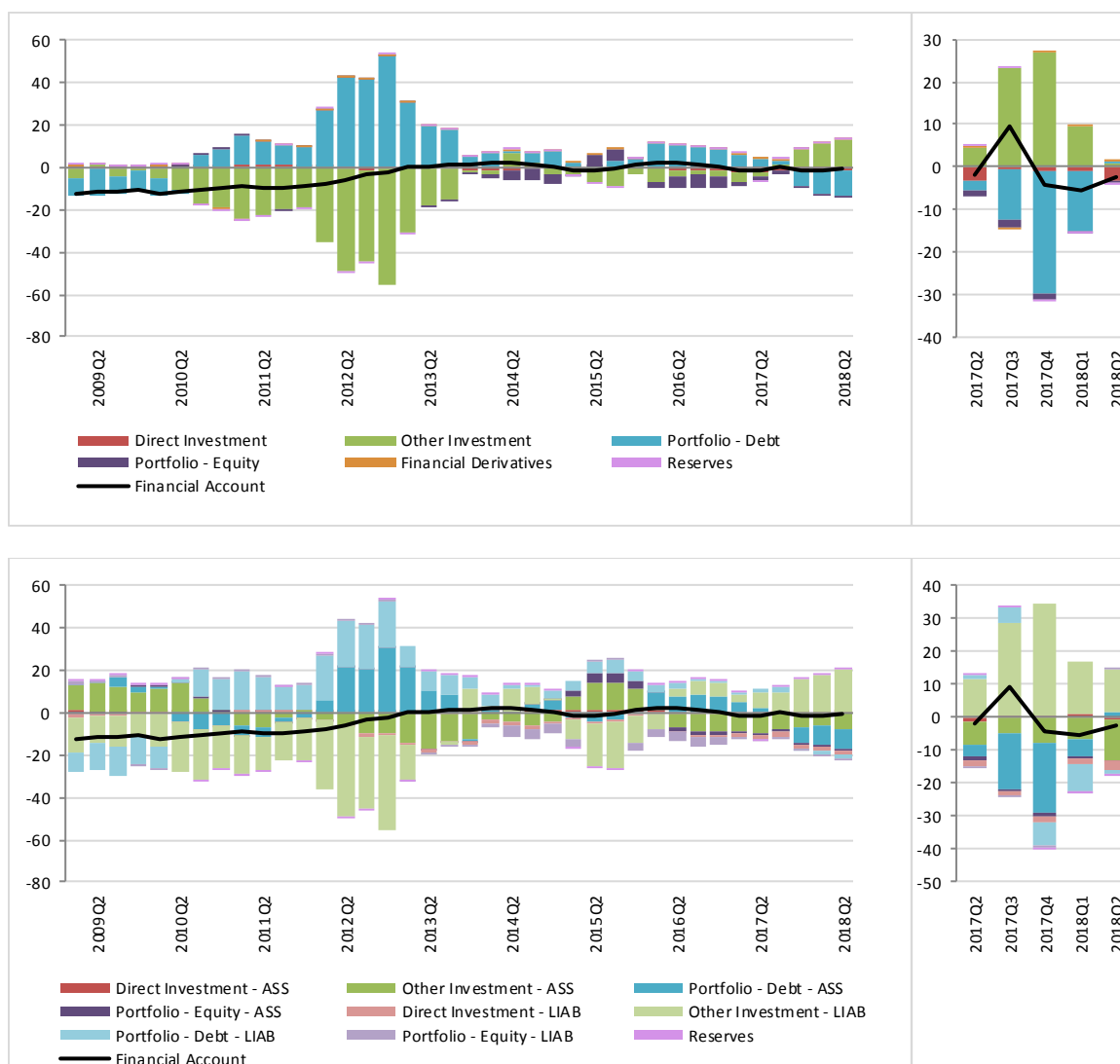
Figure 103: Euro area debtor countries, BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

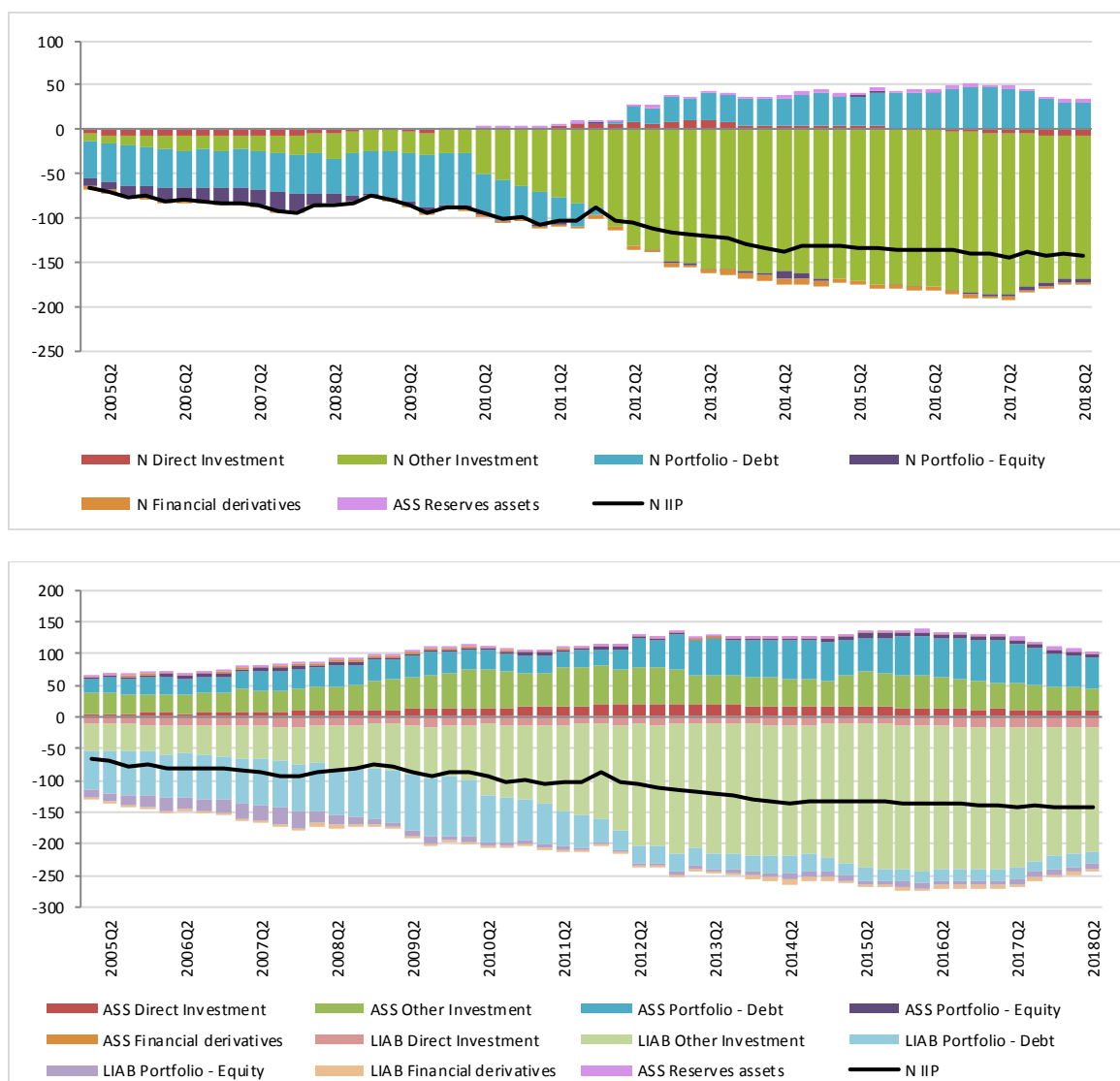
Figure 104: Greece (euro area debtor) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

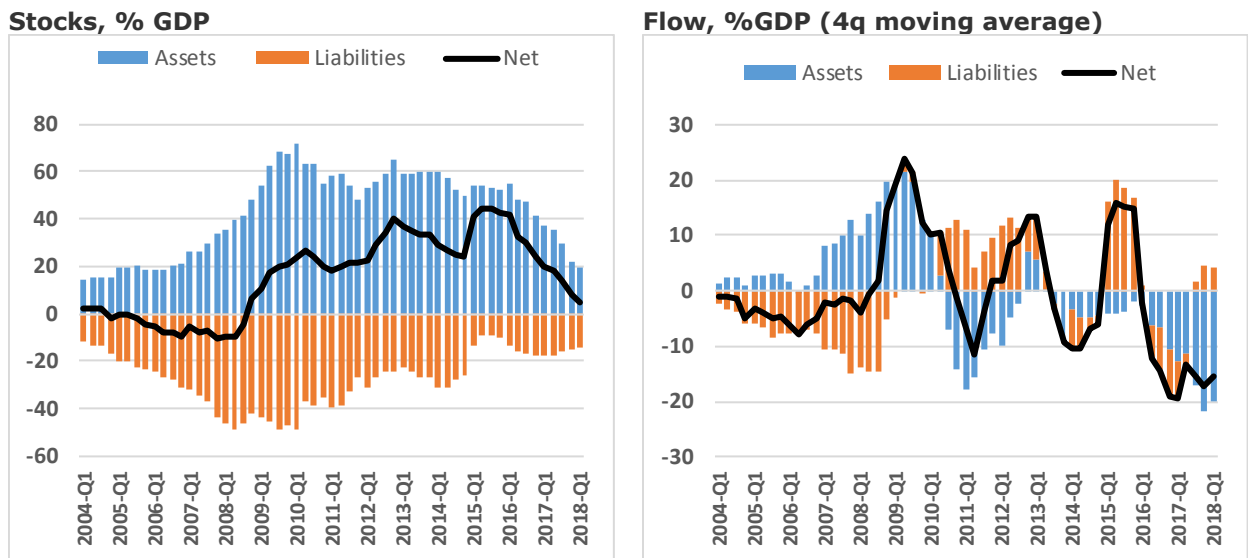
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 105: Greece (euro area debtor) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

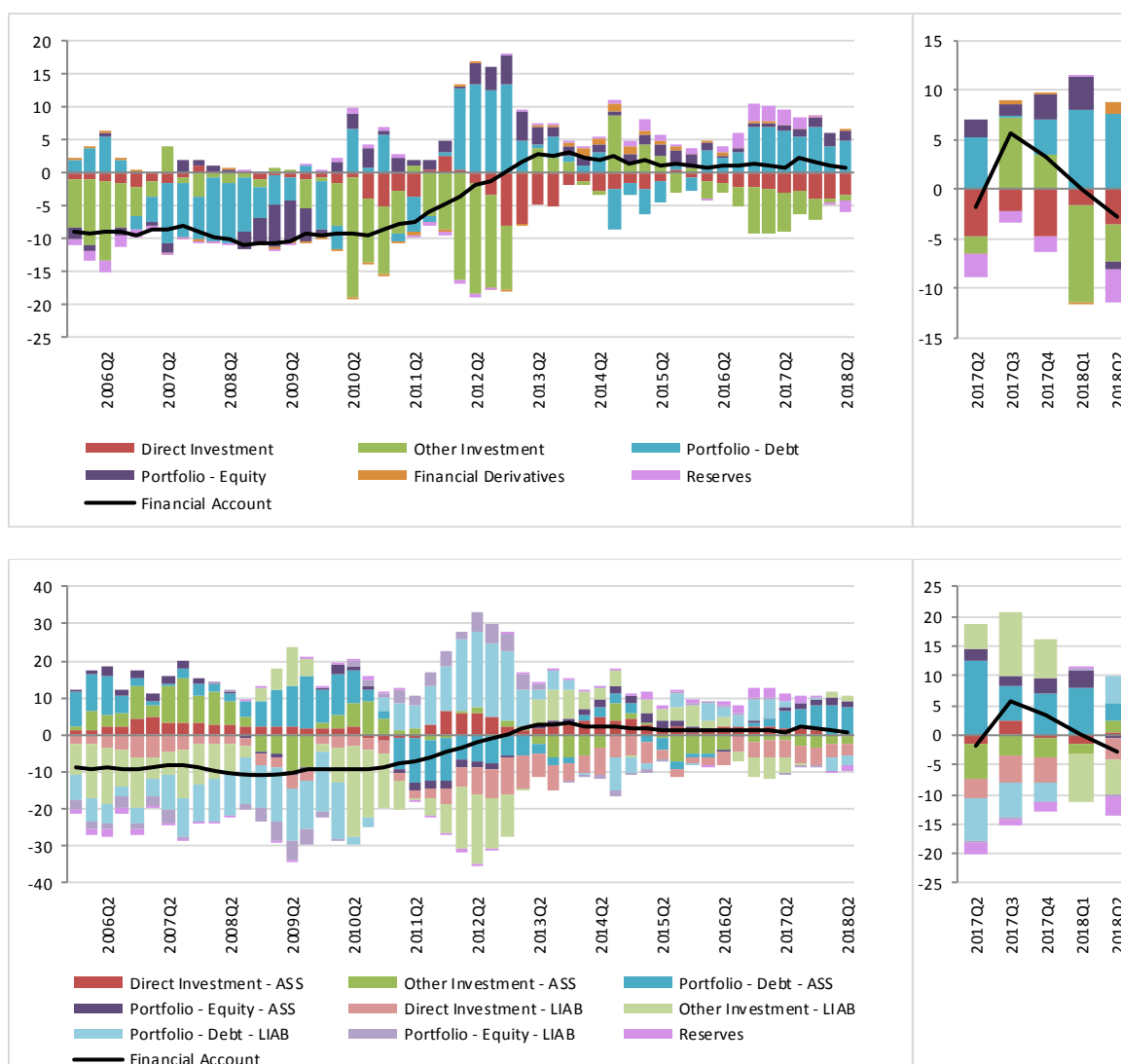
Figure 106: Greece (euro area debtor), BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

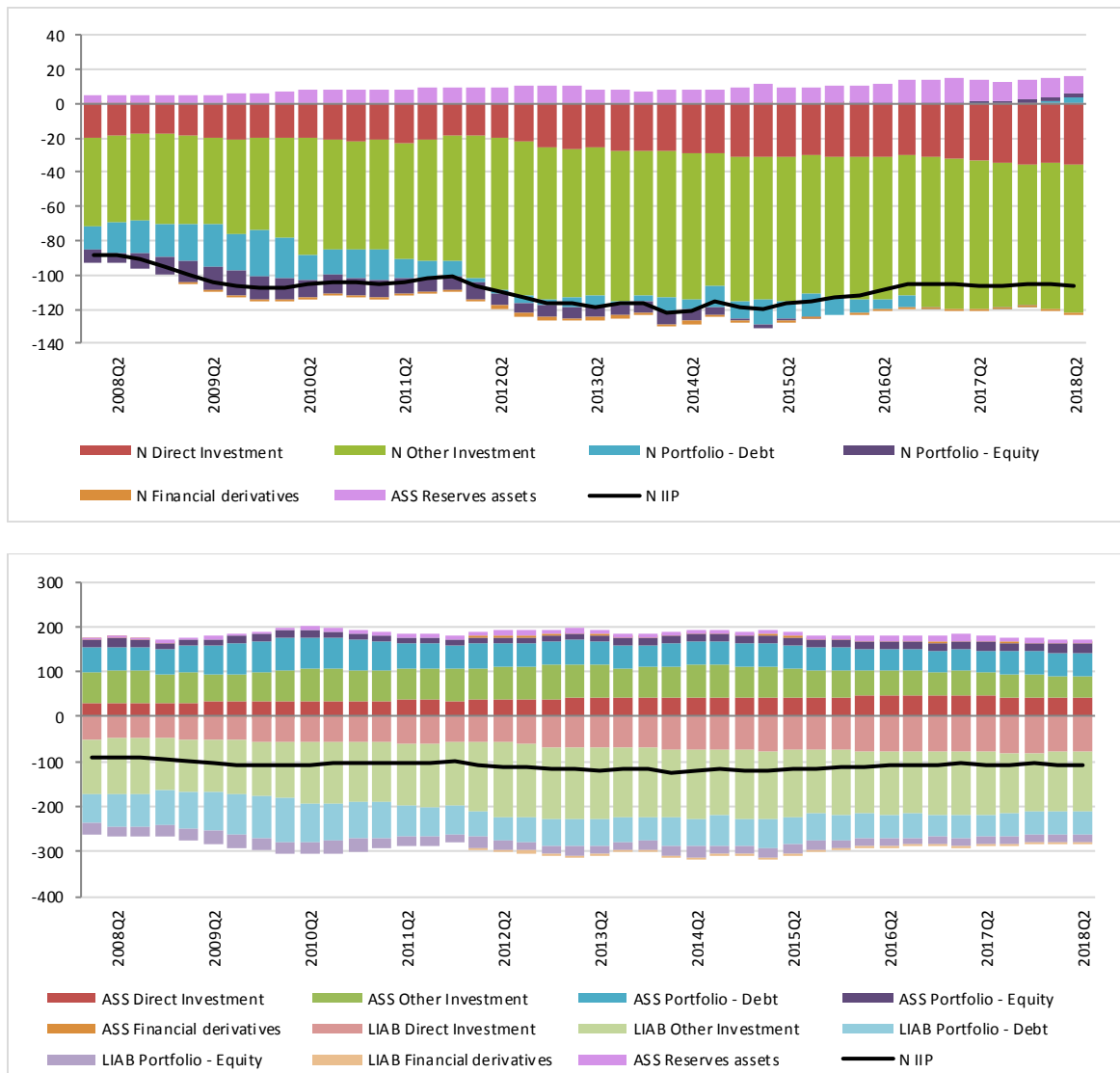
Figure 107: Portugal (euro area debtor) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

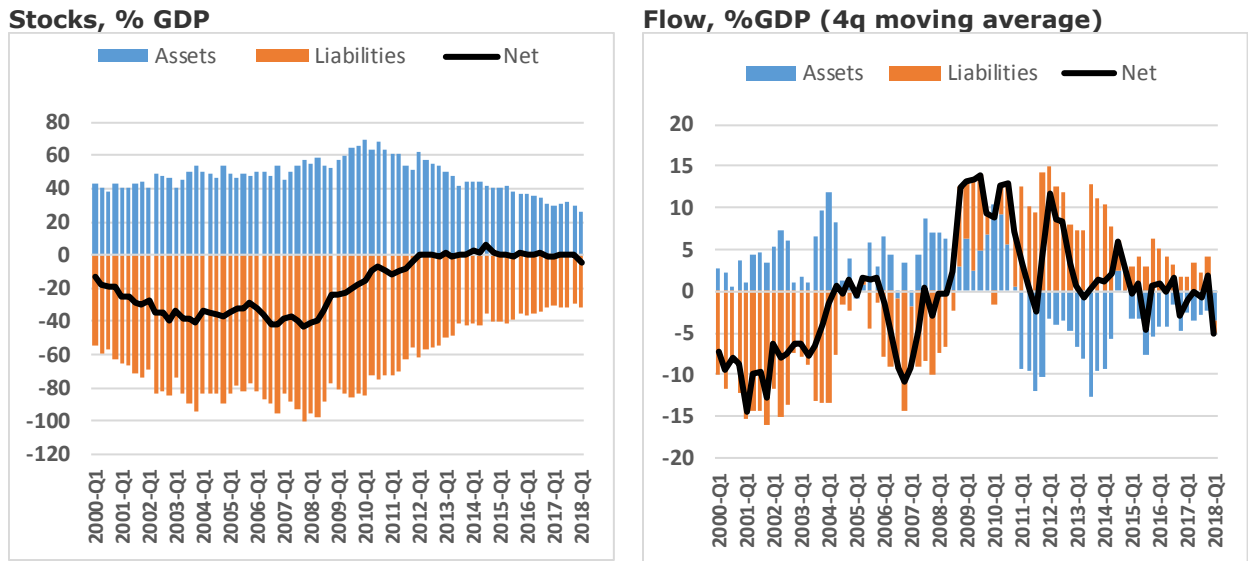
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 108: Portugal (euro area debtor) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

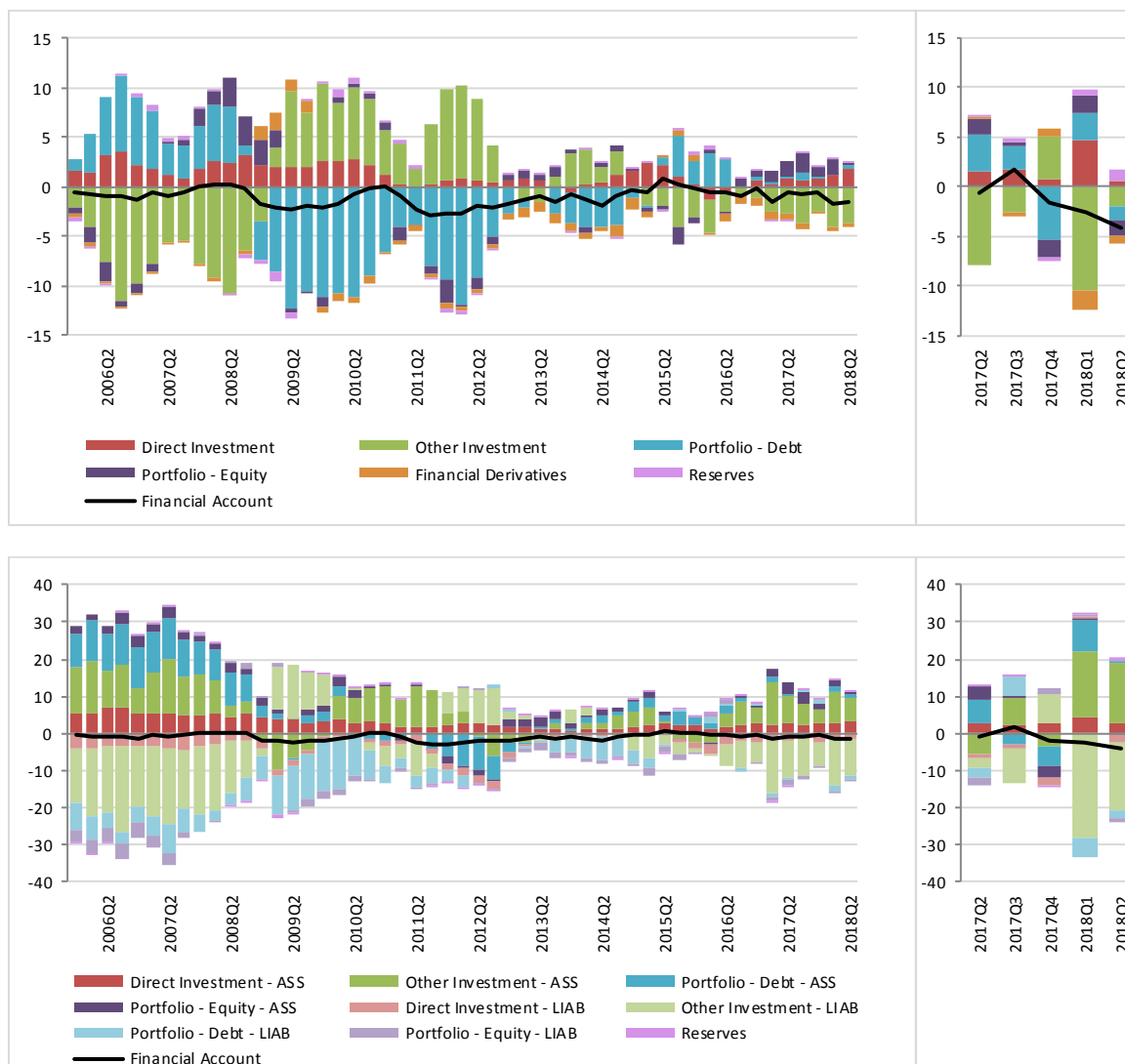
Figure 109: Portugal (euro area debtor), BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

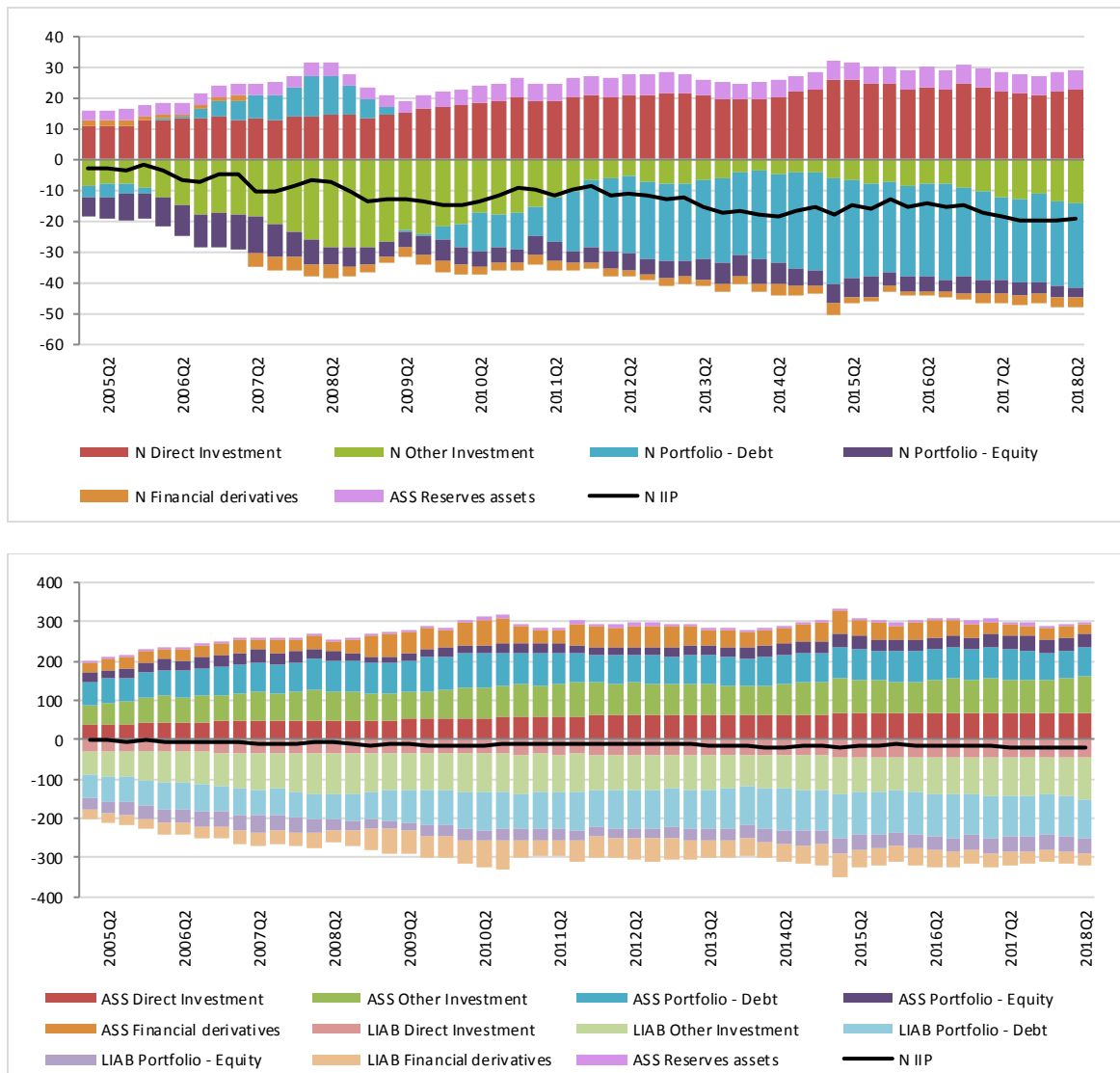
Figure 110: France net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

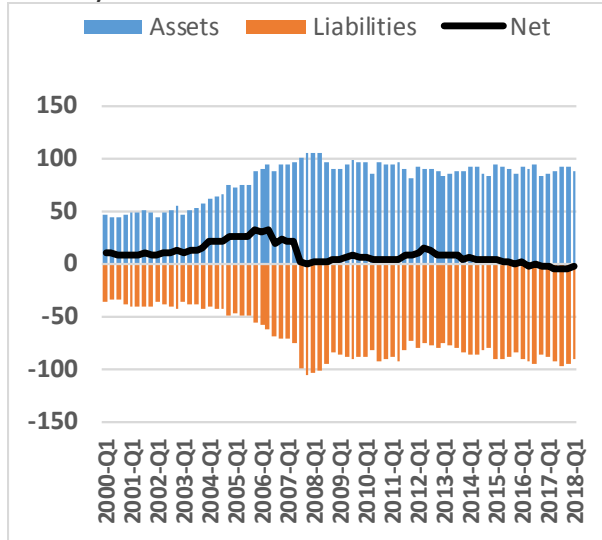
Figure 111: France net and gross international investment position by instrument, % of GDP



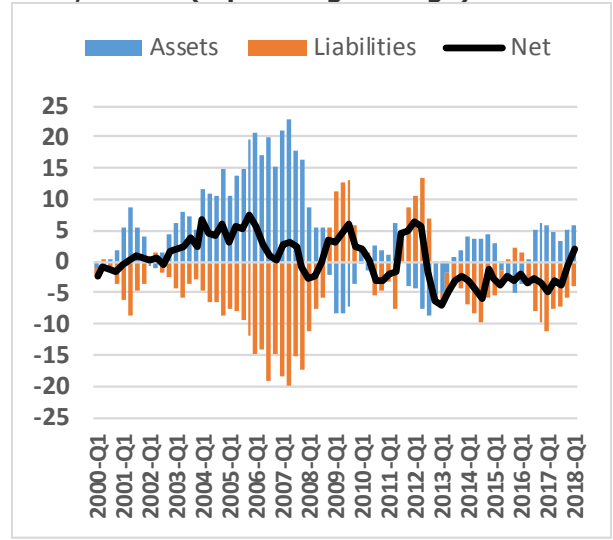
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 112: France, BIS LBS

Stocks, % GDP



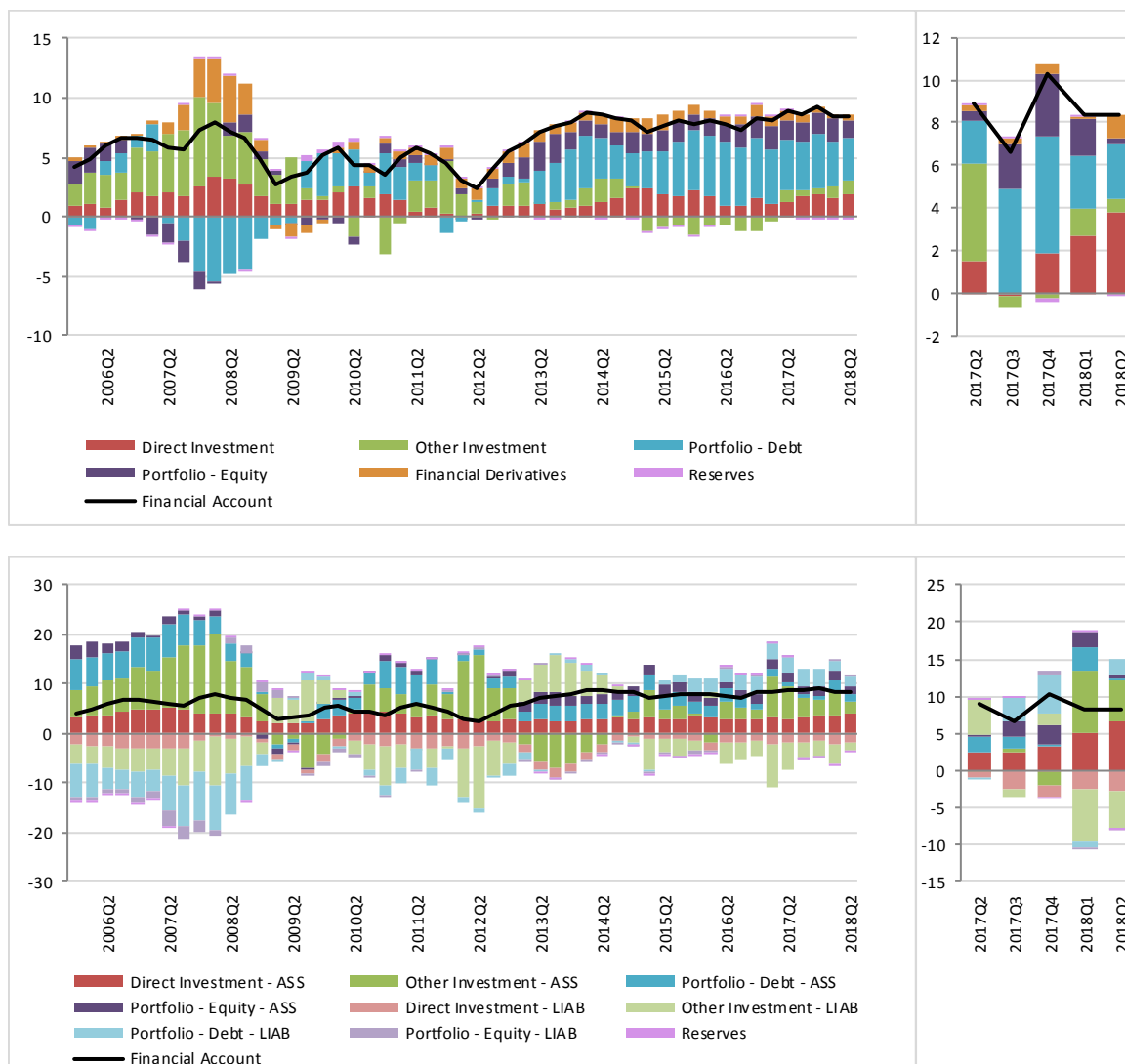
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

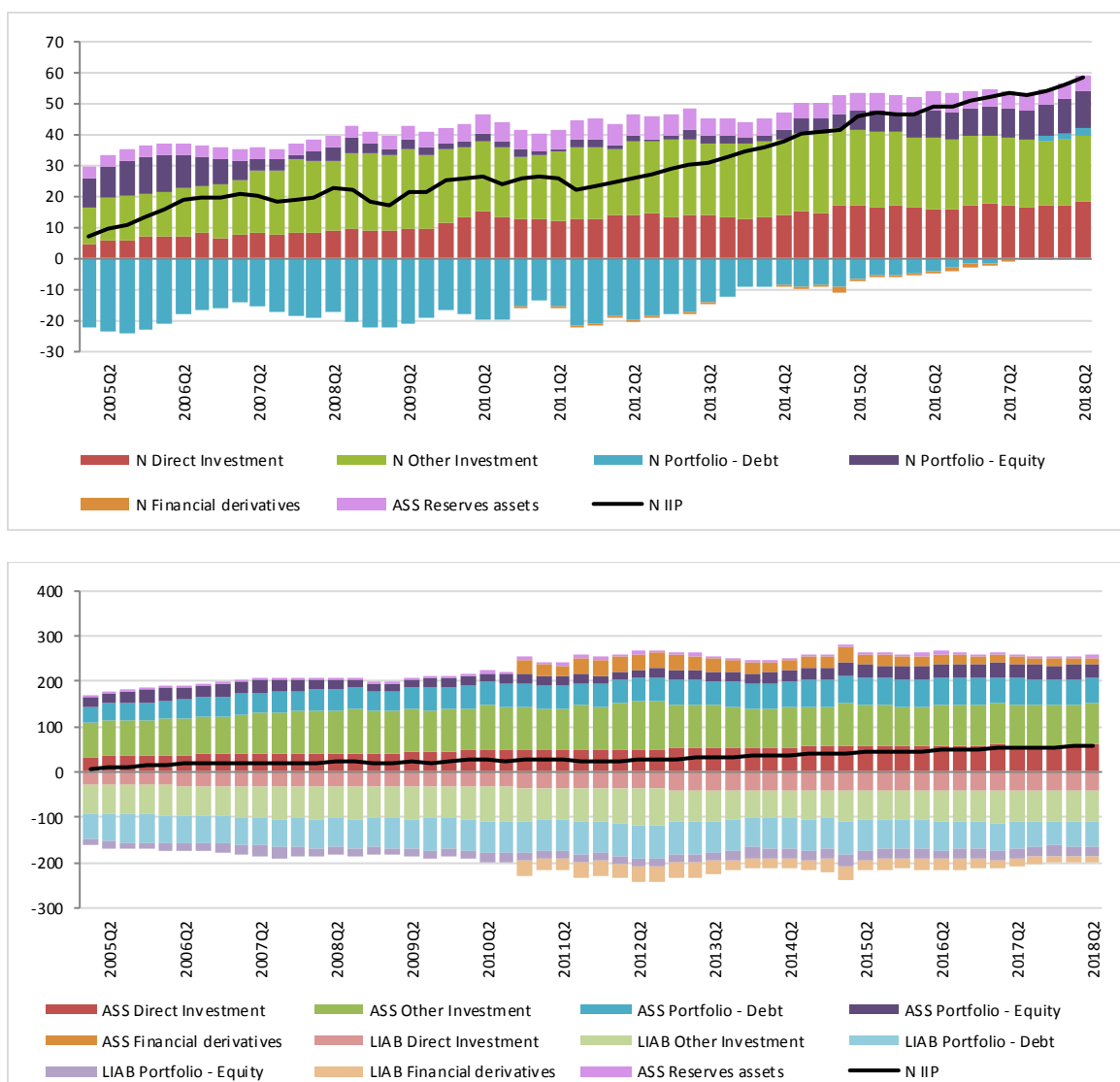
Figure 113: Germany net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

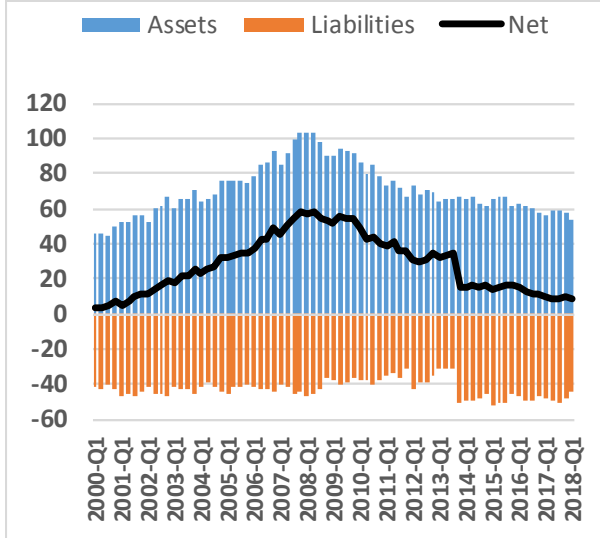
Figure 114: Germany net and gross international investment position by instrument, % of GDP



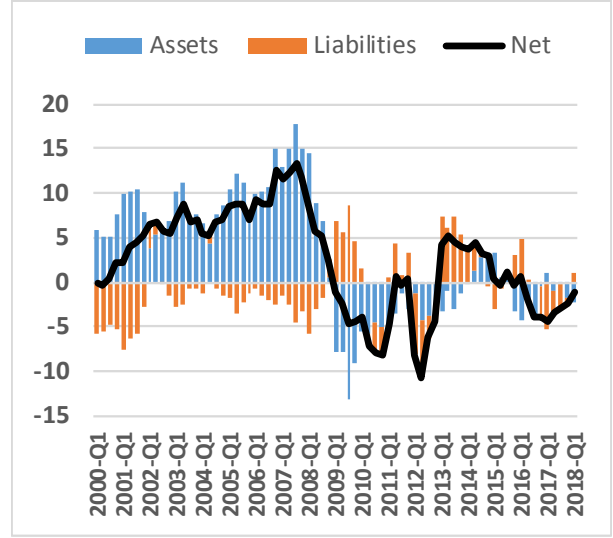
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 115: Germany, BIS LBS

Stocks, % GDP



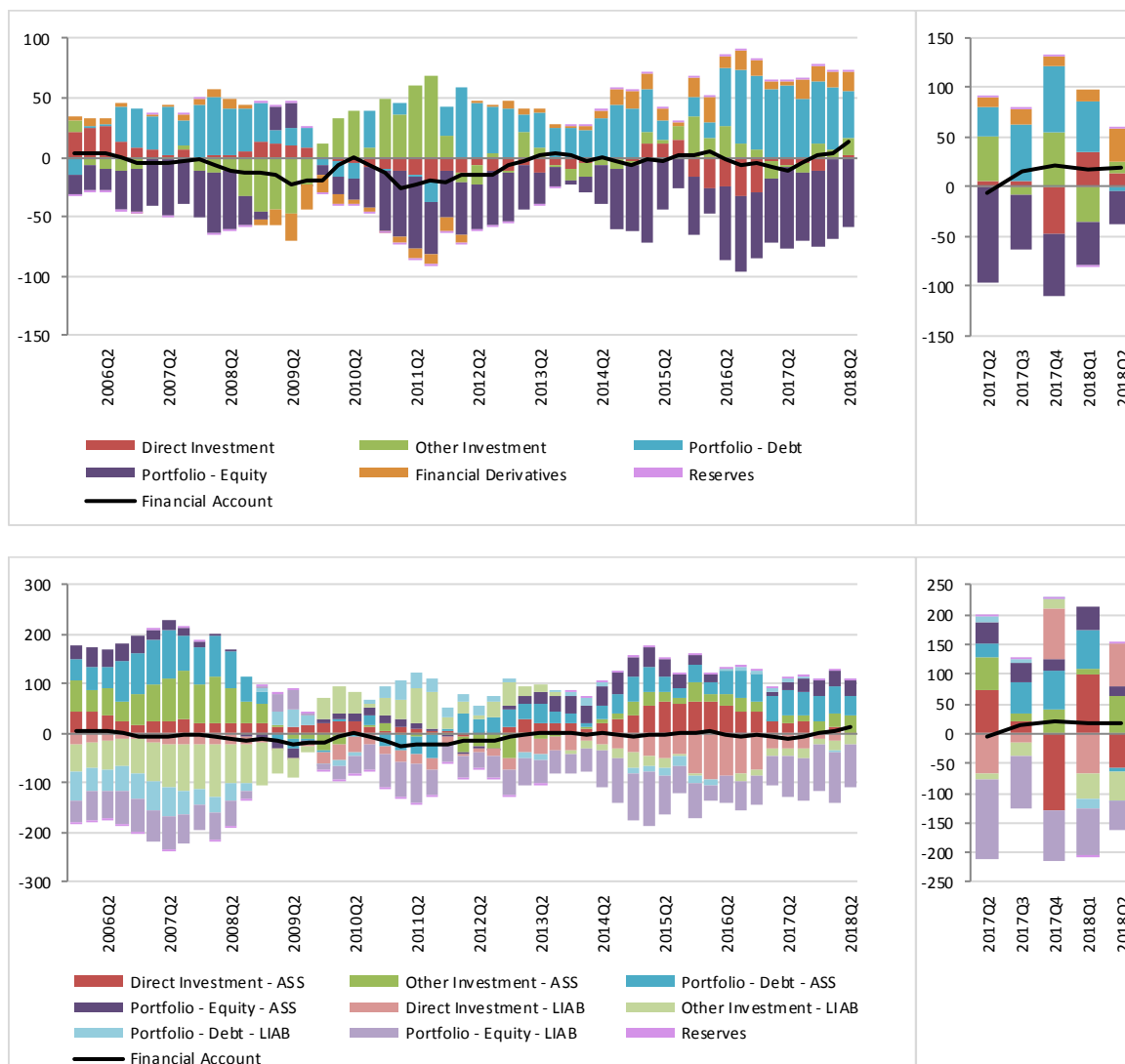
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

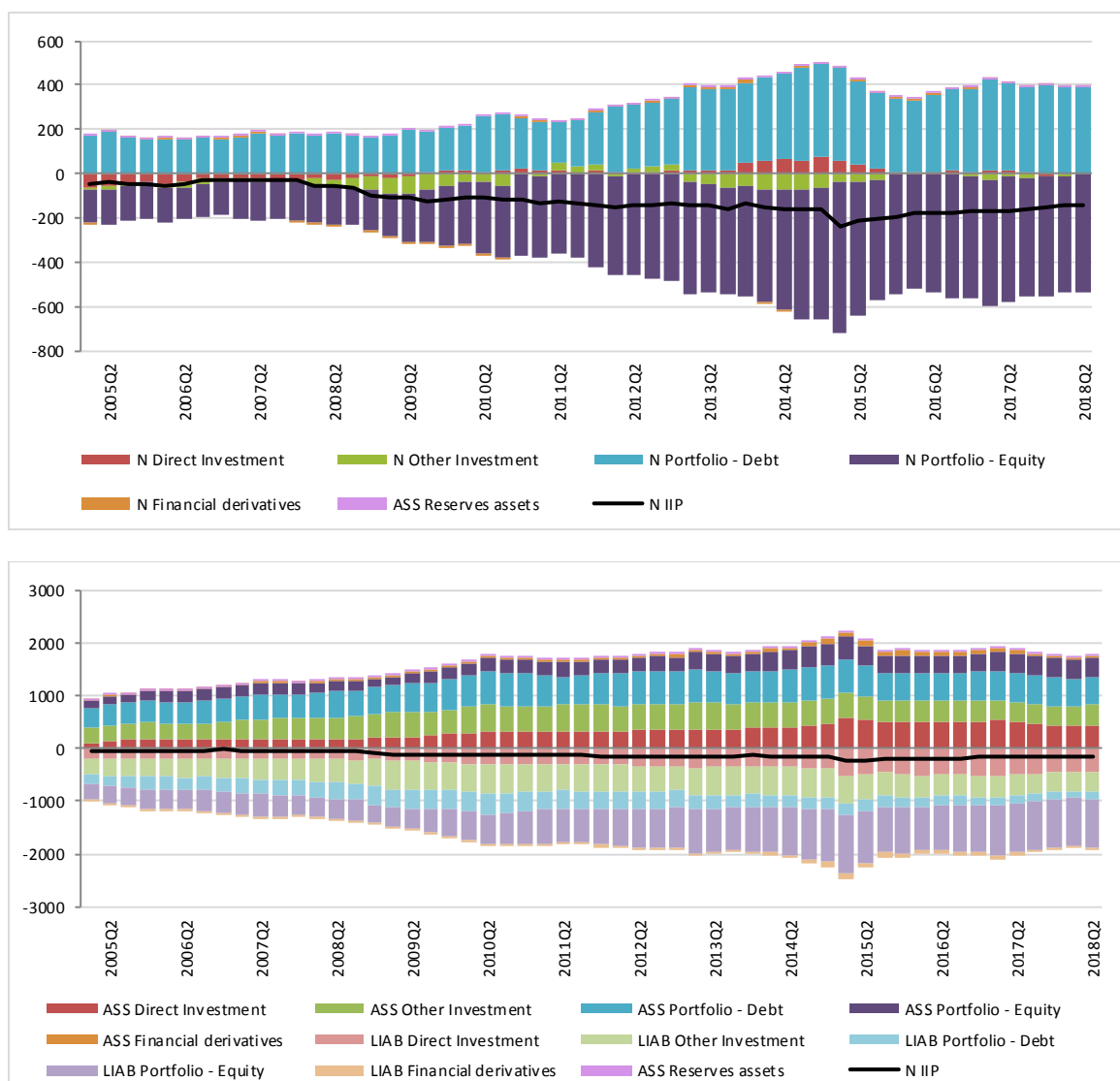
Figure 116: Ireland net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

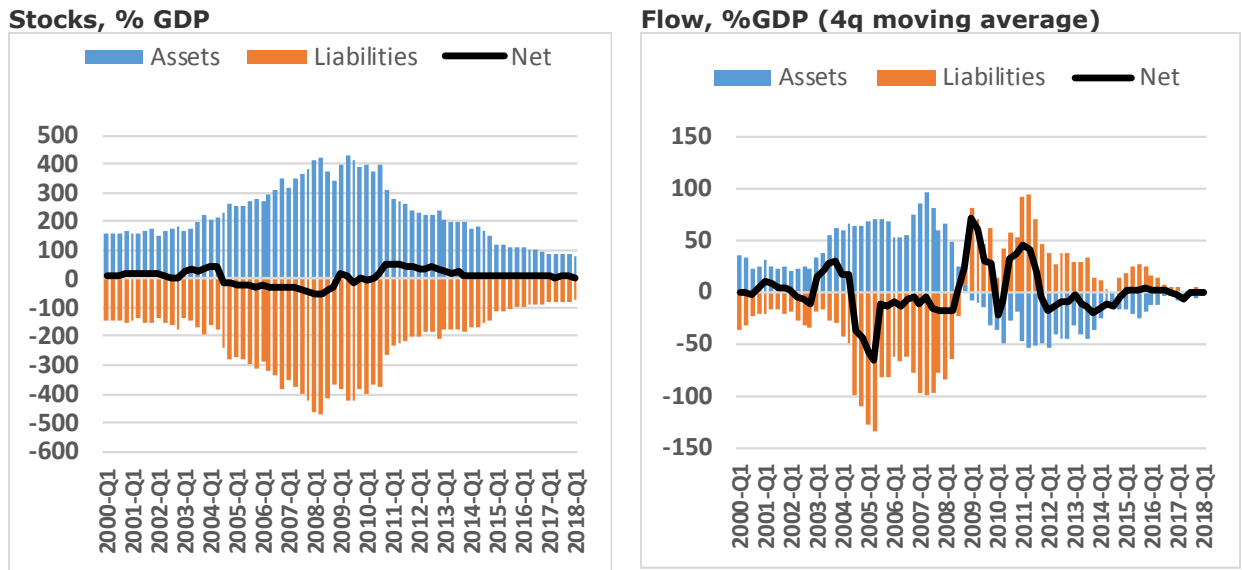
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 117: Ireland net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

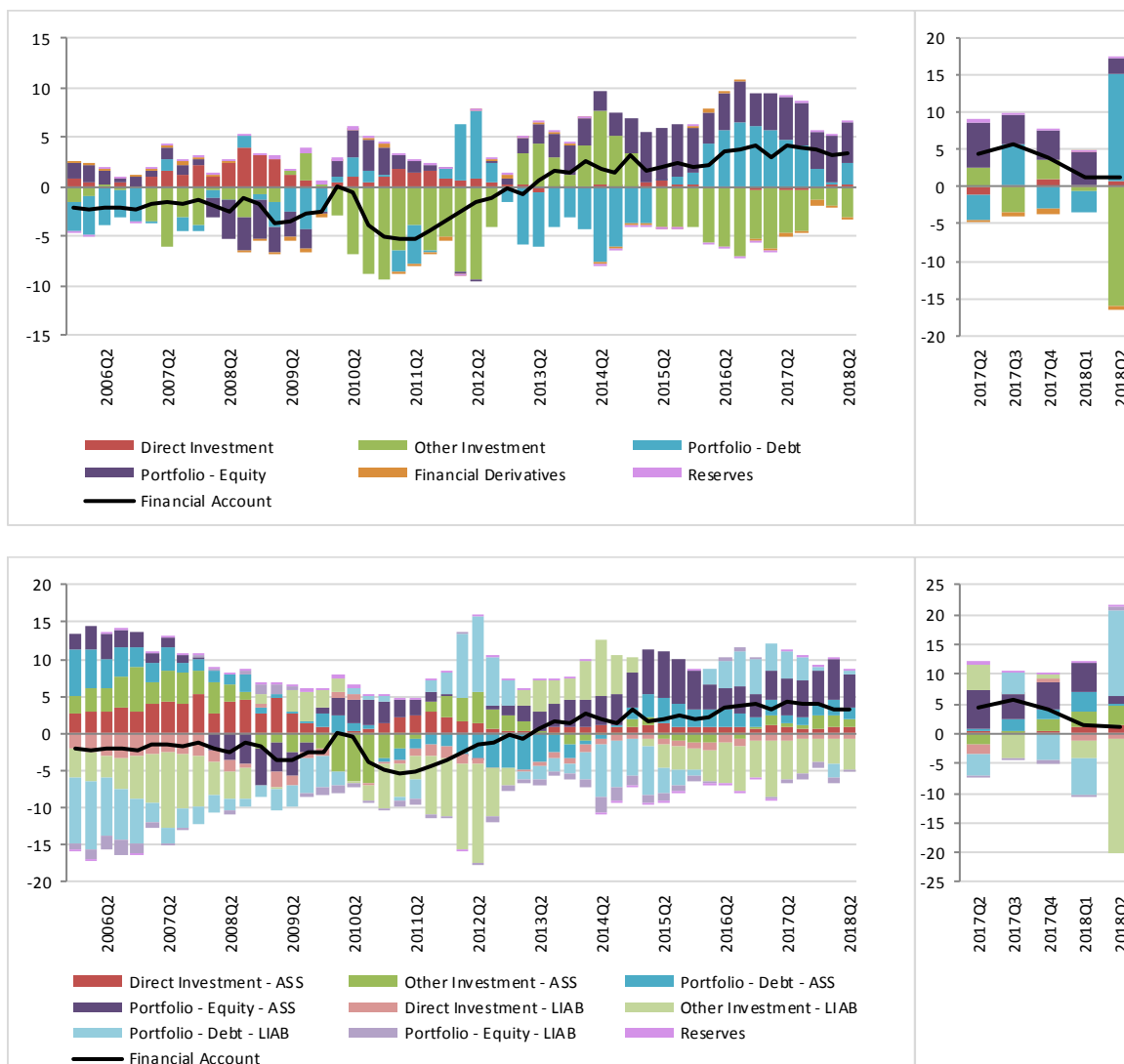
Figure 118: Ireland, BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

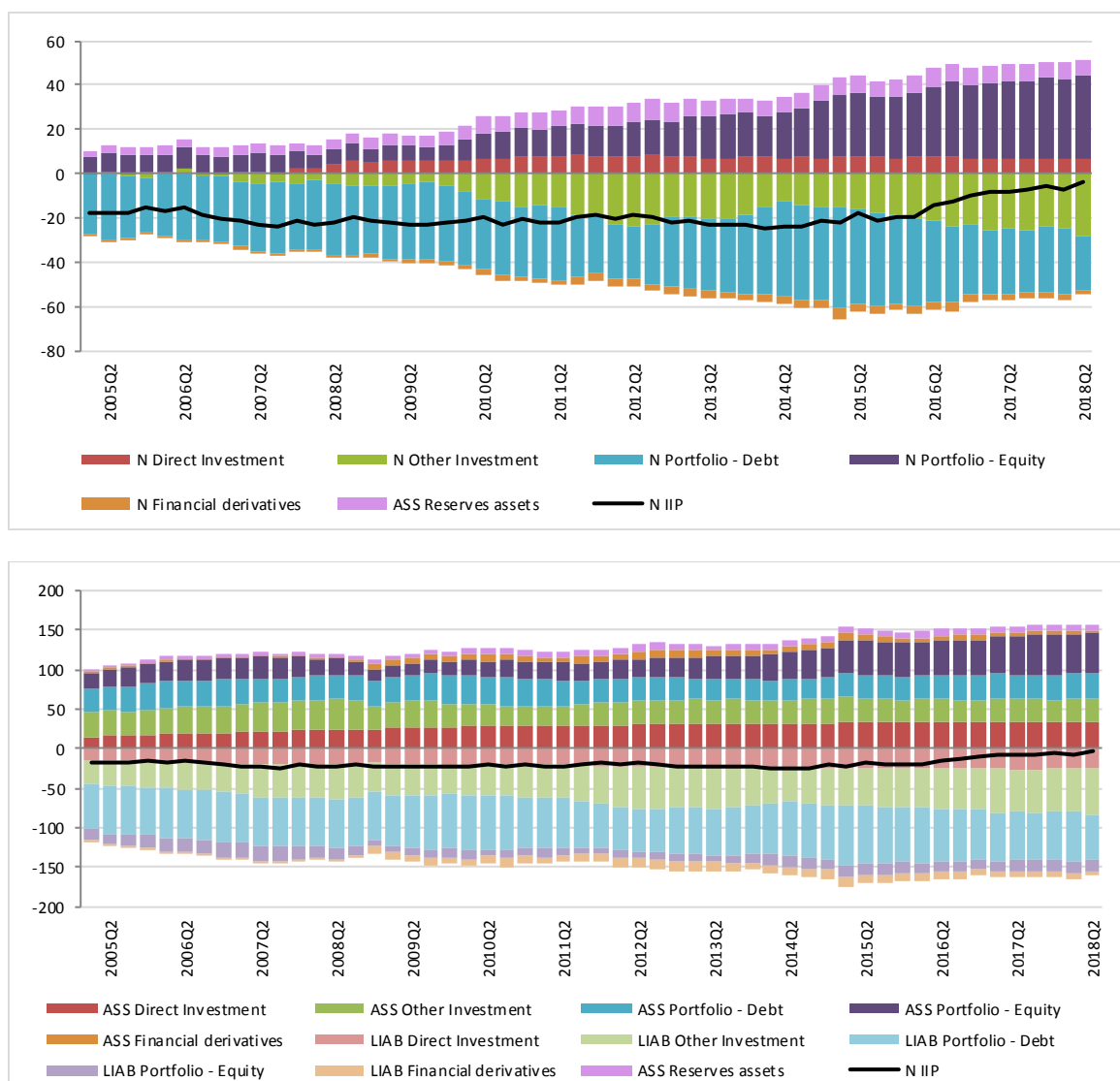
Figure 119: Italy net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

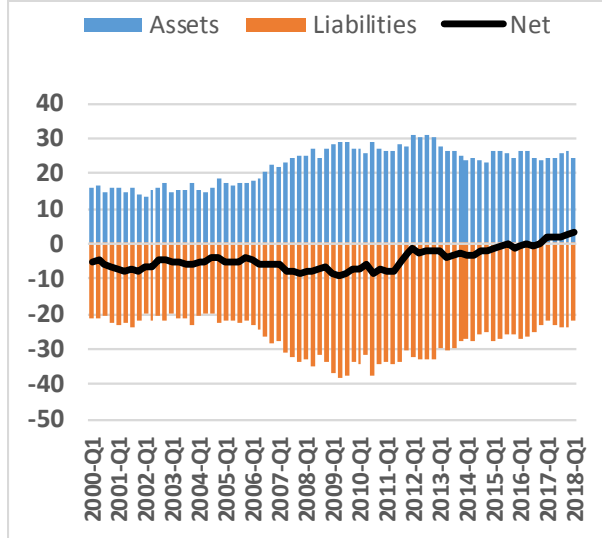
Figure 120: Italy net and gross international investment position by instrument, % of GDP



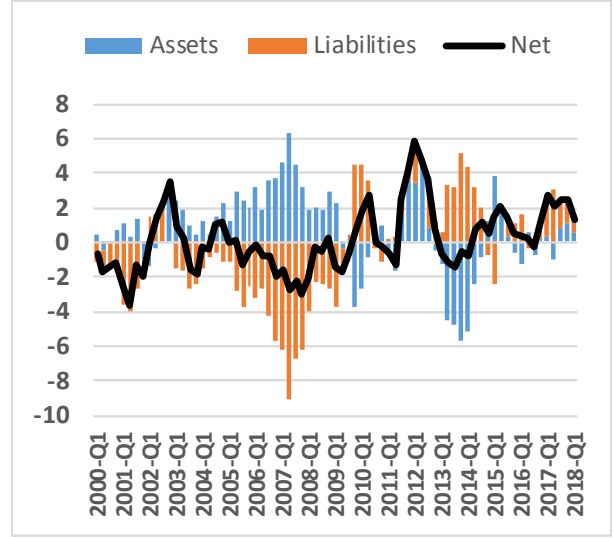
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 121: Italy, BIS LBS

Stocks, % GDP



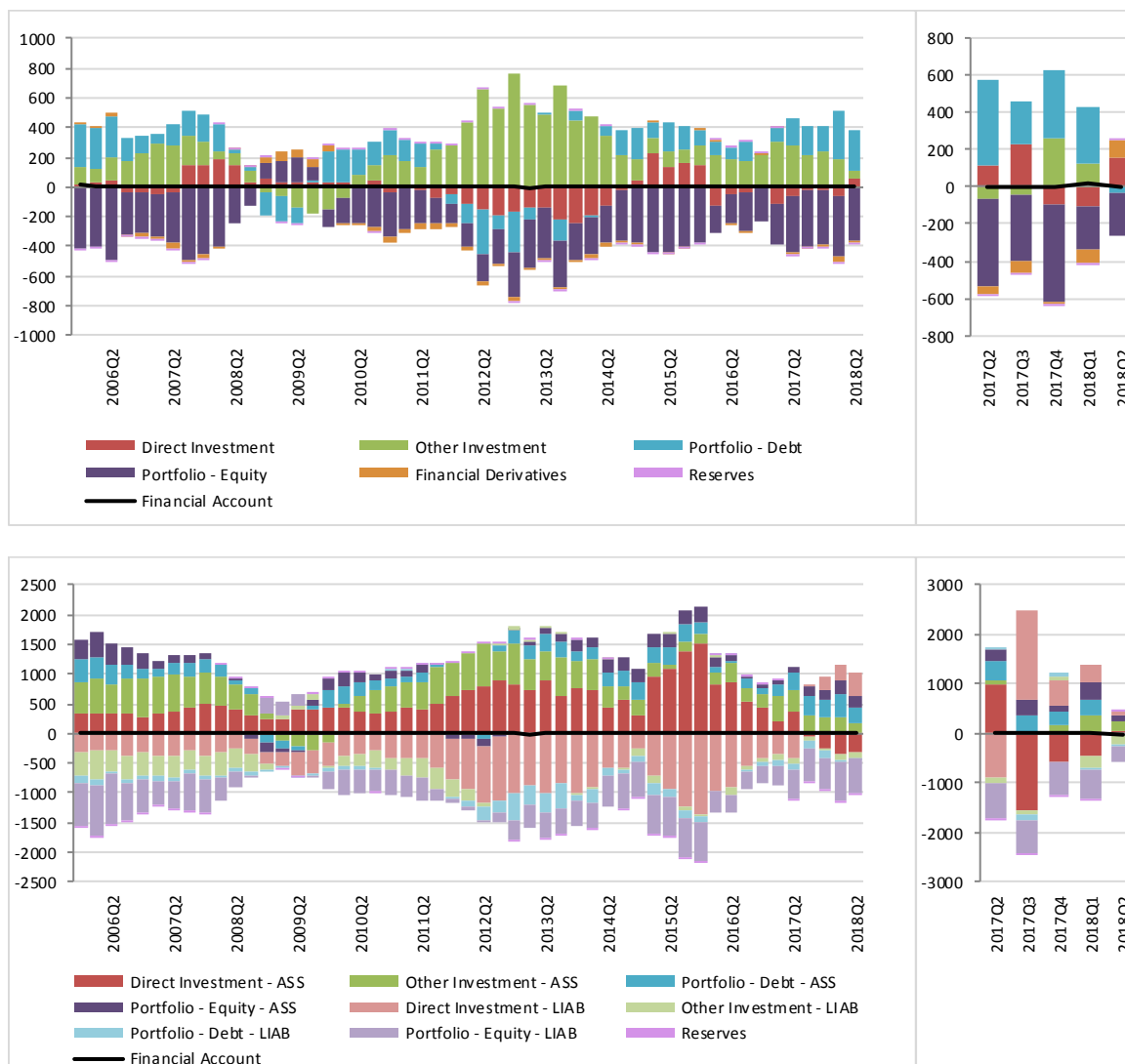
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

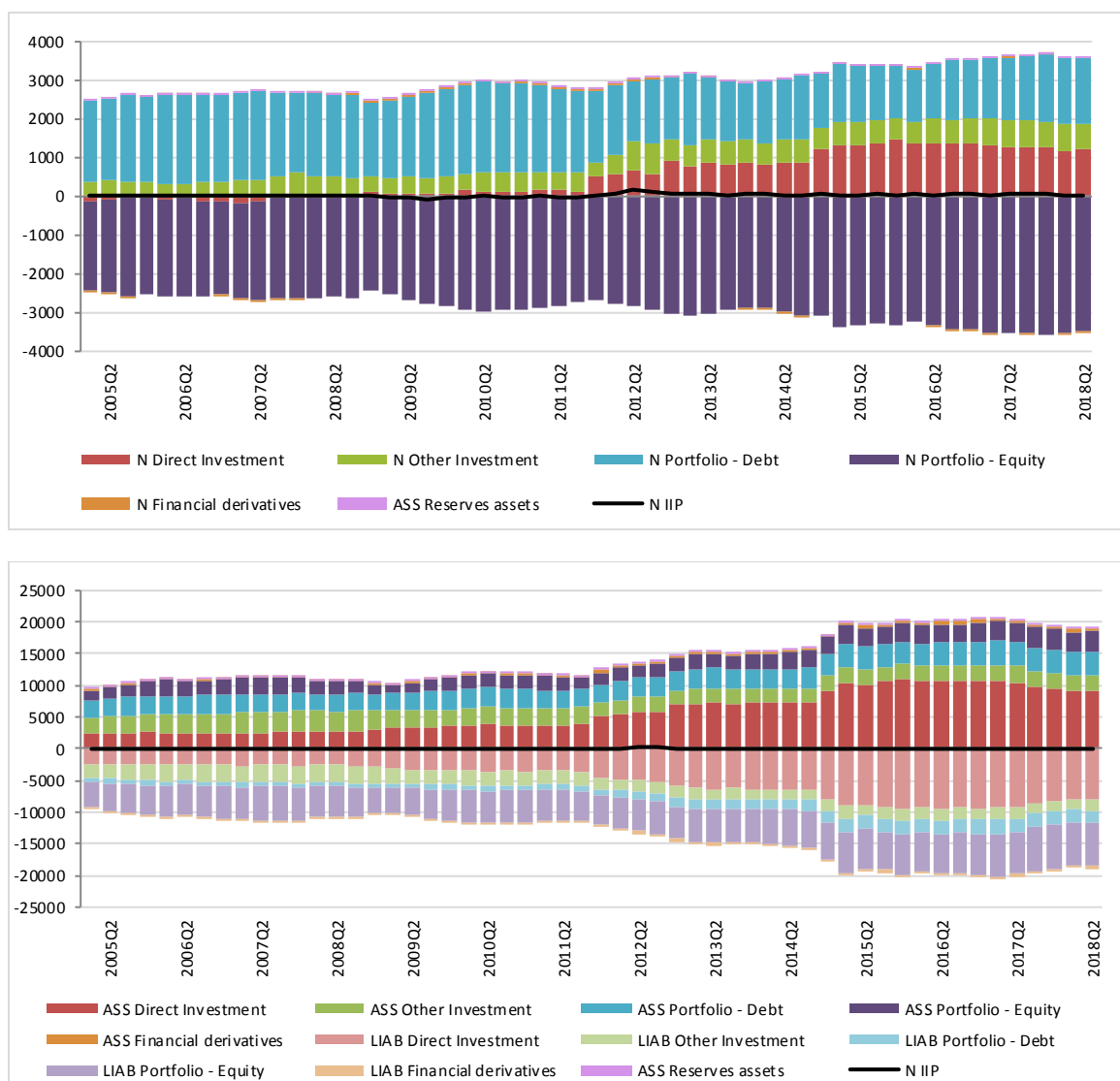
Figure 122: Luxembourg net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

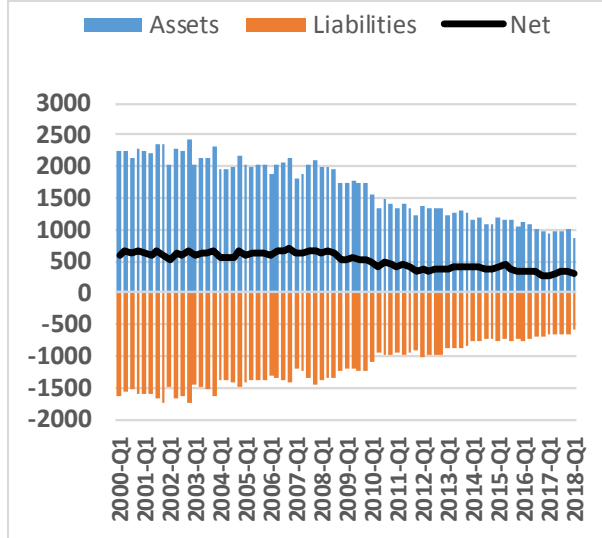
Figure 123: Luxembourg net and gross international investment position by instrument, % of GDP



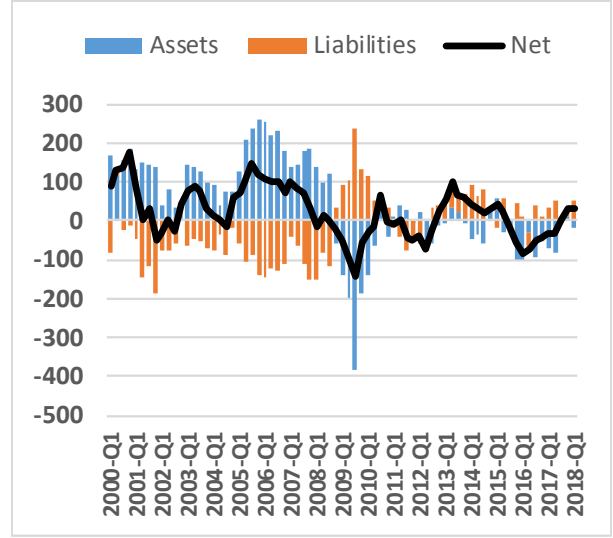
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 124: Luxembourg, BIS LBS

Stocks, % GDP



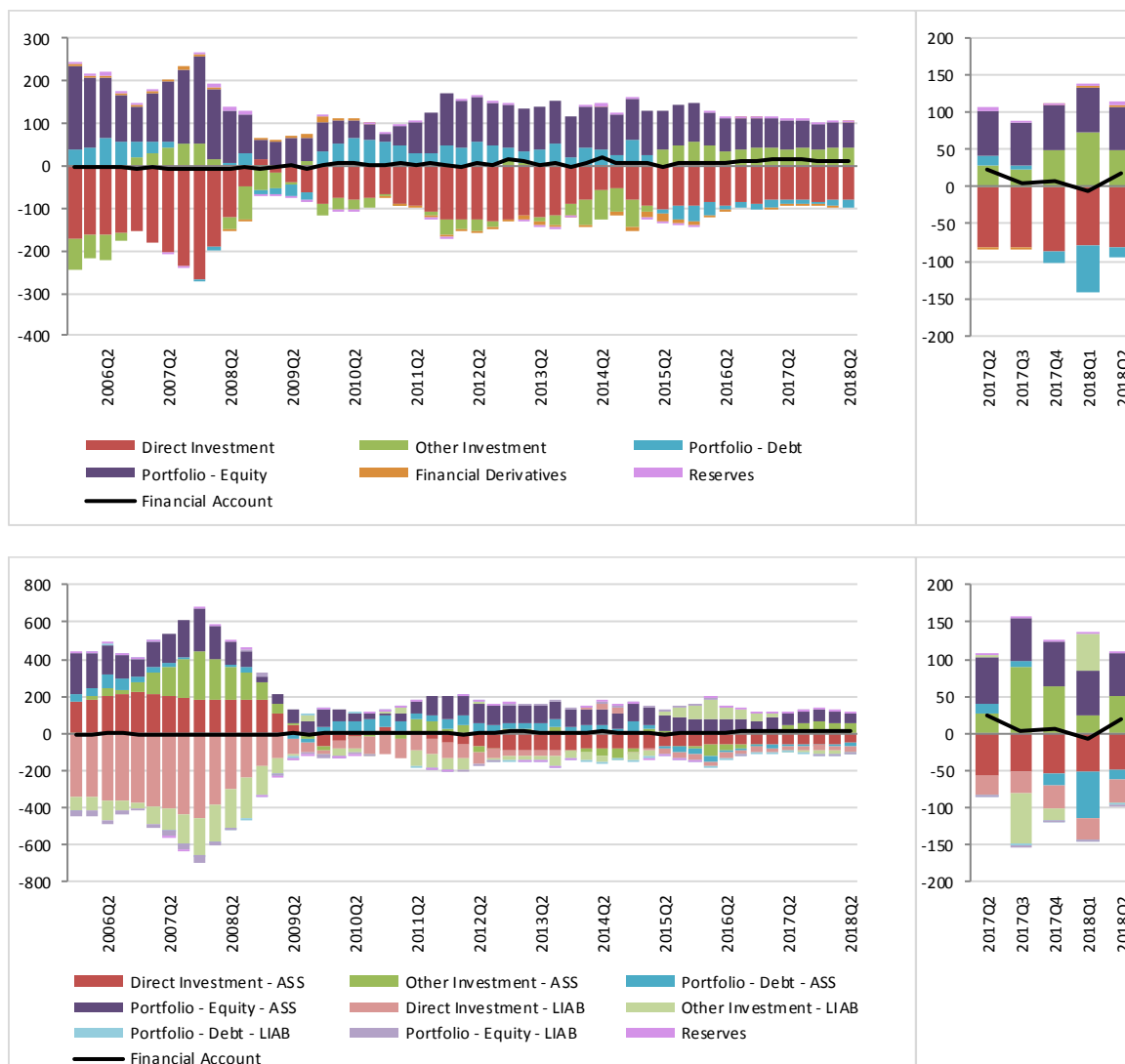
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

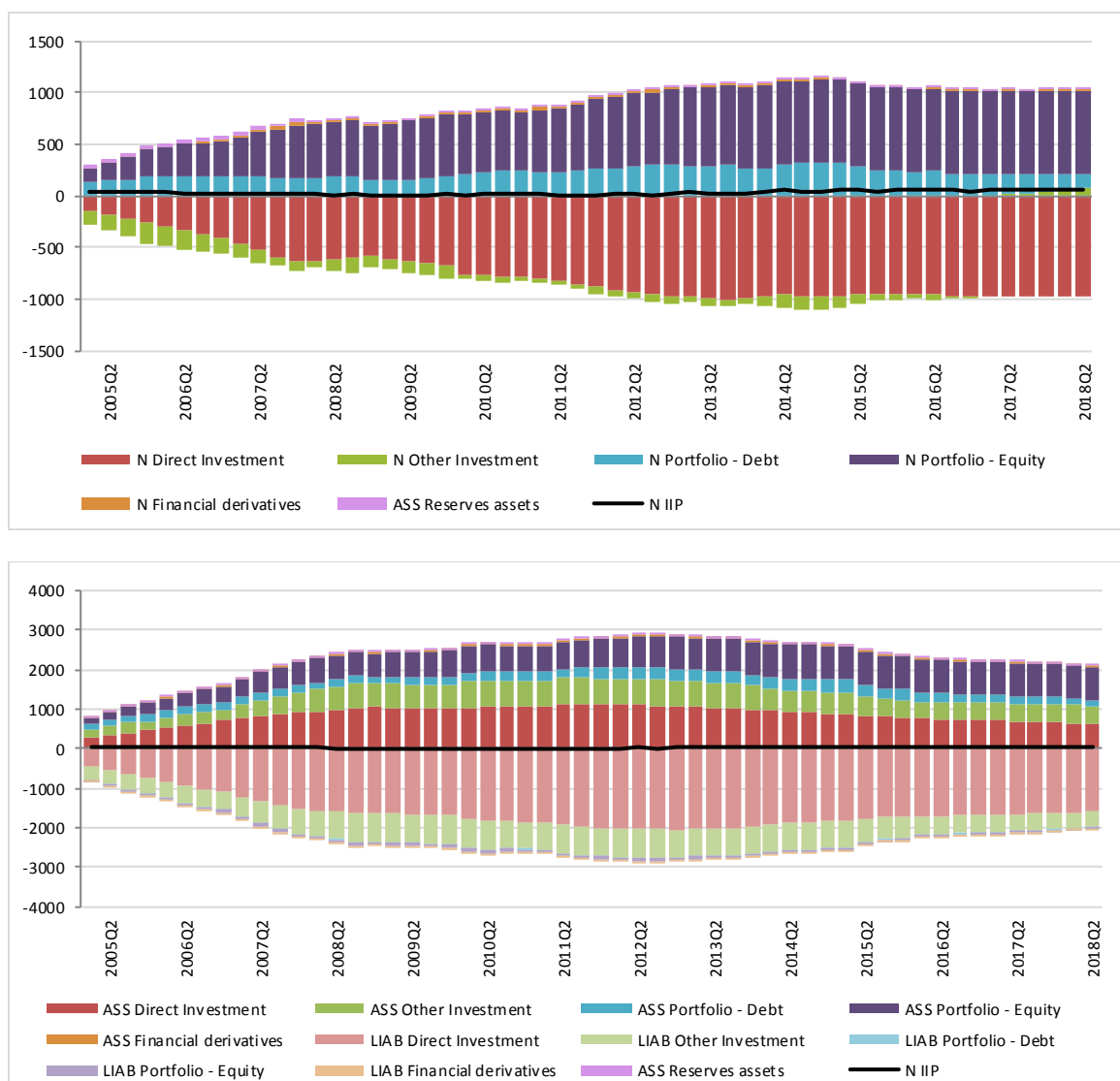
Figure 125: Malta net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

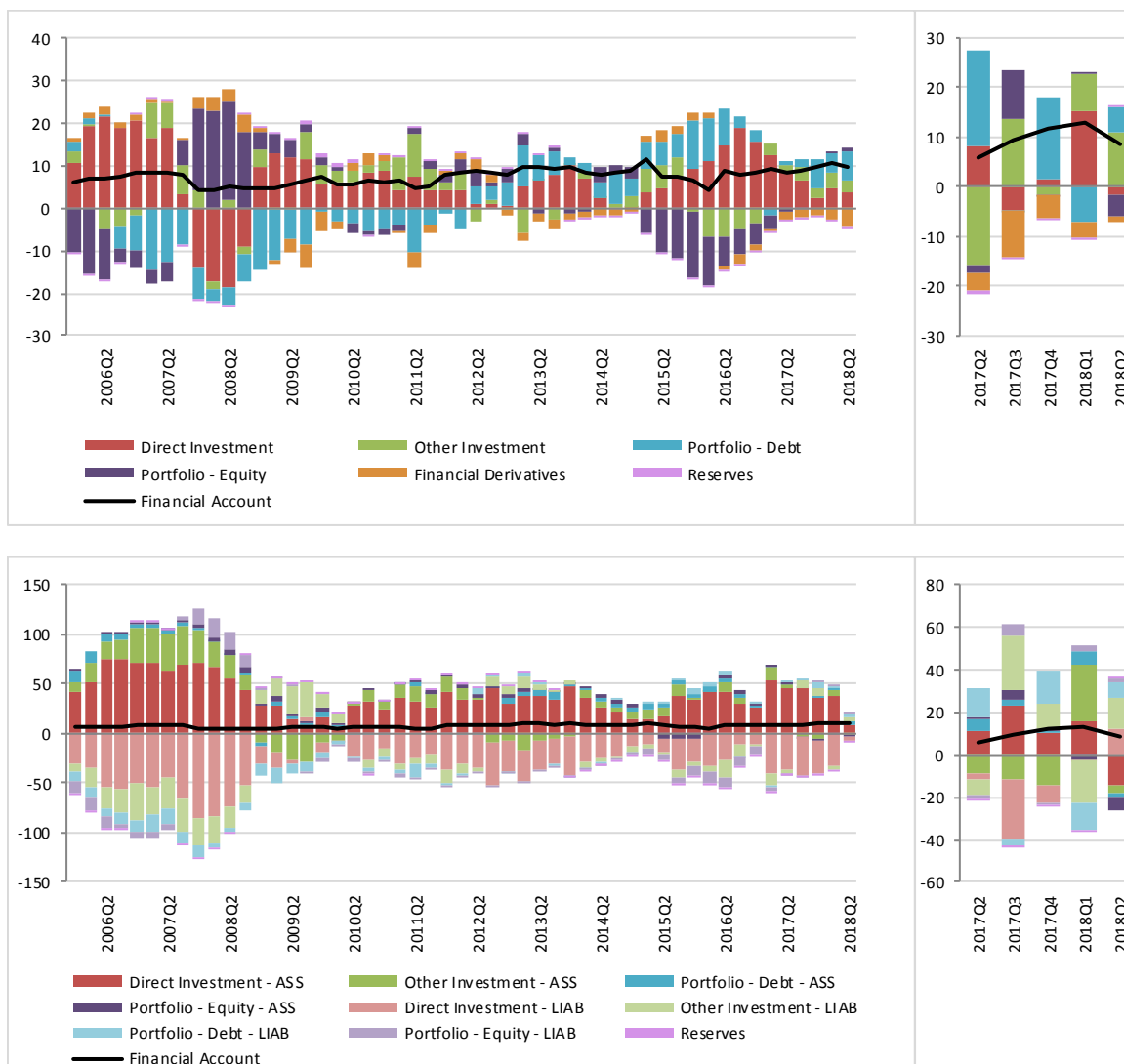
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 126: Malta net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

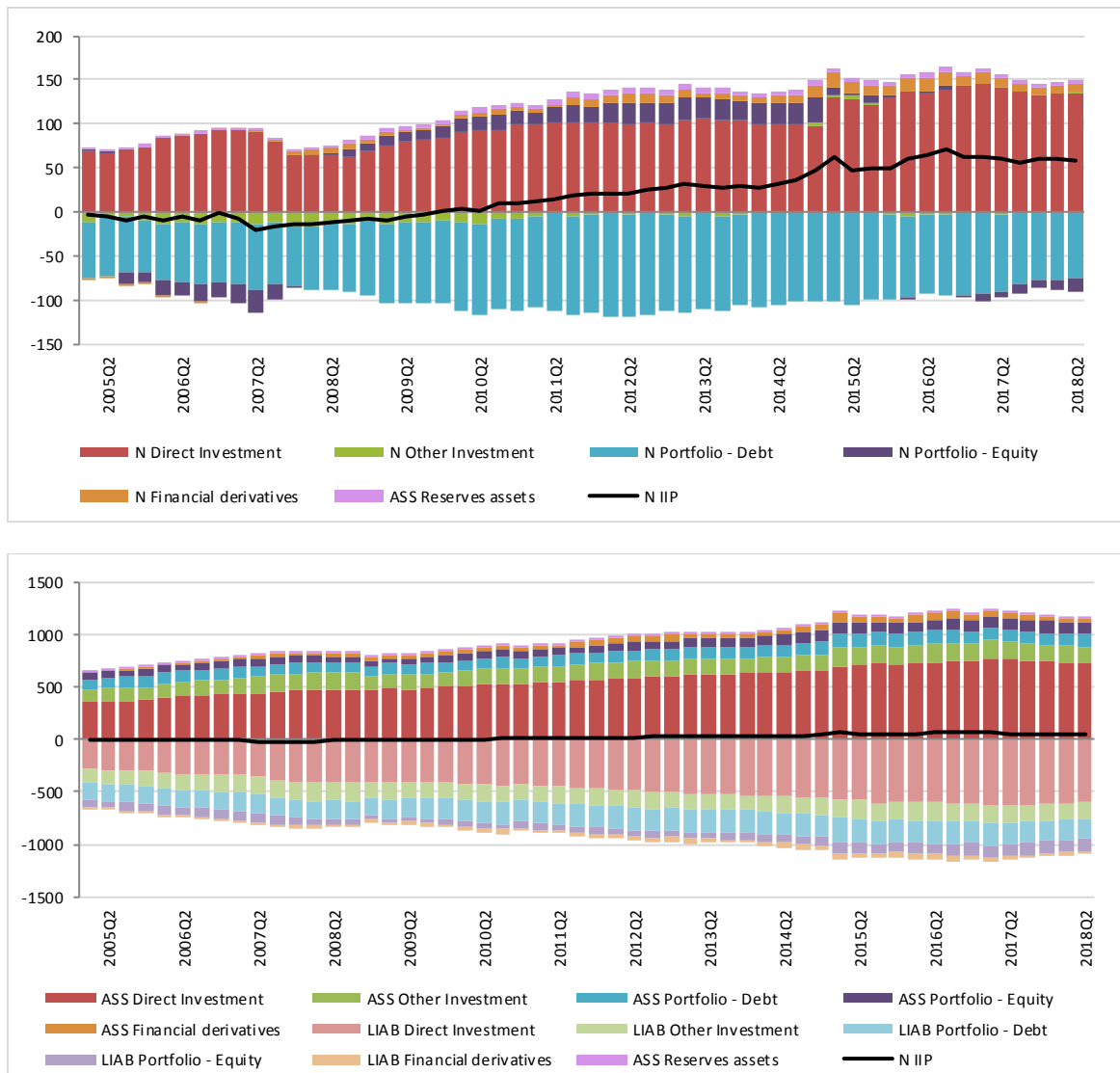
Figure 127: the Netherlands net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

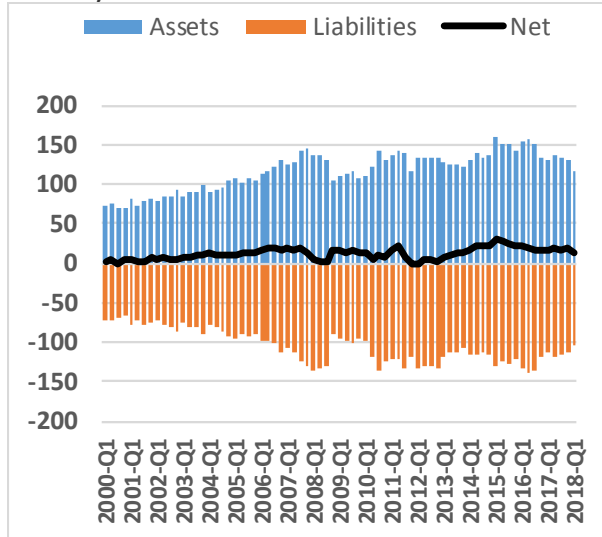
Figure 128: the Netherlands net and gross international investment position by instrument, % of GDP



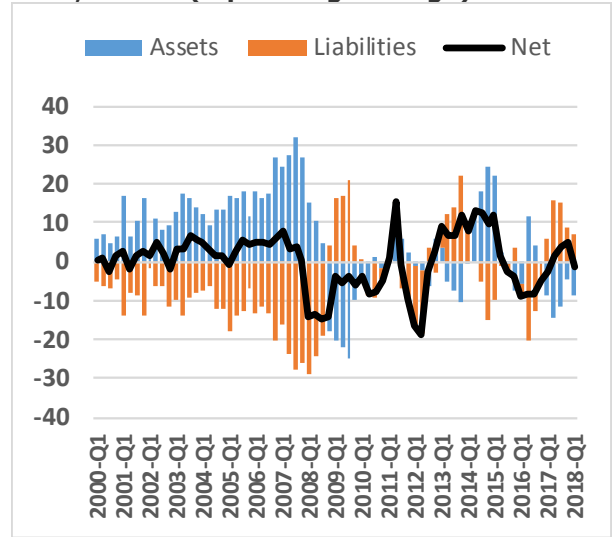
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 129: the Netherlands, BIS LBS

Stocks, % GDP



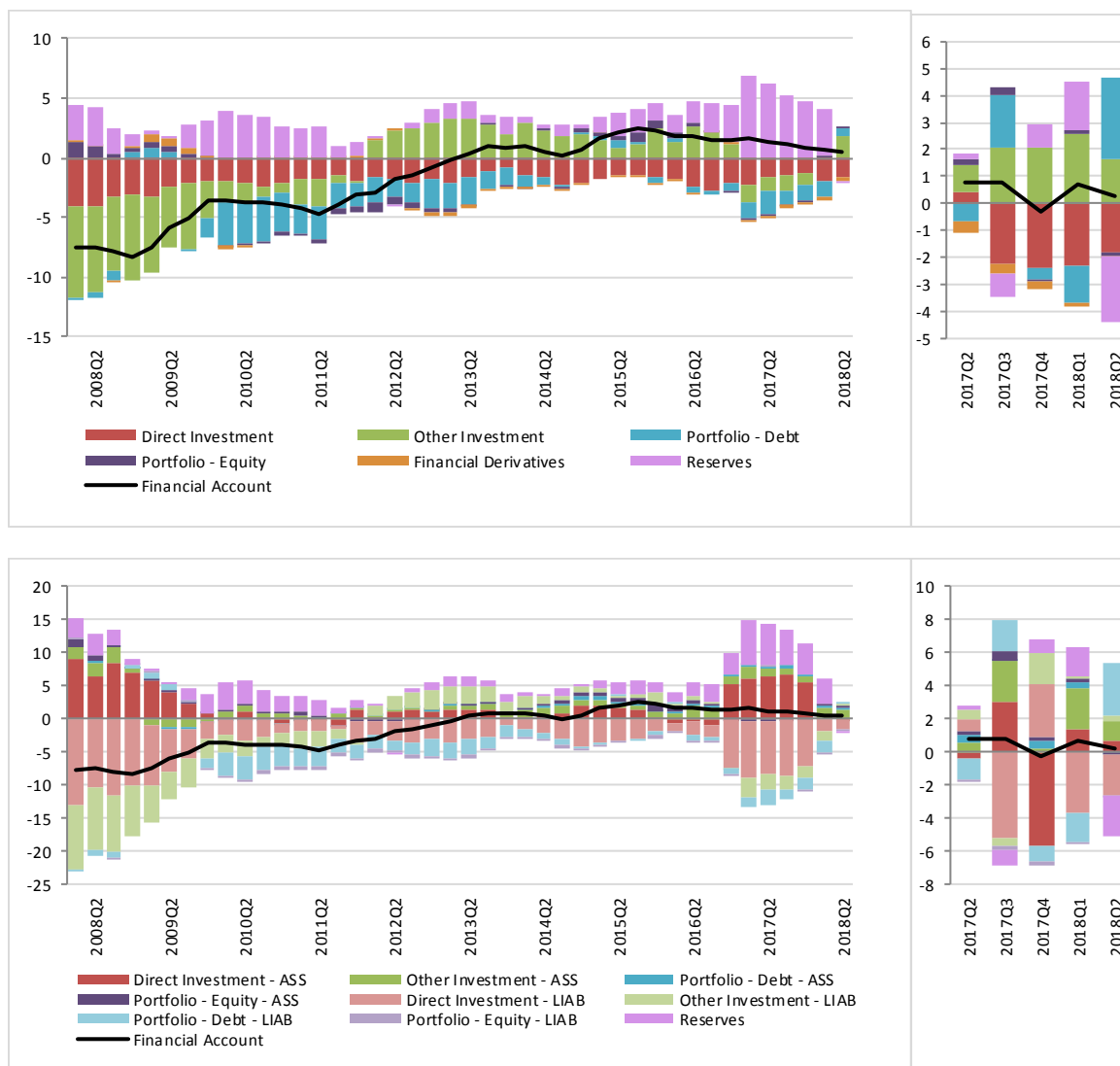
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

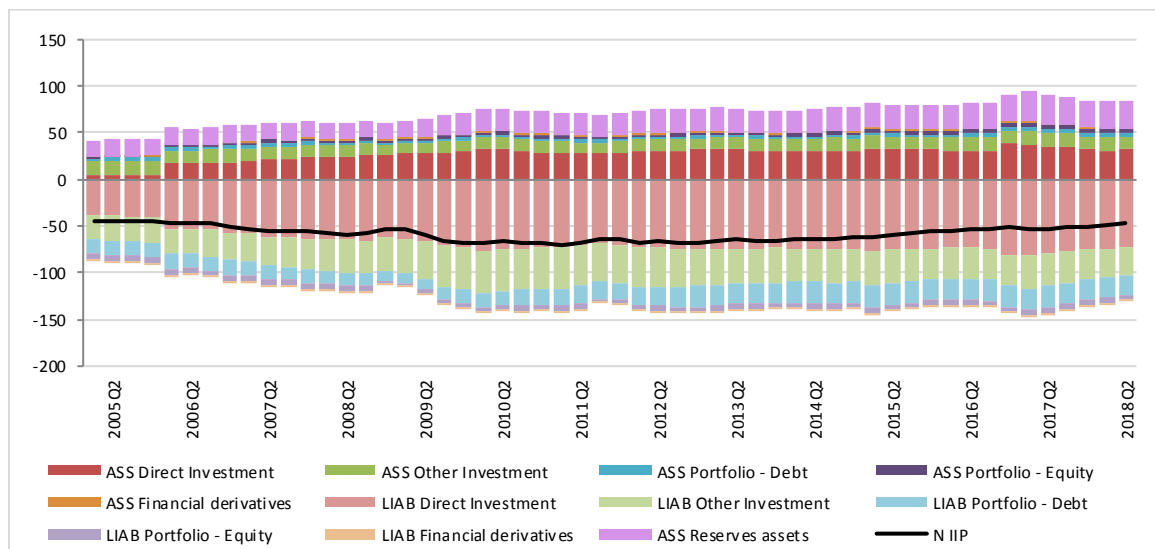
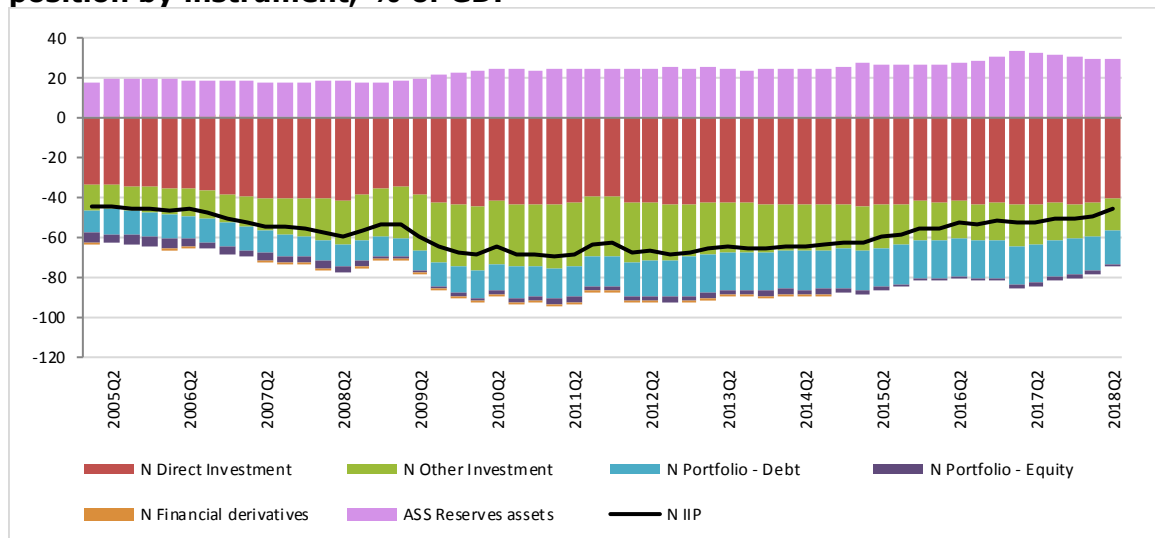
Figure 130: Non-Euro area CEE net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

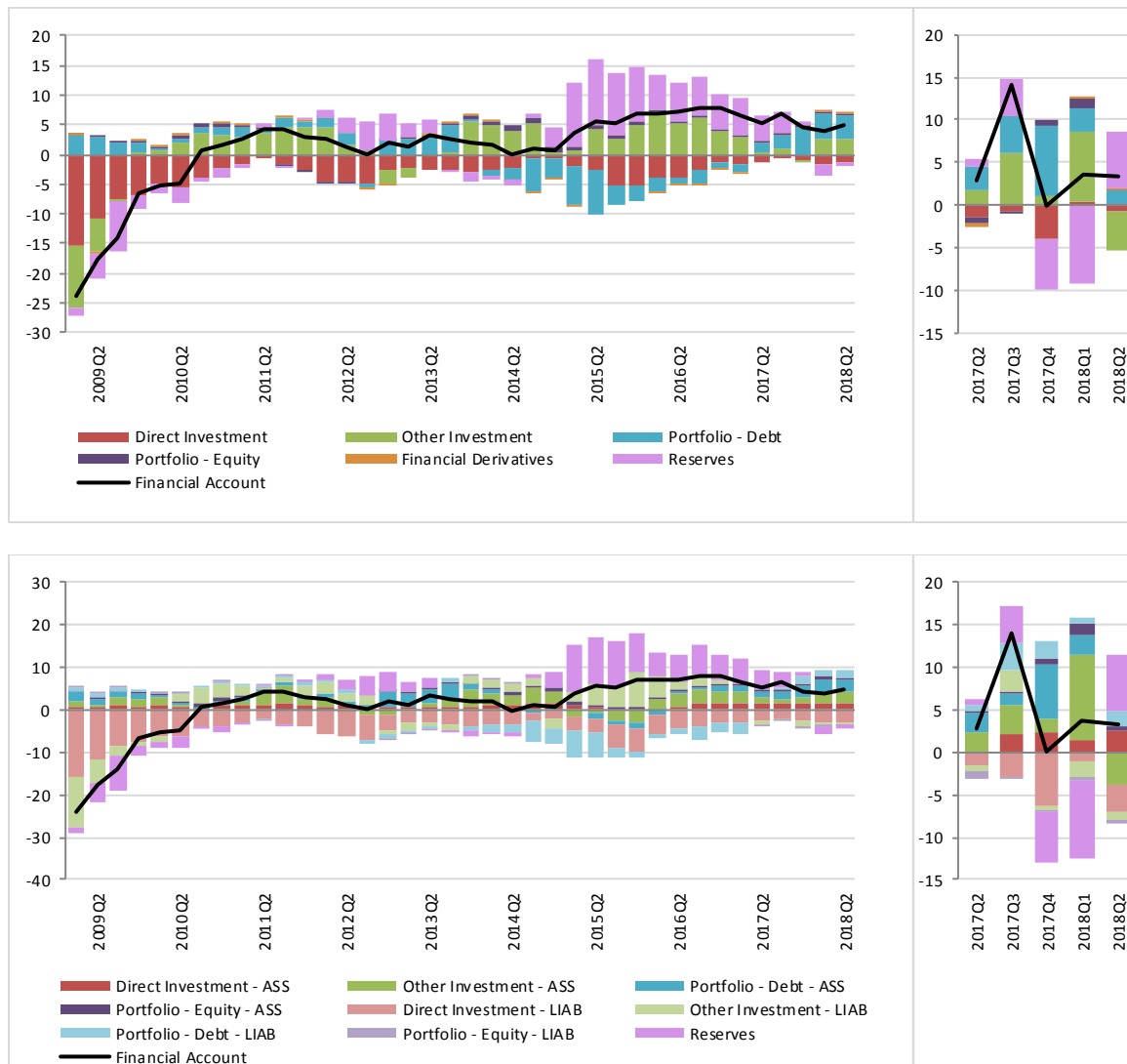
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 131: Non-Euro area CEE net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

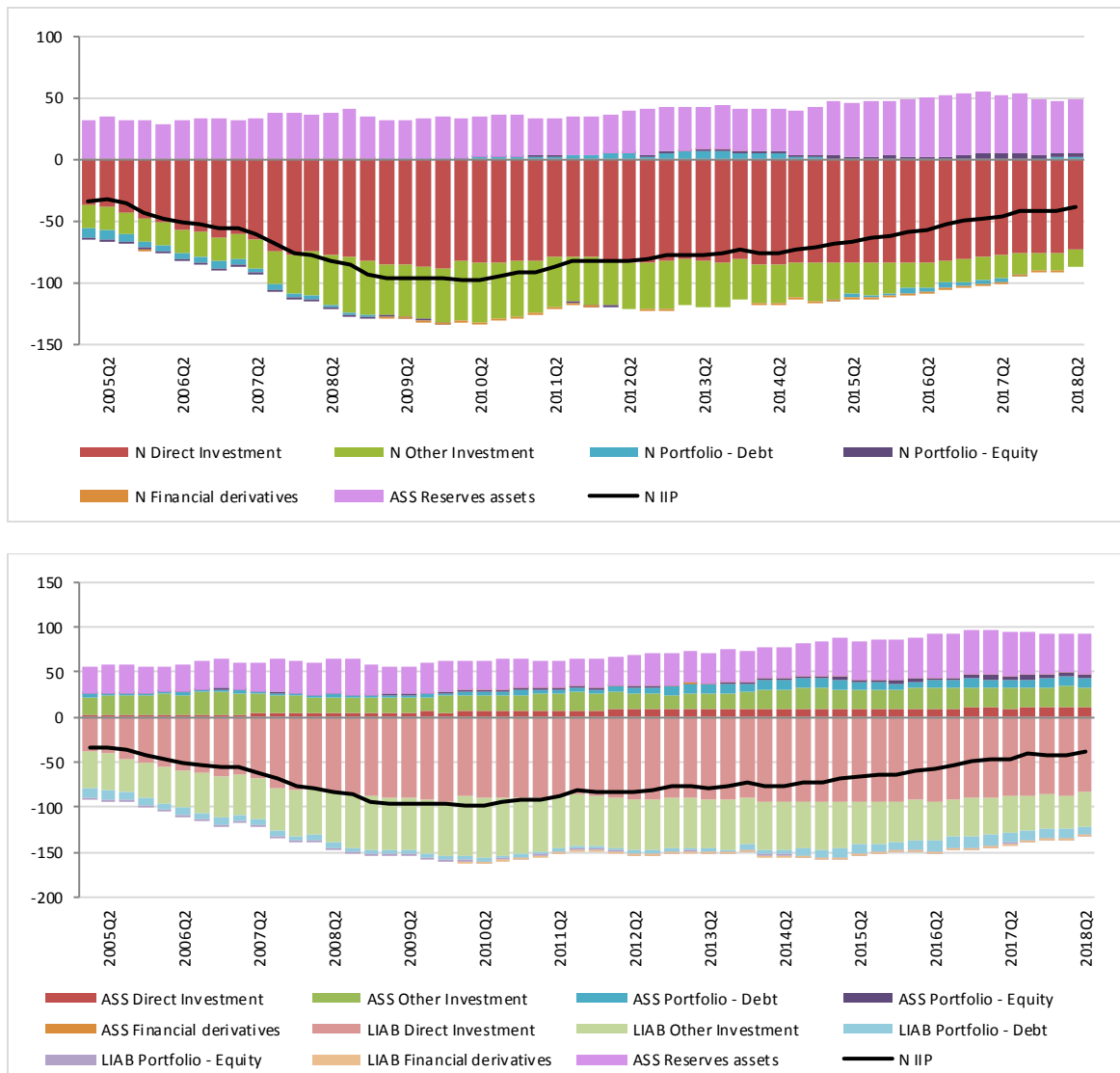
Figure 132: Bulgaria (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

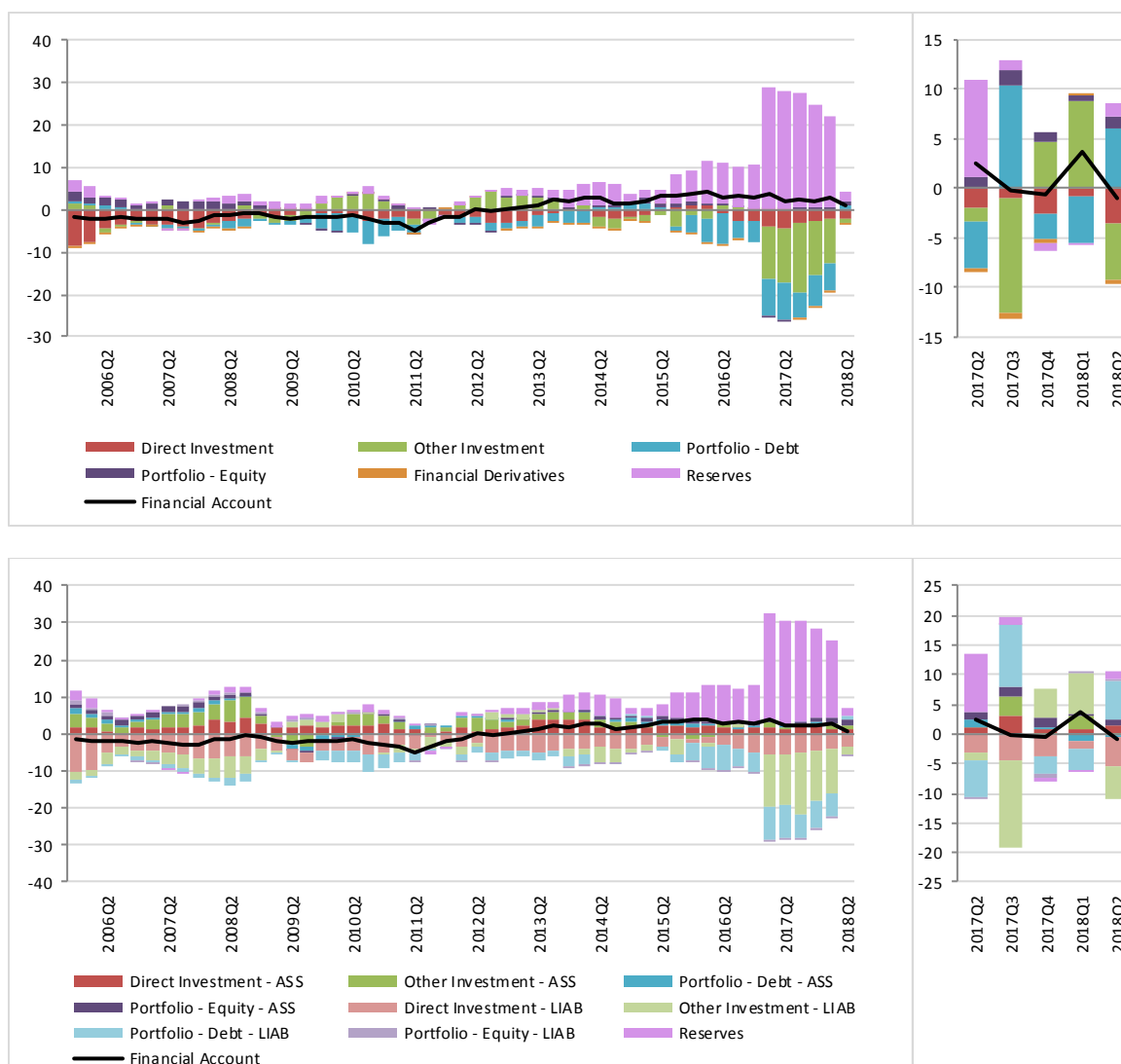
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 133: Bulgaria (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

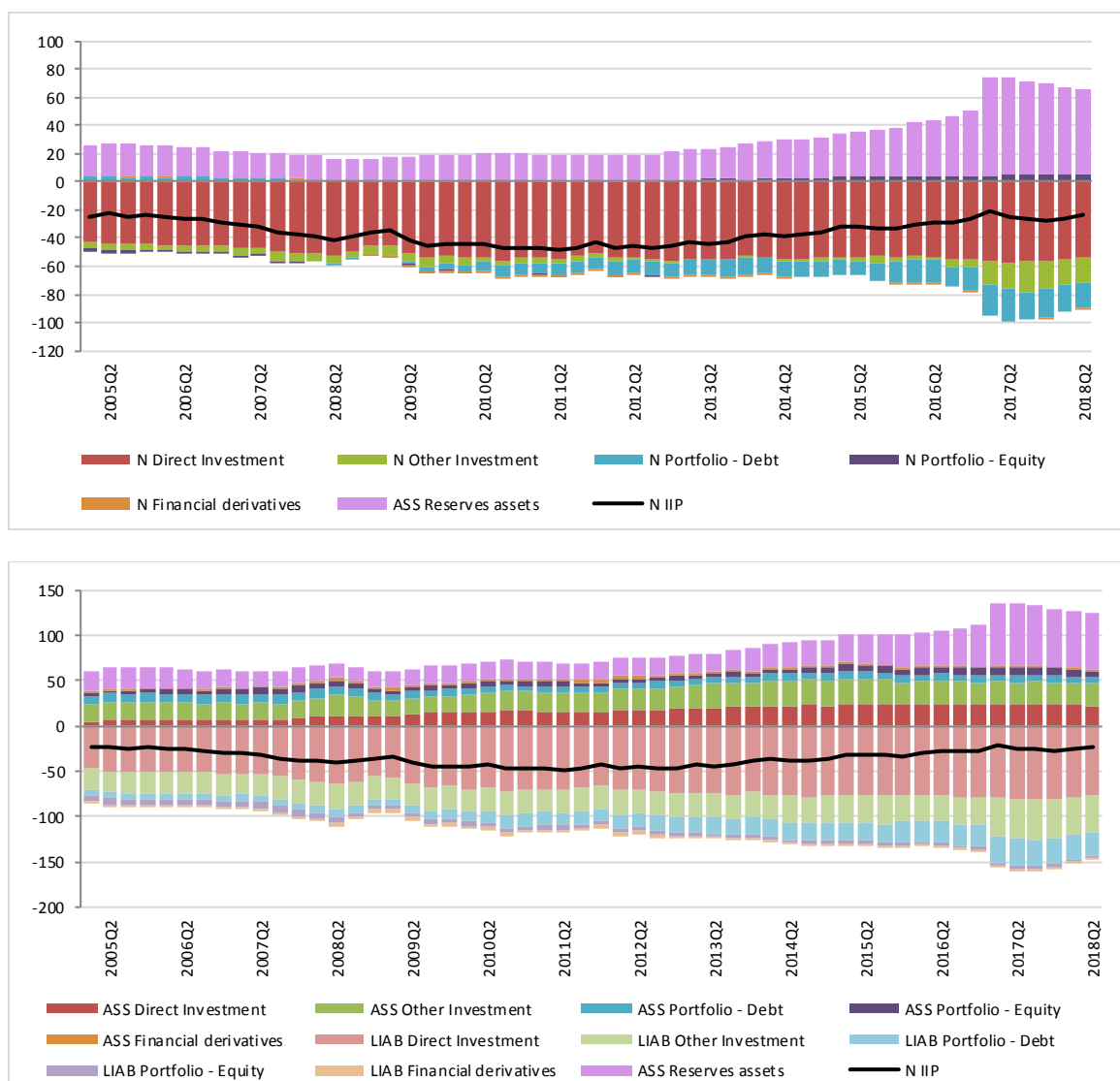
Figure 134: Czech Republic (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

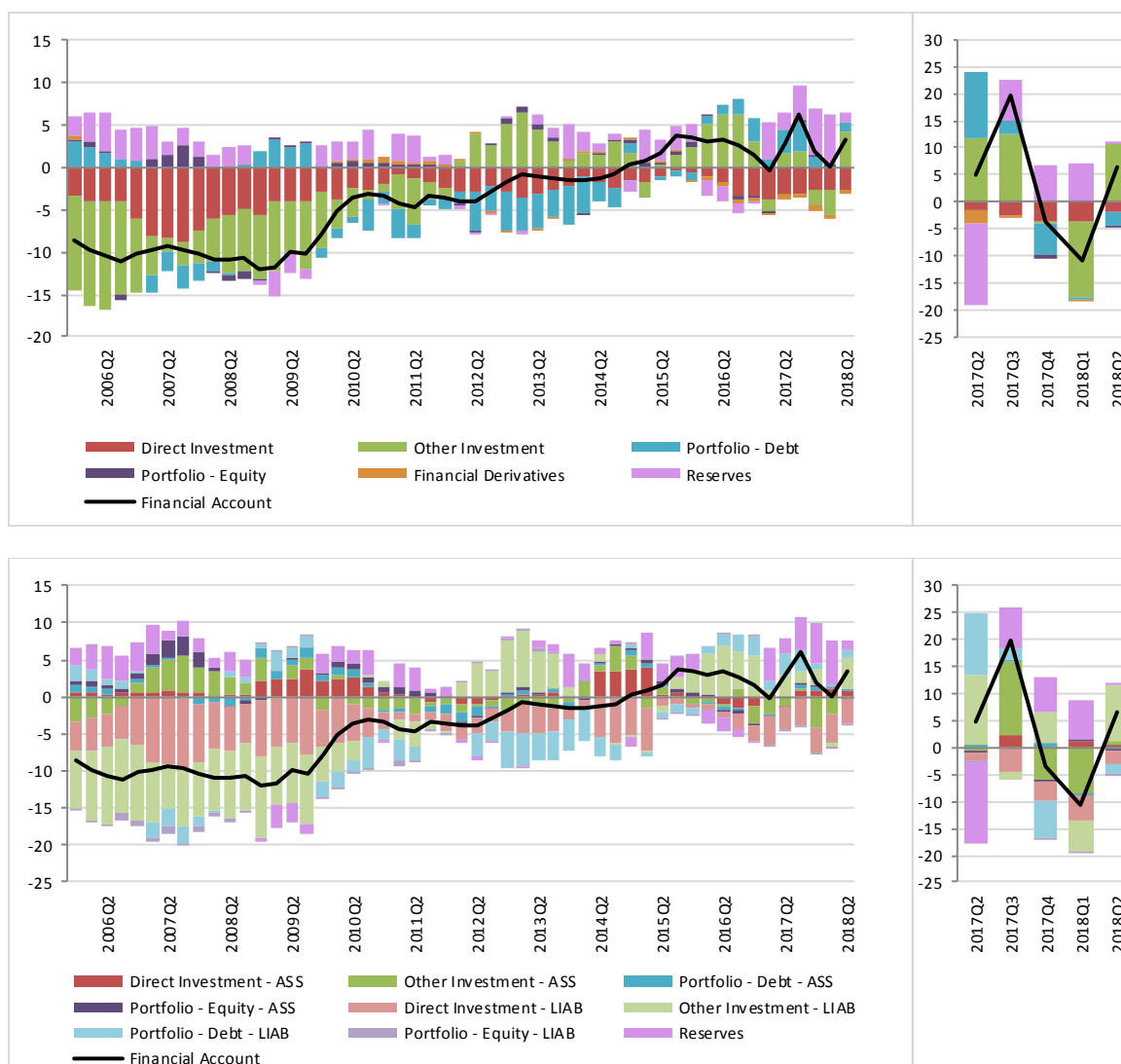
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 135: Czech Republic (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

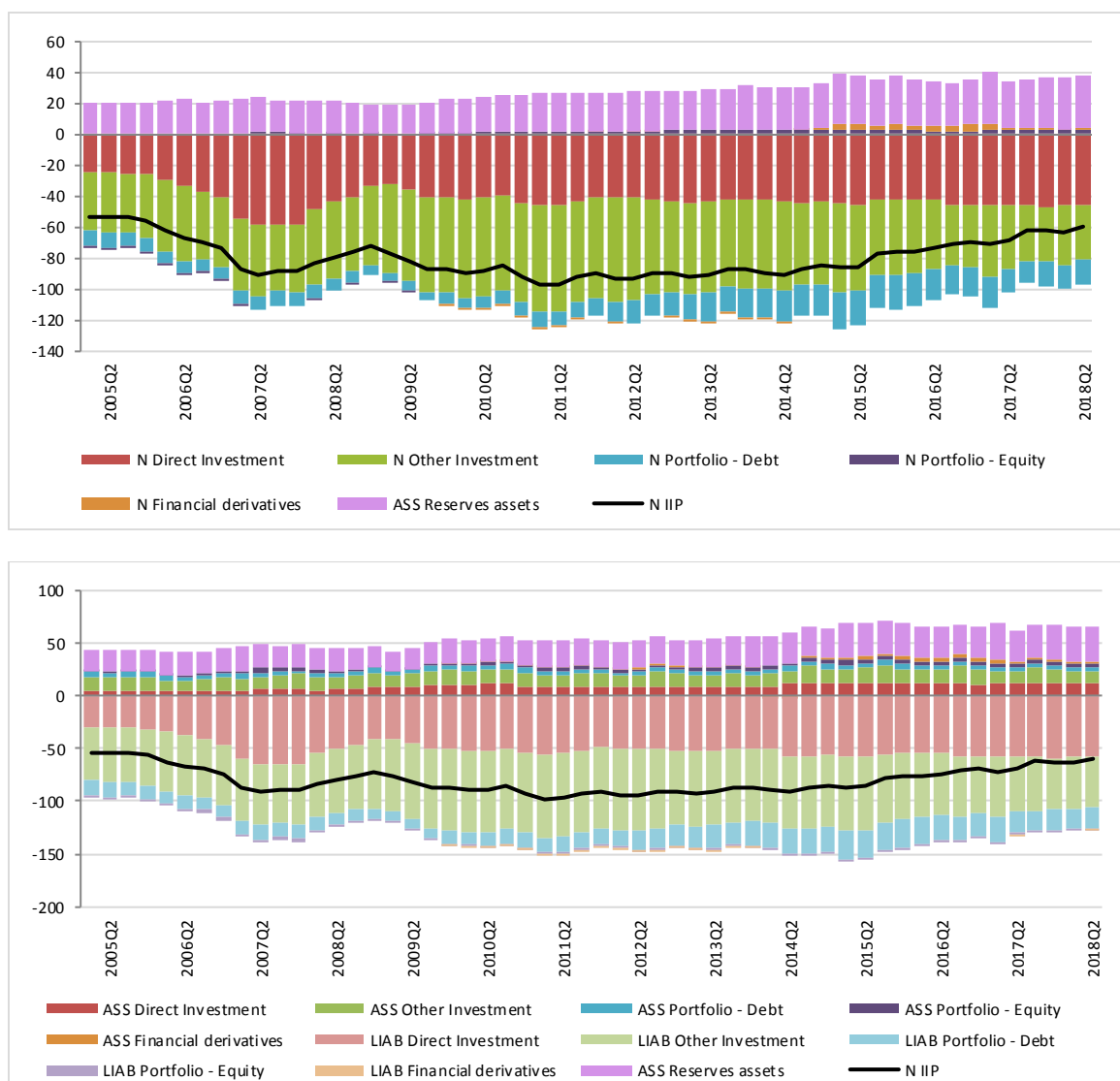
Figure 136: Croatia (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

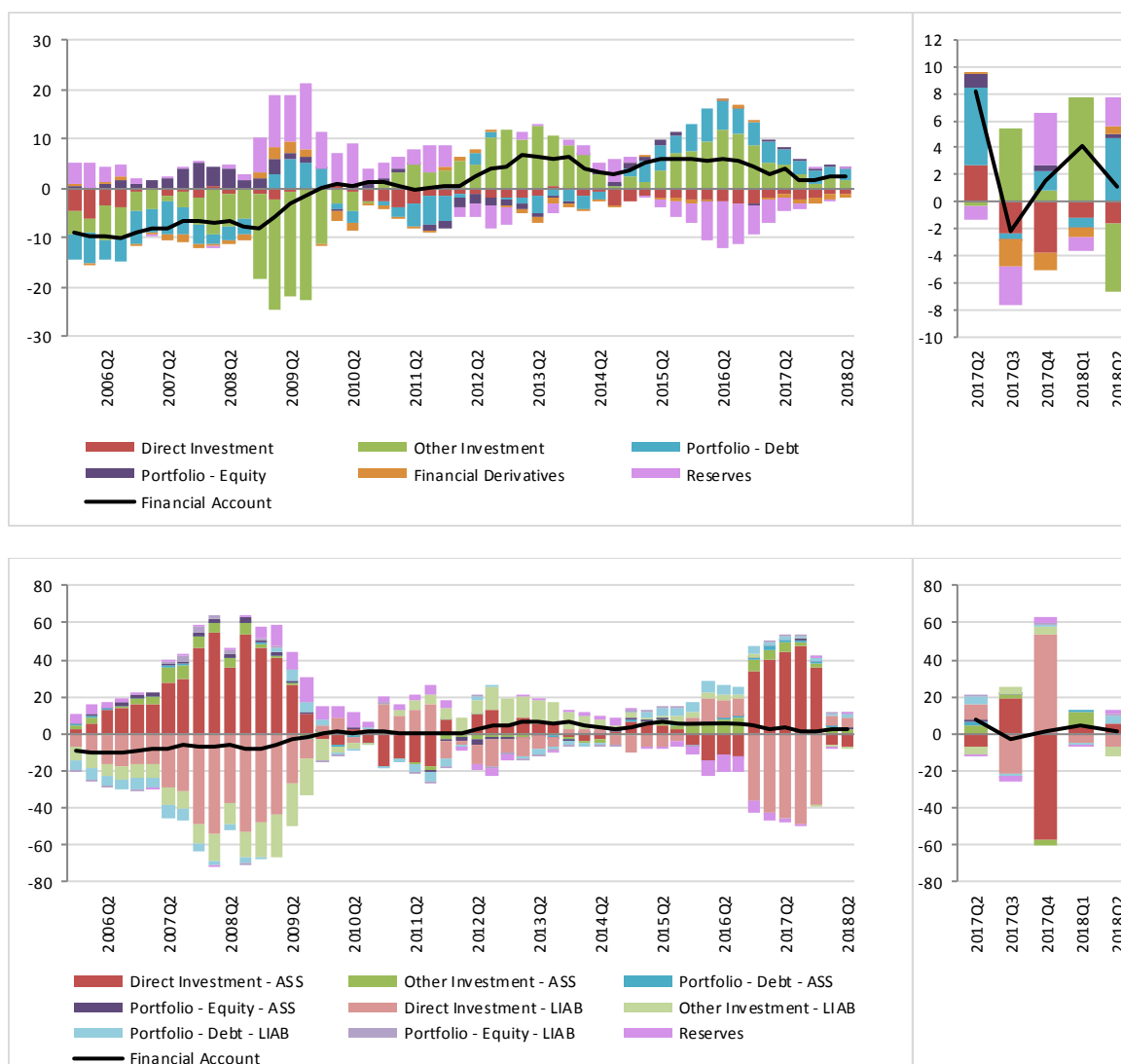
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 137: Croatia (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

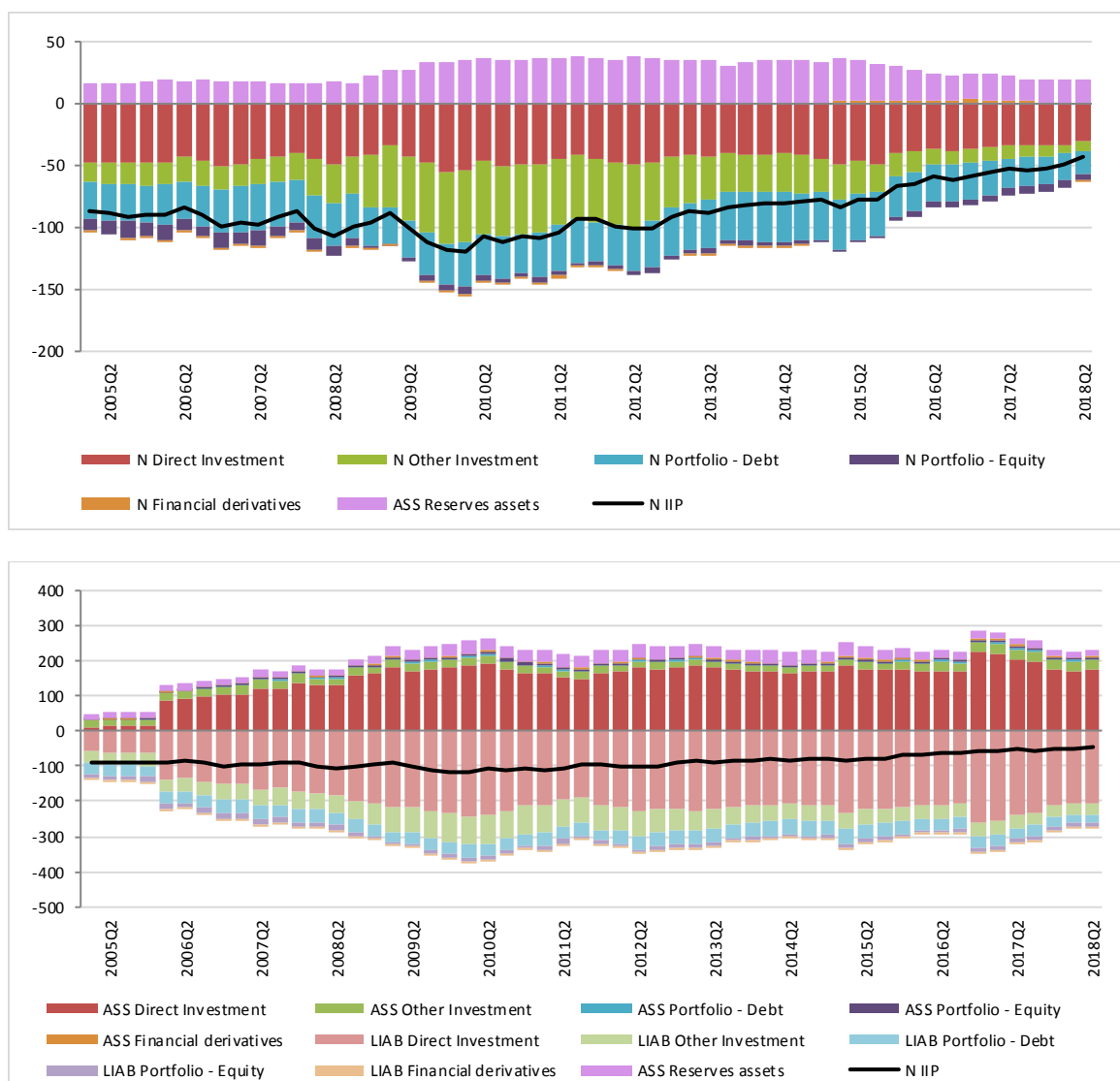
Figure 138: Hungary (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

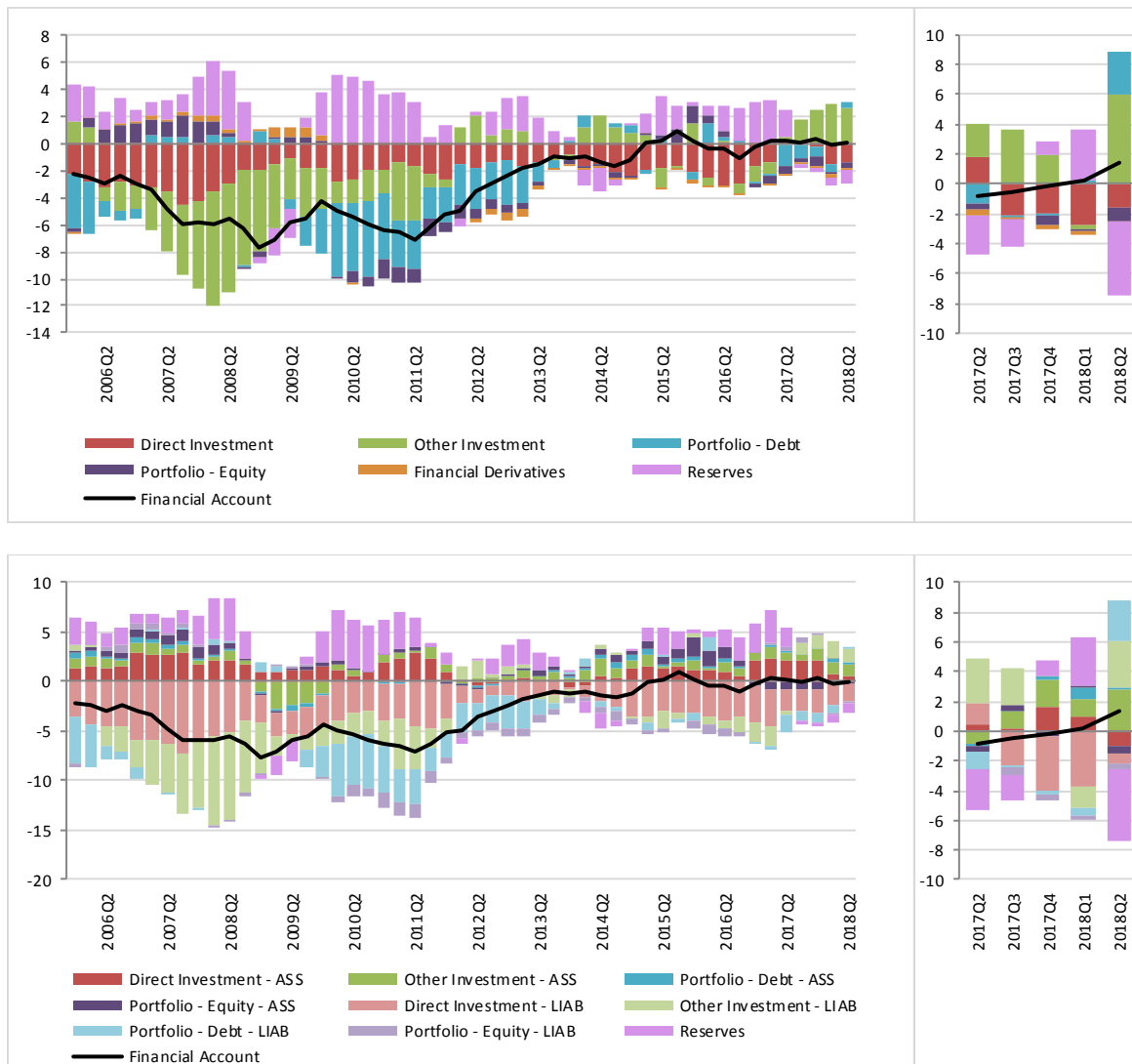
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 139: Hungary (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

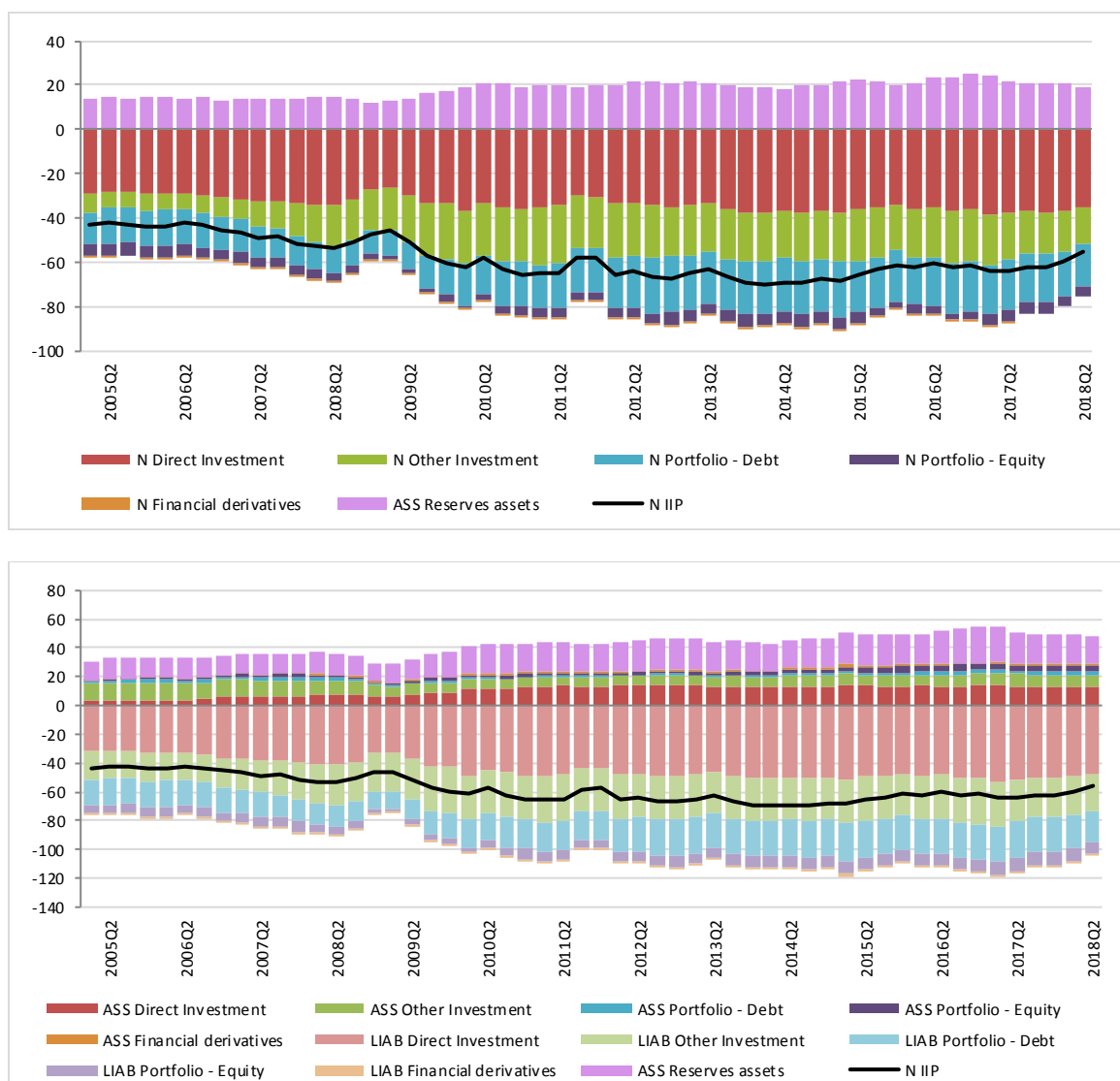
Figure 140: Poland (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

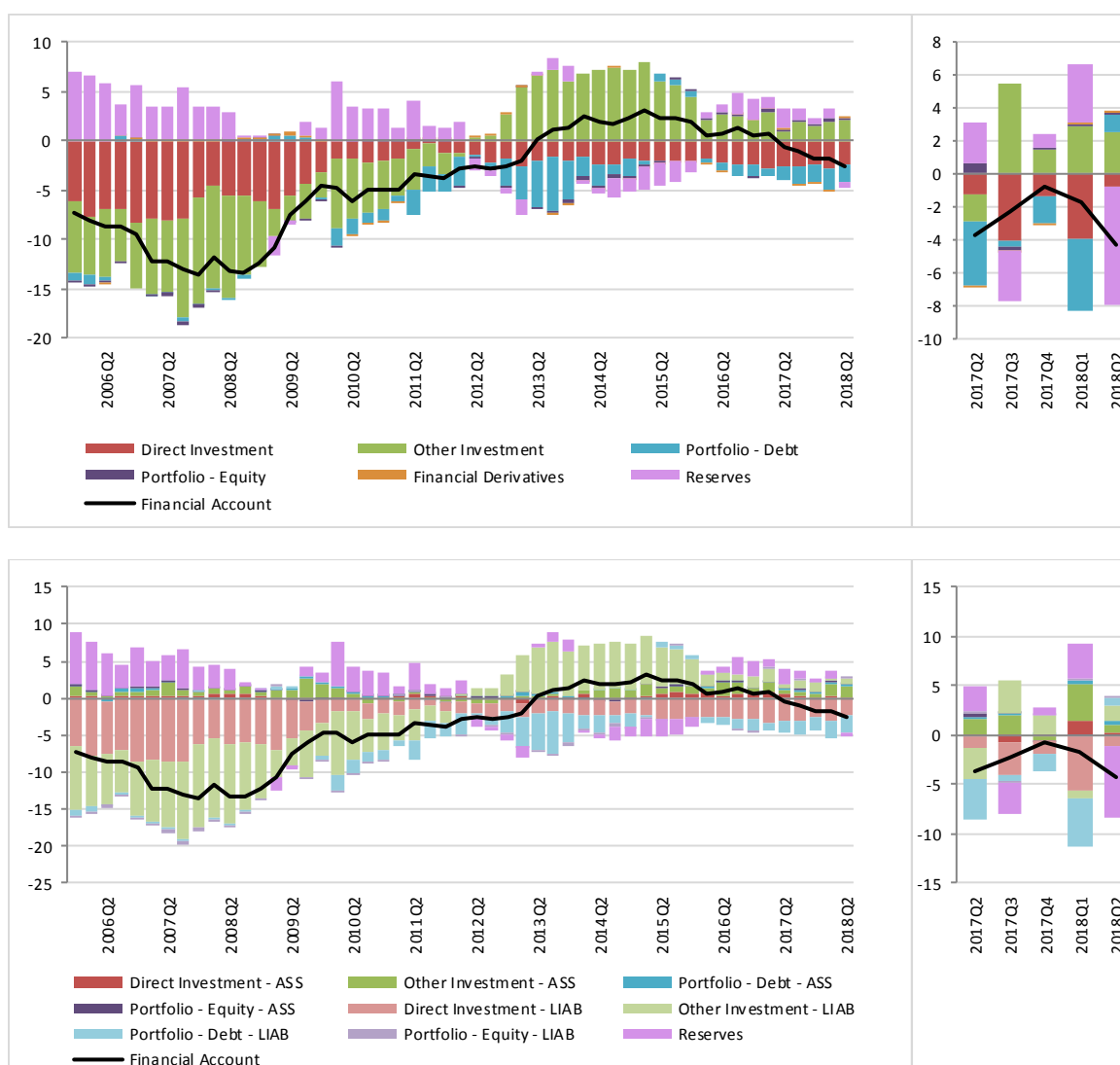
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 141: Poland (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

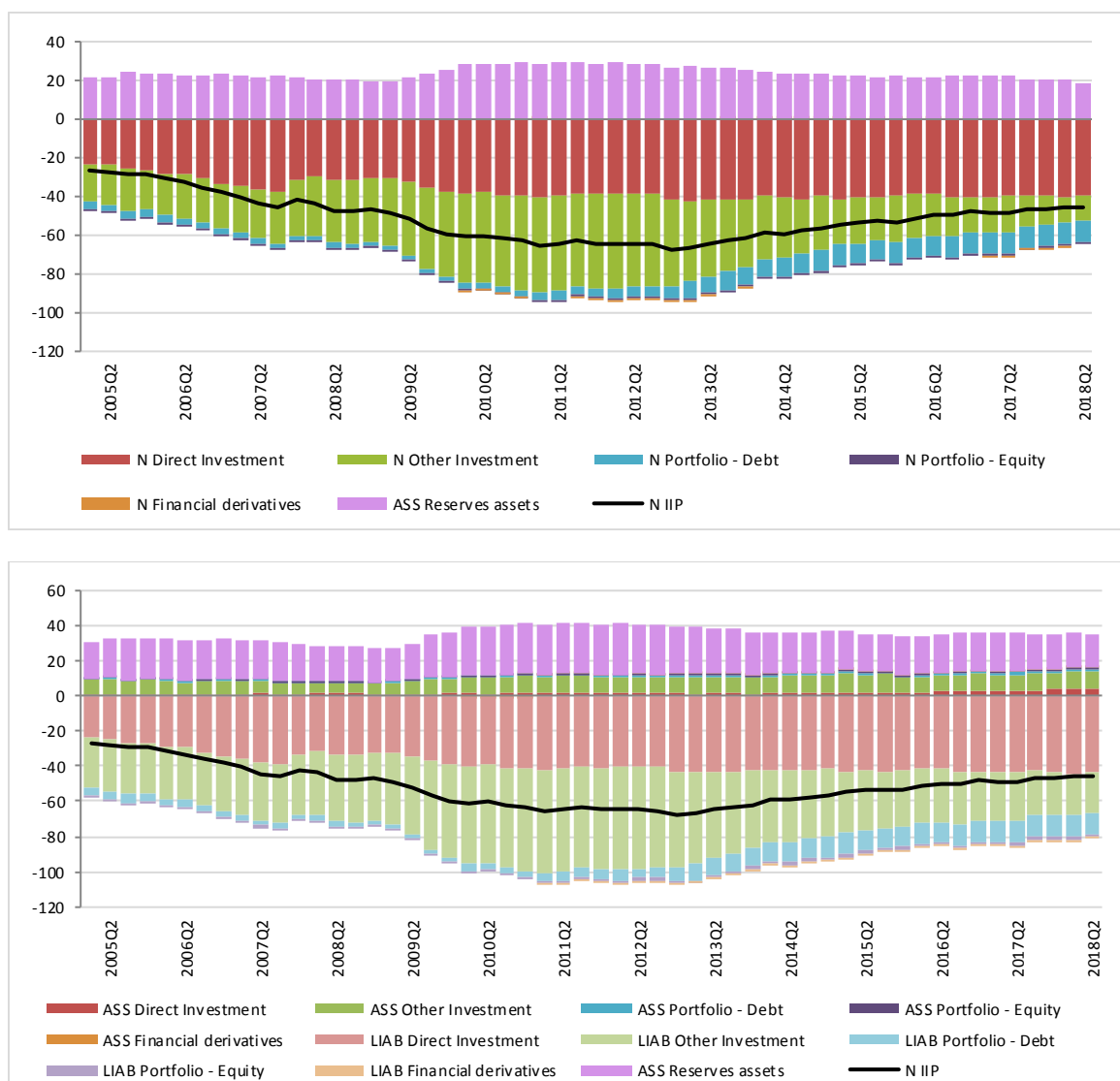
Figure 142: Romania (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

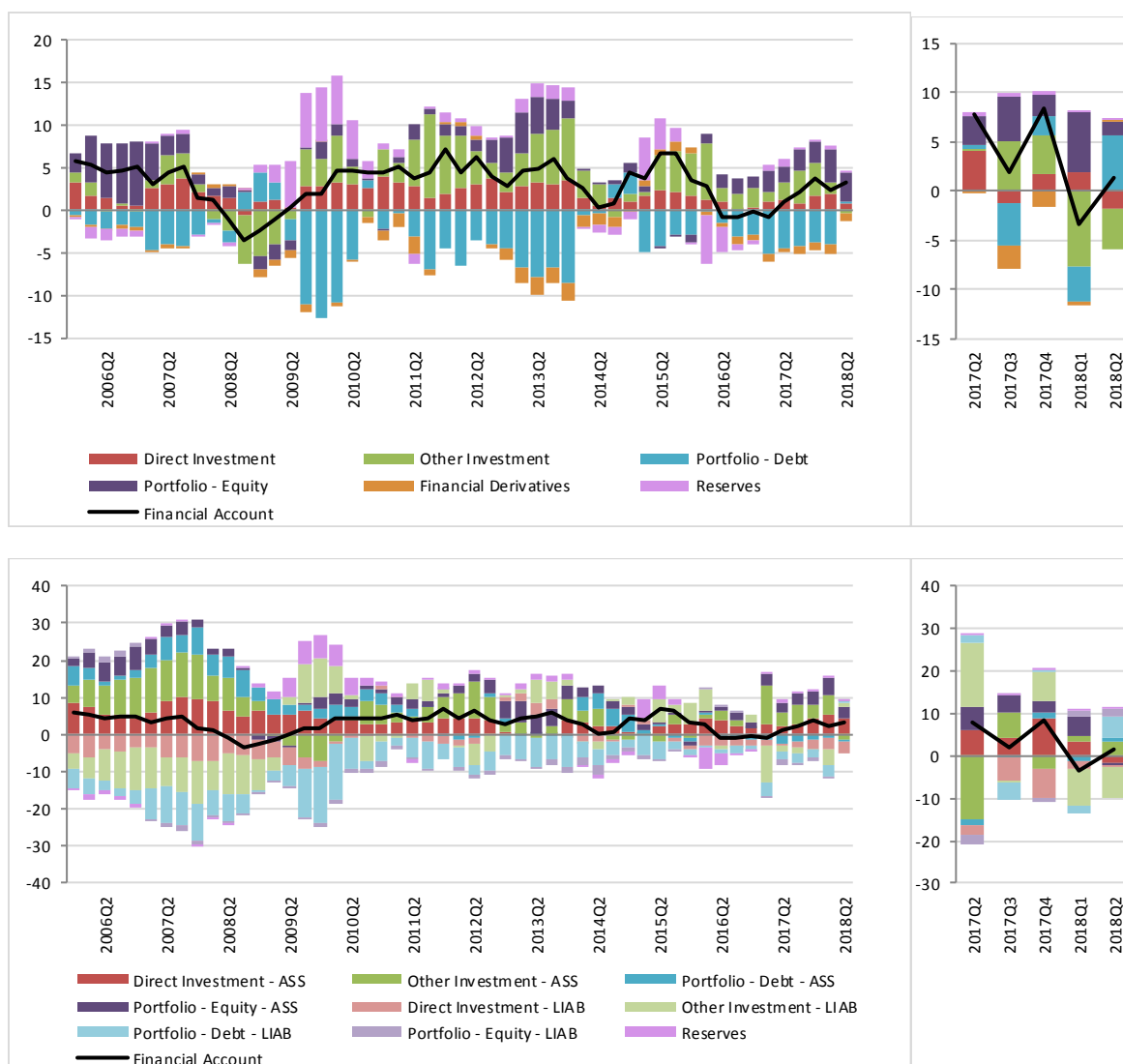
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 143: Romania (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

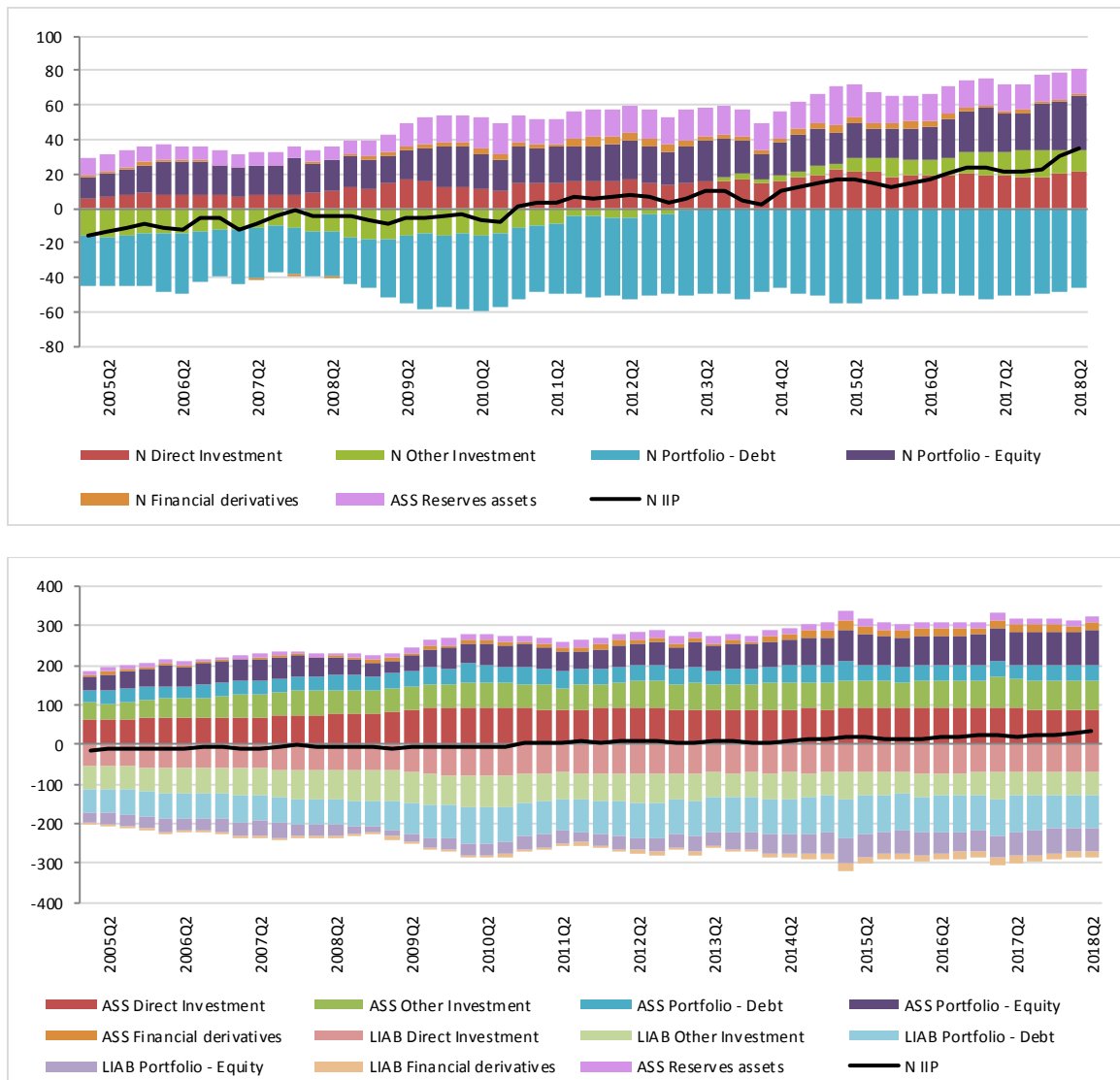
Figure 144: Non-euro area Nordics net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

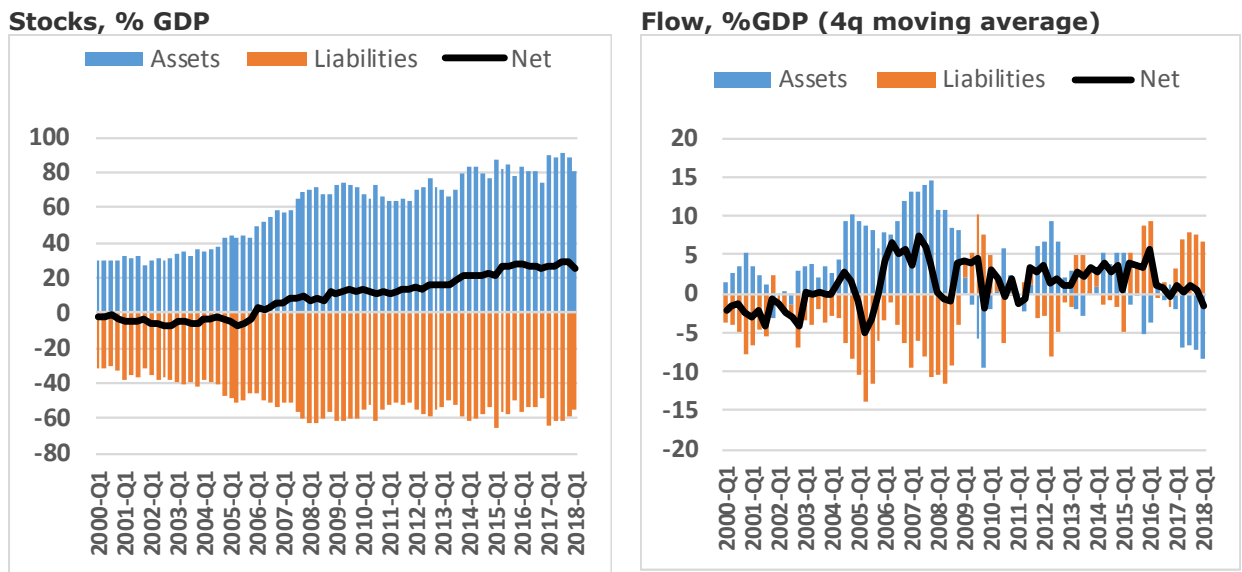
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 145: Non-euro area Nordics net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

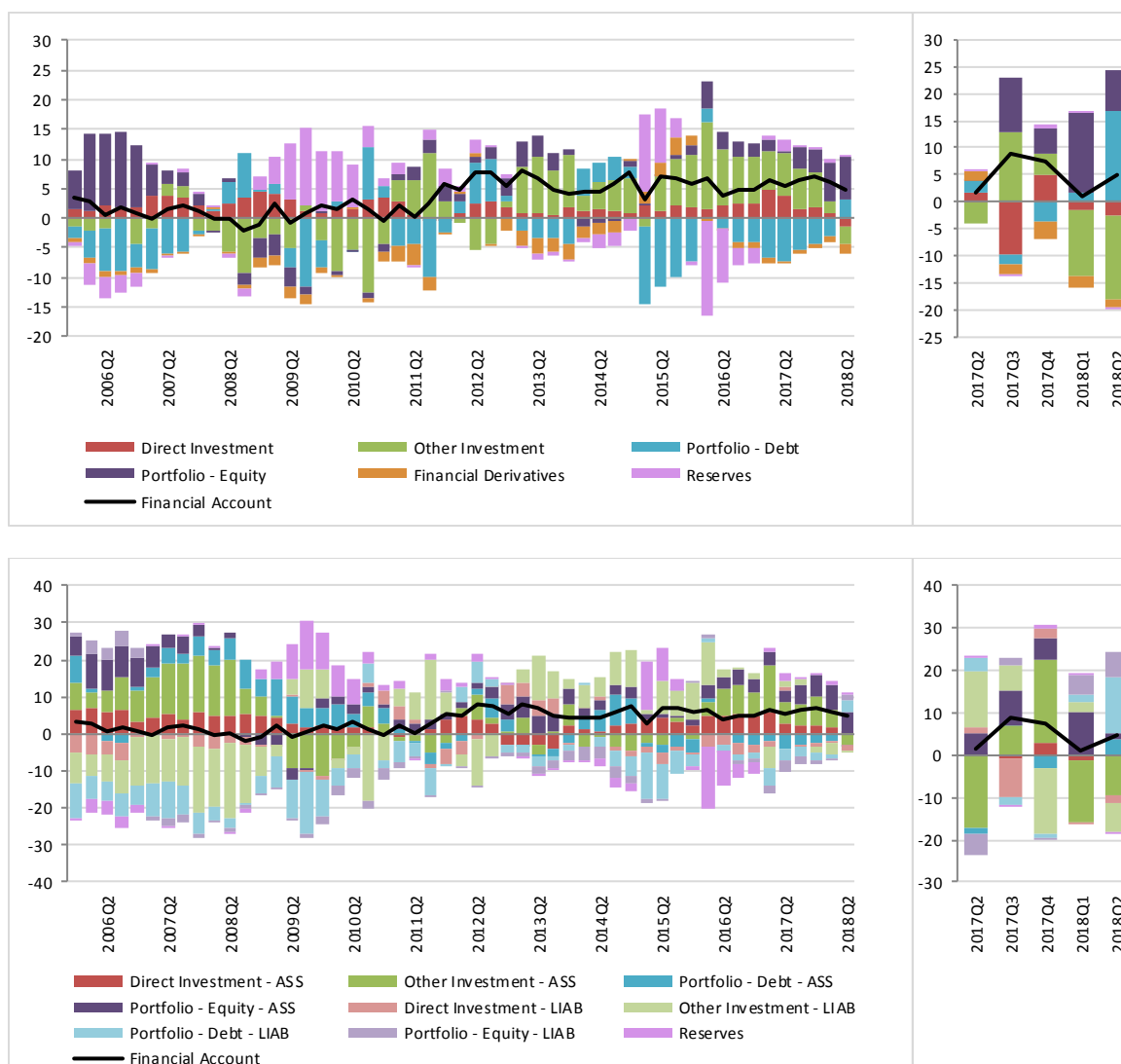
Figure 146: Non-euro area Nordics, BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

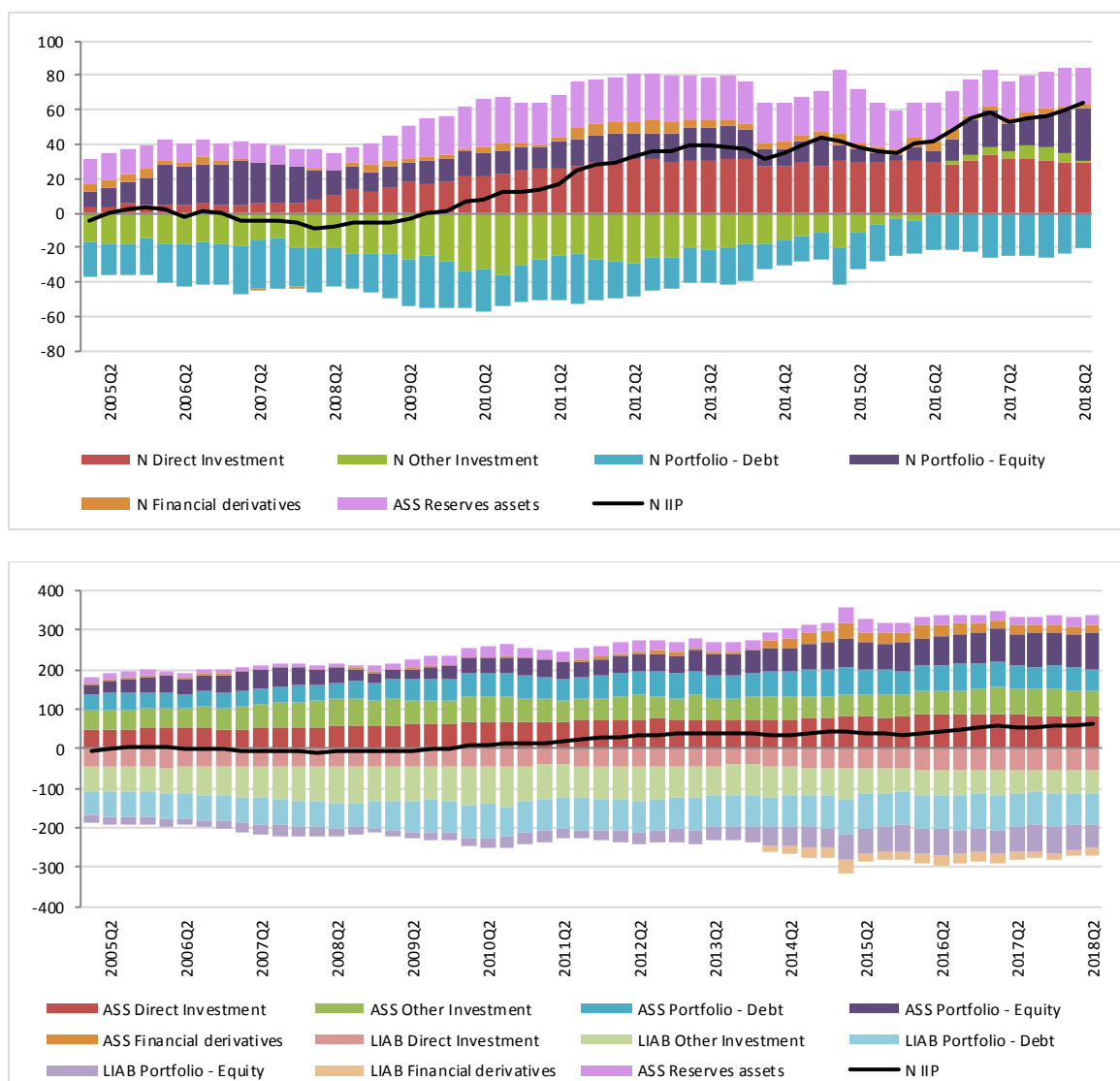
Figure 147: Denmark (non-euro area Nordics) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

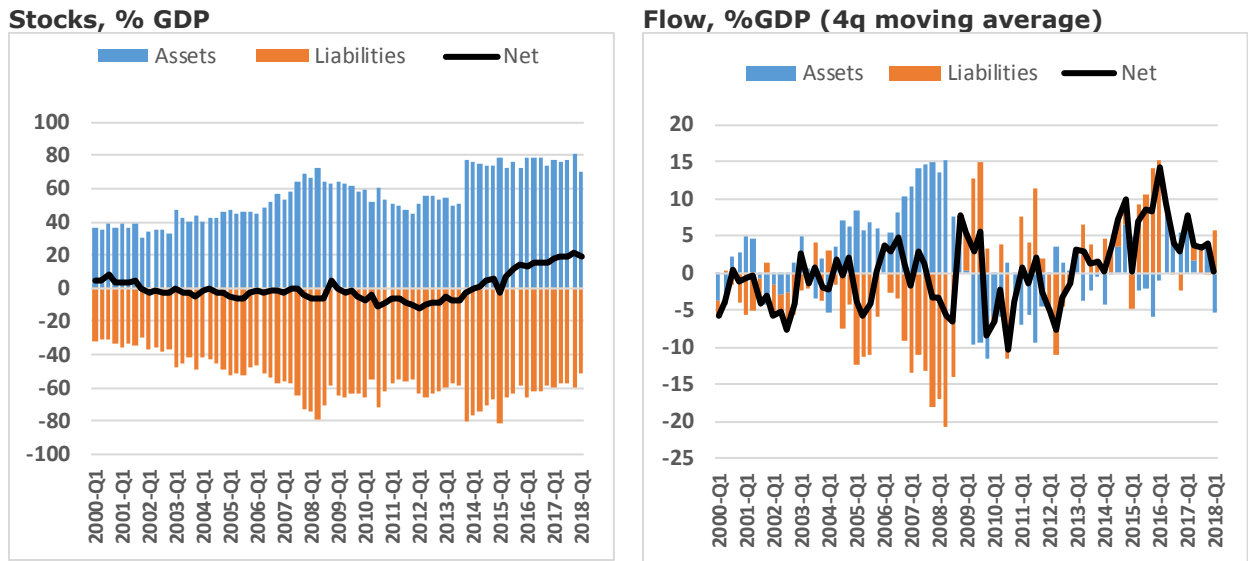
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 148: Denmark (non-euro area Nordics) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

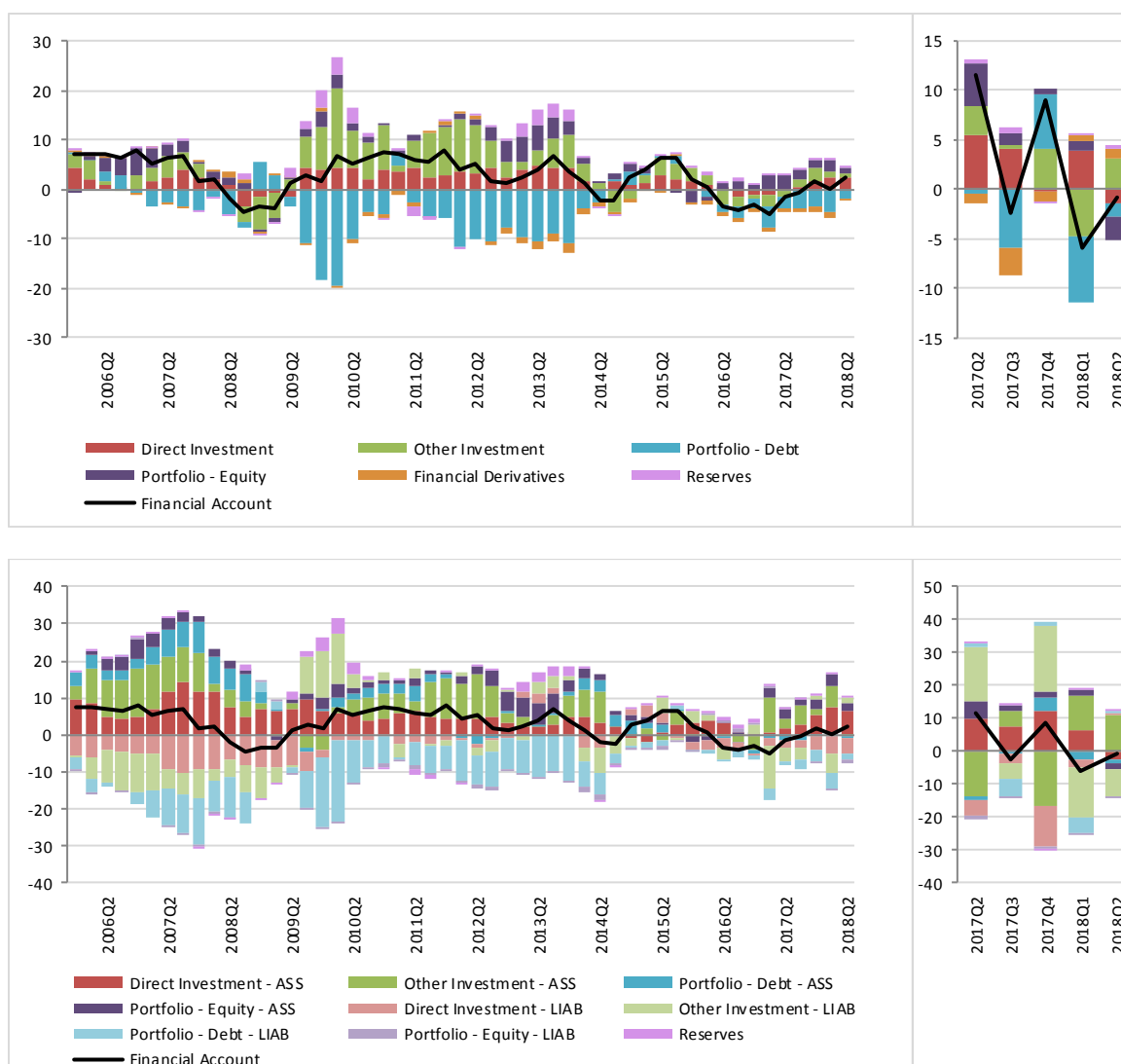
Figure 149: Denmark (non-euro area Nordics), BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

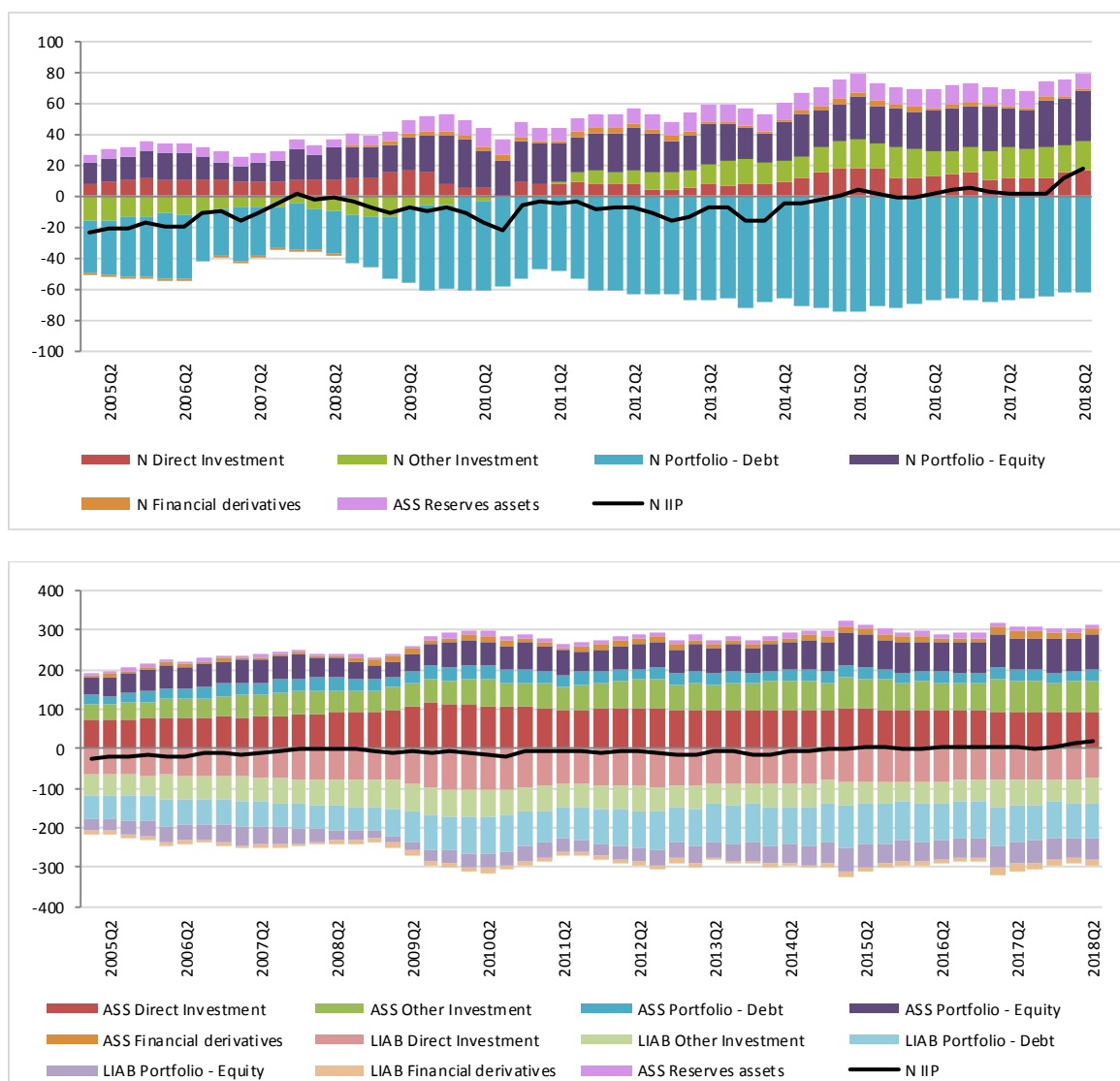
Figure 150: Sweden (non-euro area Nordics) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

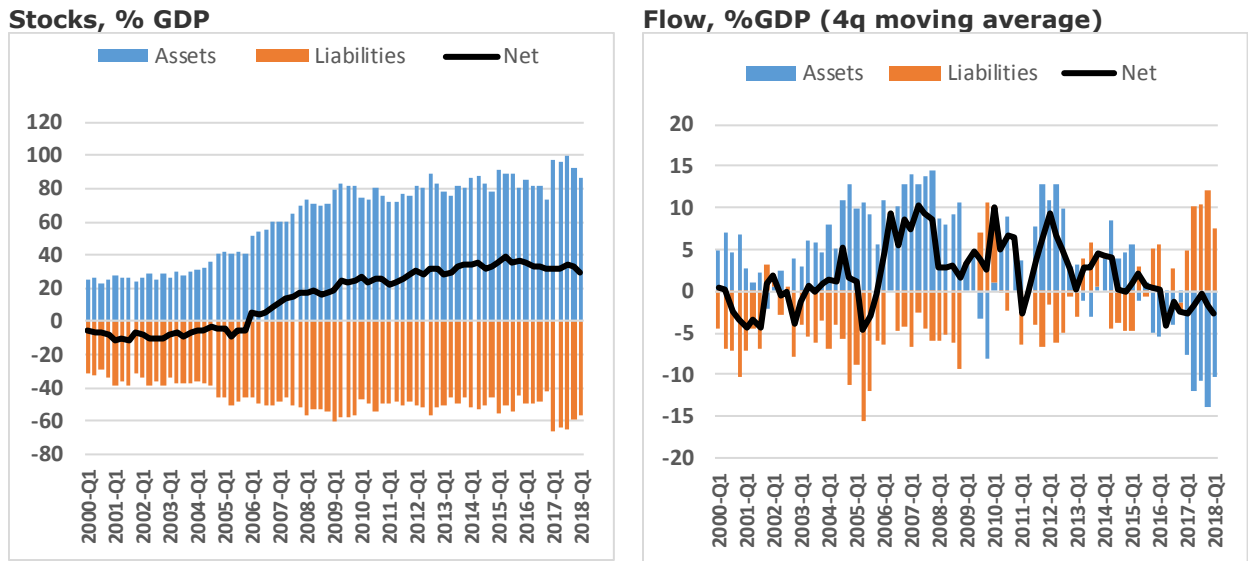
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

Figure 151: Sweden (non-euro area Nordics) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

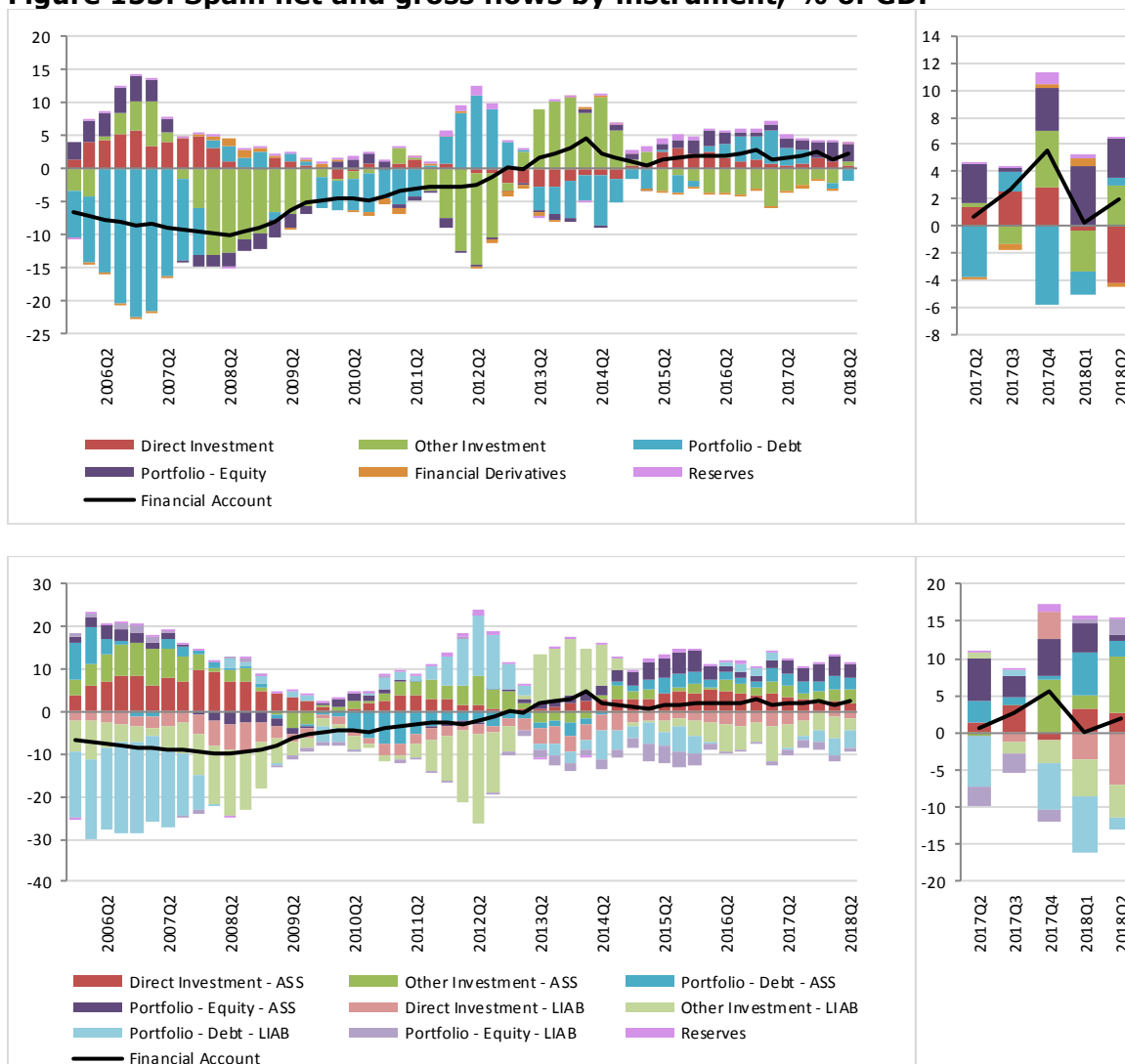
Figure 152: Sweden (non-euro area Nordics), BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

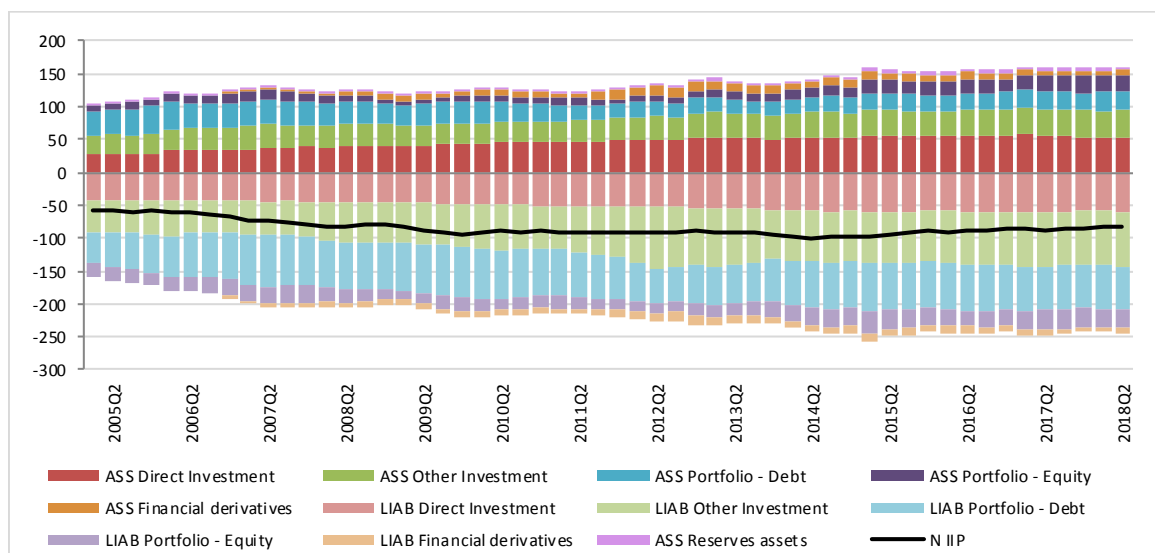
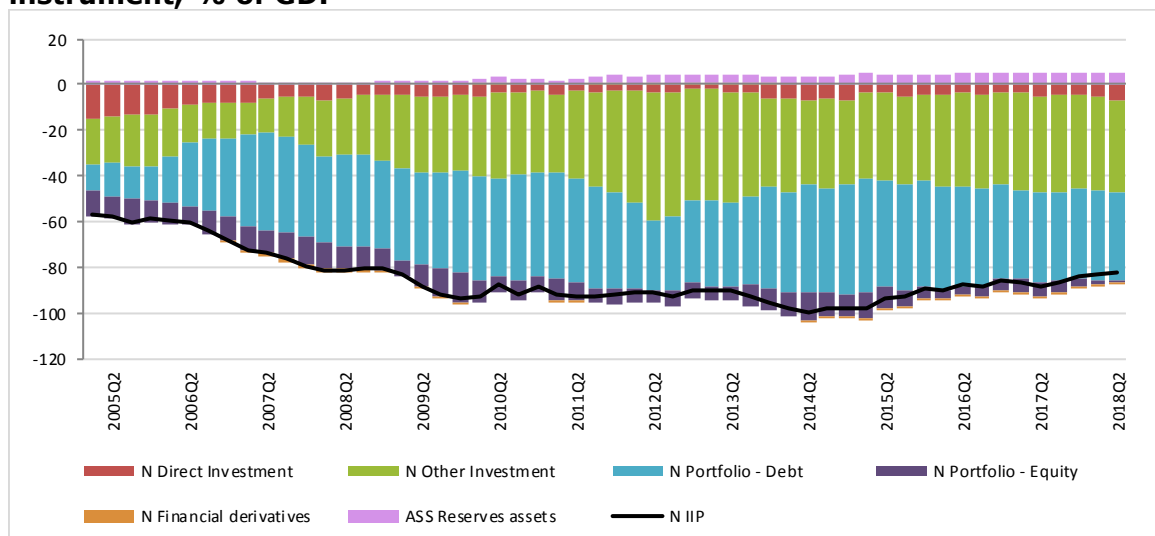
Figure 153: Spain net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account flows and GDP are measured in EUR.

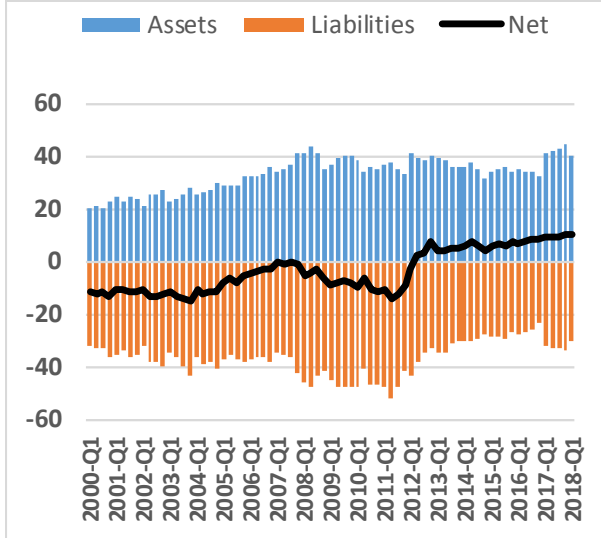
Figure 154: Spain net and gross international investment position by instrument, % of GDP



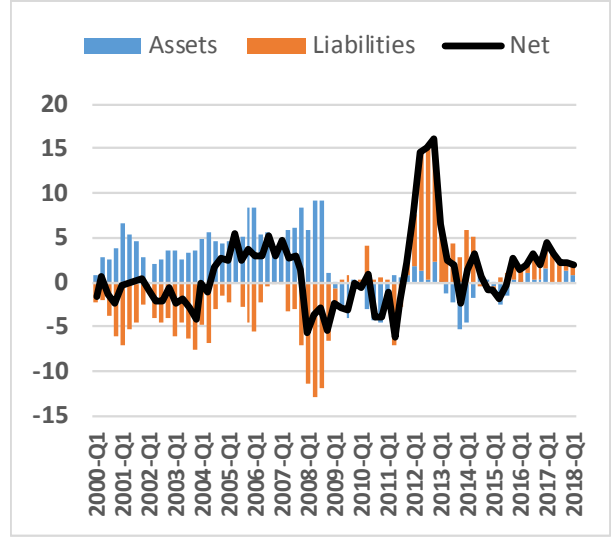
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 155: Spain, BIS LBS

Stocks, % GDP



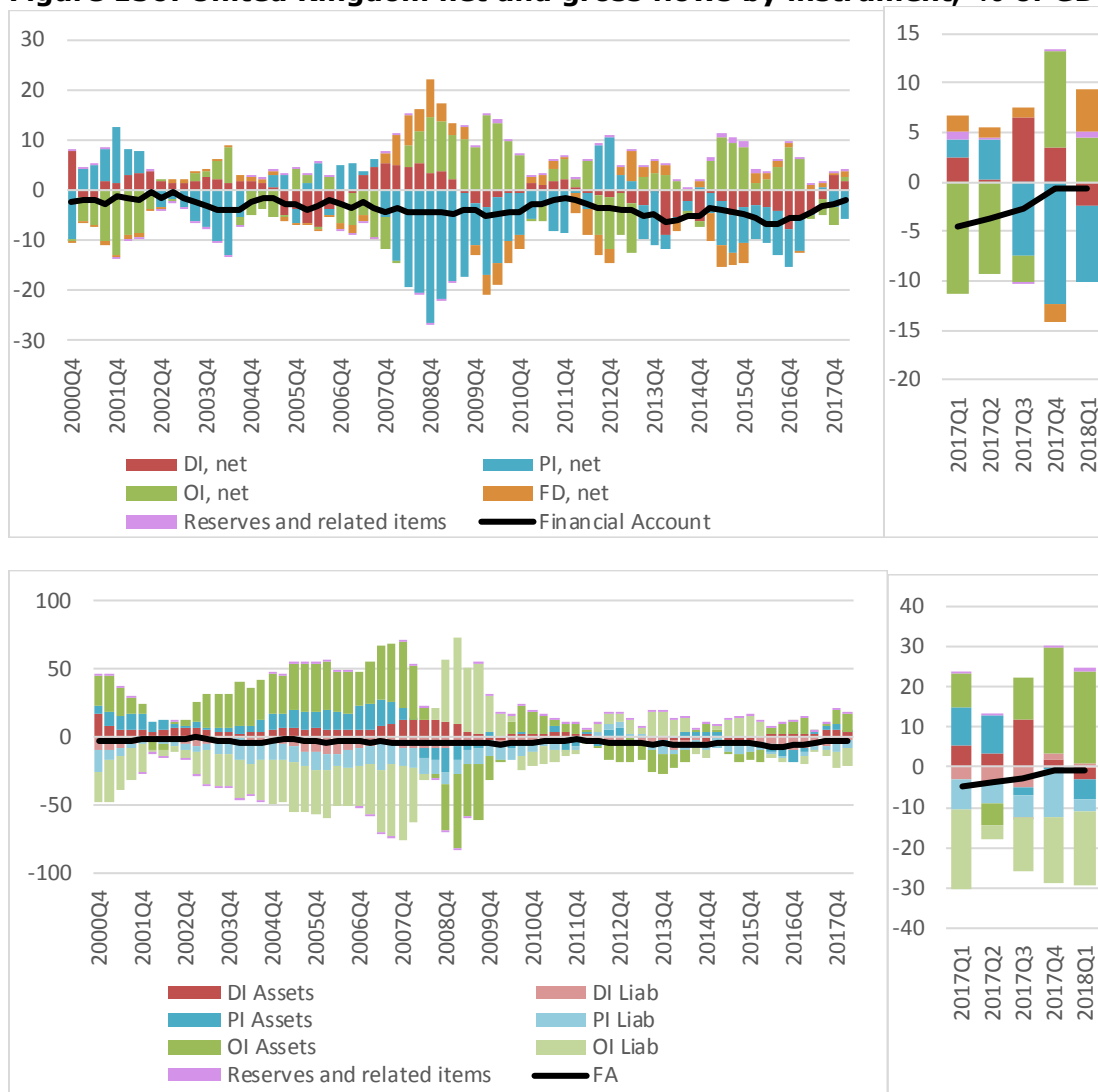
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

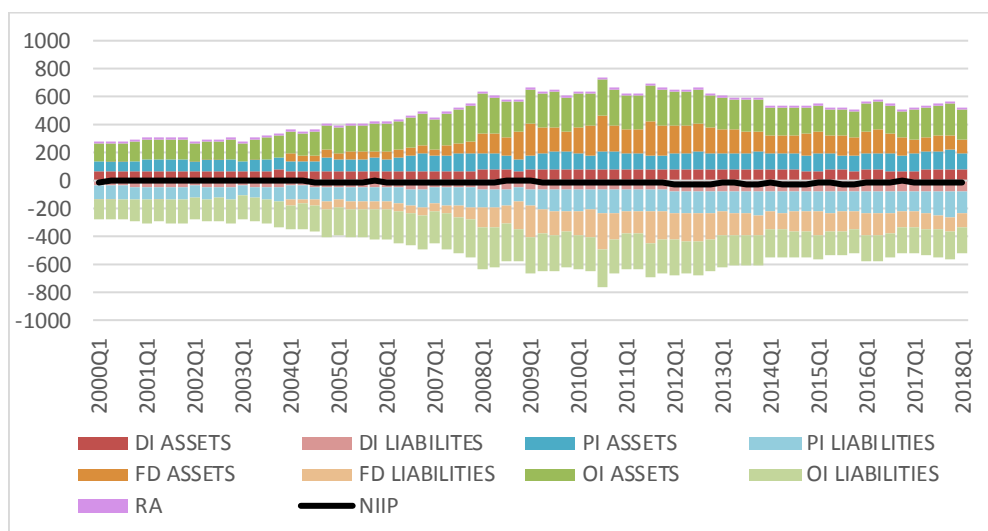
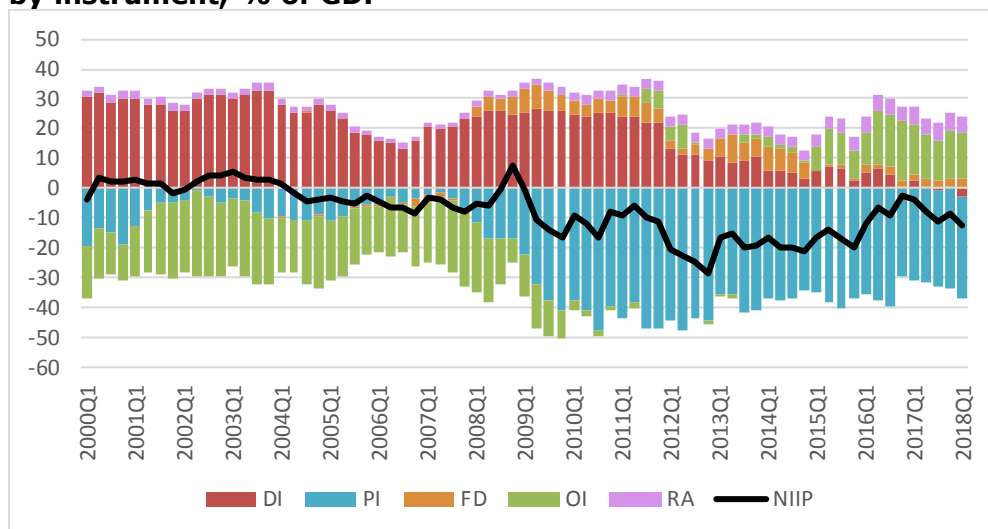
Figure 156: United Kingdom net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

Figure 157: United Kingdom net and gross international investment position by instrument, % of GDP

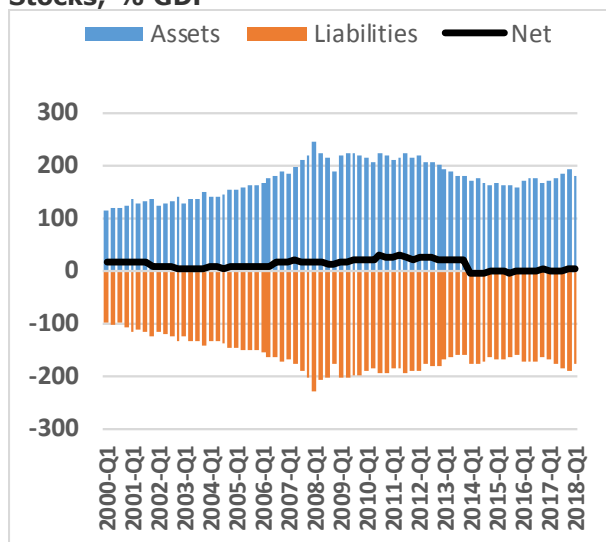


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

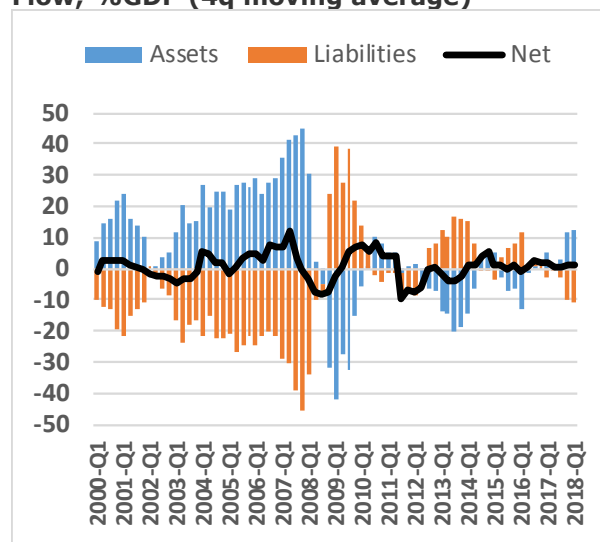
Notes: Both the NIIP positions and GDP are measured in USD

Figure 158: United Kingdom, BIS LBS

Stocks, % GDP



Flow, %GDP (4q moving average)

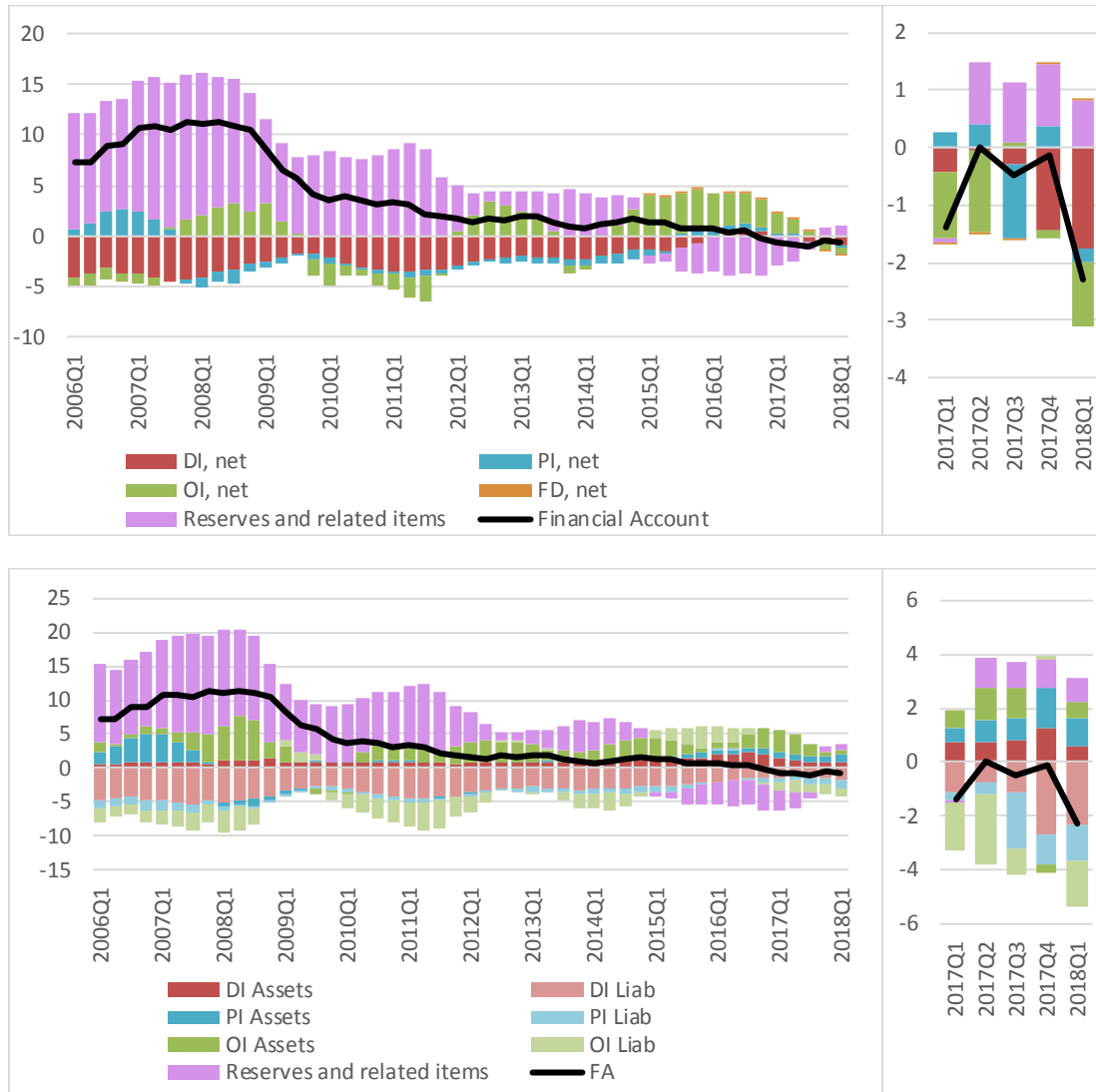


Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

7.3. Global regions

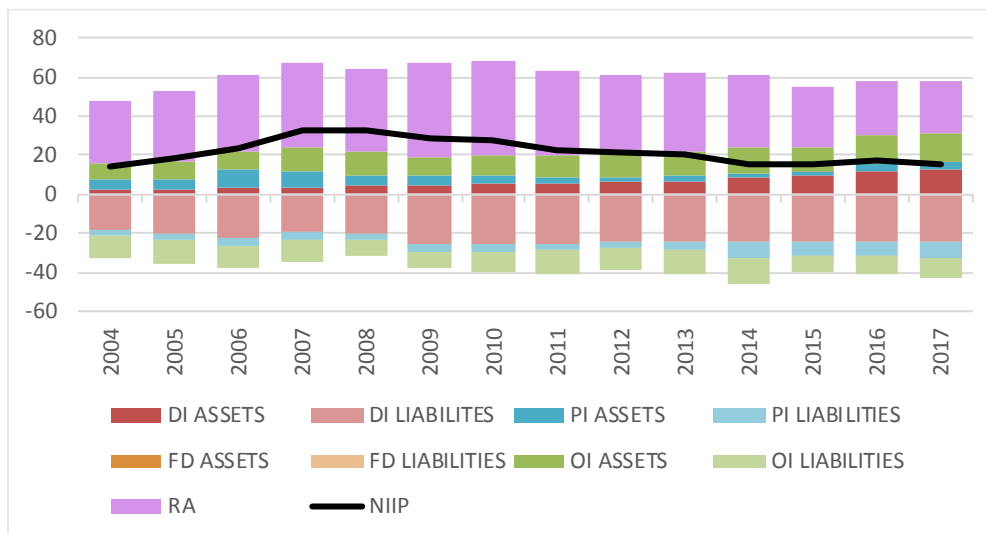
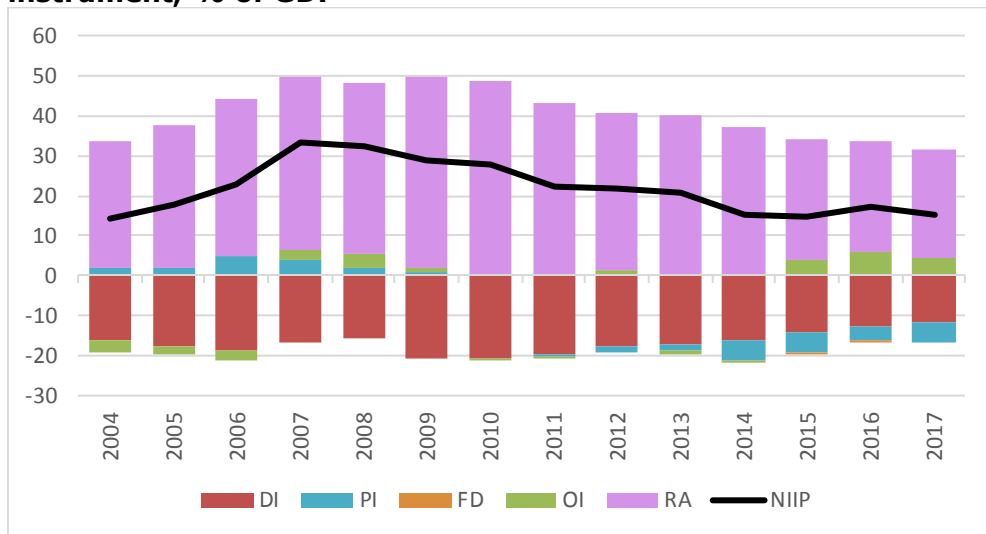
Figure 159: China net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

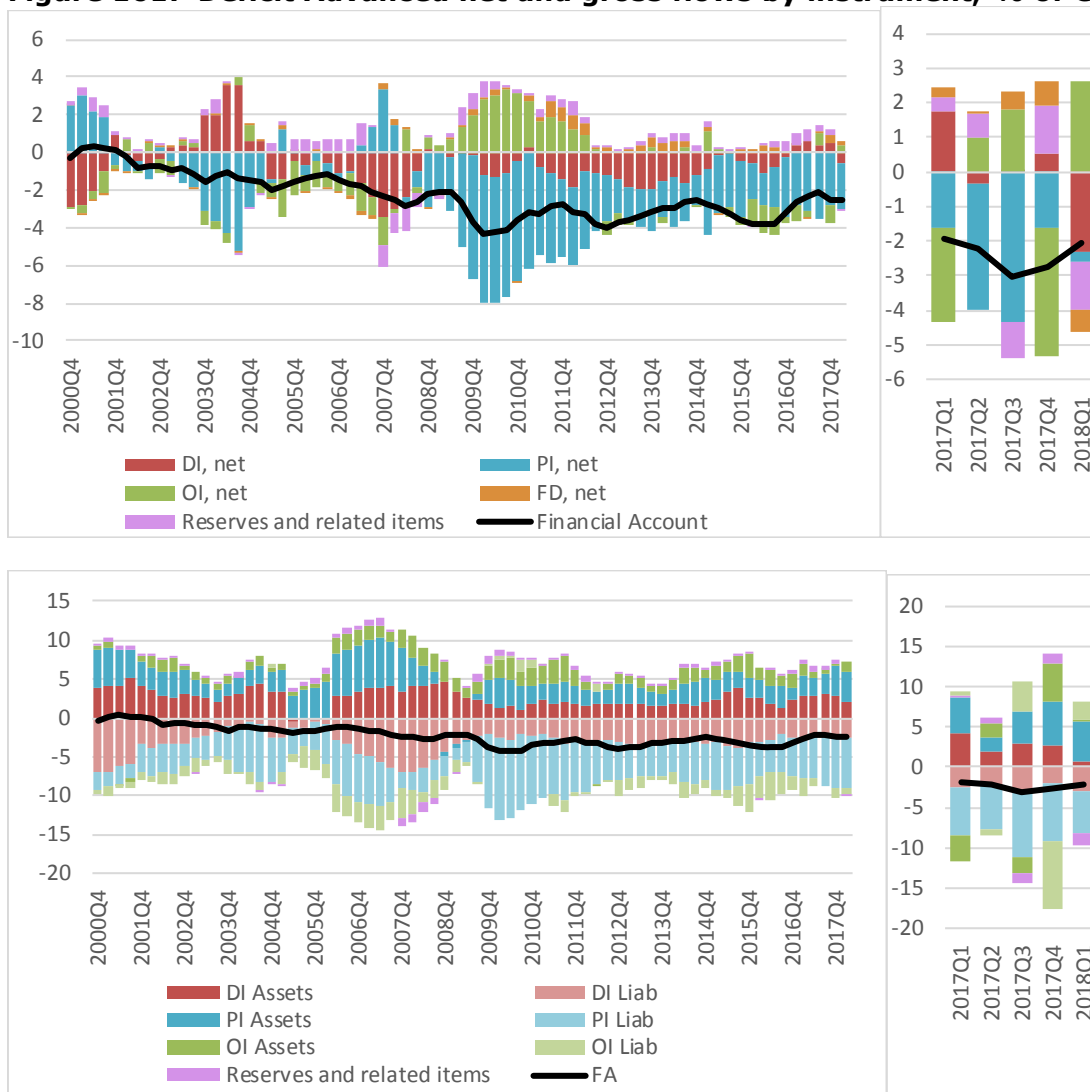
Figure 160: China net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD.

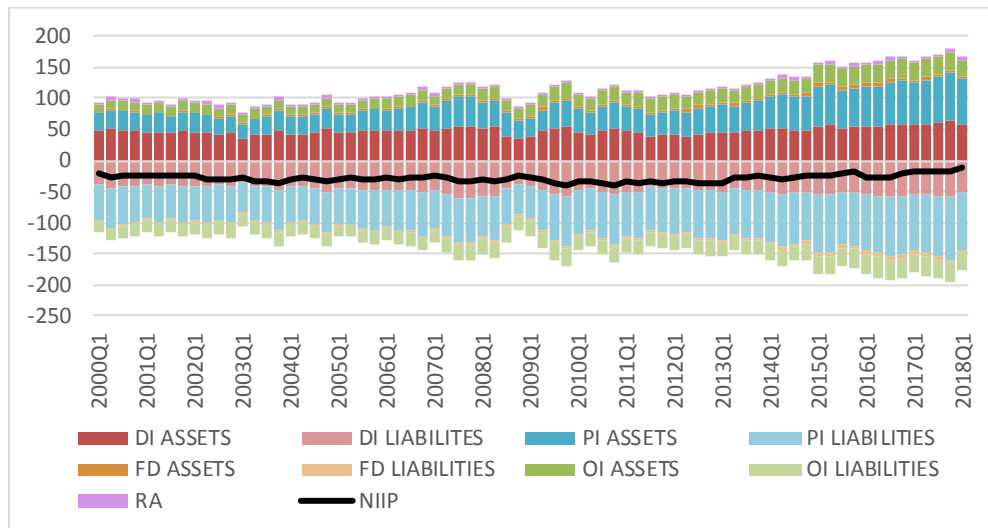
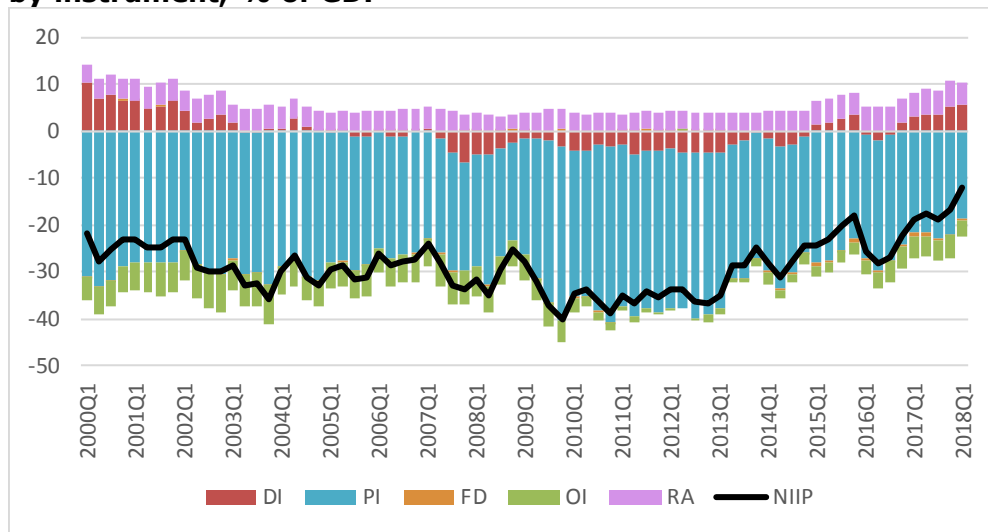
Figure 161: Deficit Advanced net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

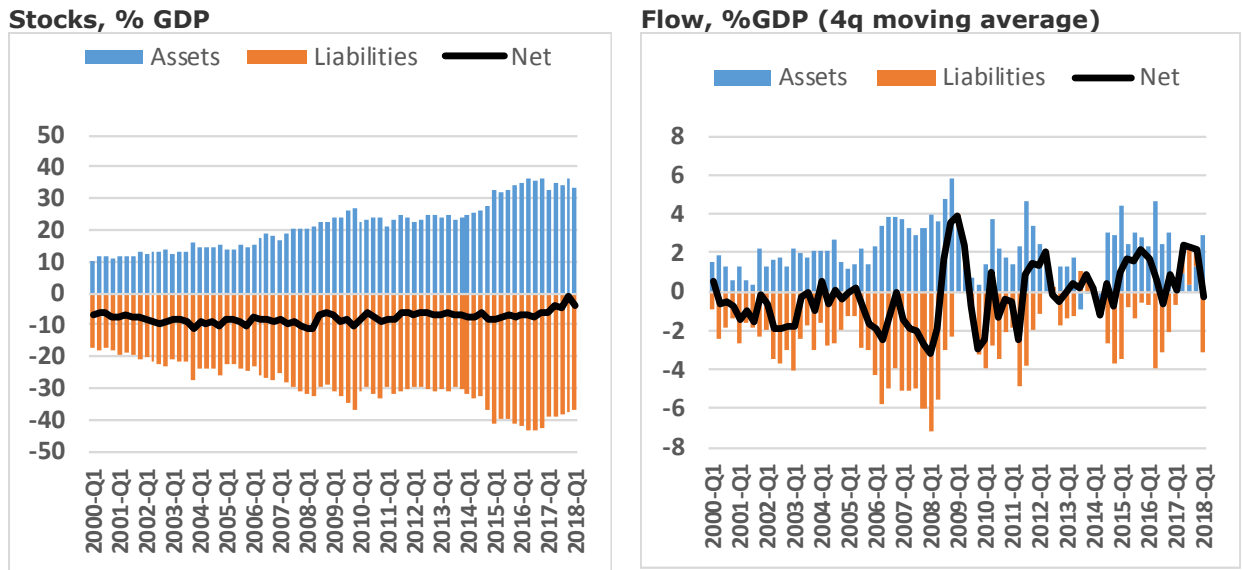
Figure 162: Deficit Advanced net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD

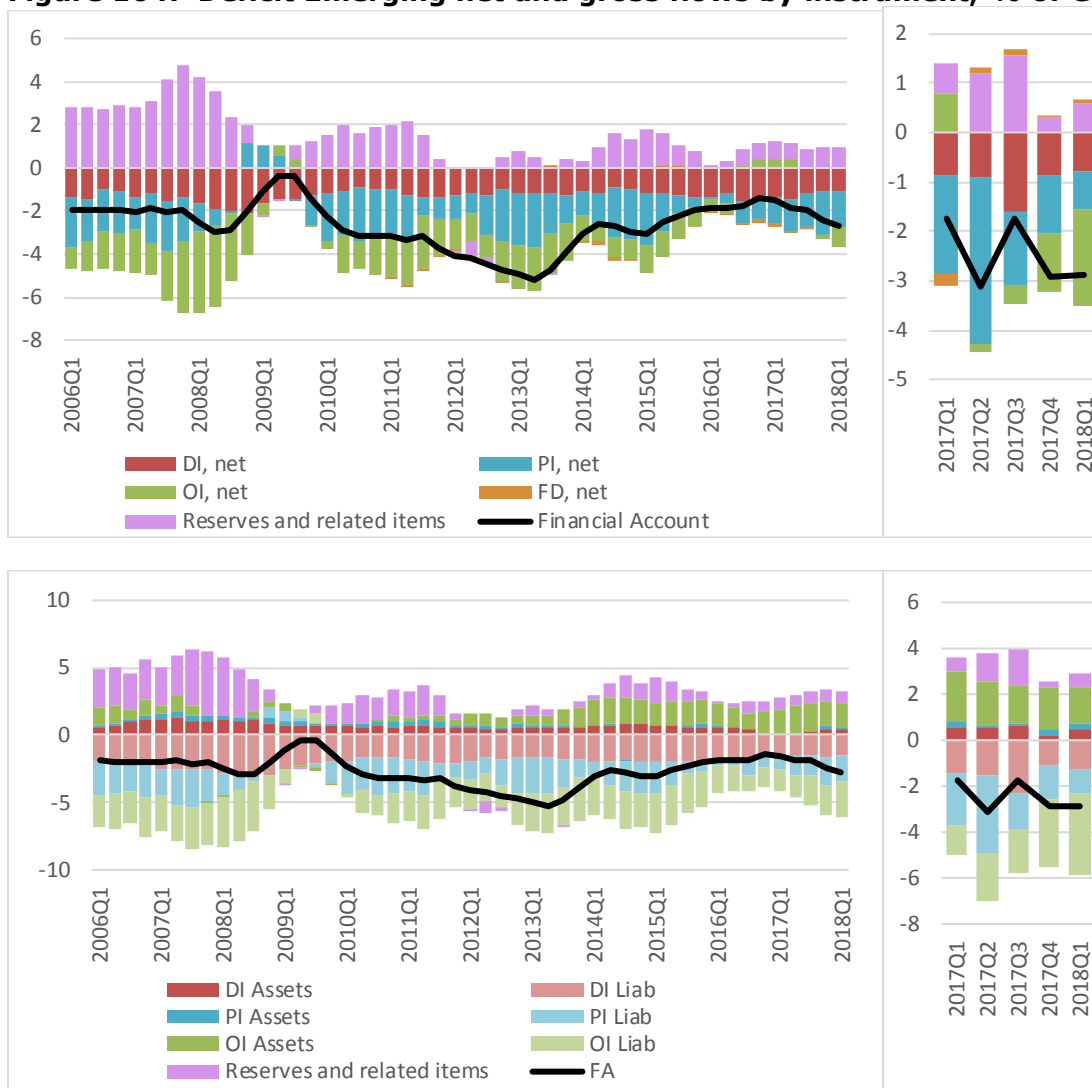
Figure 163: Deficit advanced countries, BIS LBS



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average; New Zealand is excluded due to data availability

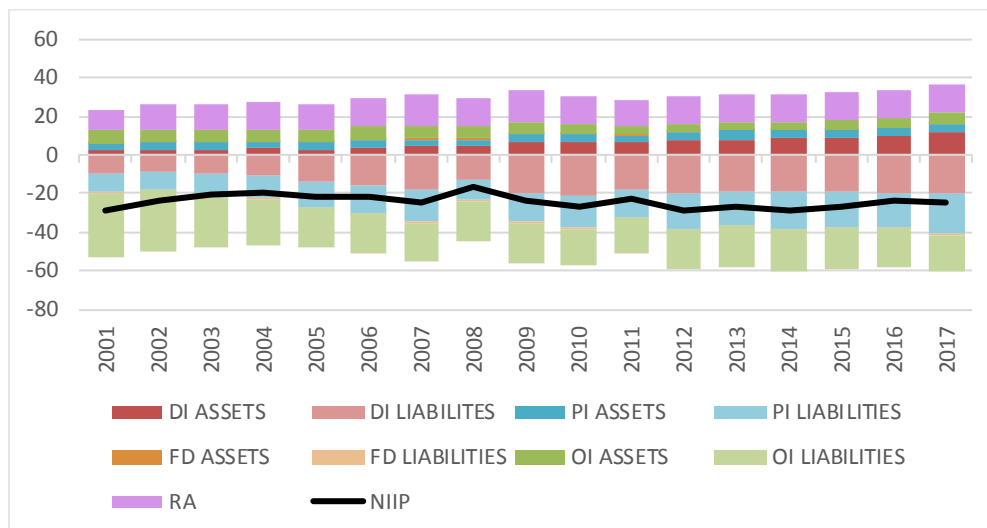
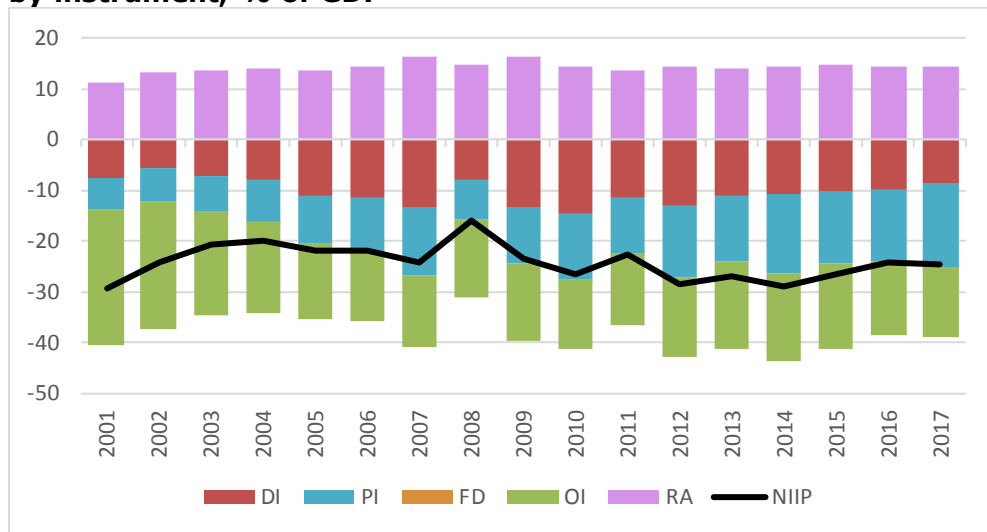
Figure 164: Deficit Emerging net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

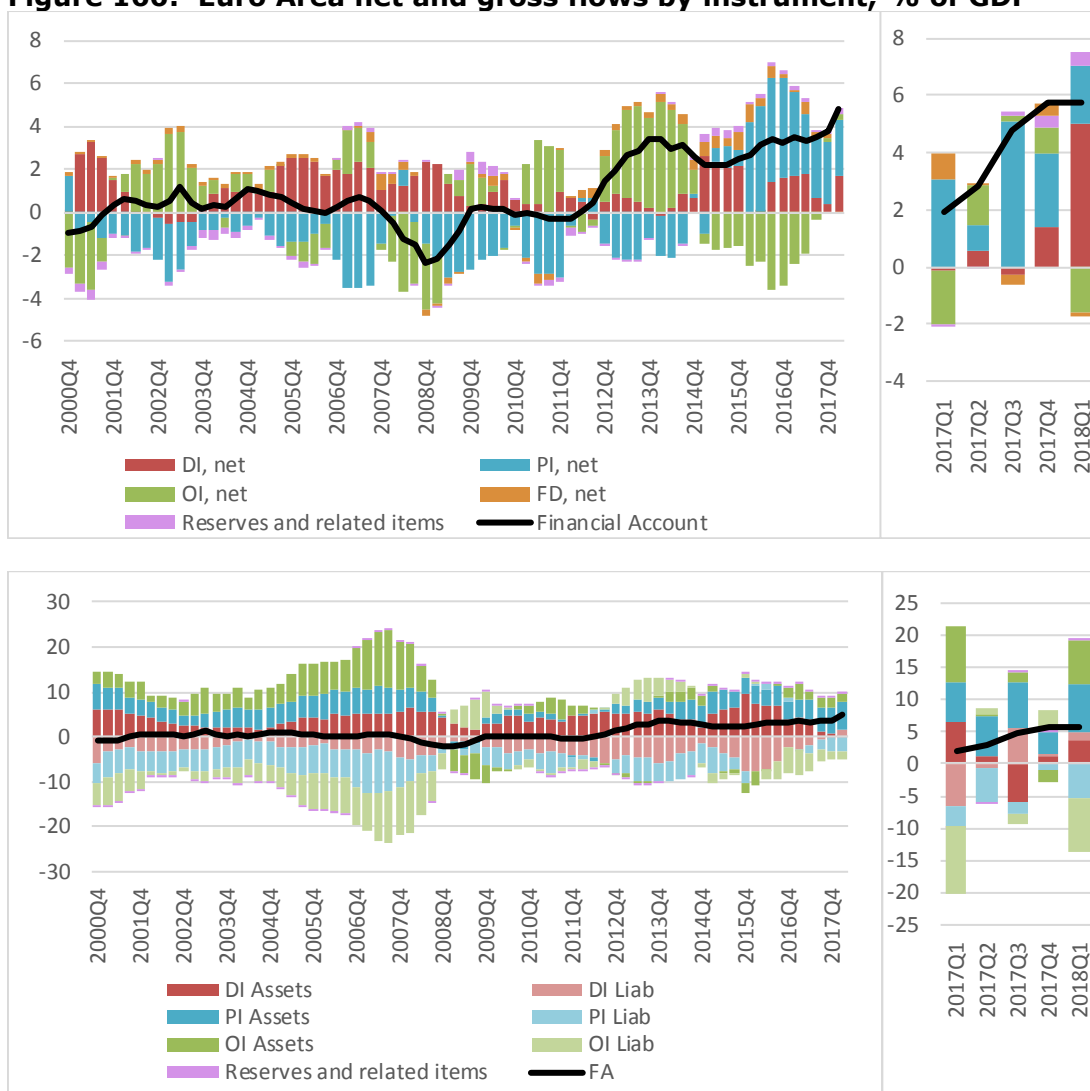
Figure 165: Deficit Emerging net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD

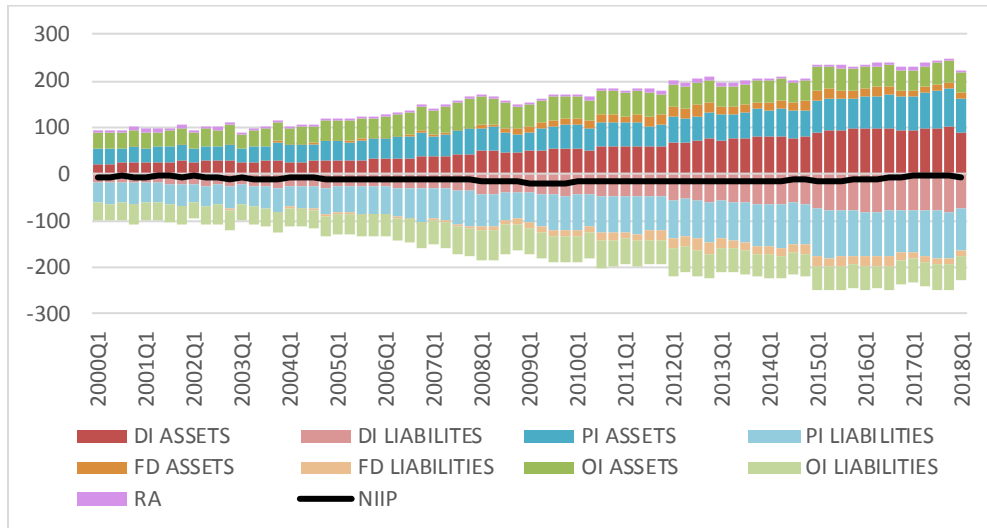
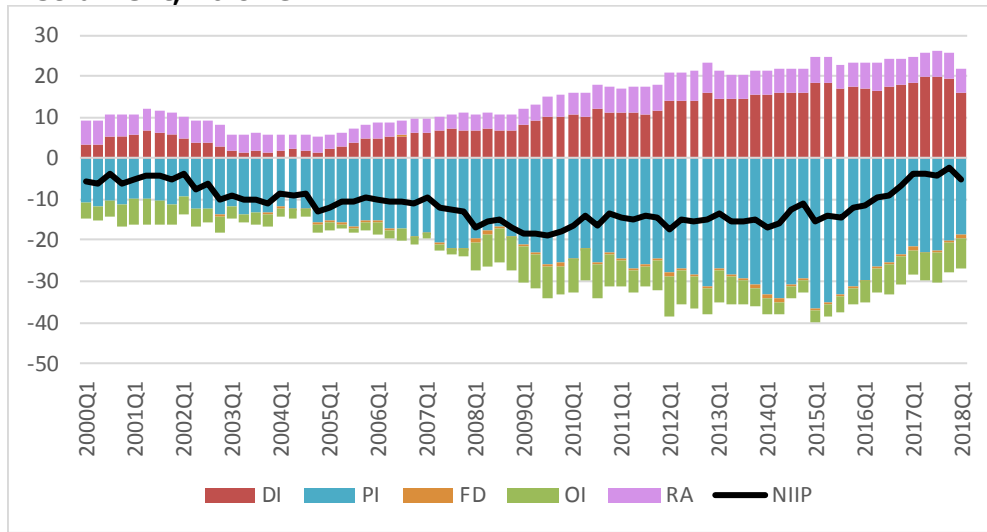
Figure 166: Euro Area net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

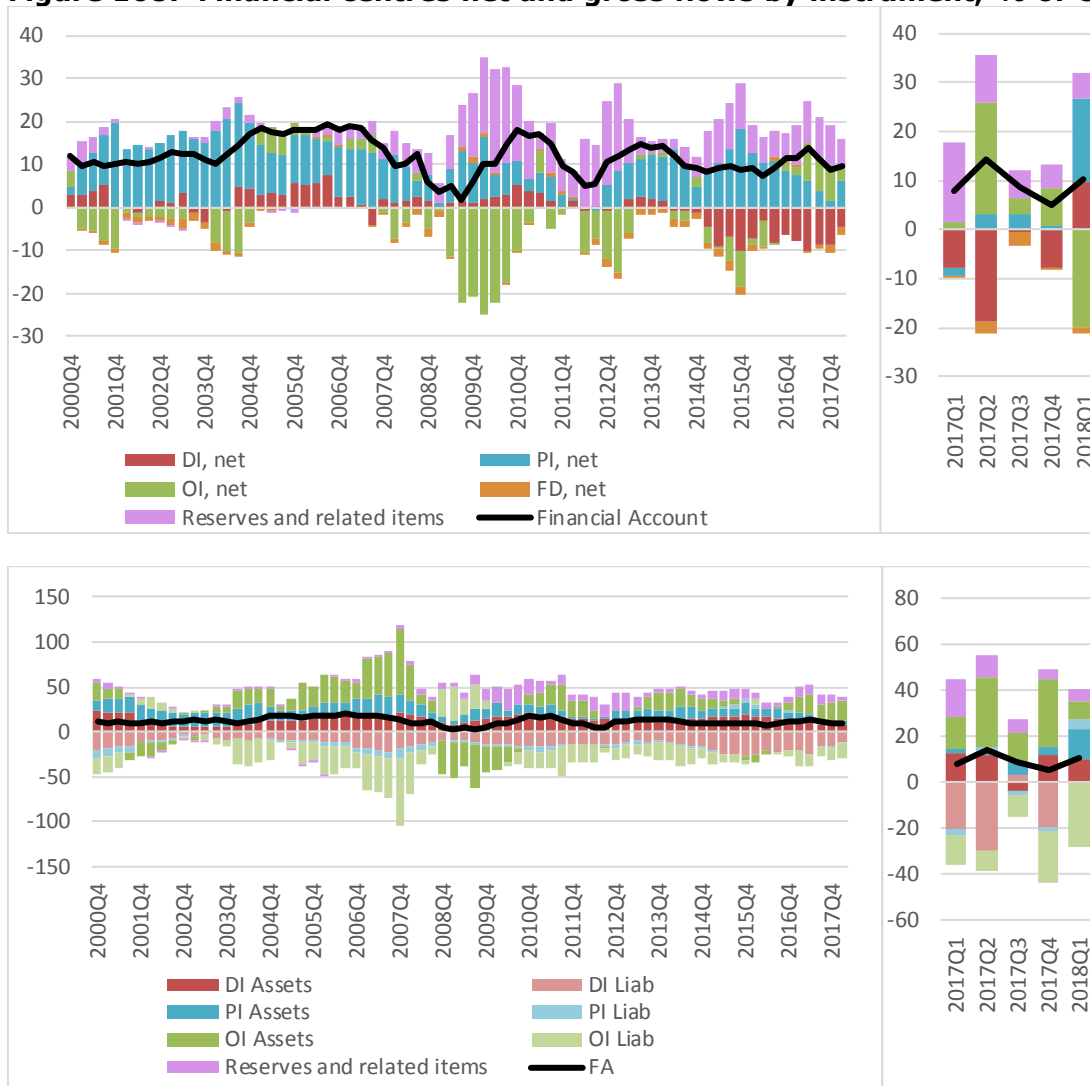
Figure 167: Euro Area net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD

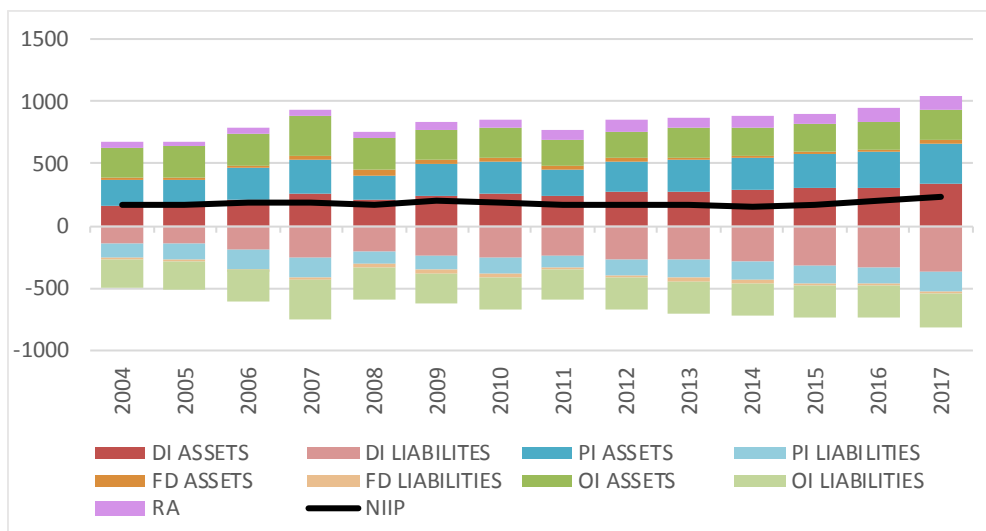
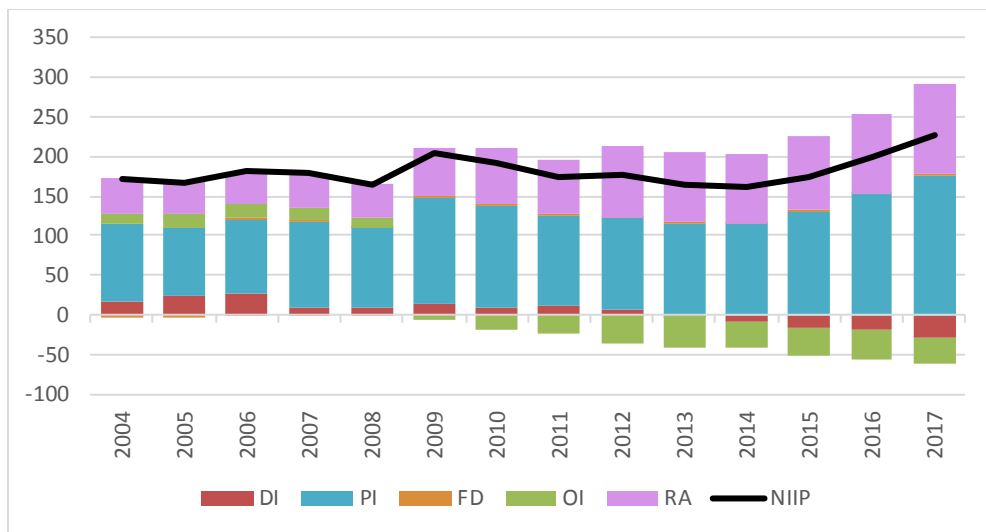
Figure 168: Financial centres net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

Figure 169: Financial centres net and gross international investment position by instrument, % of GDP

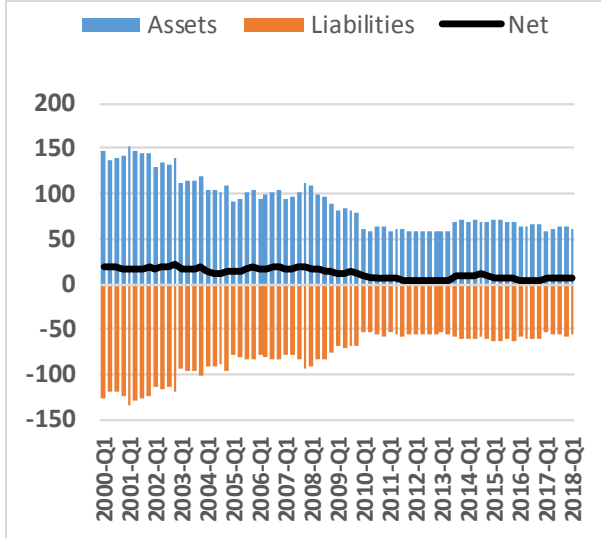


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

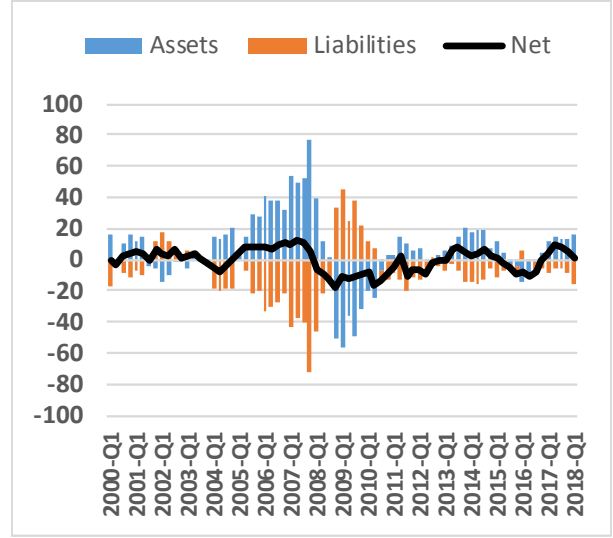
Notes: Both the NIIP positions and GDP are measured in USD

Figure 170: Financial centres, BIS LBS

Stocks, % GDP



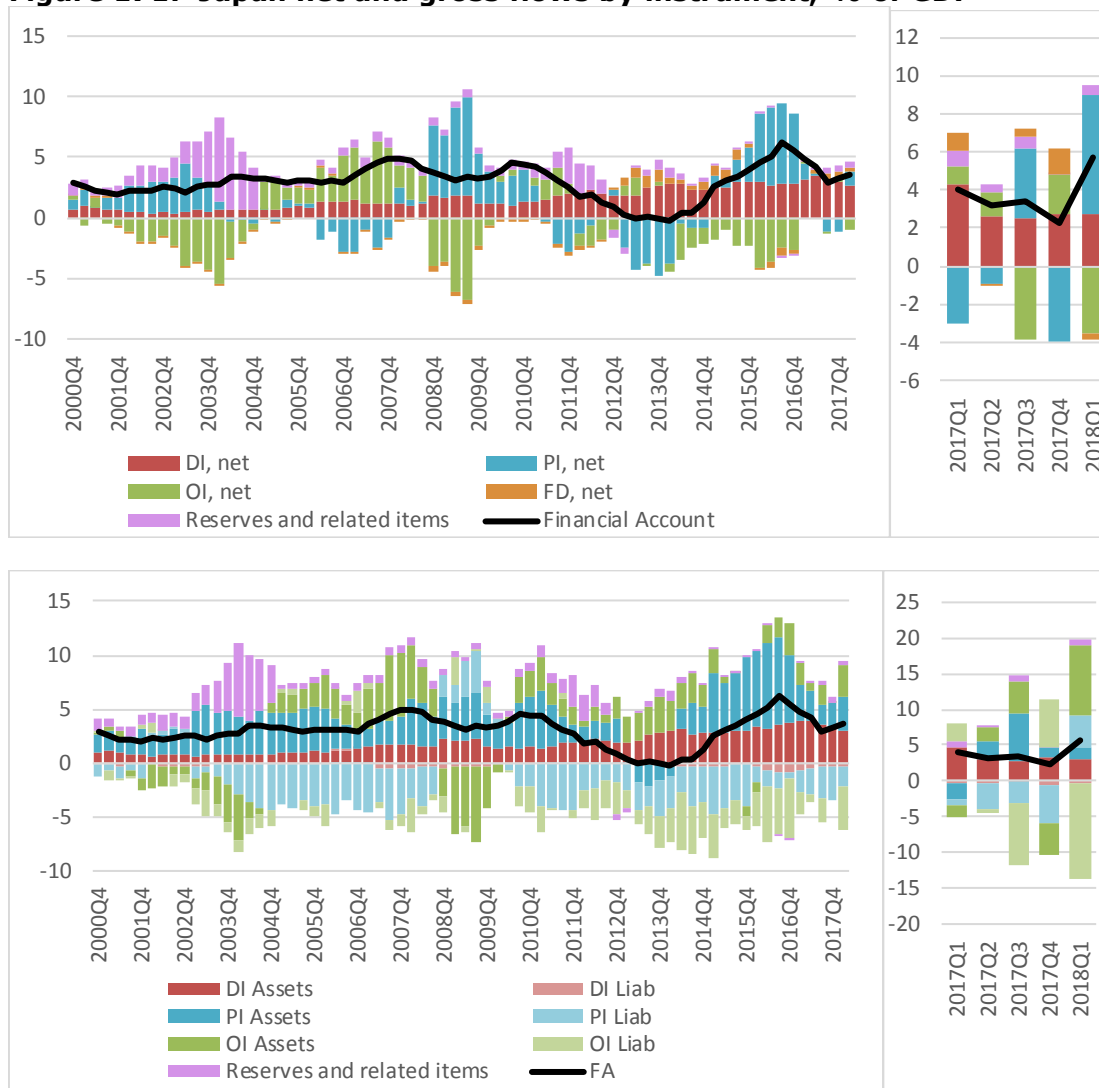
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

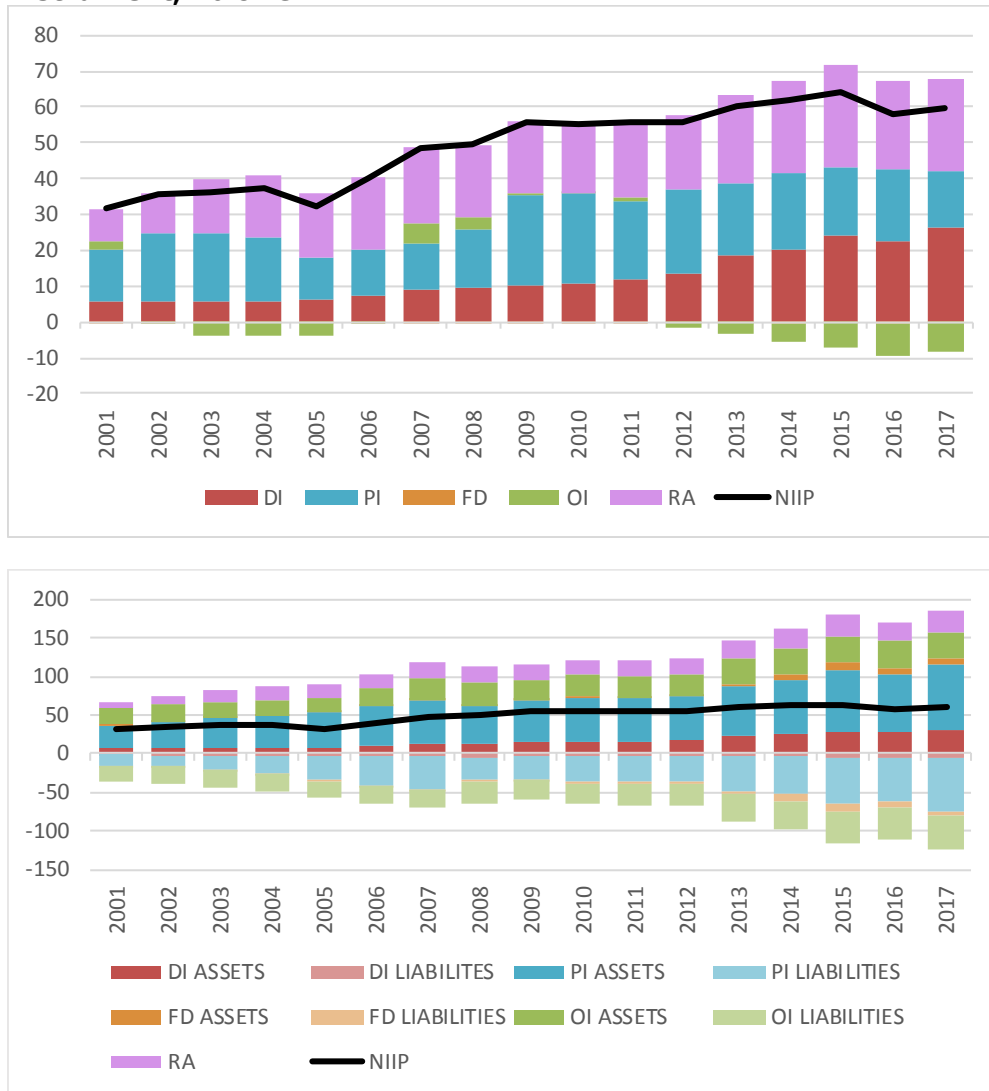
Figure 171: Japan net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

Figure 172: Japan net and gross international investment position by instrument, % of GDP

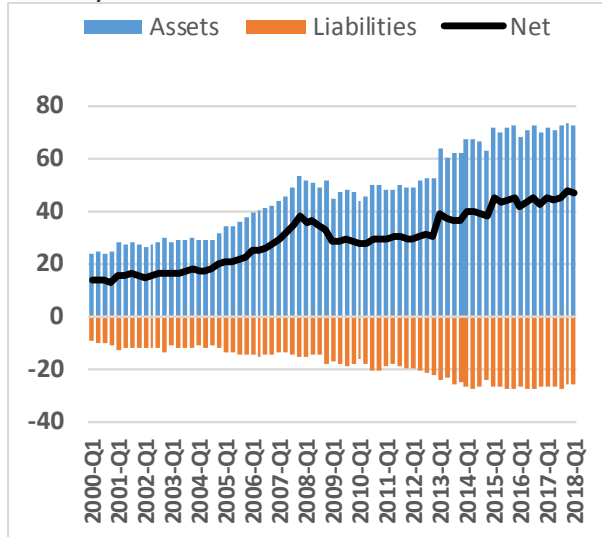


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

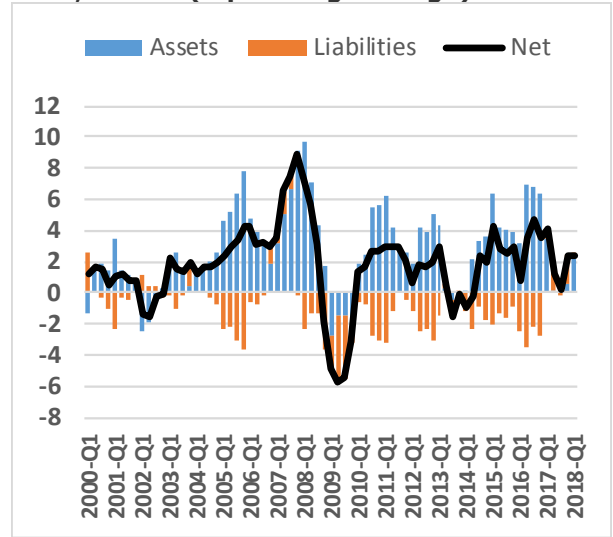
Notes: Both the NIIP positions and GDP are measured in USD

Figure 173: Japan, BIS LBS

Stocks, % GDP



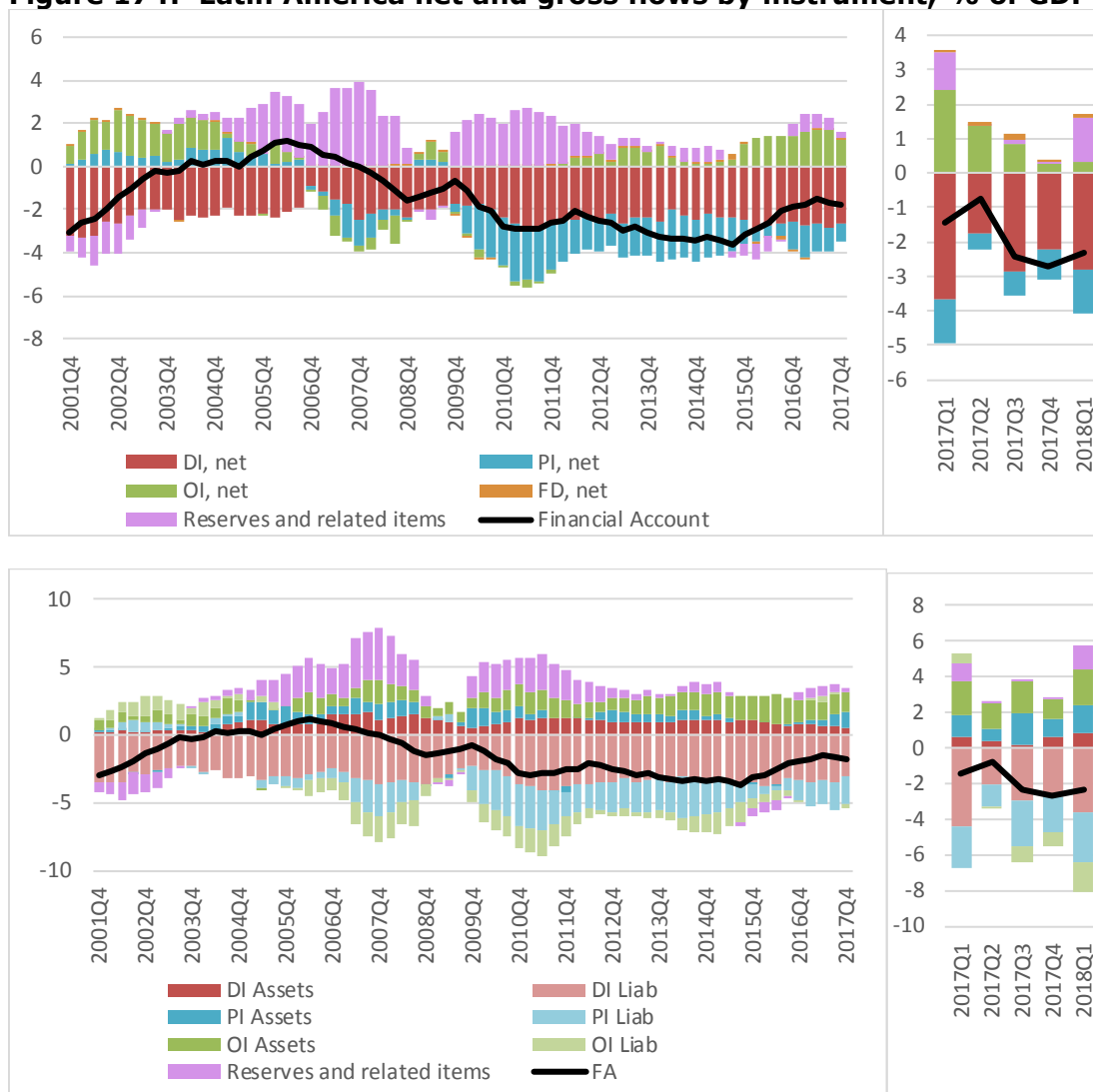
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics.

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average.

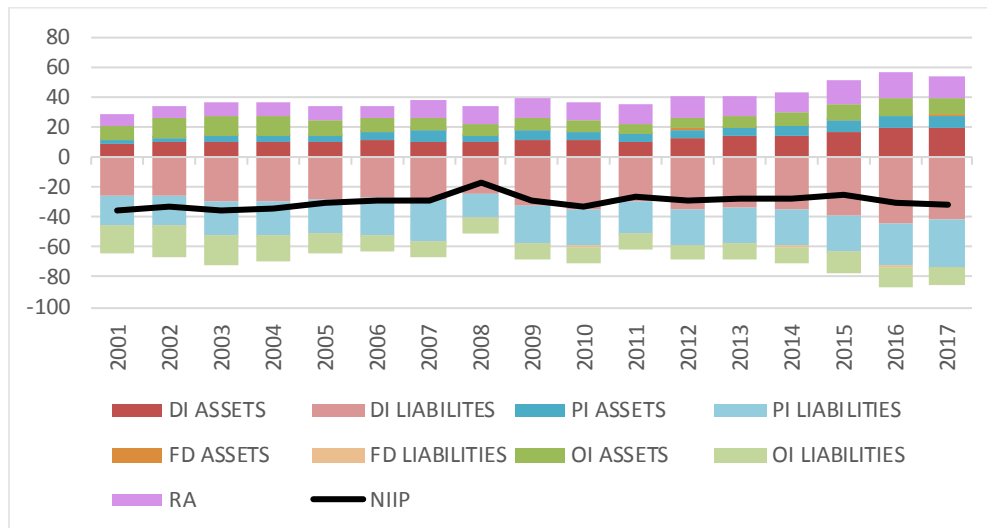
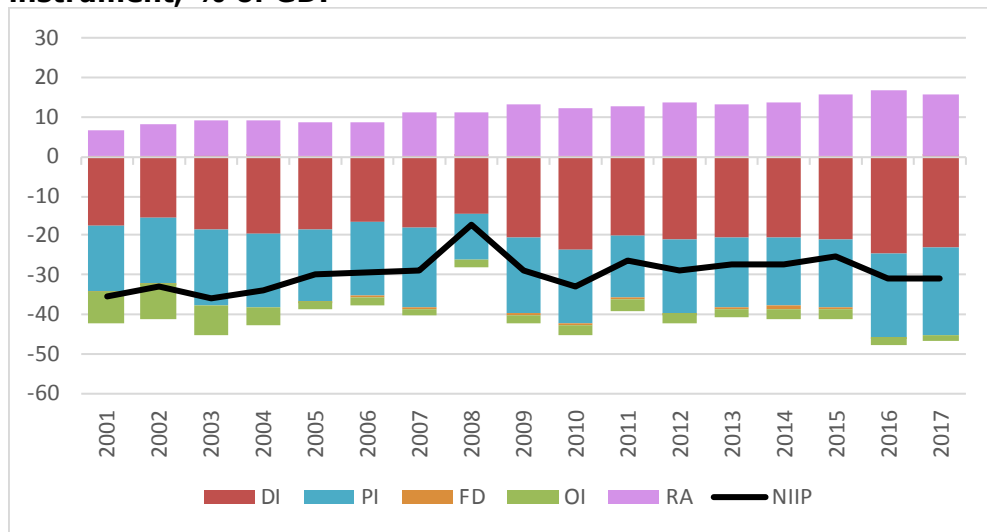
Figure 174: Latin America net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

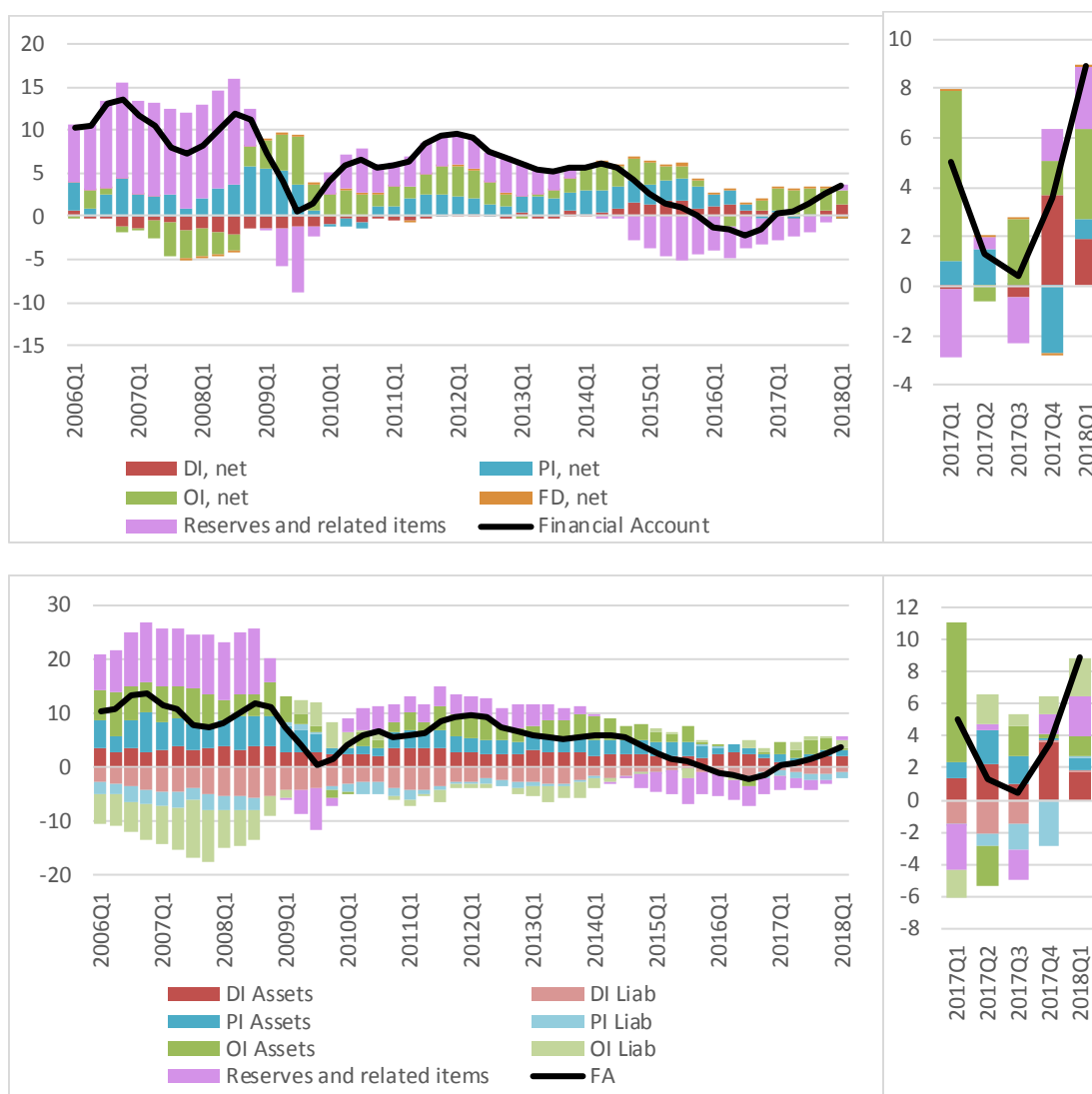
Figure 175: Latin America net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD.

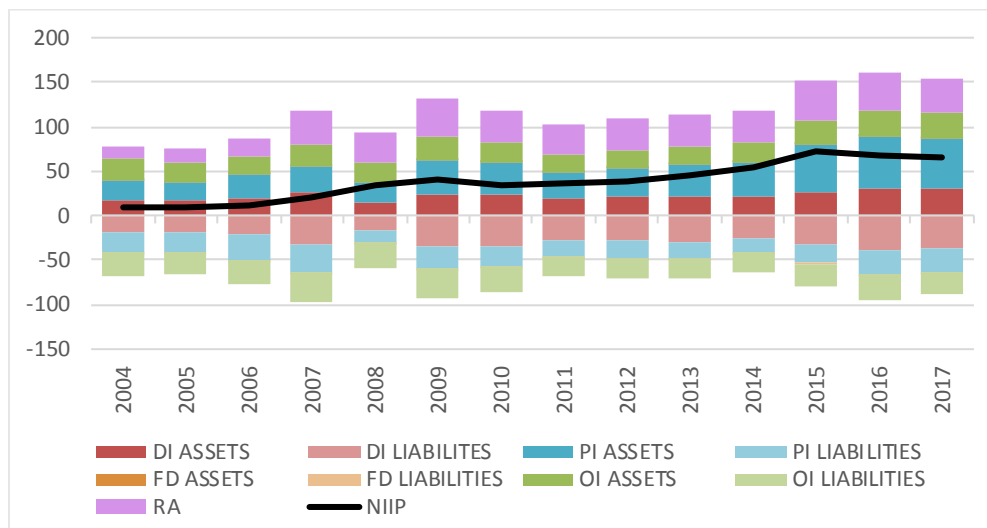
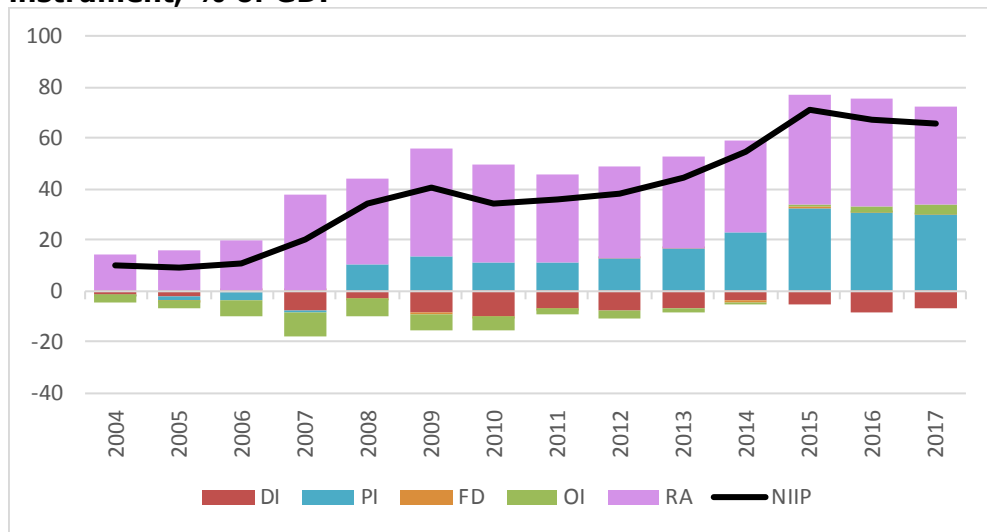
Figure 176: Oil net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

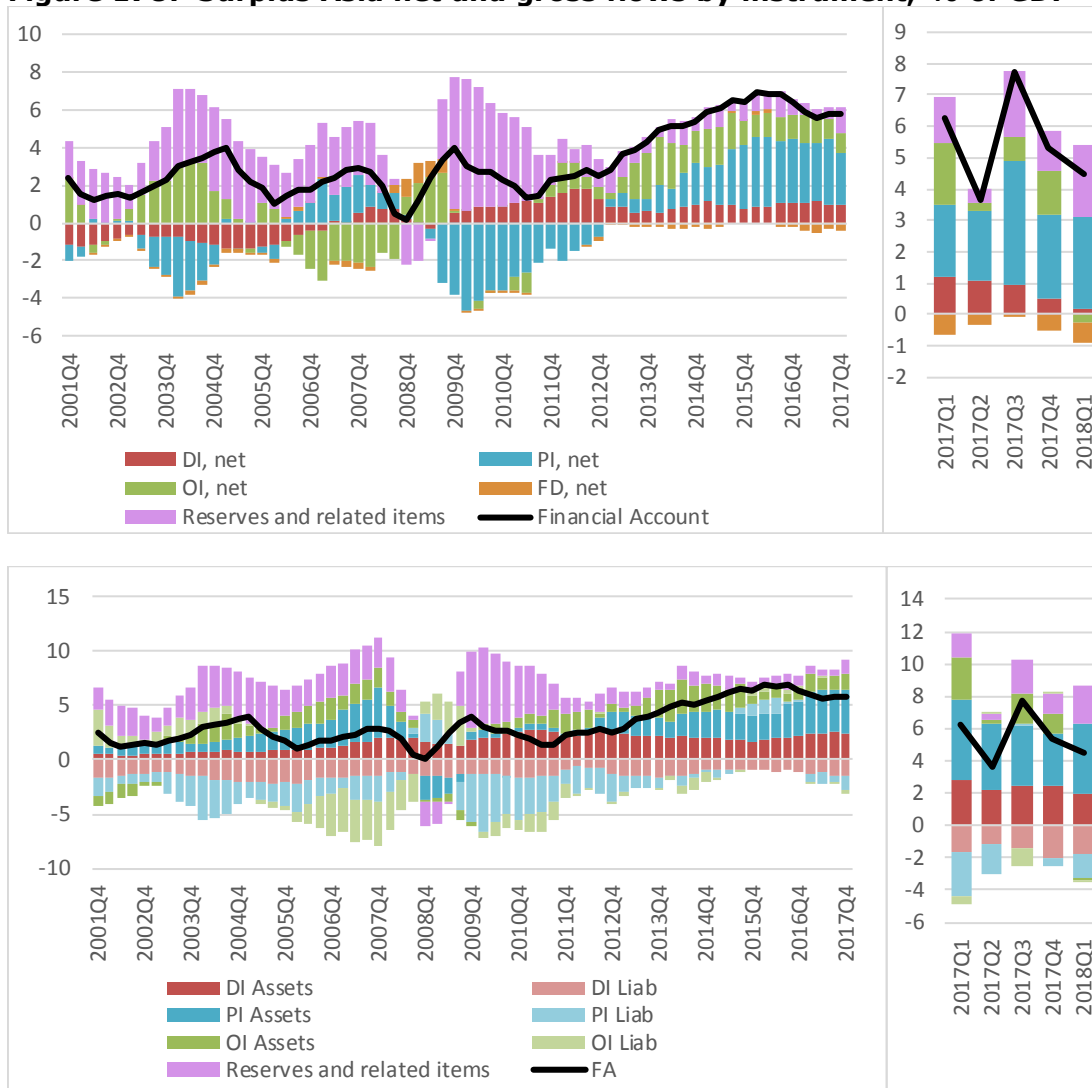
Figure 177: Oil net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD.

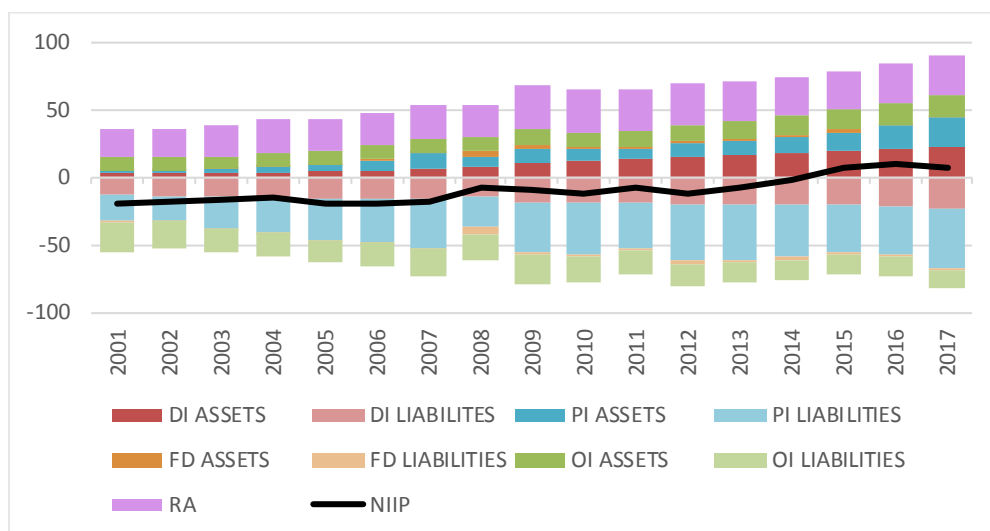
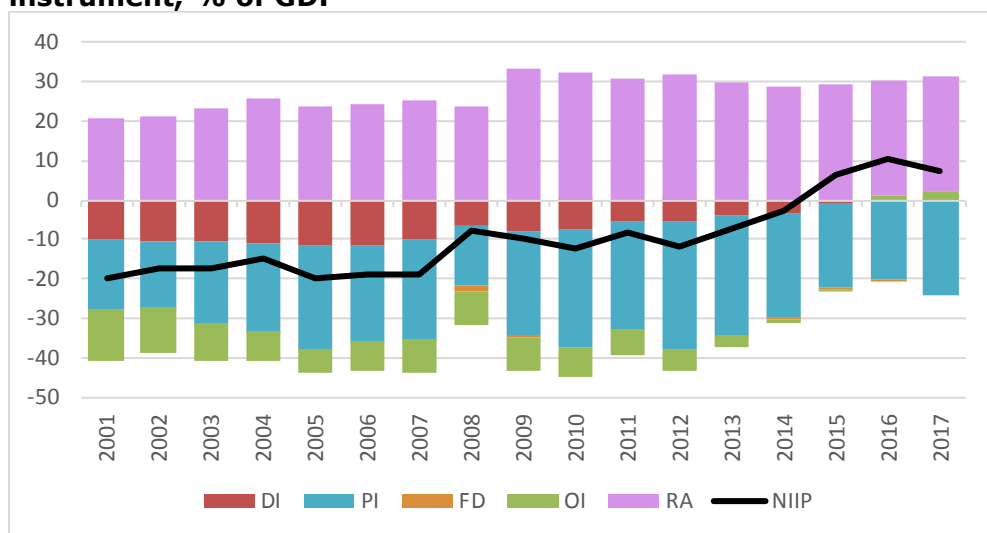
Figure 178: Surplus Asia net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

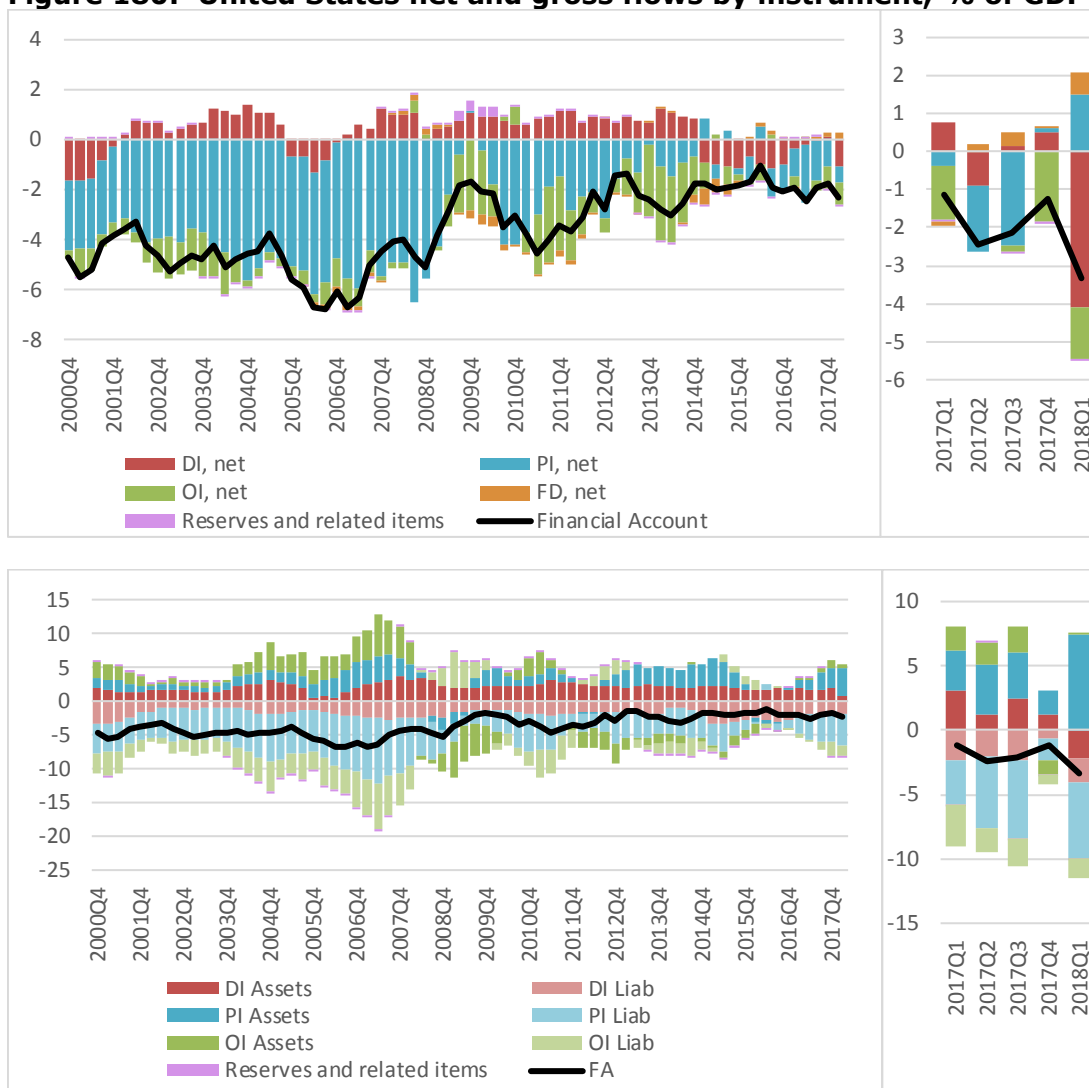
Figure 179: Surplus Asia net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Both the NIIP positions and GDP are measured in USD.

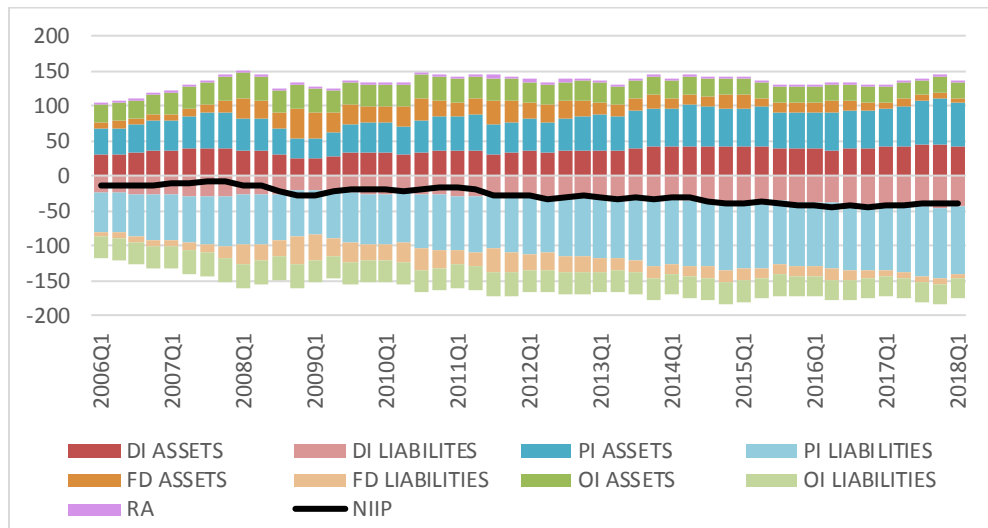
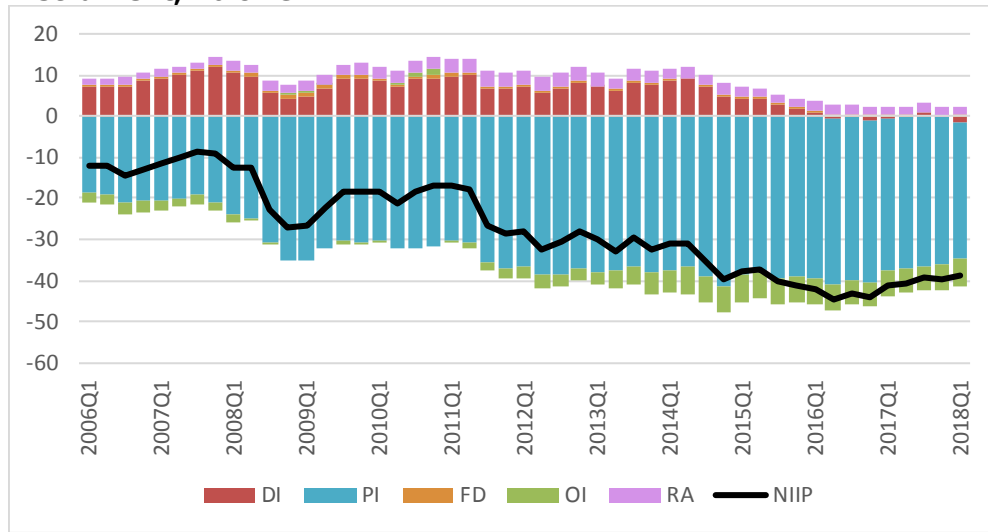
Figure 180: United States net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available.

Figure 181: United States net and gross international investment position by instrument, % of GDP

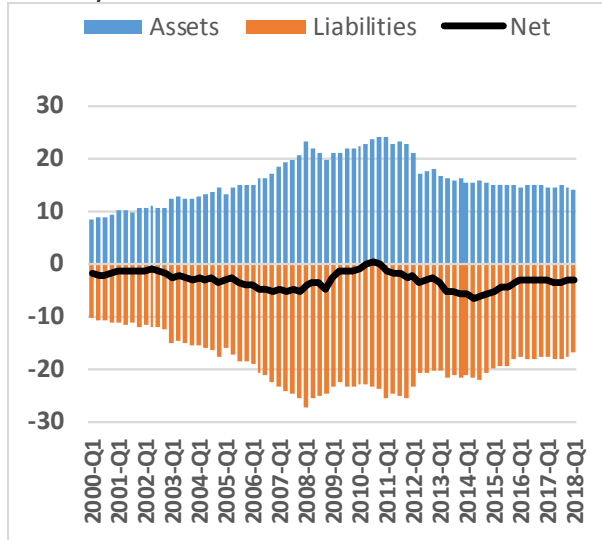


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2018.

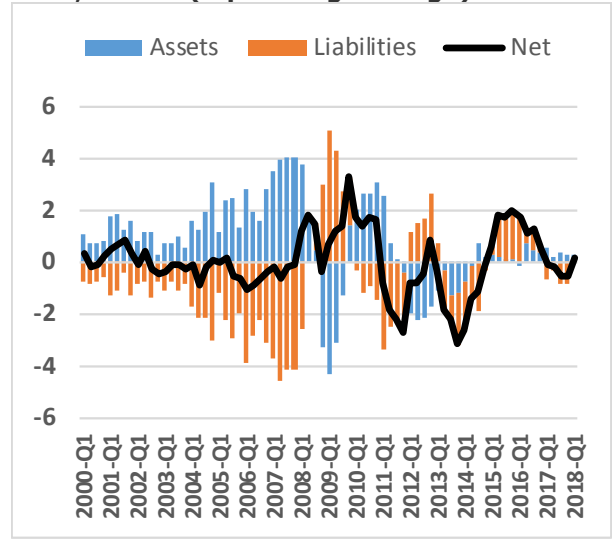
Notes: Both the NIIP positions and GDP are measured in USD.

Figure 182: United States, BIS LBS

Stocks, % GDP



Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

Notes: Assets (flows) and liabilities (flows) are 4Q lagging moving average

8. Appendix 3: Variables for estimation

Regressors	SAFE survey question	SAFE answer options	Treatment
SME	How many people does your enterprise currently employ either full or part-time at all its locations <in your country>?	<p>From 1 employee to 9 employees (micro)</p> <p>From 10 employees to 49 employees (small)</p> <p>From 50 employees to 249 employees (medium)</p> <p>250 employees or more (large)</p>	<p><i>Dummy micro enterprises</i></p> <p><i>Dummy small and medium enterprises</i></p> <p><i>Dummy large enterprises</i></p>
Age	In which year was your enterprise first registered?	<p>- 10 years or more</p> <p>- 5 years or more, but less than 10 years</p> <p>- 2 years or more, but less than 5 years</p> <p>- less than 2 years</p>	<p><i>Dummy between 2 and 5 years</i></p> <p><i>Dummy more than 5 years</i></p>
Profit	Has profit decreased, remained unchanged or increased over the past six months?	<p>- Increased</p> <p>- Remained unchanged</p> <p>- Decreased</p> <p>- DK</p> <p>- NA</p>	<p><i>Dummy increased</i></p> <p><i>Dummy remained unchanged</i></p> <p><i>Dummy decreased</i></p>
Turnover	What was the annual turnover of your enterprise in <last year>?	<p>Between 2 and 10 million</p> <p>Between 10 and 50 million</p> <p>Over 50 million</p>	<p><i>Dummy Turnover 210</i></p> <p><i>Dummy Turnover 1050</i></p> <p><i>Dummy Turnover50</i></p>
Leverage	Has debt compared to assets decreased, remained unchanged or increased over the past six months?	<p>- Increased</p> <p>- Remained unchanged</p> <p>- Decreased</p> <p>- DK</p> <p>- NA</p>	<p><i>Dummy increased</i></p> <p><i>Dummy remained unchanged</i></p> <p><i>Dummy decreased</i></p>
Innovative	During the past 12 months have you introduced a new or significantly improved product or service to the market OR a new organisation of management OR a new way of selling your goods or services	<p>- Yes</p> <p>- No</p> <p>- DK</p> <p>- NA</p>	<p><i>Dummy innovative if answered 'yes'</i></p>

Relevance of other sources of financing	Are the following sources of financing relevant to your enterprise, that is, have you used them in the past or considered using them in the future?	<ul style="list-style-type: none"> - Yes - No 	<p><i>Dummy relevance bonds</i></p> <p><i>Dummy relevance loans</i></p>
Enterprise capital	Would you say that your enterprise's own capital has improved, remained unchanged or deteriorated over the past six months?	<ul style="list-style-type: none"> - Improved - Remained unchanged - Deteriorated 	<p><i>Dummy enterprcapital if improved</i></p>
Ownership	Who owns the largest stake in your enterprise?	<ul style="list-style-type: none"> - Public shareholders - Family or entrepreneurs - Venture capital enterprises or business angels - One owner only, yourself or another natural person 	<p><i>Dummy ownership if company is a family, entrepreneur, business angel or single person</i></p>
Investor appetite	Would you say that the willingness of investors to invest in your enterprise has improved, remained unchanged or deteriorated over the past six months?	<ul style="list-style-type: none"> - Improved - Remained unchanged - Deteriorated 	<p><i>Dummy investorappup</i></p> <p><i>Dummy investorappdown</i></p>
Enterprise-specific outlook	Would you say that your enterprise-specific outlook with regards to your sales and profitability or business plan has improved, remained unchanged or deteriorated over the past six months?	<ul style="list-style-type: none"> - Improved - Remained unchanged - Deteriorated 	<p><i>Dummy enterprise outlook up</i></p> <p><i>Dummy enterprise outlook down</i></p>

9. Appendix 4: Regression results

Equity finance gap	Coefficient	Robust		P> t	95% Confidence Interval	
		SE	t			
sme	0.01	0.02	0.43	0.67	-0.03	0.05
large	-0.02	0.03	-0.90	0.37	-0.07	0.03
ownership	-0.03***	0.01	-2.41	0.02	-0.05	0.00
autonomous	0.02	0.01	1.14	0.26	-0.01	0.04
profitup	0.00	0.01	-0.34	0.74	-0.03	0.02
profitdown	0.03**	0.01	2.06	0.04	0.00	0.06
investorappup	-0.08***	0.01	-5.42	0.00	-0.11	-0.05
investorappdown	0.20***	0.03	7.43	0.00	0.15	0.25
enterprcapital	-0.03*	0.01	-1.94	0.06	-0.05	0.00
leverageup	0.08***	0.02	5.31	0.00	0.05	0.11
age25y	-0.03	0.06	-0.53	0.60	-0.16	0.09
age5ymore	-0.04	0.06	-0.66	0.51	-0.16	0.08
turnover210	0.00	0.02	0.13	0.90	-0.04	0.04
turnover1050	-0.02	0.02	-0.77	0.44	-0.06	0.02
turnover50	0.00	0.02	-0.16	0.87	-0.05	0.04
relevancebonds	0.00	0.01	0.16	0.87	-0.02	0.03
relevancebonds	0.00	0.01	-0.14	0.89	-0.03	0.02
enterpoutlookup	0.00	0.01	-0.17	0.87	-0.03	0.02
enterpoutlookupdown	0.04**	0.02	2.25	0.03	0.00	0.07
innovative	0.01	0.01	0.81	0.42	-0.01	0.03
_cons	0.05	0.07	0.77	0.44	-0.08	0.19

OLS regression results. Cluster-robust standard errors are reported, with clusters being defined at the sector-country level. The reference category is a German micro firm, younger than two years old, with a turnover less than 2 million euros, part of a profit-oriented enterprise, listed on the stock market or owned by other firms, with no changes reported in profit, investor appetite, enterprise capital or leverage, and with no recent innovations implemented. Country-dummies were included in the model and are jointly significant but are omitted from the table for presentation purposes. Wald test ($F(27,84)=3.39$ Prob > F=0.000).

Number of observations = 2,862; $F(47,84) = 31.4$; Prob>F = 0.00; R-squared = 0.1527
 p-values reported * p<10%, ** p<5% and *** p<1%.

Results of the Ramsey RESET test do not reject the null hypothesis (Ho: model has no omitted variables)
 $F(3, 2811) = 1.72$ Prob > F = 0.1615

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