



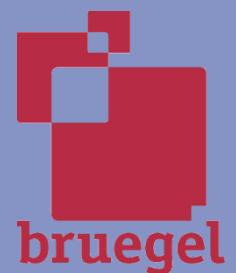
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Analysis of developments in EU capital flows in the global context

*Taking the perspective of the Capital Markets
Union*

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Executive summary

- This report presents an overview of the **recent trends of capital flows**, focused especially on the past year. It provides a detailed analysis at the global level and at the European Union level.
- From a global perspective, the first key takeaway from the report is that 2018 has seen the persistence of the **current account imbalances** of developed economies, consistent with a medium-term redistribution of global surpluses and deficits away from emerging economies that has been taking place since 2014.

While both the surpluses and the deficits of emerging economies are diminishing, a shift in the distribution of global surpluses away from China and towards oil exporters has taken place throughout 2018, mainly as a result of the increase in the price of oil over that same period.

Meanwhile, the current account imbalances of developed economies continue to be polarised between the surpluses of the euro area and Japan and the deficits of the US, the UK, and a group of advanced deficit economies.

Digging deeper into the EU's situation, the main development in 2018 has been the fall in the EU's financial account surplus, driven by a relatively broad-based fall in its member states' financial accounts. That said, the EU remains the most prominent net exporter of capital, with a financial account surplus of 2% vis-à-vis the rest of the world.

An important driver of the fall was the decline in the German financial account surplus, matched by a rise of domestic household and corporate investment in the current account. Germany's long-standing surplus has been a key contributor to the EU's overall position, in contrast to the UK and France's continued deficits.

- Secondly, and partially as a result of this polarisation, the divergence in **net international investment positions** between the two most important net debtor economies has continued in 2018. The US has seen a further deterioration of its NIIP throughout the year while the euro area continues to converge towards a balanced position.

NIIP imbalances are mainly the result of the trade imbalances of the last decade. The trends concerning trade balances have persisted in 2018: creditors generally continued to run surpluses and debtors to run deficits. At the same time, valuation effects on the stock of existing foreign assets and liabilities have contributed in the other direction, preventing a stronger divergence in NIIPs.

The notable exception is the US: a stronger dollar throughout 2018 combined with persistent trade deficits have supported the deterioration in the US net foreign asset position, absorbing improvements in the NIIPs of the rest of the world.

- Thirdly, a common factor behind recent global developments in capital flows has been the monetary divergence among advanced economies, and 2018 saw a partial shift between the first and the second half of that year.

In the first half of 2018, the size of **net portfolio debt outflows** fell in comparison to previous years. This was motivated by the expectation of better economic prospects for the euro area and an eventual monetary tightening by the ECB which had increased yields somewhat. At the same time, the actual interest rate differential between the US and the euro area pushed the cost of hedging dollar investments higher. As a result, the hedged yield of (risk-free) dollar investments became less appealing than the euro equivalent over time.

Nonetheless, economic optimism about the euro area was short-lived. Already by the second-half of 2018, euro area growth was expected to disappoint expectations for that year, as well as underperform forecasts for 2019. Although growth forecasts for 2019 were also revised downwards for the US, the expected interest rate differential between the US and the euro area widened again as markets ruled out gradual interest rate hikes in the latter and actually began to price a cut in 2019 and other measures such as the return of net asset purchases, which actually took place in September 2019.

As a result, net portfolio debt outflows from the euro area could intensify in the second half of 2019. After all, the interest rate differential between the US and the euro area, given the difference in the speed of the economic recovery between the two regions from 2013-14 and as a result of Fed rate hikes and expectations thereof, has been the most important driver of the net portfolio outflow from the euro area in recent years.

At the same time, the strengthening of the US dollar throughout 2018 had an important effect on global trends and followed an appreciating euro the previous year. Partially as a result of this, emerging market currencies suffered severe depreciations in the course of the year, but their value seems to have stabilised in the first half of 2019. This is partially driven by the weakening global outlook of the past several months which has altered expectations about the monetary policy of both the Federal Reserve (Fed) and of the ECB.

- Finally, the evolution of **global FDI flows** this year has been particularly important. This report provides several key takeaways in this regard.

From a global standpoint, the main development in net FDI flows in 2018 has been the increase in net inflows into the US throughout the year, partly related to repatriation of previous earnings from US multinationals after the enactment of the Tax Cuts and Jobs Act (TCJA).

On the other side of the Atlantic, the EU has been recording stronger net FDI outflows in the past year. This represents a partial shift from 2016-17 when FDI flows were close to balance (after a reduction of outflow in the aftermath of the crisis). Germany, France and the Netherlands have been the main source of FDI, while the UK generally exhibits net inflows. British fluctuations in the post-crisis period (including the recent fall in inflows) have had a significant impact on the overall EU balance.

- That said, the evolution of **gross flows** throughout 2018, mainly driven by FDI, has been more significant, both at the Global and at the EU level, and warranted deeper analysis.

In recent quarters, the reduction in direct investment flows which started in 2015 accelerated substantially. This had been compensated until 2017 by an increase in portfolio investment and other investment, when both also started to decrease, causing a reduction in total flows.

The drop was largest in the US and the euro area, where it was largely driven by large declines in Luxembourg, the Netherlands and, to a lesser extent, Hungary. These can be attributed to the recent decrease in flows to and from special purpose entities (SPEs). The slowdown on the liability side follows a similar pattern, and it is also mainly driven by the euro area.

These developments are mainly driven by the slowdown of flows from non-EU Ultimate Investing Countries (UICs) to non-EU Ultimate Host Countries (UHCs) that pass through a set of specific EU countries that have been heavily used as

conduits of FDI, mostly those with high concentration of SPEs. On the contrary, 'genuine' FDI flows in and out of the EU are much more robust.

Indeed, there is evidence that the decrease in gross flows in the EU is concentrated among SPEs in Luxembourg and the Netherlands, while the evolution of flows in most of the remaining EU countries that do not host SPE activities is much more stable. In addition, EU countries with a high presence of SPEs or entities that serve as FDI conduits have large FDI asset and liability positions with extra-EU countries and among themselves (the Netherlands and Luxembourg are in the global top three of largest sources and destinations of direct investment, along with the US).

The question of which non-EU countries are behind the slowdown is more difficult to answer as we do not observe bilateral flows. The US is the most plausible candidate to be the ultimate investing country behind the slowdown, given that a decrease in its flow of asset acquisitions is not matched by liabilities. With regards the ultimate host country, possible explanations include the fall seen in the UK because of the uncertainty surrounding Brexit, China and other Asian countries because of the global trade and geopolitical tensions, the US itself, mainly because of the changes in its legislation, and, more plausibly, a combination of these three explanations.

Considering the flexibility of SPE structures used by MNEs and the tax, regulatory and confidentiality benefits some global financial centres provide, it can be expected that even small changes in legislation can shift investment flows' pattern. A good example of a legislation change that might have contributed to the global drop in FDI is the 2017 US Tax Cuts and Jobs Act (TCJA).

1. Introduction

The aim of this report, like the five 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 uses, 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 two following 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 from previous reports (Darvas *et al.* 2014, 2015, 2016, Claeys *et al.* 2017 and 2018), but get right into an analysis of global capital flows.

Contrary to these previous reports, to avoid too much repetition, this year's report does not dig into the data of each country, or group of countries, but adopts a thematic approach in order to investigate the most important developments in capital flows in the recent period. However, the evidence by country and country groups provided in previous years' reports, using the IMF, Eurostat, and BIS Locational Banking Statistics (LBS) datasets, can still be found in Appendix 2 of this report.

Section 2 presents trends from a global perspective, focusing on trends 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 other relevant events. Looking at global imbalances and net flows, the overall picture has not radically changed since last year. However, when looking at gross flows, a remarkable evolution is visible. Recent quarters have seen an acceleration of the substantial reduction in direct investment flows which started in 2015. On an aggregate level, this development had been compensated until 2017 by an increase in portfolio investments and other investments. This was not the case in 2018, causing a reduction in total flows. We investigate the main drivers of this important evolution further. It appears that this development is mainly driven by the slowdown of flows from non-EU UICs to non-EU UHCs that pass through a set of specific EU countries that have been heavily used as conduits of FDI. On the contrary, 'genuine' FDI flows in and out of the EU are much more robust.

Section 3 focuses on Europe. We analyse the different capital flow patterns and developments in international investment positions, including their compositions. Again, to avoid repeating last year's report, we do not dig into each country or group of countries, but when necessary we discuss some particular countries that are relevant to understand the European picture. The most interesting observation in this analysis for the year 2018 is also related to FDI flows, as we observe a decline in extra-EU FDI gross flows in the recent period. Concerning intra-EU flows, the most important pattern observed, in particular in FDI, is how correlated they are with the ones observed for extra-EU28 flows. The link between the two has to do with the fact that inward FDI in particular tends to transit first through a few EU countries. This leads us to investigate the decomposition of flows between special purpose entities (SPEs) and non-SPEs, which shows that the decrease in direct investment gross flows in the EU is driven by the flows involving SPEs. This means that the reduction in FDI flows is not necessarily linked to a substantial fall in 'genuine' direct investment flows within the EU. Actually, when observing only the resident non-SPE entities, the slowdown seems less pronounced.

2. Global trends

2.1. Global imbalances

Box 1: Groups for analysis

As in previous versions of the report (Darvas et al., 2014, 2015, 2016 and Claeys et al. 2017, 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. Flow imbalances

In an inherently complex system consisting of countless financial transactions and investment decisions, balance of payment statistics can serve as a tractable indicator of the overall direction of cross-border 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.¹ Taking the global view – i.e. a closed system in which countries' current account balances must sum up to zero – the above accounting identity, thus, illustrates the flow of financial capital on aggregate.

With that in mind, the main takeaways from the past year were: the continued rotation of imbalances towards advanced economies, a shift in surplus away from China (whose current account now approaches zero) and towards oil exporters (given the rise in commodity prices) and the falling importance of the role of reserve sale/accumulation (China and financial centres acquired few if any, oil producers did not restock despite the higher oil price).

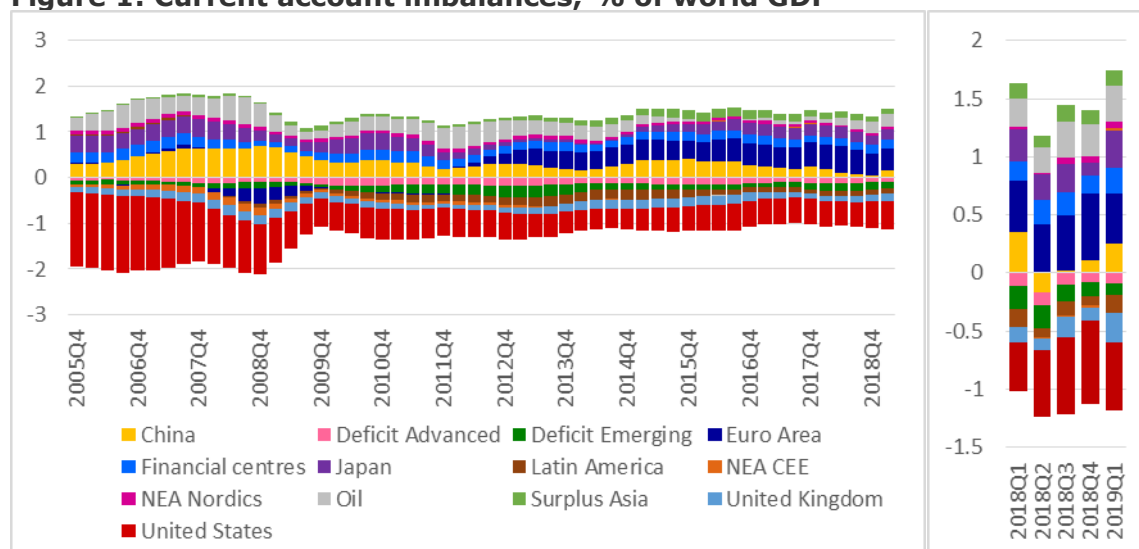
¹ Another way to look at the current account is the difference between output and domestic demand; in other words, the sum of the trade balance (net exports) and the income balance.

In the two previous reports we highlighted two main patterns that have shaped global imbalances² in recent years. First, although imbalances remain elevated, their magnitude is smaller compared to the run-up to the great financial crisis. Second, relative to the period immediately after the crisis, imbalances have rotated towards advanced economies. Surpluses are mainly concentrated in the euro area and Japan, as the surpluses of China and oil producing countries (Norway, Russia and Saudi Arabia) have significantly shrunk. At the same time, the distribution of deficits became more concentrated around the US, the UK and some other advanced economies (Australia, Canada and New Zealand) as the deficits of emerging countries, in Latin America and elsewhere, shrank.

Both patterns continue to play out in 2018: overall surpluses and deficits remain at levels similar to those observed in recent years and their composition has not changed substantially.

In 2018, capital continued to be mainly exported from the euro area, Japan, financial centres, oil producers and other surplus countries in Asia, primarily towards the United States and, to a lesser extent, to the UK and other large economies, both advanced and emerging. Apart from the euro area and the UK, the picture for the EU is completed by accounting for the – small by world economy standards – surplus of non-euro area (NEA) Nordic economies (Denmark and Sweden) and deficit of NEA Central and Eastern Europe (CEE).

Figure 1: Current account imbalances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

In Claeys et al. (2017) we noted that the rotation of imbalances towards advanced economies reflects: (i) asymmetries in the recovery speed and the corresponding policy responses between advanced surplus (i.e. the euro area, Japan) and deficit economies (i.e. the US), (ii) China's transition from an investment- to a consumption-driven growth model and (iii) sustained low commodity, and especially oil, prices.

² In this report we use the term imbalance as a deviation from a balance equal to 0. This should not be interpreted as a normative statement, as some current account imbalances, whether positive or negative, can be justified by economic fundamentals.

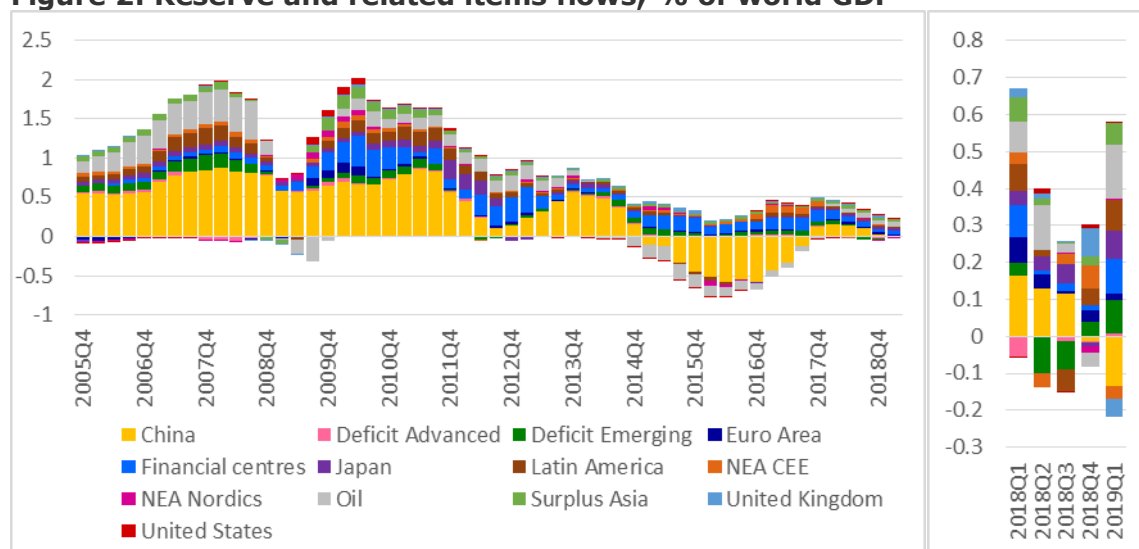
In Claeys et al. (2018) we contrasted the diminishing importance of these drivers in the course of 2017 against the continued concentration of imbalances in advanced countries during the same year. The expansion of the euro area had intensified and commodity prices were on the rise, but the distribution of imbalances had not changed. We attributed this apparent contradiction to an expected lag in the transmission.

In 2018, while commodity prices continued to increase, expectations about growth, not just in the euro area but globally, were significantly revised downwards. The result has been a visible reshuffling of surpluses away from China, whose current account continued to fall towards zero, towards oil producing countries. Meanwhile, the remaining distribution of current account balances, especially among advanced economies, remained essentially unaltered.

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-maximising 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 other objectives than profit.

An important body of literature³ has analysed the reasons behind 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).

Figure 2: Reserve and related items flows, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.
 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.

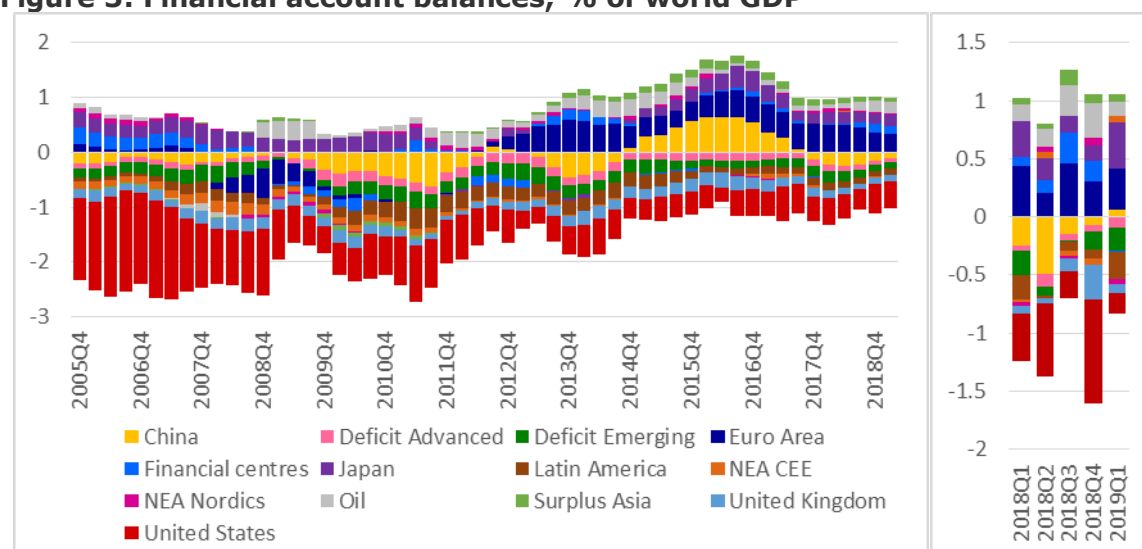
³ See for example Angeloni et al (2011).

As Figure 2 shows, the role of reserve accumulation/sale in driving global imbalances has become less important in recent years, as already pointed out in Claeys et al. (2017). Starting in 2014, China and oil exporting countries reduced their reserve stocks significantly. In China, the decline in reserves was due to the People's Bank of China's (PBoC) efforts to stabilise the value of the currency amidst private capital outflows, to avoid an excessive depreciation of the yuan against the US dollar. Oil exporters grappled with a large drop in oil prices, and the resulting deterioration of their terms-of-trade and current account balances. 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, as pointed out in Claeys et al. (2018), this global wave of reserve sales came to a halt in the first quarter of 2017, when China's reserve reduction slowed and then reversed. Another development also worth highlighting was the persistent reserve accumulation in global financial centres (Hong Kong, Singapore and Switzerland) after the global financial crisis.

In 2018, the importance of reserve accumulation/sale declined further. Not only did China add few, if any, reserve assets, but the reserve accumulation of global financial centres also declined substantially. In addition, the renewed current account surpluses of oil producers did not translate into reserve accumulation but were instead reflected in their financial accounts. As a result, the decomposition of the global financial account balance by country group very closely resembles the corresponding distribution of current accounts, as Figure 3 shows.

Figure 3: Financial account balances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

2.1.2. Stock imbalances

Contrary to flow imbalances, which have been reduced in size after the crisis, stock imbalances jumped in the aftermath of the crisis and have stabilised since. The combined net asset position of creditors exceeds 10% of world GDP, while the net liability position of debtors is around 15% — the difference between the two resulting

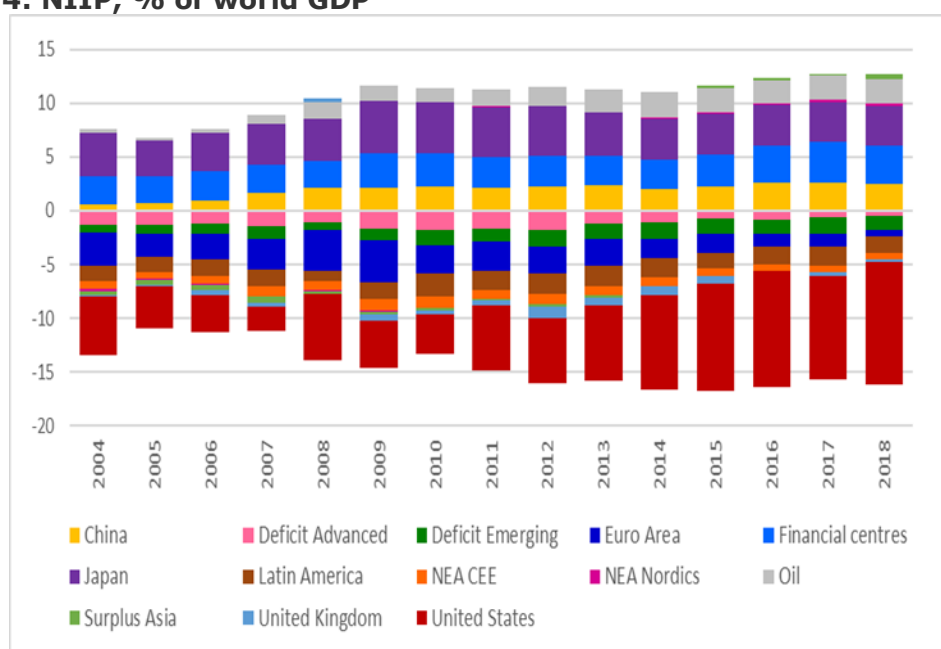
from our non-comprehensive coverage of the world economy, but also from errors and omissions in balance of payments statistics.

In 2018, the divergence in NIIP between the two key net debtors has continued: the US has seen further deterioration while the euro area converges towards zero. Dollar strength in 2018 combined with persistent trade deficits has supported this US deterioration, while other advanced debtor economies such as the UK have benefited from valuation effects reducing their NIIP deficit.

Overall, the distribution of NIIP imbalances is as follows: Japan, non-EU financial centres (Hong Kong, Singapore and Switzerland), China and oil exporters form the creditor group. The composition of positive net international investment positions (NIIPs) has been relatively stable over the past few years.

By contrast, as Figure 4 shows, the global debtor side has been more fluid. The most dramatic change in the post financial crisis period has been the shift away from the euro area towards the US. In 2018, the US accounted for 2/3 of all net negative NIIPs, up from less than 1/3 in 2009. During the same period, the euro area visibly reduced the extent of its net foreign liability position, which in 2018 was only marginally negative (if scaled by world GDP).

Figure 4: NIIP, % of world GDP

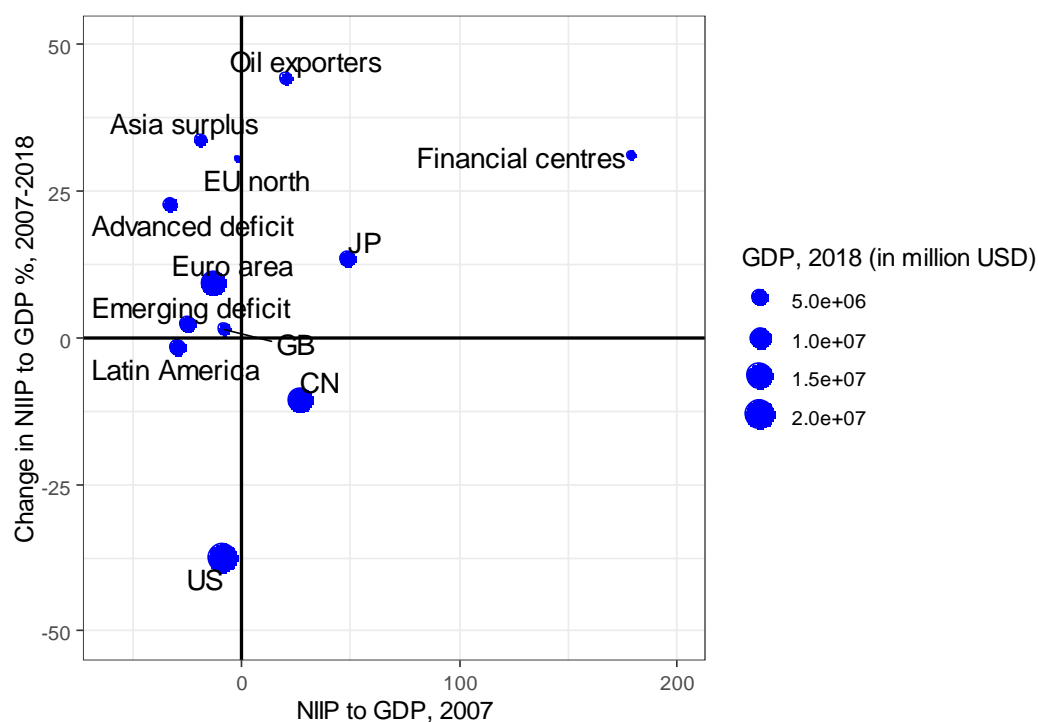


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

Changes are easier to see from a country/group perspective, as exhibited in Figure 5 below. Most debtors in 2008 have seen an improvement in their NIIP during the last decade, including Asian surplus countries and advanced deficit economies and the non-euro area Nordic EU member states. However, the euro area is by far the largest debtor group improving its NIIP. Some other debtors' NIIPs, in particular those of emerging deficit economies, Latin America and the UK, have only marginally improved, if at all, and essentially remained constant. In sum, there was no substantial deterioration in the NIIP of almost all debtor countries/groups from 2008 to 2018.

On the other hand, among creditors, only China's NIIP deteriorated. The NIIPs of financial centres, Japan and oil exporters increased further. Making up for that lopsided adjustment in net foreign asset positions is the US, a net debtor economy in 2008. Thus, given the size of the deterioration of its net asset position (more than 30 pp. in one decade) and the size of its economy, the US has been by far the main 'absorber' of improvements in global NIIPs.

Figure 5: Relationship between NIIP and change in NIIP 2007-2018, % of GDP



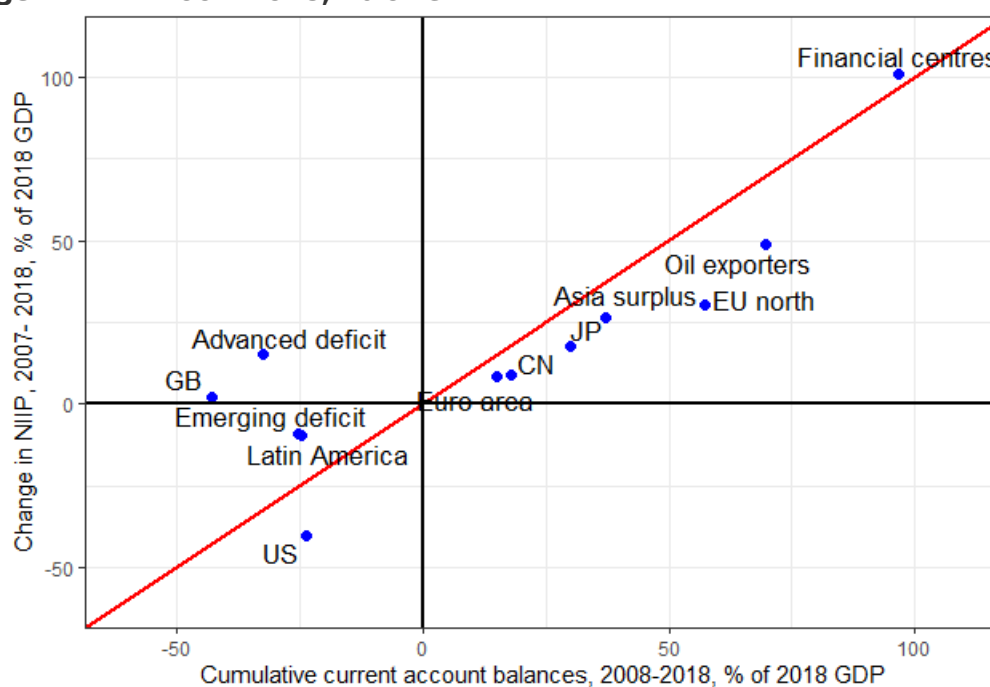
Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019. Notes: The change in the NIIP equals the difference between the end-2018 and end-2007 net positions.

These shifts are consistent with the sustained current account surpluses the euro area and deficits the US have run in recent years.

However, the accumulated current account balances are not fully aligned with the changes in the NIIP for all countries (or groups) and in some cases point to opposite directions. This is visible in Figure 6, which shows the cumulative current accounts against the change in NIIPs between 2007 and 2018. We observe, for instance, that the NIIP of the UK has improved significantly in spite of persistent current account deficits in the last decade, while China's NIIP has stayed roughly constant, despite the country's persistent current account surpluses.

These discrepancies occur because the value of the stock of financial assets held by a country change not only because of transactions (i.e. flows) but also because of valuation changes. These changes in the valuation of net positions, in turn, can occur because of a change in market prices, but also because of exchange rate fluctuations (on aggregate, in case there exists a currency mismatch between foreign assets and liabilities).

Figure 6: Relationship between cumulative current account balance and change in NIIP 2007-2018, % of GDP



Source: Bruegel based on IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019. Notes: The change in the NIIP equals the difference between the end-2018 and end-2007 net positions. The cumulative current account balances is the sum of the current account flows from 2008 to 2018. Both variables are rescaled by the value of nominal GDP in 2018. All variables are measured in USD.

Figure 6 shows the overall effect of these revaluations on the NIIPs of individual countries or country groups, scaled to their GDP. The countries on the right side of the 45° line (surplus Asian countries, China, NEA Nordic EU countries, the euro area, Japan, oil exporters and the US) experienced negative valuation effects on their NIIPs over the last decade while those on the left side of the 45° line (advanced and emerging deficit countries) positive effects. The size of these valuation effects, captured by the distance to the 45° line, was the largest for China, NEA Nordic EU countries and the US among the negatives and advanced deficit countries and the UK among the positives.

Valuation effects have overall been stabilising in the last ten years, in the sense that countries that have accumulated current account surpluses in the last ten years (the ones on the right of the vertical axis in Figure 6) have experienced negative valuation effects while those that have run persistent current account deficits (on the left of the vertical axis) have experienced positive valuation effects. There is one major exception, the US, whose NIIP has deteriorated more than the sum of its current account deficits suggest. The financial centre group is another, albeit more marginal, exception: the NIIP has outgrown the cumulative surpluses of these countries.

Finally, valuation effects can be so strong that the change in NIIP moves in the opposite direction from the one suggested by the sum of the current account balances. This is not the case for most countries: a cumulative current account surplus (on the right of the vertical axis) has generally resulted in a positive change in the NIIP (above the horizontal axis) placing countries on the upper-right quadrant; and a cumulative current account deficit (on the left of the vertical axis) has generally resulted in a negative change in the NIIP (below the horizontal axis) placing countries on the lower-left quadrant. However, the positive valuation effects on the net asset

position of the UK and of advanced deficit countries (Australia, Canada and New Zealand) were so strong that the change in their NIIP was positive despite persistent current account deficits.

Given the importance of exchange rates in adjusting external positions towards their external constraint, either through real effects (i.e. the trade balance - flow) or financial effects (i.e. the valuation of assets - stock), we summarise their evolution over the past few years in the following section.

2.2. Exchange rates' evolutions in recent years

In terms of exchange rates, 2018 was dominated by the strengthening of the US dollar. Emerging market currencies went through several periods of depreciation throughout the year as a result, although their values appear to have primarily stabilised in 2019 because of the weakening economic outlook in advanced countries and the resulting changes in monetary policy expectations for the Fed and the ECB. Finally, after over a year of fluctuation under 7 yuan per USD, the Renminbi went through a depreciation phase in early August 2019 spurred by trade tensions.

The value of the US dollar in terms of other currencies is key, as the dollar is heavily used in international trade and in financial markets, both from private (invoice/quotation, vehicle/payment, and investment/funding currency) and public (peg, intervention and reserve currency) actors. The past year has been characterised by dollar appreciation, with important effects for both developed and, more significantly, emerging market currencies.

Figure 7: Nominal effective exchange rate of the US dollar

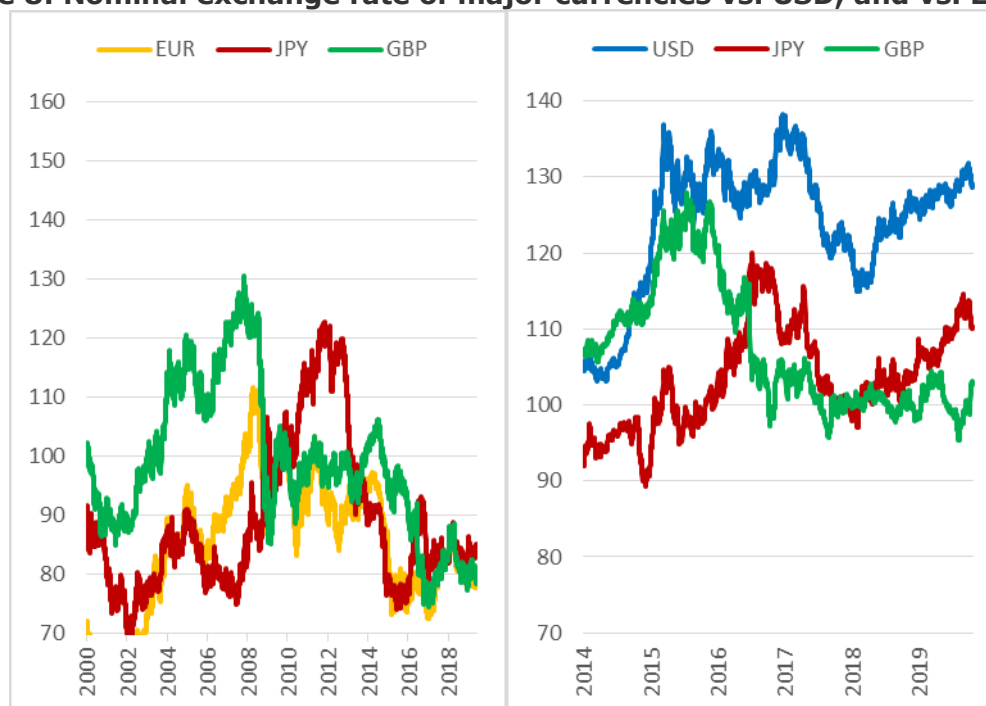


Source: Bruegel based on Darvas (2012) and the Bank of International Settlements Effective exchange rate indices.

Tracking the nominal effective exchange rate of the dollar (i.e. weighted by trade) helps identify five distinct phases since 2010 (Figure 7). First, between 2010 and 2013, a period of low interest rates in all advanced economies, the effective exchange rate was relatively stable. Second, from 2014 to 2015, the years during which monetary policy between advanced economies diverged, the dollar appreciated

substantially. Third, in 2016, the year in which capital outflows from China intensified, and the referendum on the EU membership in the UK and the presidential elections in the US were held, the dollar exchange rate was more volatile. Fourth, the pick-up of the recovery in the euro area led the dollar depreciation in 2017. Fifth, 2018 was marked by the renewed strength of the dollar, in a context of capital outflows, currency depreciations in emerging markets and rising tensions, mainly between the US and China.

Figure 8: Nominal exchange rate of major currencies vs. USD, and vs. EUR



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 evolution of the USD value (LHS) and EUR value (RHS) of 1 unit of that currency. In other words, a positive (negative) change indicates currency appreciation (depreciation) vs. the USD (LHS) and the EUR (RHS). EUR = euro, GBP = British pound, JPY = Japanese yen, USD = US dollar.

The forces driving the US dollar nominal effective exchange rate mentioned above can be traced in the different cross-currency exchange rates, in particular those between the major currencies (i.e. the USD, EUR, JPY and GBP). The left-hand side panel of Figure 8 shows the value of the EUR, JPY and GBP in USD (i.e. an increase in the exchange rate is an appreciation of the currency vis-à-vis the US dollar). In 2014 and 2015, all three currencies depreciated strongly. By contrast, in 2016, their paths followed different patterns. On the one hand, the dollar was losing value against the yen (and to a much lesser extent against the euro) before the US presidential elections, and rebounded after it. On the other hand, the British pound depreciated sharply in the aftermath of the UK Brexit referendum. After that, 2017 was characterised by the euro's significant appreciation, while 2018 saw an appreciation of the dollar against all currencies, albeit smaller compared to the 2014-15 increase.

The euro is the second most internationally-used currency for trade, transactions in financial markets and reserve accumulation, trailing the dollar in all these international functions, yet remaining far ahead from any other currency (Efstathiou and Papadia, 2018). Due to the size of the US and euro area economies, and the strong economic relationship between the two, the effective exchange rates of the two economies are heavily influenced by their bilateral exchange rate. Apart from the strong links

between the euro area and the US, the role of the euro area economy and its currency in regional (EU and EU neighbourhood) trade and finance is especially strong (Efstathiou and Papadia, 2018).

In recent years, exchange rates between the euro and currencies of most other EU and EU neighbourhood countries have been relatively stable, in part because of the role of the euro as an anchor in these countries' exchange rate policies. As a result, the movements in the euro area effective exchange rate are mainly explained by the evolution of its bilateral rates with the dollar and the pound. The latter is especially important given the size of the UK economy, its proximity and its function as a financial hub. Having already discussed the trajectory of the euro/dollar rate, we solely focus on the pound.

When monetary policy between advanced economies diverged (2014-15), the recovery in the UK was more robust than in the euro area and the pound appreciated against the euro similarly to the dollar, as can be seen in the right-hand side panel of Figure 8. However, that was followed by the acute depreciation of the pound in anticipation and in the aftermath of the referendum. Since 2016, that exchange rate has remained relatively stable, this was the case through 2018 as well.

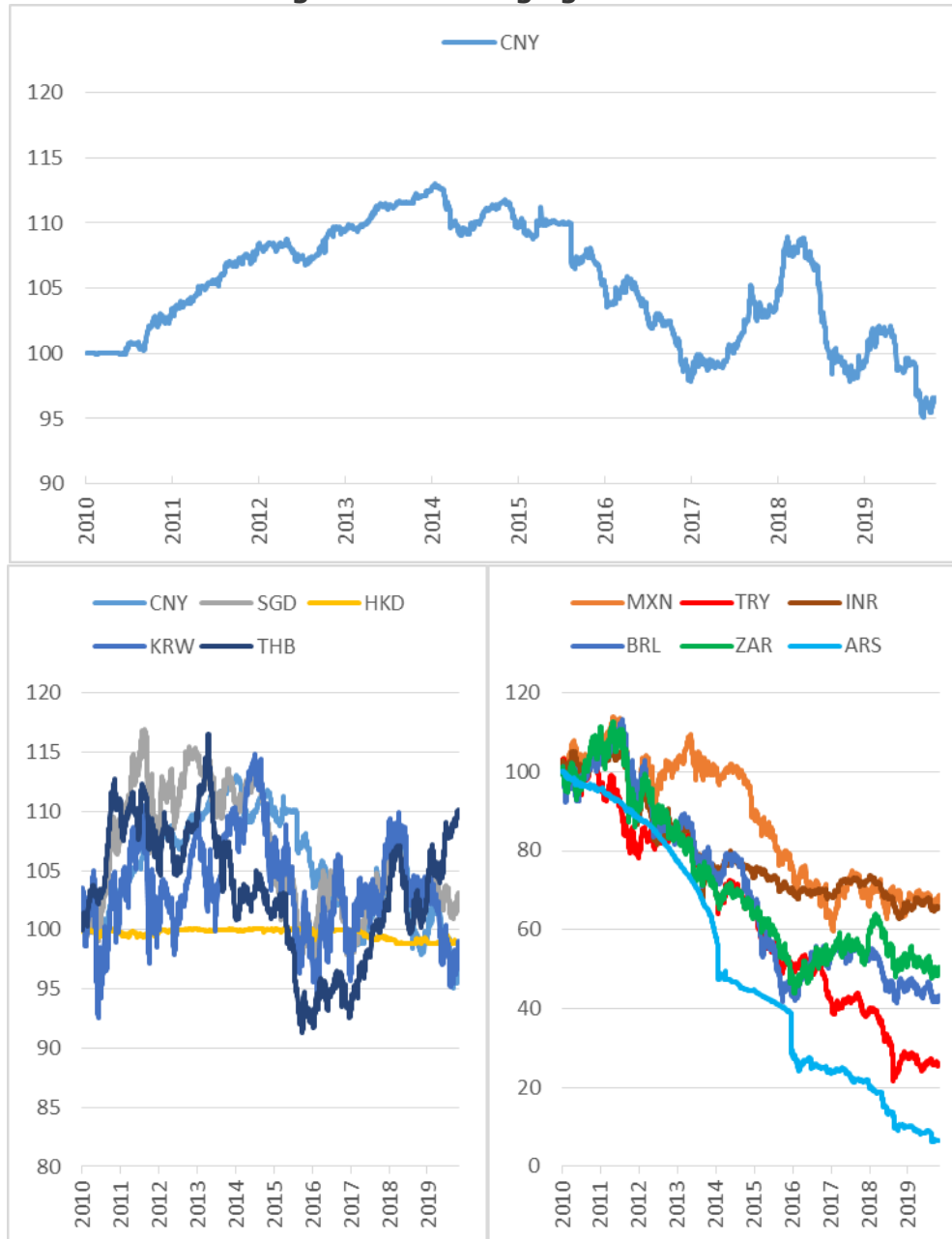
Beyond the relationship between advanced countries' currencies, the exchange rate between the Chinese yuan and the dollar is also a key variable to follow, given the size of the two countries. Furthermore, the currencies of most Asian economies (with the exception of Japan) closely follow that bilateral exchange rate and some (Hong Kong) have a fixed exchange rate to the US dollar.

However, unlike the currencies discussed before, China does not have a floating exchange rate policy. Since 2005, 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). 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 their exchange rate policy. First, they made the central parity depend on the closing rate of the previous day. Second, in December 2015, they disclosed the China Foreign Exchange Trade System (CFETS) basket of currencies. In 2016, the Chinese renminbi also became part of the IMF's basket of Special Drawing Rights (SDR) as a reserve currency.

In Claeys et al. (2017) we discussed at length the 2015-16 episode of capital outflow from China that followed the 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 to avoid a too quick depreciation of the currency.

Moreover, in Claeys et al. (2018) we noted a stabilisation of the exchange rate and capital flows in 2017 due to a combination of foreign exchange intervention and capital controls, and a rebound in the Chinese economy. We also discussed what China's response to a US trade war would be and whether in the future 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).

Figure 9: Nominal exchange rate of emerging markets' 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. ARS = Argentinian peso, BRL = Brazilian Real, CNY = Chinese yuan, HKD = Hong Kong dollar, INR = Indian Rupee, KRW = Korean Won, MXN = Mexican Peso, RUB = Russian Ruble, SGD = Singaporean dollar, THB = Thai Baht, TRY = Turkish Lira, ZAR = South African Rand.

This depreciation ultimately took place in August 2019. After over a year of holding the exchange rate at slightly under 7 yuan per US dollar, the PBOC allowed the currency to depreciate. The US-China trade war was the main driver of this depreciation. The episode followed a new round of tariffs on Chinese imports that had been announced by President Trump four days prior. Despite China's high real effective exchange rate, the devaluation is generally considered as being largely geopolitically motivated. However, the economic motivation is also evident, Chinese economic growth has been slowing down and the effects of the trade war have begun

to take hold on China. The devaluation offset this new round of tariffs and ultimately represents a form of stimulus in an economy with a high augmented fiscal deficit⁴ and in which monetary policy is constrained by exchange rate management.

As the upper panel of Figure 9 shows, the yuan, which had rebounded from the depreciation of 2015-16 in the course of 2017, did indeed depreciate against the dollar in 2018, but its value had stabilised in 2019 before the August episode. Other Asian currencies have followed suit (as can be seen in the bottom-left panel), also remaining largely stable.

The fluctuations of China's and other Asian countries' currencies pale in comparison to those of other emerging markets. The currencies considered in the bottom-right panel of Figure 9 have been on a depreciating trend since 2012-13. In particular, there have been two episodes of strong, synchronised outflows of capital from emerging market, coupled with rapid depreciations, during that period. The first one was during the so-called 'taper-tantrum' of 2013. The tightening of financing conditions, and in particular the earlier than expected tightening of US monetary policy announced by the Federal Reserve, were at the heart of that episode.

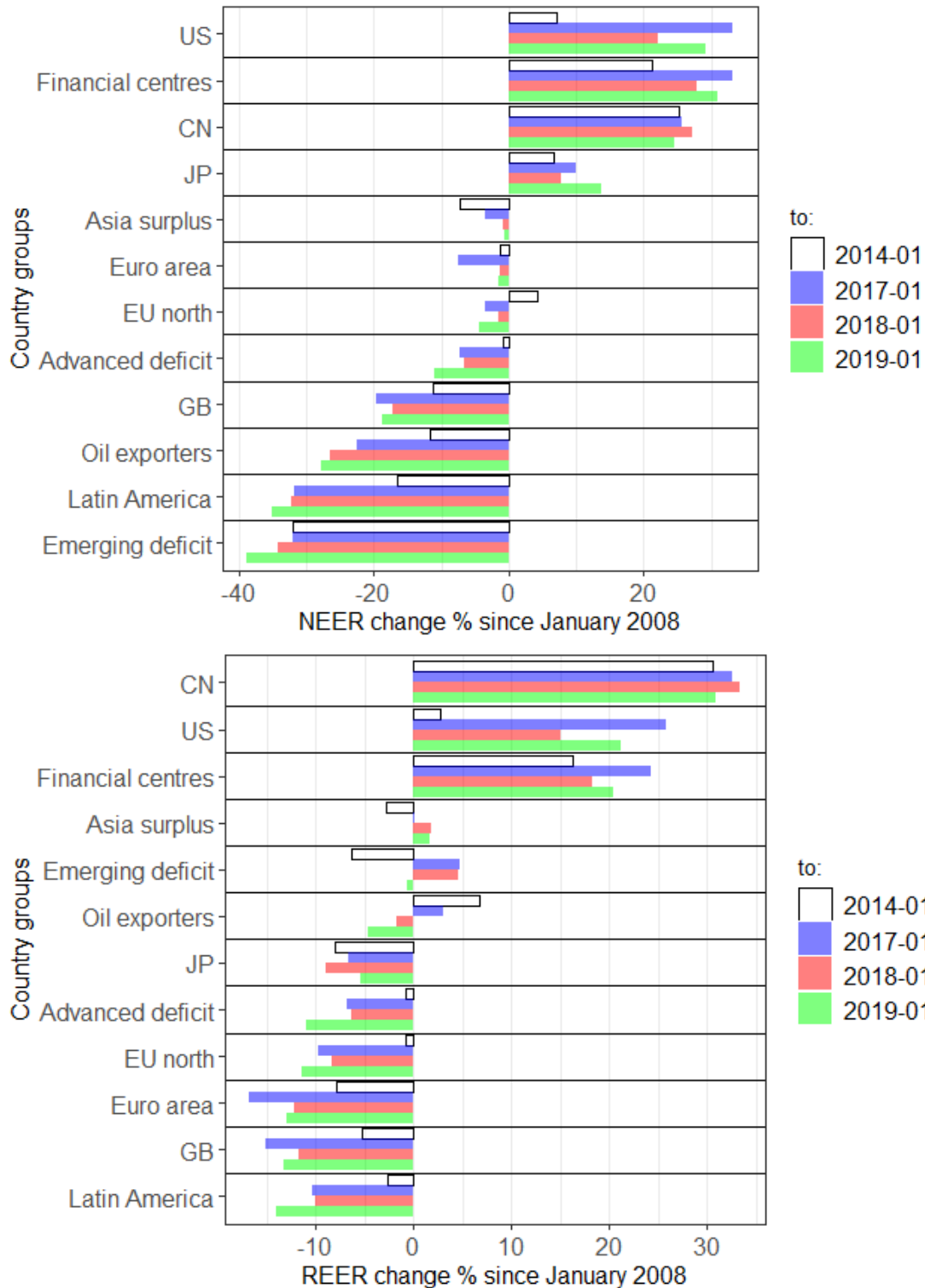
The second episode took place in 2018 and was extensively discussed in last year's report (Claeys *et al.*, 2018). First, we noted that the emerging market sell-off of 2018 – as of September 2018 – was more severe than the 2013 'taper-tantrum' in terms of the magnitude of the depreciations, even though the fundamentals looked better. Second, we established that the repercussions of the sell-off were the strongest for the cases identified as most vulnerable based on conventional metrics (in terms of composition of liabilities or reserve adequacy), namely Argentina and Turkey. South Africa and some smaller Latin American economies (e.g. Bolivia, Ecuador) also faced high risks. Finally, we claimed that the sell-off seemed to abate thanks to the different pace of monetary normalisation in advanced economies, which made the tightening of financing conditions less acute than if it had been synchronised.

In late 2018, the deterioration of the growth outlook for advanced economies in particular led to the revision of expectations about the future path of their monetary policies (see next section) in a way that supports the 'push' factor of capital flows towards emerging markets.

Overall, exchange rate movements can be visualised in Figure 10 which shows the evolution of nominal and real effective exchange indices since 2010 for each country, or group of countries.

⁴ The augmented fiscal deficit is an analytical term that adds to general government deficit measures (consolidated national and regional) to also include government-managed funds and local government financing vehicles (LGFVs). Further detail on methodology can be found in Zhang and Barnett (2014)

Figure 10: Change in NEER and REER by country group



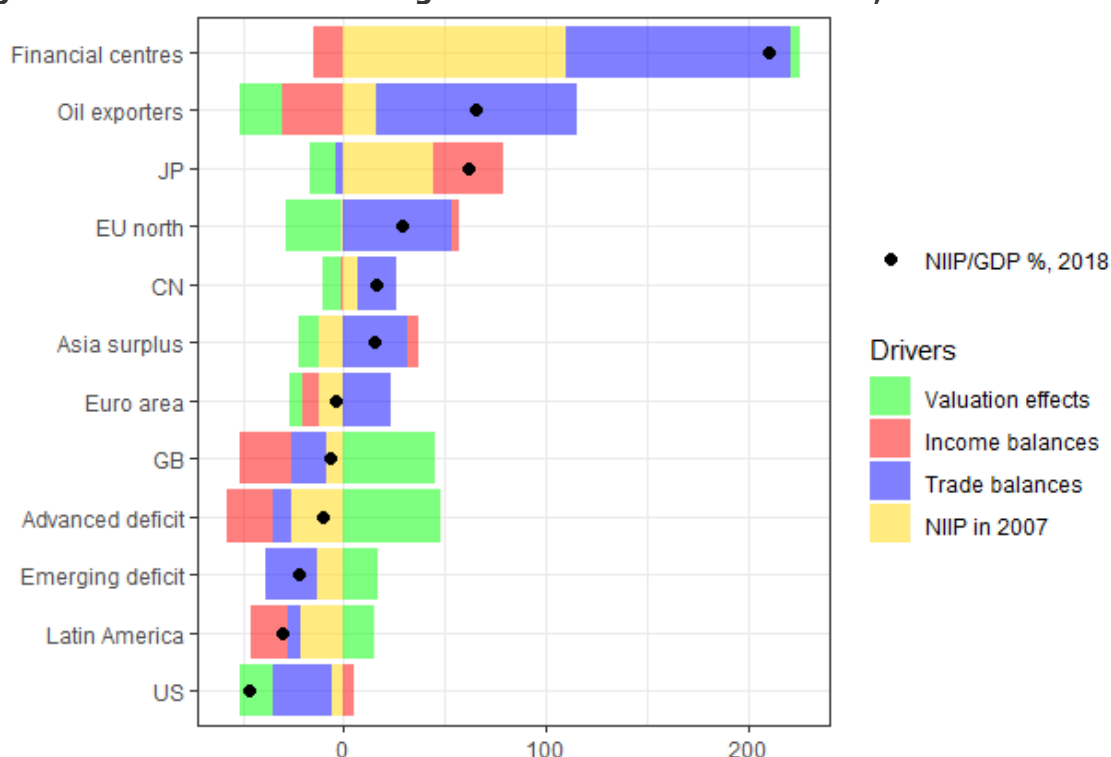
Source: Bruegel based on Darvas (2012) and the Bank of International Settlements Effective exchange rate indices.

The traditional trade channel of external adjustment emphasises the role of the real exchange rate. In particular, net debtors improve their positions by running future trade surpluses, which call for a depreciation of their real exchange rate, whereas net creditors run trade deficits and their exchange rate appreciates. Lane and Milesi-

Ferretti (2002) found some empirical evidence for this channel, long before the financial crisis.

We try to see if this has been the case in the last decade. Figure 11 shows the NIIP to GDP ratio at the end of 2018 decomposed into four components: the contribution of the starting NIIP at the end of 2007, the cumulative trade balances from 2008 to 2018, the cumulative income (mainly investment income) balances during the same period, and a residual that can be attributed to valuation effects, as well as errors and omissions.

Figure 11: Drivers of the change in NIIPs from 2007 to 2018, in % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019. Notes: Income balances is calculated as the difference between the cumulated current account and trade balances. Valuation effects is the residual left from subtracting the cumulated current account from the NIIP.

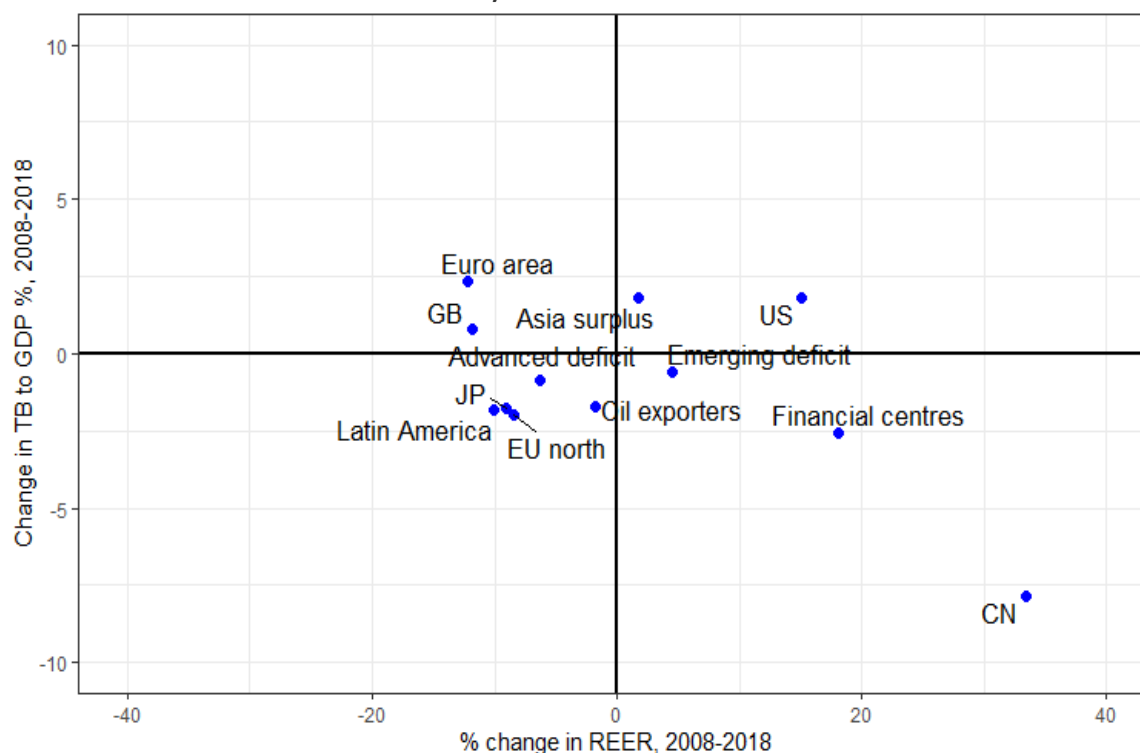
As Figure 11 shows, generally, creditor countries/groups ran cumulative trade surpluses and debtor countries/groups ran trade deficits. This is opposite to what the trade channel of adjustment would suggest. So instead of facilitating the reduction of stock imbalances, the patterns of trade have in fact reinforced net foreign asset positions' imbalances.

Moreover, as Figure 12 shows, changes in the real effective exchange rate were weakly correlated with the overall change in the trade balance to GDP ratio, while in theory we would have expected a negative correlation between the two.

Furthermore, the current account also includes the balance from the income account, in addition to the trade balance. In most cases shown in Figure 11, the overall change in NIIP due to the current account (flow adjustment) is mainly due to the effect from the trade balance rather than the income balance. However, in some other cases, the opposite is true but nevertheless the two effects work in the same direction. Japan's positive NIIP, however, increased further despite a cumulative, albeit small, trade

deficit. Instead it was driven by a highly positive investment income balance vis-à-vis the rest of the world, linked to Japan's status as a creditor country.

Figure 12: Relationship between change in the REER and the change in the trade balance from 2008 to 2018, % of GDP



Source: Bruegel based on Darvas (2012) and the Bank of International Settlements Effective exchange rate indices, IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019. Notes: The change in the trade balance equals the difference between the end-2018 and end-2007 net positions.

Finally, as pointed out above, many of the debtor countries/groups that improved their NIIP or maintained it relatively constant (advanced deficit, emerging deficit, Latin America and the UK) did not do so through any type of flow adjustment.

All in all, the traditional trade channel appears to be a less relevant adjustment mechanism for the NIIP. First, the distribution of trade balances did not alleviate, but actually exacerbated legacy imbalances. Second, it is not the only (and sometimes even not the main) explanation behind the evolution of net foreign assets in the last decade.

As already noted by Lane and Milesi-Feretti (2005), with the advancement of financial globalisation, the dynamics of net foreign asset positions depend on stocks as much as on flows. Their paper highlights the valuation channel of exchange rate adjustment. Additionally, having examined the implications of a country's external constraint for the dynamics of net foreign assets, returns and exchange rates, Gourinchas and Rey (2007) found that deteriorations in external accounts imply future trade surpluses (trade channel) or excess returns on the net foreign portfolio (valuation channel).

Figure 11 shows that this valuation channel appears to have played a very significant role for some countries, in particular advanced and emerging deficit countries, non-euro area Nordic EU countries, Latin America and the UK. Valuation effects – i.e. the impact of capital gains/losses on the international balance sheet – vary based on 3 main elements: 1) the scale of the international balance sheet (gross assets and

liabilities), 2) the net value of the position and 3) the currency composition of foreign assets and liabilities (Lane and Shambaugh, 2010). Although accurate and up-to-date data on currency composition are not readily available, some attempts (e.g. Bénétrix, Lane and Shambaugh, 2015) generally support the expectation of strong valuation effects in these countries/groups given their characteristics.

Moreover, Figure 11 shows that the distribution of valuation effects was generally stabilising for NIIPs, as they are negatively correlated with 2007 NIIPs. The only significant exception was the US.

2.3. Global net flows by type of investment

This section's main objective is to monitor the global distribution of net flows, by category of investment in the financial account: foreign direct investment (FDI), portfolio (PI) and other investment (OI).

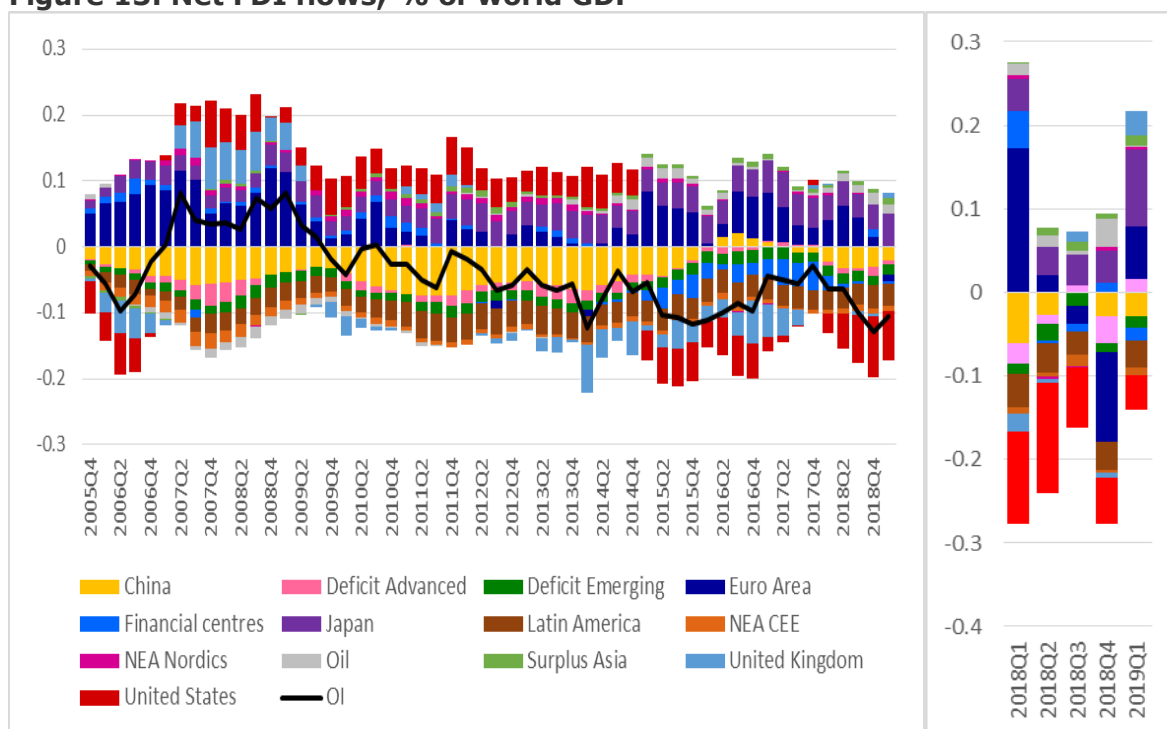
Net flows correspond to the difference between (net) acquisition of assets, often referred to as gross asset flows, and (net) incurrence of liabilities, often referred to as gross liability flows. A positive net flow (i.e. when the flow of acquisition of foreign assets exceeds the flow of incurrence of liabilities to non-residents), thus, translates into net outflows of capital. It is important to note that underlying 'gross' flows can be negative: a net outflow could thus be the result of foreign assets being acquired faster than liabilities are incurred to non-residents, but it could also mean that foreign liabilities are being reduced faster than foreign assets, or that assets increase while liabilities decrease.⁵ Equivalently, a negative net flow means an inflow of investment.

With this in mind, we examine successively FDI, portfolio and other investment from a global perspective. In 2018, the main development in net FDI flows was the increase in net inflows to the US, partially made up of the repatriation of previous earnings after the enactment of the Tax Cuts and Jobs Act (TCJA). At the same time, net portfolio debt flows have also seen interesting developments. In advanced economies these are primarily driven by monetary policy or, more specifically, interest rate differentials (the differential between the euro-area and the US plays a particularly crucial role given the size of both economies). Net Portfolio debt outflows from Europe thus fell in the first half of 2018, driven by euro-optimism and expectations of ECB tightening. However, the change in outlook caused a reversal in the second half of 2018 as a cut in rates begun to be priced-in. This cut (of 10 bps) in the key rate ultimately took place in September 2019, and could result in the intensification of net outflows. Looser monetary policy expectations in Europe and (especially) the US should provide some cover from capital flight to emerging market currencies.

2.3.1. Foreign Direct Investments

The first observation about FDI flows (Figure 13) is that, in net terms they tend to flow out of advanced economies towards emerging economies. On the one hand, Japan and the euro area are consistent sources of net FDI outflows into the rest of the world. On the other hand, Latin American countries, as well as other emerging economies running current account deficits and non-euro area CEE countries are constantly receiving flows of direct investment. That said, this section provides an overview of the main shifts that have taken place in the last decade, with the main development in 2018 having been the spike in FDI inflows into the US.

⁵ We do not discuss it in this section, but in the next one, and focus here on net flows.

Figure 13: Net FDI flows, % of world GDP

Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019. 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.

Between 2007 and 2014, the US was a major source of net FDI outflows and China was the main destination of net FDI inflows. During that period, the global distribution of net FDI flows was stable. Still, there were fluctuations in the size of the overall net flows, as well as in the relative contributions by advanced and emerging countries. Net flows of FDI shrank in the aftermath of the Great Financial Crisis and, reflecting the double-dip recession in the euro area, rotated away from the euro area towards the US as far as the outflow side goes, and away from non-euro area CEE towards Latin America as far as the inflow side is concerned.

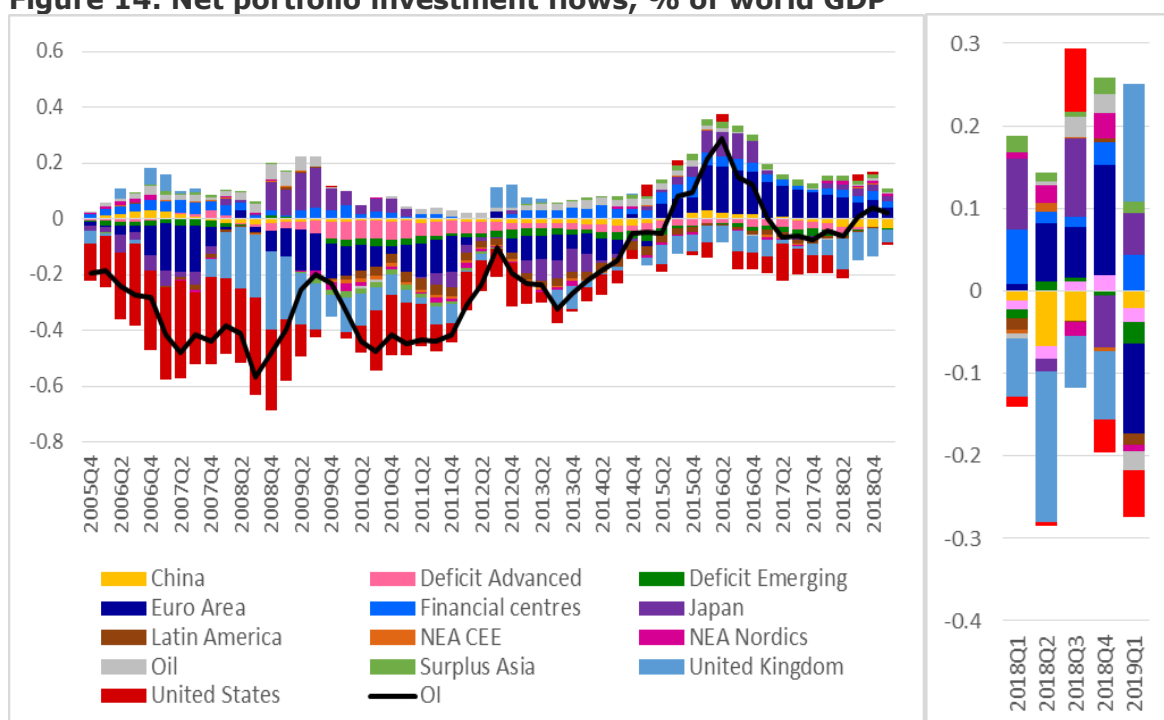
Yet, the most important shifts took place in 2015. Initially, the US balance swung to inflows while the outflows from the euro area strengthened substantially. The timing of the shift coincided with a wave of corporate inversions of US multinationals, moving their headquarters into the European Union, and in particular, euro area countries. At the same time, the national accounts of Ireland began to be distorted by the activities carried out there and the new corporate structures of US multinationals encompassing the country. That shift in FDI flows may also reflect the better growth performance of the US vis-à-vis the euro area. Finally, the spike in FDI inflows in 2018 is partly related to some repatriation of previous earnings from US multinationals after the enactment of the Tax Cuts and Jobs Act (TCJA) of 2017 (see details in section 2.4).

The second shift taking place since 2015 is related to China. Net inflows gradually decreased and temporarily reversed into outflows in 2016. As discussed in Claeys et al. (2018), this reversal in FDI was partly linked to the general capital flight out of China (Setser, 2017), but also to the longer-term economic transition of China which is gradually increasing its outbound FDI to the rest of the world.

2.3.2. Portfolio Investments

Contrarily to FDI, the global distribution of portfolio net flows is notably tilted towards the inflow side (apart from a temporary episode in 2015-16 related to the evolution of reserve flows, see more details below). This is particularly the case for the period before the Great Financial Crisis, but also during the economic recovery that followed it. Moreover, from a global perspective, unlike FDI, net portfolio flows tend to be important only for advanced economies and next to negligible for emerging economies. Against this backdrop, trends in recent years have been largely driven by the interest differential between the euro and the dollar, which has been widening again after a period of euro optimism in late 2017 and early 2018 caused it to shrink.

Figure 14: Net portfolio investment flows, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019. 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 reduced role of emerging markets can be explained by the accumulation of reserves: in emerging markets, it is mostly monetary authorities/central banks that acquire foreign financial assets such as debt securities in order to build up foreign exchange reserves. Consequently, these flows of acquisitions are classified as reserve assets instead of portfolio investment. Indeed, reserve acquisitions (an outflow if positive, an inflow if negative) are highly correlated with overall net portfolio flows.

But, as noted above, the importance of reserve flows has declined over time: it briefly turned negative in 2015-16 and stabilised close to balance in 2017-18. As a result, the global distribution of portfolio net flows has become more balanced, and net outflows have become concentrated in the euro area, financial centres and Japan, while inflows are concentrated in the US and the UK. This rotation occurred in 2014-15, when the monetary policies of major advanced countries diverged: financial markets began expecting policy interest rate increases in the US and the implementation of

quantitative easing by the ECB and further accommodation from the Bank of Japan. Given the importance of this development for the evolution of imbalances, we will come back to this in more details below.

But before we turn to that, a final development worth discussing is related to the sale of US securities held by Chinese authorities as reserves in 2015-16. This was offset by the acquisitions by investors in other jurisdictions (e.g. euro area). Therefore, in Figure 14, we do not observe an overall increase in the net inflow of portfolio investment in the US, since it was mainly the ownership of portfolio assets that changed, away from the Chinese official sector to private investors in advanced economies.

That said, the net portfolio outflow from the euro area peaked in 2015-16 and has followed a downward trend since then.

Monetary policy and portfolio debt flows

This section is devoted to the monetary policy developments in key advanced economies, in particular the US and the euro area, the evolution of the interest rate differential between these economies and its impact on portfolio debt assets, and more generally on global capital flows. The fact that the differential contracted and then expanded again in the past year has made its impact on recent developments substantial.

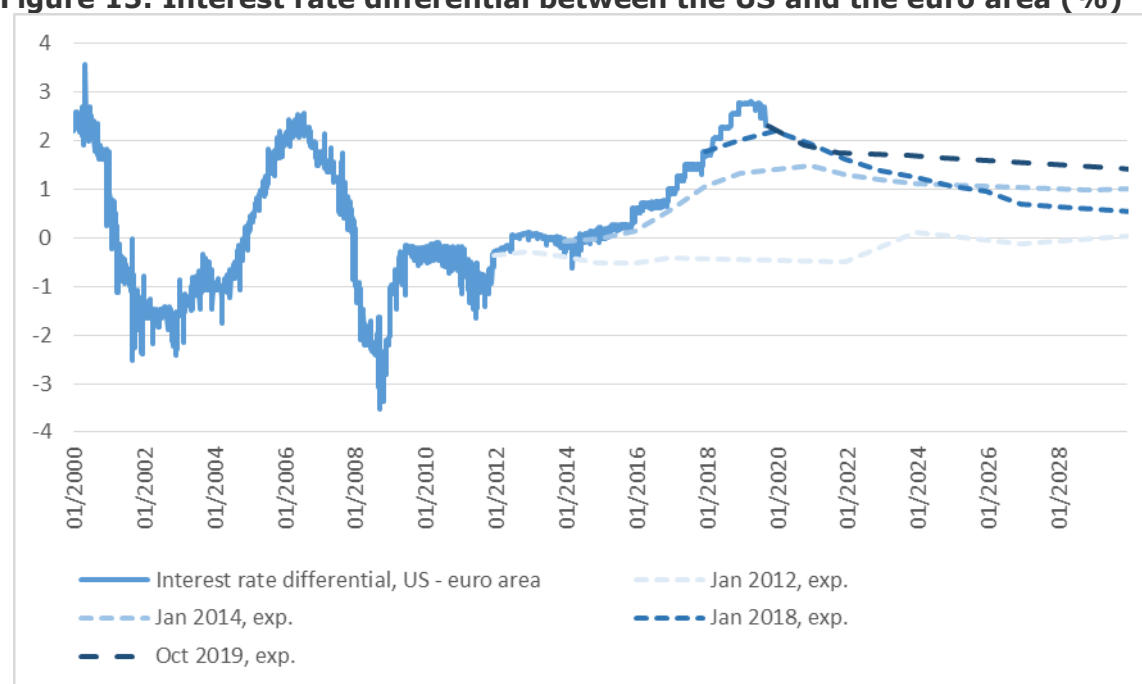
At the end of 2008, as the US plunged into recession, the Federal Reserve (Fed) pursued a zero-interest rate policy. After cutting its policy rate to zero, the Fed also implemented three rounds of quantitative easing (QE): QE1 began in Q1 2009 and went on for a year, while QE2 lasted from Q4 2010 to Q2 2011. The last program, QE3, started in the last quarter of 2012 and lasted until the end of October 2014. 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.

By contrast, the European Central Bank (ECB) did not implement large-scale asset purchases until 2015 and even increased policy rates briefly in 2011. In addition, the post-financial crisis recovery of the euro area trailed that 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 economic recovery proceeded at a faster pace in the US than in other advanced countries, in particular in the euro area but also in Japan.

In the period following the sovereign debt crisis, inflation remained well under the “below, but close to, 2%” target of the ECB, with the threat of deflation creeping up dangerously. This led the ECB to implement a number of new measures. First, it gradually reduced its policy rates. At -0.5 percent (since September 2019), its deposit rate even moved slightly into negative territory. Second, the ECB also provided long-term lending to European banks with favourable conditions. Third, 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.

How have these developments impacted the euro area-US interest rate differential and more importantly the financial markets' expectations about the differential? As can be seen in Figure 15, at the beginning of 2014, investors were already anticipating a significant and persistent differential in monetary policy interest rates between the US and the euro area, with the Fed Fund rate expected to be above the EONIA by more than 150 basis points during the next decade.

Figure 15: Interest rate differential between the US and the euro area (%)

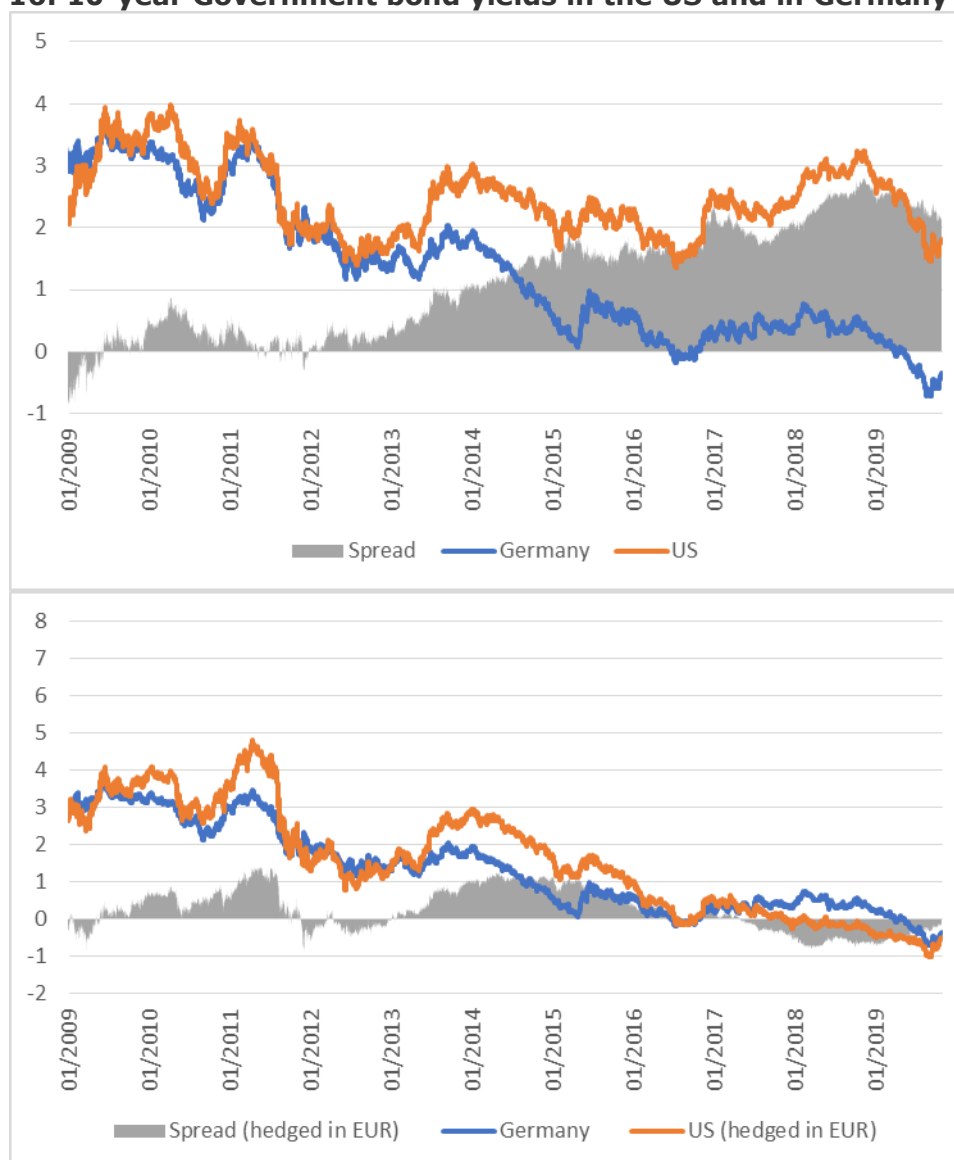


Source: Bruegel based on Bloomberg. Notes: Fed Funds rate for the US, EONIA for the euro area. Notes: Positive values of the differential indicate that the Fed Fund rate is expected to be above the EONIA.

This significant expected differential in interest rates certainly played an important role behind the rotation of net portfolio into outflows from the euro area and inflows into the US, as well as the strengthening of the US dollar.

In addition, the higher expected, and eventually actual, monetary policy rates in the US compared to the euro area translated into higher yields for US fixed income assets with longer maturities, which made them attractive for euro area investors. As the upper panel of Figure 16 shows, the yields of 10-year government bonds for the US and Germany have been diverging continuously and substantially since 2013. However, given that the evolution of the exchange rate plays a role in the final return that an investor will make, investors (and especially institutional investors) may prefer to hedge against the currency risk of foreign currency-denominated assets. That is why it is also interesting to look at yields hedged for currency risk visible in the lower panel of Figure 16. The result is quite similar to that with simple yields: between 2013 and 2016, the 10-year US government bond yield hedged for currency risk (i.e. its return in euro) exceeded the German government bond yield.

In the following years, as the recovery in the euro area picked up and deflation risks receded, the ECB announced 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 finish at the end of 2018 (after 4 months of reduced purchases between September and December).

Figure 16: 10-year Government bond yields in the US and in Germany

Source: Bruegel based on Bloomberg. Notes: in the lower chart the hedged US yield corresponds to the 10y US government bond yield plus the cost of hedging (a negative number), which equals the risk-free interest rate differential between the euro area and the US (from 1y Overnight Indexed Swaps) and the euro dollar basis (from 1y cross-currency swaps).

At the same time, the ECB did not commit to any rate hike but future increases became more probable in June 2018. It was then when 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”, hinting that rates could rise by the end of 2019. As a result, in mid-2018, financial markets and ECB watchers were expecting the first rates hikes since 2011 to occur in 2019.

That is why, as Figure 15 shows, at the beginning of 2018, markets expected the interest rate differential between the US and the euro area to shrink and rates to converge towards a more similar level in the future. At the same time, longer-term yields of US debt assets stopped being more attractive relative to those of euro area assets (as visible in Figure 16). Actually, already by mid-2016, the hedged yield of 10-year US government bonds in euros (see Box 2) and the yield of 10-year German government bonds were equalised (Figure 16). The expectation of future interest rate

hikes by the ECB also led to a catch-up of euro area interest rates with US ones. As a result, in 2017, the euro appreciated and net portfolio outflows from the euro area decreased.

Box 2: The cost of hedging and the dollar basis

The cost of hedging currency risk when investing in dollars assets is equal to the forward premium, which equals the depreciation of the dollar against the local currency, say the euro, implied by the difference between forward (F_t , the price of 1 dollar in euros) and spot exchange rates (S_t , so the % appreciation is $\frac{F_t}{S_t} - 1$). This is because, taking the example of a euro area-based investor considering an investment in dollar-denominated assets, currency risk can be hedged by entering into a foreign exchange swap (FX swap) agreement. The investor buys dollars at the spot rate (using the euros owned by the investor), in order to invest them in a dollar-denominated asset, and agrees to sell them back at the prevailing forward rate for the maturity date.

Using an arbitrage argument, the covered interest rate parity (CIP) predicts that the forward premium cost of hedging (in absolute value) for that investor should equal the difference between risk-free interest rates of the US and, in this example, the euro area. However, in practice, the CIP has ceased to hold since the Great Financial Crisis. Rather, for most currencies and not just the euro (notably the yen), the forward premium to hedge dollar investments is larger than what the risk-free rates would suggest. Adding to the cost of hedging for the party supplying the foreign currency in the spot leg of the FX swap, and correspondingly rewarding the party supplying the dollars, the aforementioned CIP deviation is called the dollar basis.

So, there are two factors driving hedging costs: a) the (actual) interest rate differential and b) the dollar basis (or size of the CIP deviations). The contribution of the interest rate differential to the cost of hedging does not need any justification, unlike the effect of the opening up of the dollar basis, which first appeared in 2008 and persists to date (see Figure 17 and Figure 18).

The literature has identified the interplay between divergent monetary policies and new financial regulation as the source of the dollar basis in recent years (market stress during the financial and euro crises were the main factors in earlier years).

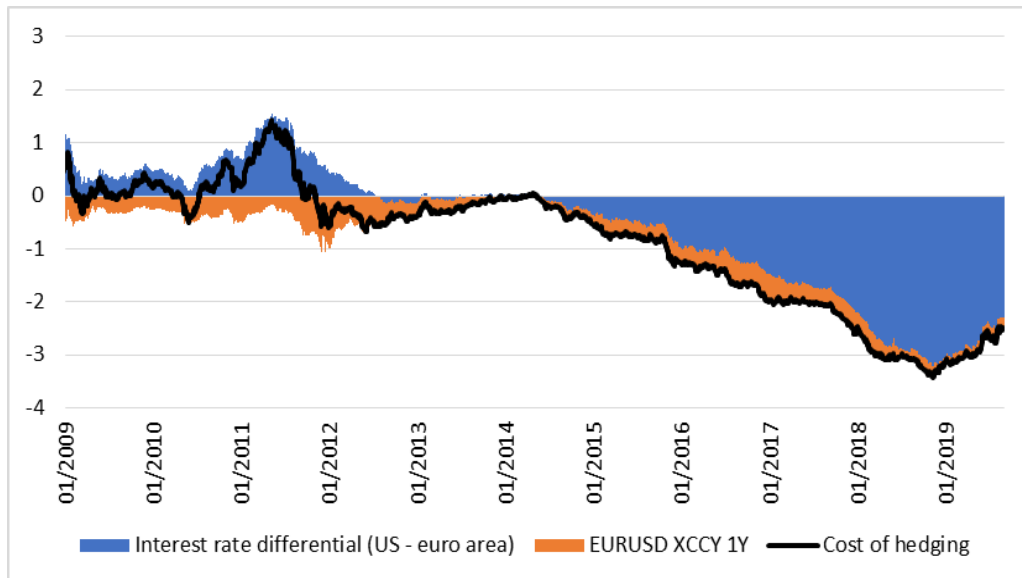
Sushko, Borio, McCauley, and McGuire (2016) point to the FX swap market and the forward rate as the key price. The find evidence that increased demand to swap other currencies into dollars that is structural and, thus, not very sensitive is behind the opening up of the dollar basis.

The sources of this type of demand are threefold: 1) Banks' desire to hedge a structural currency mismatch between their assets (e.g. loan book) and their liabilities (deposit base) arising from their business model. 2) (European and Japanese) institutional investors' demand to hedge strategic investing decisions in foreign-currency (dollar) denominated assets. 3) (American) non-financial corporate investors' demand to hedge opportunistic issuance in a foreign currency (euro or yen) where credit spreads are compressed.

The surge in structural demand for hedging is then linked to monetary policy divergence between large currency areas, in particular very low interest rates and large central-bank asset purchases. Low interest rates decrease bank profits (e.g. in

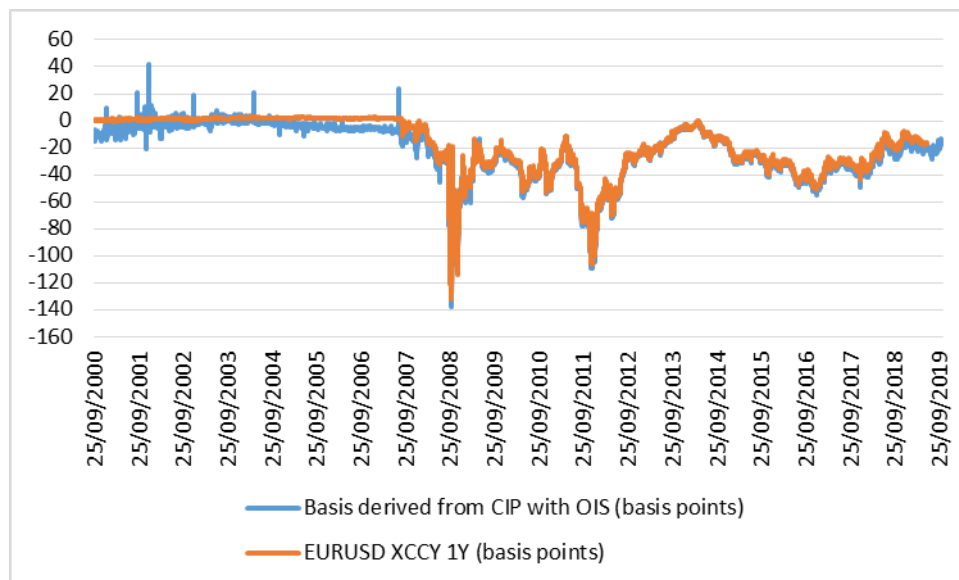
Japan), fuelling foreign expansion (e.g. in the US). And large central-bank asset purchases absorb long-maturity assets and compress spreads, adding to the hedging demand of local institutional investors and foreign corporates.

Figure 17: The cost of hedging from USD to EUR and drivers



Source: Bruegel based on Bloomberg. Notes: the interest rate differential uses the 1y rates implied by OIS and the EURUSD XCCY 1Y is the euro dollar basis from 1y cross-currency swaps.

Figure 18: The euro-dollar basis and the deviation from the CIP



Source: Bruegel based on Bloomberg. Notes: EURUSD XCCY 1Y is the euro dollar basis 1y cross-currency swaps. The basis derived from CIP with OIS is the deviation from the covered interest rate parity using 1y rates implied by OIS, the forward and the spot rates.

In their paper, Rime, Schrimpf and Syrsatd (2017) agree on the paramount importance of the FX swap market and monetary policy, and conclude that CIP deviations reflect segmented money markets and different liquidity conditions across currencies. The implementation of quantitative easing in the euro area and Japan has generated so much excess liquidity sitting in central banks' deposit facility that it has

lowered borrowing costs in euro and yen for all banks. Meanwhile, segmentation in the dollar money market persists, meaning that banks still face much more heterogeneous borrowing costs, costs that increase as their creditworthiness declines.

The relative scarcity of dollars compared to euro and yen has given rise to an additional cost, a liquidity premium spread, for all banks wishing to borrow dollars. Although obtaining dollar liquidity straight from the money market is challenging for all banks, it is most expensive for the low-rated banks. The FX swap market clears at an equilibrium price attractive for all: low-rated banks are able to borrow dollars more cheaply using FX swaps and the euro or yen as a vehicle. On the other side of the transaction, top-rated banks are compensated for supplying the coveted – and relatively cheaper, for them – dollars in the swap through arbitrage profits on central bank deposits' investment.

As to why the deviations persist and are not arbitrated away, the literature is also in agreement (see Du, Tepper and Verdelhan, 2018; Cenedese, Della Corte and Wang, 2019). The implementation of financial regulation on minimum leverage ratios makes the balance sheet expansion required to make arbitrage trade based on relatively small deviations costly by requiring the issuing of (expensive) equity.

However, although the beginning of 2018 showed optimism for global growth and for euro area growth in particular, the final numbers came in lower than the initial expectations (see Table 1). Expectations for lower growth, mainly in the euro area but also Japan, became perceptible in the second-half of 2018. Global growth for 2019 was also revised downwards (both in April of 2019 and again in October) especially because of lower expected growth in the US and the euro area. The size of the revision was stronger for the euro area, also driving lower forecasts for the EU.

Table 1: Growth forecasts by the IMF for 2018 and 2019

	Euro area		EU		US		Japan		World	
	2018	2019	2018	2019	2018	2019	2018	2019	2018	2019
April 2018 WEO	2.4	2.0	2.5	2.1	2.9	2.7	1.2	0.9	3.9	3.9
October 2018 WEO	2.0	1.9	2.2	2.0	2.9	2.5	1.1	0.9	3.7	3.7
April 2019 WEO	1.8	1.3	2.1	1.6	2.9	2.3	0.8	1.0	3.6	3.3
October 2019 WEO	1.9	1.2	2.2	1.5	2.9	2.4	0.8	0.9	3.6	3.0

Source: IMF WEO April 2018, October 2018, April 2019 and October 2019. Notes: Downward revisions in red, upward revisions in green.

Faced with poor perspectives first visible in monthly indicators (PMI surveys, industrial production, car purchases, etc.) and which then began to materialise in growth and inflation numbers in the second half of 2018 and at the beginning of 2019, the ECB and the Fed quickly adapted their respective speeches to become more dovish. While one year before they were opening the door to tighter monetary policies in the near future, both central banks started discussing openly about contingency plans in case of a marked downturn and a fall in inflation. The ECB first pushed back further the potential date of its first-rate hike when it announced in March 2019 that the

governing council expected rates “to remain at their present levels at least through the end of 2019”. In June 2019, President Draghi went further and made clear that the ECB was ready to act using all the instruments at its disposal if necessary, including by re-starting net asset purchases or cutting policy rates further. In September 2019, the ECB decided to act by restarting net asset purchases and by decreasing further the deposit rate by 10 basis points to -0.5%. On the other side of the Atlantic, the US economic situation has also deteriorated, and the Fed has also decided to intervene by cutting its interest rate target range twice by 25 basis points in 2019. The Fed Fund target range is thus now at 1.75%-2% at the end of September 2019. However, the economic slowdown is for the moment less pronounced in the US than in Europe and the Fed has been less dovish than the ECB. This is why markets continue to expect a monetary divergence between the two regions despite a common slowdown.

How have these recent reversals impacted the expected interest rate differential, bond yields and the cost of hedging?

First, as markets ruled out rate hikes by the ECB in the near future, the expected interest rate differential opened up again (as can be seen in the expectations from October 2019 on Figure 15), even though market expectations for the trajectory of US interest rates were also significantly revised downwards. Second, after a slight decline in 2017, the 10-year US-German government bond spread increased again in 2018 (Figure 16). However, third, hedging the exchange rate risk of dollar-denominated investments into euros became more expensive. Despite a fall in the dollar basis, which peaked in 2016, the successive interest rate increases in the US pushed the hedging cost higher in 2017-18. As a result, 10-year German government yields have been higher than the hedged 10-year US government yields since late 2017. More importantly, both of these yields have turned negative since the end of 2018.

On the one hand, this could explain lower flows from the euro area to US fixed income assets. On the other hand, the intensifying search for yield by investors could translate into more unhedged investment in foreign assets.

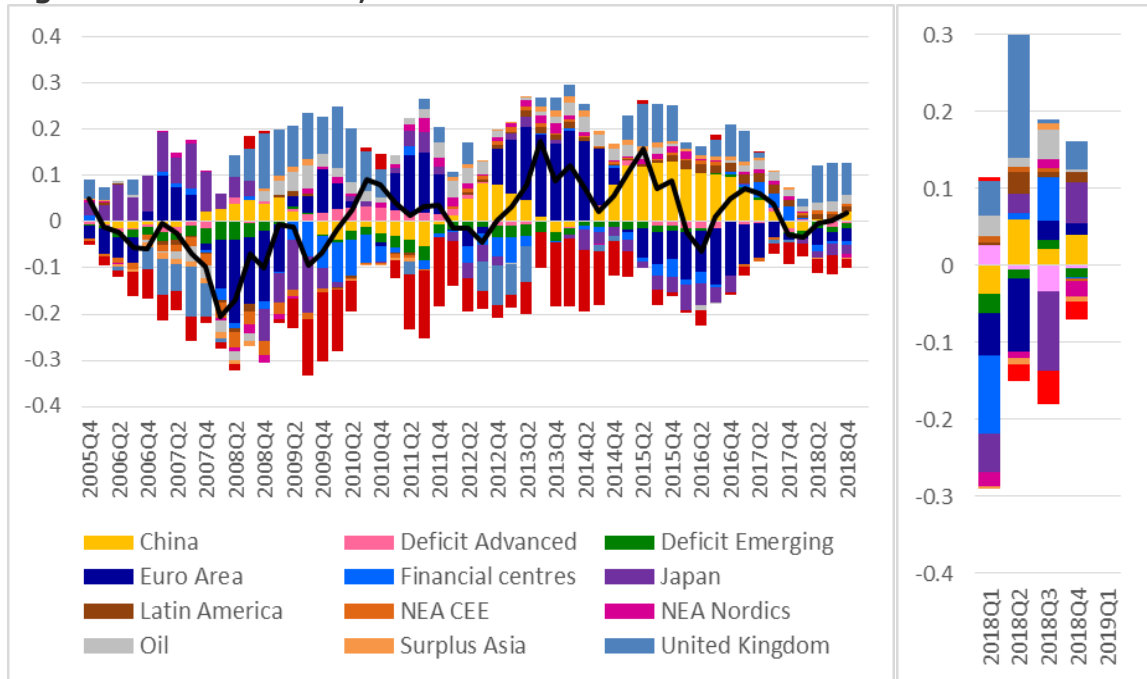
Another implication concerns emerging markets, which should be less vulnerable to capital flight than they were in recent years now that markets do not expect an impending simultaneous monetary tightening across advanced economies.

2.3.3. Other investment

The global distribution of other investment is much more volatile, but also less imbalanced, than the other two types of investment. However, some patterns linked to the developments already discussed above can be highlighted.

First, the magnitude of the outflows from China in 2015-16 is visible. Second, Figure 19 captures hints of the implementation of QE in advanced economies, first in the US and in the UK, and then euro area and Japan. The assumption here is that after foreign investors sold bonds to the central banks, they were compensated with cash that they kept as bank deposits in the same jurisdiction.

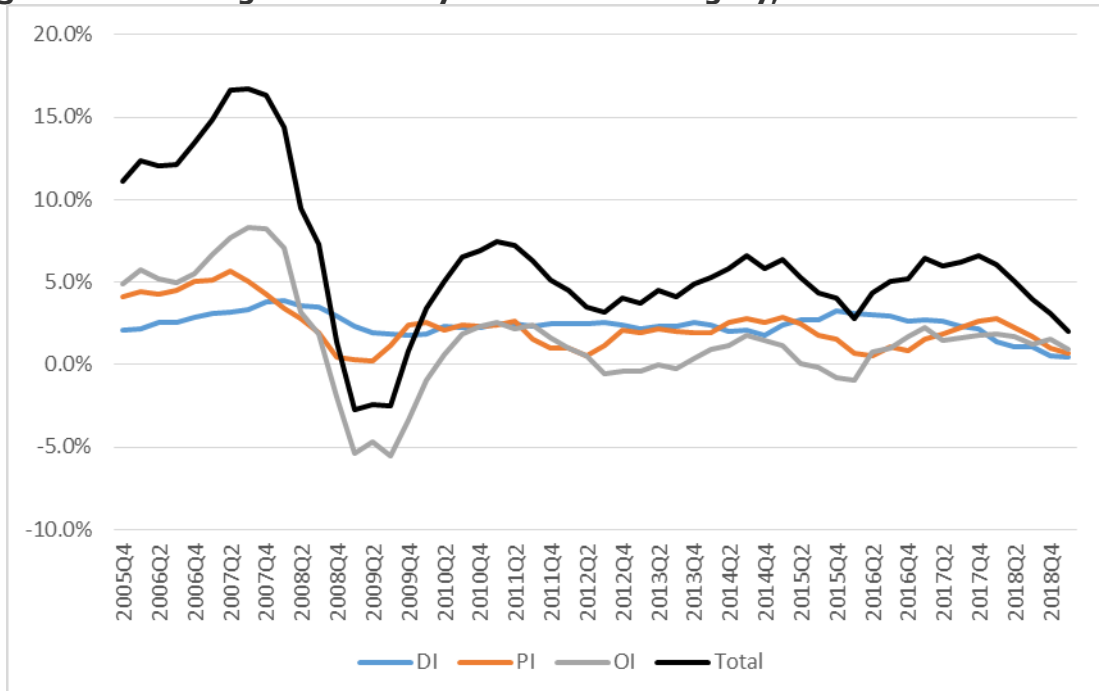
Figure 19: Net OI flows, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.
 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.

2.4. Global gross flows

Figure 20: Global gross flows by investment category, % of world GDP



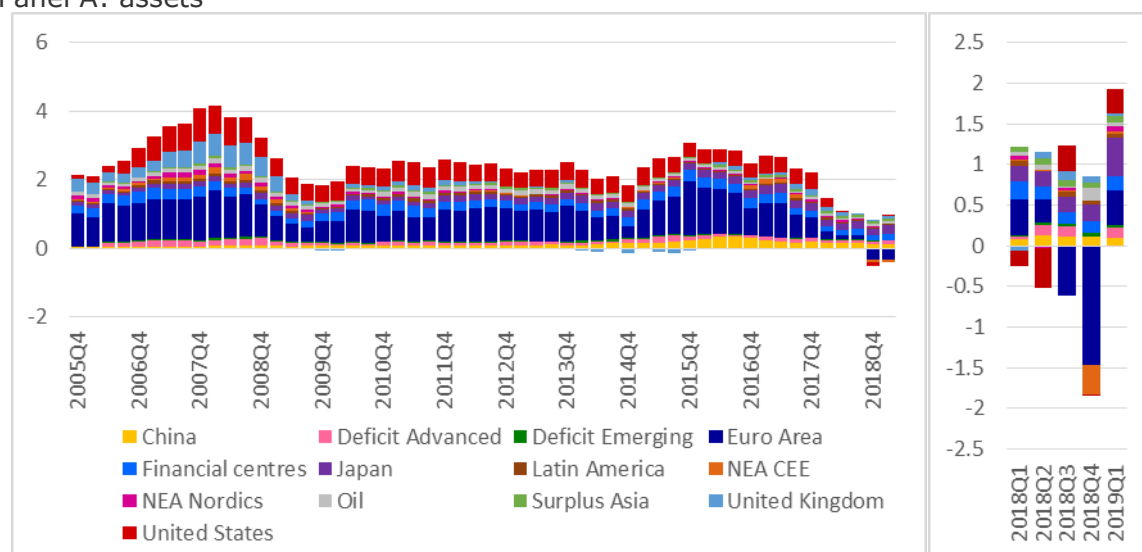
Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.
 Notes: Average of assets and liabilities.

The most striking observation when looking at global gross flows by investment categories (Figure 20) is the substantial reduction in global gross FDI flows as a percentage of world GDP in recent years. This has dominated in 2018: even as this movement started in 2015, it has substantially accelerated in recent quarters. Until 2017, this development was compensated by an increase in portfolio investments and other investments. However, both have since also started to decrease, causing an important reduction in total flows. In addition, statistics also suggest that the drop is most substantial in the euro area and, as a consequence, in the EU28.

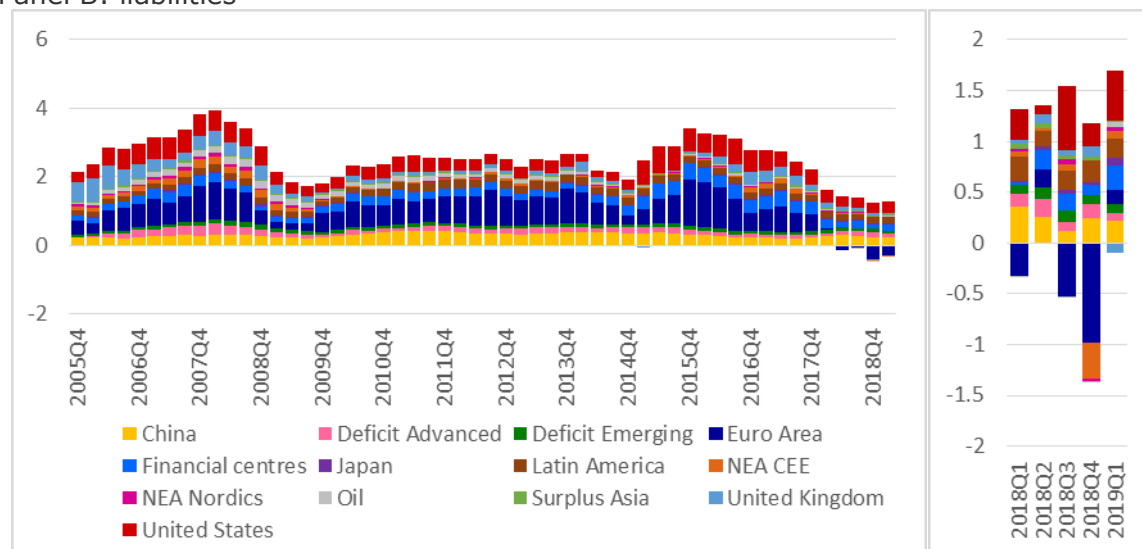
2.4.1. Foreign Direct Investments

Figure 21: Direct investment assets and liabilities, % of world GDP

Panel A: assets



Panel B: liabilities



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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. In some regions summing up multiple countries (but not the EZ that is considered as one jurisdiction) gross FDI assets are slightly over-evaluated because they double-count intra-region flows, which we cannot correct without bilateral data.

The decrease in gross FDI asset flows in 2018 was mainly driven by the US and the euro area (panel A of Figure 21). Traditionally one of the major sources of direct

investment worldwide, the US saw a decrease in its FDI asset flows in 2018 for the first time since 2005. The euro area's drop in gross FDI asset flows in 2018 was even bigger than the American one and mostly driven by decreases from Luxembourg, Germany and the Netherlands (for details on the European flows, see section 3.3). The drop in NEA CEE was driven by the decrease in Hungary, which can be attributed, as is the case in Luxembourg and the Netherlands, to the recent trend of decrease in flows to and from special purpose entities (SPEs). The major sources of FDI worldwide in 2018 were Japan, China as well as global financial centres.

The slowdown in liability accumulation follows the same pattern as the assets, and is largely driven by the euro area which records negative net accumulation of foreign claims. In terms of size, the decrease in the US liability gross flows is smaller than the change on the asset side. However, the decrease in flows on the liability side on the global level started somewhat earlier, already in the first half of 2018.

It is important to note that gross flows also include conduit FDI, i.e. FDI that does not flow directly from the ultimate investing country (UIC) to the ultimate host country (UHC), and is, thus, counted multiple times in the gross flow statistics. In other words, conduit FDI leads to an overestimation of gross 'genuine' flows.

The main argument of this section is that the collapse in FDI flows captured in the BoP statistics is mostly driven by the slowdown of flows from non-EU UICs to non-EU UHCs that pass through a set of specific EU countries that are used as conduits of FDI, mainly those with high concentration of SPEs.

That said and before we proceed to that discussion, another reason that is thought to have partially influenced the fall in FDI and which it is worth noting concerns recent trade tensions. In contrast to other categories of capital flow, FDI can be fairly closely interrelated to trade. After all, FDI provides foreign companies with a marketing, financial and physical infrastructure that aids trading internationally. FDI can also be a substitute to trade, providing a more cost effective way to produce and sell products in a particular country. Pessimism surrounding trade dis-incentivises these operations, especially as they are often considered in a medium- to long-term time horizon.

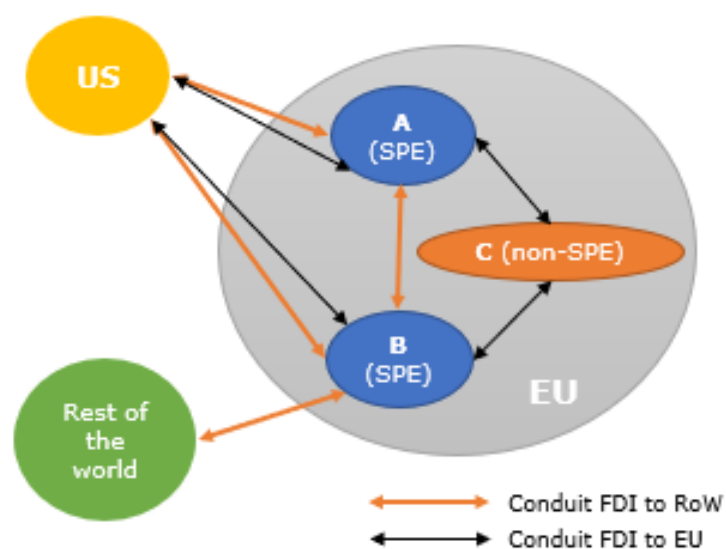
The level of interrelation between trade and FDI is further thought to be stronger for economies with high degrees of intra-industry trade and integrated consumer markets. This is the case of the EU-US relation, as players in both economies leverage on similar kinds of expertise and technology. Similarities between consumer groups also result in very similar products being offered in both markets. Most trade thus depends less significantly on location effects (as is the case with China). This would indicate that trade tensions are likely to have resulted in a particularly large drop in FDI between these players as well as other advanced economies. Box 4 provides some insights in this regard by exploring the origin of FDI into the EU as well as the EU China investment relationship.

However, 'genuine' FDI flows in and out of the EU remain much more robust, suggesting the bulk of the fall in FDI is explained by the diminished use of conduits. Figure 22 below illustrates the relationship between non-EU UICs and UHCs, as well as the conduit FDI to the EU.

This hypothesis is supported by three main arguments. First, there is evidence that the decrease in gross flows in the EU is concentrated among SPEs in Luxembourg and the Netherlands. Second, the evolution of asset and liability flows in most of the remaining EU countries that do not host SPE activities is much more stable. Third, the 'FDI conduit' EU countries have large FDI asset and liability positions with extra-EU

jurisdictions and among themselves. The first two arguments are related directly to the developments in the EU and thus explored in more detail in the third section of the report.

Figure 22: Schematic representation of FDI flows involving SPEs



Source: Bruegel.

Notes: A, B and C represent 3 countries of the EU: A and B countries with SPEs, and C a country without SPEs

The question of which non-EU countries are behind the slowdown, however, is more difficult to answer as we do not observe bilateral flows. However, given the simultaneous net decrease in FDI assets abroad from the US (i.e. a decrease in the flow of asset acquisitions not matched by liabilities), the US is the most plausible candidate to be the UIC behind the slowdown in global gross FDI flows (Figure 20).

The picture is even less clear as regards the UHC affected by the slowdown. Possible scenarios include the UK because of Brexit, China and other Asian countries because of the global trade and geopolitical tensions, the US itself, mainly because of the changes in its legislation (with the Tax Cuts and Jobs Act), or a combination of these three explanations.

The BoP statistics that we have been using until now (which are based on the asset/liability principle, see Box 3 for explanations) do not allow us to investigate bilateral investment relationships and the distribution of FDI flows and positions between countries (or a group of countries) and to fully identify the direction and the nature of FDI flows. That is why it is useful to resort to another database (using the directional principle) – the IMF Coordinated Direct Investment Survey (CDIS) – to obtain a clearer picture. In particular, using this database can be especially useful for countries with large values of pass-through funds, in differentiating between them and genuine investment that might affect economic developments.

Box 3: Difference between asset/liability and directional principle for presenting investment flows

According to the BPM6 and BMD4 standards, there are two ways of presenting aggregate direct investment positions and flows – the asset/liability principle and the directional presentation. Following the asset/liability principle, direct investment is organised according to whether the investment relates to an asset or a liability of the reporting country, regardless of the direction of the investment relationship. The asset side includes all assets of both resident parent companies and of resident affiliates, while the liability side, in a similar way, covers all liabilities. For example, a reporting country's assets include equity investments in and lending to the foreign affiliates of the resident parent company, as well as equity and debt claims of a resident affiliate in its foreign parent company or in another fellow enterprise. Similarly, a country's liabilities include all foreign investment claims of foreign parent companies in their resident affiliates or of foreign affiliates in the resident parent or fellow entities (Table 2). The asset/liability presentation does not take into account the motivation for the direct investment or the direction of control and influence as the directional presentation does.

The directional form of presentation divides FDI into inward and outward investment. Inward (direct investment in the reporting economy) includes all the assets and liabilities between resident direct investment entities and their foreign direct investors. It also covers assets and liabilities between resident and non-resident fellow enterprises if their ultimate controlling parent is a non-resident. In the opposite case, outward investment (reporting country's investment abroad) includes all assets and liabilities between a resident investor and a non-resident investment entity. Again, it also covers assets and liabilities between resident and non-resident fellow entities, but in this case if the ultimate controlling parent is a resident. In other words, the outward investment position consists only of positions of resident parents, and inward only of positions of foreign parents, adjusted for the flows from their affiliates from abroad. In a special case of the cross-border investment relationship between so-called 'sister companies', the categorisation of loans and equity depends on the location of the ultimate parent company. On principle, all assets and liabilities between fellow enterprises are considered outward investment in the reporting economy if the ultimate parent is a resident. For the inward investment the opposite is the case. Table 2 below shows the calculation rules and relationships between the two forms of presentation.

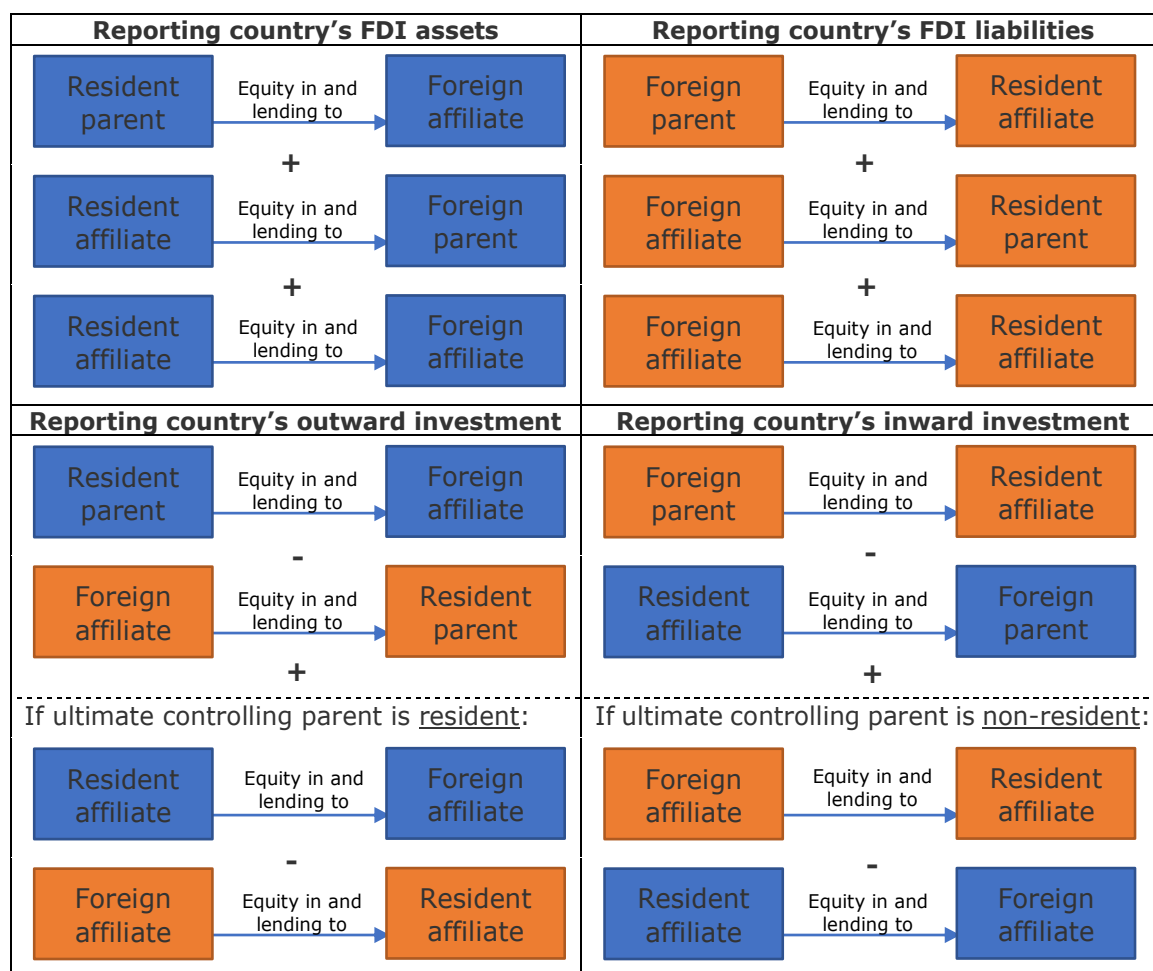
The main difference in figures presented this way comes from the different treatment of reverse investment, i.e. affiliate's investments in their parent companies and some investment between fellow enterprises.

Reverse investment includes lending funds or acquiring equity by an enterprise in its ultimate direct investor, provided that it does not own equity of 10 or more percent in that direct investor. If there are two companies that each own 10 percent or more of the voting power in the other, the relationship is classified as two mutual direct investments, rather than the reverse investment.

The use of asset/liability principle was recommended by BPM6 and BMD4 for the sake of consistency with other macroeconomics statistics and with the statistics of other categories of investment in the BoP and IIP data. This type of presentation provides consistent information on the size and composition of a country's assets and liabilities by category of investment and by instrument (equity or debt). However, compared to the directional presentation, it is not as useful for identifying the direction of influence and the nature of FDI. To understand bilateral investment relationships and the

distribution of FDI flows and positions between countries (or a group of countries) and by industry, the statistics shown on the directional basis paint a clearer picture. The directional principle can be especially useful for countries with large values of pass-through funds, in differentiating between them and genuine investment that might affect economic development.

Table 2: Derivation of statistics under asset/liability and directional principles



Source: BPM6 and BMD4

Table 3 below shows the bilateral inward and outward direct investment positions for a selected sample of countries in 2017 (the latest data available), based on the IMF Coordinated Direct Investment Survey (CDIS) dataset. The purpose of CDIS is to improve the availability and quality of direct investment position statistics, both overall and by immediate counterpart economy. The survey has been conducted since 2009, providing annual statistics on inward and outward FDI positions cross-classified by economy of immediate investor for inward and immediate investment for outward positions. Participation in the CDIS is voluntary, but it covers data for about one hundred countries.

Table 3: Inward and outward direct investment positions by counterpart country in 2017, in % of total position and in USD millions.

Inward Counterpart	Reporting country						
	US	Luxembourg	Netherlands	Ireland	UK	Germany	France
US		18%	19%	24%	24%	10%	9%
Luxembourg	10%		14%	12%	10%	17%	20%
Netherlands	9%	12%		13%	19%	19%	13%
Ireland	4%	12%	6%		1%	1%	1%
UK	13%	13%	10%	8%		9%	12%
Switzerland	8%	4%	6%	10%	4%	8%	10%
Bermuda	0%	8%	6%	3%	2%	1%	c
Cayman	2%	5%	1%	5%	2%	0%	0%
Jersey	na	3%	0%	c	6%	1%	0%
	46%	74%	61%	76%	67%	67%	66%
Germany	8%	3%	4%	1%	4%		9%
France	7%	0%	3%	2%	6%	7%	
Canada	11%	5%	2%	0%	2%	0%	0%
Japan	12%	0%	2%	0%	4%	3%	2%
Spain	2%	0%	0%	1%	3%	2%	3%
Belgium	3%	3%	4%	1%	1%	3%	7%
Sweden	1%	0%	1%	0%	1%	2%	1%
Italy	1%	0%	2%	1%	1%	4%	3%
	44%	11%	19%	6%	22%	21%	25%
%W	90%	88%	80%	82%	88%	88%	91%
%W (top 20)	96%	98%	89%	83%	93%	96%	95%
World	4,025,492	3,987,835	5,005,349	892,742	1,607,987	950,837	874,521

c = confidential, na = not available

Outward Counterpart	Reporting country						
	US	Luxembourg	Netherlands	Ireland	UK	Germany	France
US		16%	15%	13%	22%	17%	17%
Luxembourg	11%		8%	40%	8%	12%	4%
Netherlands	16%	17%		11%	11%	13%	11%
Ireland	7%	11%	4%		5%	1%	2%
UK	12%	17%	11%	12%		9%	9%
Switzerland	4%	8%	8%	-2%	2%	3%	3%
Bermuda	6%	2%	3%	6%	0%	0%	0%
Cayman	6%	-1%	1%	c	c	0%	0%
Singapore	5%	3%	1%	0%	1%	1%	1%
	67%	73%	50%	80%	51%	55%	48%
Germany	2%	3%	6%	0%	2%		6%
France	1%	3%	3%	1%	6%	6%	
Canada	7%	2%	3%	0%	2%	1%	1%
Japan	2%	0%	1%	0%	0%	1%	2%
Spain	1%	1%	3%	c	5%	4%	4%
Belgium	1%	2%	3%	0%	1%	2%	12%
Sweden	1%	1%	1%	1%	2%	2%	1%
Italy	0%	2%	3%	0%	1%	2%	6%
	16%	14%	22%	3%	19%	16%	31%
%W	83%	88%	72%	83%	70%	71%	80%
%W (top 20)	90%	94%	82%	88%	78%	87%	87%
World (W)	6,013,335	4,812,170	6,174,234	860,058	1,625,169	1,606,120	1,451,663

c = confidential

Source: IMF Coordinated Direct Investment Survey (CDIS).

Notes: Direct investment positions are negative when a direct investor's claims (equity and/or debt) on its direct investment enterprise are less than the direct investment enterprise's claims (equity and/or debt) on its direct investor. Direct investment positions also could be negative due to net negative positions with fellows. Direct investment positions also can be negative due to negative retained earnings (which may result from the accumulation of negative reinvested earnings). The world total (W) is in USD millions; % total W (top 20) = share of the top 20 largest counterparts in the total inward/outward position of a country.

The selected sample of countries mostly corresponds to the list of top countries in terms of the size of FDI positions globally, both inward and outward.⁶ The list of

⁶ <http://data.imf.org/regular.aspx?key=61227425>

counterpart economies represents a subset of the top 20 most significant investment sources and destinations for the countries in the sample. The counterpart list is split into two groups: (i) countries of the initial sample, to illustrate the large investment positions between them, and additionally, countries that immediately follow in term of the size of the positions (both are known to be the hotspots for the pass-through of conduit FDI, with the exception of DE and FR), and (ii) countries for which a more 'genuine' investment relationship with the countries in the reporting sample might be expected.

The CDIS dataset⁷ shows that the Netherlands and Luxembourg are in the global top three of largest sources and destinations of direct investment, along with the US. The fact that two relatively small countries are by the FDI statistics presented as global investment hotspots, additionally to the fact that both inward and outward positions are ranked at the very top of the world, points to the conclusion that the immediate counterpart economy in some cases might not be the UHC. There are ongoing pilot studies by Eurostat and EU Member States that look to analyse this. With the increasingly complex corporate structures of MNEs and the widespread use of SPEs, direct investment positions vis-a-vis financial centres (including offshore ones) are significant and show that FDI flow statistics might not be the most useful indicator for real economic activity.

Table 3 shows that inward investment positions in the US are fairly balanced between the two counterpart groups, which implies that the investment aimed at the US does not necessarily have to go through the mentioned financial centres. For the outward investment this is not the case. Compared to the other countries in the sample, except for Luxembourg and Ireland, US outwards positions with the SPE hotspots and offshore financial centres are quite significant and might signal the prevalence of conduit FDI. Ireland's outward position with Luxembourg is exceptionally large, covering 40% of its total outward investment.

Inward investment positions of Germany and France show the Netherlands and Luxembourg as their most significant counterparts, in both cases covering more than 30% of their total inward positions, which signals that a large part of inflows has to pass through SPEs. This might hide the original source, quite likely a country outside the EU. The outward positions of France and Germany with the first group of counterparts is somewhat less significant, especially compared to other countries in the sample. The low percentage for Germany in the bottom group might be explained by the non-comprehensive coverage of the counterpart list (e.g. CEE countries are not included).

Considering the flexibility of SPE structures used by MNEs and the tax, regulatory and confidentiality benefits some global financial centres provide, it is reasonable to expect that even small changes in legislation can shift investment flows' patterns. Shifting profits to low-tax jurisdictions, taking advantage of certain countries' double taxation treaties, transfer pricing or corporate inversions are some of the tools MNEs use to reduce their tax burden. All of it can be easily affected by legislation changes, possibly resulting in changes in global investment flows. A good example of a legislation change that might have contributed to the global drop in FDI is the 2017 US Tax Cuts and Jobs Act⁸ (TCJA).

The main changes brought by the TCJA are the following. First, TCJA represents a shift from a so-called 'worldwide' to a 'territorial' tax system, which exempts foreign income

⁷ <http://data.imf.org/regular.aspx?key=61227425>

⁸ Public Law 115-97 <https://www.govinfo.gov/content/pkg/PLAW-115publ97/html/PLAW-115publ97.htm>

from taxation in the residence country. In a 'worldwide' tax system, resident entities are taxable on their income irrespective of where the income is created, while under the 'territorial' system the country only taxes only income derived from within its borders, regardless of the residence of the taxpayer.

Second, the TCJA introduced a permanent reduction of the US corporate income tax rate from 35% to 21%.

Third, it also introduced a one-time tax on historical earnings and profits of certain US-owned foreign corporations that had not been distributed to the US parent company at low rates (15.5% for cash and cash equivalents and 8% for all other non-liquid assets). Taxpayers may elect to pay the deemed repatriation tax in instalments over 8 years. Once this repatriation tax has been collected, the reform exempts future dividends paid to the US corporate shareholder and moves towards a territorial system of taxation. It is important to mention that this change does not require historical profits to necessarily be repatriated, only for the tax to be paid in the period over the next 8 years.

Fourth, to avoid an erosion of the tax base due to the shift from a worldwide to a territorial system, the TCJA also inaugurated a new way to tax foreign income, thanks to the introduction of the *Global intangible low-taxed income* (GILTI) tax and the *Foreign derived intangible income* (FDII) deduction. GILTI is a new category of foreign income tax subject to a minimum rate of between 10.5% and 13.125% and is supposed to reduce the incentive to move (or keep) corporate profits related to intellectual property out of the US into low-tax jurisdictions. Income earned abroad in excess of a 'normal' rate of return defined at the level of 10% is considered by the US tax administration as an anomaly and therefore considered as income from intangibles produced in the US and is thus subject to US tax. FDII is a deduction that lowers the effective tax rate to 13.125% (compared to the statutory 21%) for the foreign portion of the excess return. It is the income connected with the export of goods related to intangible assets (e.g. copyrights, patents or trademarks) held in the US.

There are some potential effects of the changes introduced by the TCJA on global capital flows.

Should a company wish to repatriate earnings to the US, there is no (corporate) tax difference anymore between earning foreign income and either repatriating it or keeping it booked abroad. Because of GILTI, the company faces the same tax rate and the liability cannot be deferred. As far as 'legacy profits' go, there is a one-time settlement of the tax liability at a lower rate.

However, depending on the jurisdiction, the incentive of some US MNEs to book profits abroad remains; the effective tax rate can still be lower abroad even with GILTI. Additionally, the FDII deduction may incentivise the on-shoring of intellectual property and off-shoring of manufacturing (real assets) which tend to have the rate of return below 10% (Kaysar, 2018; Setser, 2019).

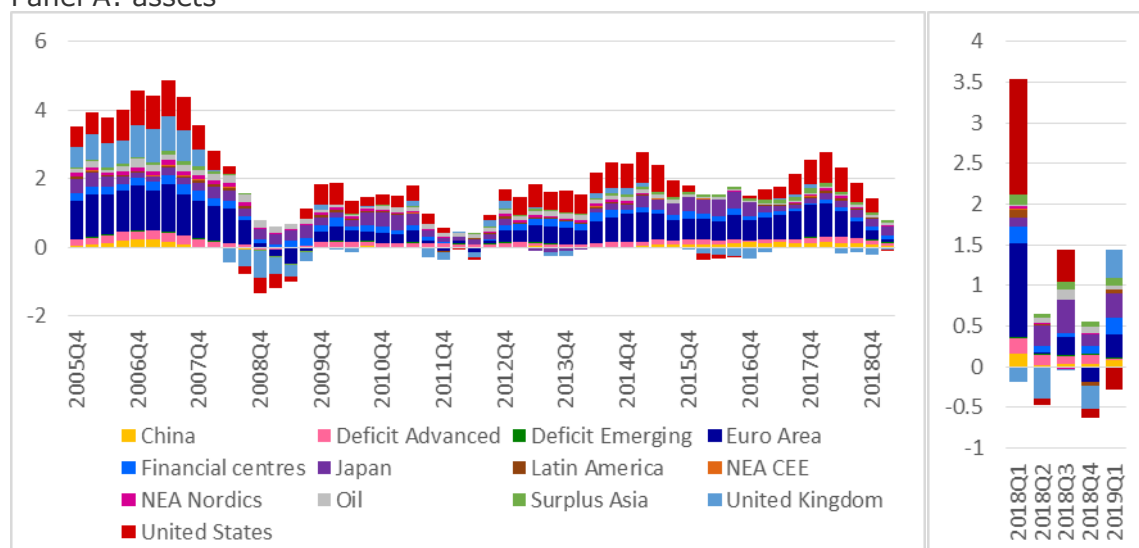
Finally, another possibility is that the offshore funds (accumulated profits booked abroad) of US companies were not really trapped abroad, but instead invested in US assets. This allowed US companies to borrow against those assets to 'raise' funds in the US and use the proceeds to return funds to their shareholders in form of dividends/buybacks. In this case, the TCJA does not significantly affect the current situation (Setser, 2019).

Due to the opposing effects of these changes, the total net impact on global capital flows is difficult to measure and challenging to fully understand. Some assumptions can be made about whether and how quickly the investment would respond to the possible lower tax burden in the US.⁹

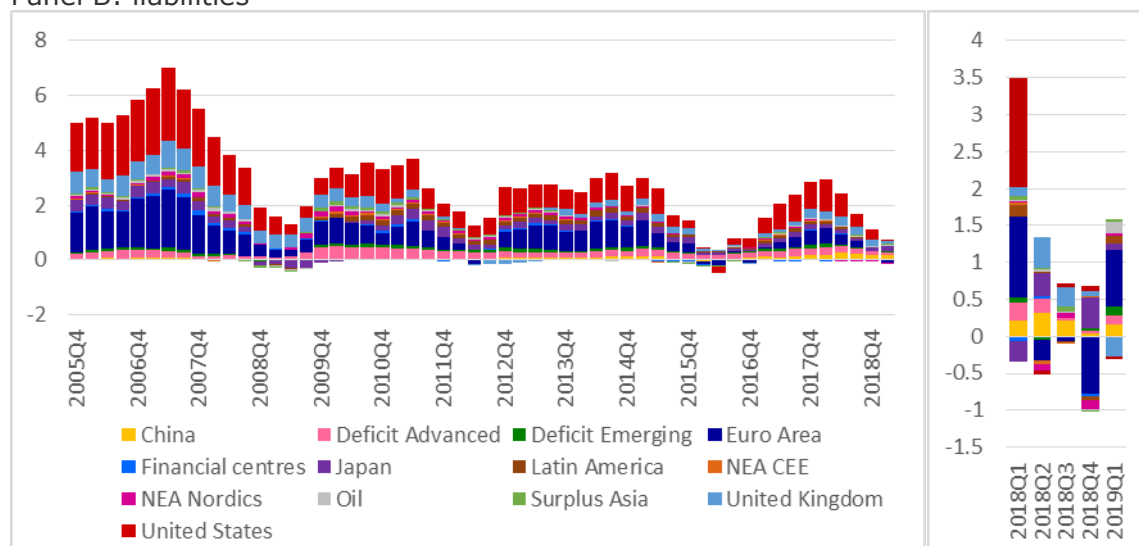
2.4.2. Portfolio Investments

Figure 23: Portfolio investment assets and liabilities, % of world GDP

Panel A: assets



Panel B: liabilities



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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. In some regions summing up multiple countries (but not the EZ that is considered as one jurisdiction) gross FDI assets are slightly over-evaluated because they double-count intra-region flows, which we cannot correct without bilateral data.

Global gross flows of portfolio investment have been decreasing during the last year, both on the asset and liability side. The change is mainly driven by advanced economies (already major contributors on the global level), with the decline in the euro area being more pronounced on the asset side. In general, the gross flows on

⁹ Additionally, the gradual change in tax structures as a response to the implementation of the Base Erosion and Profit Shifting (BEPS) Actions might be more consequential in driving changes in the flow of capital.

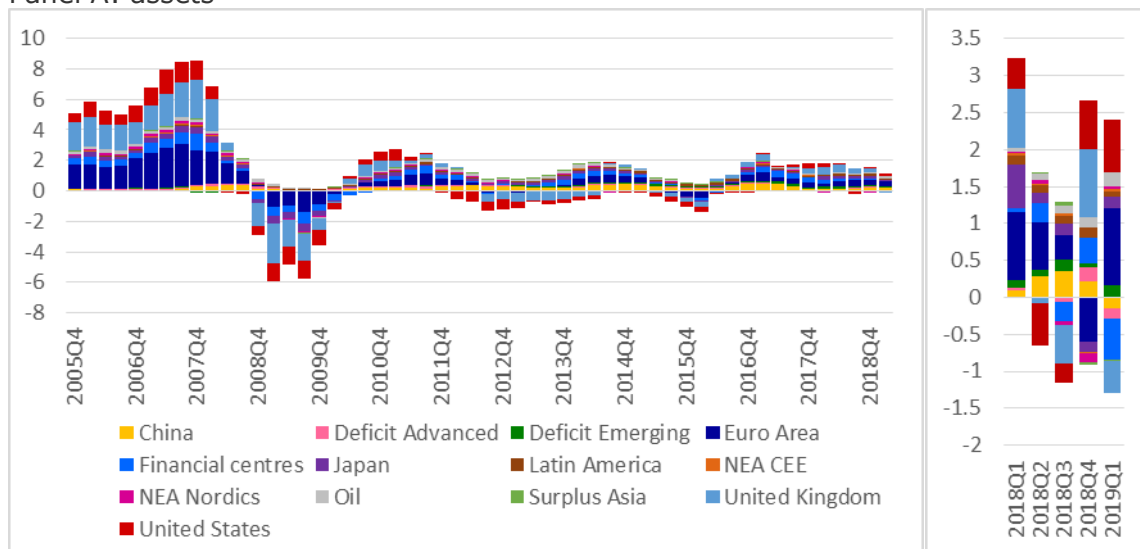
both sides are significantly smaller than before the crisis and, especially during that period, significantly higher on the liability side, causing an imbalance in total net flows.

2.4.3. Other Investments

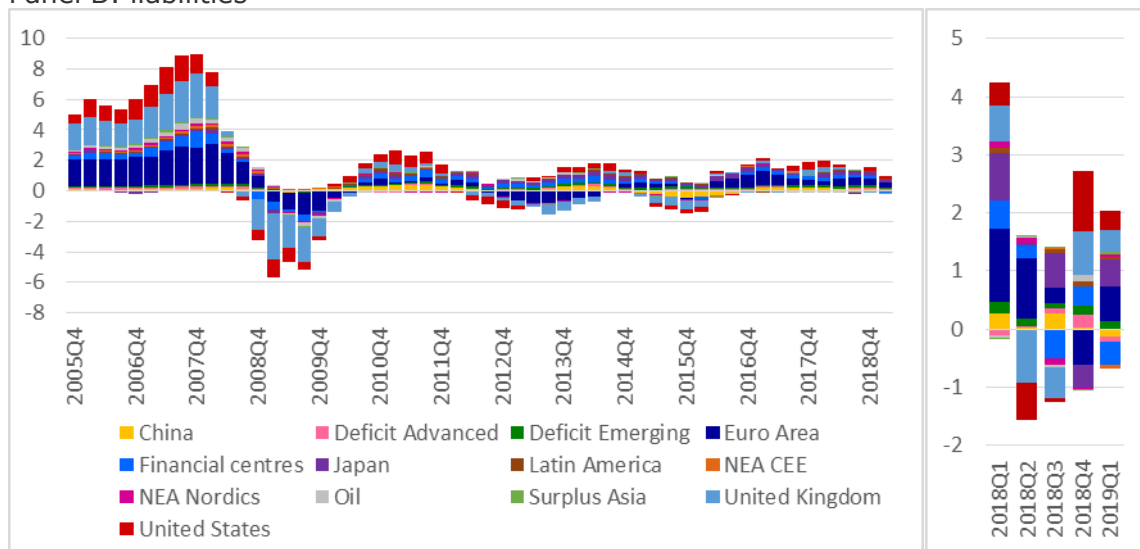
Global gross flows of other investment have significantly reduced in size after the financial crisis, following a very similar pattern.

Figure 24: Other investment assets and liabilities, % of world GDP

Panel A: assets



Panel B: liabilities



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.
 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. In some regions summing up multiple countries (but not the EZ that is considered as one jurisdiction) gross FDI assets are slightly over-evaluated because they double-count intra-region flows, which we cannot correct without bilateral data.

In the pre-crisis years, net accumulation of assets as well as the net incurrence of liabilities was most significant in the euro area, the UK, the US and in global financial centres, reaching in total a peak of 8% of global GDP by the end of 2007. Compared to the following year the total change amounted to 14 pp., resulting in the negative

net accumulation in both assets and liabilities. The decrease during the crisis was most pronounced for the UK. It started in the beginning of 2010 and by 2018 global gross flows of assets and liabilities barely exceeded 2% of world GDP.

As already discussed in details in previous reports (Claeys et al., 2017 and 2018)¹⁰, this reduced size of other investment flows illustrates the down-sizing of the cross-border balance sheets of banks across many jurisdictions that took place after the financial crisis, the effects of which are still visible today.

¹⁰ The evidence provided in previous reports, using the LBS dataset from the BIS, can still be found in Appendix 2 of this report (by country and country groups).

3. A closer look at Europe

3.1. EU imbalances

The previous section assessed capital flows and international investment positions from a global perspective. However, the EU is highly heterogeneous. Understanding its financial account also requires a closer look at its determining features and is thus well complemented by a deeper analysis of the geographical building blocks that result in this aggregate external position. This section explores the EU's financial account and delves deeper into the different trends within Europe that have determined its recent evolution.

The external EU (and euro area) position vis-à-vis the world is of notable significance, given the relative size of euro capital flows in international capital markets, the role of the euro as a whole and the effect of ECB decisions on the world economy. It thus has an important impact on the net position of counterparties and the general state of international capital markets.

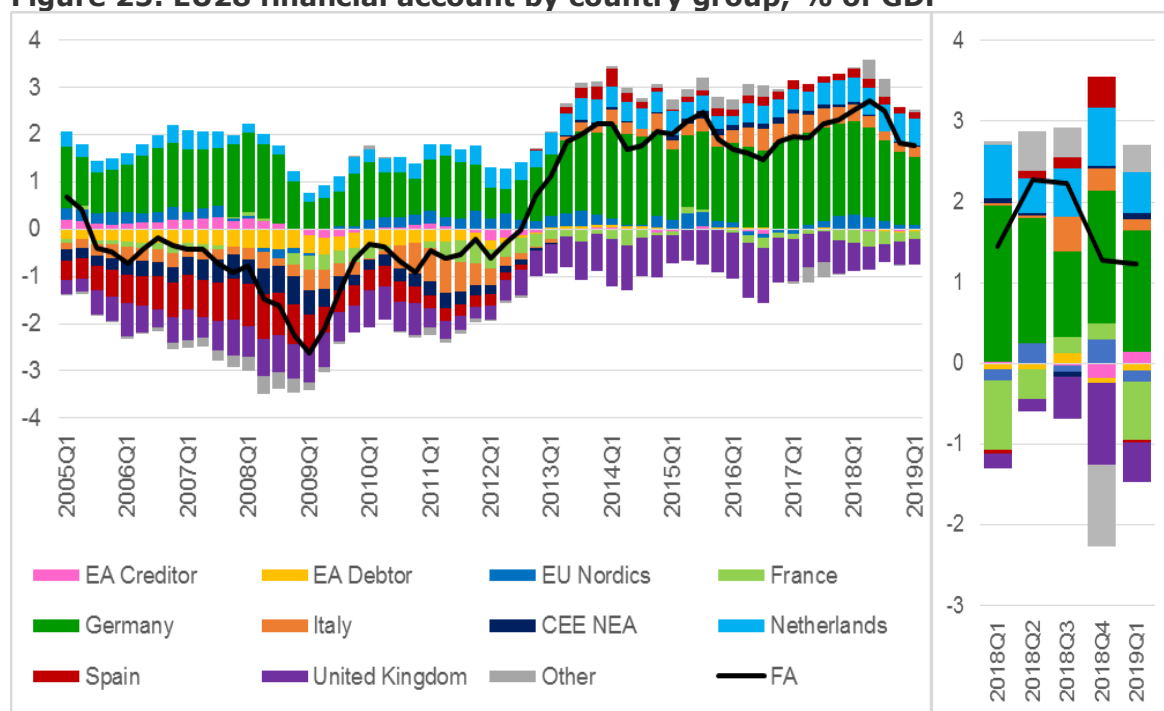
Overall, in 2018, the main European development has been the fall in the EU's financial account surplus, driven by a relatively broad-based fall in its member states' accounts (even as the EU remains the most prominent net exporter of capital with a surplus of 2%). An important driver of this fall was the decline in the German financial account surplus, matched by a rise of domestic household and corporate investment in the current account.

As in the two previous reports (Claeys *et al.*, 2017 and 2018), our analysis divides European member states into a series of subgroups, facilitating the detection of trends across countries. Data for the EU's six largest economies (Germany, France, Italy, Spain, the Netherlands and the UK) is exhibited independently, given their relatively high individual contribution to the EU's overall economy and financial account. The remaining countries are divided into sub-groups according to the following two main determinants of medium to long-term capital flows: per capita income and reserve currency status (euro vs. non-euro). The resulting non-reserve currency groups are the high-income Nordics (Denmark and Sweden) and lower-income CEE group (Bulgaria, Czech Republic, Croatia, Hungary, Poland and Romania). The higher income reserve currency group is made up of euro area creditor countries (Austria, Belgium and Finland). The lower-income reserve currency group is additionally divided into two, to account for the fact that it is made up of countries that joined the EU and euro at different times, with the resulting effects of currency adoption and capital account liberalisation reflected in the data in different time periods. These are the euro area debtors (Greece and Portugal) and the euro area CEE group (Estonia, Latvia, Lithuania, Slovakia and Slovenia). Finally, Cyprus, Ireland, Luxembourg and Malta are discussed individually. This seeks to account for the significant size of their cross-border balance sheet relative to their economies.

As visible in Figure 25, overall, the net EU financial account balance vis-à-vis the world remains significantly in surplus at around 2% at the end of 2018. As discussed in Claeys *et al.* (2018), this follows the post-crisis trend that has seen an uneven adjustment of the significant (and opposing) imbalances that developed in this first decade of the euro when savings in countries like Germany and the Netherlands constituted an important source of periphery investment (in countries like Spain, Greece, Portugal, Ireland). These financial inflows towards the southern periphery and

CEE countries have ceased (Spain and Ireland, for example, have enjoyed a financial account surplus for several years now), reducing asymmetries within the EU substantially. However, financial outflows from the traditional 'surplus' countries remain strong. 'Deficit' countries focused their exports of goods and capital outside the Eurozone, boosted by their gradual internal devaluation, as did 'surplus' countries given falling demand from 'debtors' and aided by a fall in their real effective exchange rates (IMF, 2019).

Figure 25: EU28 financial account by country group, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

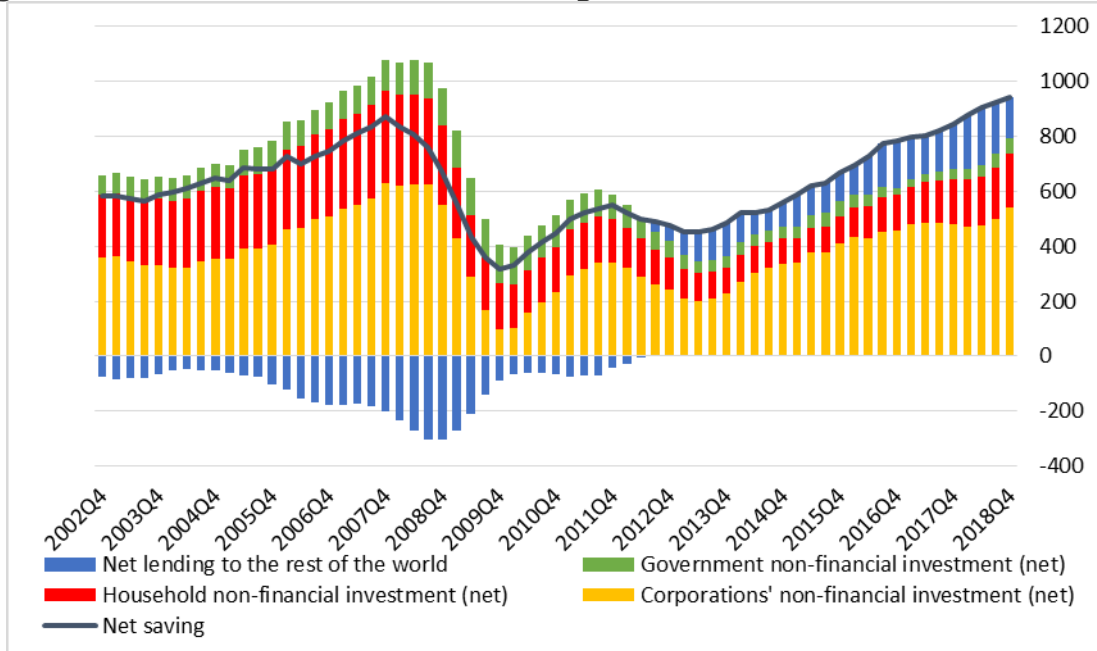
Notes: EU28 financial account is calculated as the sum of all individual countries' financial account. 'Other' includes Cyprus, EA CEE, Ireland, Luxembourg and Malta. Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding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

The increase of the current and financial account balance surpluses in the EU in recent years has been primarily driven by a widespread increase in corporate and public saving. The increase in public saving was driven by the fiscal consolidation that started simultaneously in most euro-area countries, while the corporate saving rose mainly because of the relatively low level of investment and low yield paid to corporate debt and low dividends paid on equity in 'surplus' countries (IMF, 2019).

That said, the picture has recently evolved in a new direction, as the last few quarters have seen a gradual fall in the EU's financial account surplus, from a peak of 2.8% at the beginning of 2018 to 2.1% by the end of the year. The first observation is that, although this change has been largely driven by a fall in the financial account surplus of Germany (-0.43 percentage points of EU GDP) and the EU non-euro area Nordics (Sweden and Denmark, -0.21 percentage points), it has been broad-based and it has affected the majority of EU member states since the beginning of 2018, also including Italy (-0.16 percentage points). Furthermore, the difference between the aggregate surplus for surplus economies and aggregate deficit for deficit economies (both as a percentage of EU GDP), as shown on Figure 25, has fallen by over 1 percentage point in the same period (thanks in particular to a small deficit from the UK). These cases

will be explored in greater detail later, with the German case receiving special attention as the main driver of the fall.

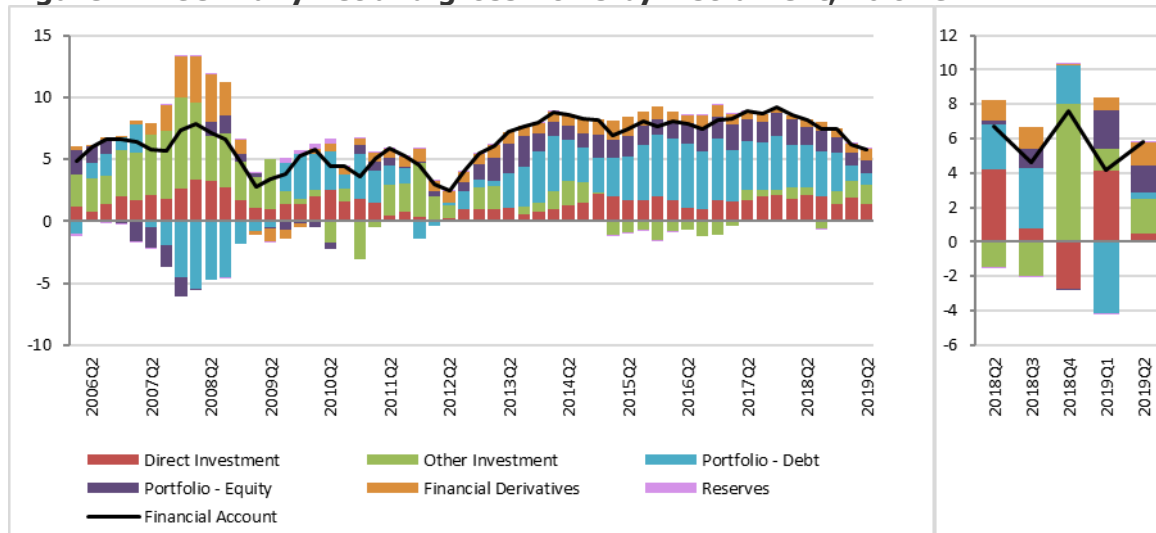
Figure 26: EU net investments and saving



Source: ECB

Contrarily to last year’s report (Claeys et al. 2018), we do not discuss all the aforementioned groups but only focus on those which have played a substantial role in shaping the EU’s financial account and driving its fluctuations in the recent past: Germany, the Netherlands, the EU Nordics, France and the UK.

Figure 27: Germany net and gross flows by instrument, % of GDP



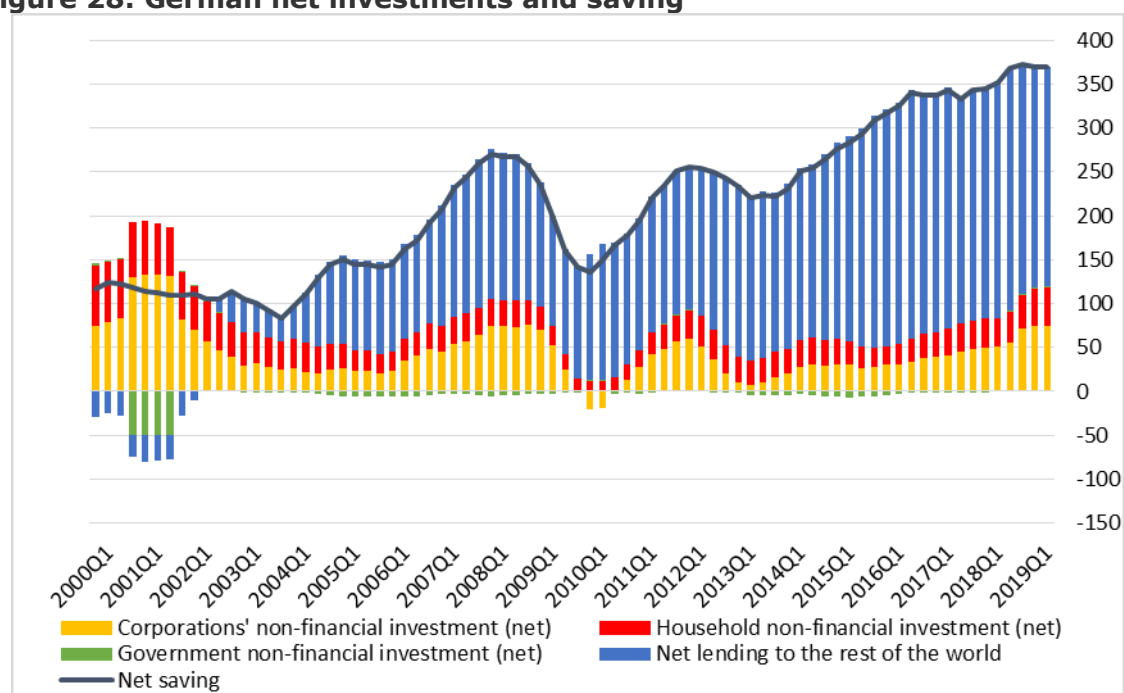
Source: Eurostat (bop_c6_q & namq_10_gdp)

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.

Looking at the geographical distribution of the EU's financial account, the role of Germany stands out throughout the years given its substantial surplus. Germany constantly reported net financial outflows since the introduction of the euro, which have exceeded 5% since 2013 (after a small dip in the immediate aftermath of the crisis). These flows are primarily driven by portfolio debt flows, as can be seen in Figure 27. Until 2015, this was mostly the result of German residents acquiring foreign debt securities, and incurring very few new liabilities. After the ECB began its asset purchase programme in 2015, the surplus was supported by the fall in the demand for European debt securities by non-residents due to the interest rate differential with the US that made European debt relatively less appealing.

However, the German financial account balance has fallen from a surplus of 2% of EU GDP in 2018Q1 to around 1.5% in 2018Q4. As can be seen in Figure 28, the concomitant fall in the current account (represented in the graph by the net lending to the rest of the world) appears to be principally driven by a renewed focus on investing in the domestic economy for German firms and households, with both household non-financial investment and corporations' non-financial investment having risen rapidly at the end of 2018. More broadly, this is also due to the recent weakness of the German economy and in particular to a reduction in German exports.

Figure 28: German net investments and saving



Source: ECB

An additional key contributor to the EU financial account surplus is the Dutch economy, which has been exporting its excess savings since the late 1980s. This financial account surplus is largely the result of a strong and persistent trade surplus in both goods and services. As was discussed in Claeys *et al.* (2018), these excess savings come largely from the non-financial corporate sector, although household contributions have also been significant (even if these have recently decreased). Furthermore, Dutch pension funds are very active in international capital markets and hold an important share of foreign securities. Finally, FDI outflows from the Netherlands have been significant and persistent for over a decade.

Finally, outside the euro area, Denmark and Sweden have often contributed to the EU's financial account surplus, although their balance has fluctuated and has experienced several episodes of deficit. Sweden has had a longer phase of capital exports, even if its financial account balance reversed in 2008/9, 2013 and 2016, as discussed in Claeys *et al.* (2018), and has been verging on negative throughout 2018. This partially relates to its proximity to the euro area and the relative attractiveness of euro investments at different points in time, with the 2008/9 episode having been motivated by a rapid euro capital outflow given the uncertainty surrounding the state of the monetary union at the time. In Denmark, the financial account has also typically exhibited a surplus, but its recent decrease has contributed to the overall fall of the EU's overall financial account. However, as the Danish Krone is pegged to the euro, central bank interventions have reduced the volatility of the financial account balance given their active engagement in international foreign exchange markets. Fluctuations in the Nordics have thus been more significantly driven by Sweden.

On the other hand, France's net financial account has been negative almost continuously since the introduction of the euro. France has recently been the only large euro area country to be a net importer of capital, which held true throughout 2018, and is thus a main drag on the EU's overall surplus. In France, net portfolio flows (often positive) and other investments (often negative) partially compensate for each other, so the deficit has remained small given the size of the economy. Looking at the current account, in terms of which sectors drive these flows, households in France are net savers while corporates net borrowers.

Finally, the United Kingdom has run a financial account deficit for many years. Despite fluctuations in the pound, with important periods of weakness (in 2007-2008, and since 2016) and strength (2013-2015) especially vis-à-vis the euro, the UK's external deficit has long remained stable at around 2%.

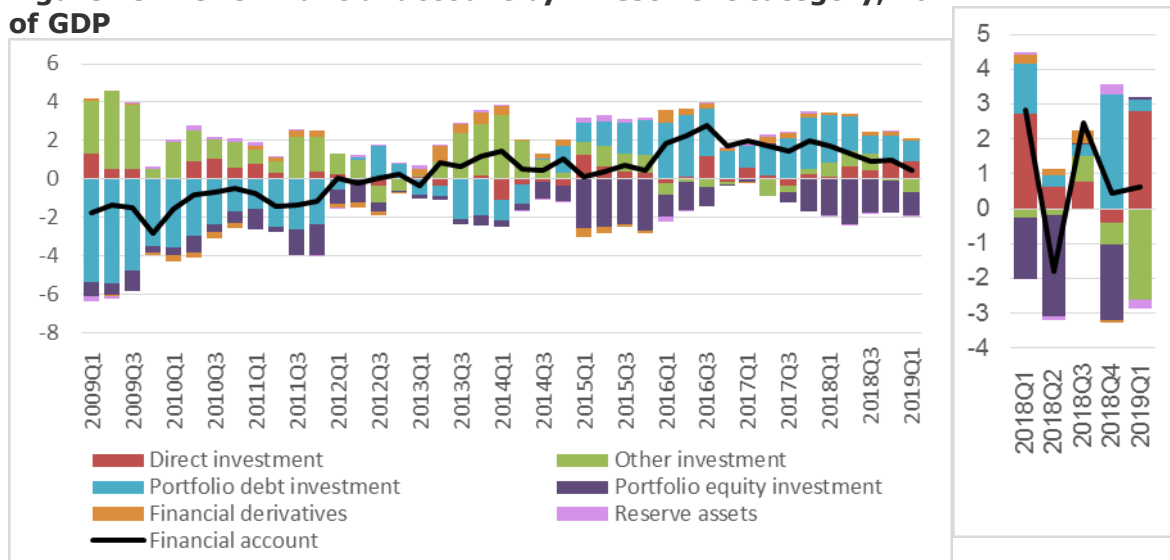
3.2 EU net flows

In a similar fashion to the analysis of global net flows (section 2.3), this section reviews net flows in and out of the EU, treated as a single block. Net flows display the difference between net foreign asset purchases and net foreign liability incurrence: a positive balance therefore corresponds to a net outflow of investment, a negative balance to a net inflow of investment.

First, we summarise the overall balance of cross-border investment into and out of the EU28. Figure 29 displays net balance of the EU's financial account as a percentage of EU GDP, as well as the net balances by category of investment (FDI, PI, OI). In 2018, the picture of the EU28 financial account was not fundamentally different to the previous years. Indeed, the EU continued running a financial account surplus whose size and composition took shape in 2015. It has the following two features. First, the net flows of FDI and other investment have been close to balance (in particular in 2016-17). Second, the overall net outflow of investment to the rest of the world is mainly composed of a persistent outflow of portfolio debt which is partially offset by a slightly more volatile inflow of portfolio equity (even though it briefly dried up in 2017-18).

However, throughout the course of 2018 and the beginning of 2019 there were two main new developments playing out that could signal a departure from the recent picture described above. Firstly, portfolio debt investments saw an important fall in net outflows, which resulted in a reduction of the financial account surplus. Secondly, in comparison to the two previous years, the EU has been recording stronger net FDI outflows in recent quarters.

Figure 29: EU28 financial account by investment category, % 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

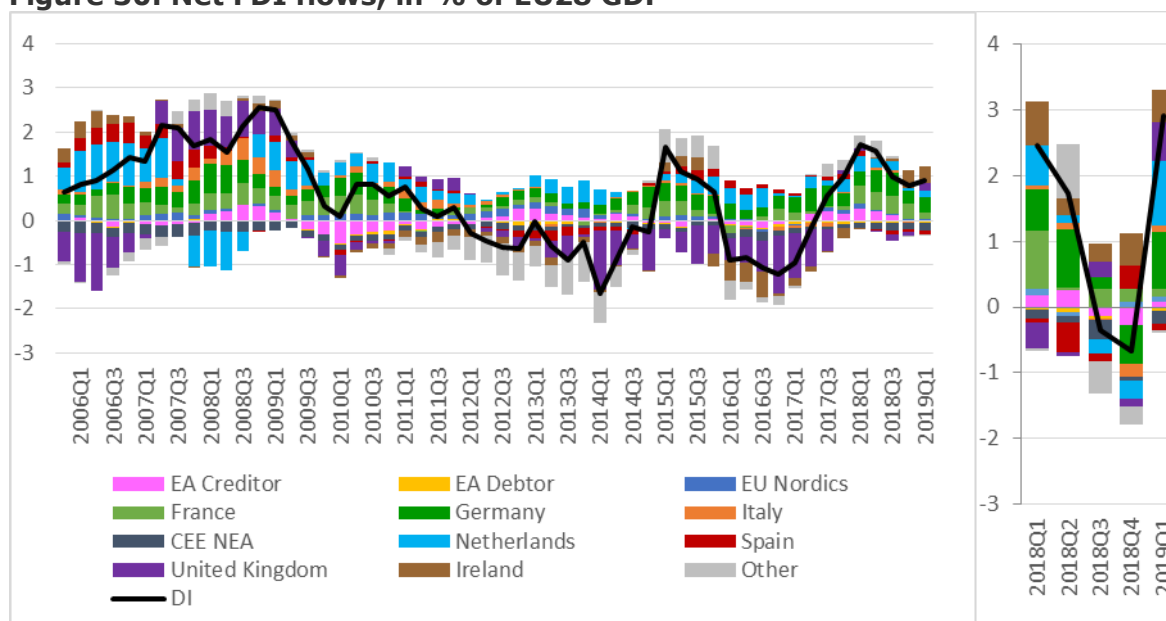
Having identified the most important EU-wide trends and developments, the following sub-sections will look at the distribution of net flows for each investment component by country. We begin with FDI and proceed with portfolio investment (PI) and other investment (OI).

It is worth noting that Figure 29 also includes financial derivatives and reserves. However, the net impact of flows pertaining to these categories is relatively small, so we omit a detailed discussion.

3.2.1 Foreign Direct Investments

In theory, FDI is generally expected to flow from more to less advanced economies, where capital is scarcer and opportunities of higher potential returns more abundant. However, although the EU is an advanced economy, and thus a natural candidate for exporting FDI capital to the rest of the world, the net outflow of FDI has been reduced in the aftermath the Great Financial Crisis and the subsequent double-dip recession.

Looking at the geographical distribution of flows in Figure 30, France, Germany and the Netherlands are historically the most important sources of FDI outflows among European countries, especially in the period before the financial crisis, along with Spain and Italy, whose role diminished after 2009. On the side of net FDI inflows, the UK plays a predominant role, and its fluctuations in the post-crisis period have been driving the overall balance heavily. The most recent instance of this was the fall in inflows that coincides with the Brexit referendum and its fallout.

Figure 30: Net FDI flows, in % of EU28 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. Both the financial account flows and GDP are measured in EUR

3.2.2 Portfolio Investments

The role of net PI debt flows and equity flows will be explored separately, given their notable divergence in recent years.

Net portfolio debt investment in the EU has been heavily driven by macroeconomic developments and, in particular, by interest rate differentials. Section 2.3. describes in detail the context and the policies that led to the monetary divergence between the US and the euro area, behind the net portfolio debt outflow from the euro area observed in recent years. Moreover, due to the size of the euro area economy, this monetary divergence has for the most part shaped the overall EU net portfolio debt flow.

However, beyond the role of the ECB, it is also worth examining the role of the other central banks within the EU that conduct independent monetary policy. However, many of these, with the notable exceptions of the Swedish Riksbank and the Bank of England (which will be tackled last) have largely followed the ECB's path in recent years in order to ensure the stability of their currencies vis-à-vis the euro. This follows the logic that many of these countries have deep economic relationships with the euro area, which leads to correlated economic cycles.

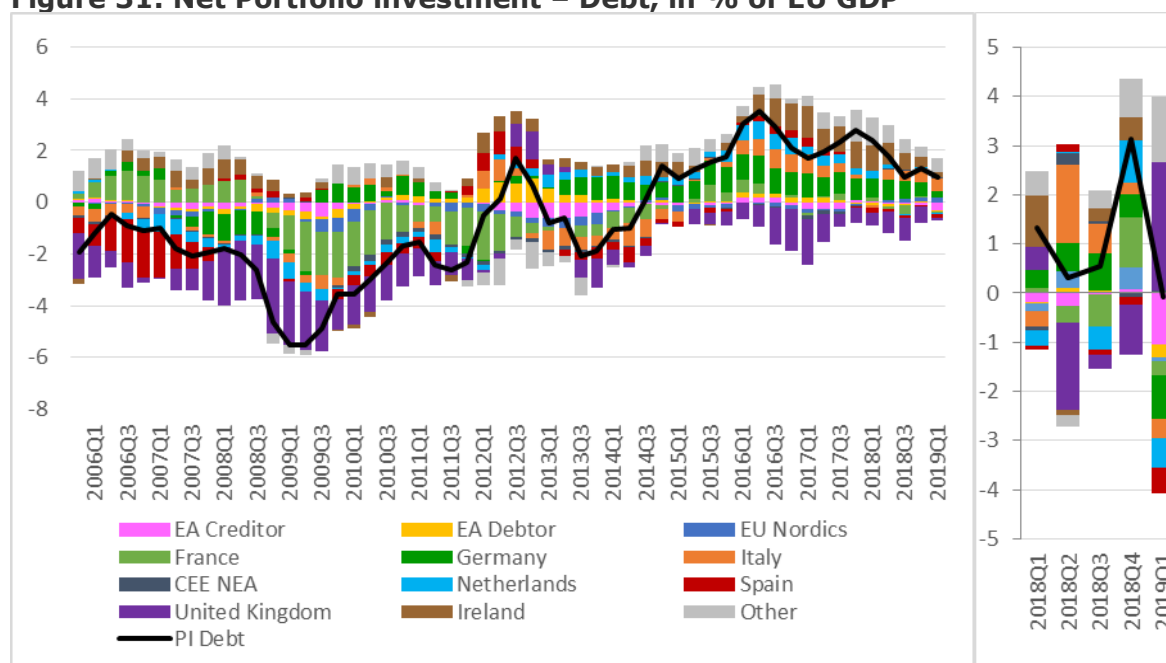
CEE central banks have largely followed the ECB's path especially in the aftermath of the crisis. That said, the Czech central bank raised interest rates twice in 2017 (by a total of 45bps), 5 times in 2018 including four consecutive meetings (by a total of 125bps) and once in 2019 (by 25bps) for a current policy rate of 2%. However, the recent economic weakness has caused a slowdown in their tightening. Meanwhile, the Hungarian central bank recently increased its deposit rate in May 2019 by 10bps (from -0.15 to -0.5).

Nordic central banks have also broadly followed in the path of the ECB. The Danish central bank is more constrained in its decisions, given the Danish Krone's (DKK)'s peg to the euro. From an interest rate standpoint, the Danish central bank experimented with negative rates before the ECB. Their current policy rate is of -0.65%. Sweden has also broadly followed the ECB, with the exception of a notable period of tightening throughout 2011 (to coincide with the ECB increases but longer and more significant) and the fact that they raised the policy rate by 25bps in December 2018 (albeit it remains negative at -0.25).

Finally, a mention must be made on the trajectory of the UK. In the aftermath of the Great Financial Crisis, the Bank of England followed a path that more closely mimics that of the Federal Reserve – first cutting rates in December 2007 and introducing the first round of QE in March 2009. Furthermore, the value of the pound has fluctuated significantly over the last decade (both vis-à-vis the dollar and vis-à-vis the euro). There have been two main episodes of GBP depreciation: one in the immediate aftermath of the crisis in 2007-08 and the second one after the Brexit referendum.

These changes have been visible in the UK's net PI flows, which jumped close to balance despite a high current account deficit. In 2013-15, sterling strength was evident, with a substantial fall of EURGBP. GBP volatility typically has a large effect on these flows because UK residents have GBP portfolio debt liabilities and foreign currency portfolio debt assets.

Figure 31: Net Portfolio investment – Debt, in % of EU GDP



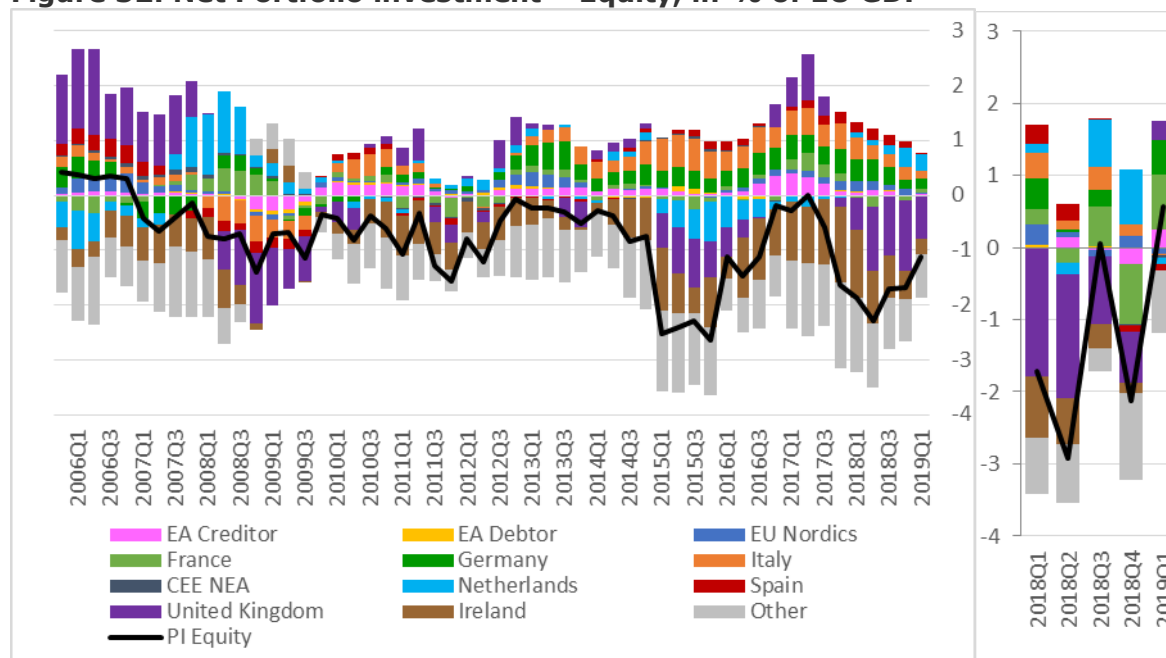
Source: Eurostat (bop_c6_q & namq_10_gdp).

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. Both the financial account flows and GDP are measured in EUR

In light of this, the UK's continuous net inflow when it comes to portfolio debt is perhaps the most important additional factor adding to the picture of the EU beyond the euro area outflow. Concerning the recent weakening of net outflows of portfolio debt investment, we observe that it is broadly spread among euro area countries, mainly Germany, France, the Netherlands, Italy and Ireland.

As Figure 32 shows, the structural break in net portfolio equity flow occurred around the same time as that of debt (2014). Before 2014, we observe a small inflow, which in the aftermath of the crisis also reflected small imbalances between different EU countries.

Figure 32: Net Portfolio investment – Equity, in % of EU 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. Both the financial account flows and GDP are measured in EUR

Nevertheless, by the end of 2014, the inflow strengthened significantly, only to temporarily fall again at the end of 2016. Not only are equity flows characterised by more significant fluctuations, but there were also more widespread differences between countries, as can be seen on Figure 32. The United Kingdom's particular switch from net exporter to net importer many times throughout the last decade is particularly striking, with a peak outflow around 1% of EU GDP the year ending in 2017Q2, squeezed between peak inflows of 1%. This is partially explained by the importance of equity financing in the UK economy that heightens fluctuations, and the result of the Brexit referendum and the stock market decline that followed it.

At the same time, the other three largest EU economies have all largely exhibited positive net PI equity flows. A connection with lower euro area growth and stock market performance could be made.

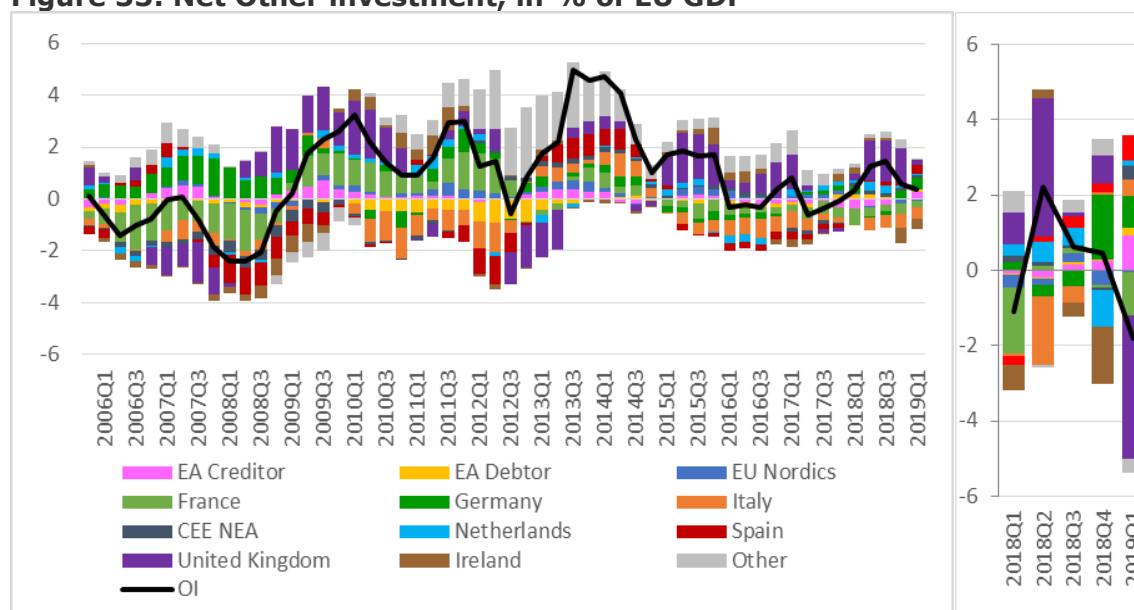
3.2.3 Other Investments

Finally, other investment is the most volatile category. It is worth mentioning that in recent years, flows in other investment have further reflected transactions related to monetary policy operations, rather than interbank flows.

Other investment flows typically exhibit lower imbalances and indeed, ever since 2015 net flows of other investments for the EU have fluctuated close to zero, exhibiting a general balance.

On the inflow side, we see some of the largest euro area economies that tend to receive central bank liquidity as a result of the ECB's monetary operations. On the outflow side, we observe some periodical outflows from the UK skew the picture. It is worth reminding that the UK is a global financial centre, intermediating financial flows from around the world. Relative to the volume of assets and liabilities that are intermediated by the UK, these net balances are small, but their absolute size makes a difference from the EU financial account perspective.

Figure 33: Net Other investment, in % of EU 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. Both the financial account flows and GDP are measured in EUR

3.2. EU gross flows

In 2018, there was a pronounced decline in extra-EU accumulation of foreign assets; and a subsequent slowdown on the liability side. While this was the result of a decline across investment categories, the fall in direct investment and equity assets was most significant. Last year, all components of FDI net acquisitions fell causing an important overall decline, similar to that seen by liabilities. Other investment net acquisitions have been positive since 2016, while portfolio investments saw a temporary rise in 2017 that has since subsided.

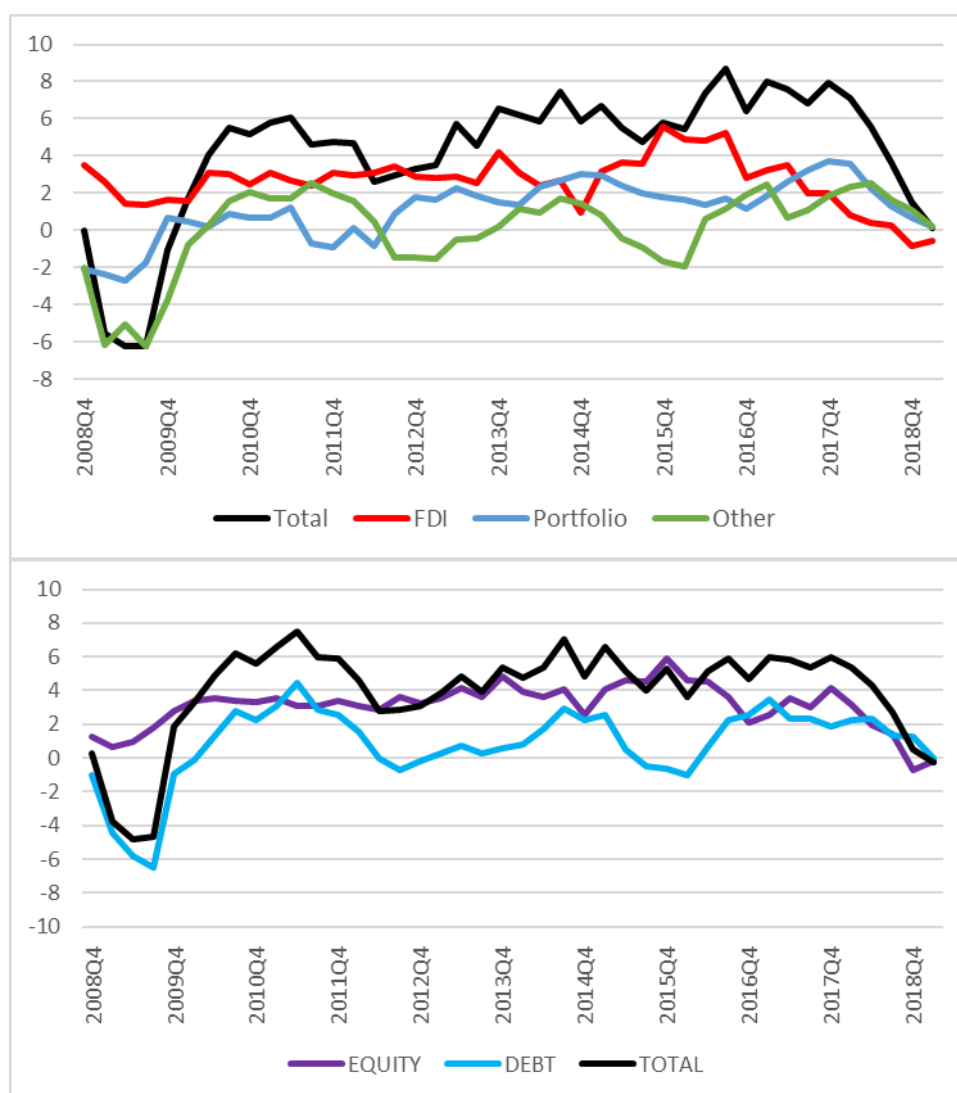
While gross flows are divided between the extra-EU and intra-EU dimension, as these are often driven by different factors, in 2018, trends observed in Europe in intra-EU financial flows have seen a high level of correlation with those observed for extra-EU28 flows. This correlation is particularly strong for FDI, as much FDI first arrives into a select number of EU countries (e.g. Luxembourg, the Netherlands or the UK) before being more evenly distributed internally. If we decompose the fall in intra-EU FDI, however, it becomes evident that much of the fall represents the diminished use of FDI conduits or SPEs, 'genuine' investment appears to have largely held-up.

3.2.1. Extra-EU dimension

3.2.1.1. Assets (EU residents net accumulation of claims)

As can be seen in Figure 34, EU residents accumulated additional foreign (i.e. extra-EU28) financial assets representing 1.6% of GDP in the year ending in Q4 2018. This was down a whole 7 percentage points (pp.) since the year before (8.6% of GDP at the end of Q4 2017). In 2018, the decline in foreign asset accumulation was the result of a simultaneous, though not equal, fall across investment categories (FDI -3.5 pp.; portfolio -2.9 pp.; and other investment -0.6 pp.) and across instruments (equity -5.0 pp.; and debt -1.9 pp.).¹¹

Figure 34: Extra-EU28 gross flows by investment category and by item, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show a 4Q backward-looking average.

Not only is the slowdown in the net acquisition of direct investment and equity assets more pronounced, but it also started much earlier, as it began long before 2018, in contrast to the more recent decline in portfolio investment and other investment. On

¹¹ Excludes reserves and derivatives, i.e. it is a breakdown of direct, portfolio and other investment.

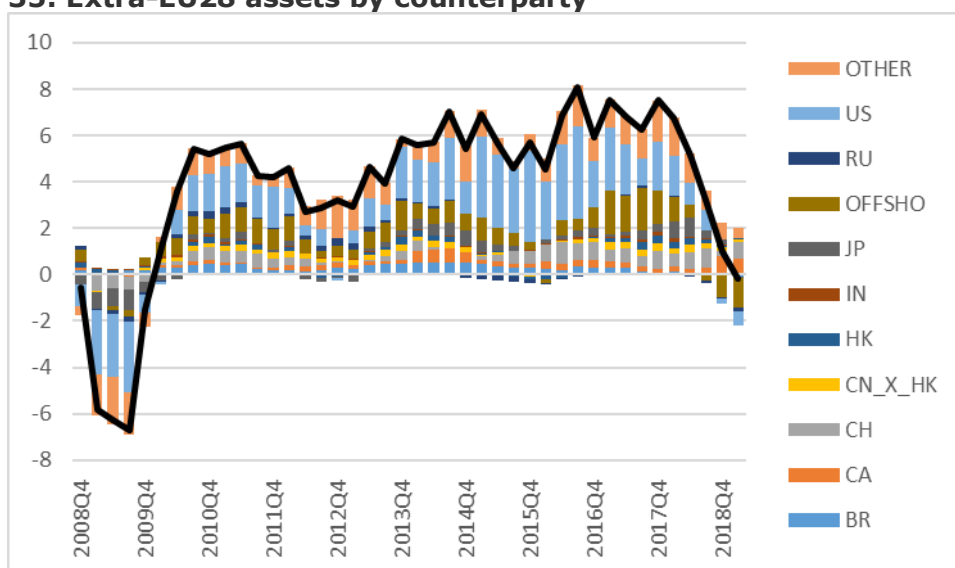
an annual basis, net acquisitions peaked at 5.6% of GDP in Q4 2015 for FDI and 5.3% of GDP in Q2 2017 for equity instruments. At the end of Q4 2018, however, net acquisitions had even turned negative representing -0.8 % of GDP for FDI and -1.1% of GDP for equity.

Looking back at the longest time window available, FDI has been the largest component of acquisitions of financial assets by EU28 residents from the rest of the world in the last decade. In that timespan, accumulation had never turned negative before. It is also worth noting, however, that this reversal follows immediately a period of higher-than-average accumulation that peaked in 2015 (as already pointed out above) meaning that one potential interpretation behind this fall could be a reversion to the mean, and could thus be temporary. Net acquisitions of equity assets have also turned negative for the first time in a decade. By comparison, unlike FDI flows, flows of equity acquisitions have been more stable in the last 10 years.

As a result, the historically more volatile and less important net acquisitions of portfolio, other and (in term of instruments) debt assets have overtaken their counterparts in size (0.7%, 1.2% and 2.2% of GDP at the end of 2018 respectively).

In a first phase (from 2015 to 2017), net acquisitions across all three categories of investment intensified (+1.9, +2.5 and +2.5 pp. respectively), counteracting the fall in FDI and equity. In the most recent phase (2018), though, net acquisitions in these categories have begun to slow down as well (-3.0, -0.6 and -1.9 pp. respectively).

Figure 35: Extra-EU28 assets 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 excluding Hong Kong, CH = Switzerland, CA = Canada and BR = Brazil.

As Figure 35 shows, from a geographical perspective, the bulk of the recent slowdown in net acquisitions relative to 2015 has come from claims vis-à-vis US counterparties (from 3.9% in Q4 2015 to -0.2% in Q4 2018). From 2015 to 2017, offshore¹²

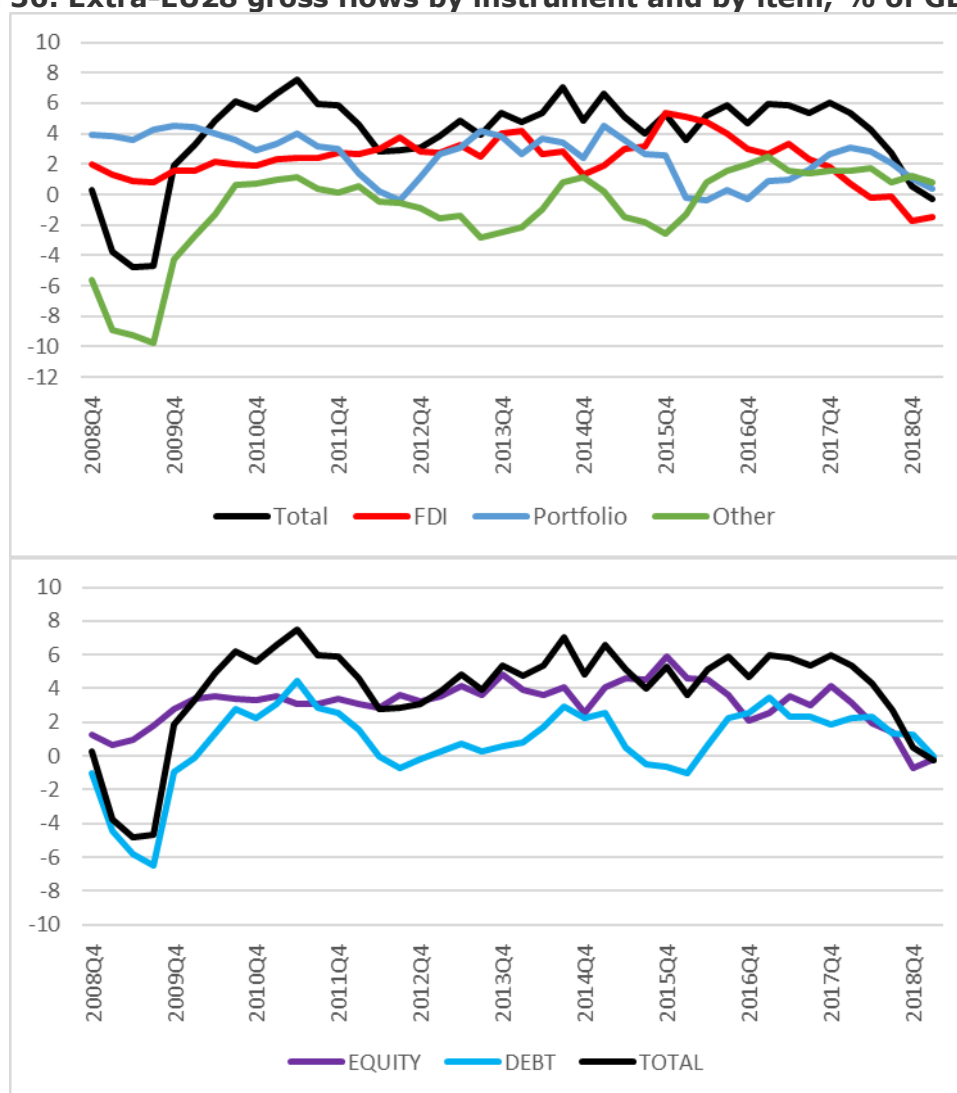
¹² Offshore financial centers include: Andorra, Antigua and Barbuda, Anguilla, Aruba, Barbados, Bahrain, Bermuda, Bahamas, Belize, Cook Islands, Curaçao, Dominica, Grenada, Guernsey, Gibraltar, Hong Kong, Isle of Man, Jersey, St Kitts and Nevis, Cayman Islands, Lebanon, Saint Lucia, Liechtenstein, Liberia, Marshall Islands, Montserrat, Mauritius, Nauru, Niue, Panama, Philippines, Seychelles, Singapore, Sint Maarten, Turks and Caicos Islands, Saint Vincent and the Grenadines, Virgin Islands (British), Virgin Islands (US), Vanuatu and Samoa.

destinations for outbound investment in foreign assets made up for this shortfall. However, by 2018, they were reversing too.

3.2.1.2. Liabilities (Foreign residents net accumulation of claims)

EU residents incurred foreign (i.e. extra-EU28) financial liabilities representing 1.5% of GDP in the year ending in Q4 2018. This was down by 5.1 pp. since the year before (i.e. from 6.6% of GDP at the end of 2017). Unlike asset accumulation, however, the decline in foreign liabilities accumulation in 2018 was not the result of a pronounced fall across all investment categories (FDI -3.6 pp.; portfolio -1.3 pp.; and other investment no change) and across all instruments (equity -4.6 pp.; and debt -0.5 pp.).

Figure 36: Extra-EU28 gross flows by instrument and by item, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show a 4Q backward-looking average.

As with assets, the slowdown in the net accumulation of direct investment and equity liabilities was more pronounced and started earlier. On an annual basis, flows peaked at 5.3% of GDP for FDI, and at 5.9% of GDP for equity at the end of 2015. By comparison, at the end of 2018, non-residents actually off-loaded EU28 FDI claims (-1.1% of GDP) and piled up equity assets only slightly (0.1% of GDP).

From a historical perspective, the slowdown in the accumulation of liabilities in FDI and equity has no precedent in the last 10 years. Again, one caveat for FDI is the possibility of a mean reversion (the reversal follows a period of higher-than-average accumulation that peaked in 2015).

The expansion of portfolio, other and (as far as instruments are concerned) debt liabilities was relatively more stable (1.2%, 1.5% and 1.4% in the year ending in Q4 2018 respectively) after having intensified in 2016-17 (indicatively, at the end of 2017, the respective levels were 2.5%, 1.5% and 1.9%).

3.2.1.3. Direct investment

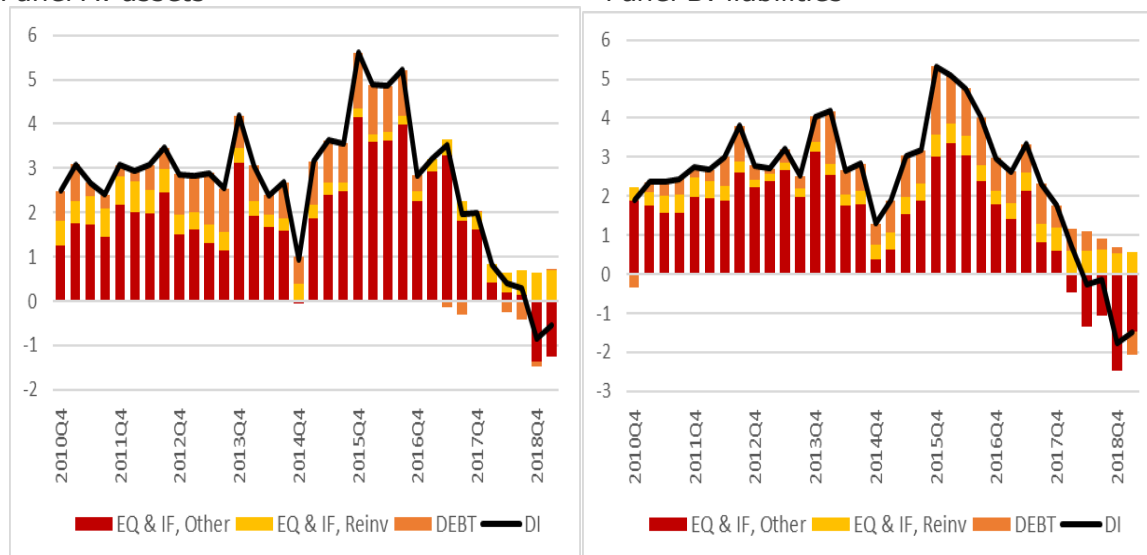
We now look in more details at the evolution of FDI, both in terms of assets and liabilities. While this section tackles the evolution of flows, their origin is also of note and is explored in greater detail in Box 4. The first important observation from the left-hand side panel of Figure 37 is that the decline in FDI asset acquisitions took place in two distinct phases, the second of which took place throughout 2018.

First, the net acquisitions of FDI equity asset excluding reinvested earnings (noted 'EQ & IF, Other' in the chart) held up while the net acquisitions of FDI debt essentially came to a halt (from 1.3% GDP in 2015 to 0.4% in 2016, and to 0% in 2017). Secondly, in the past year, all components of net acquisitions of FDI assets weakened, leading to an overall decline (from 2.7% of GDP in 2017 to -0.6% in 2018).

Figure 37: Direct investment assets and liabilities by item, % of GDP

Panel A: assets

Panel B: liabilities



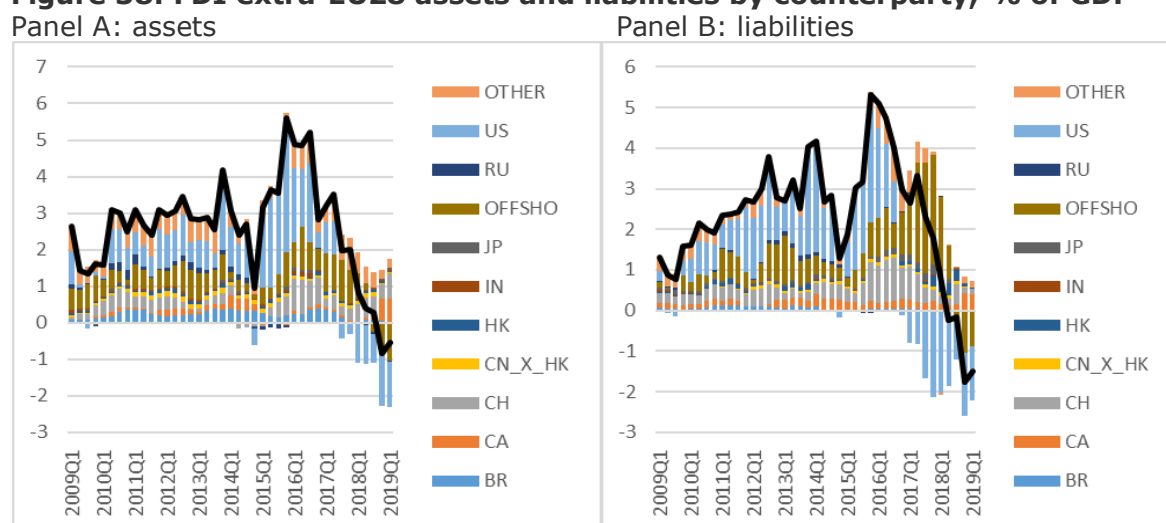
Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show a 4Q backward-looking average. Note: EQ = equity, IF= investment fund shares, Reinv = reinvested earnings

Looking at the liability side of EU28 gross FDI flows (RHS panel of Figure 37), the slowdown, which accelerated in 2018, is mainly driven by equity and investment fund shares excluding reinvested earnings ('EQ & IF, Other'). Annual flows represented 3% of GDP at the end of 2015, before declining to 1.8% in 2016, 1.3% in 2017 and finally -1.8% at the end of 2018.

The geographical breakdown of FDI liability flows shows that in 2018, investors from US and offshore financial centre counterparties reduced FDI holdings: in the US at -1.4% and offshore at -0.8%. A similar pattern can be observed for assets but is less pronounced. This stands in contrast with the interesting divergence between both jurisdictions in 2016-17. First, the 2015 highs were split at 2.2% of GDP from US-resident sources and 1% of GDP from offshore sources. By the end of 2017, the distribution had shifted to -1.7% from the US and 3% from offshore. In other words, increased acquisitions from offshore jurisdictions partly made up for the reversal of US flows to Europe.

Figure 38: FDI extra-EU28 assets and liabilities by counterparty, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show 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.

Box 4: The origin EU FDI, China and the role of investment protection

In recent years the origin of FDI has received increased attention. As a result, the EU has been moving towards a joint screening framework, while the US established the Committee on Foreign Investment in the United States (CFIUS). Recent policy developments concerning FDI screening are summarised in Box 5. Furthermore, as part of the European initiative on FDI screening, the Commission has carried out a detailed analysis of the origin of FDI into Europe, providing specifics on the foreign ownership of EU entities at the firm level with a focus on strategic sectors (European Commission, 2019). This box discusses this issue, and looks in particular at the EU-China investment relation given China's recently increased importance in terms of FDI in Europe.

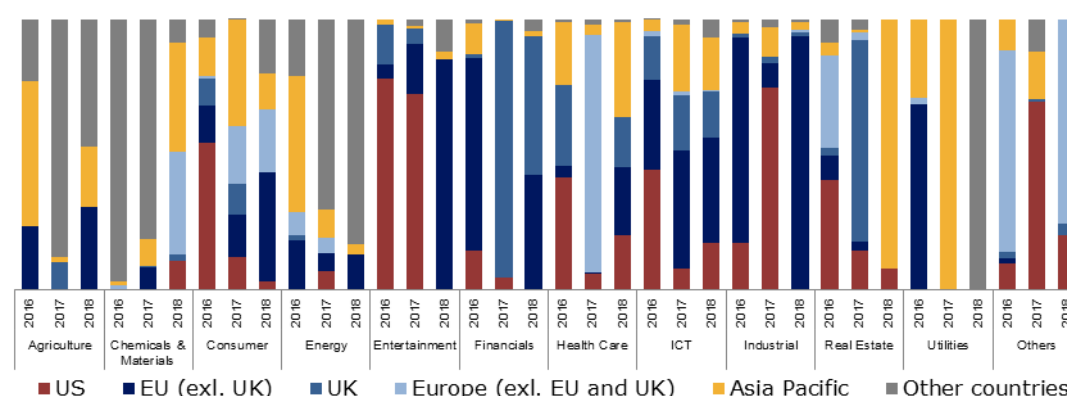
The European Commission analysed a large sample of EU companies in order to establish the origin of FDI. They found that, while foreign investors only controlled around 3% of the number of companies in the sample, this represented 35% of the sample's total assets (this number rose to 45% of the sample's assets when only listed company assets were taken into account, as only 0.16% of companies are listed yet they own 20.5% of overall EU equity assets). Extrapolated to the entirety of the European workforce, this would mean that foreign owned companies are responsible for 16 million European jobs. These facts confirm the foreign focus on larger companies, further seen in M&A deal trends. More generally, overall trends include the rise in the importance of new investors (e.g. China), offshore investors, SOEs and private acquisitions. From a geographical standpoint, the US and Canada alone own

29% of foreign-controlled firms in the EU and represent 61.8% of their assets. That said, their share has remained fairly stagnant in recent years, while that of new investors has increased. China, Hong Kong and Macao have seen an increase both in the number of firms controlled by their investors and total assets held (China's share has grown from 0.2% in 2007 to 1.6%). Indian and Russian investors have also seen an important (albeit lesser) rise in the number of firms controlled. Meanwhile, from a sectoral standpoint, the report finds the US and Canada invest across the board while Asian companies tend to focus on electronic and electric equipment and machinery. Official Financial Centres (OFCs) are responsible for 19% of financial services deals.

The European Commission (2019) also shows that foreign SOEs are playing an increasing role in FDI: since 2007 almost 400 European companies have been acquired by SOEs or other entities with a foreign state as their ultimate owner. A third of these come from EFTA countries (Norway and Switzerland), 93 from Russia and 80 from the Gulf Cooperation Council (GCC) Countries. While China and Hong Kong have only carried out 60 of these acquisitions, these began later and have become more prominent, a good example being the 2015 acquisition of Pirelli (Italy) for \$7.7 billion. Finally, large yet minority stakes where the acquirer could gain a controlling interest are also worth underlining, as these investments are subject to reduced scrutiny and transparency and require limited disclosure of obligations. The European Commission (2019) finds that between 2007 and 2017 the number of these deals has increased dramatically, with the US and Canada as the main players. While OFCs and China, Hong Kong & Macao have fewer deals, steep growth trends are evident.

The role of China deserves further attention. In this regard, not only is the increase in Chinese investment into the EU of interest but also the fall of EU FDI into China, driven partially by poor investment protection. Before delving further and given the absence of a standardised definition, investment protection will include investor rights over the life cycle of an investment including market access, operating in the market in the post-establishment phase, market exit and enforcement of investor rights domestically.¹³ With this in mind, a recent study by Garcia Herrero and Xu (forthcoming) has carried out a detailed analysis of two-way FDI flows between the EU and China. Their conclusions provide several interesting insights.

Figure 39: Regional and sectoral distribution of Chinese M&A by deal value



Source: Garcia Herrero and Xu (forthcoming)

First, they provide an overview of the recent rise of FDI from China to the EU. While the discrepancies between Chinese and EU statistics are noted (Chinese statistics typically exhibit higher values) the trends remain the same. The rapid rise in Chinese

¹³ This is derived from the Communication of Protection of intra-EU investment of July 2019.

M&A activity in Europe that took place in 2016 and 2017 (which has since partially subsided) has been driven by three major factors. Firstly, the recent economic slowdown in China has reduced domestic returns, raising the differential between foreign and domestic investments. Secondly, Chinese companies are looking to acquire technological (and managerial) expertise to accelerate their rise up the value chain. This driver is enhanced by Chinese government policy: the recent tightening of capital controls has meant acquiring foreign currency funding (to finance M&A transactions) often requires government approval and their preference for technology has become evident (in contrast to so-called non-strategic investments). Finally, other Western players have recently tightened their screening policies (such as the US and Australia). EU policy has remained more accommodating and the final word remains at the member state level. Regional and sectoral distribution of M&A transactions are exhibited in the graph above.

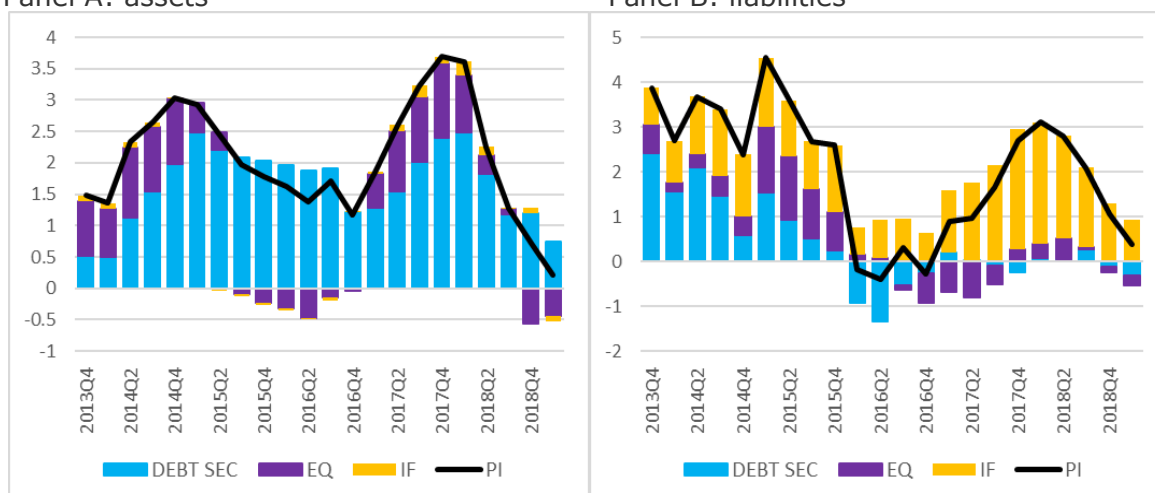
Secondly, Garcia Herrero and Xu (forthcoming) also contrast this rise with the fall in European direct investment into China. EU FDI into China grew rapidly in the 1990s, following western style market reforms. However, since China entered the WTO in 2001 and, more significantly, after the financial crisis the pace of European FDI flows into China has fallen (as have American and Japanese flows). A first reason for this is the increase in the cost of labour, which has eliminated some of China's competitive advantage as a production hub for the lower end of the value chain. Secondly, Chinese firms are becoming increasingly competitive, reducing the attractiveness of the Chinese market. Finally, a third reason is the growing perception of poor investor protection (especially market access) in China. This is visible in the OECD FDI restrictiveness index, where China is shown to be a difficult environment for foreign investors. Similarly, both the Chinn-Ito Index and the FKRSU measure (see Appendix 1 for greater detail) rank China poorly in terms of financial account openness and show little improvement in recent years. These concerns have also been raised recently by the EU Chambre of Commerce, in relation to market access, in their latest China position paper (EU Chambre of Commerce, 2019). Finally, over 60% of FDI into China in 2018 originated from Hong-Kong. Much of this is believed to be Western investors benefiting from the greater degree of investment protection enjoyed there.

3.2.1.4. Portfolio investment

Figure 40: Portfolio investment assets and liabilities by instrument, % of GDP

Panel A: assets

Panel B: liabilities



Source: Eurostat (bop_eu6_q & namq_10_gdp).

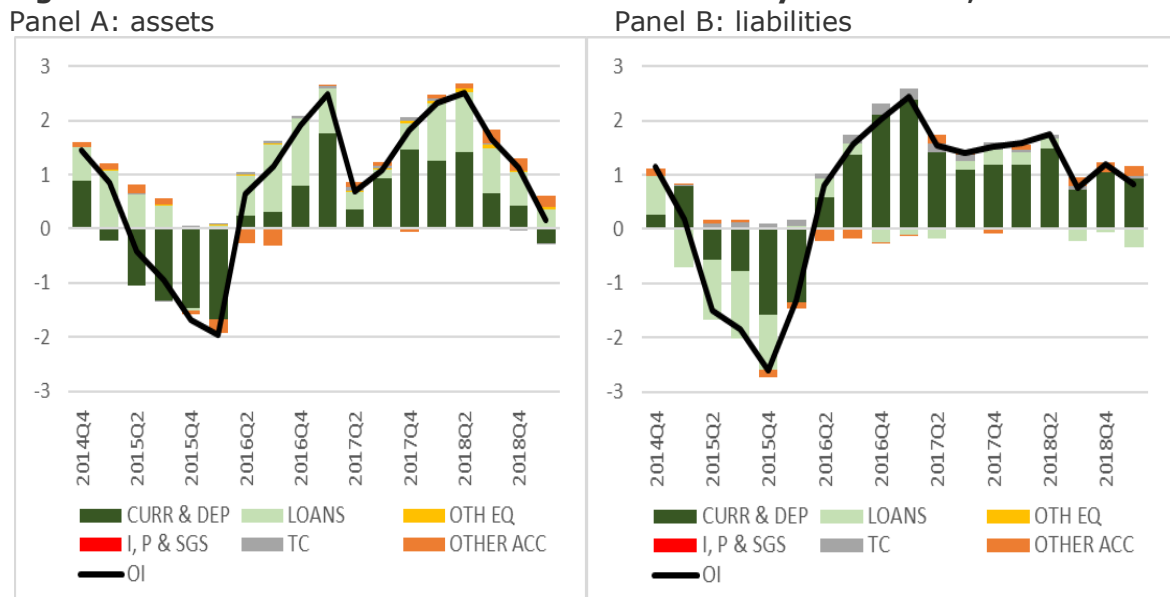
Notes: The figures show a 4Q backward-looking average.

The temporary increase in portfolio net asset acquisitions in 2017 was mainly due to EU residents acquiring equity securities (other than investment fund shares) at a higher rate. This had subsided in 2018.

In terms of liabilities, the right-hand side panel of Figure 40 shows the important role of net acquisitions of investment fund shares by non-residents in driving overall portfolio acquisitions between 2016 and 2018. On the contrary, equity and debt securities' net acquisitions have been negligible, if not negative.

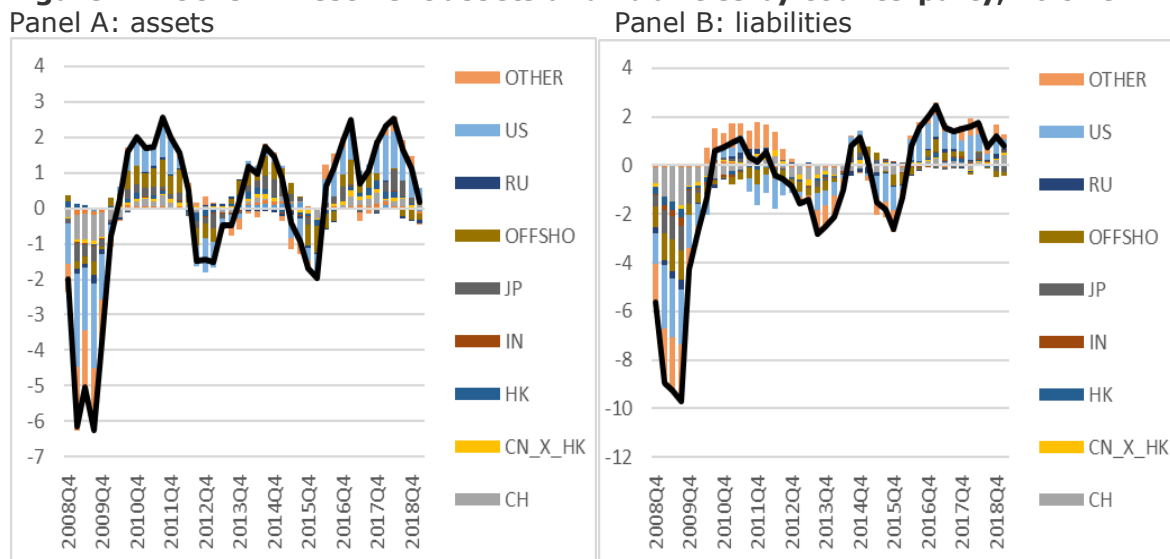
3.2.1.5. Other investment

Figure 41: Other investment assets and liabilities by instrument, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).
Notes: The figures show a 4Q backward-looking average.

Figure 42: Other investment assets and liabilities by counterparty, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).
Notes: The figures show a 4Q backward-looking average.

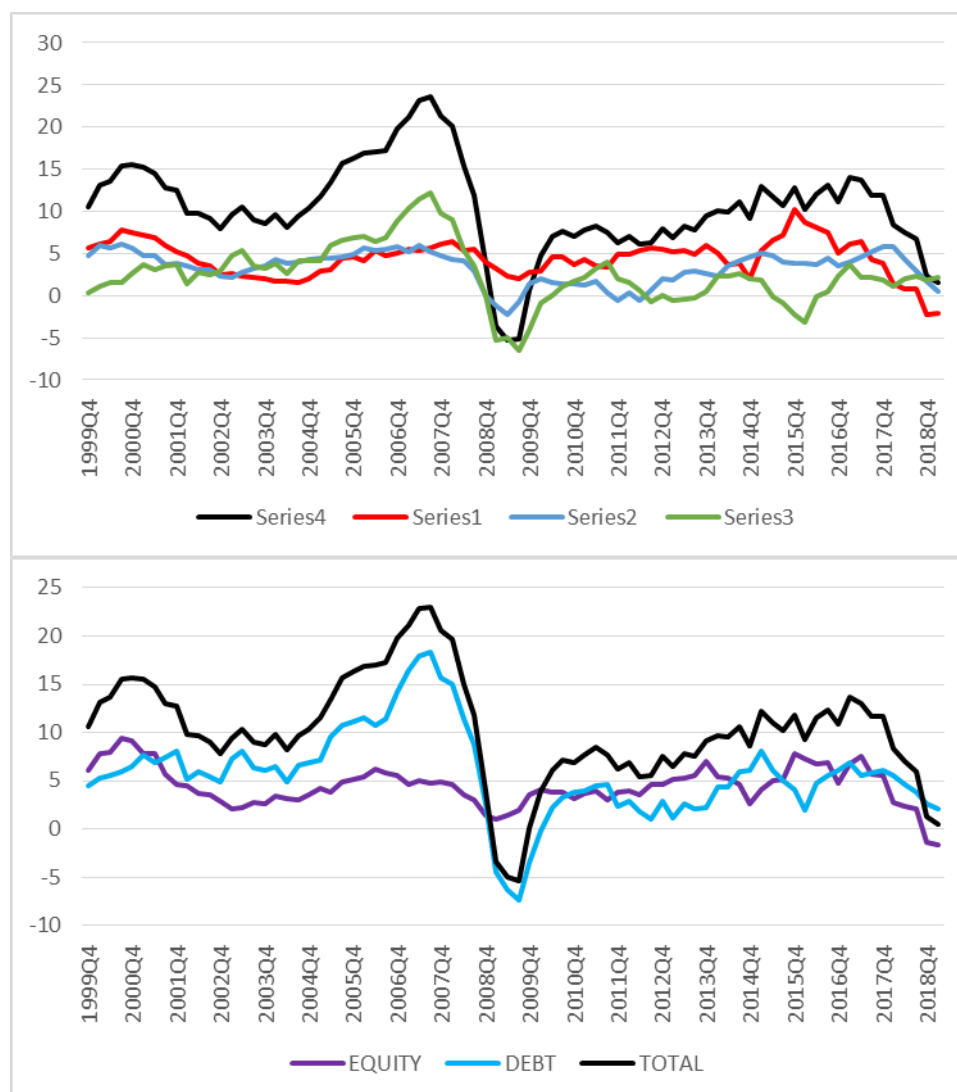
Overall, other investment net acquisitions have been positive since 2016, with the US being the main counterparty (as can be seen in Figure 42). However, looking back further, they have been fluctuating heavily in the post-crisis period and in fact they had a significant fall into negative territory in 2015.

There has been a steady expansion in the holdings of currency and deposits in the last two years, mainly by US counterparties. On the other hand, in the same period, the extension of cross-border loans to EU residents was essentially zero.

3.2.1.6. Extra-EA dimension

The euro area accounts for a major part of the EU economy and its financial flows, even though there are significant exceptions in both dimensions (i.e. the UK). Thus, it is not surprising that the developments in the consolidated EU28 accounts described until now are also reflected in the consolidated EU19 balance of payments.

Figure 43: Extra-EU19 gross flows (assets) by instrument and by item, % of GDP

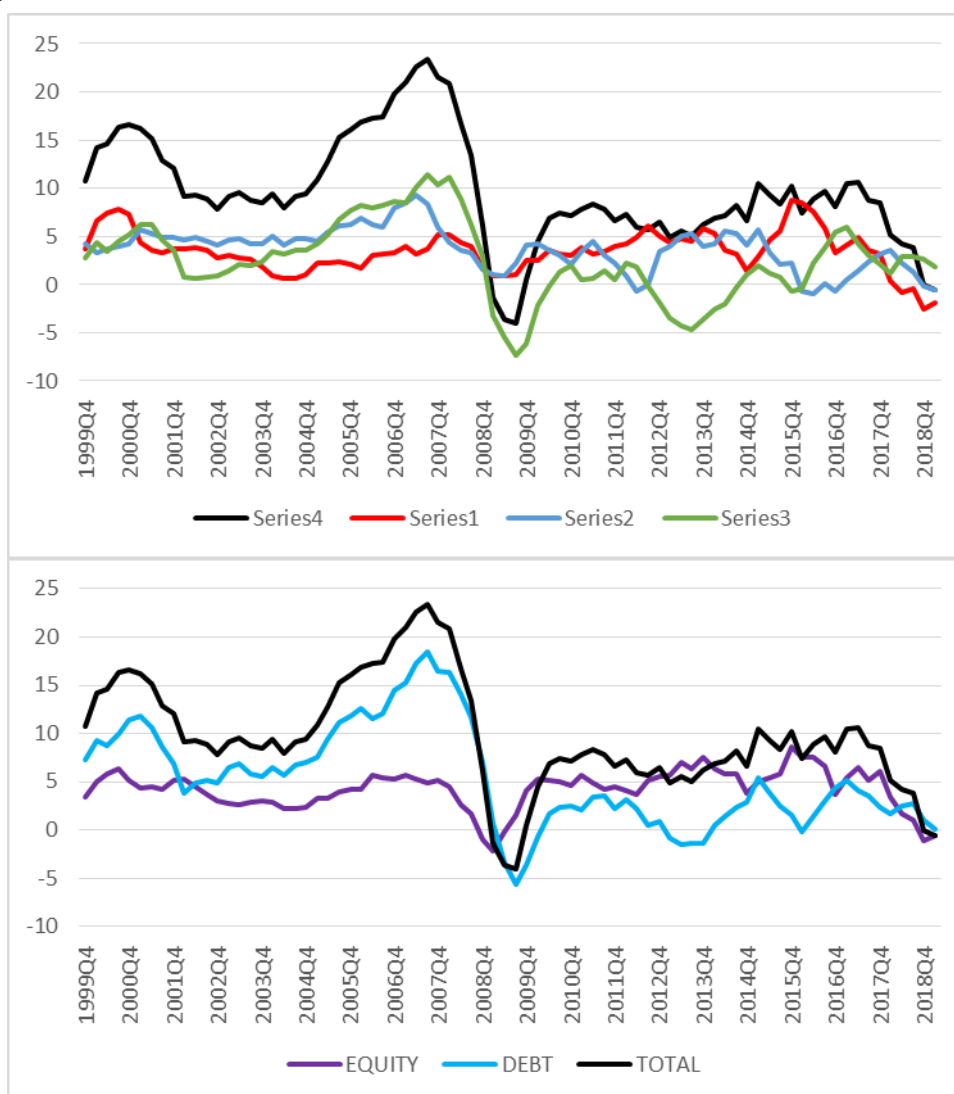


Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show a 4Q backward-looking average.

The main reason to look at (extra) euro-area flows is the availability of euro area gross flows for a longer period than EU28 gross flows. This longer-term perspective highlights the relative stability over the last two decades of direct investment and equity flows compared to portfolio, other and debt investment. This allows us to see that the recent pronounced slowdown in both FDI and equity flows is unprecedented, and that flows have been lower in 2018 than during the financial crisis (with an exception in equity liabilities' flows for which the situation in 2018 was comparable to 2008).

Figure 44: Extra-EU19 gross flows (liabilities) by instrument and by item, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show a 4Q backward-looking average.

3.2.2. Intra-EU dimension

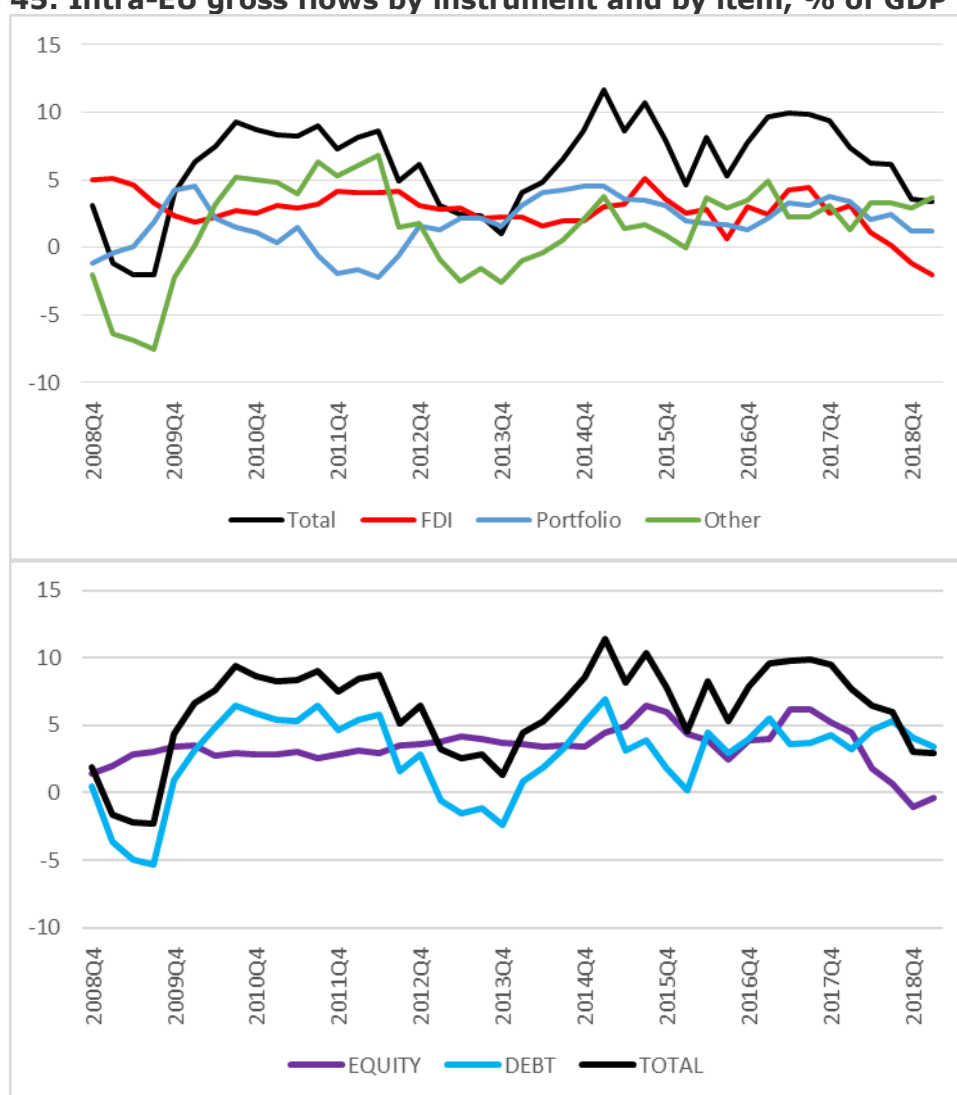
Intra-EU acquisitions of financial assets represented 3.9% of GDP in 2018, down by 5.8 pp. from the previous year. Driving this slowdown was the decline in FDI (-0.7% of GDP, -3.4 pp.) and equity flows (-0.8% of GDP, -6.0 pp). At the same time, portfolio, other investment and debt holdings continued to expand (1.1%, 3.0% and 4.1% of GDP, -2.7, -0.2, -0.3 pp. in a year).

The most important pattern observed in intra-EU financial flows, and especially FDI (in Figure 45) is how correlated their trends are with the ones observed for extra-EU28 flows.

The link between the two has to do with the fact that inwards FDI in particular tend to transit first through a few other EU countries (e.g. Luxembourg, the Netherlands, the UK) before reaching their final destination in the EU (as discussed already in 2.4). This is also true in the opposite direction: extra-EU28-bound FDI sourced from an EU country can transit through other EU countries before leaving the EU.

In both cases, the two flows are captured in these balance of payment statistics: one extra-EU28 and one intra-EU28. The strong correlation between FDI transactions inside the union and those taking place between the EU and the rest of the world suggests that an alternative interpretation, i.e. that actual intra-EU investments are responsible for the overall picture, is less likely.

Figure 45: Intra-EU gross flows by instrument and by item, % of GDP



Source: Eurostat (bop_eu6_q & namq_10_gdp).

Notes: The figures show a 4Q backward-looking average. Flows are represented by assets (given that intra-EU asset and liabilities should be the same, we do not present liabilities here)

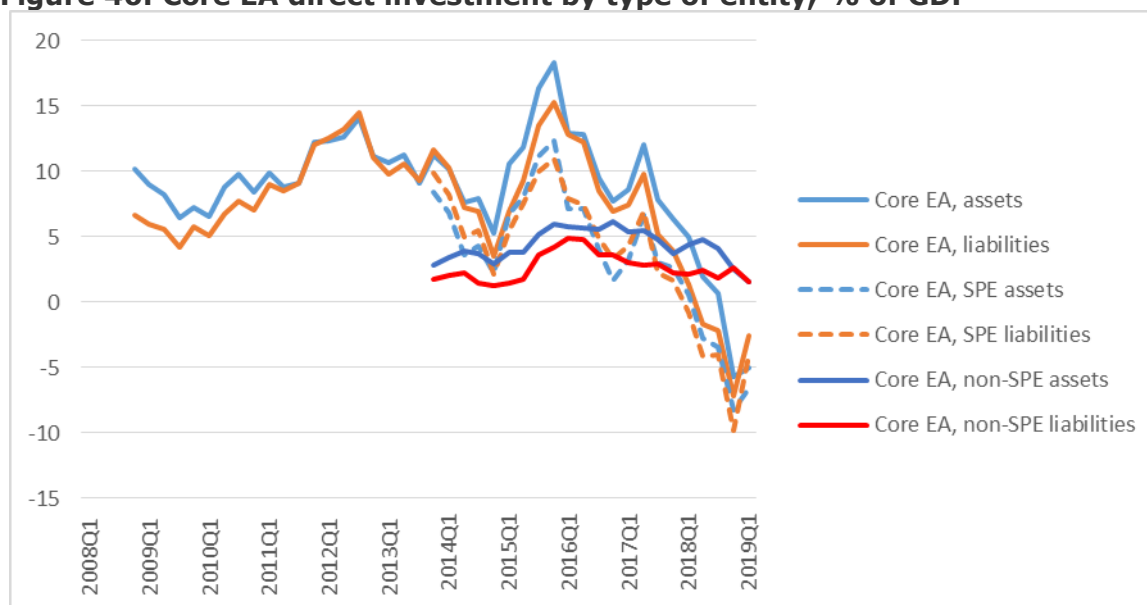
3.2.3. Direct investment developments by type of entity

To understand FDI flows in the EU, it is interesting to distinguish if these flows involve special purpose entities (SPEs) or not.

Multinational enterprises (MNEs) hold their investments through different organisational structures in different locations, which can include SPEs. According to the OECD's *Benchmark Definition of Foreign Investment (BMD4)*, SPEs are legal entities with little or no physical presence or employment in the country in which they are created. They are ultimately controlled, directly or indirectly, by a non-resident parent and almost all of their assets and liabilities represent investments in or from other countries. They are often used as tools to raise capital or to hold assets and liabilities and MNEs often channel investments through SPEs on the way to their final destination in another jurisdiction.

The decomposition of flows between SPEs and non-SPEs shows that the decrease in direct investment gross flows in the EU is driven by the flows involving SPEs, in particular in Luxembourg and the Netherlands. Moreover, Figure 46 suggests that the reduction in FDI funds passing through these SPEs is not linked to a substantial fall in 'genuine' direct investment flows with the EU. The increase in assets and liabilities of non-SPEs in a set of countries that includes Austria, Belgium, Finland, France, Germany, Luxembourg and the Netherlands remains essentially unaffected. If the final destination/origin of pass-through flows were large EU economies, we should be observing reductions in the assets and liabilities of non-SPE investment in these countries as well.

Figure 46: Core EA direct investment by type of entity, % of GDP



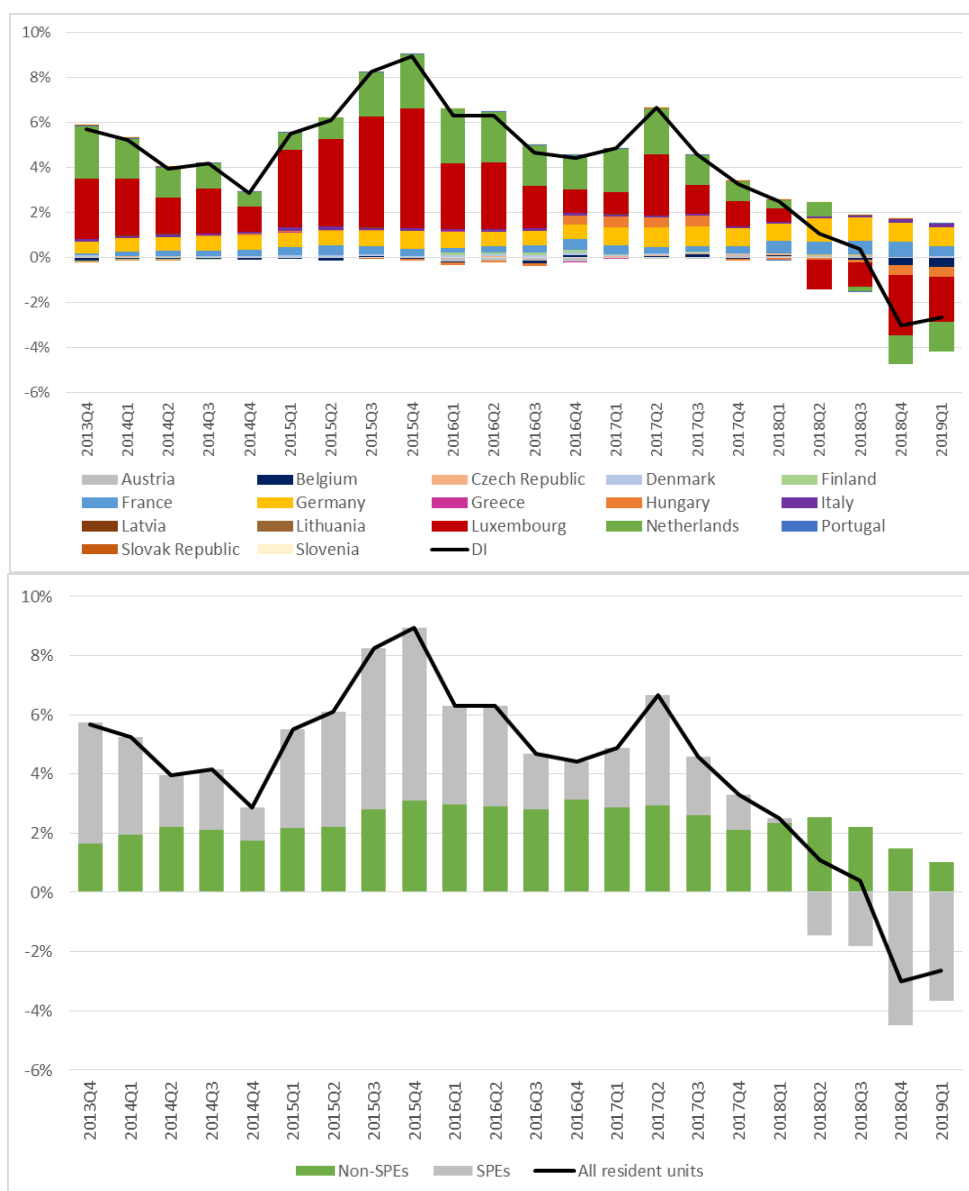
Source: Eurostat (bop_eu6_q & namq_10_gdp), OECD, (Benchmark Definition 4th edition, BMD4).

Note: Core EA = sum of Austria, Belgium, Germany, Finland, France, Luxembourg, Netherlands.

In some countries, such as Luxembourg, SPEs play a major role and account for the vast majority of direct investment flows. The presence of SPEs also explains the high level of direct investment flows in the Netherlands and in Hungary. For most other EU countries, out of those that report the information on the presence of SPEs, the share of flows involving SPEs is much lower. Some, such as France, Germany or Italy, report

that none of their direct investment can be attributed to SPEs (as can be seen in Figure 48).

Figure 47: Net acquisition of direct investment assets by country and by type of entity for all resident units, % of EU28 GDP



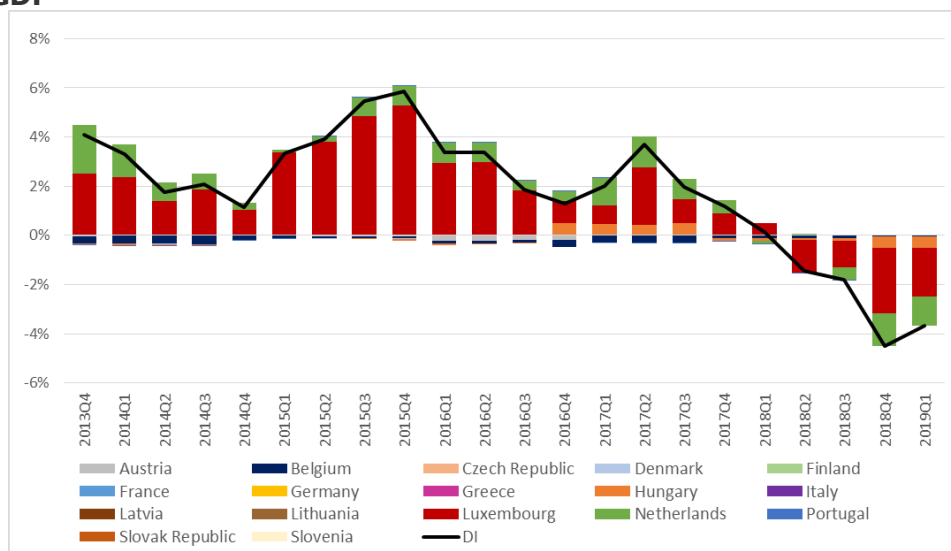
Source: OECD, (Benchmark Definition 4th edition, BMD4).
 Notes: The figure shows a 4Q backward-looking average.

By excluding flows to and from resident SPEs, we may have a better idea of the 'real' direct investment taking place in some countries. The use of SPE structures goes hand in hand with MNEs becoming increasingly global and maximising advantages from different legal regimes. For instance, we observe that in countries that have bilateral double taxation agreements (DTA) with the Netherlands, the average level of investments is over 52 percent higher than in countries without any treaty.¹⁴ As a result, SPE-related cross-border flows and positions reached significant levels for some

¹⁴ CBS Internationalisation Monitor Q4 2018, Financial globalisation (<https://www.cbs.nl/en-gb/news/2018/50/80-percent-of-inward-investments-channelled-out-directly>)

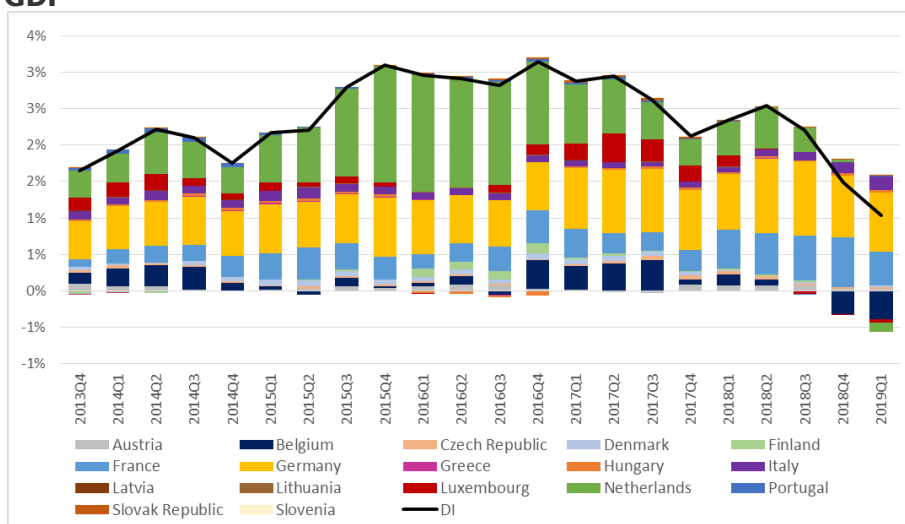
European countries, revealing the need to untangle their activities from 'genuine' investment flows. Excluding SPEs can provide a more precise distribution of direct investment for countries that host a significant number of them as a large share might be investors who are just passing capital ultimately directed to third countries.

Figure 48: Net acquisition of direct investment assets, resident SPEs, % of EU28 GDP



Source: OECD, (Benchmark Definition 4th edition, BMD4).
Notes: The figure shows a 4Q backward-looking average.

Figure 49: Net acquisition of direct investment assets, resident non-SPEs, % of EU28 GDP



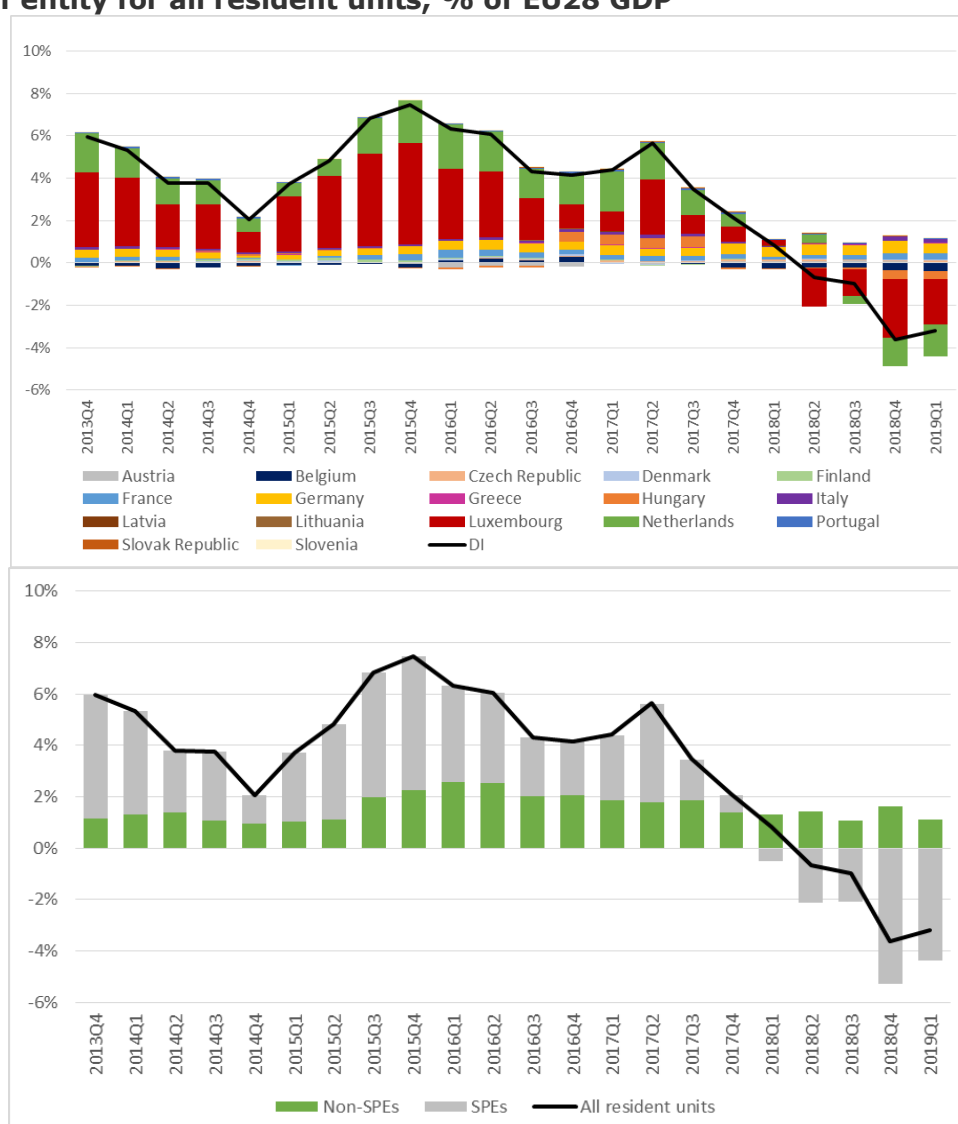
Source: OECD Benchmark Definition, 4th edition (BMD4). Notes: The figure shows a 4Q backward-looking average.

Figure 47 shows the total net acquisition of direct investment assets split by type of entity for the 17 European countries that report the information. It is clearly visible that the current decrease, that started at the beginning of 2017 (from the peak in 2017Q2 at 7.1% of GDP to -2.5% in 2018Q4), has mainly been driven by the disinvestments in SPEs (4% in 2017Q2 to -4% in 2018Q4). The geographical breakdown in the top figure shows that the drop in flows can be attributed to Luxembourg, the Netherlands and Hungary (also confirmed by Figure 48). Luxembourg and the Netherlands are the two top EU hosts of SPEs, while Hungary

also ranks highly. Part of the drop in Hungary might be due to the new FDI screening policy introduced recently (see Box 5). The asset flows excluding SPEs are stable at around 2% of EU28 GDP, and just decreased slightly in the last quarter (totals are also much lower when observing only non-SPEs).

Excluding SPEs, major sources of direct investment in Europe, but also worldwide, were Germany, France and the Netherlands. When observing only the resident non-SPE entities, the slowdown in net accumulation of assets seems less pronounced. Only a slight decrease in accumulation is present both in Luxembourg and the Netherlands between 2017 and 2018. Belgium recorded negative outflows in 2018Q4. Other large contributors (France and Germany) did not record large changes.

Figure 50: Net incurrence of direct investment liabilities by country and by type of entity for all resident units, % of EU28 GDP



Source: OECD Benchmark Definition, 4th edition (BMD4). Notes: The figure shows a 4Q backward-looking average.

Liabilities follow the same pattern as assets, although on a somewhat lower level. Net acquisitions peaked at 6% of GDP in 2017Q2 and by the end of 2018 had turned negative to -2.5%, again driven by the fast slowdown in the net incurrence of liabilities of SPEs in Luxembourg and the Netherlands.

Box 5: FDI Screening Policies

In this box we summarise the latest developments concerning FDI screening policies; readers interested in this can read more about this for example in Chapter 3 of UNCTAD (2019).

In Belgium, the Flemish government developed a new screening mechanism for intervening in FDI in December 2018. The policy applies when a foreign investor acquires control over an entity that caters to the public interest. The acquisition is deemed a threat to the strategic interests of the Flemish Region if the continuity of a vital process is endangered, strategic information could be transferred, or strategic independence is jeopardised. In such a case, the Flemish government may *ex ante* screen the transaction and, after discussions with the two parties, establish mitigating procedures or declare the legal transaction null and void.

In March 2018, China adopted the “Work Rules on Outbound Transfer of Intellectual Property Rights.” The rules established that, in the export of intellectual property or during mergers and acquisitions, the State Intellectual Property Office must review any transactions that would include the transfer of technical Intellectual Property rights to a foreign entity. Technical intellectual property means patents, registered integrated circuit layout designs, computer software copyright and new plant variety rights.

China has also increased its national security review procedures for FDIs. In 2011, China implemented a rule granting the Chinese Ministry of Commerce the responsibility of reviewing foreign investments in domestic enterprises for national security concerns. In 2017, China passed the Cybersecurity Law, which increased standards for foreign investment in network operation. In March 2019, China passed the “Foreign Investment Law of the PRC” which will take effect in 2020. The law contains a negative list of sectors in which foreign investment is prohibited and in which foreign investment is subject to restrictions based on Chinese national security concerns.

In 2019, France adopted the “Plan d’action pour la croissance et la transformation des entreprises” (PACTE). This extends the sectors subject to foreign investment screening to “sectors of the future” including artificial intelligence, the space industry, data storage, and semiconductors. This adds on from 2014 reforms which extended screened sectors to include water, electricity, gas, oil, energy, transport network operation, electronic communication, and public health. PACTE also increased the Minister for Economy’s authority to implement new and stronger punishments in the form of financial penalties or suspension of company voting rights if a transaction is made without undergoing the appropriate steps of prior authorisation.

In December 2018, Germany amended its Foreign Trade Ordinance to expand the scope of foreign investment screening systems. Foreign investment screening applies to transactions that may affect national security. Usually interpreted to mean companies in the defence and security sectors, the amendment expanded the relevant sectors to include media enterprises. In addition, the threshold for screening and potentially blocking transactions was lowered from acquisitions of 25% of a German company to 10%.

In October 2018, Hungary adopted a new foreign investment screening process for politically sensitive sectors. These are defence, cryptography, financial services, energy, government registries, and electronic communications. Screening is required

when a foreign investor acquires over 10% of a publicly listed Hungarian company or 25% of a privately held Hungarian company.

In 2019, 14 EU Member States have national screening mechanisms in place. On April 10th 2019, a new framework for the screening of FDI entered into force in the EU. The intention is to increase cooperation between Member States and with European Commission. The framework allows for Member States and the Commission to exchange information and issue opinions in response to a foreign investment. The Member State where the investment takes place retains the ultimate authority in making a decision on the investment, but must take into account the comments received.

The U.S. Foreign Investment Risk Review Modernization Act of 2018 reformed American FDI screening. It increased the amount of time allowed for review, the resources and funding available to the Committee on Foreign Investment, and extended the scope of transactions that must be screened. The definition of screened transactions was broadened to include review of real estate transactions near military facilities; investments in businesses engaged in emerging or foundational technology, critical technology, critical infrastructure, or collecting data on U.S. citizens; any change in rights for the foreign investor; and transactions in which a foreign government has a substantial direct or indirect interest.

In 2018, the UK lowered the screening threshold on mergers occurring in sectors that affect national security from acquisitions with a value of at least £70 million to acquisitions of at least £1 million. It will therefore be important to track the foreign investments policies between Britain and the EU as a result of Brexit. Since investments from third countries are subject to FDI screening in both countries, investments from Britain into the EU or vice versa may become subject to additional screening measures.

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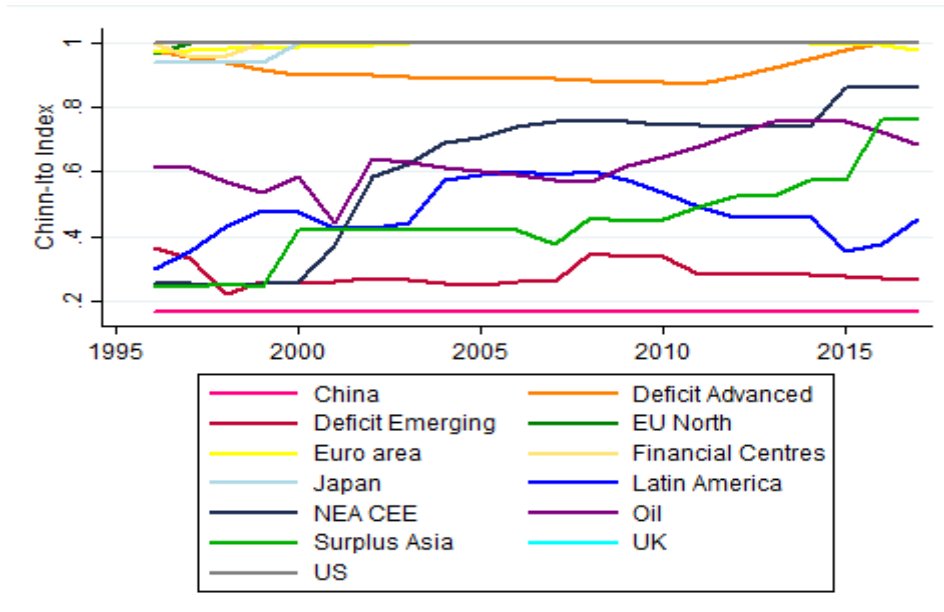
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5. Appendix 1: Capital controls and financial account openness

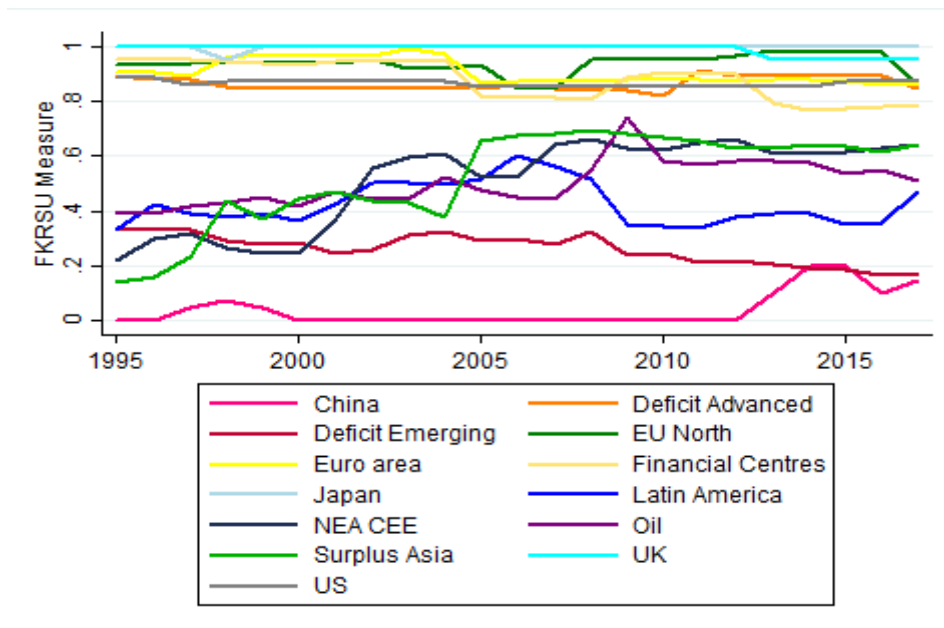
Figure 51: Chinn-Ito index, regional groups (1996-2017)



Source: Bruegel based on Chinn-Ito (2006) updated in 2019, World Economic Outlook (WEO), April 2019

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

Figure 52: FKRSU average, regional groups (1995-2017)



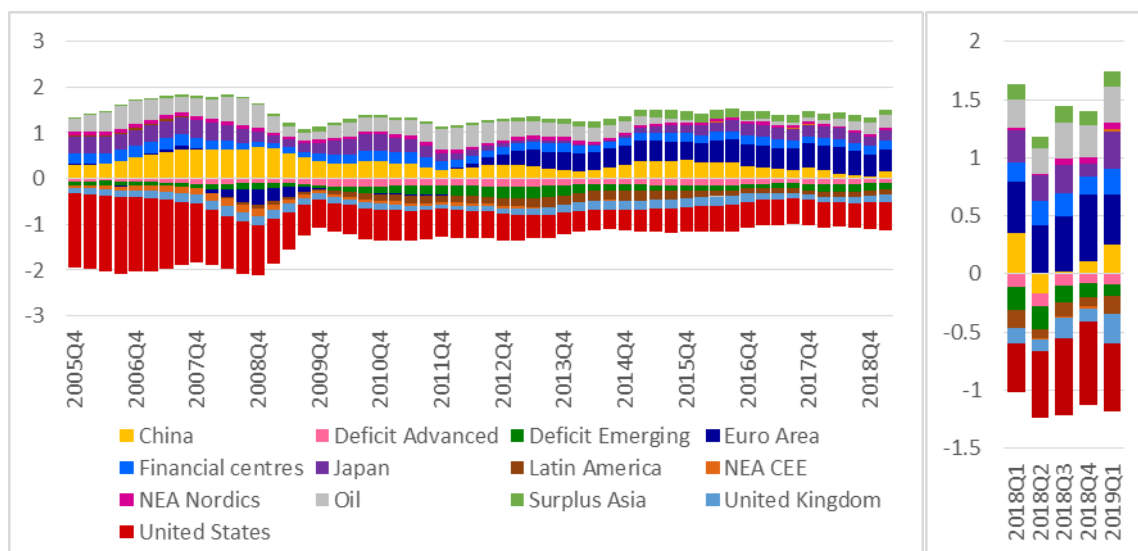
Source: Bruegel based on Fernandez at al. (2016), World Economic Outlook (WEO), April 2019

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.

6. Appendix 2: Country and regional groups: *fiches*

6.1. Global Trends

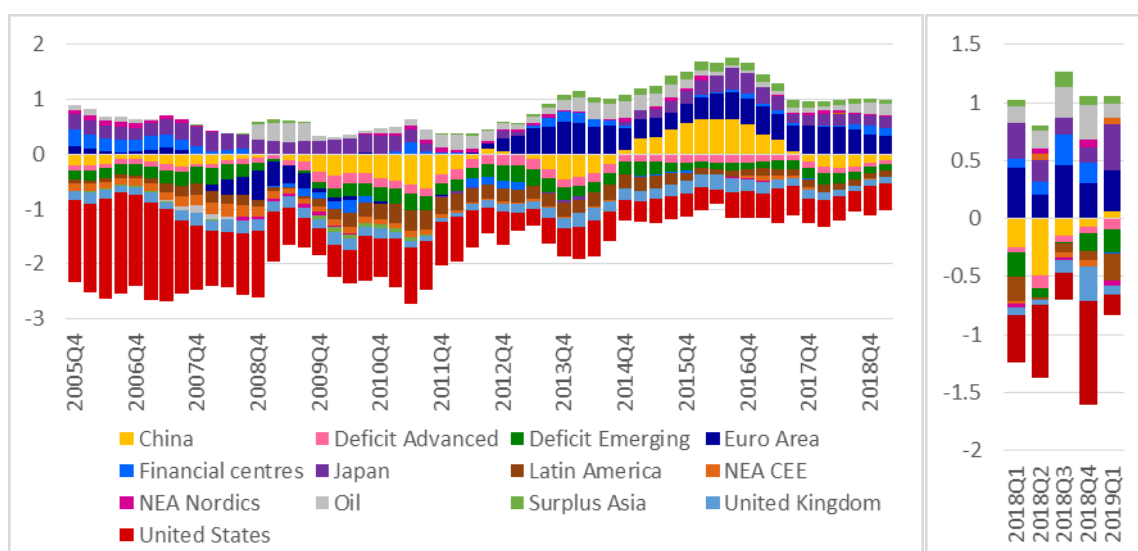
Figure 53: Current account balances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

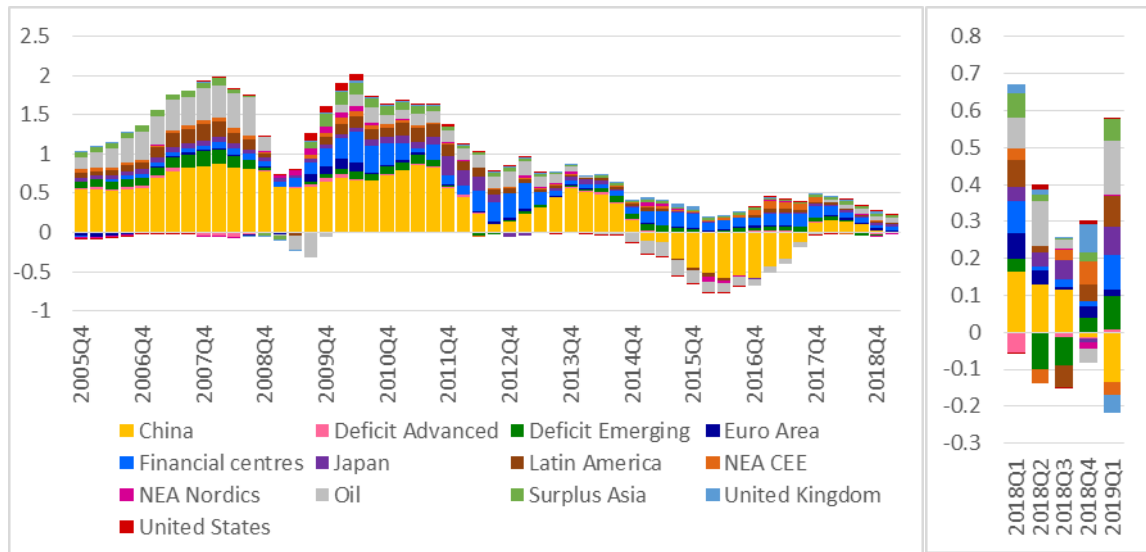
Figure 54: Financial account balances, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

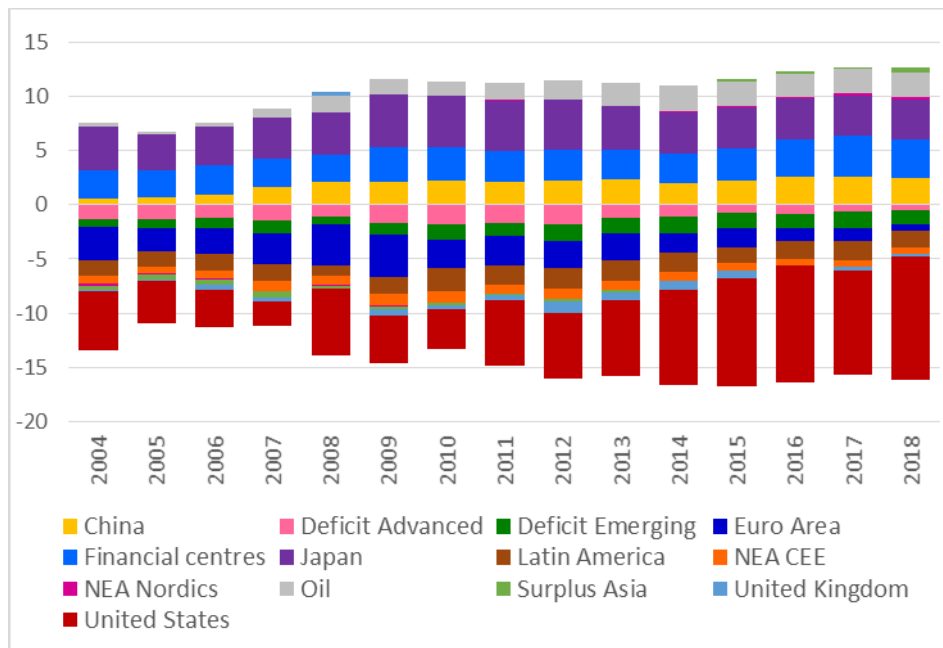
Figure 55: Reserves and related items, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

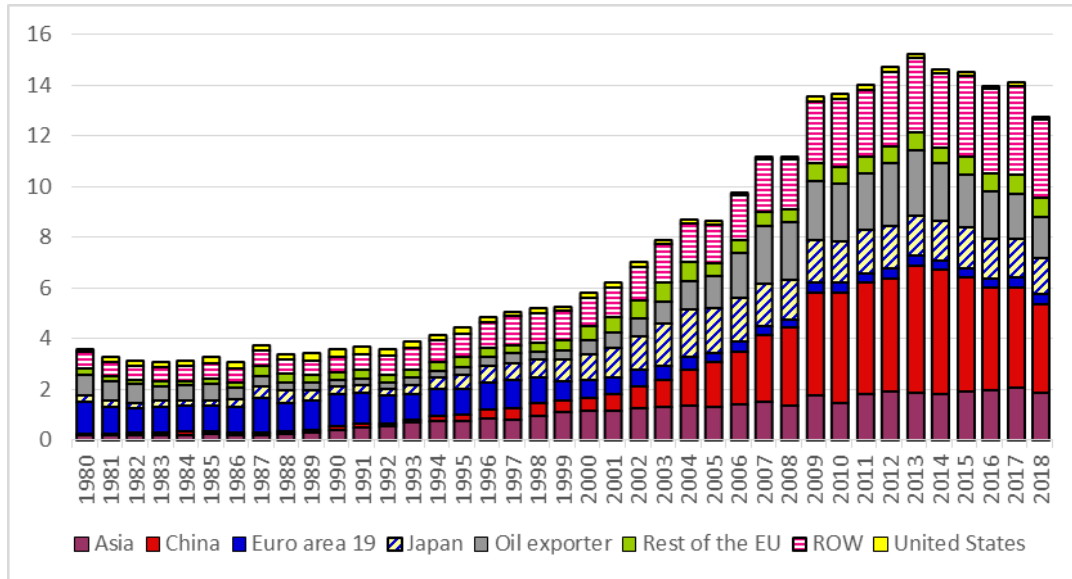
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. Both the financial account balance and GDP are measured in USD.

Figure 56: NIIP, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

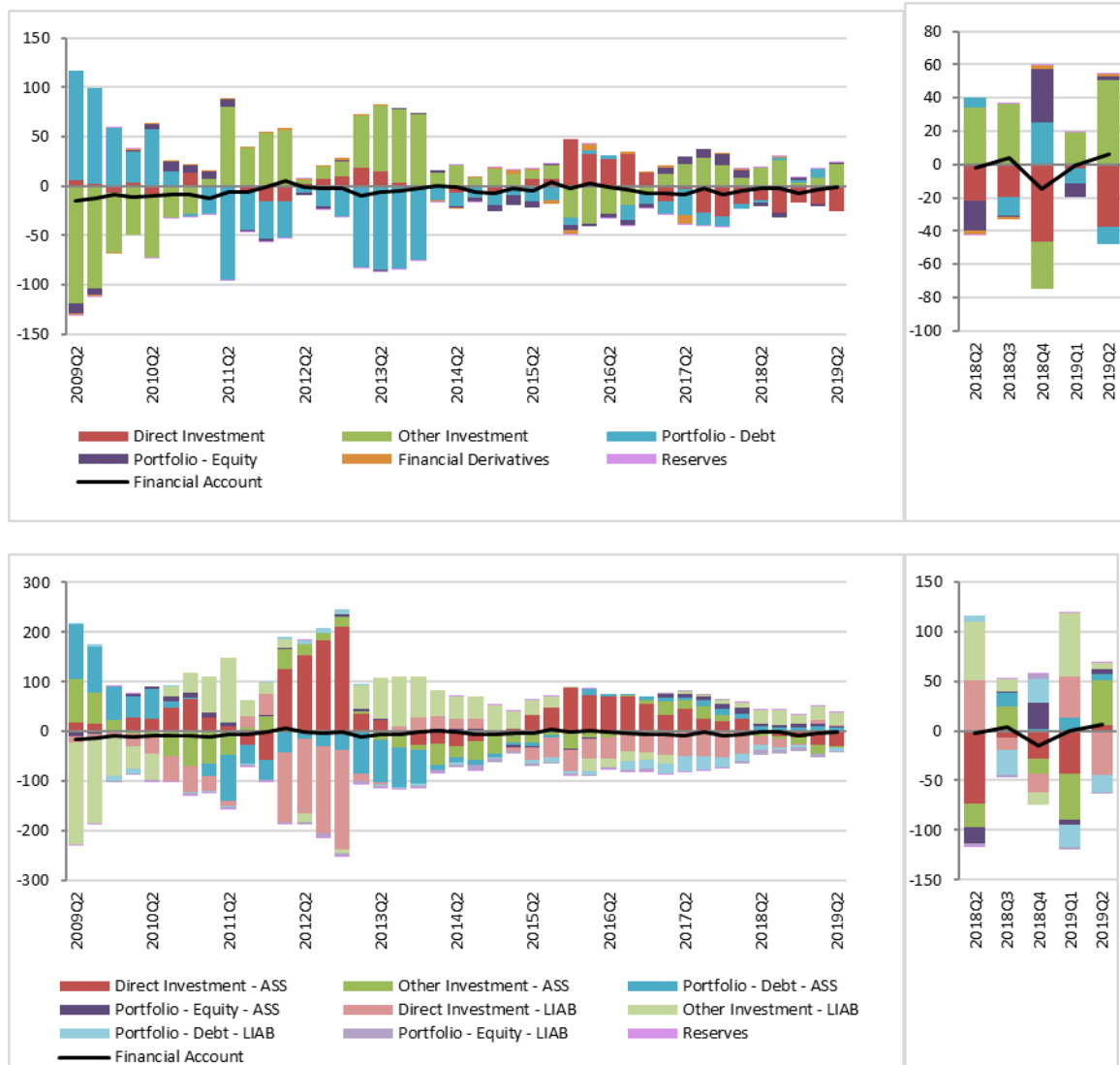
Figure 57: Foreign exchange reserves, % of world GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

6.1. Europe

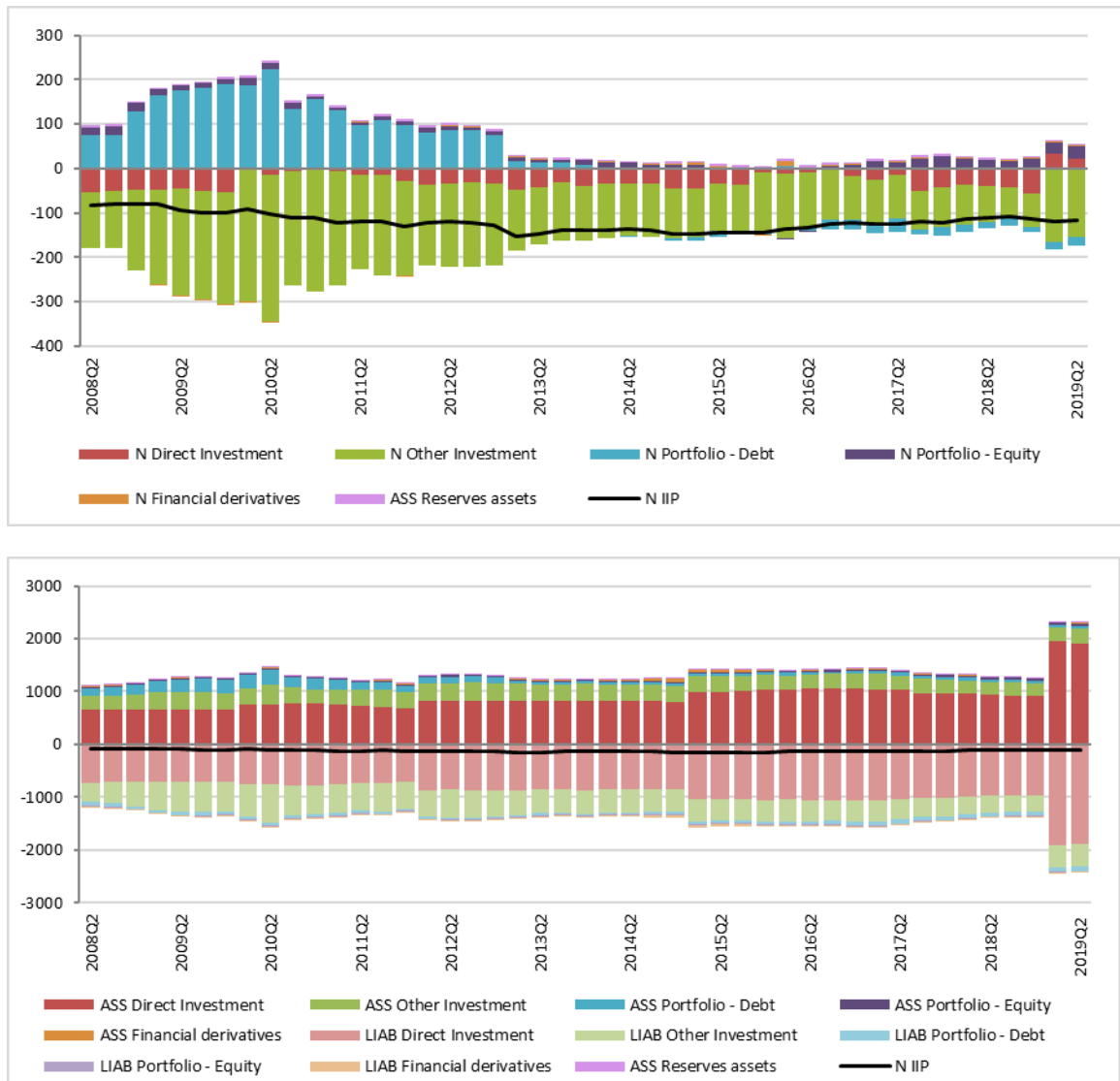
Figure 58: Cyprus net and gross flows by instrument, % of GDP



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.

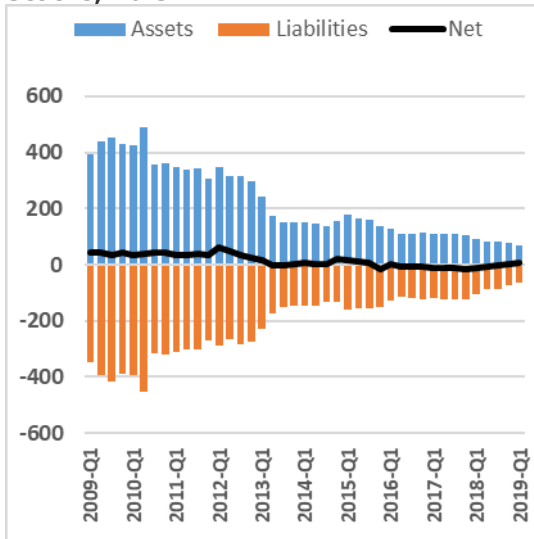
Figure 59: Cyprus net and gross international investment position by instrument, % of GDP



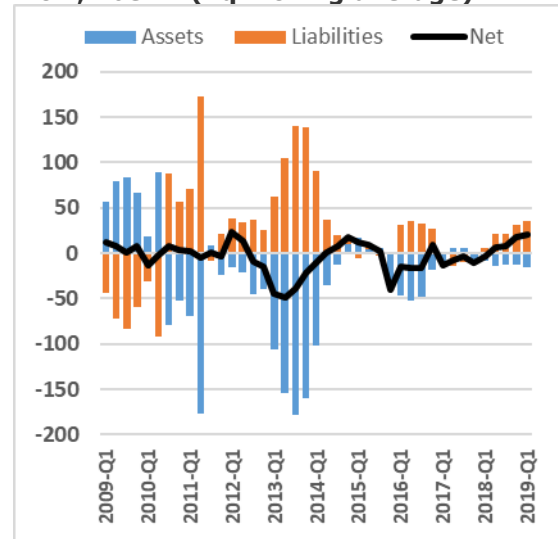
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 60: Cyprus, BIS LBS

Stocks, % GDP



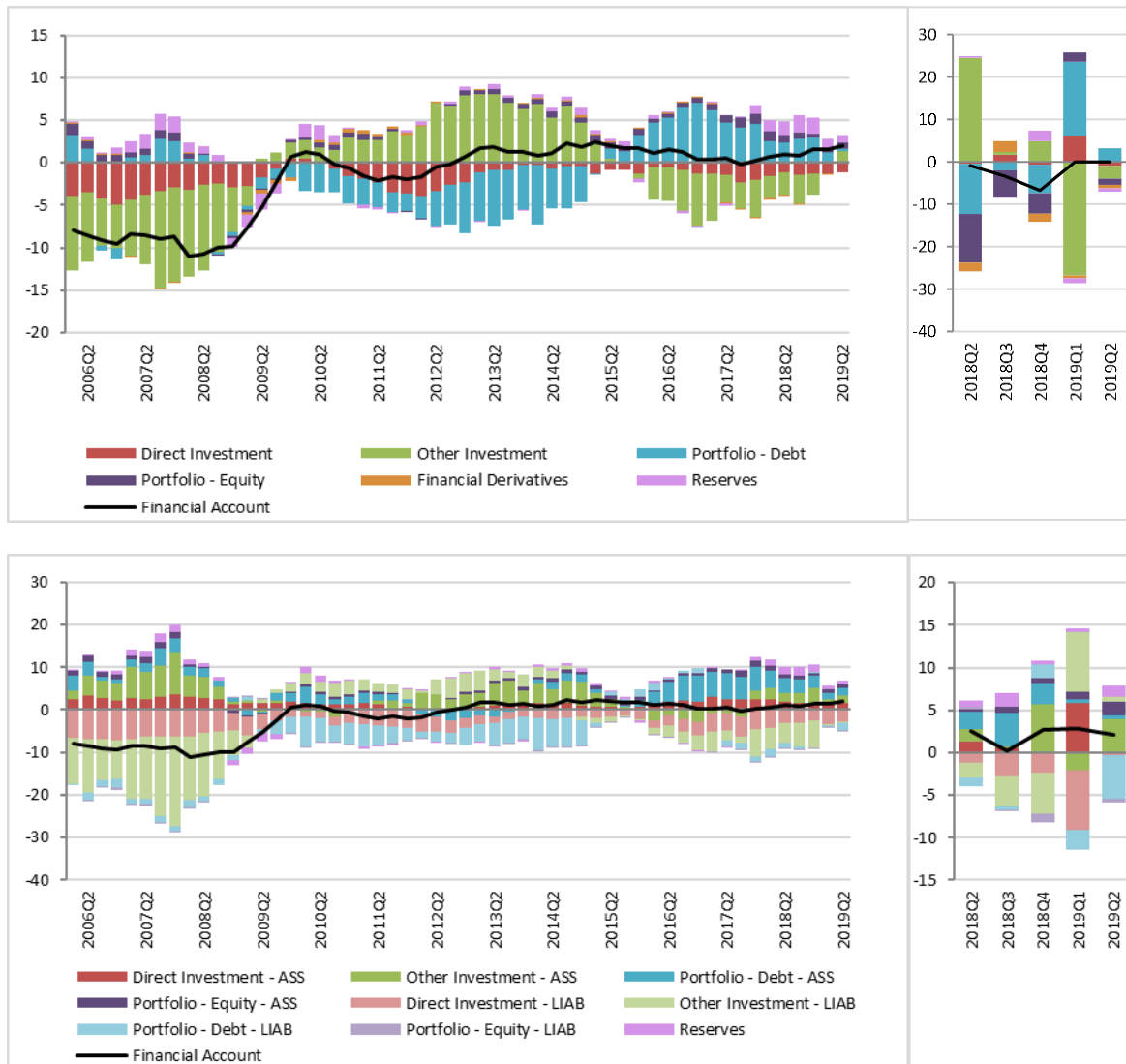
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

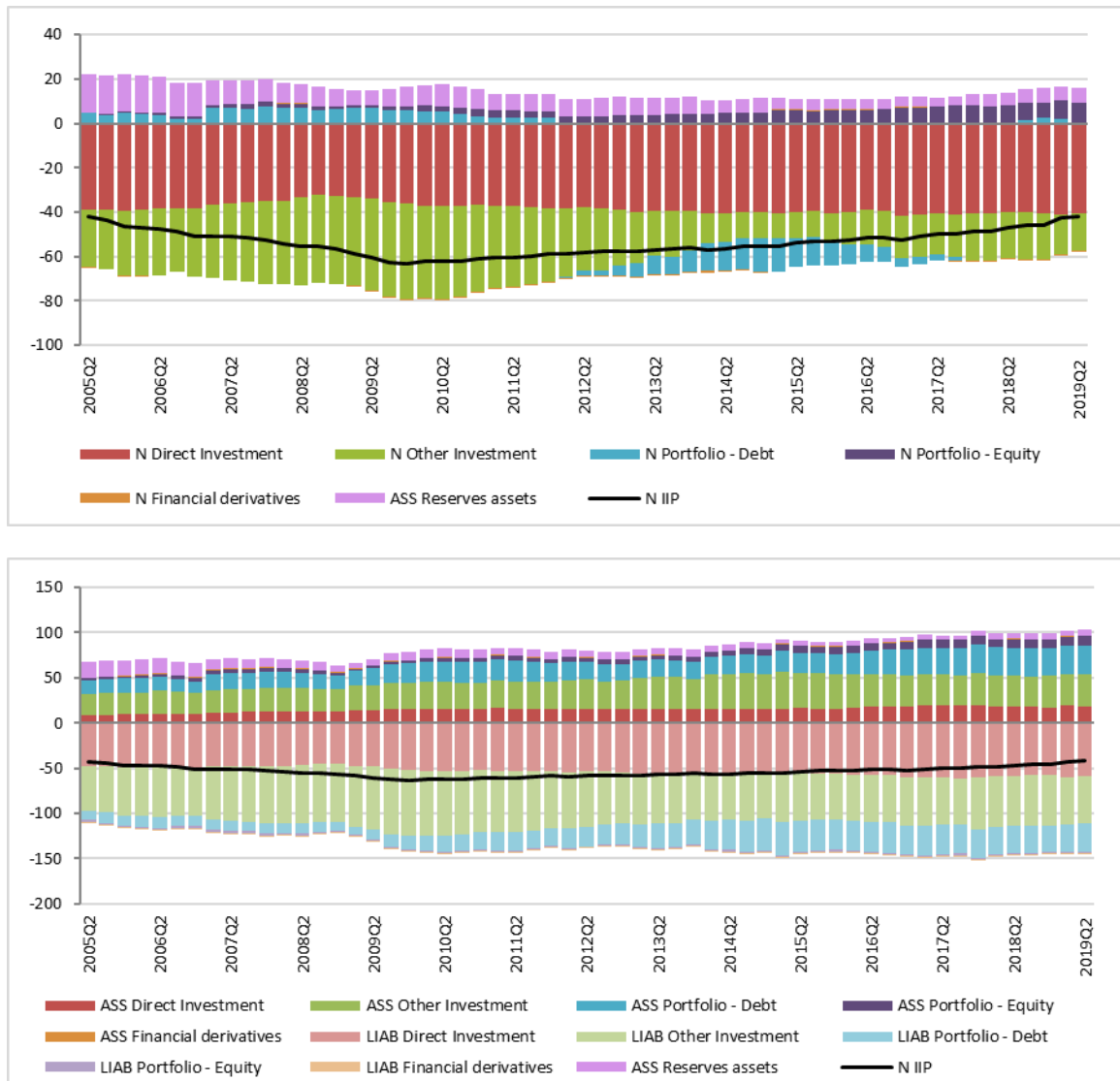
Figure 61: Euro area CEE net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

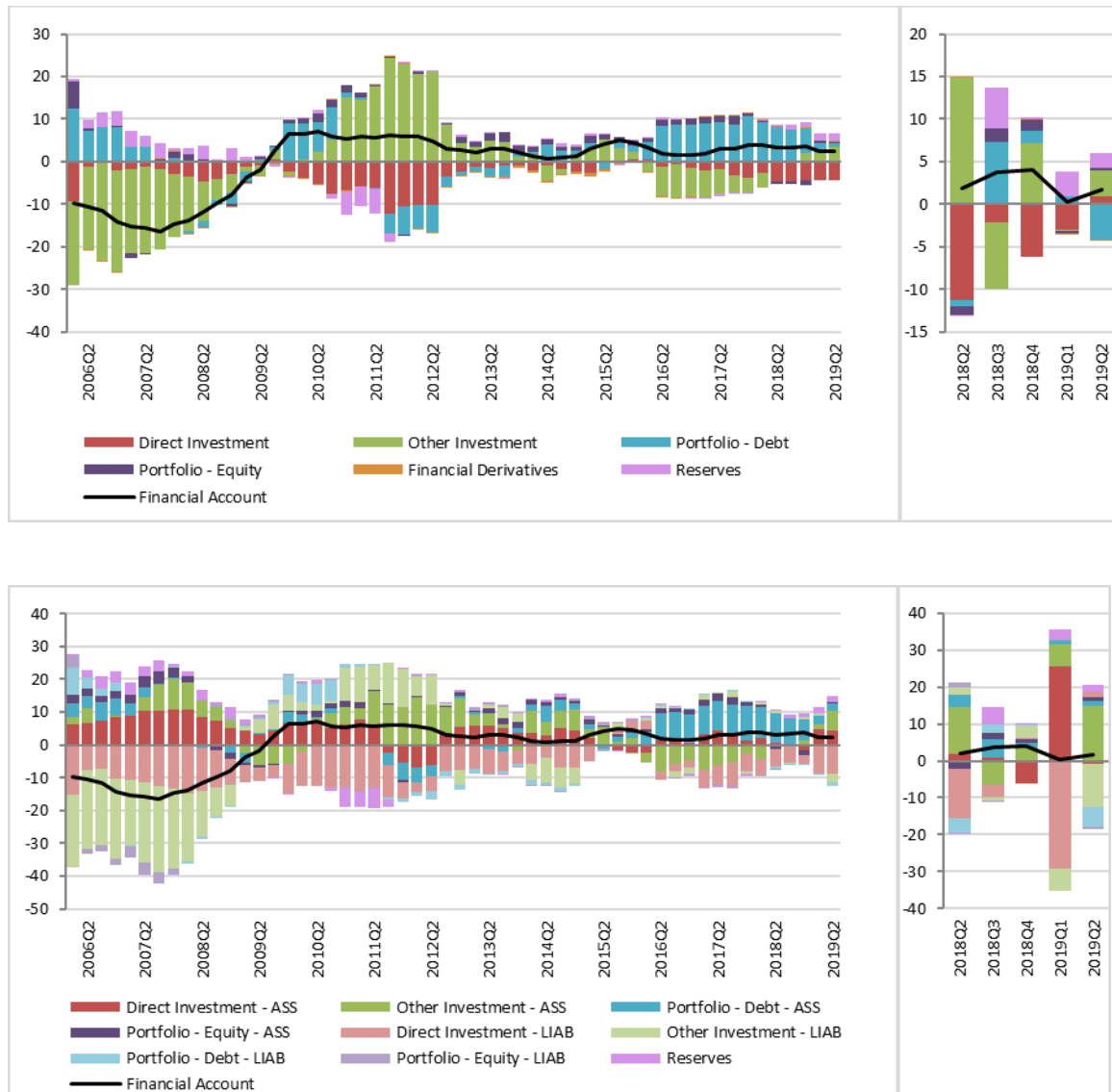
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 62: Euro area CEE net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

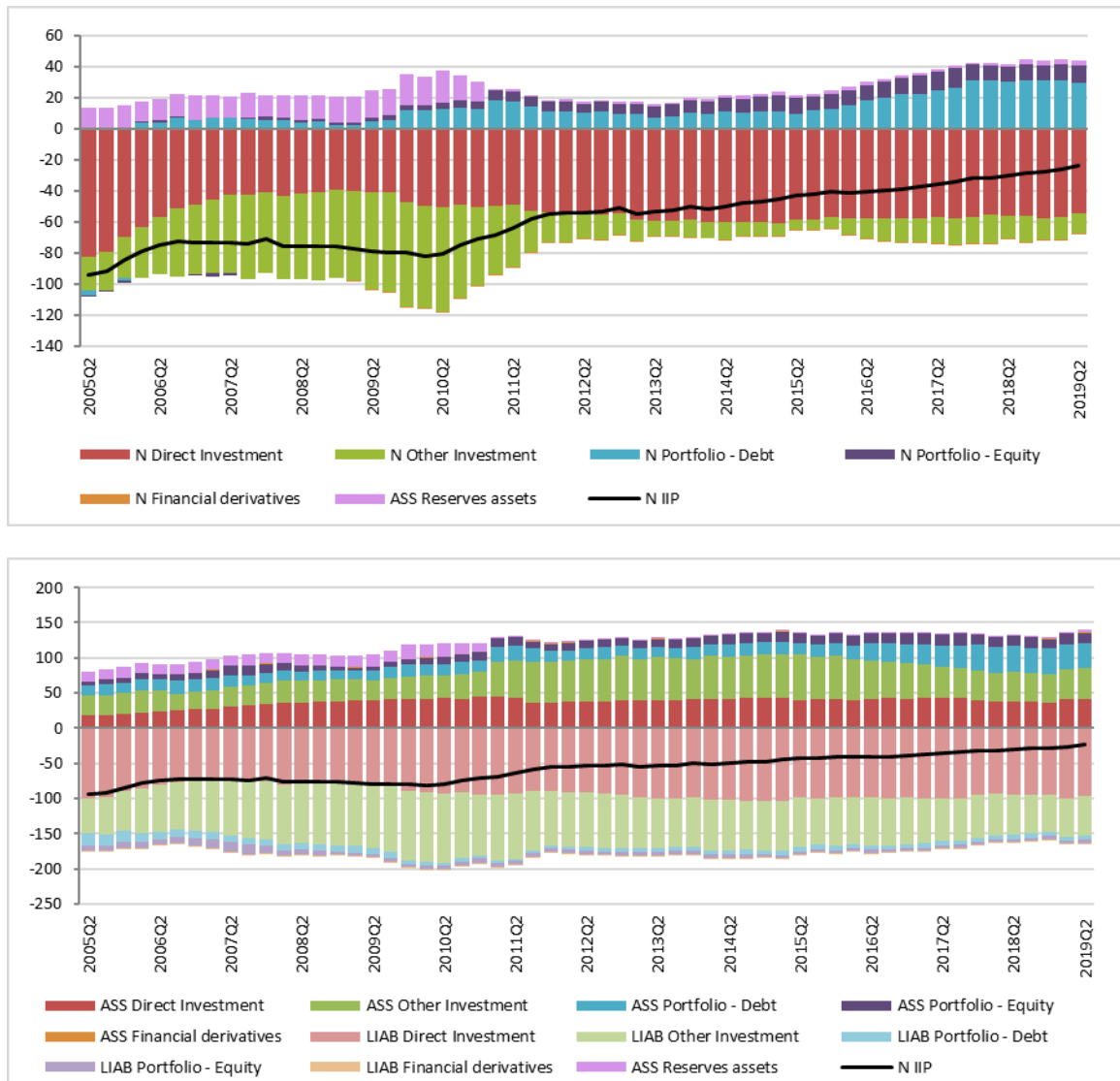
Figure 63: Estonia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

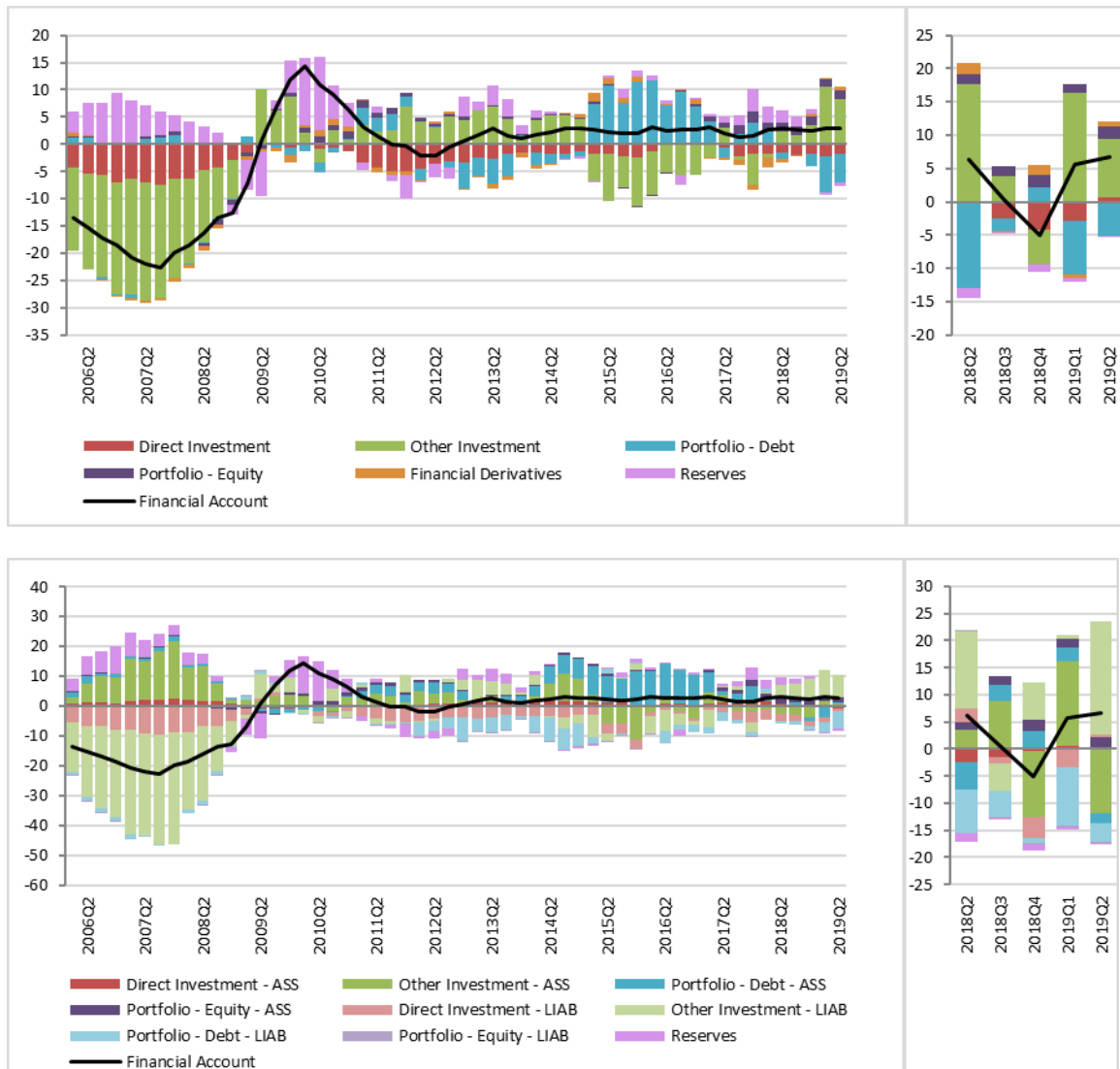
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 64: Estonia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

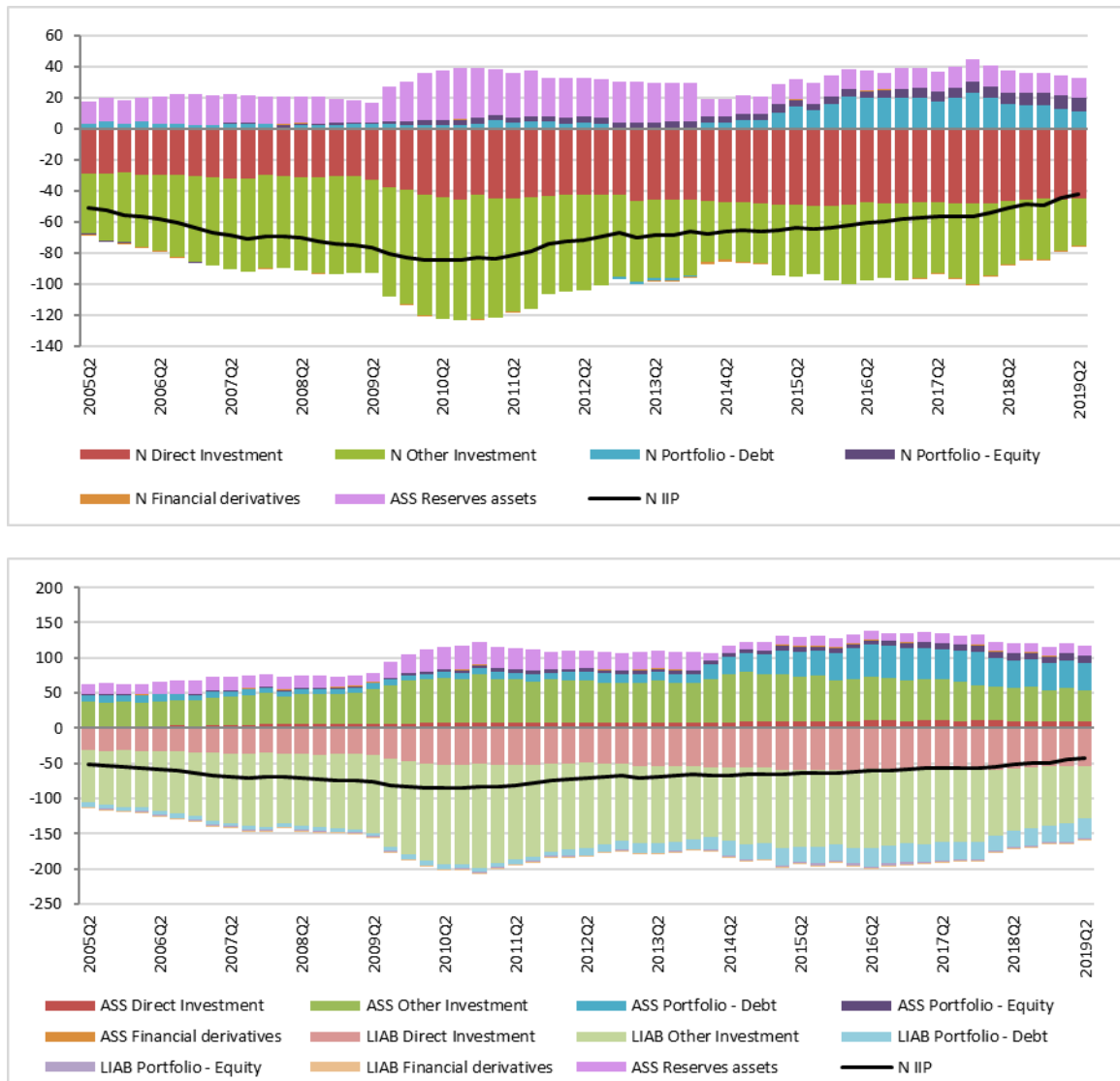
Figure 65: Latvia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

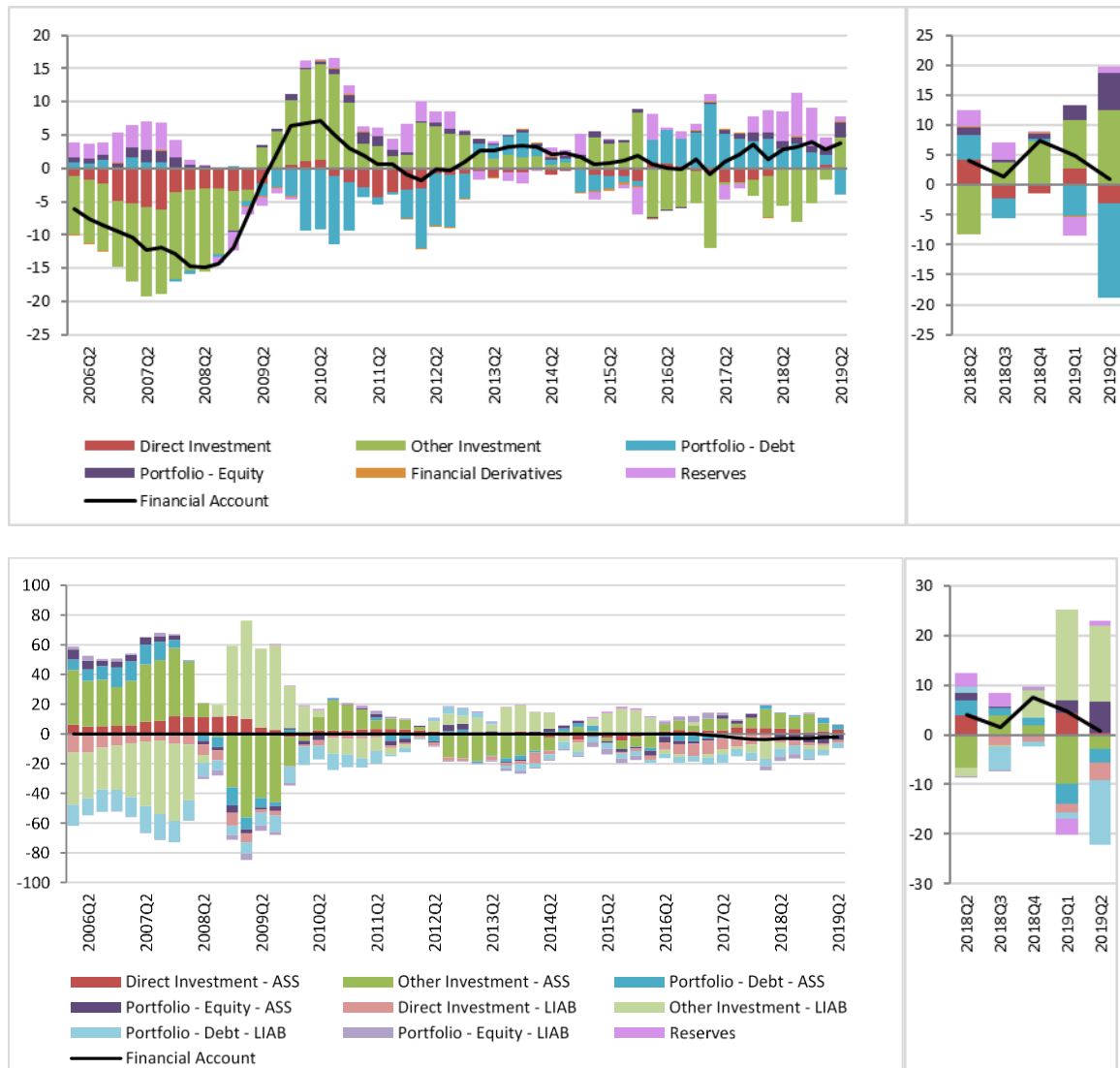
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 66: Latvia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

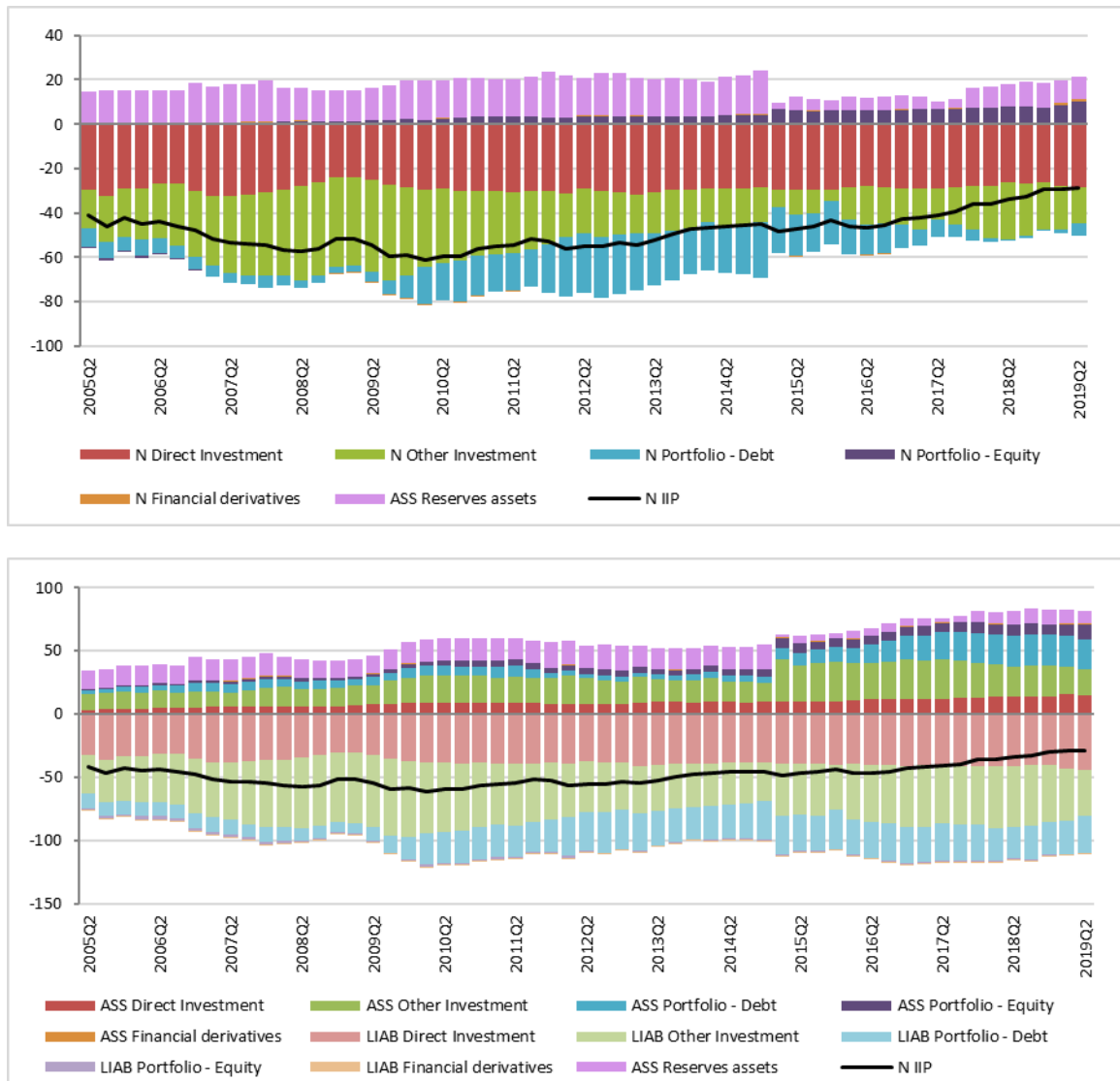
Figure 67: Lithuania (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

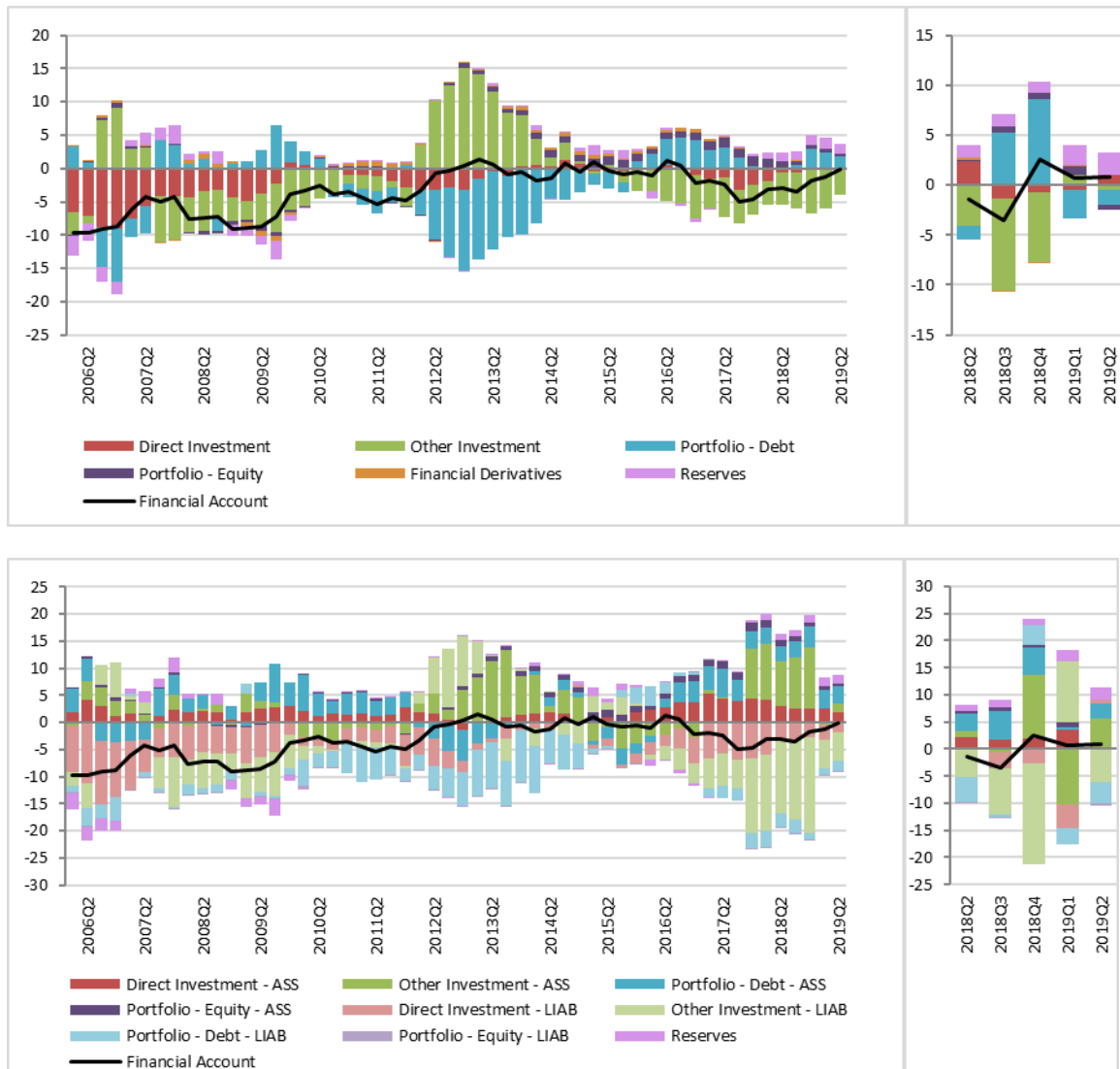
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 68: Lithuania (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

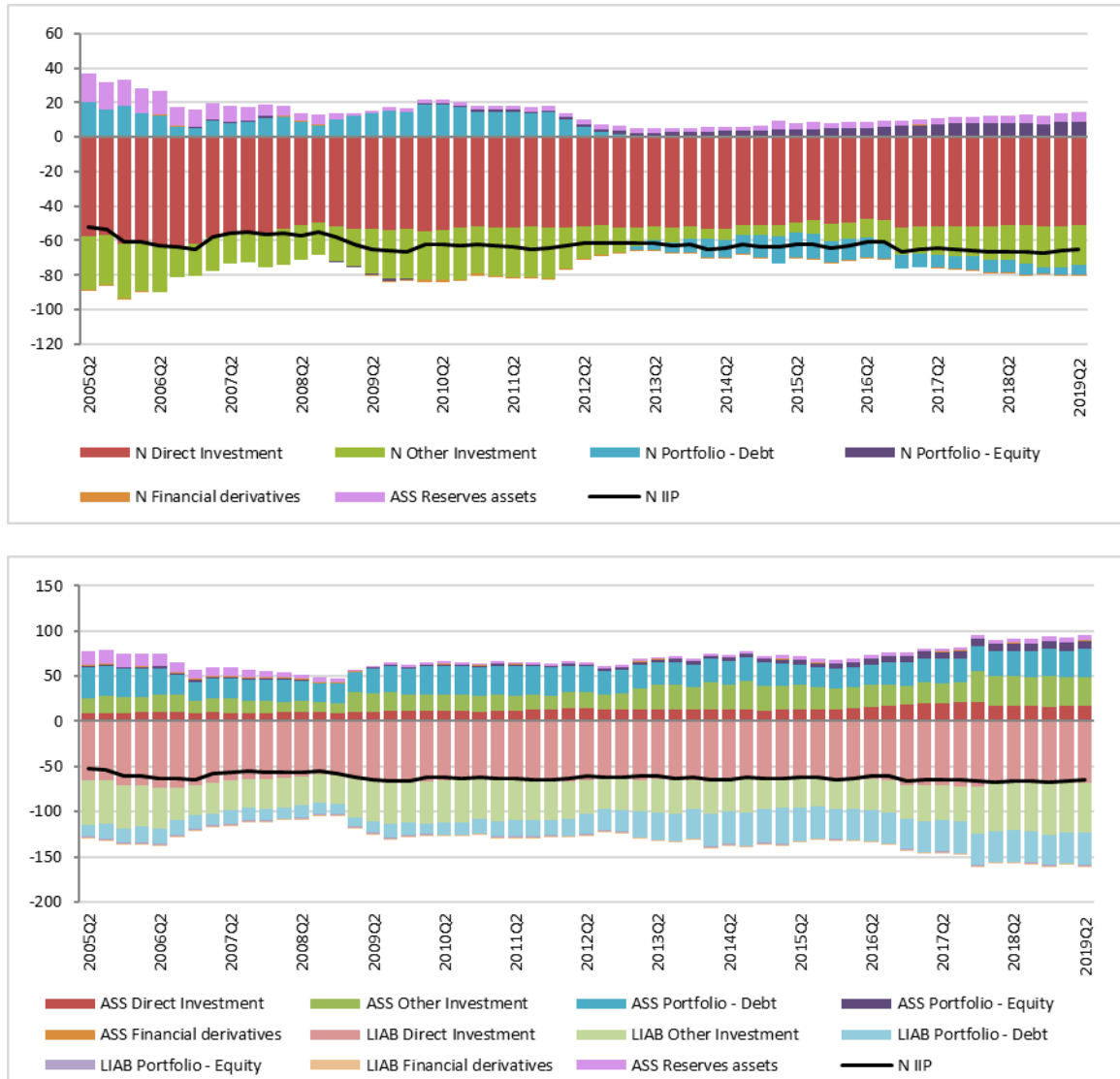
Figure 69: Slovakia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

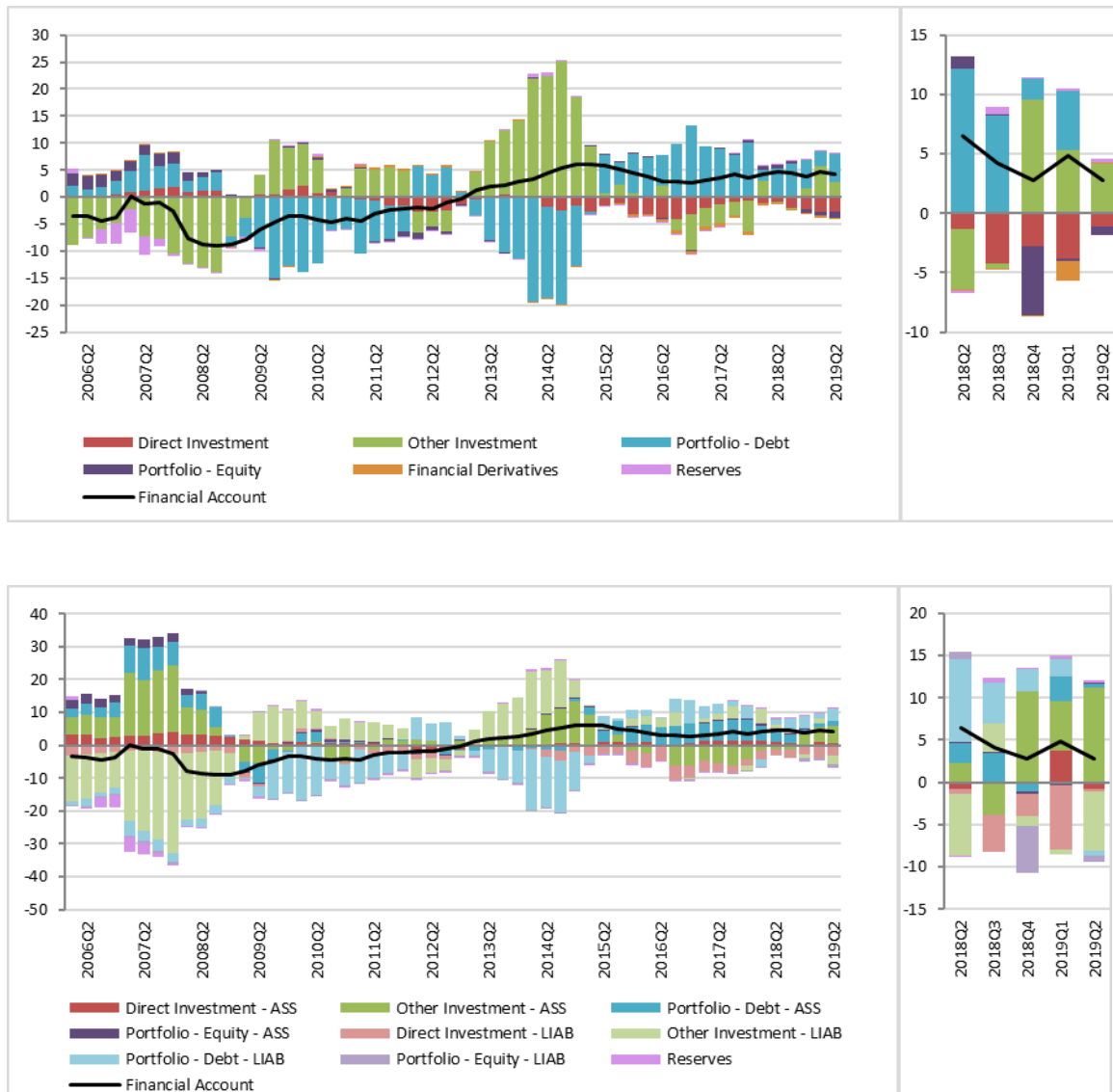
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 70: Slovakia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

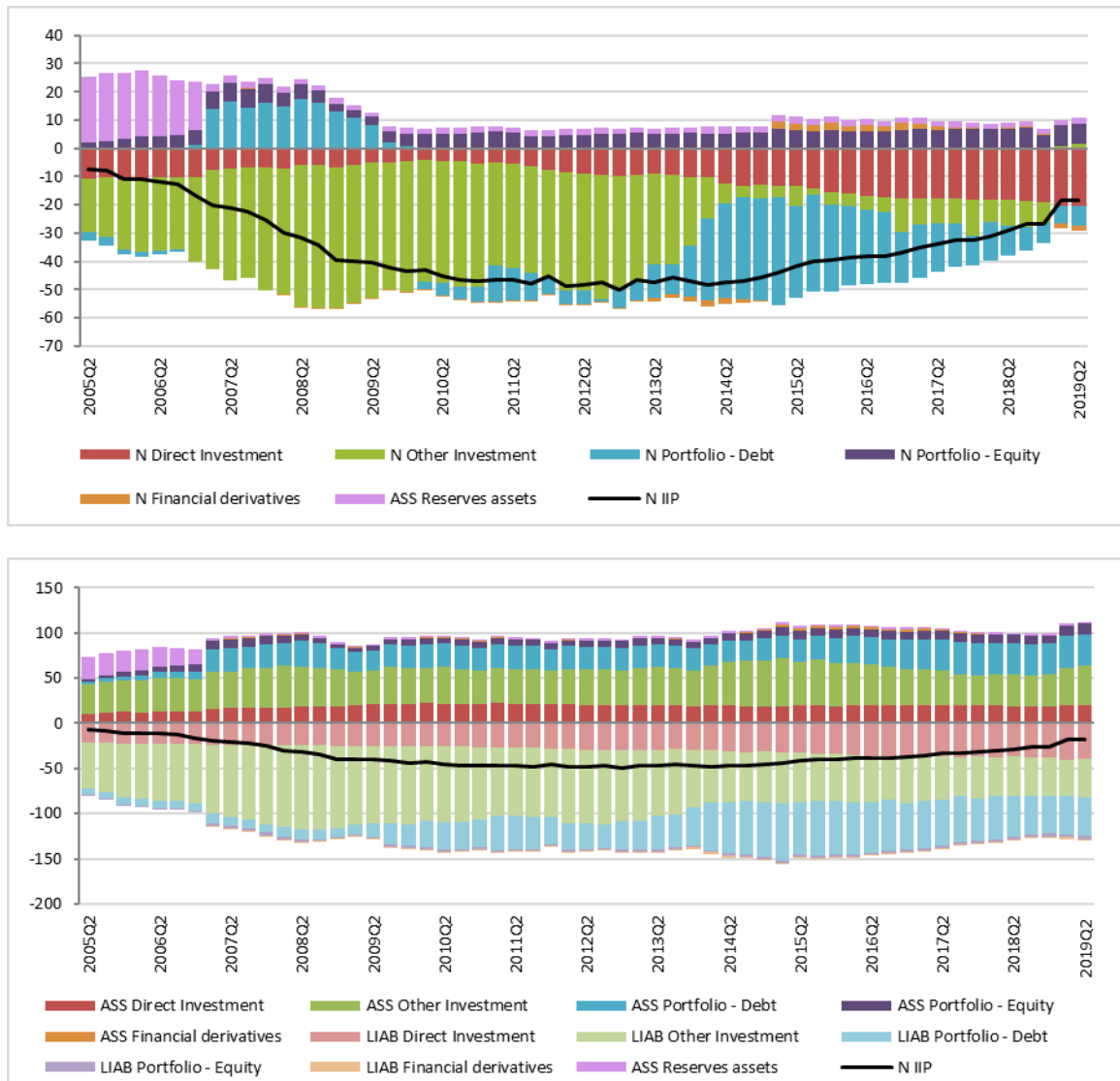
Figure 71: Slovenia (euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

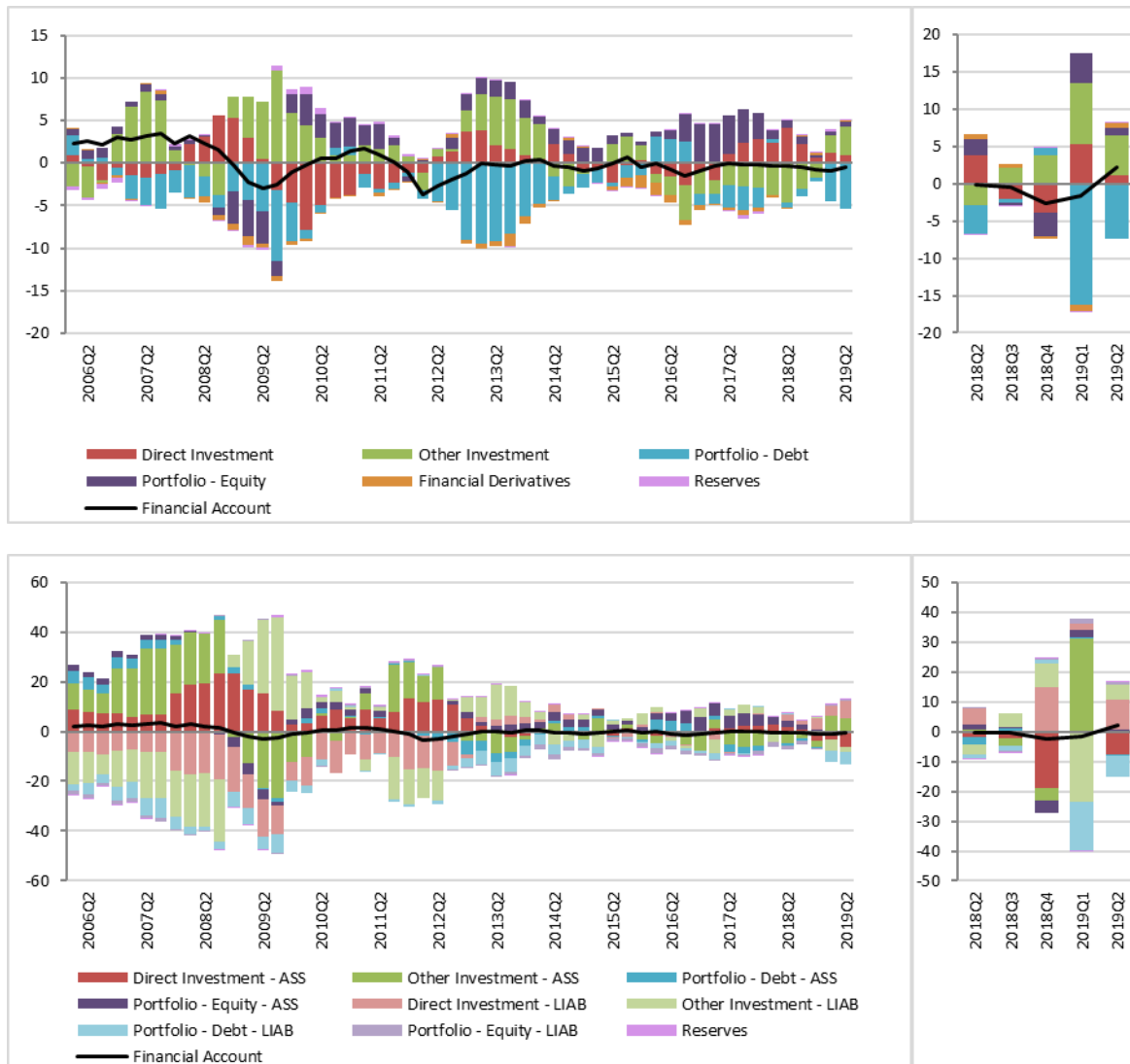
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 72: Slovenia (euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

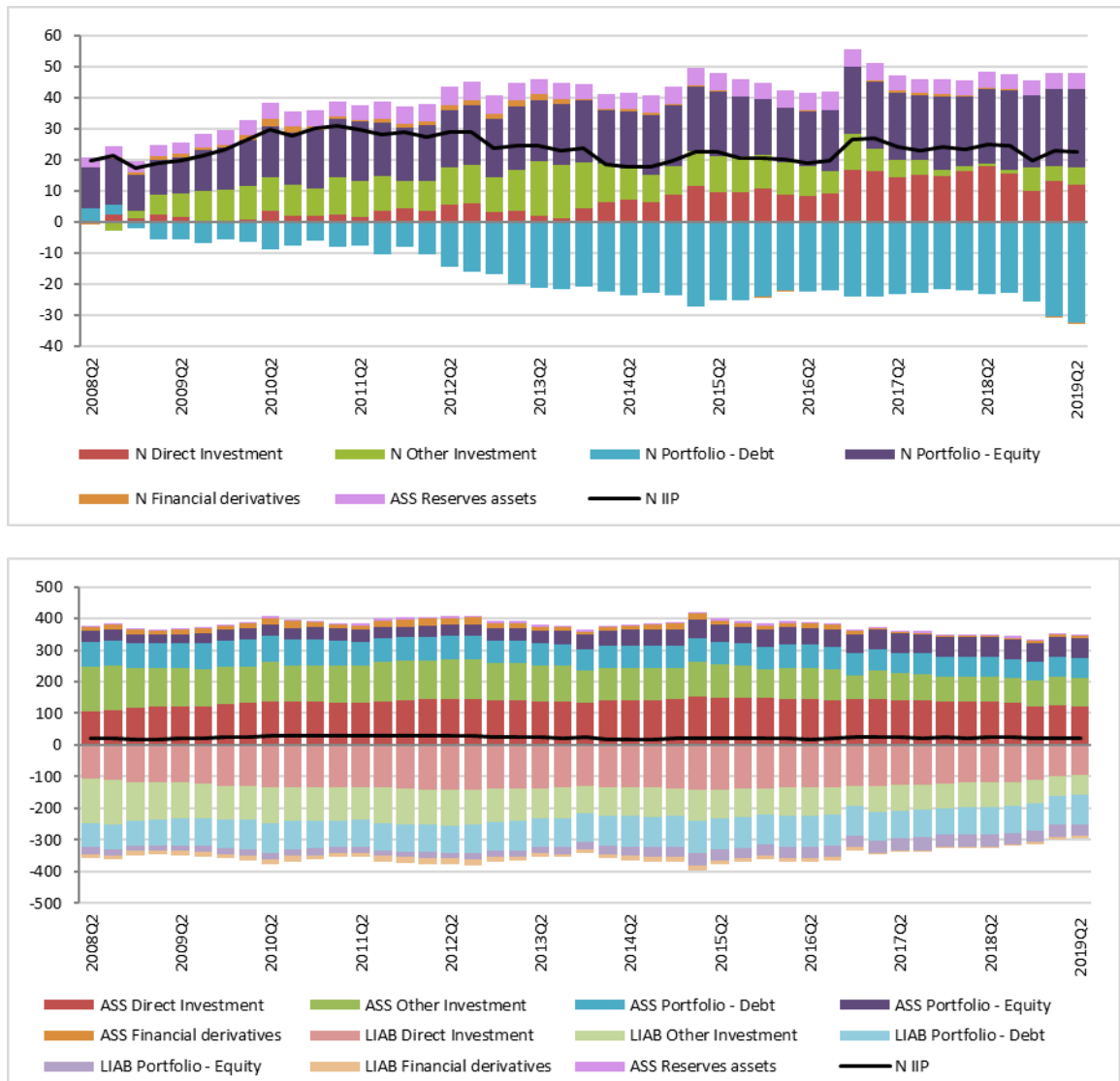
Figure 73: Euro area creditor countries net and gross flows by instrument, % of GDP



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.

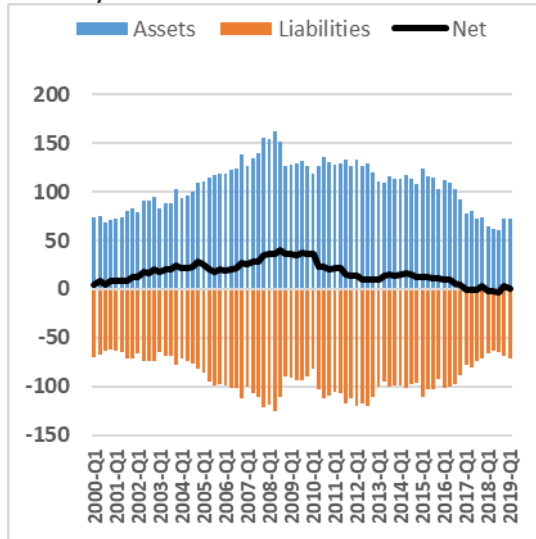
Figure 74: Euro area creditor countries net and gross international investment position by instrument, % of GDP



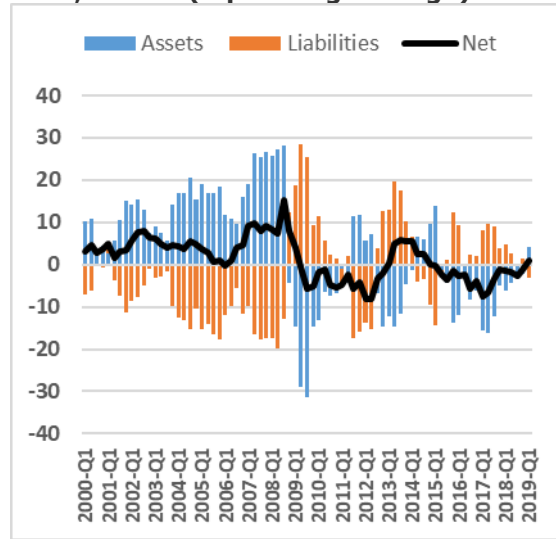
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 75: Euro area creditor countries, BIS LBS

Stocks, % GDP



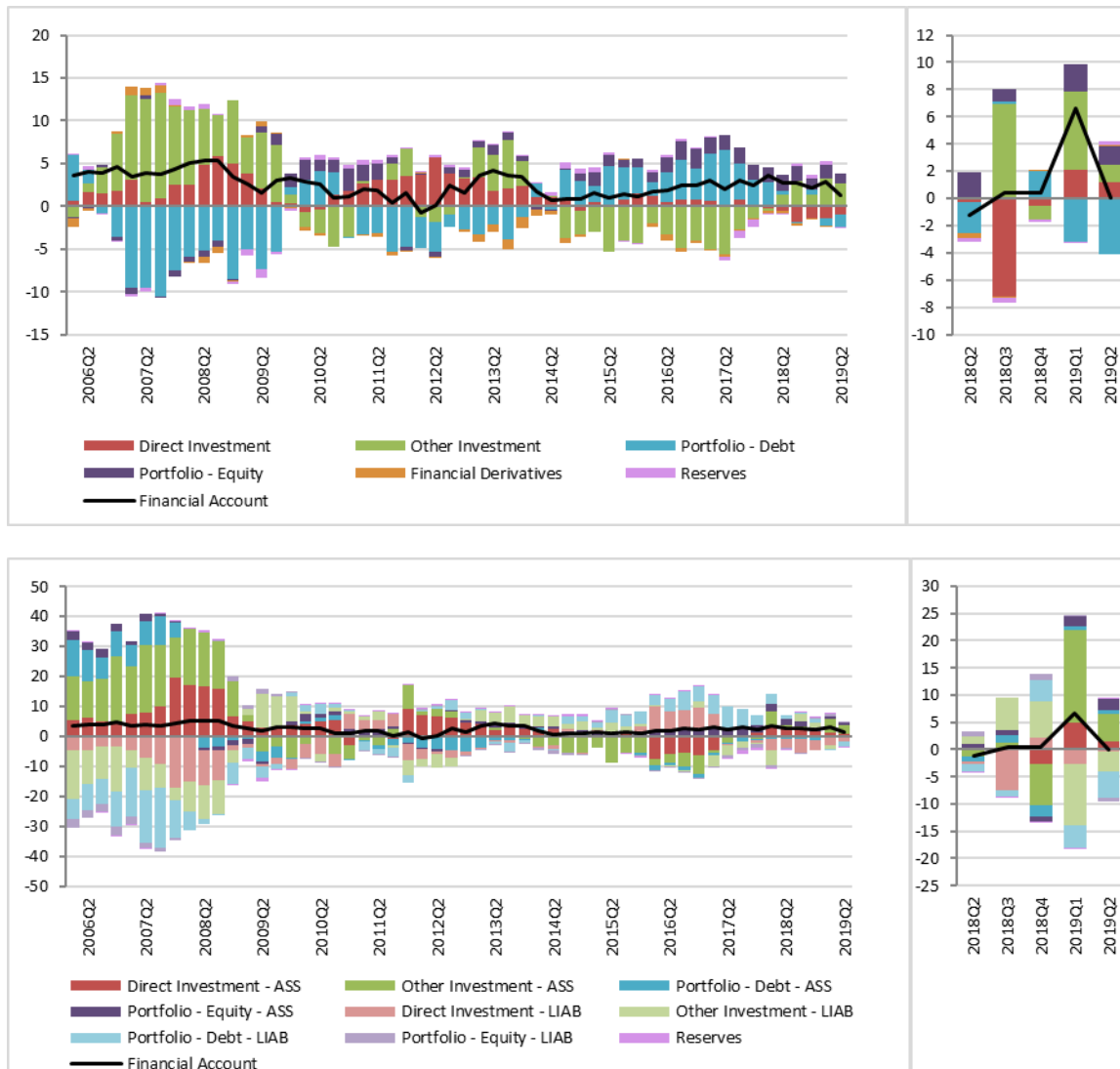
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

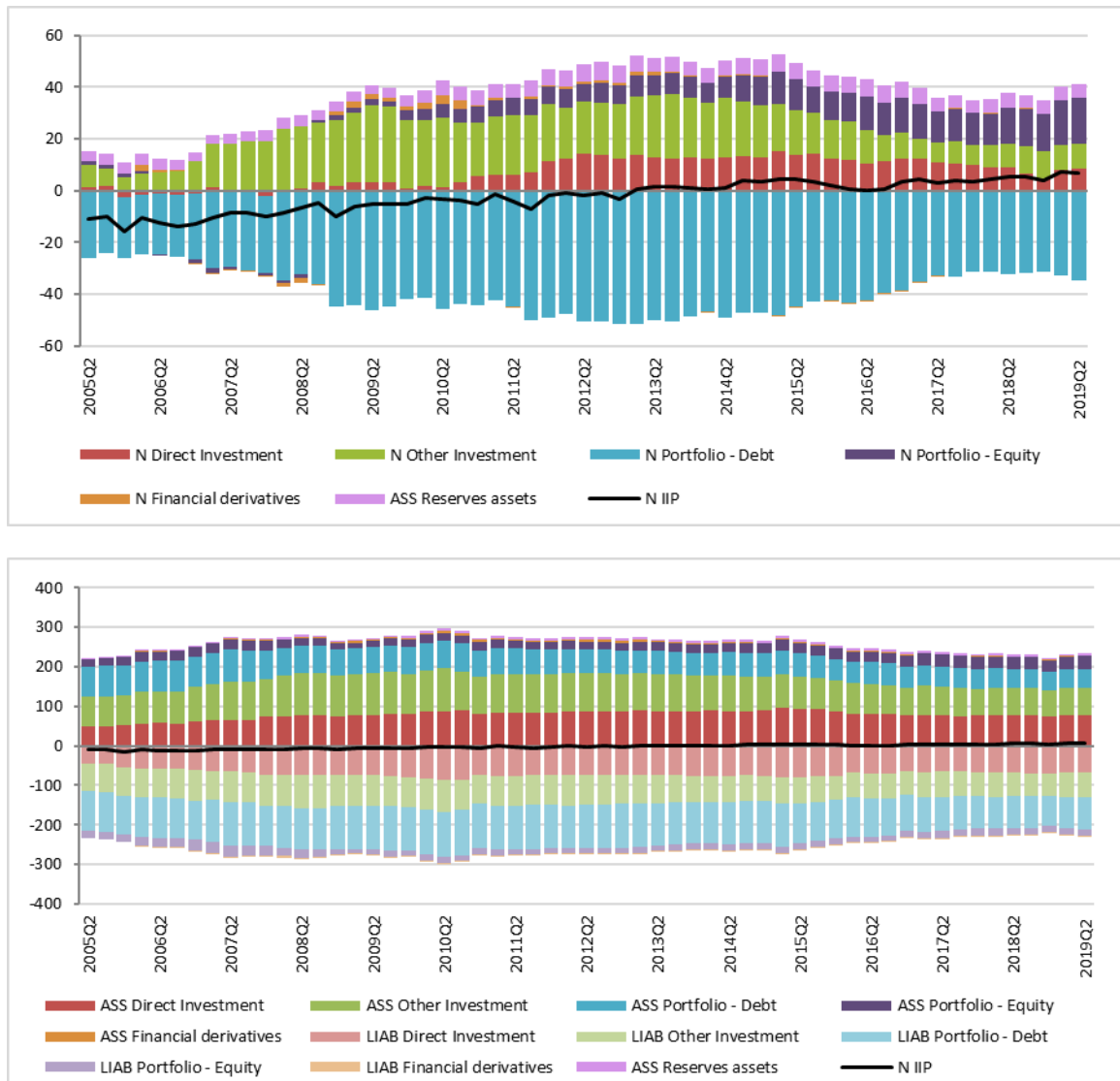
Figure 76: Austria (euro area creditor) net and gross flows by instrument, % of GDP



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.

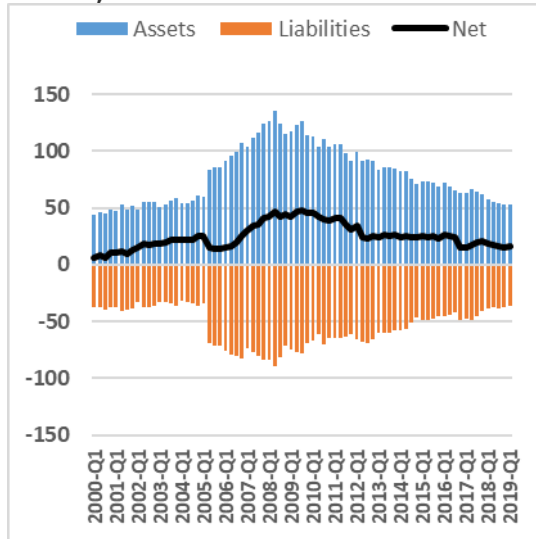
Figure 77: Austria (euro area creditor) net and gross international investment position by instrument, % of GDP



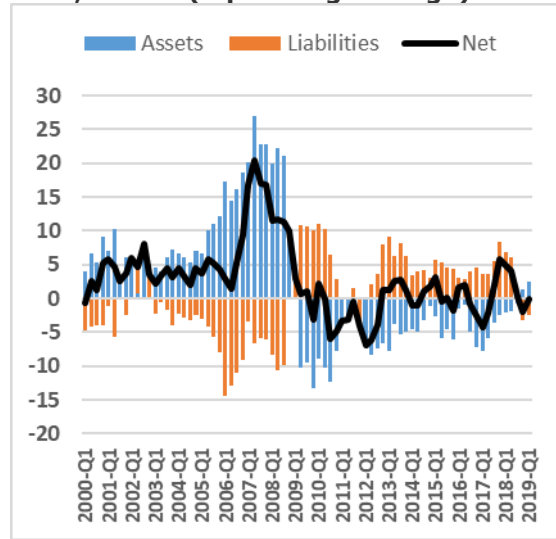
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 78: Austria (euro area creditor), BIS LBS

Stocks, % GDP



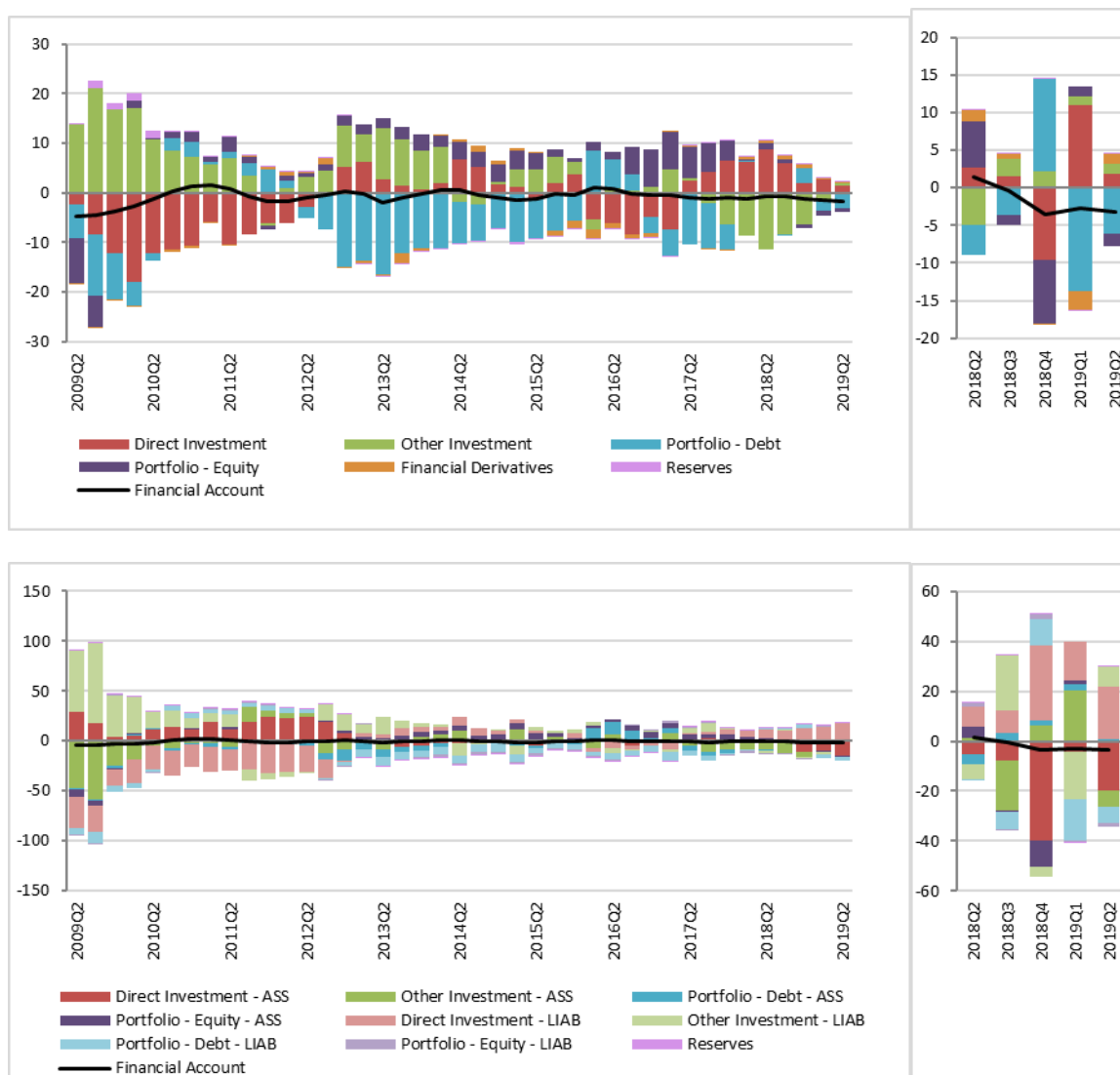
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

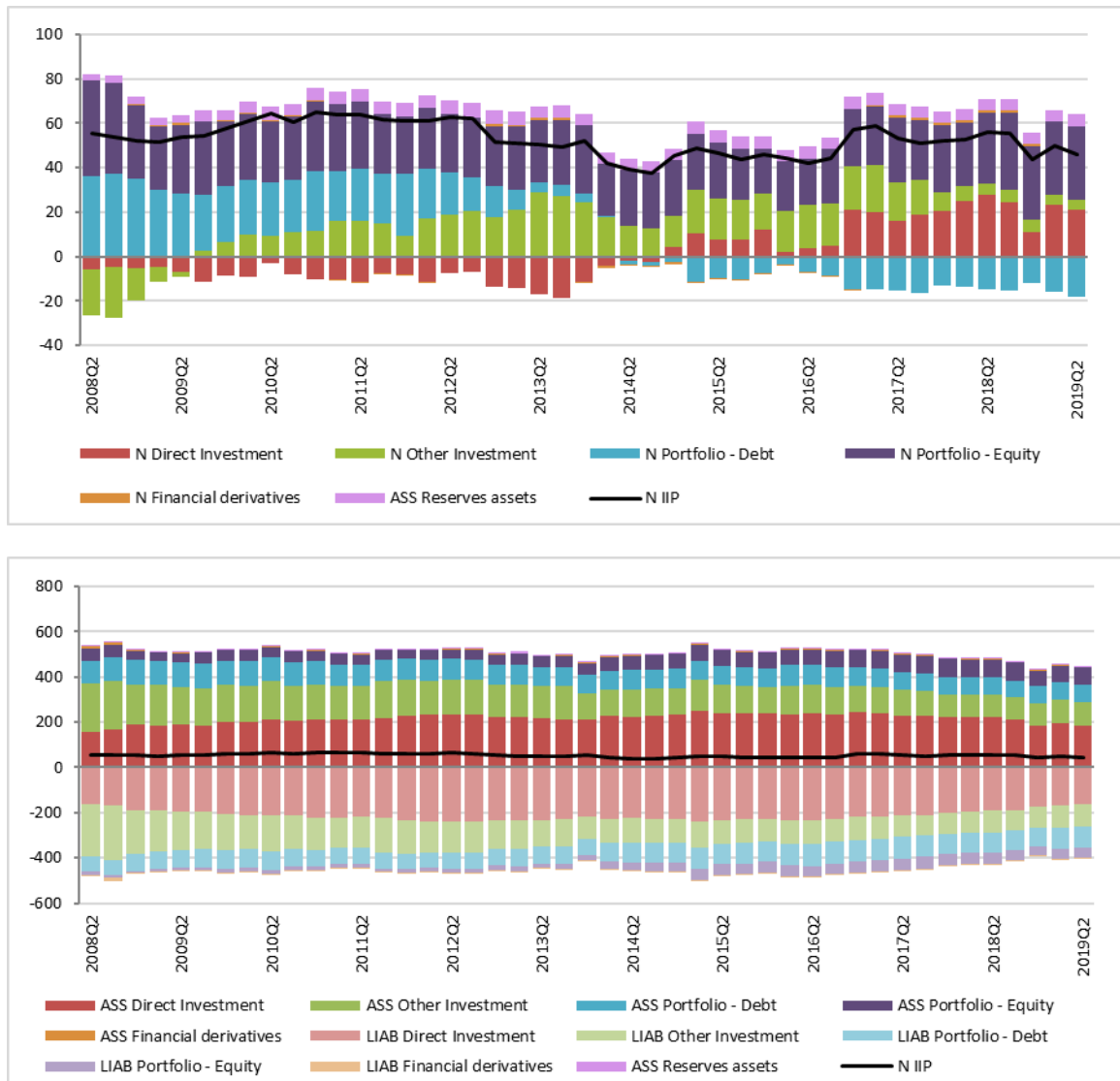
Figure 79: Belgium (euro area creditor) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

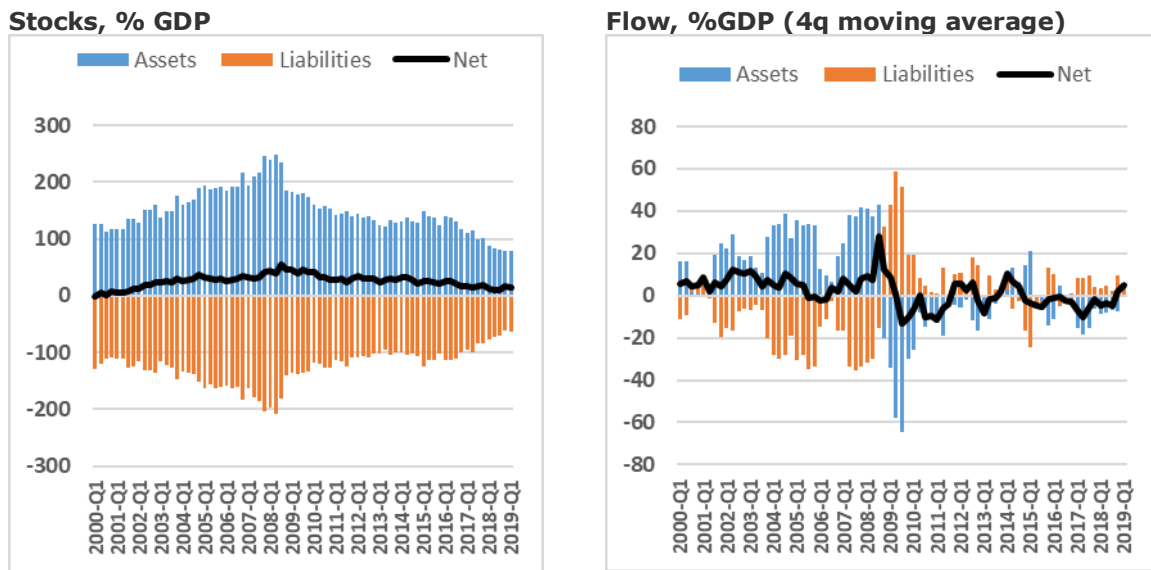
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

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



Source: Eurostat (bop_iip6_q & namq_10_gdp)

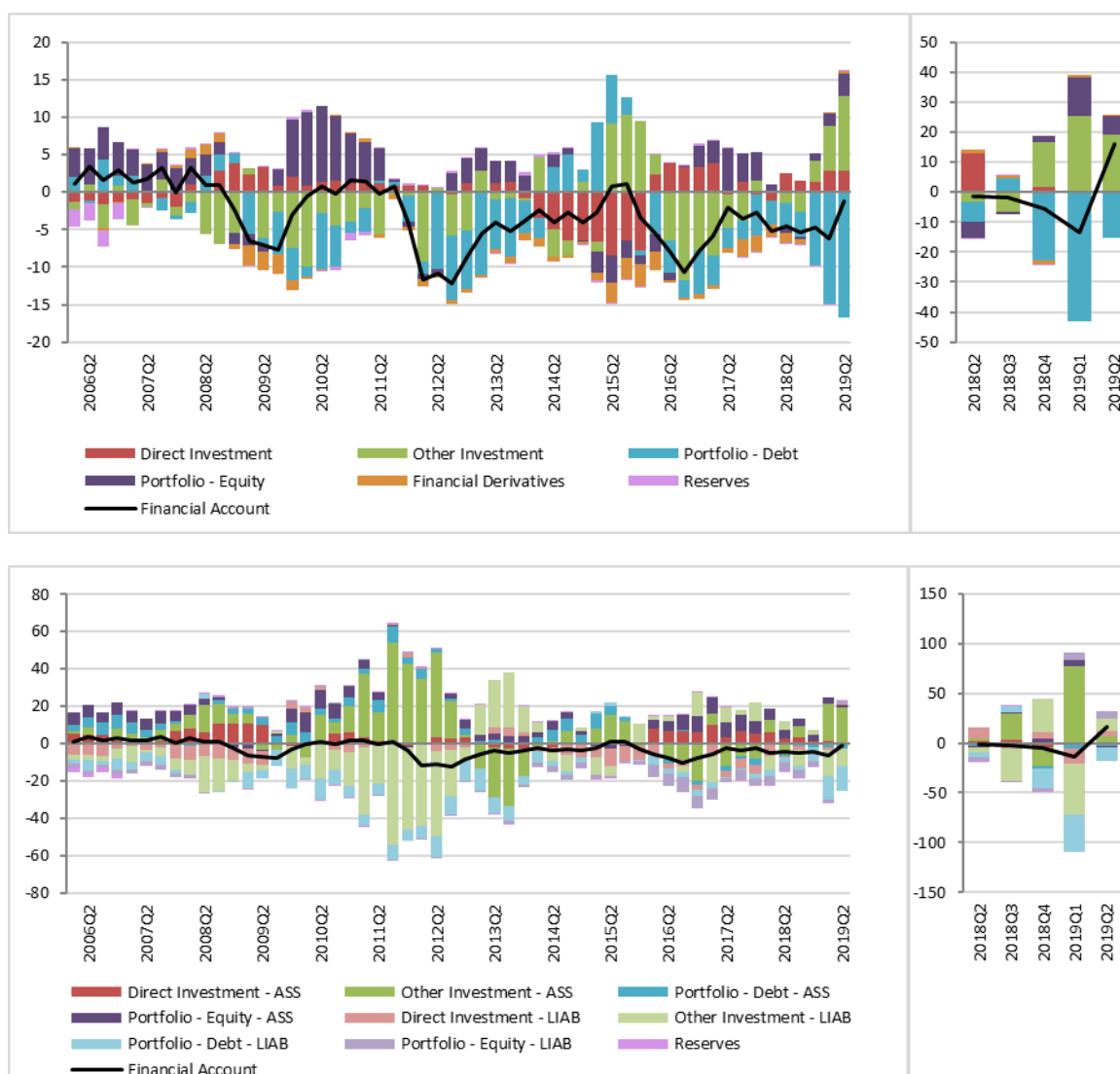
Figure 81: Belgium (euro area creditor), BIS LBS



Source: BIS Locational Banking Statistics

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

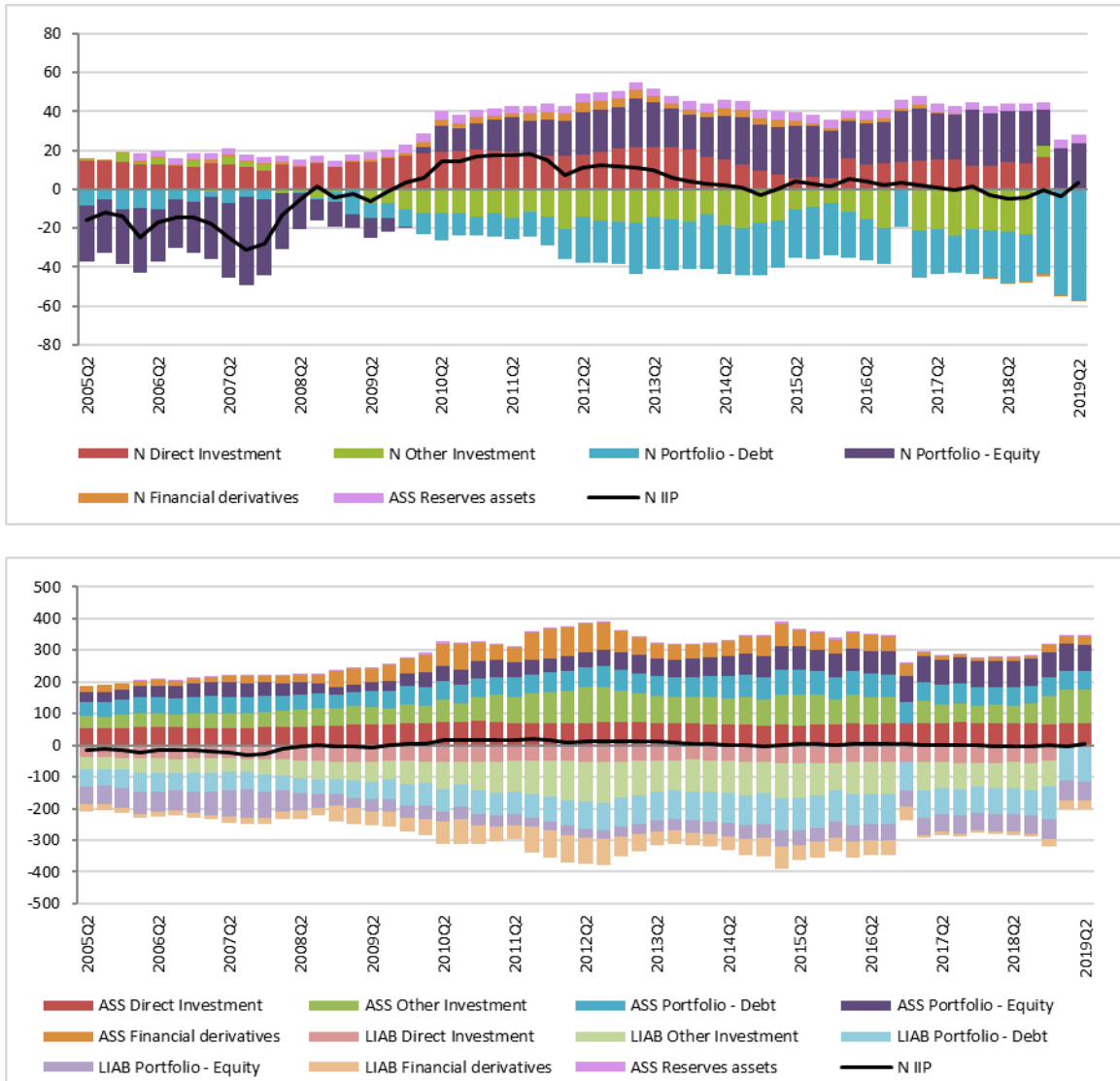
Figure 82: Finland (euro area creditor) net and gross flows by instrument, % of GDP



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.

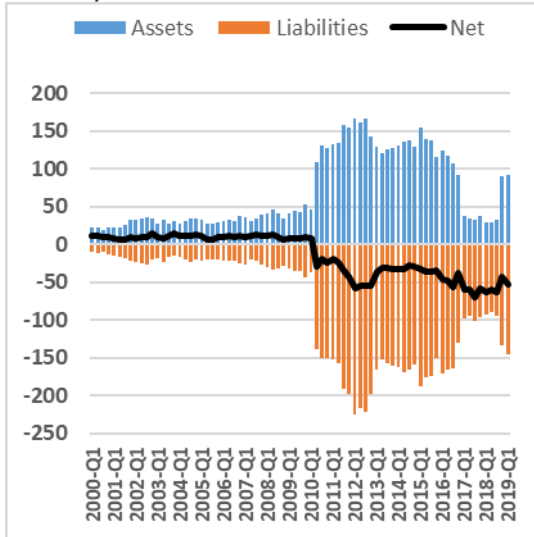
Figure 83: Finland (euro area creditor) net and gross international investment position by instrument, % of GDP



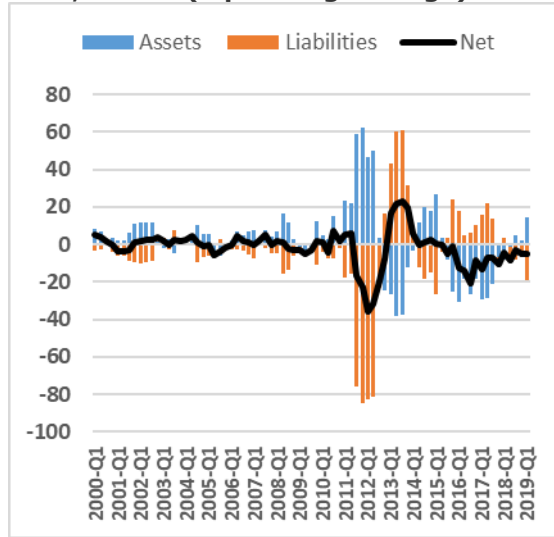
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 84: Finland (euro area creditor), BIS LBS

Stocks, % GDP



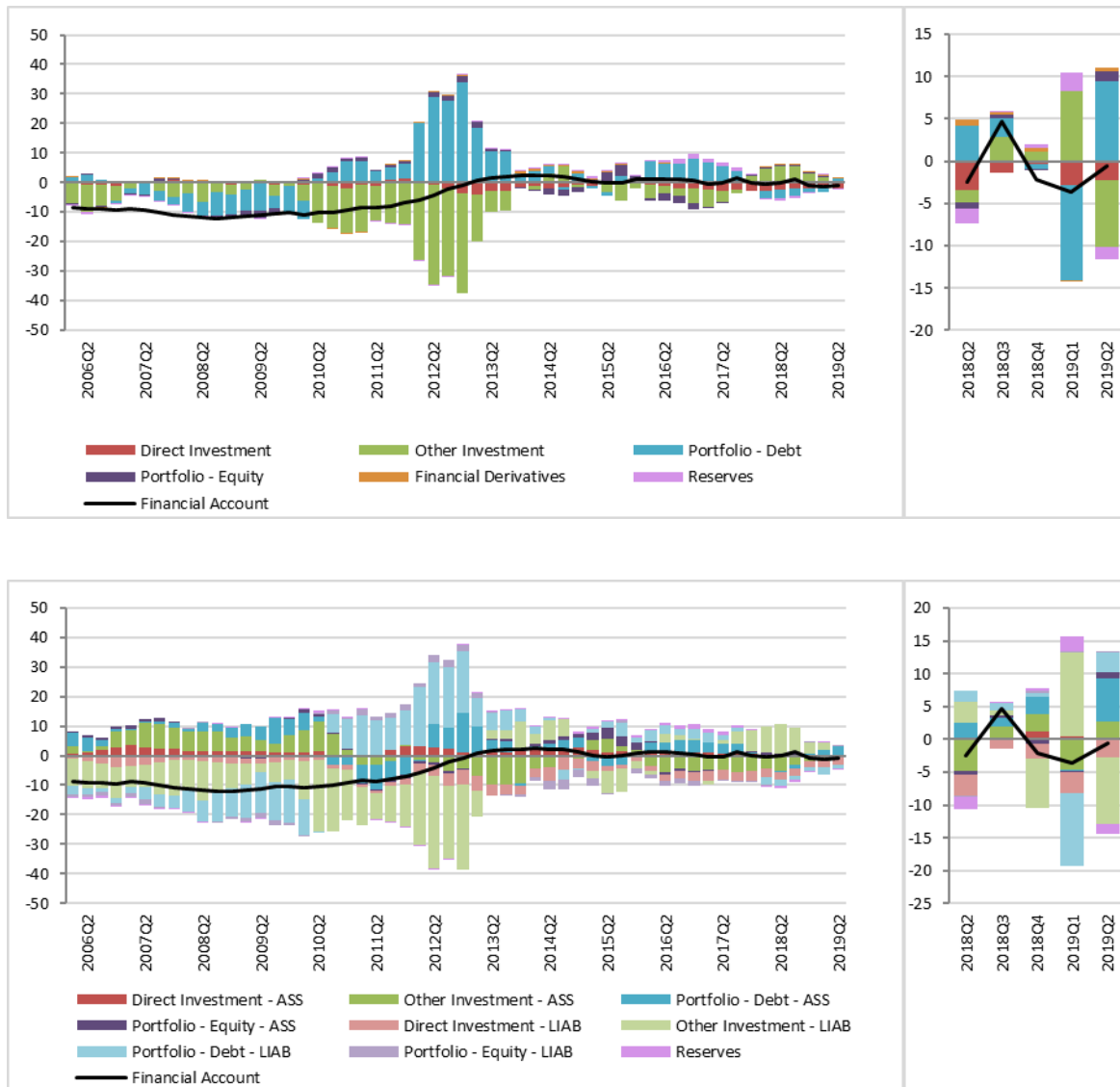
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

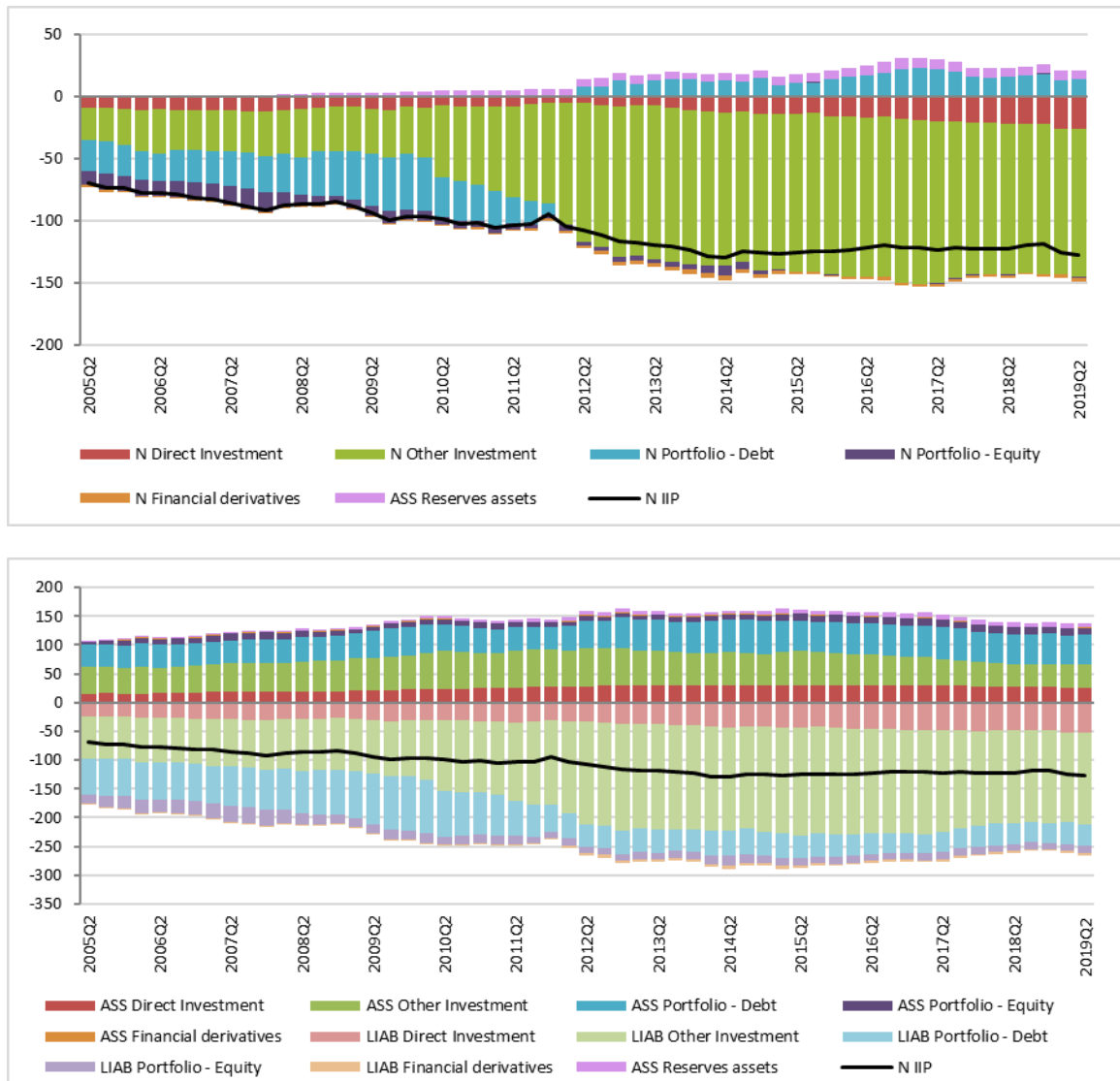
Figure 85: Euro area debtor countries net and gross flows by instrument, % of GDP



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.

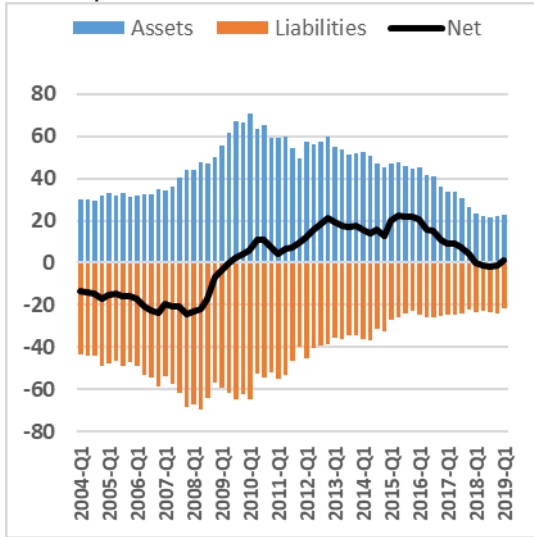
Figure 86: Euro area debtor countries net and gross international investment position by instrument, % of GDP



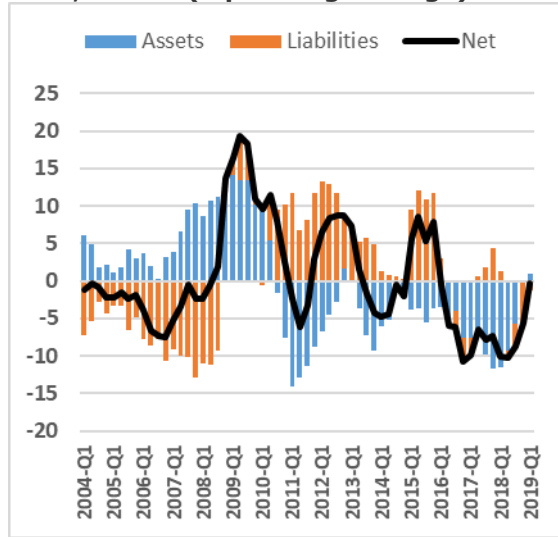
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 87: Euro area debtor countries, BIS LBS

Stocks, % GDP



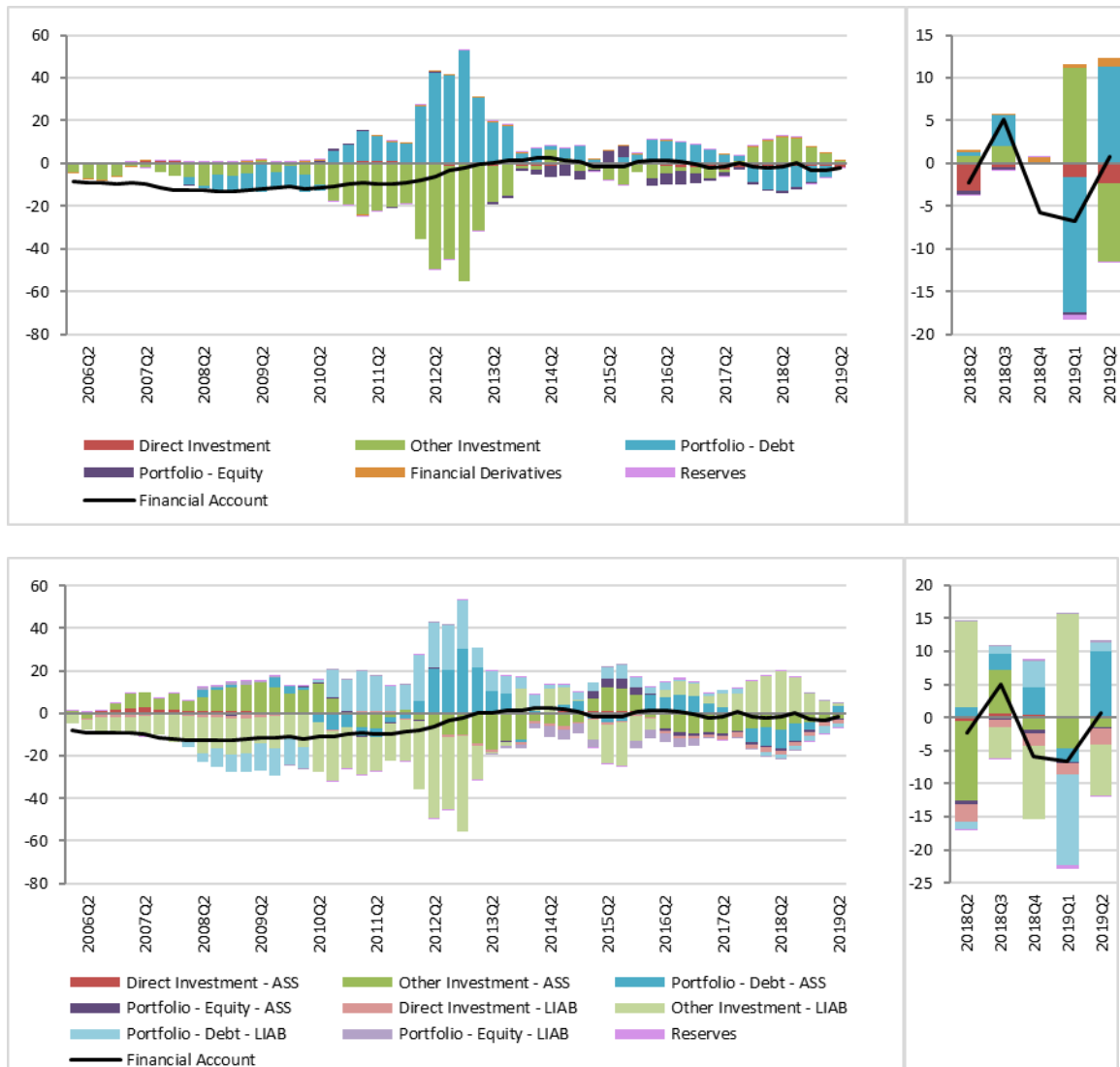
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

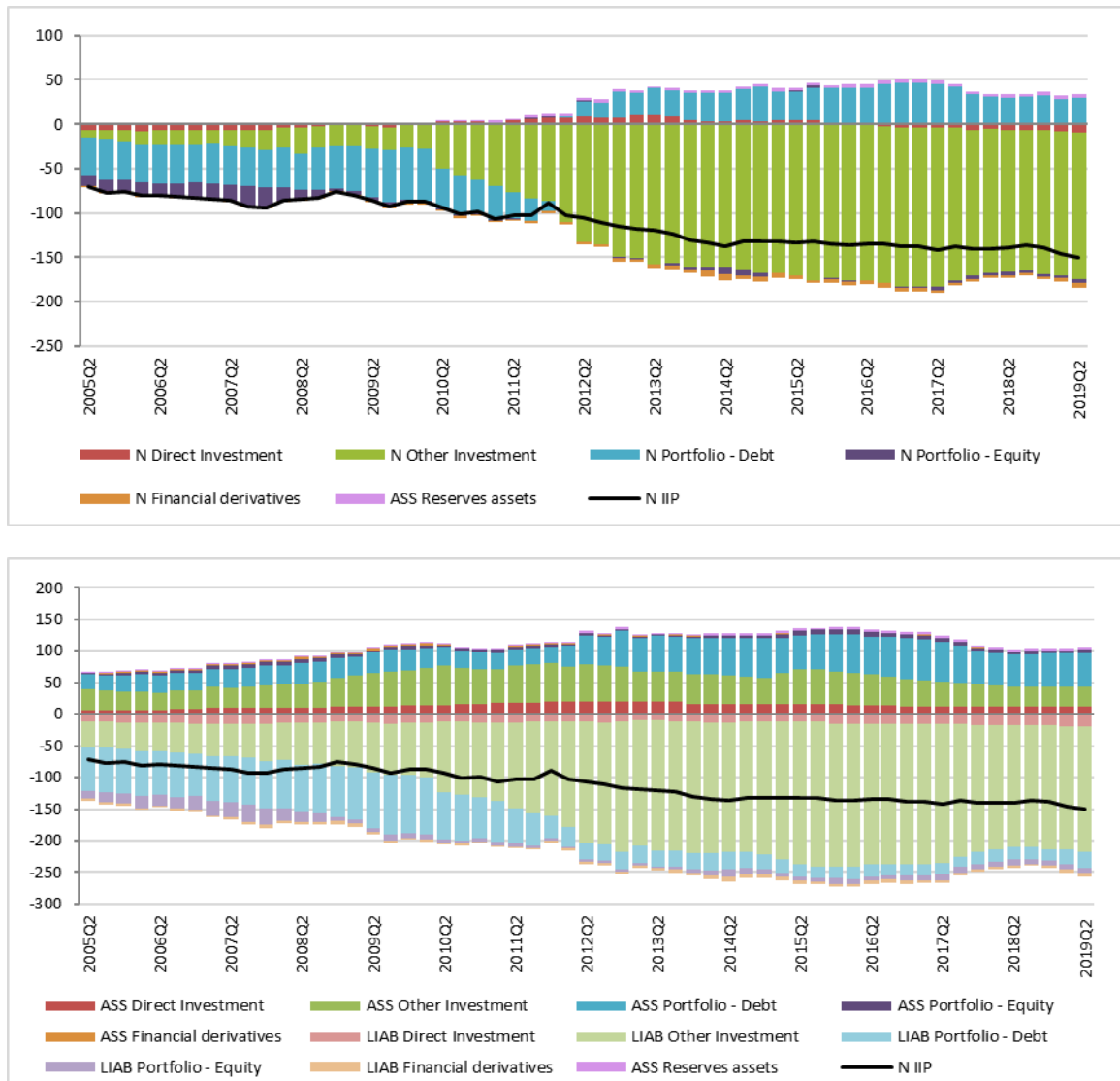
Figure 88: Greece (euro area debtor) net and gross flows by instrument, % of GDP



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.

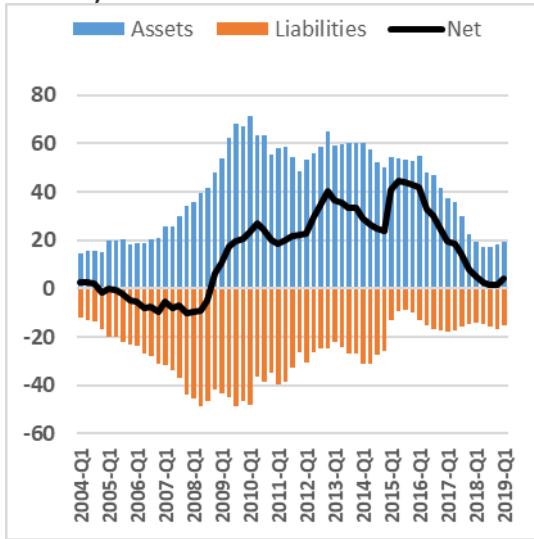
Figure 89: Greece (euro area debtor) net and gross international investment position by instrument, % of GDP



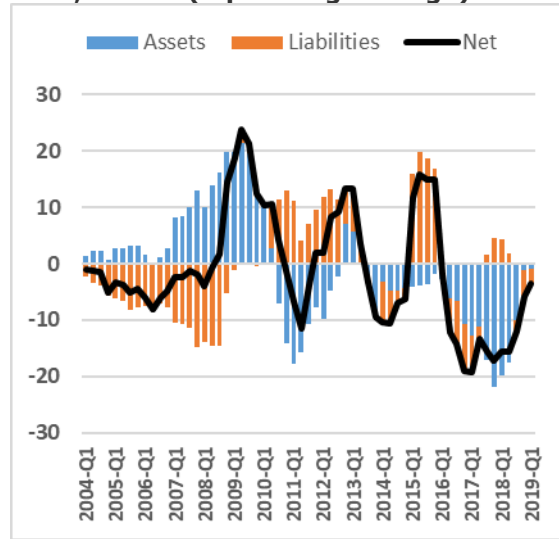
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 90: Greece (euro area debtor), BIS LBS

Stocks, % GDP



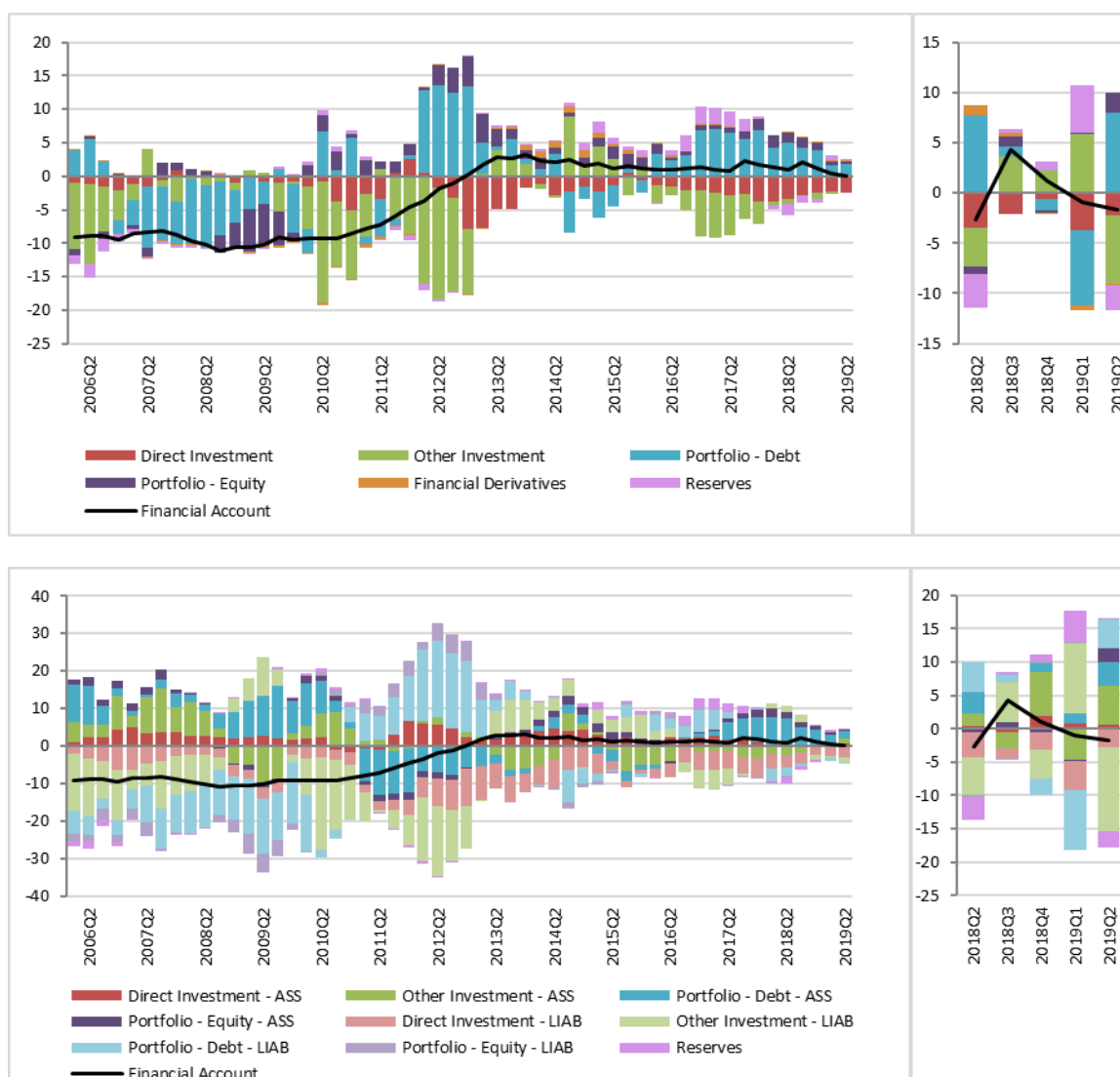
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

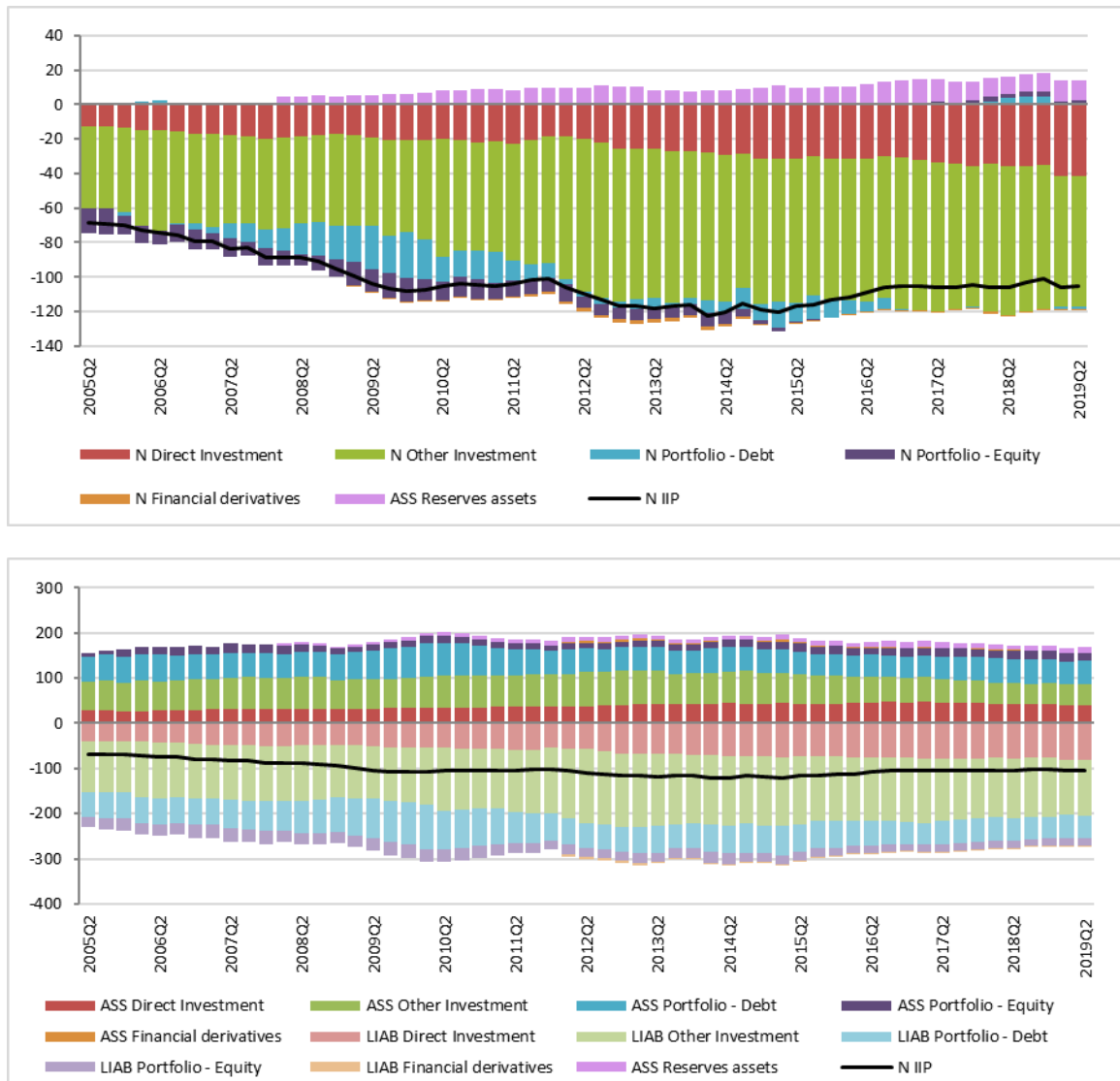
Figure 91: Portugal (euro area debtor) net and gross flows by instrument, % of GDP



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.

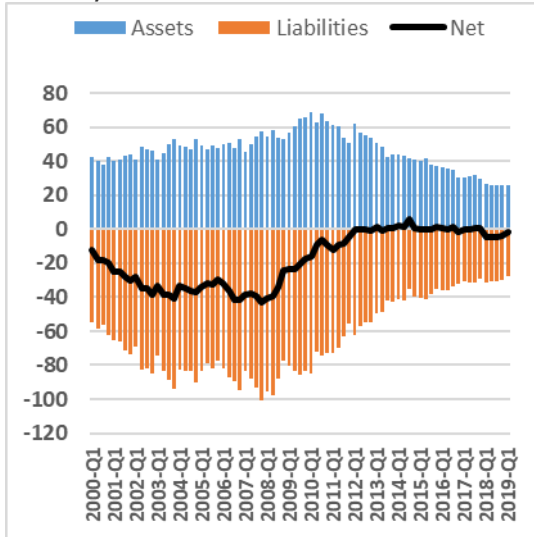
Figure 92: Portugal (euro area debtor) net and gross international investment position by instrument, % of GDP



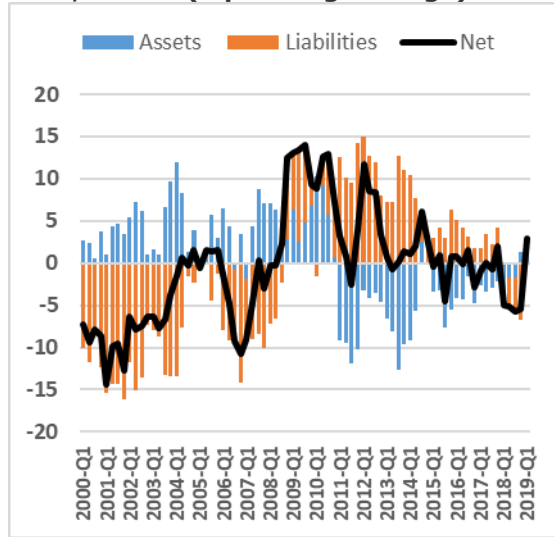
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 93: Portugal (euro area debtor), BIS LBS

Stocks, % GDP



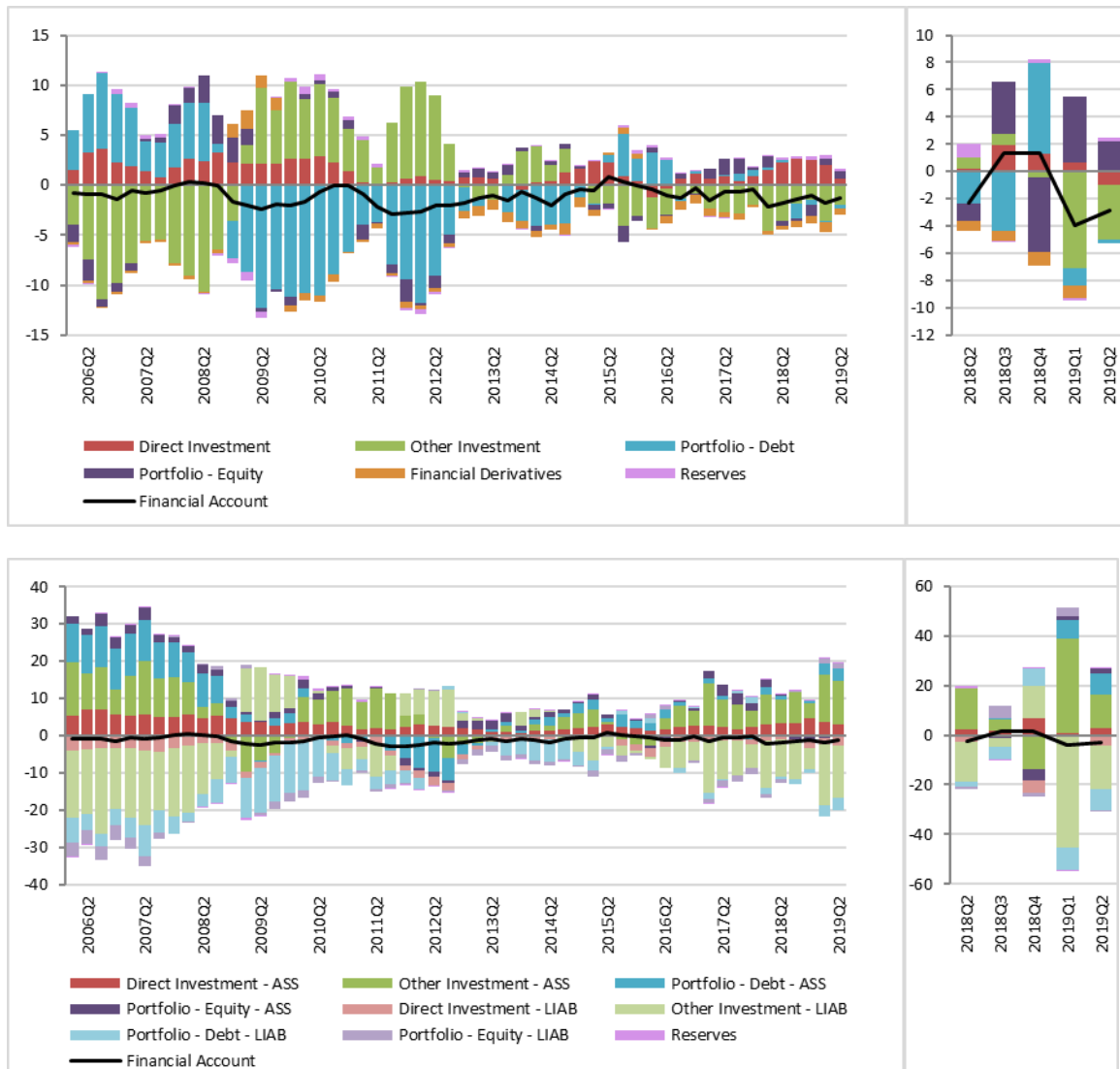
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

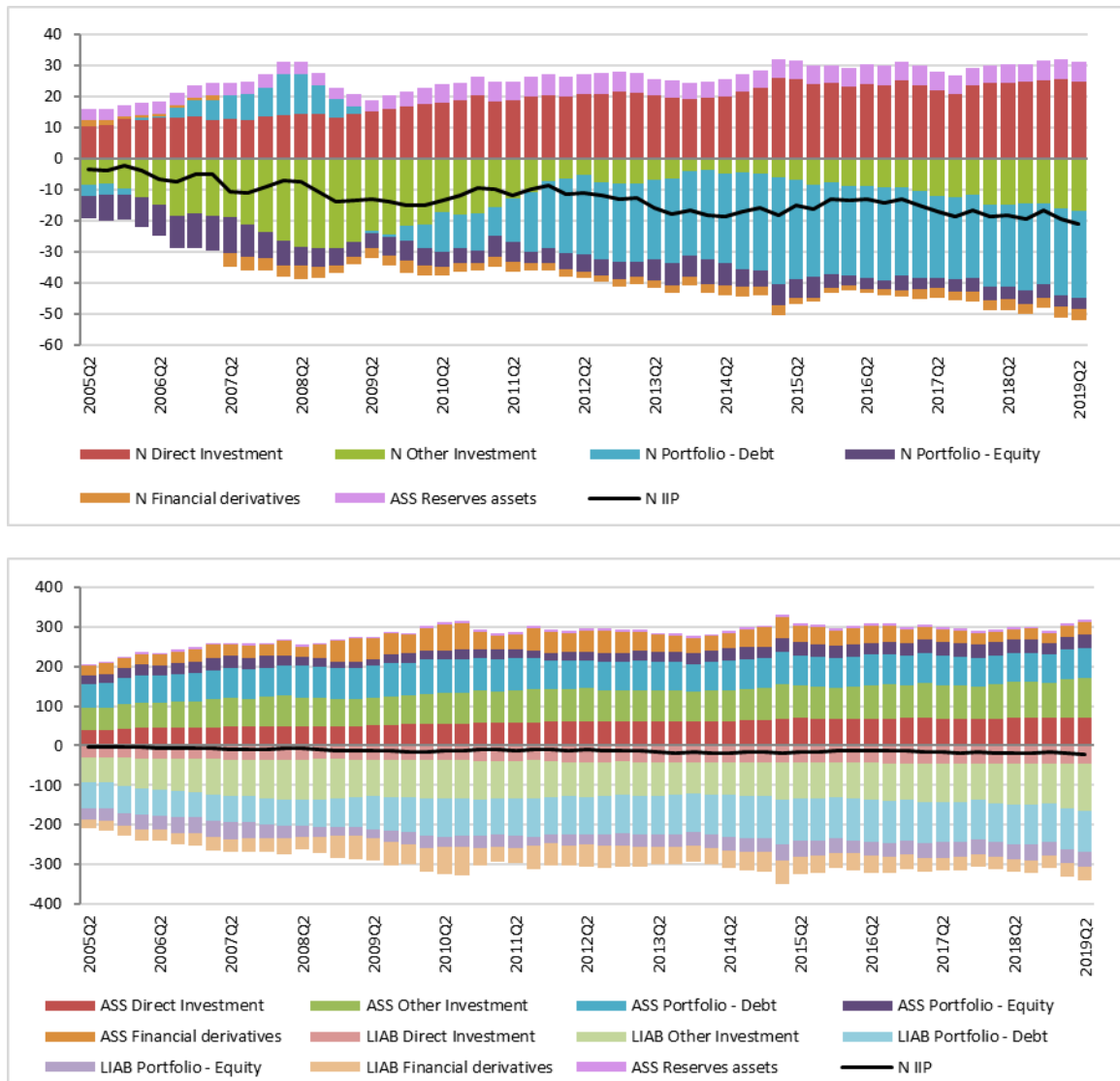
Figure 94: France net and gross flows by instrument, % of GDP



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.

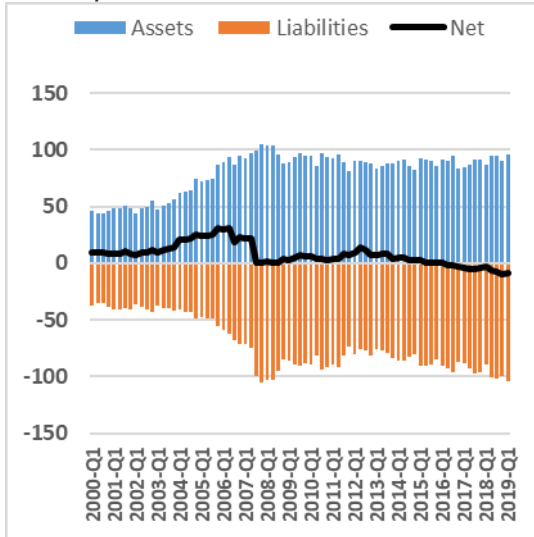
Figure 95: France net and gross international investment position by instrument, % of GDP



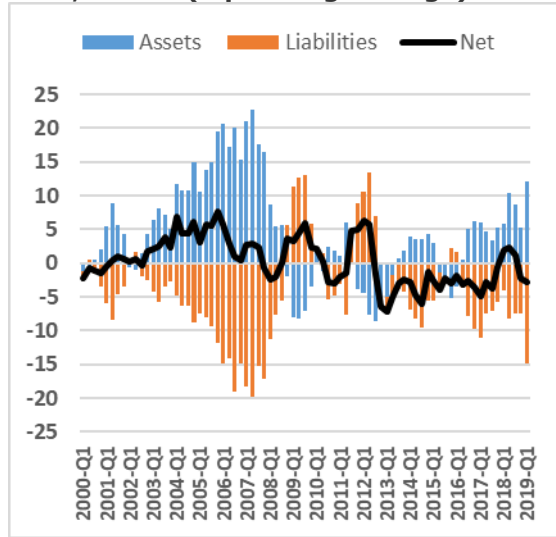
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 96: France, BIS LBS

Stocks, % GDP



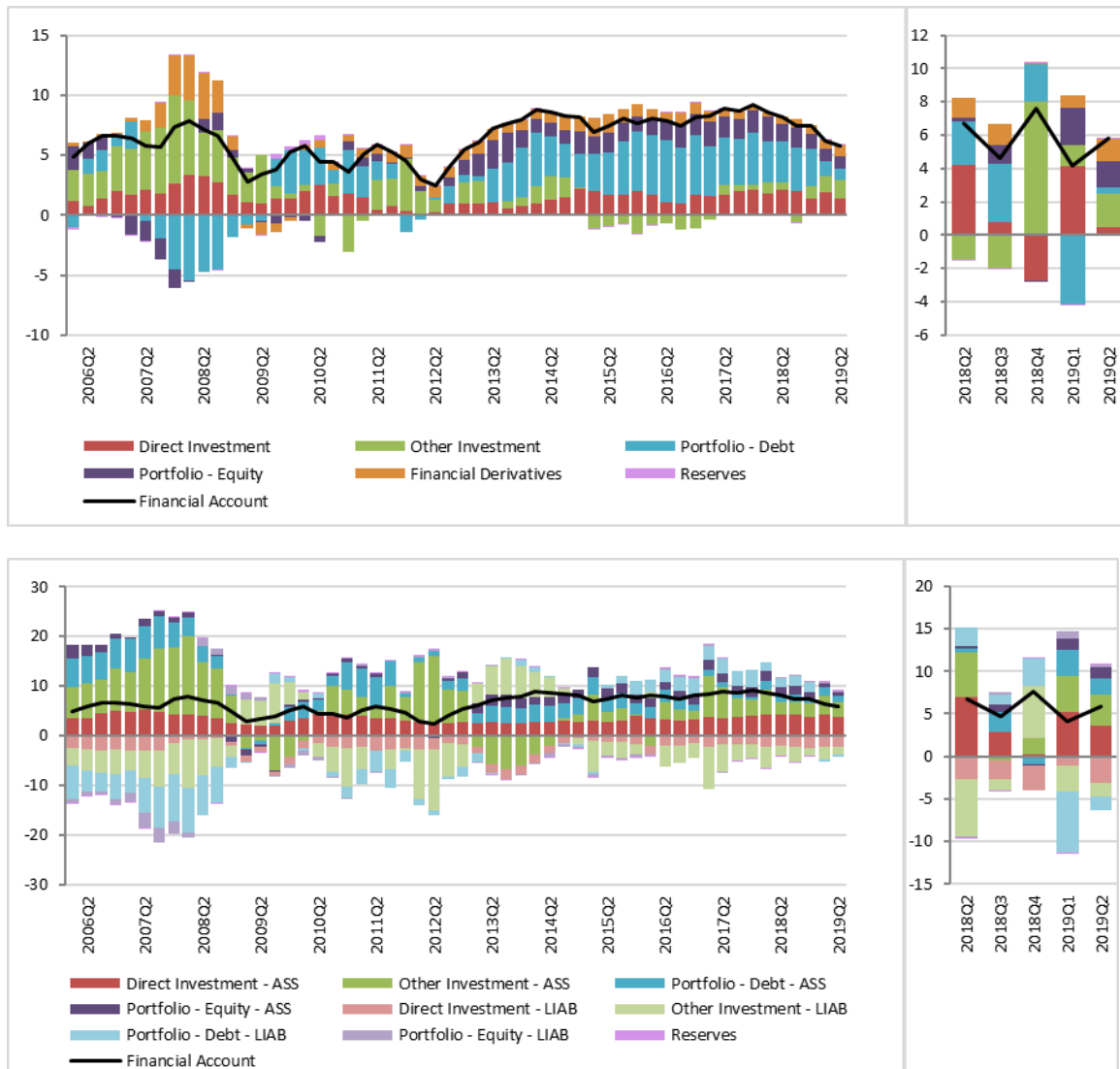
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

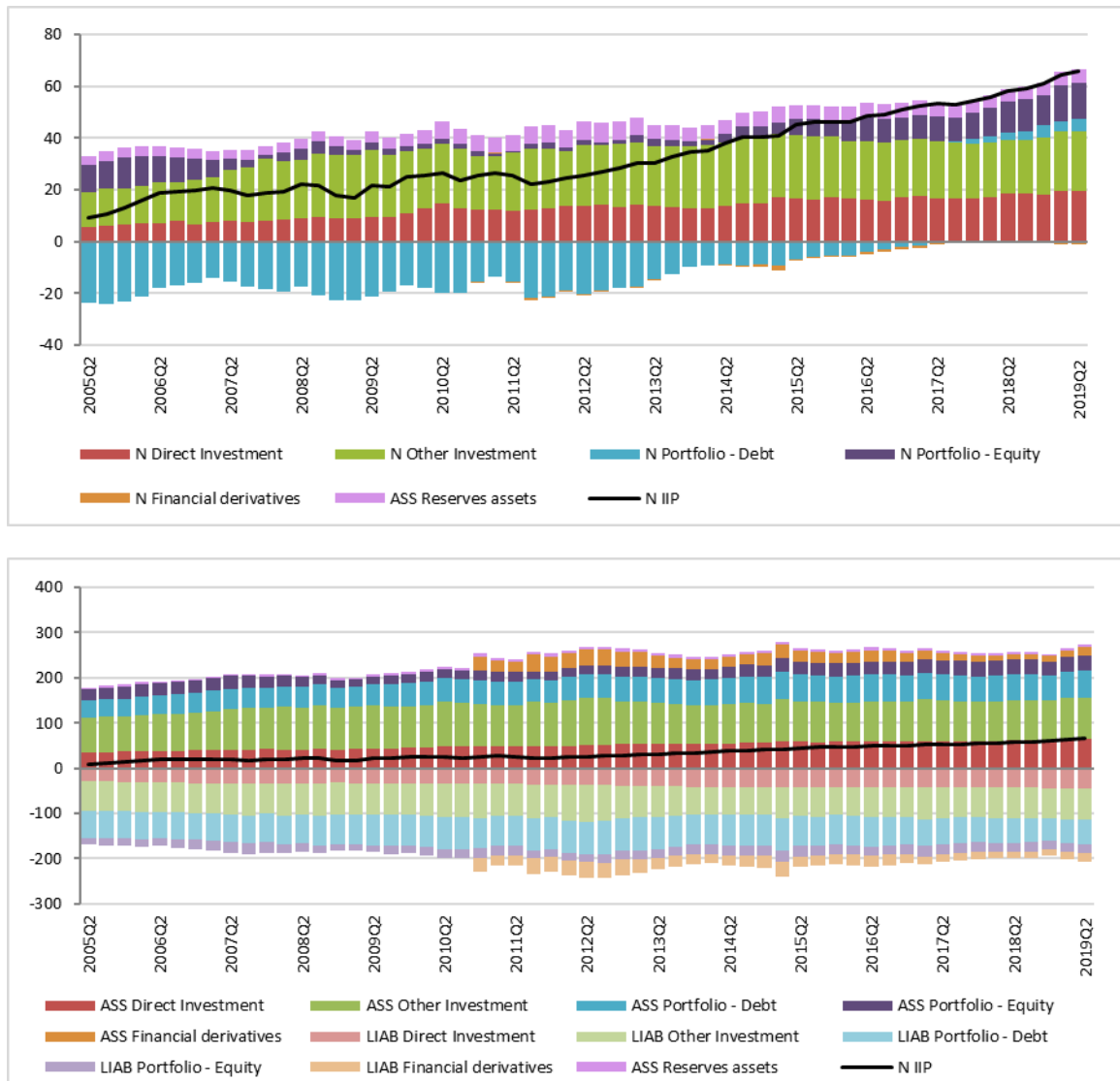
Figure 97: Germany net and gross flows by instrument, % of GDP



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.

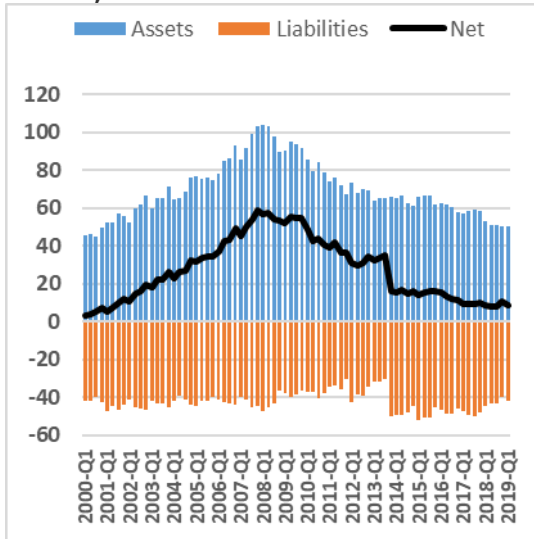
Figure 98: Germany net and gross international investment position by instrument, % of GDP



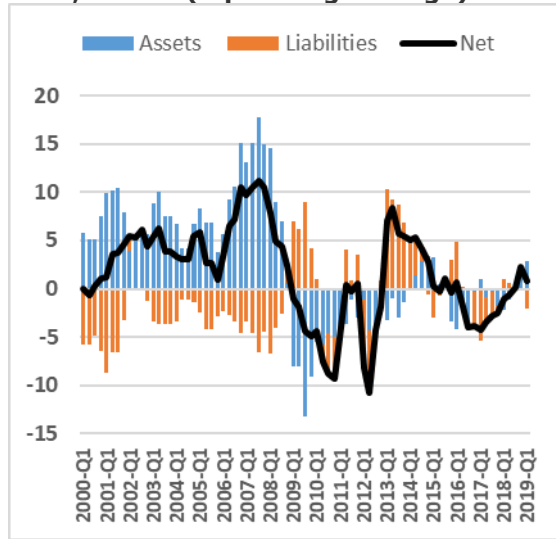
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 99: Germany, BIS LBS

Stocks, % GDP



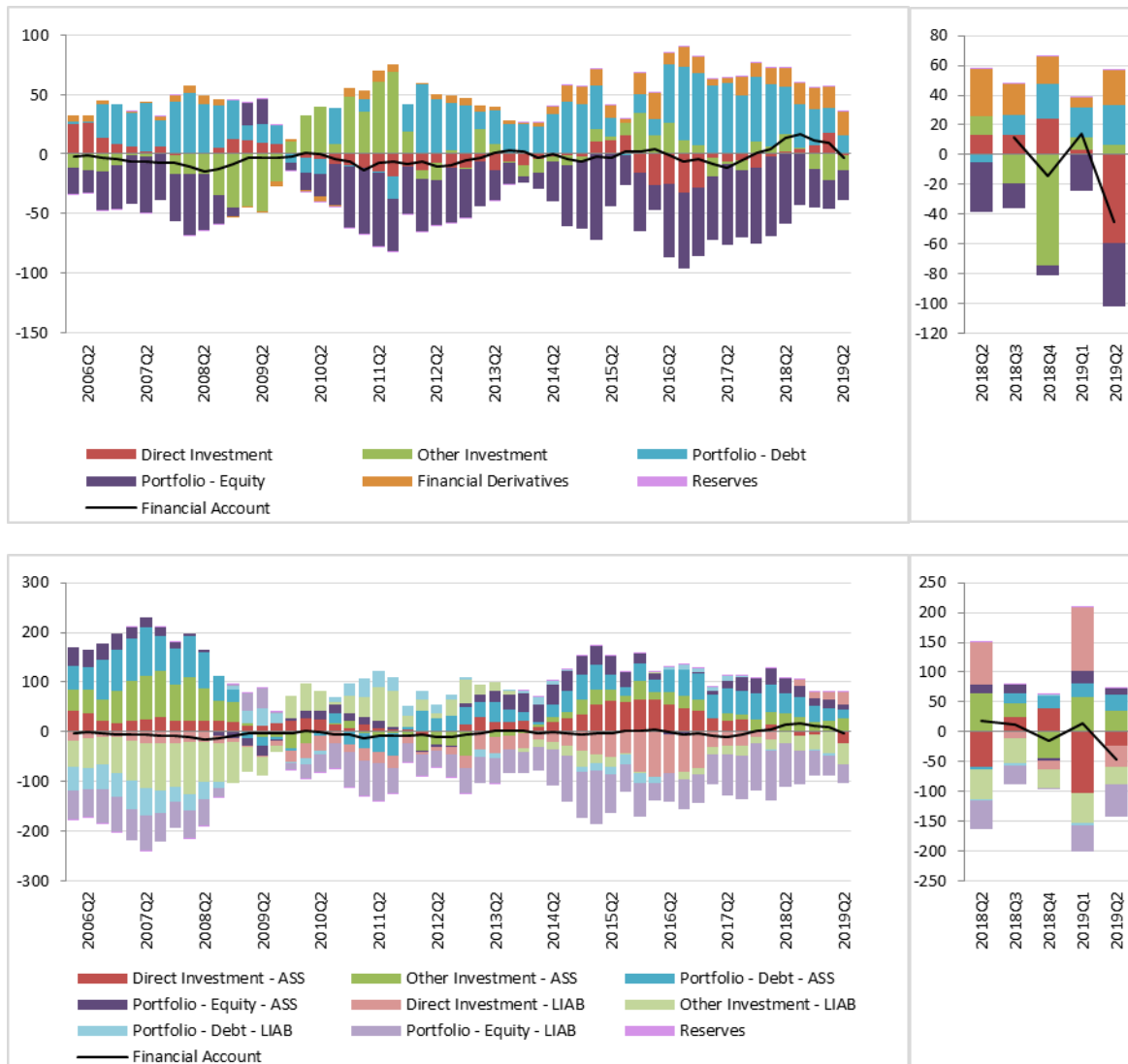
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

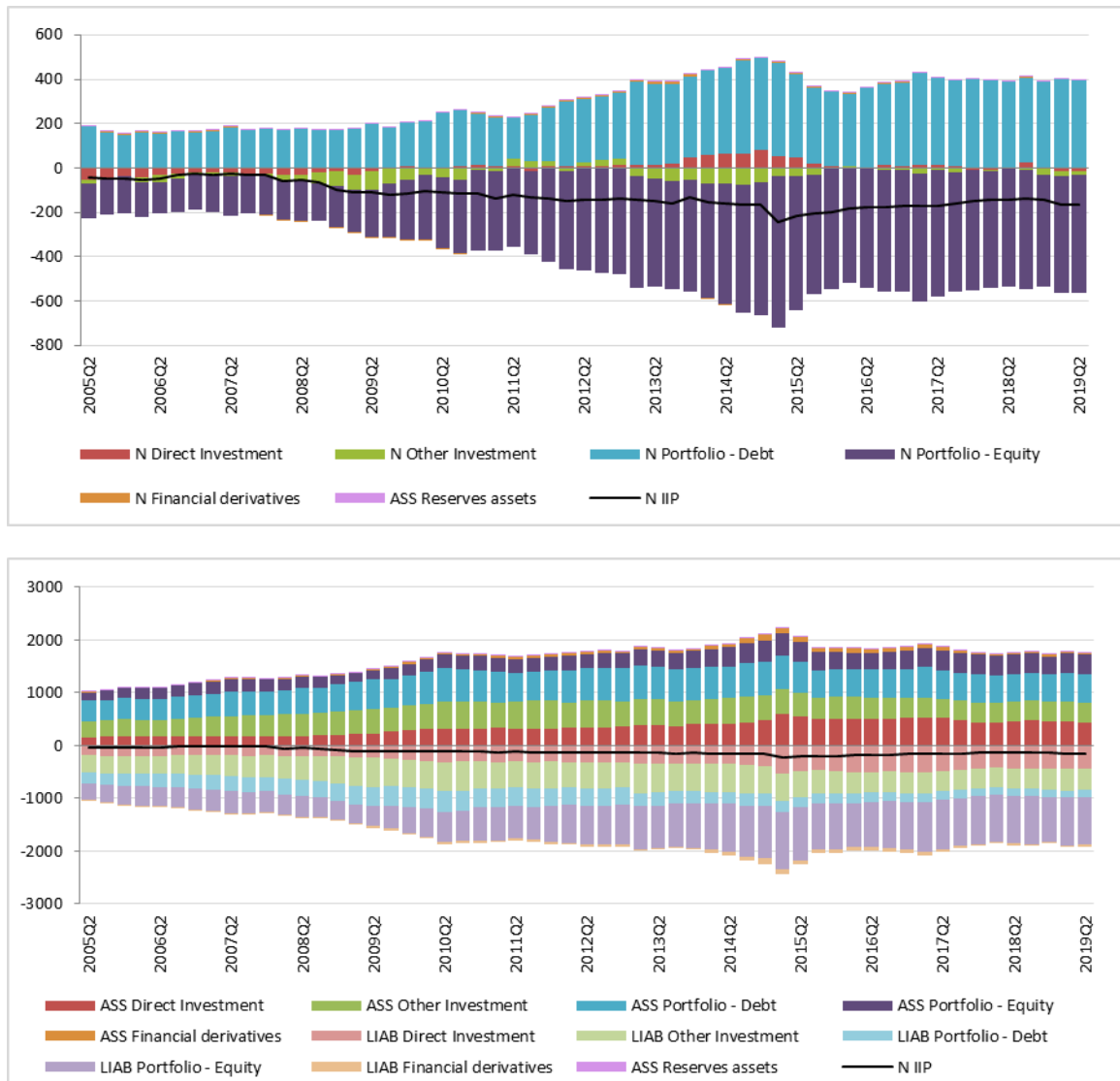
Figure 100: Ireland net and gross flows by instrument, % of GDP



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.

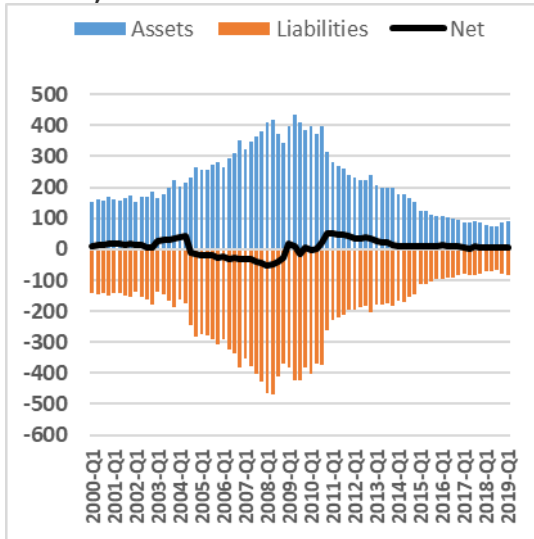
Figure 101: Ireland net and gross international investment position by instrument, % of GDP



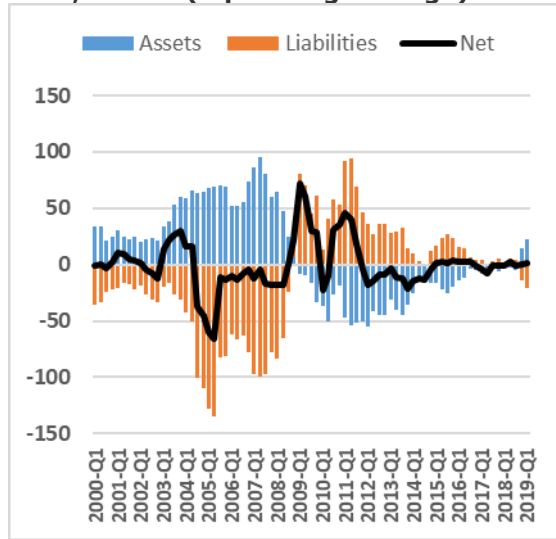
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 102: Ireland, BIS LBS

Stocks, % GDP



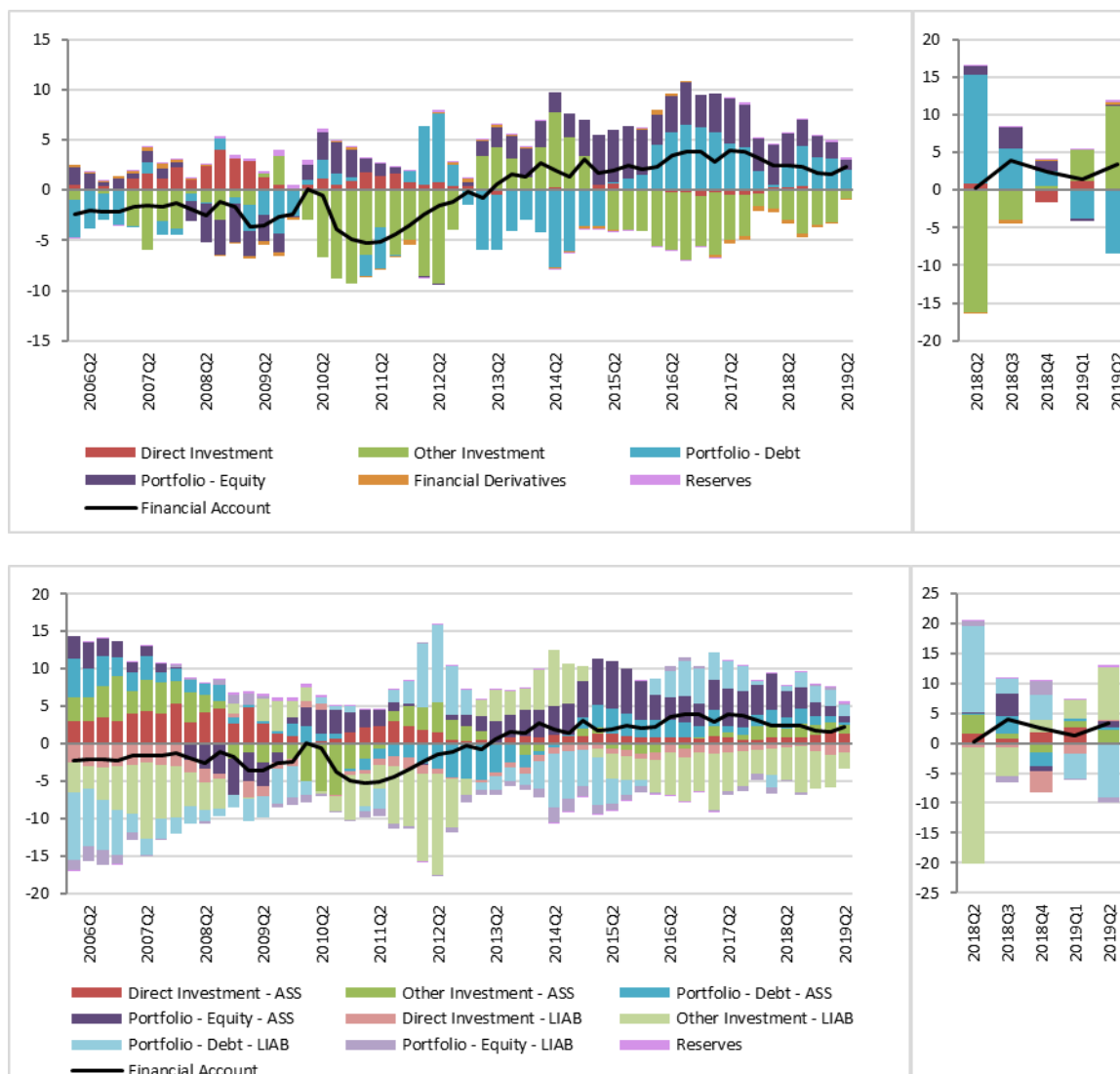
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

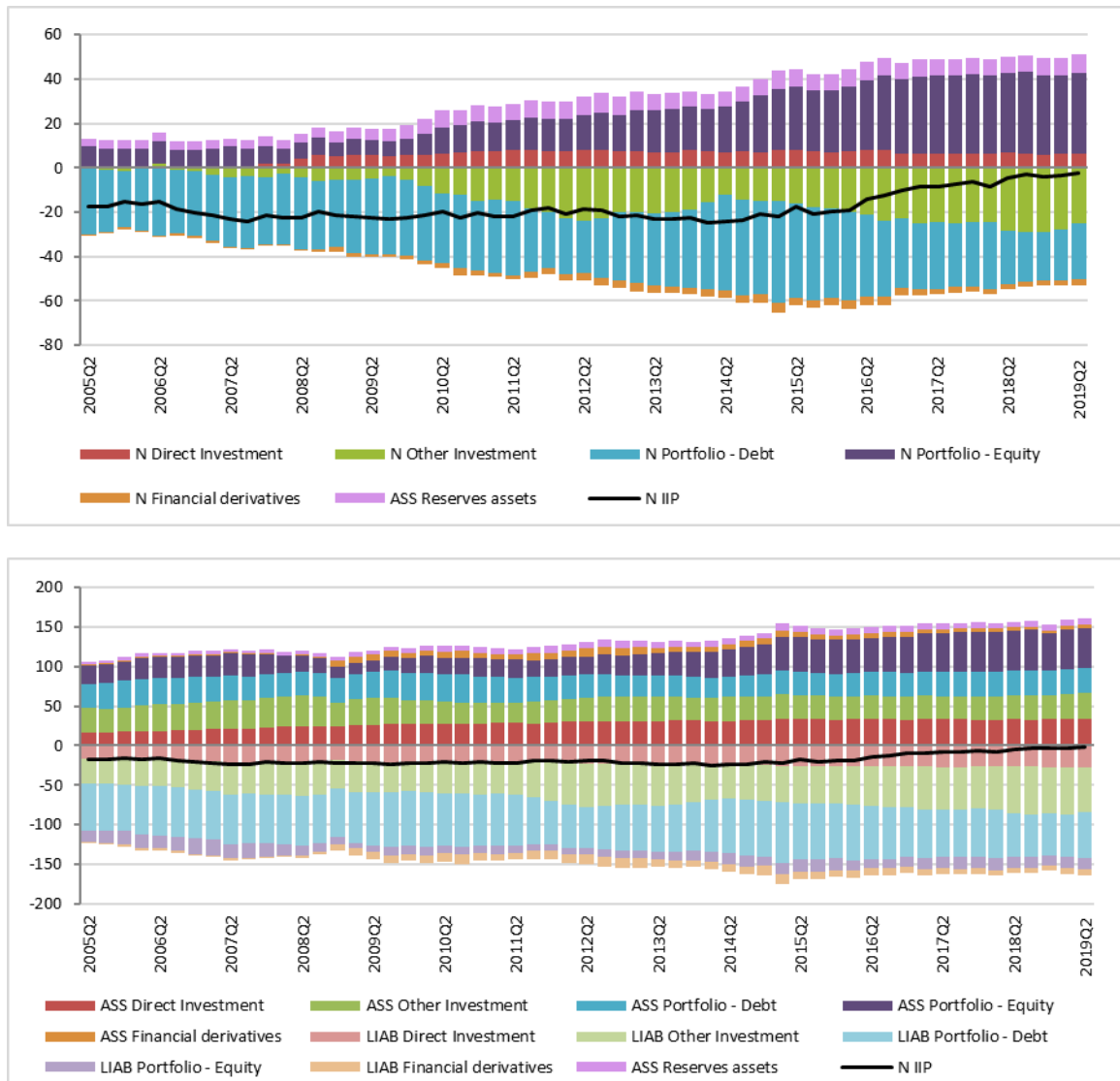
Figure 103: Italy net and gross flows by instrument, % of GDP



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.

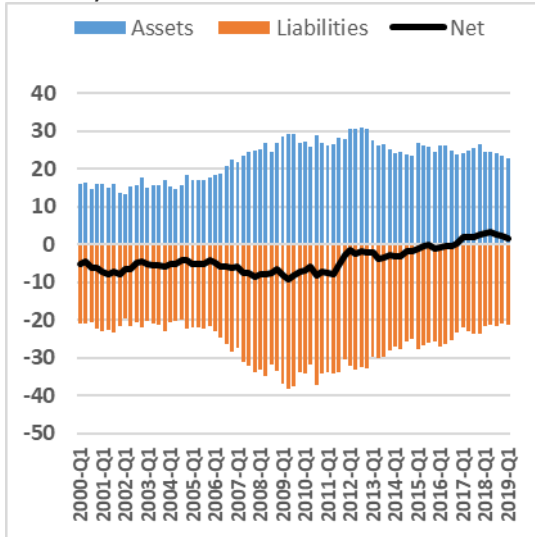
Figure 104: Italy net and gross international investment position by instrument, % of GDP



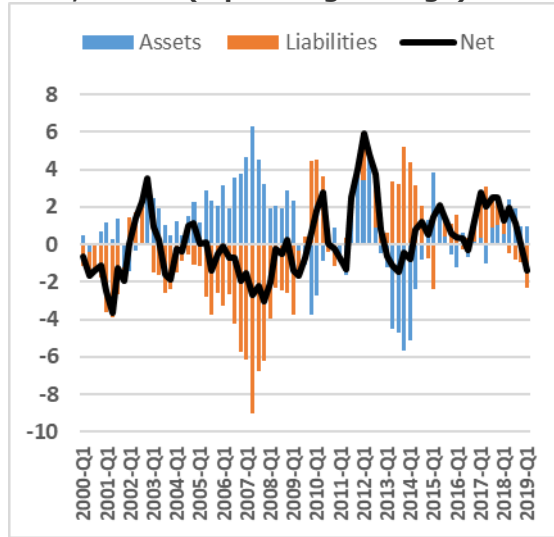
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 105: Italy, BIS LBS

Stocks, % GDP



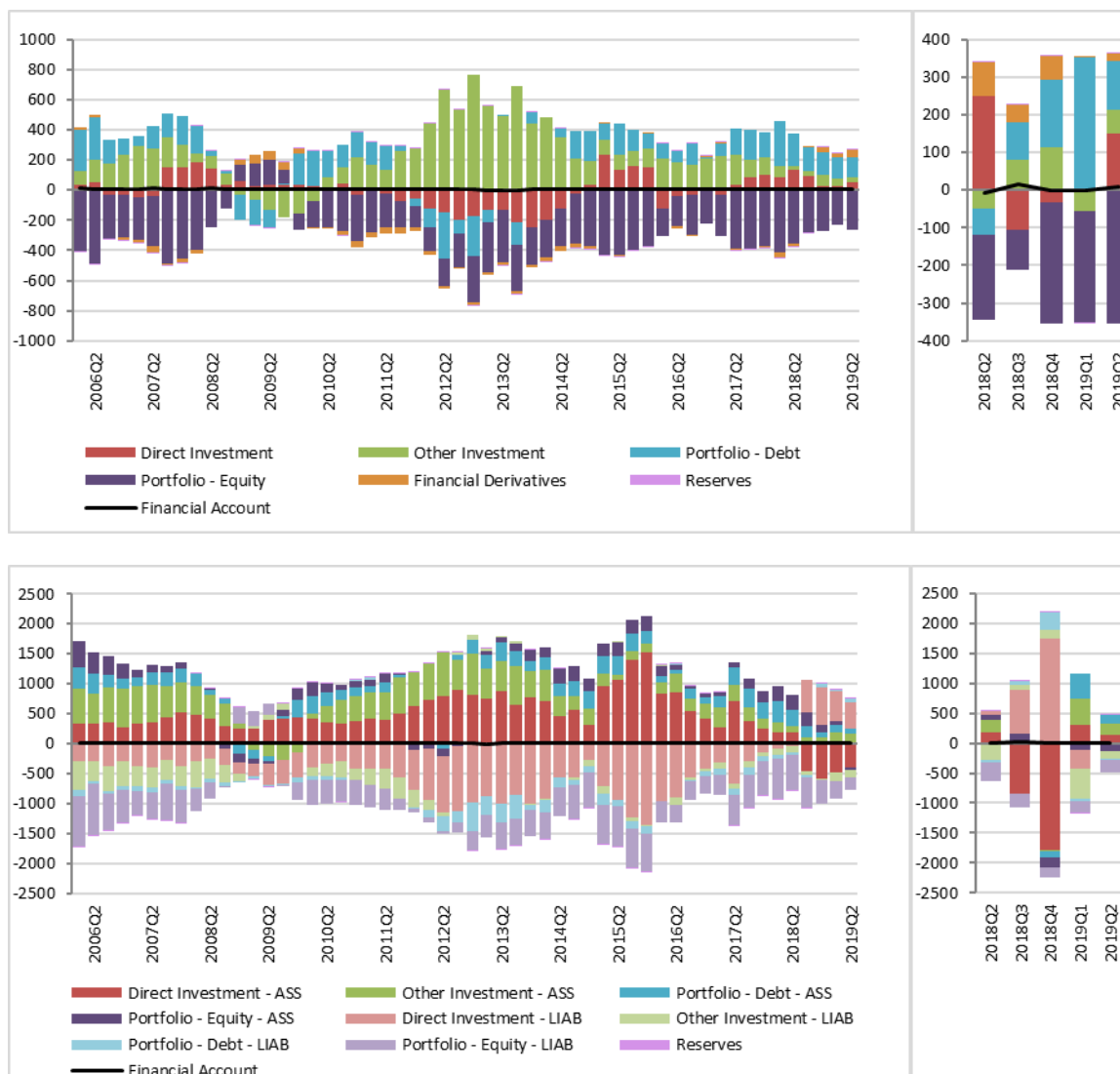
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

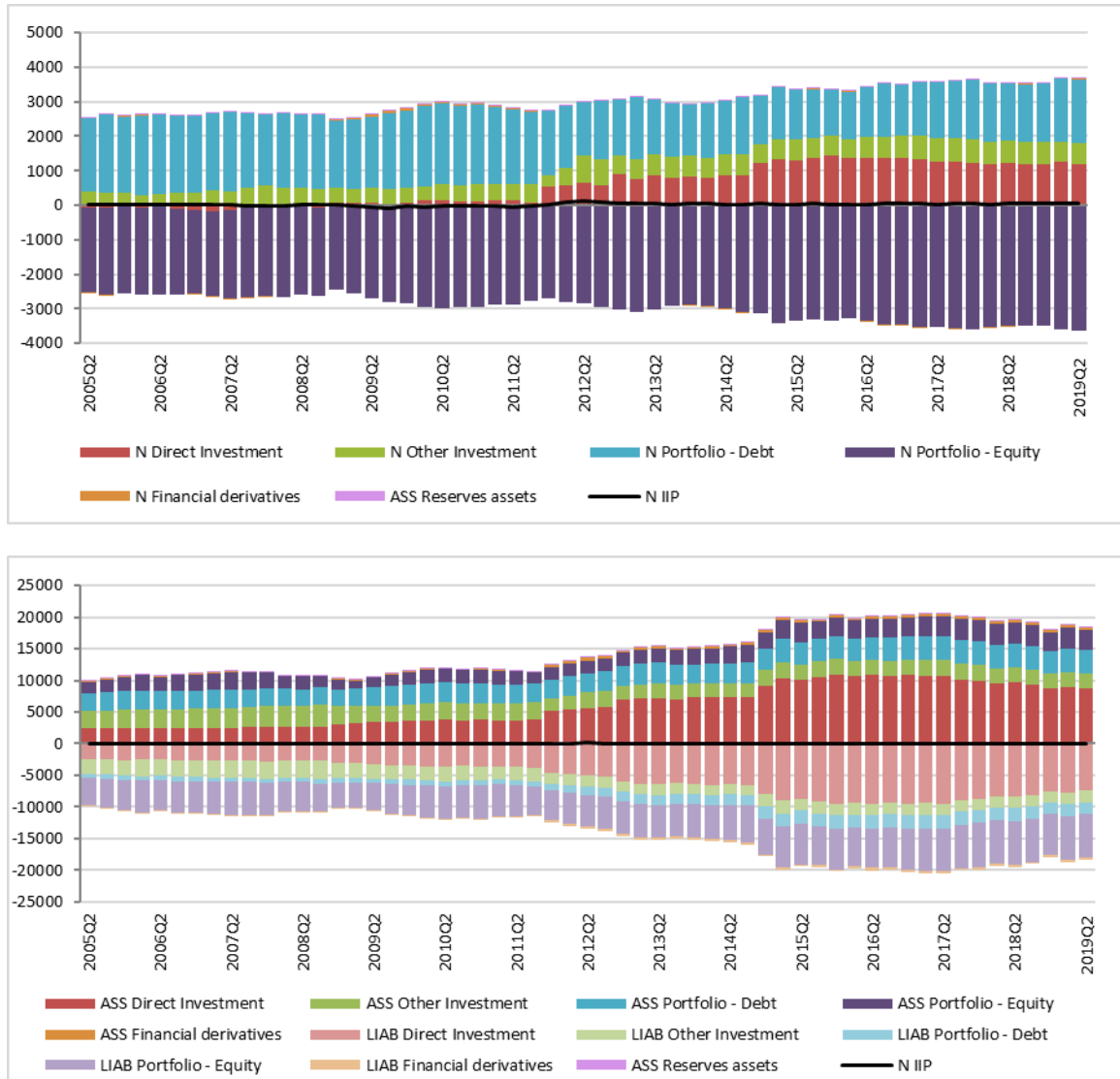
Figure 106: Luxembourg net and gross flows by instrument, % of GDP



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.

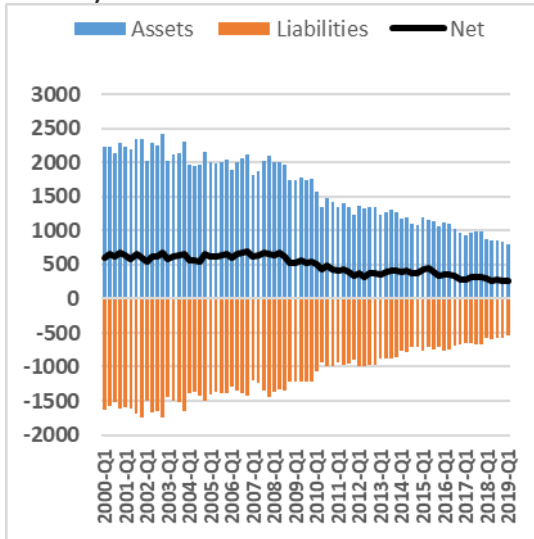
Figure 107: Luxembourg net and gross international investment position by instrument, % of GDP



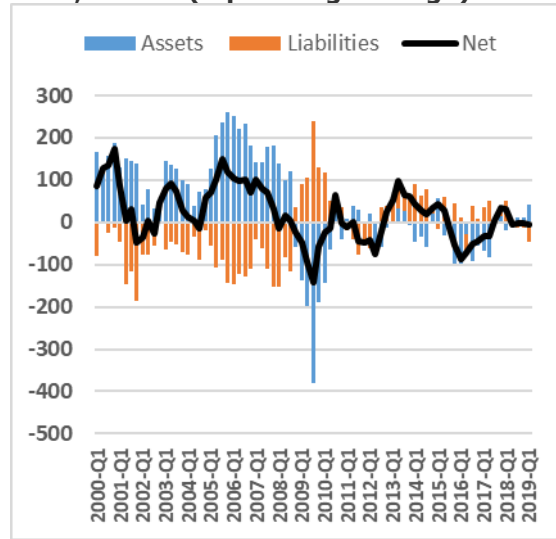
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 108: Luxembourg, BIS LBS

Stocks, % GDP



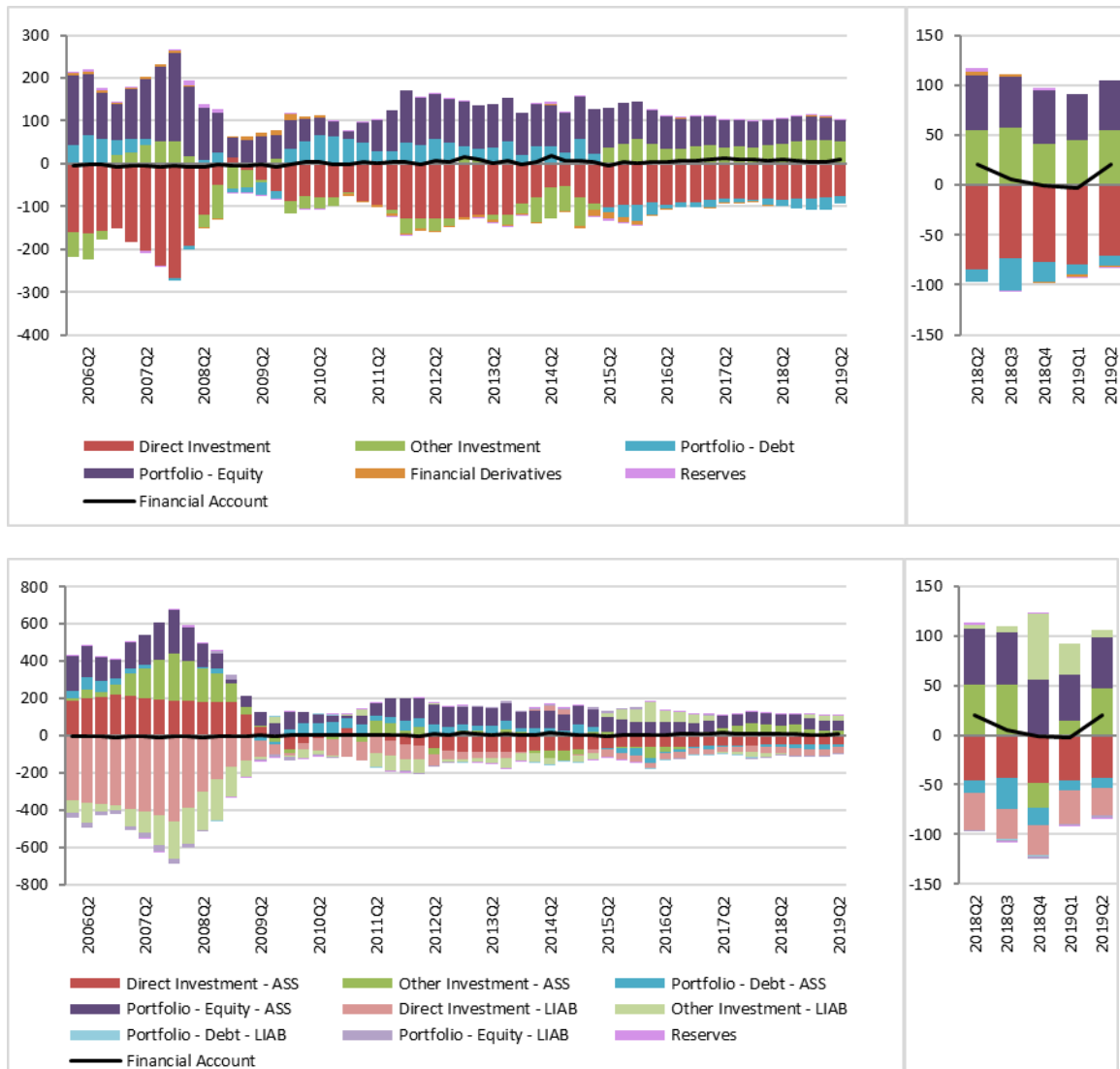
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

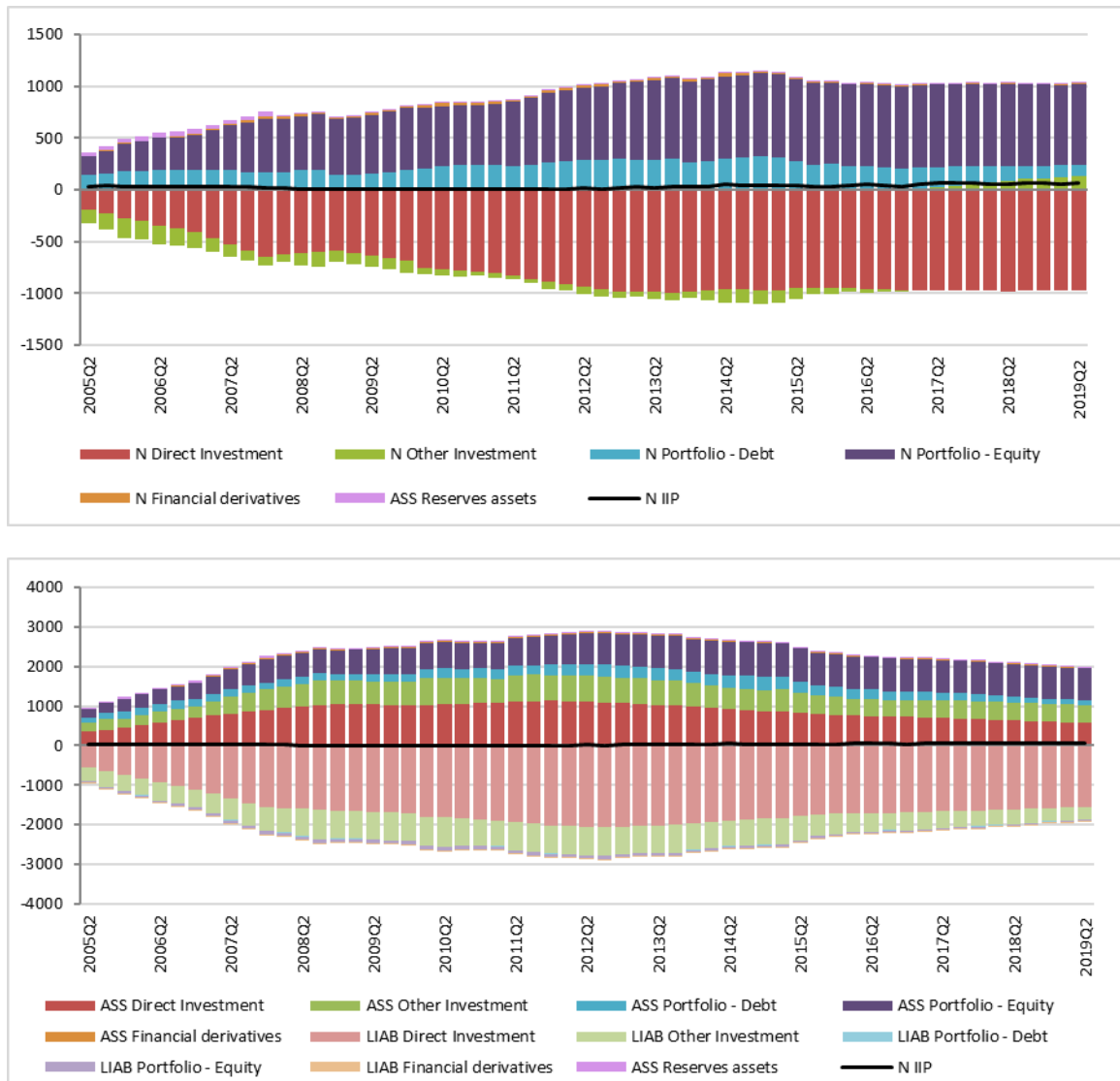
Figure 109: Malta net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

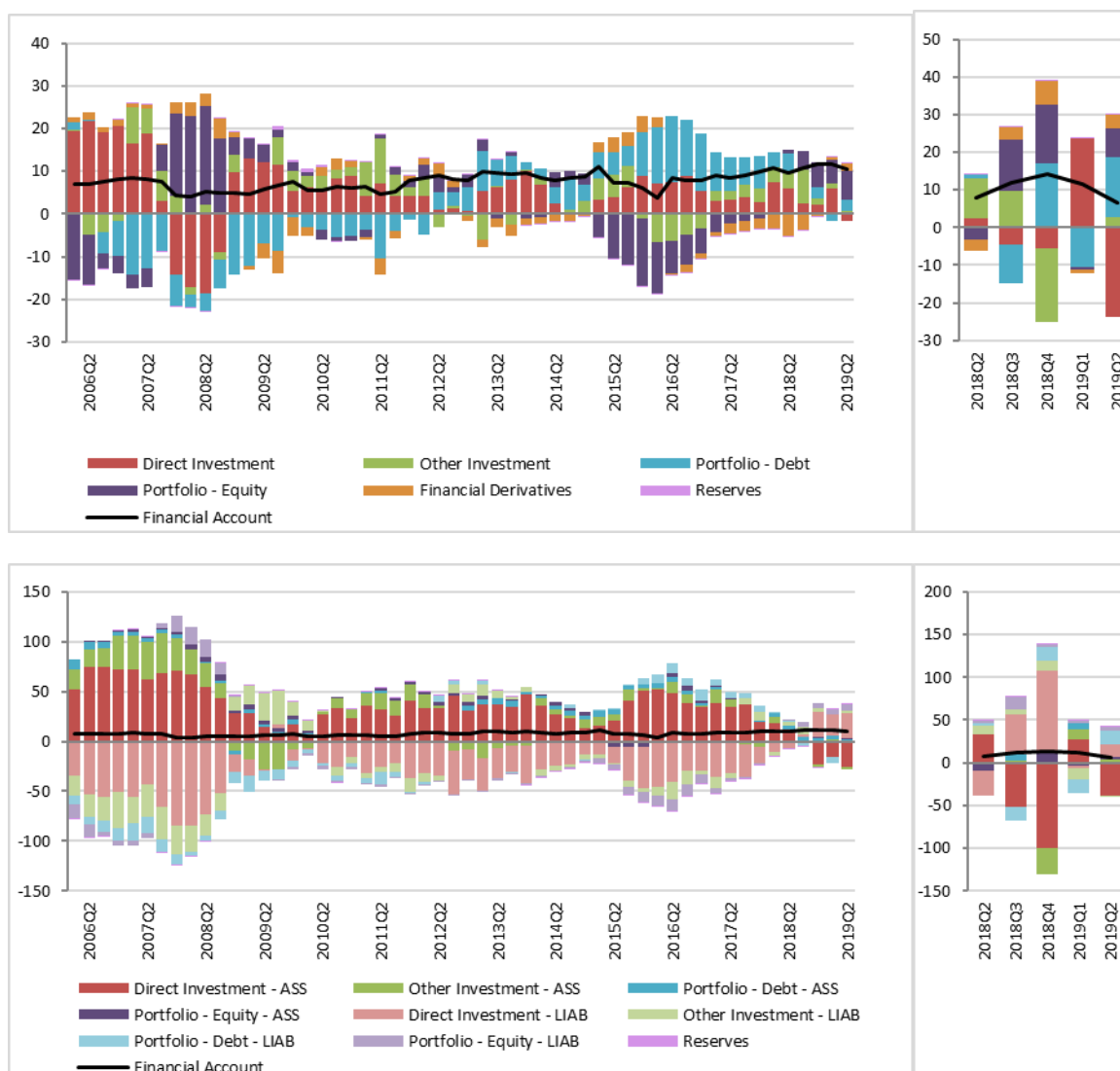
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 110: Malta net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

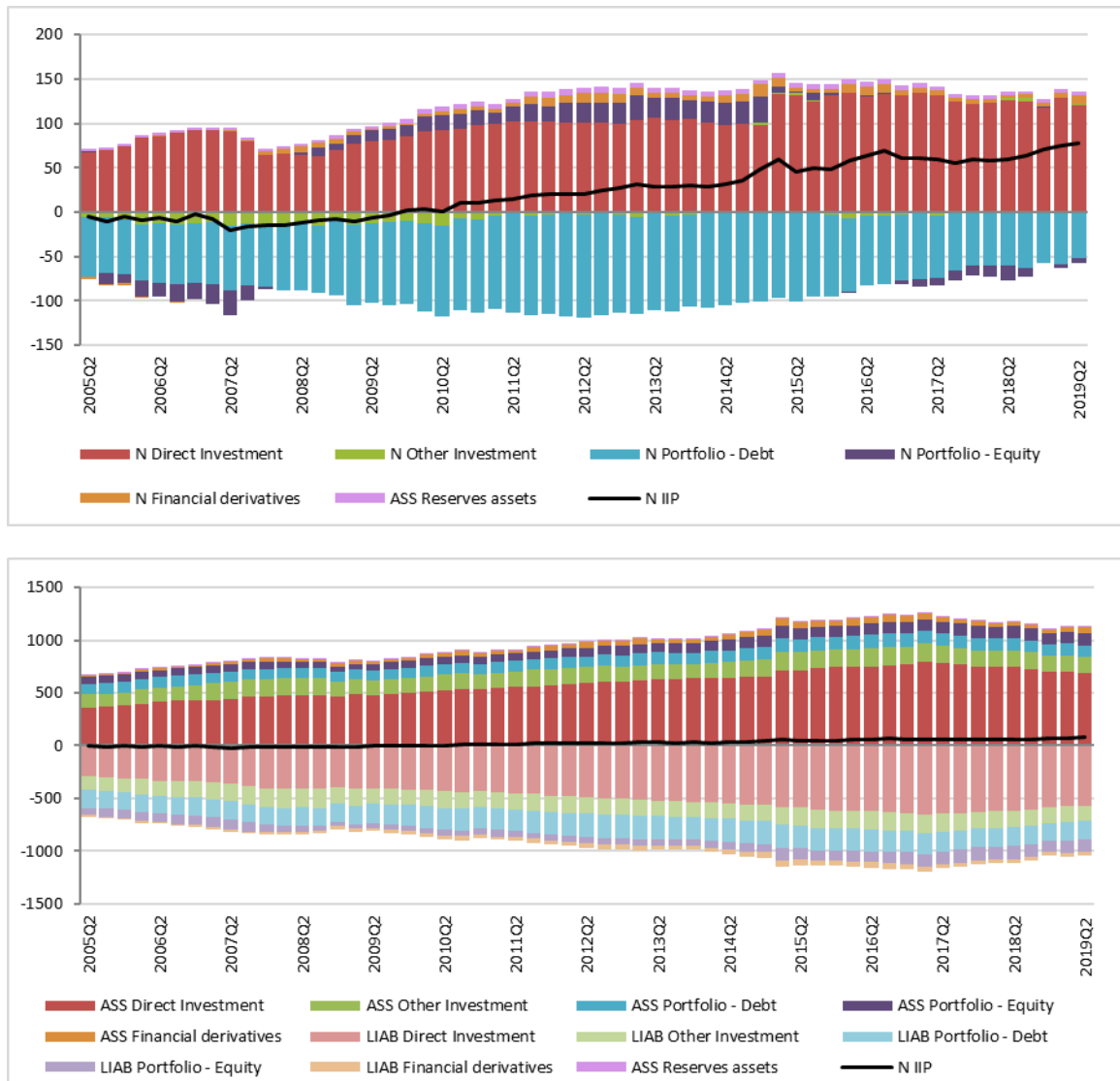
Figure 111: the Netherlands net and gross flows by instrument, % of GDP



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.

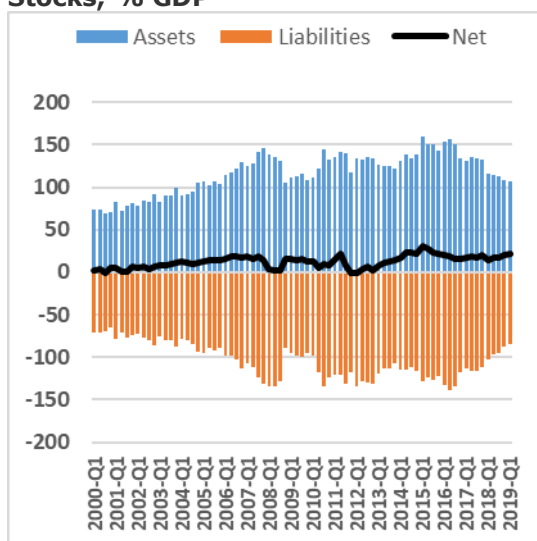
Figure 112: the Netherlands net and gross international investment position by instrument, % of GDP



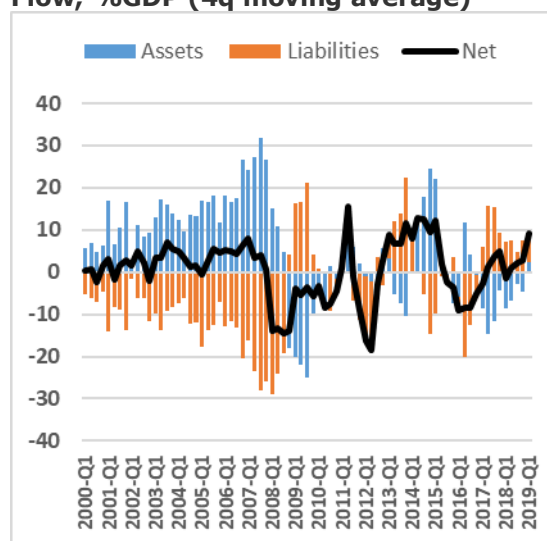
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 113: the Netherlands, BIS LBS

Stocks, % GDP



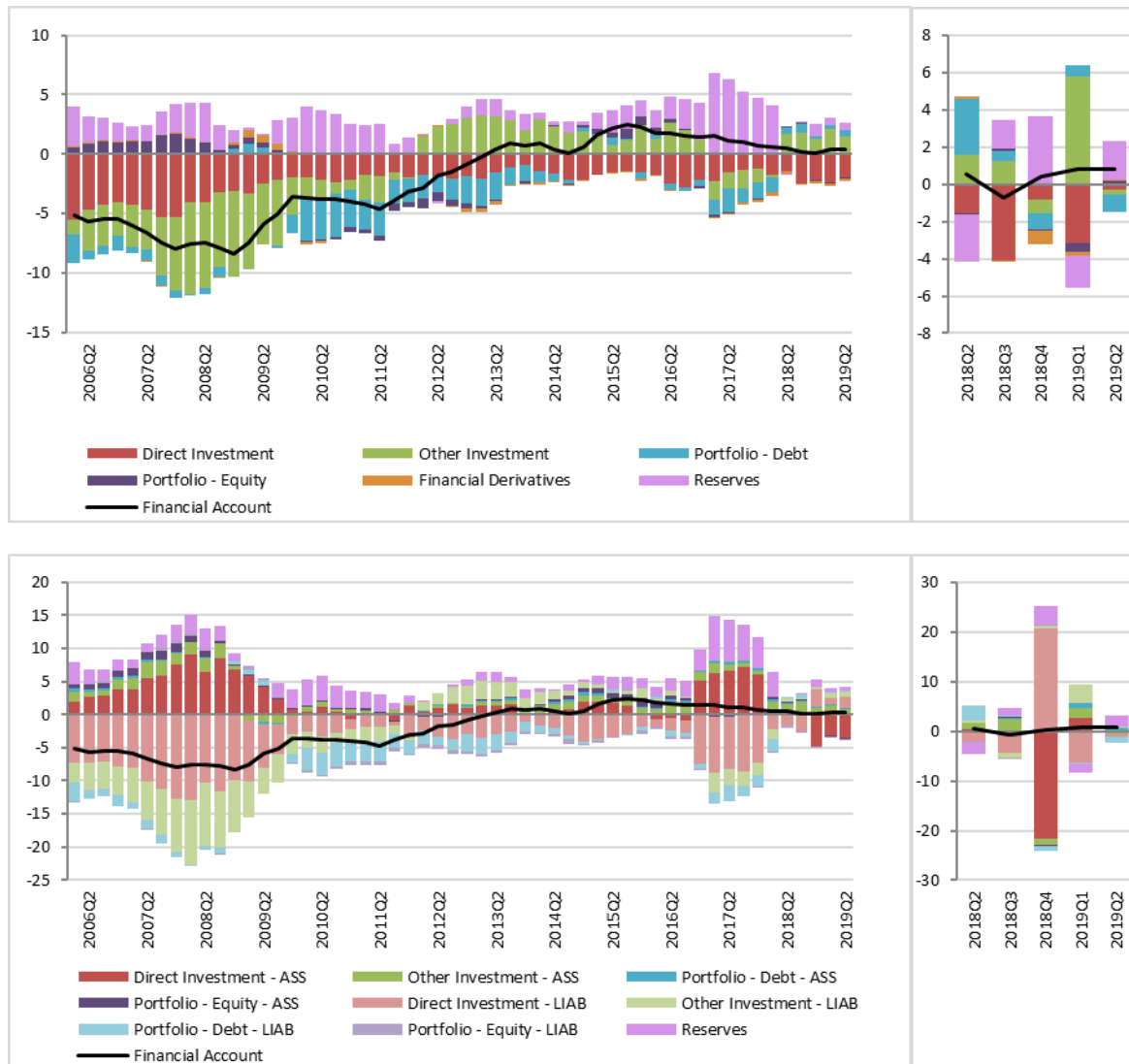
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

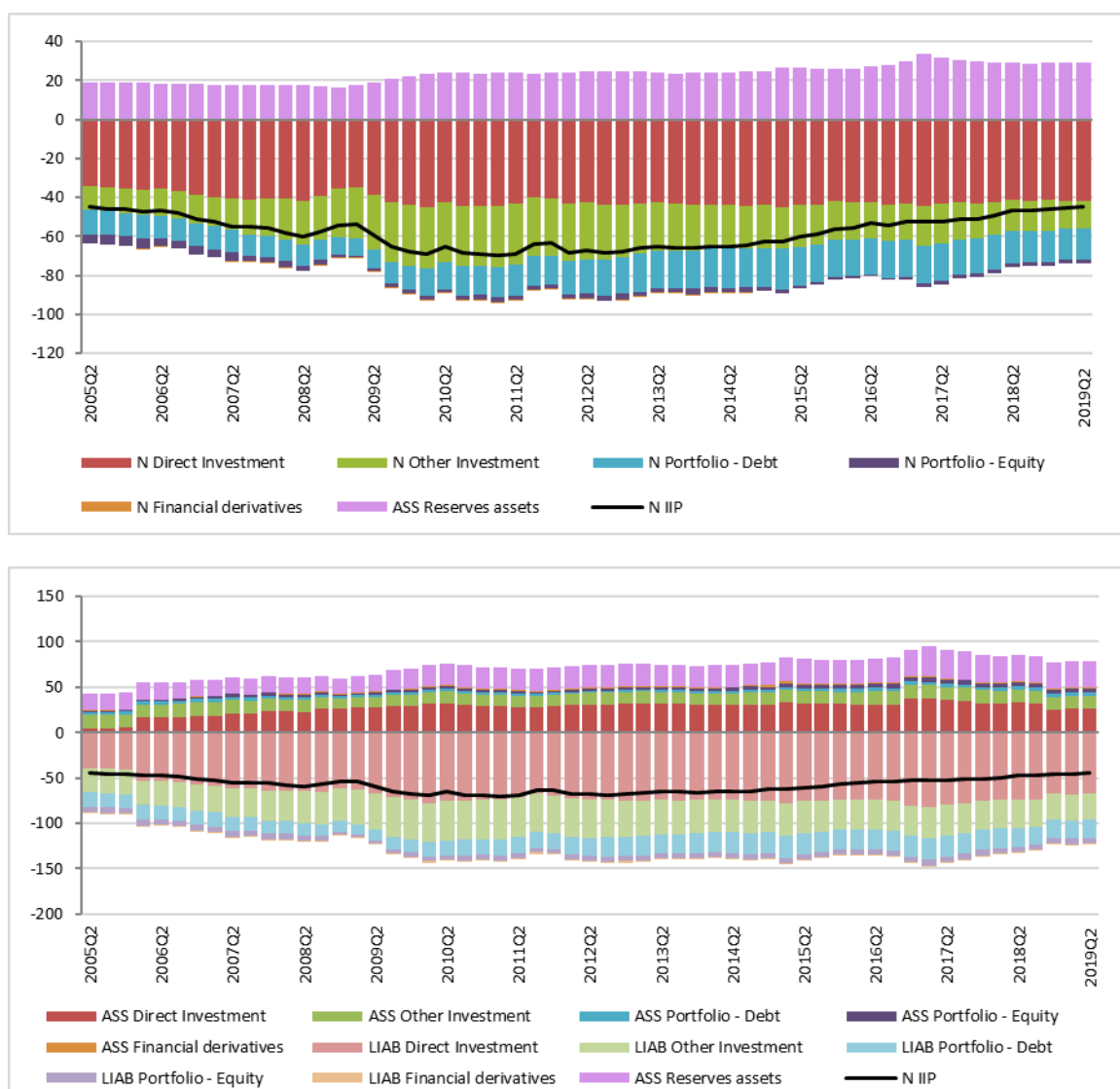
Figure 114: Non-Euro area CEE net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

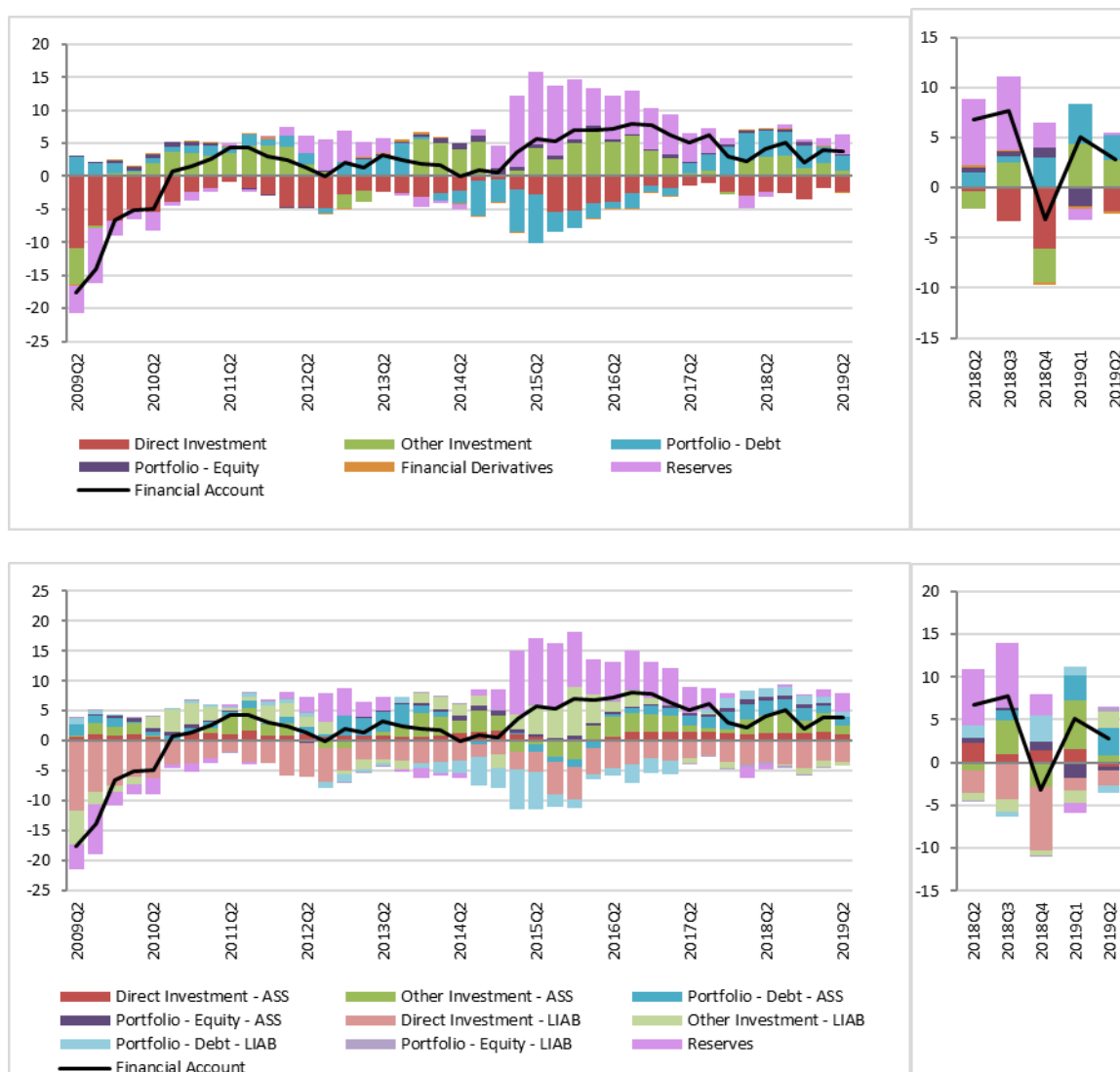
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 115: Non-Euro area CEE net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

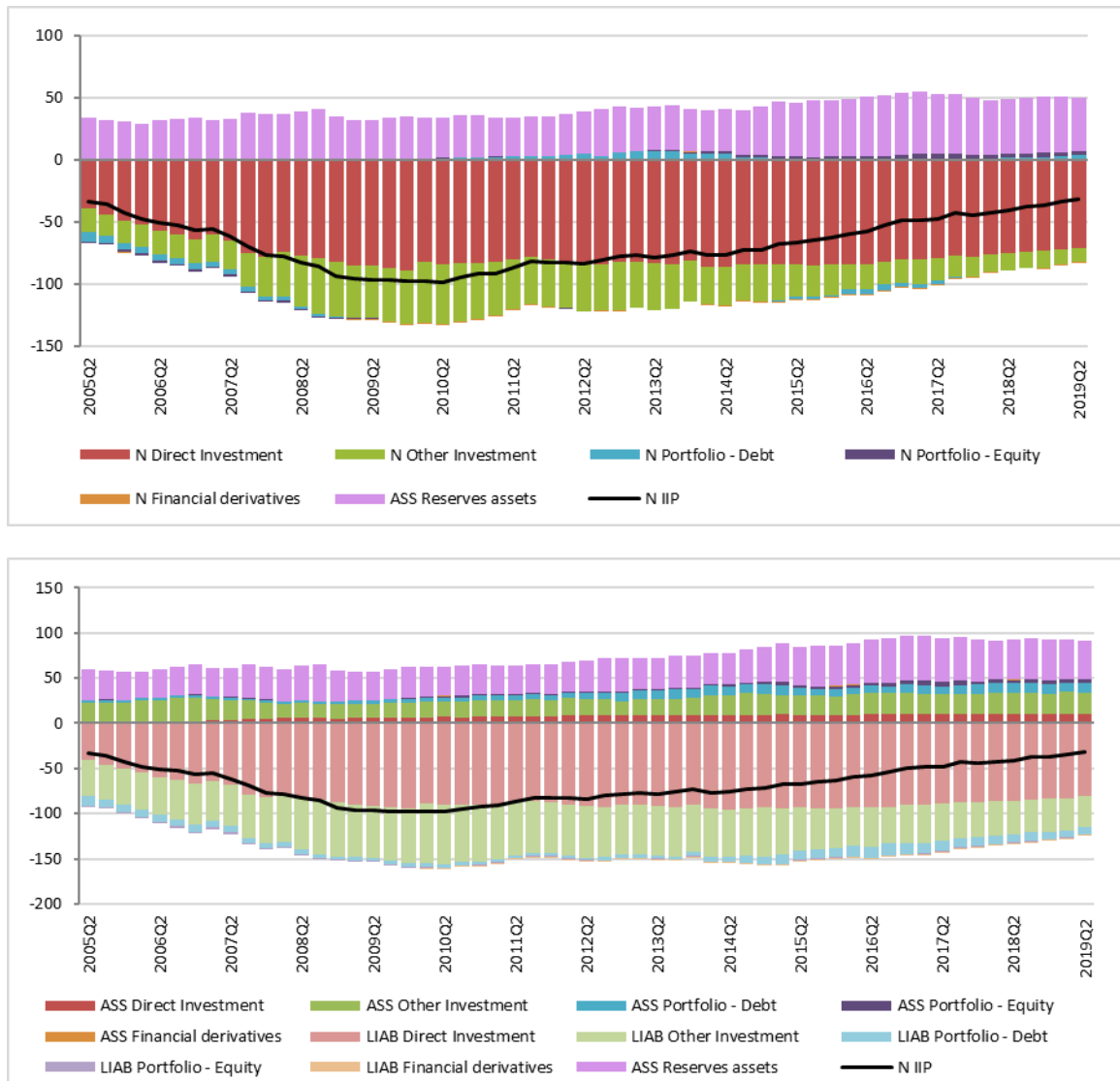
Figure 116: Bulgaria (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

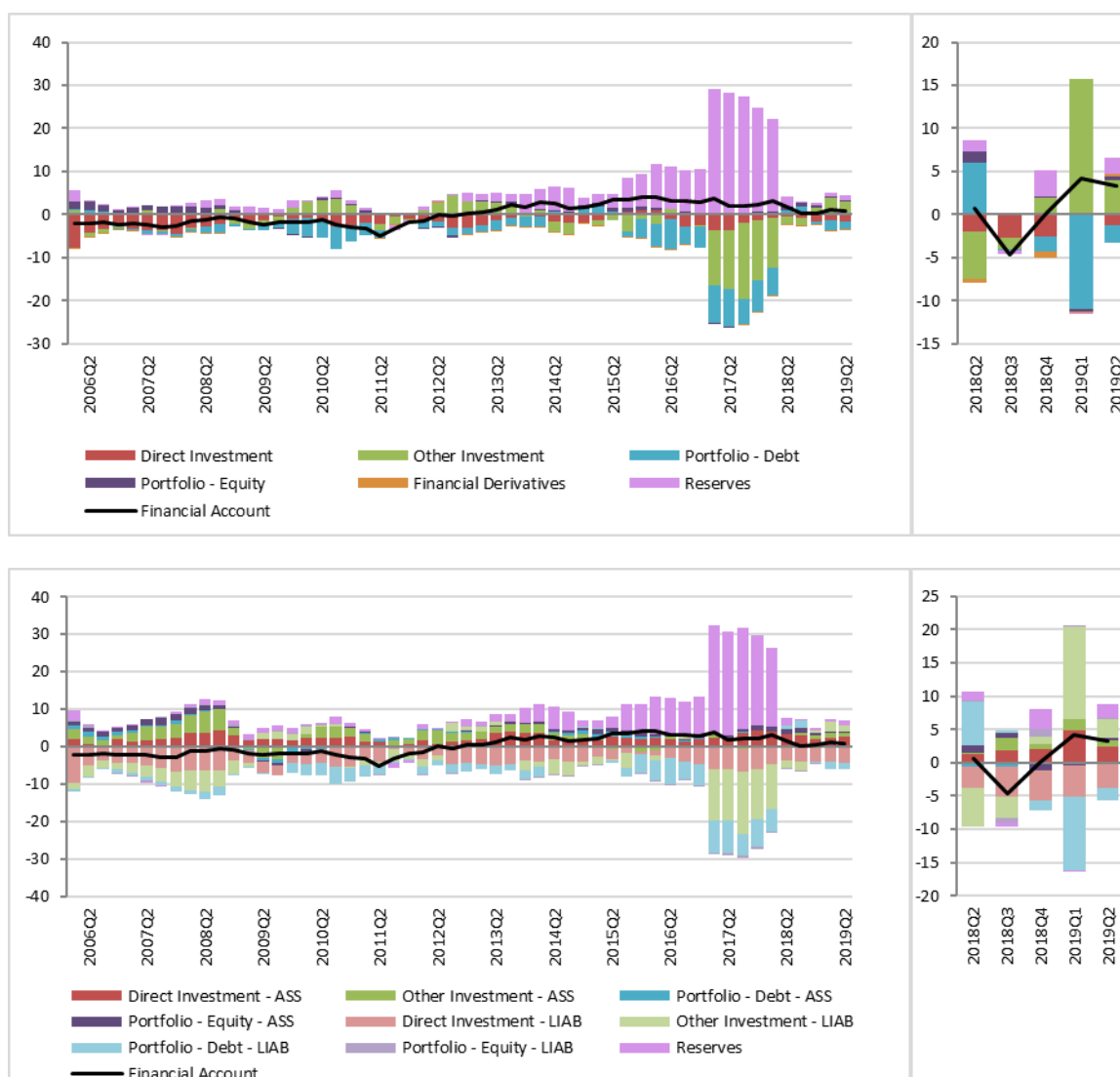
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 117: Bulgaria (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

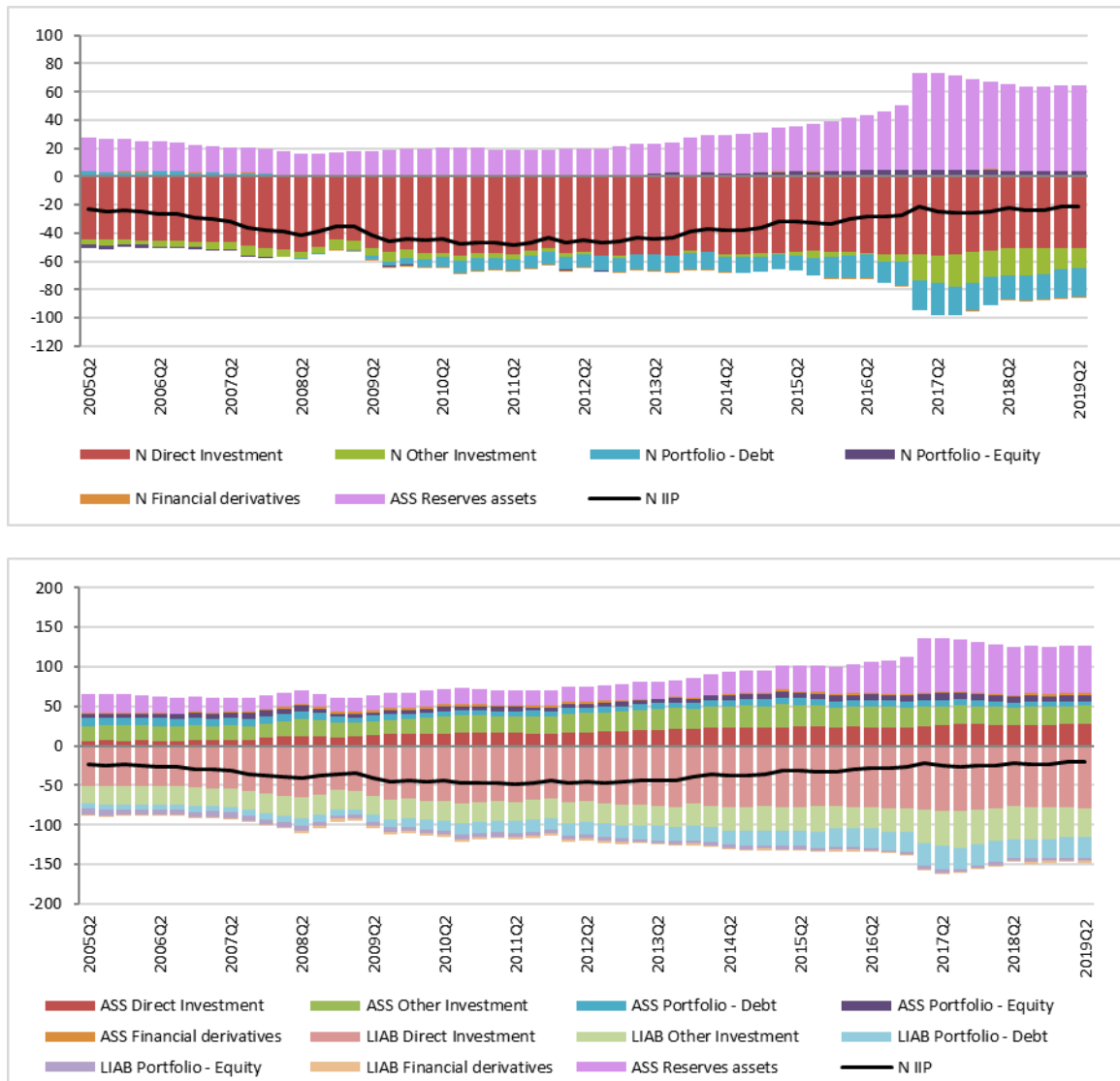
Figure 118: Czech Republic (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

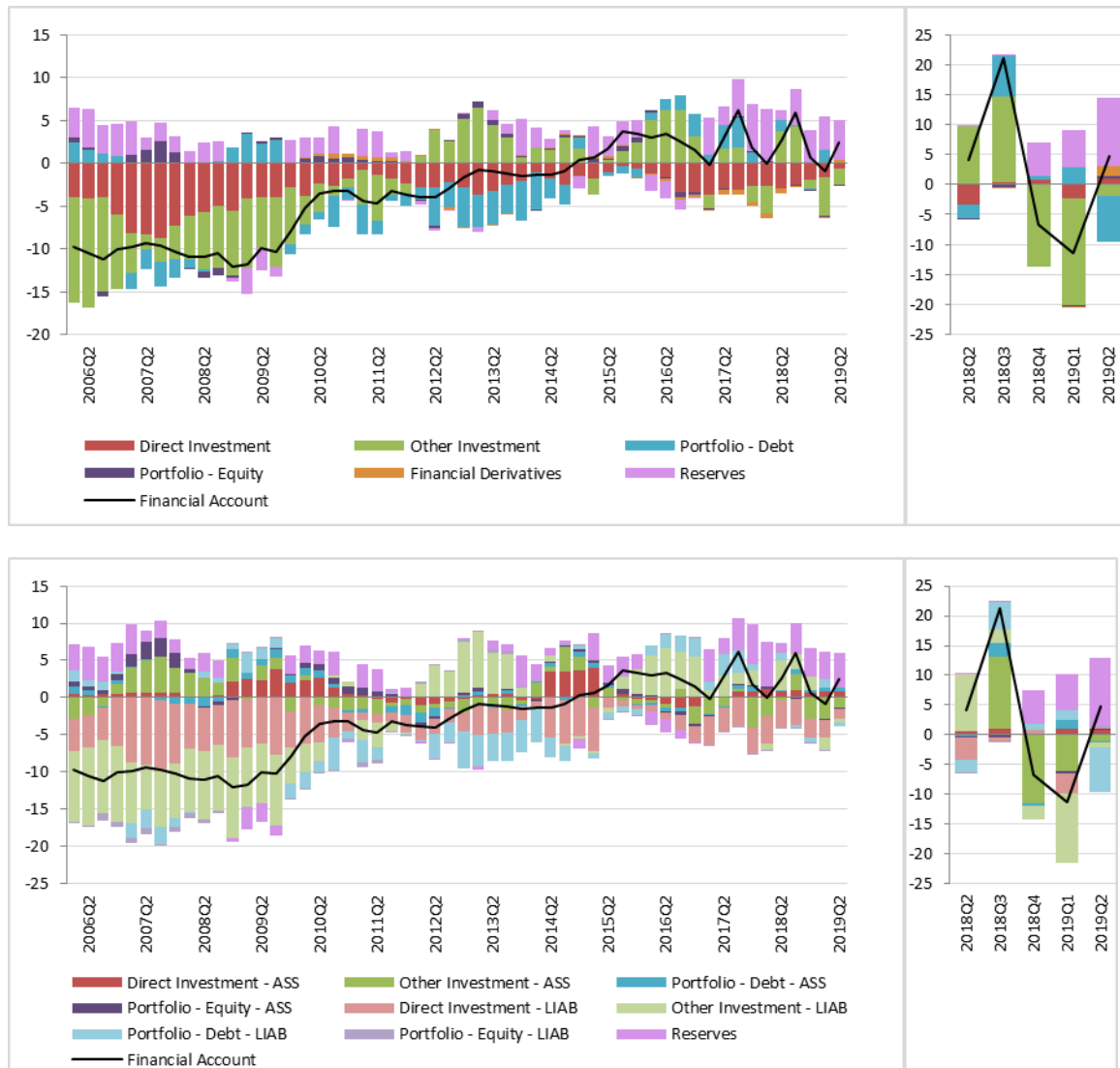
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 119: Czech Republic (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

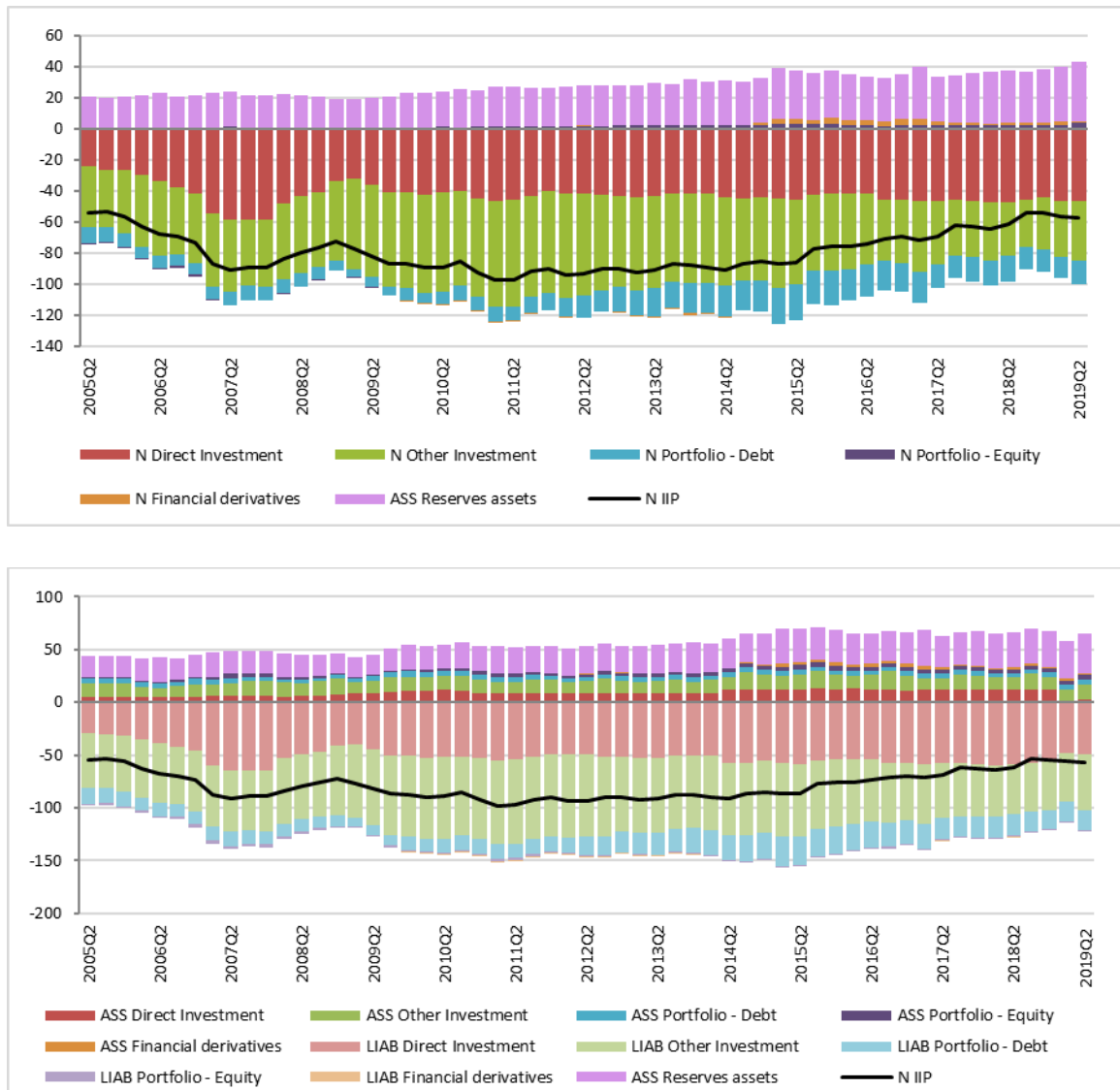
Figure 120: Croatia (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

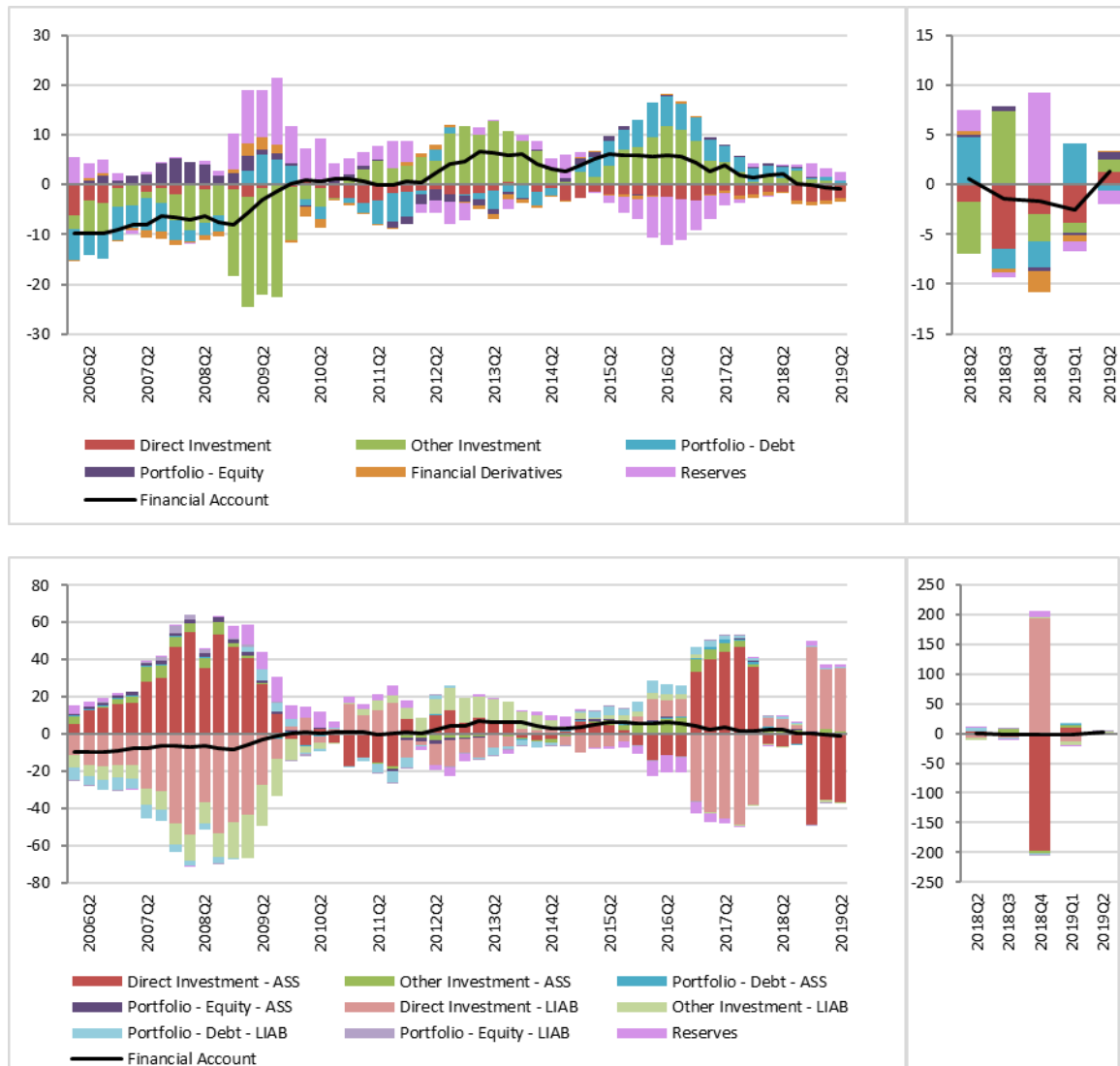
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 121: Croatia (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

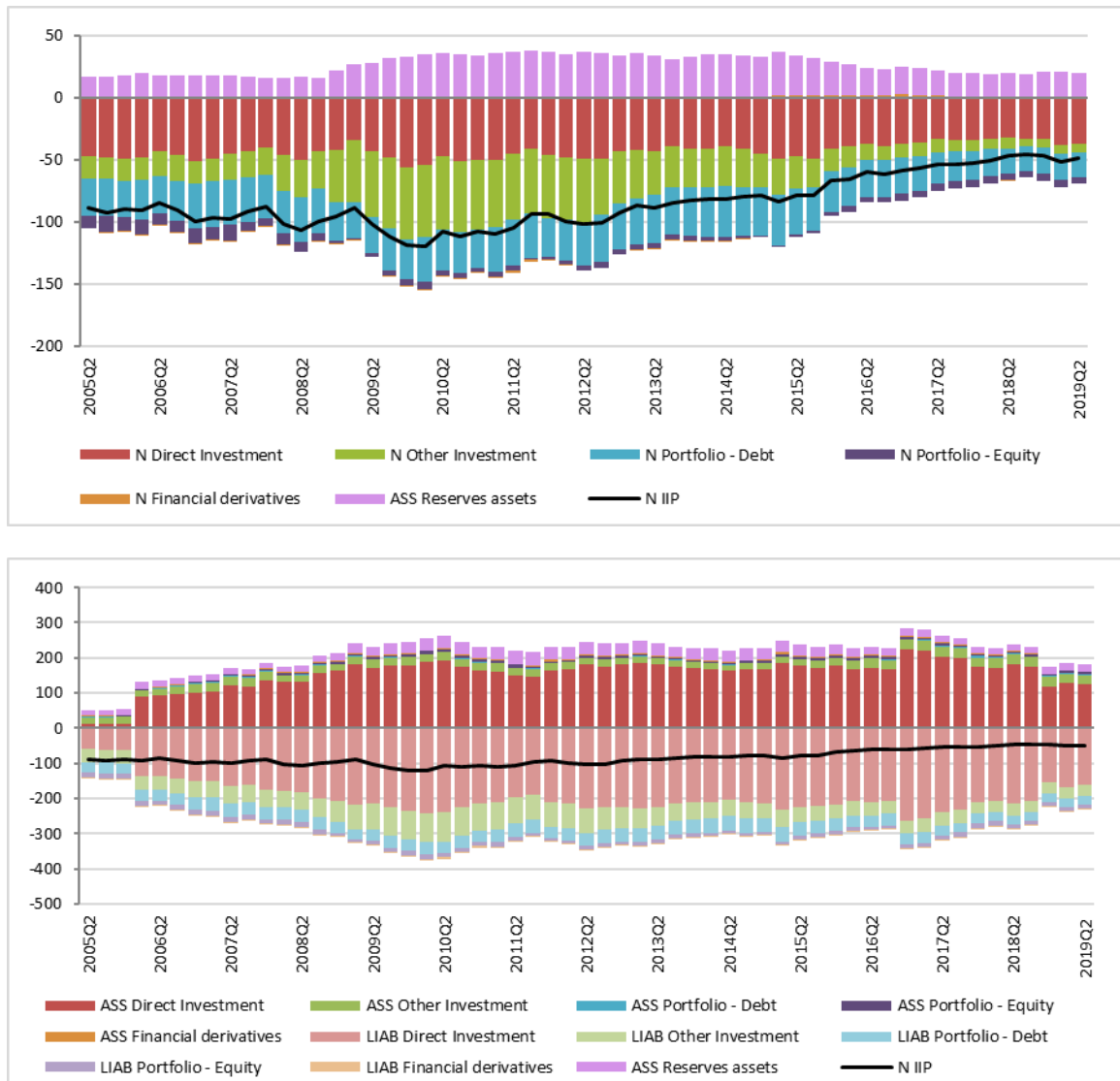
Figure 122: Hungary (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

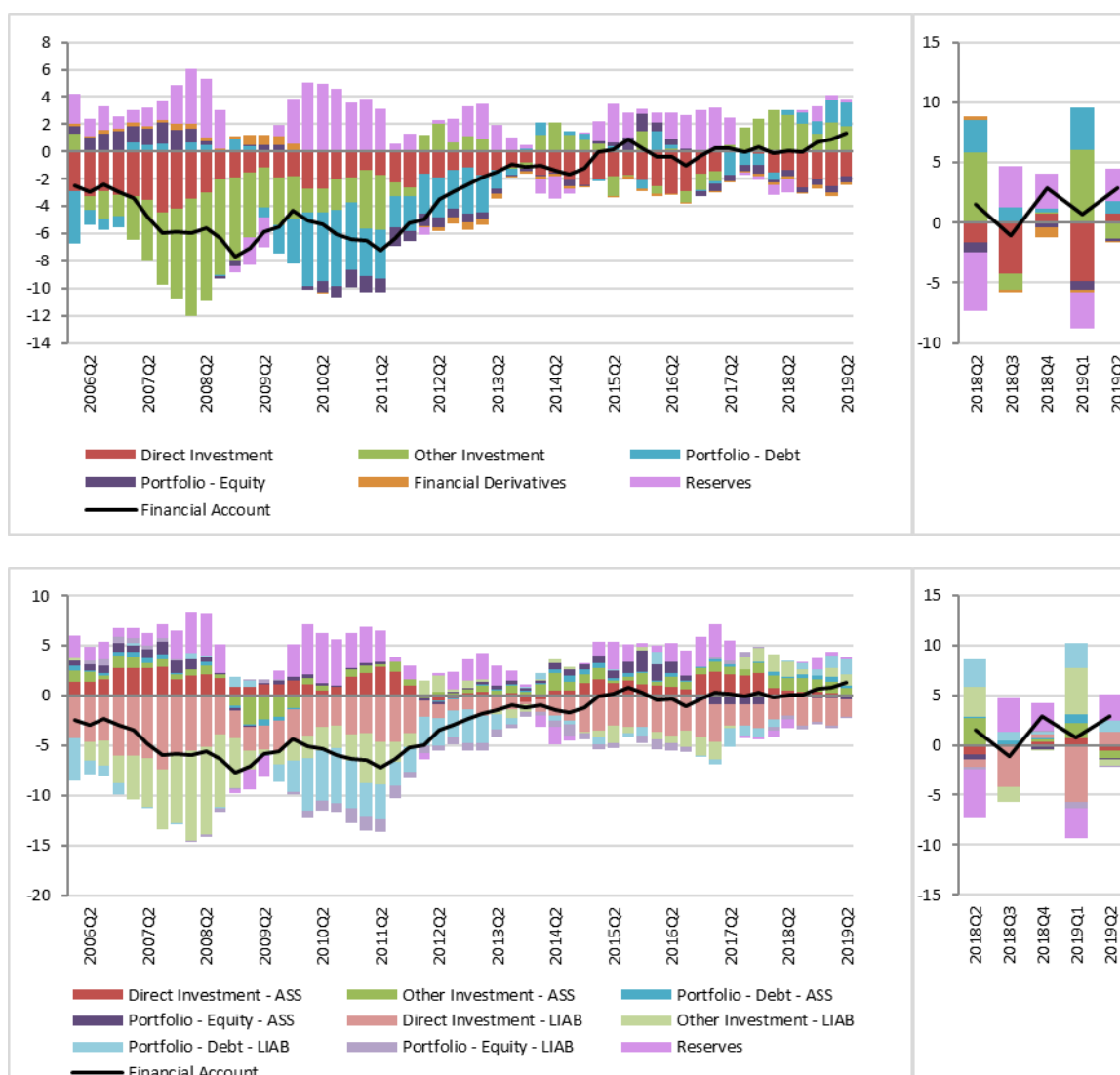
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 123: Hungary (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

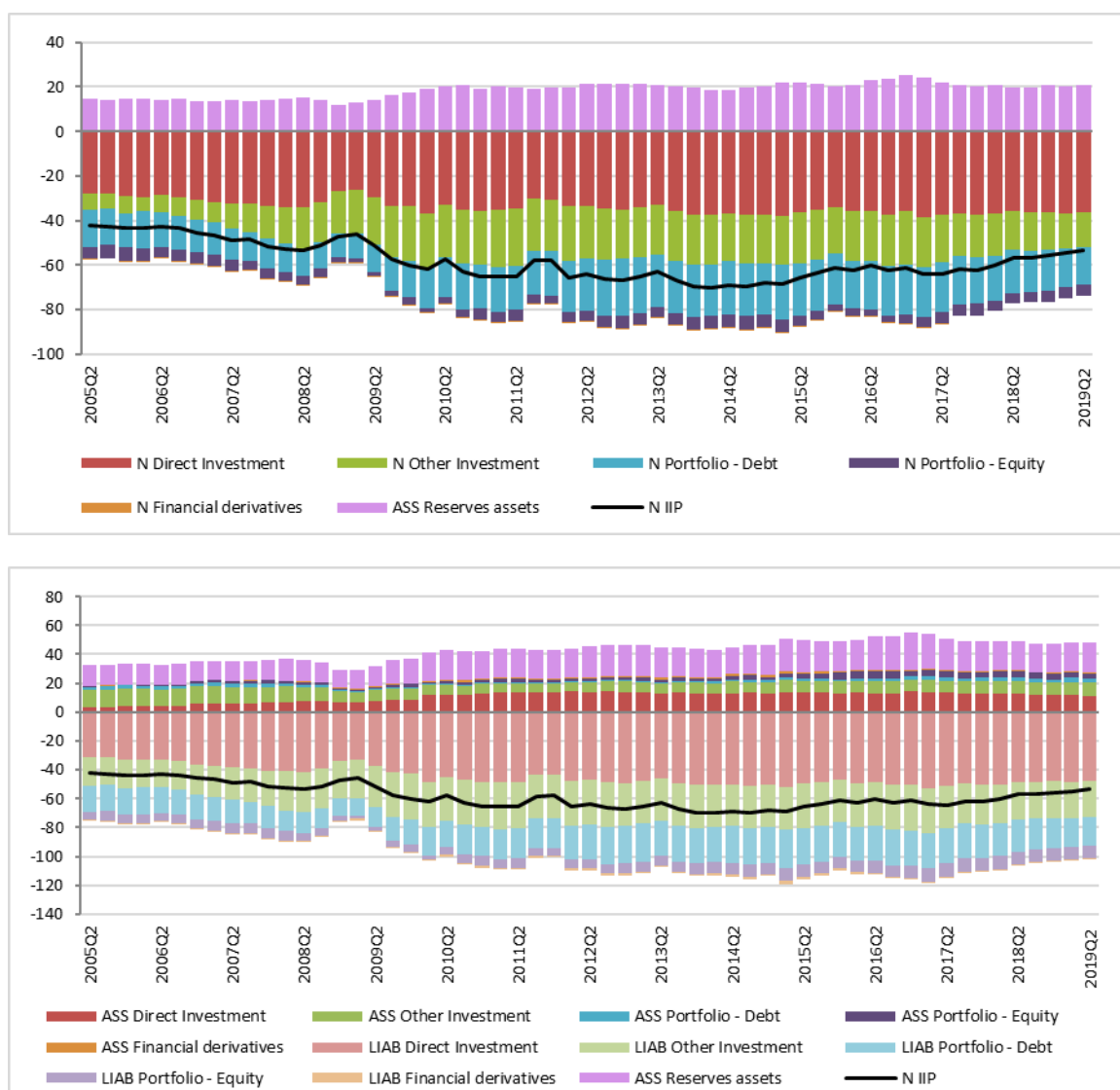
Figure 124: Poland (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

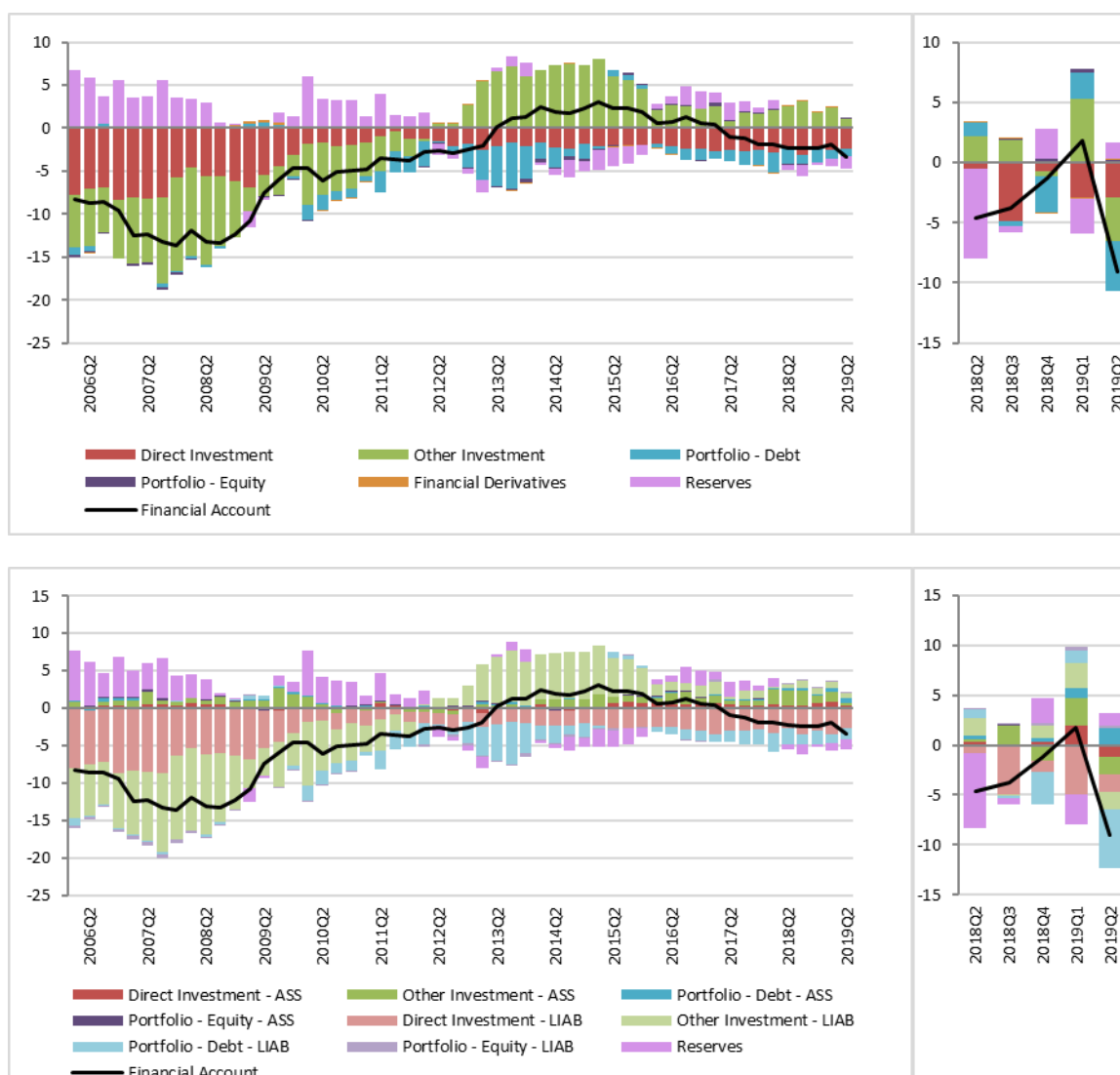
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 125: Poland (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

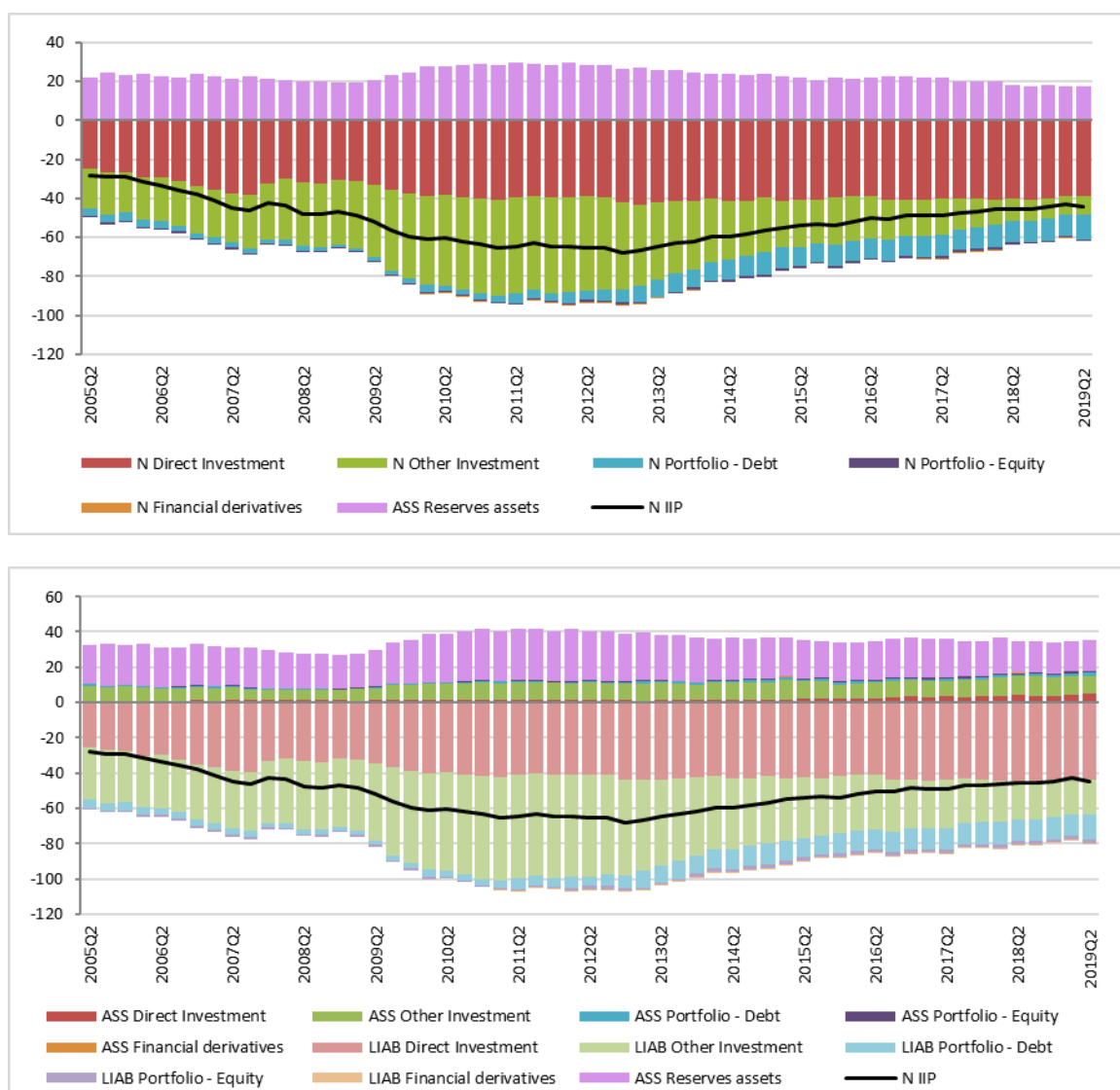
Figure 126: Romania (non-Euro area CEE) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

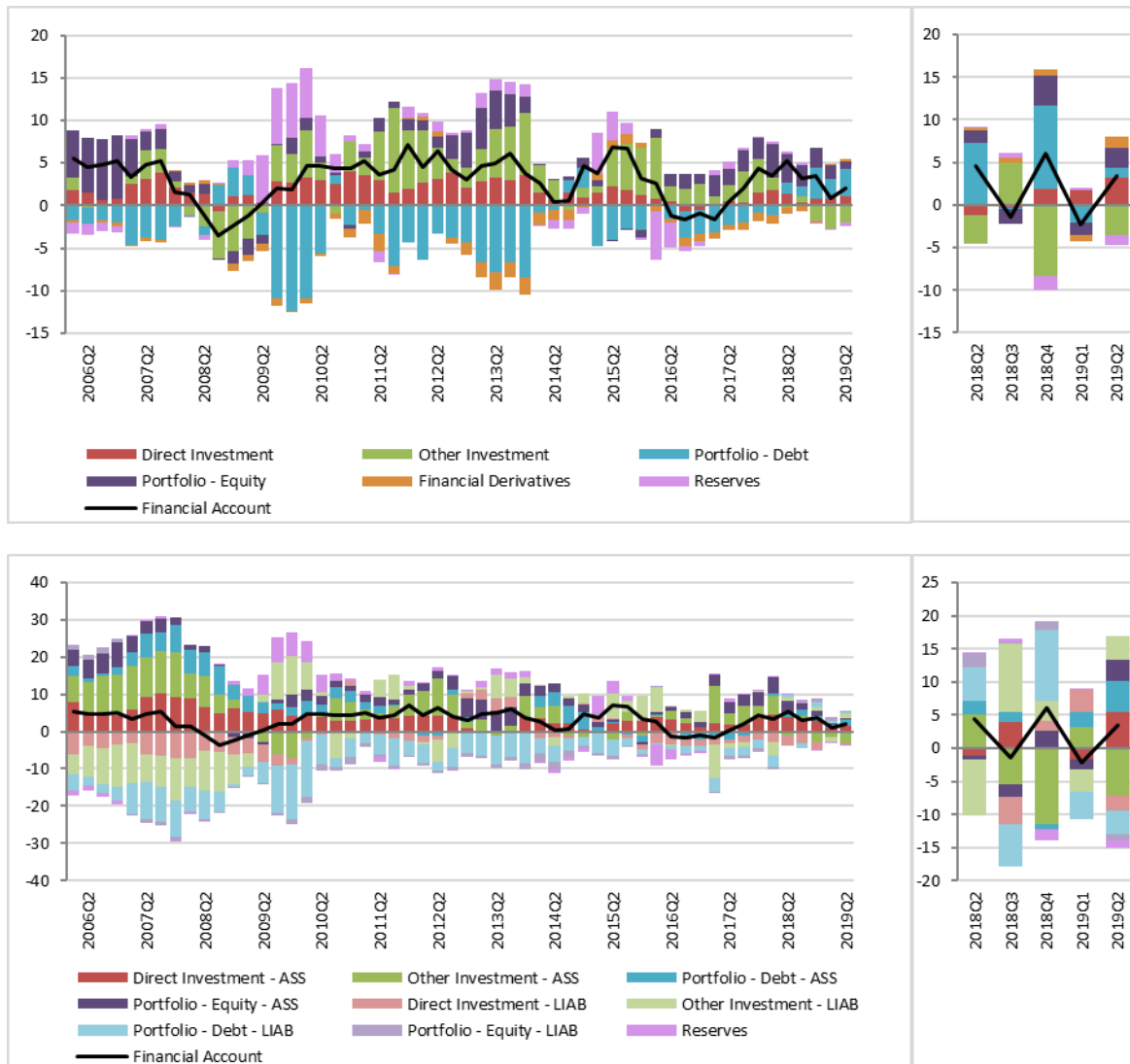
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 127: Romania (non-Euro area CEE) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

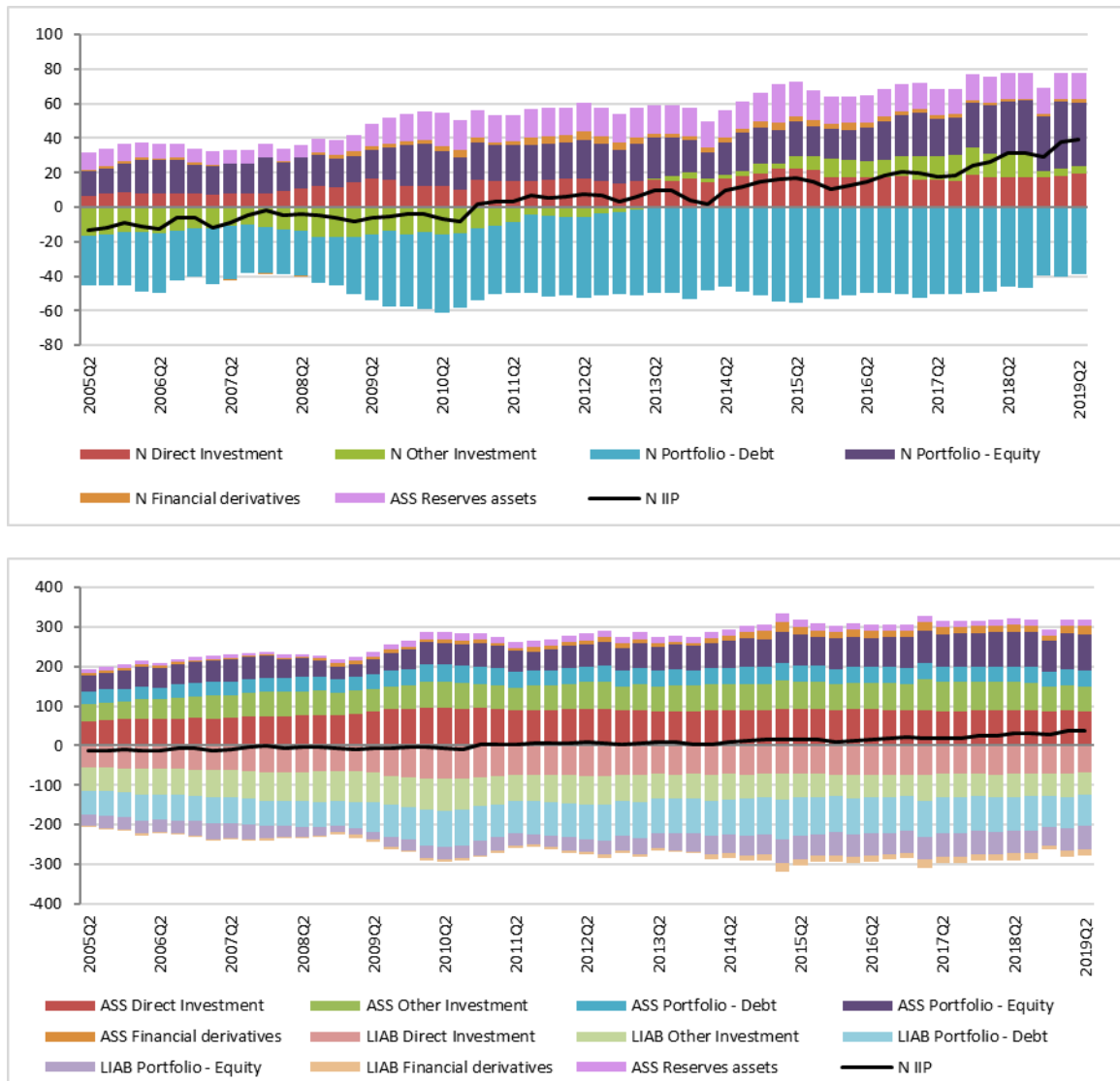
Figure 128: Non-euro area Nordics net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

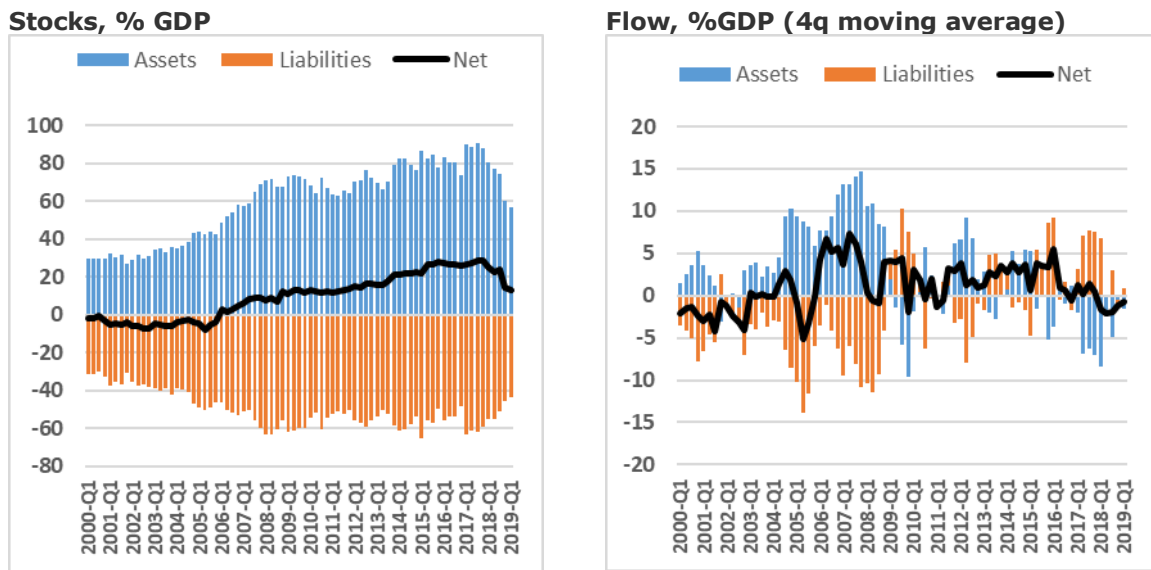
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 129: Non-euro area Nordics net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

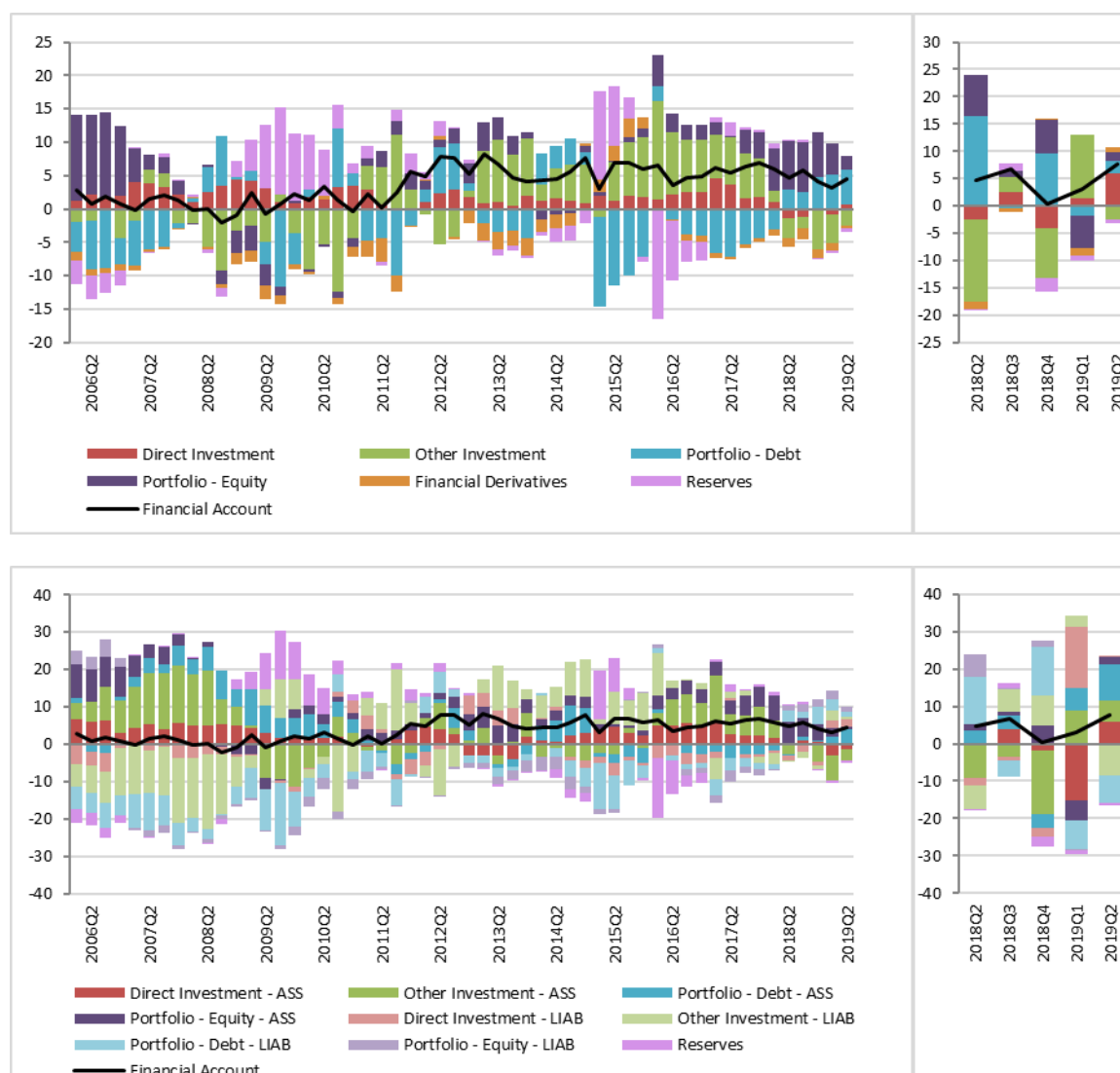
Figure 130: Non-euro area Nordics, BIS LBS



Source: BIS Locational Banking Statistics

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

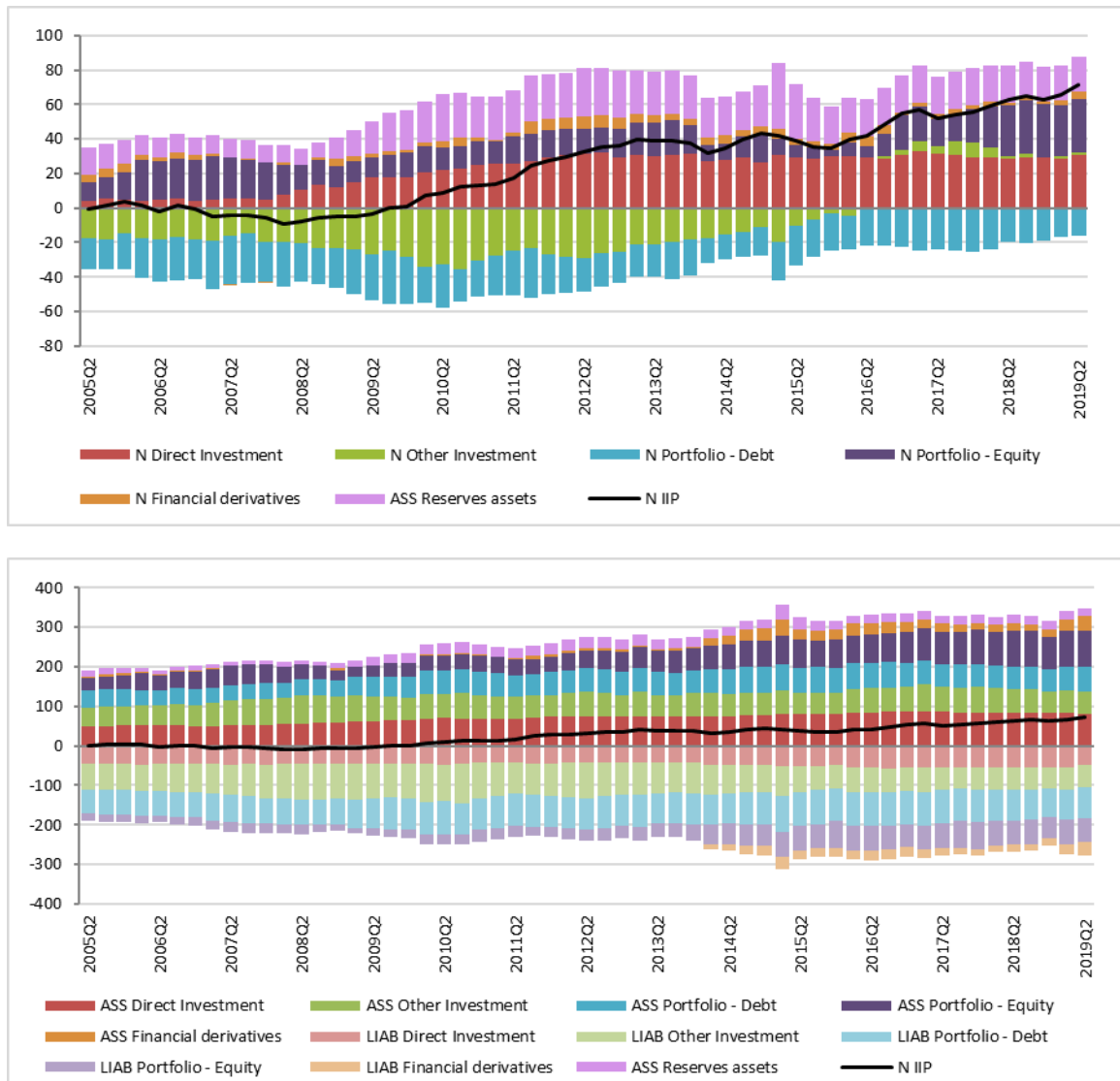
Figure 131: Denmark (non-euro area Nordics) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

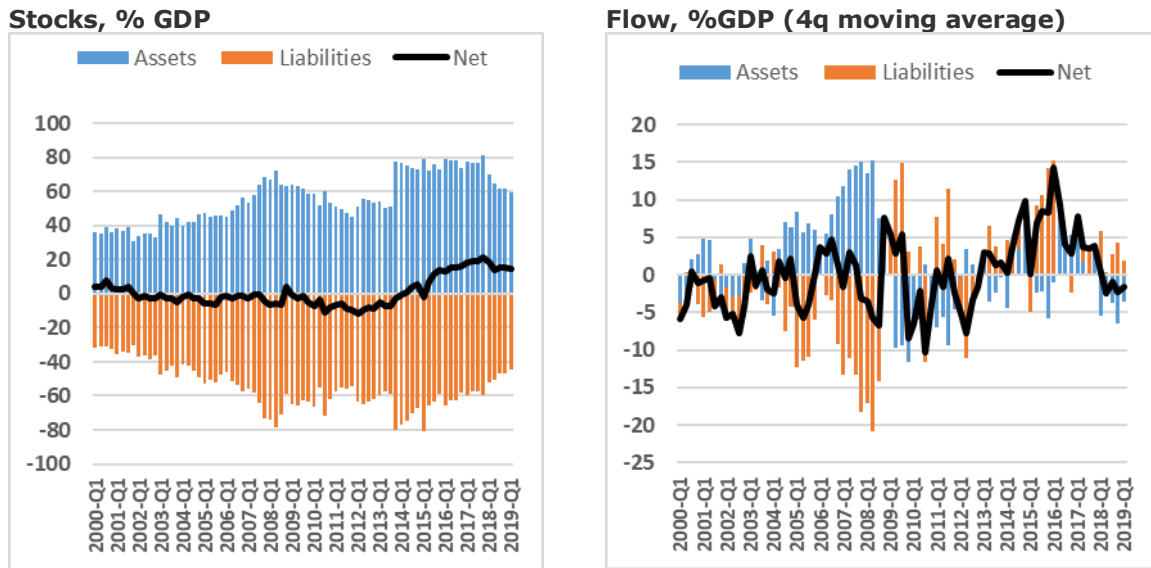
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 132: Denmark (non-euro area Nordics) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

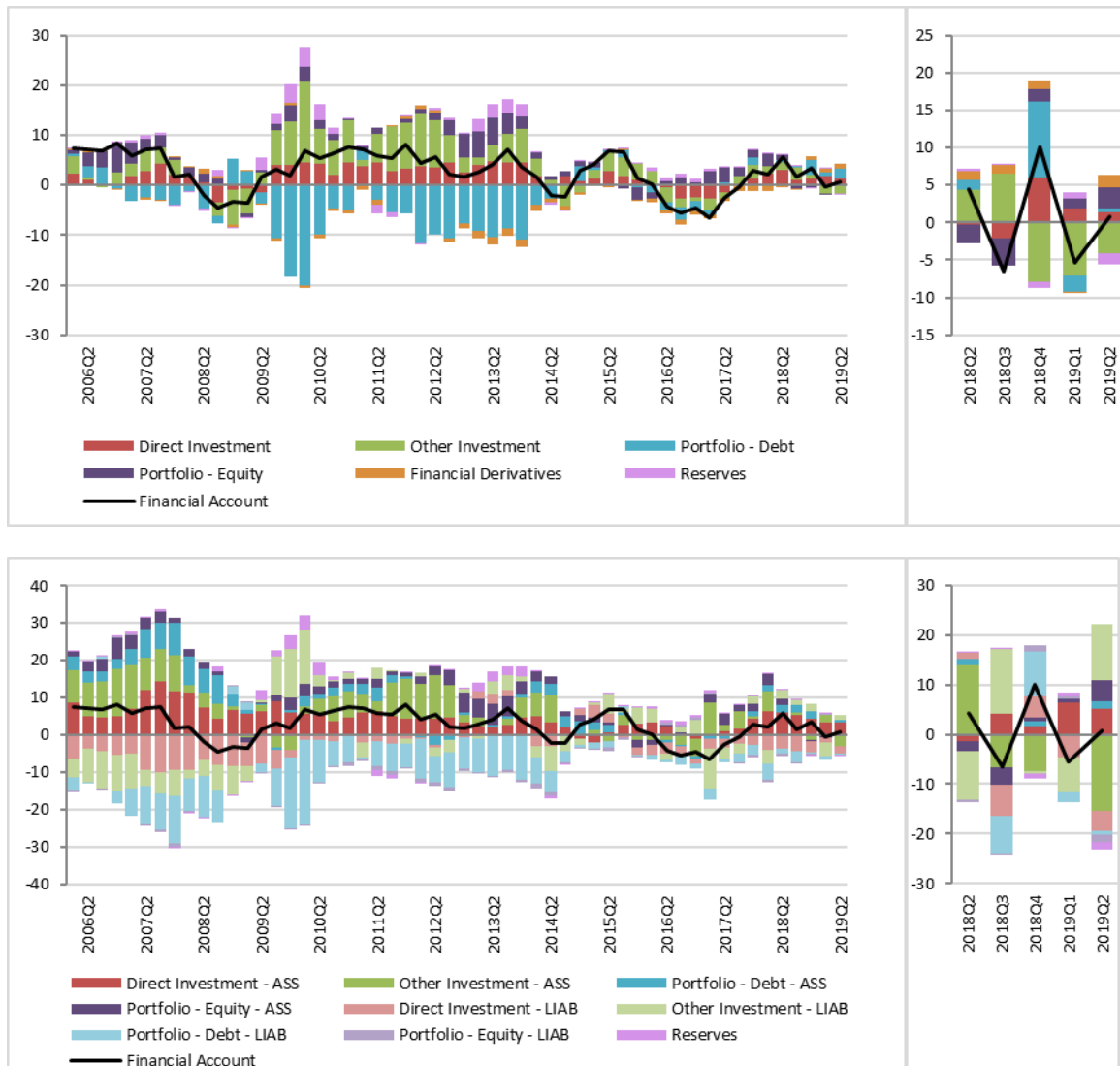
Figure 133: Denmark (non-euro area Nordics), BIS LBS



Source: BIS Locational Banking Statistics

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

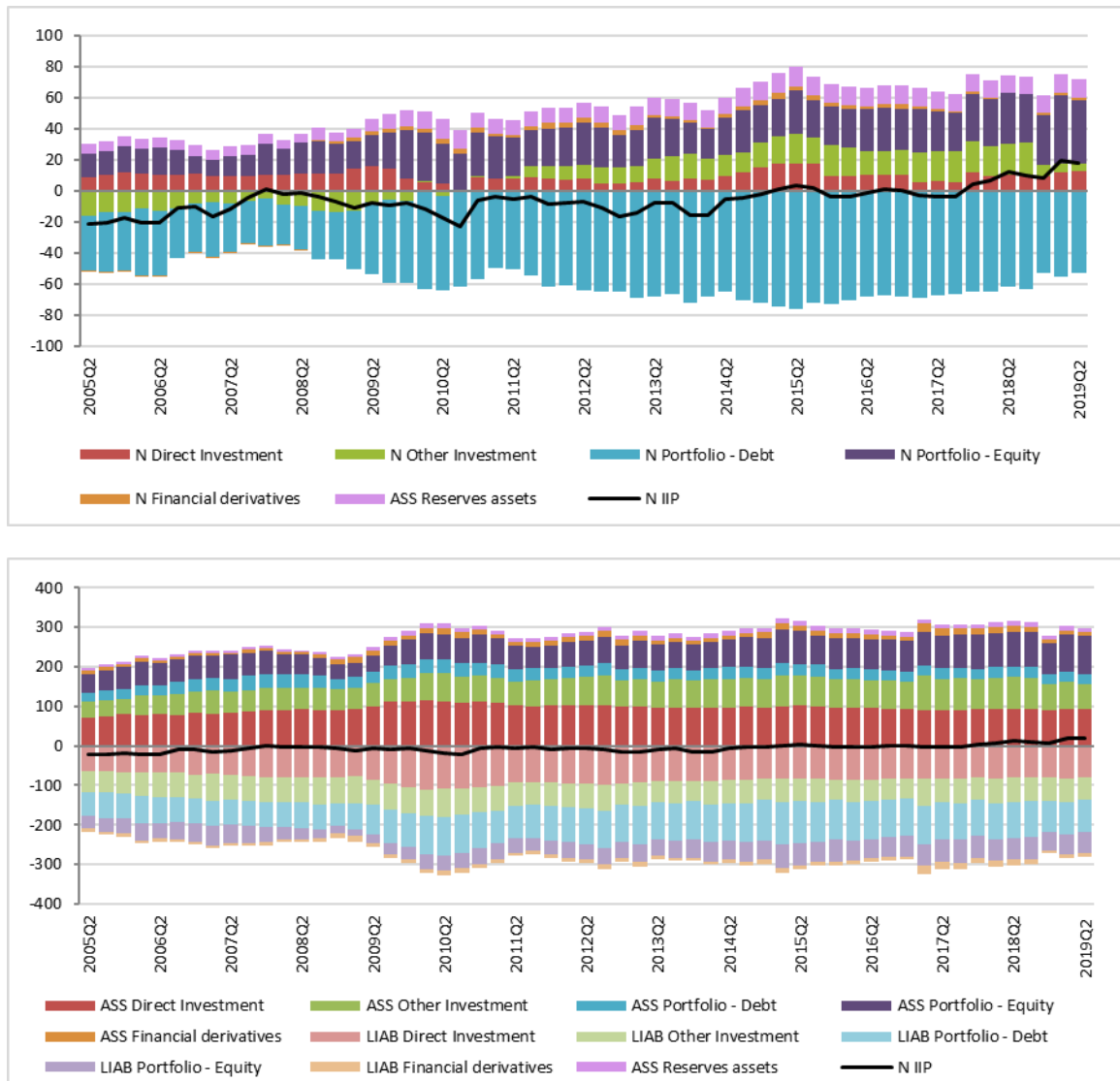
Figure 134: Sweden (non-euro area Nordics) net and gross flows by instrument, % of GDP



Source: Eurostat (bop_c6_q & namq_10_gdp)

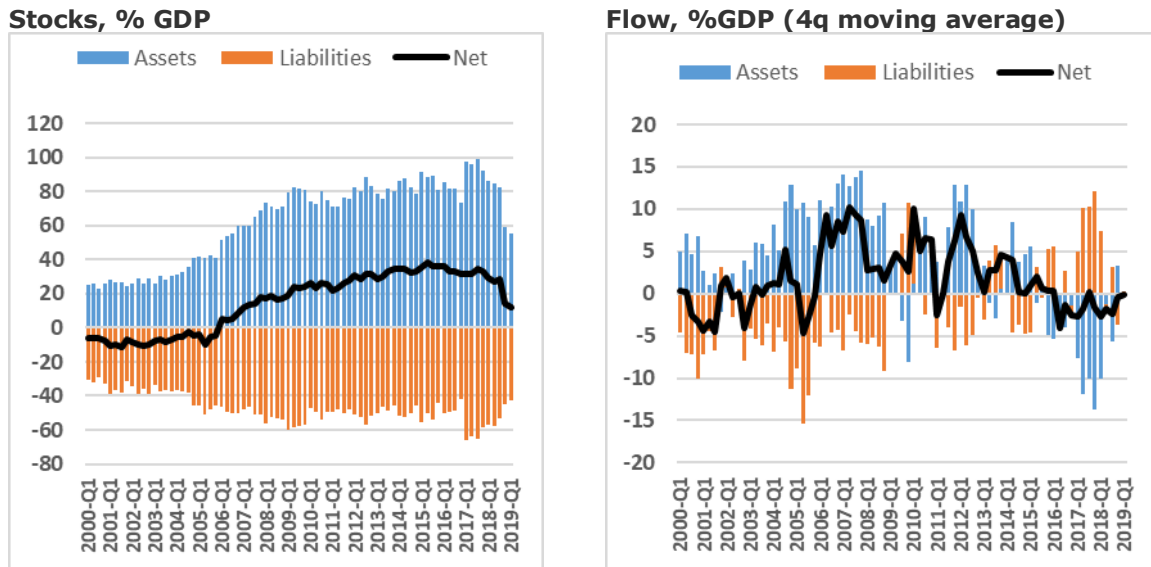
Notes: Left-hand side panel shows a 4Q lagged moving average, whereas the right-hand side panel shows the unsmoothed series over the year preceding the last data point available. The net financial account balance in the Eurostat series includes reserve assets transactions. Both the financial account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

Figure 135: Sweden (non-euro area Nordics) net and gross international investment position by instrument, % of GDP



Source: Eurostat (bop_iip6_q & namq_10_gdp)

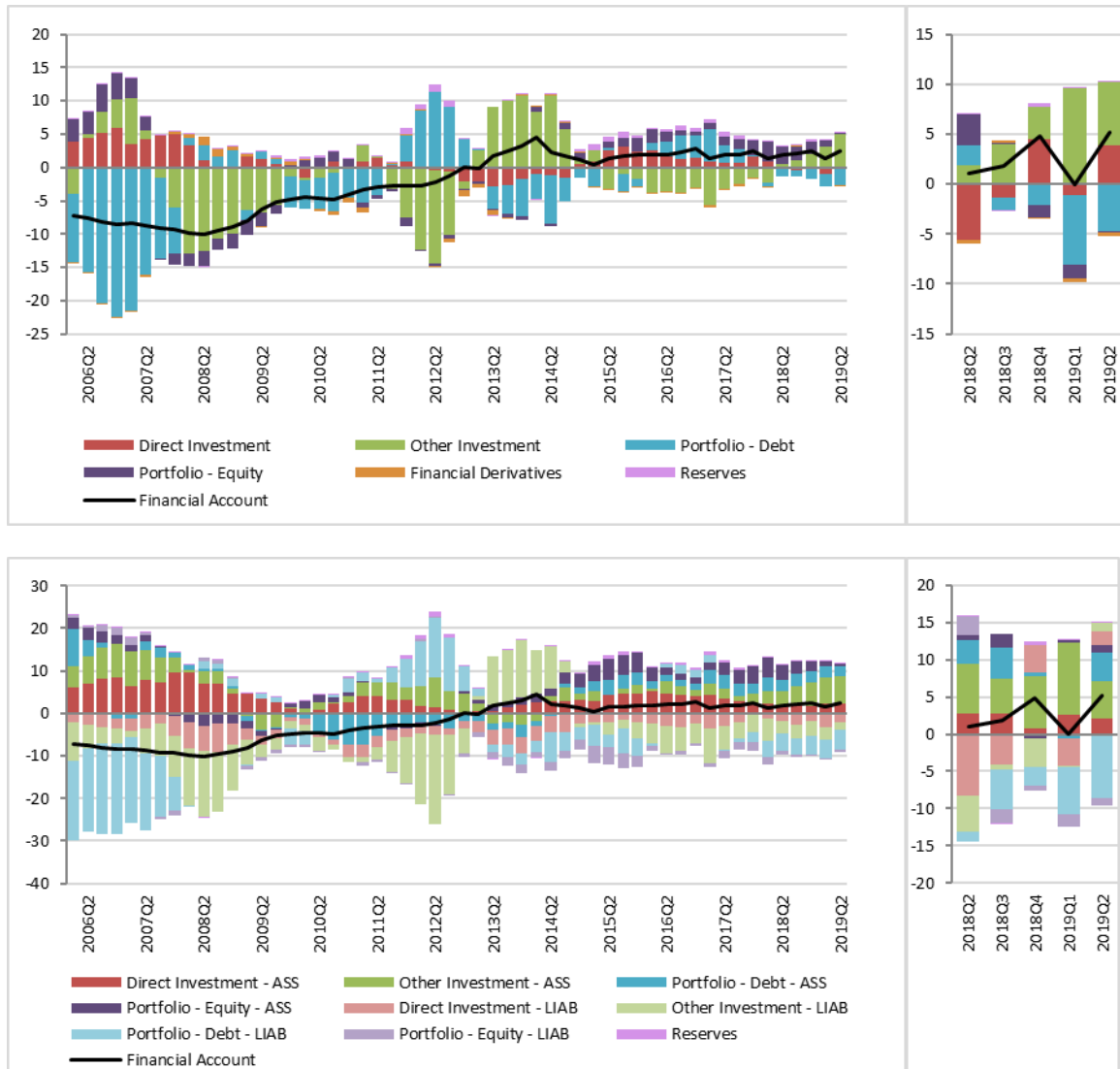
Figure 136: Sweden (non-euro area Nordics), BIS LBS



Source: BIS Locational Banking Statistics

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

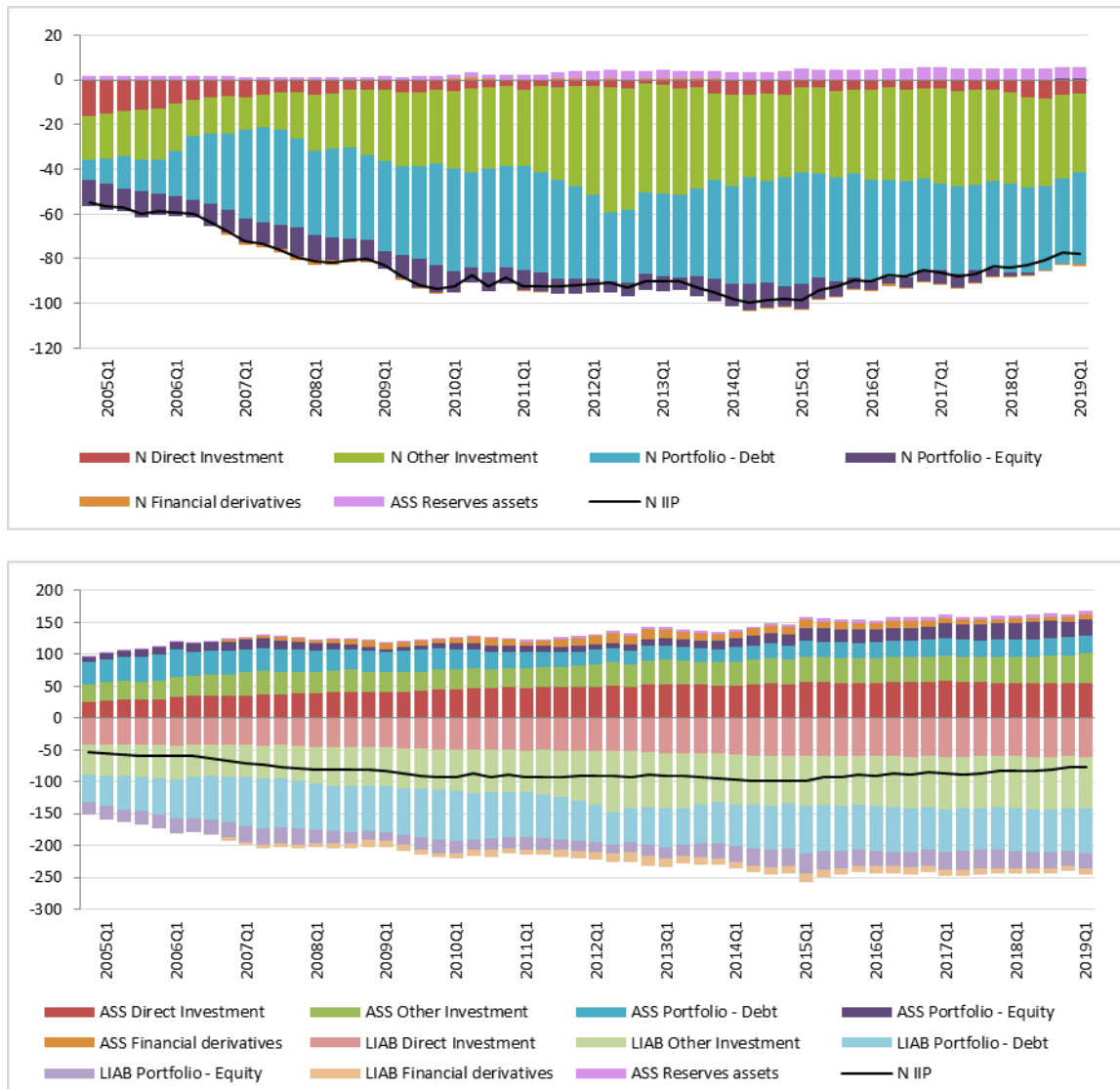
Figure 137: Spain net and gross flows by instrument, % of GDP



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.

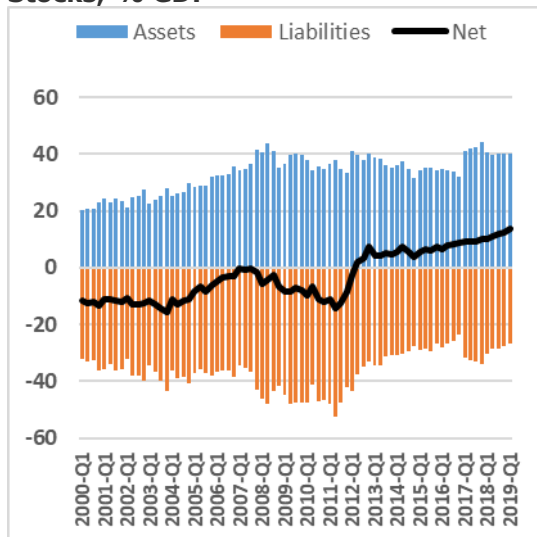
Figure 138: Spain net and gross international investment position by instrument, % of GDP



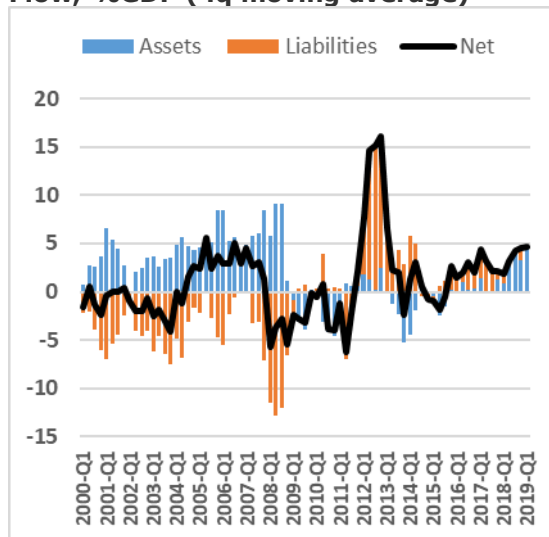
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 139: Spain, BIS LBS

Stocks, % GDP



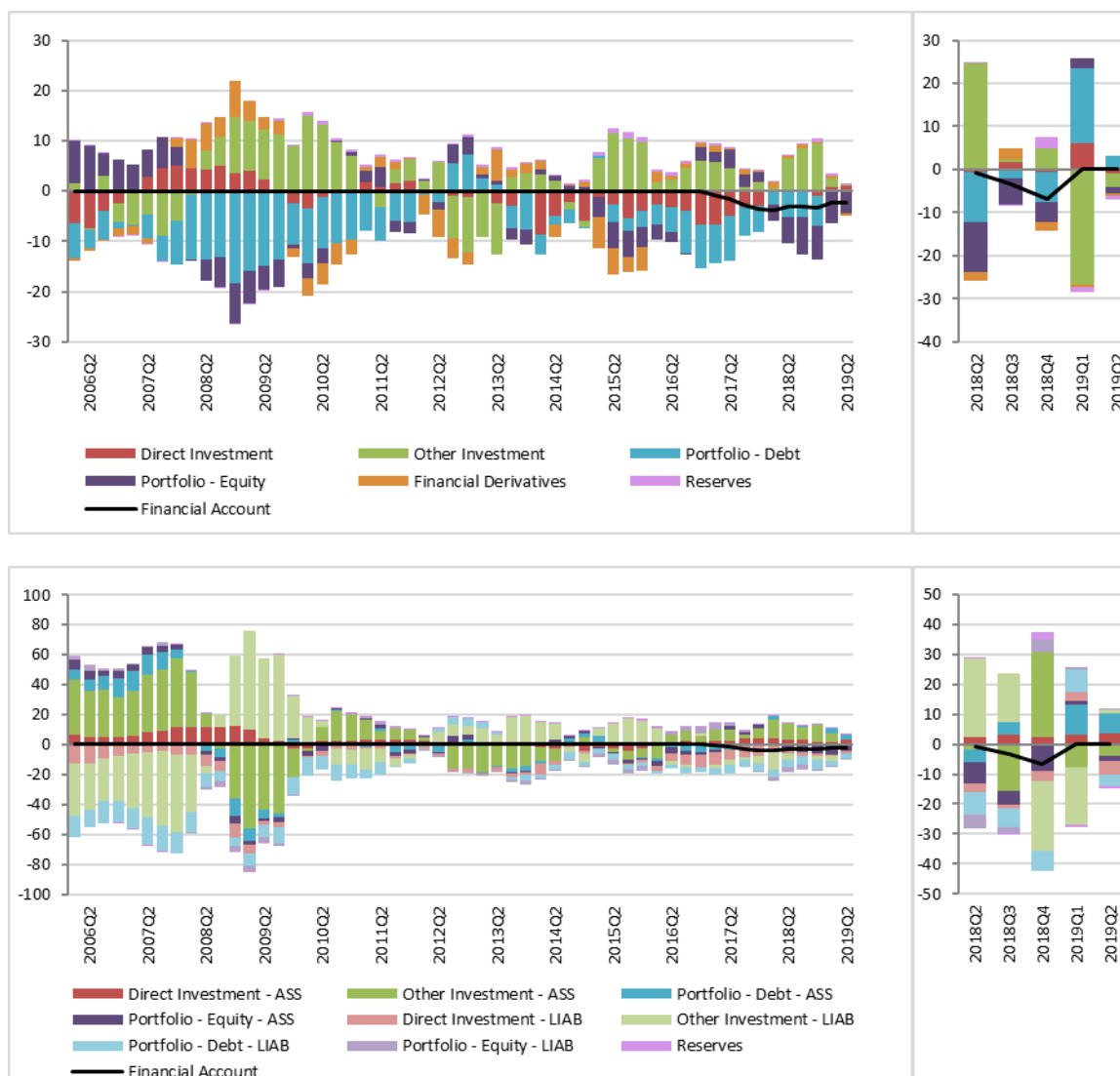
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

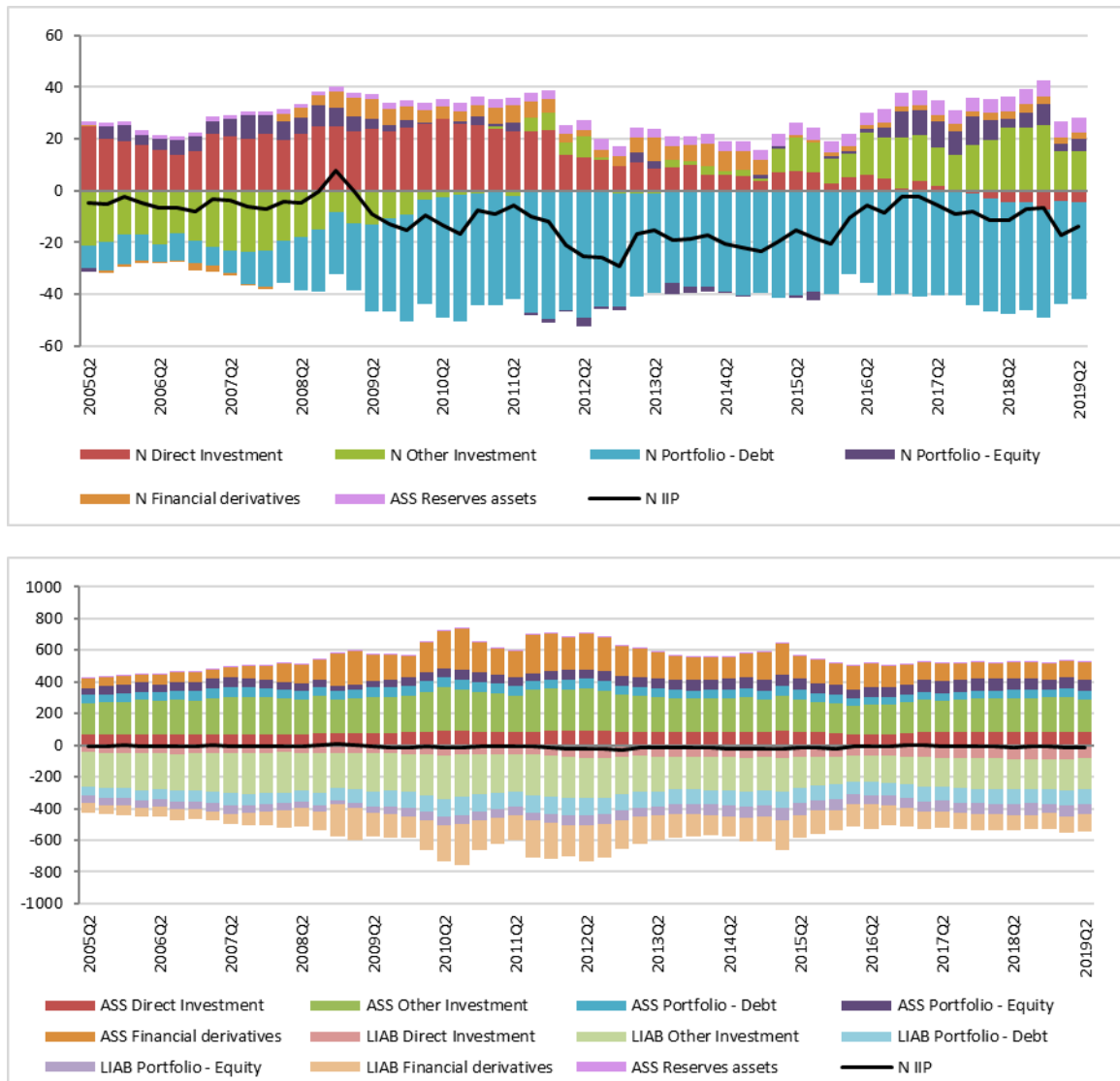
Figure 140: United Kingdom net and gross flows by instrument, % of GDP



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.

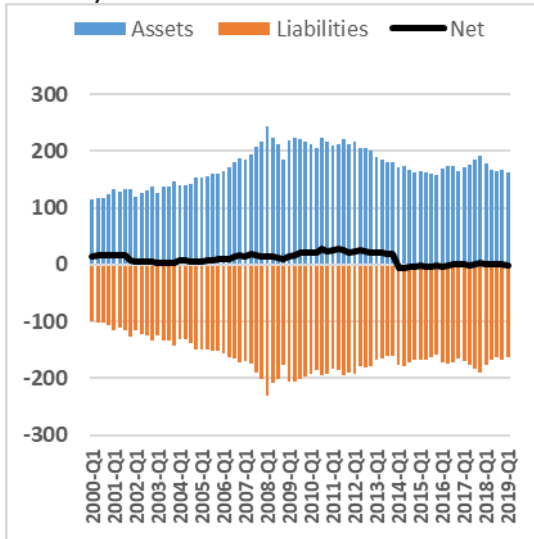
Figure 141: United Kingdom net and gross international investment position by instrument, % of GDP



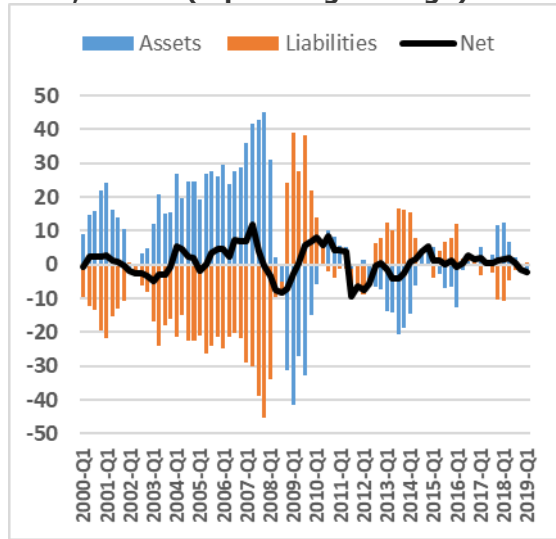
Source: Eurostat (bop_iip6_q & namq_10_gdp)

Figure 142: United Kingdom, BIS LBS

Stocks, % GDP



Flow, %GDP (4q moving average)

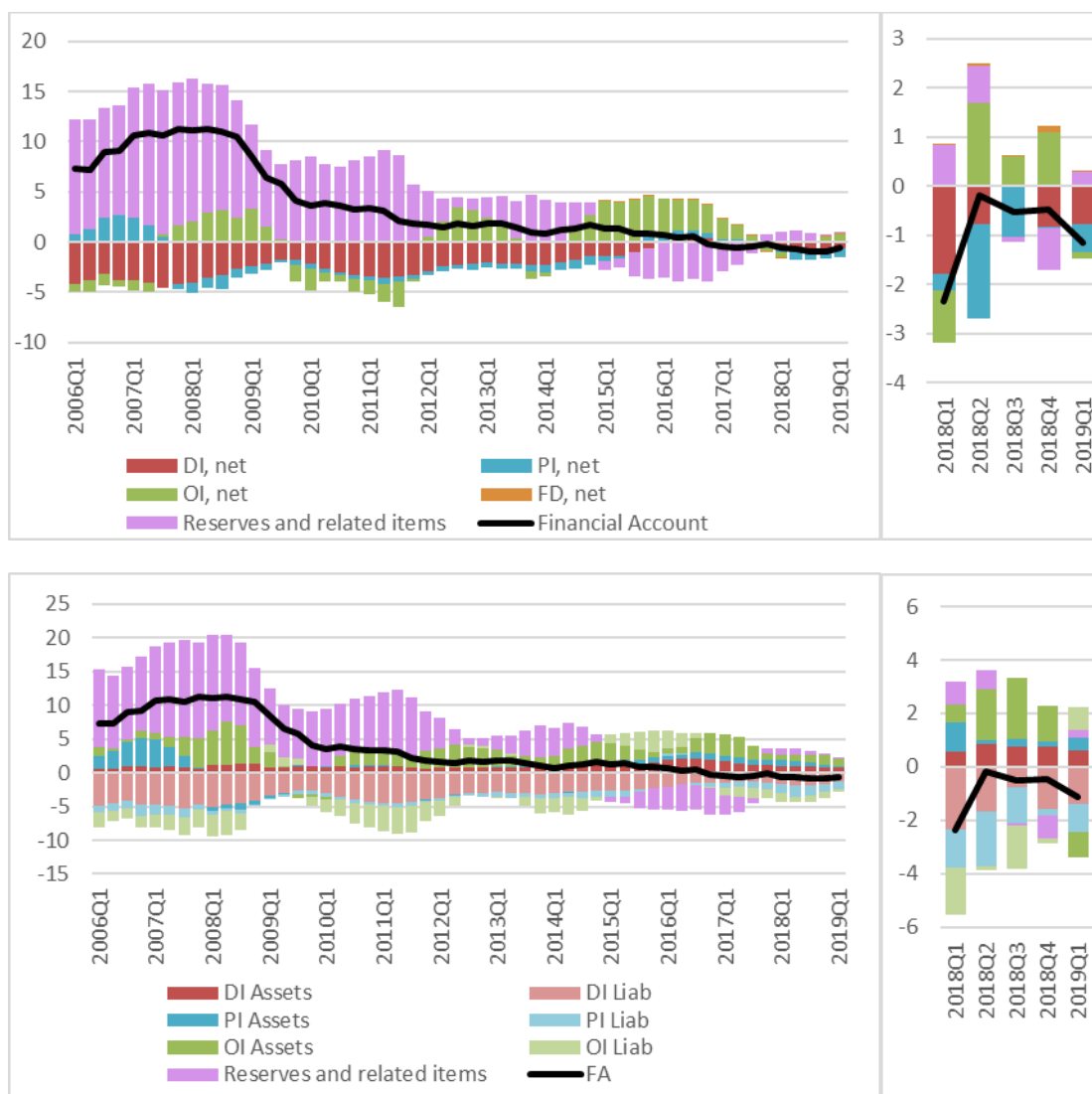


Source: BIS Locational Banking Statistics

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

6.2. Global regions

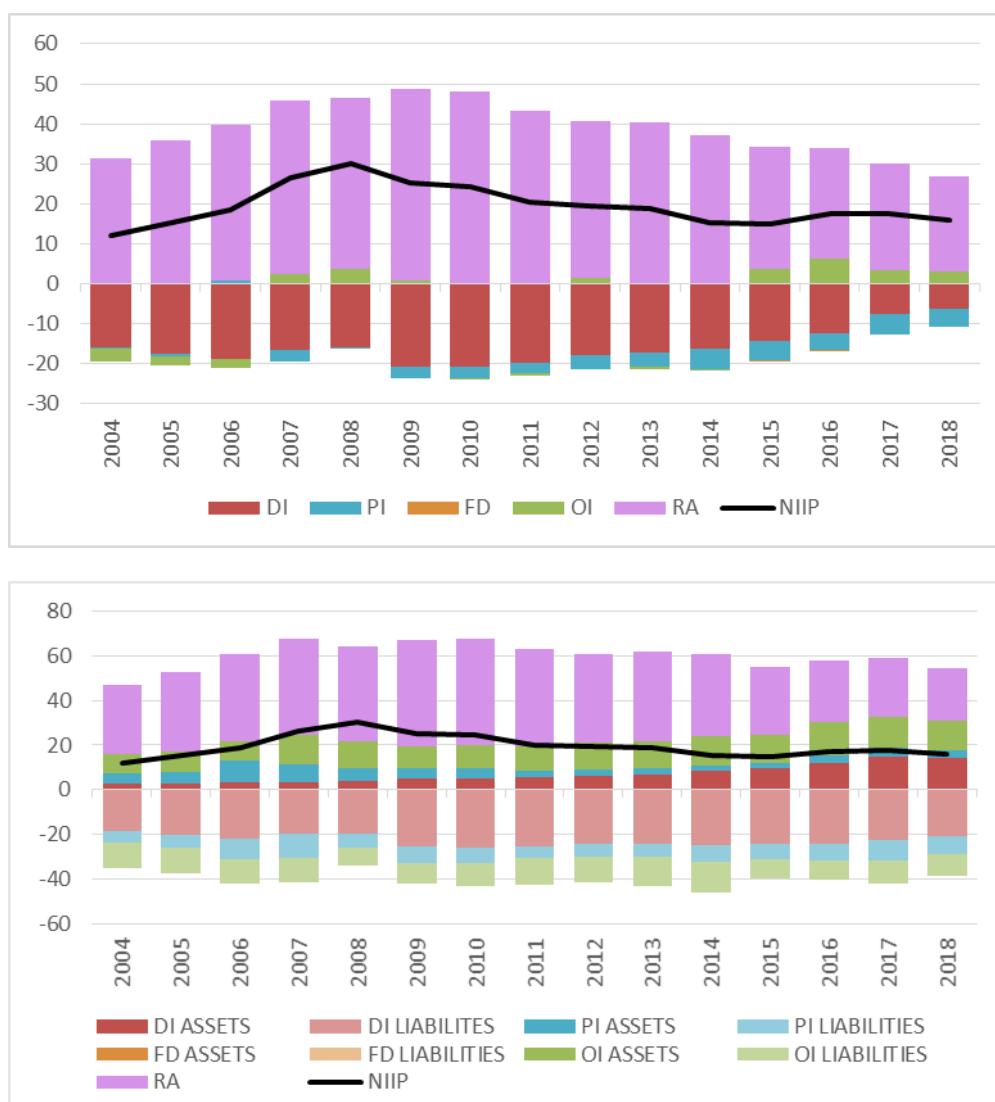
Figure 143: China net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

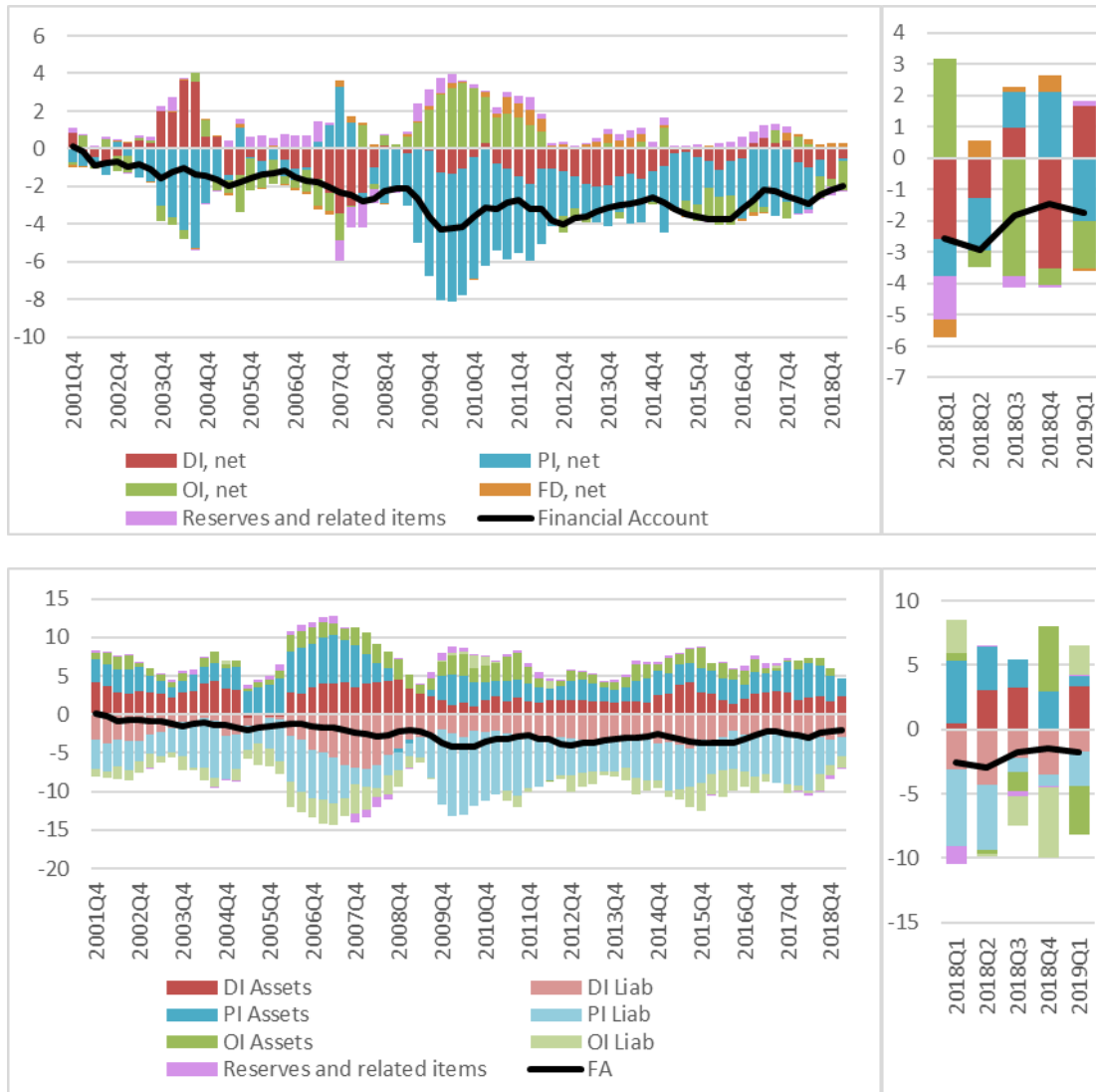
Figure 144: China net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

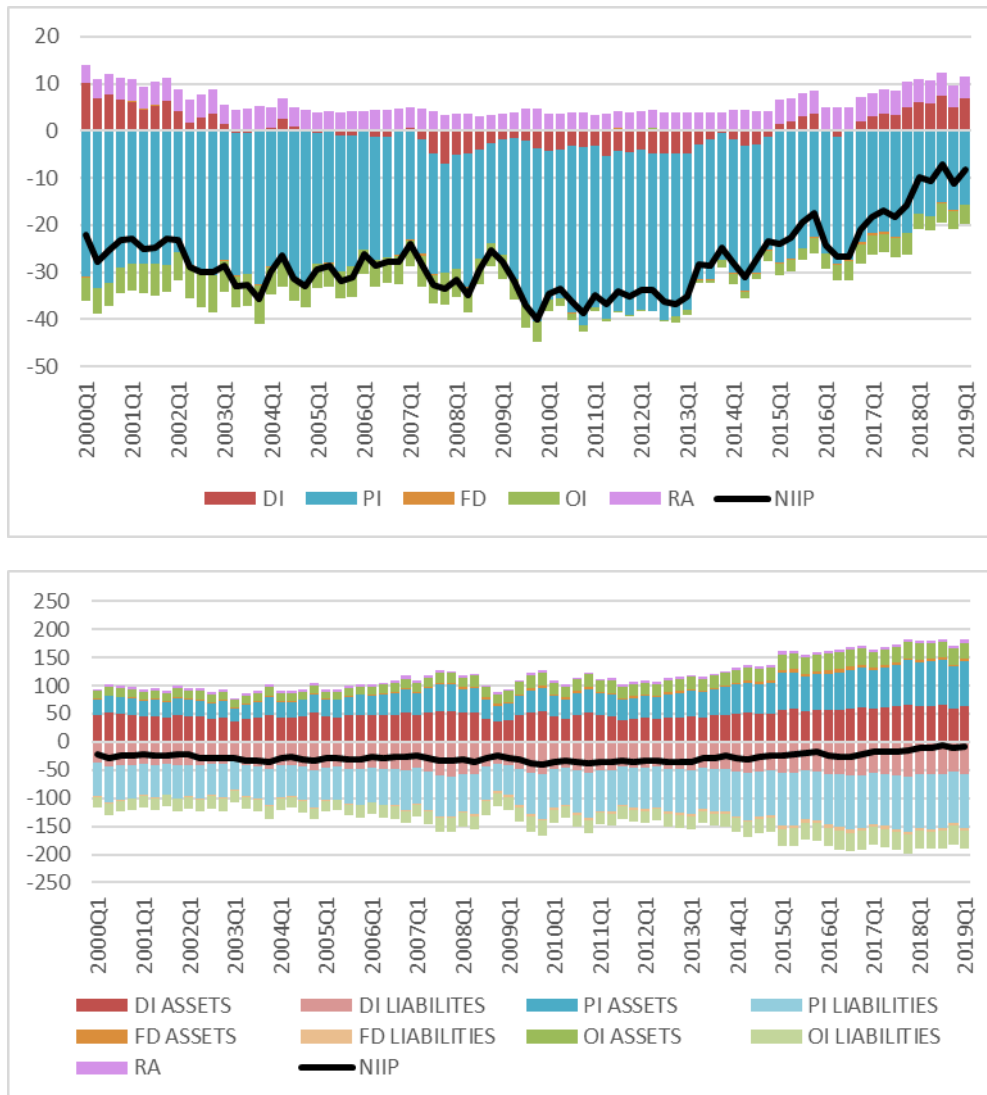
Figure 145: Deficit Advanced net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

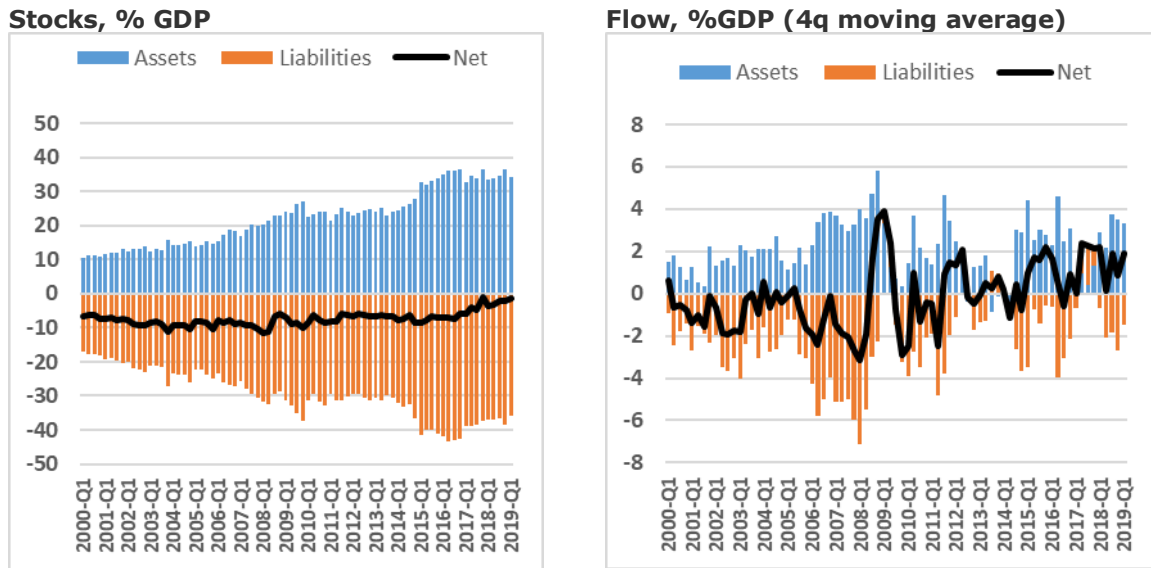
Figure 146: Deficit Advanced net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

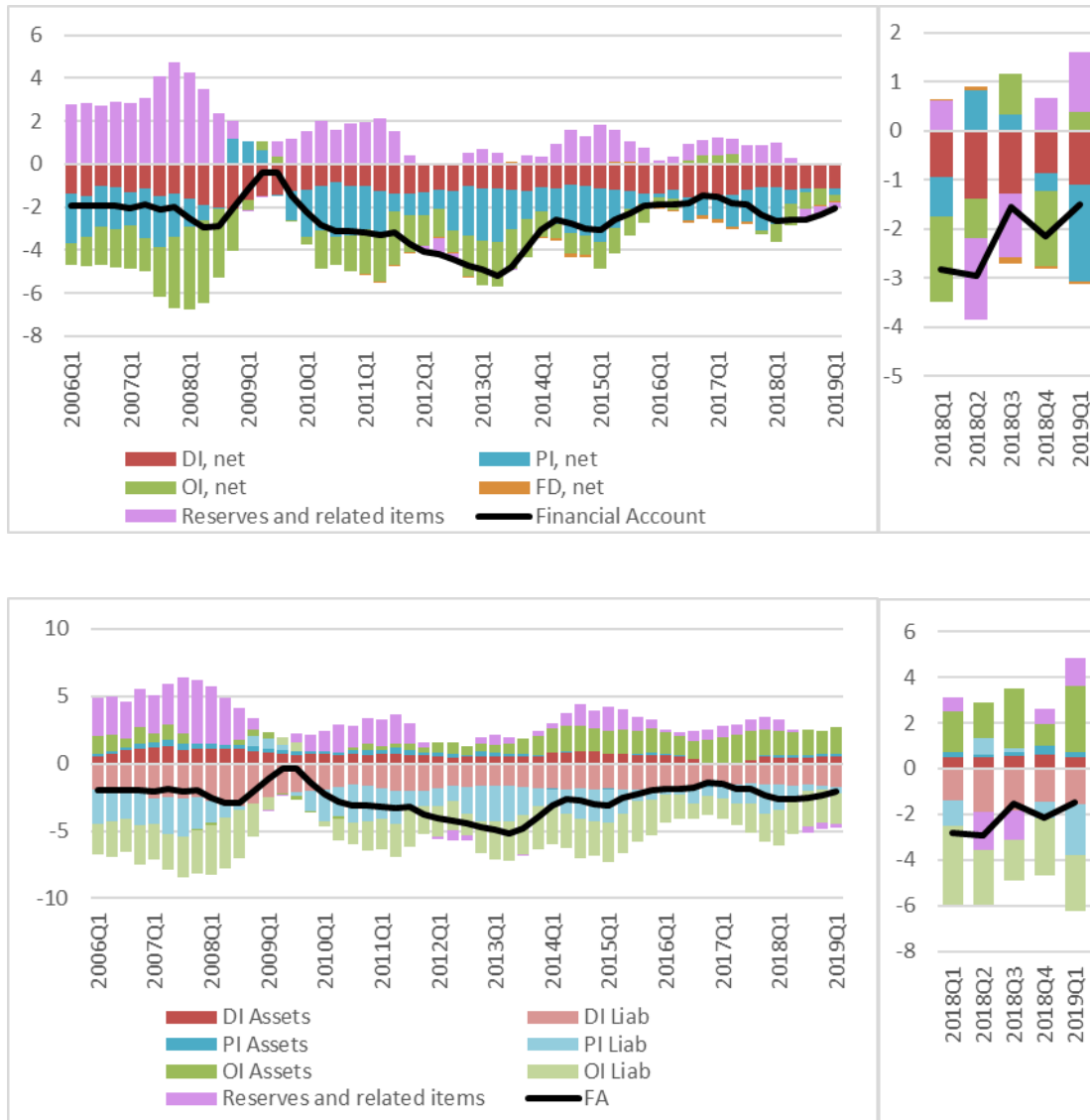
Figure 147: Deficit advanced countries, BIS LBS



Source: BIS Locational Banking Statistics

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

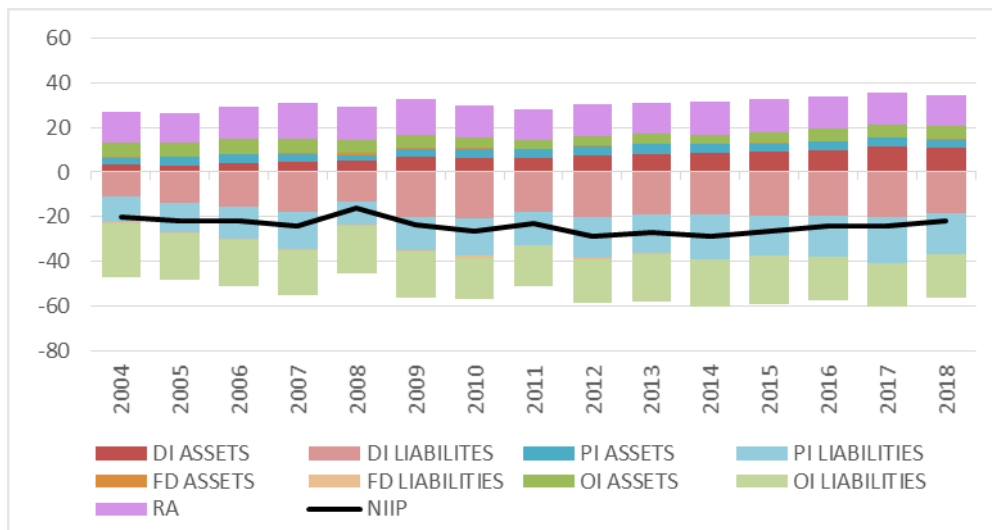
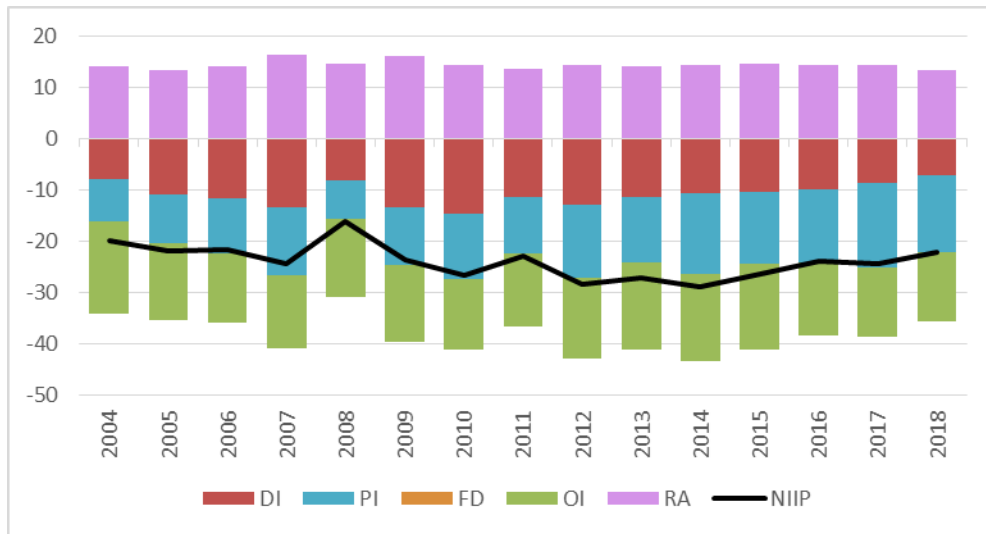
Figure 148: Deficit Emerging net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

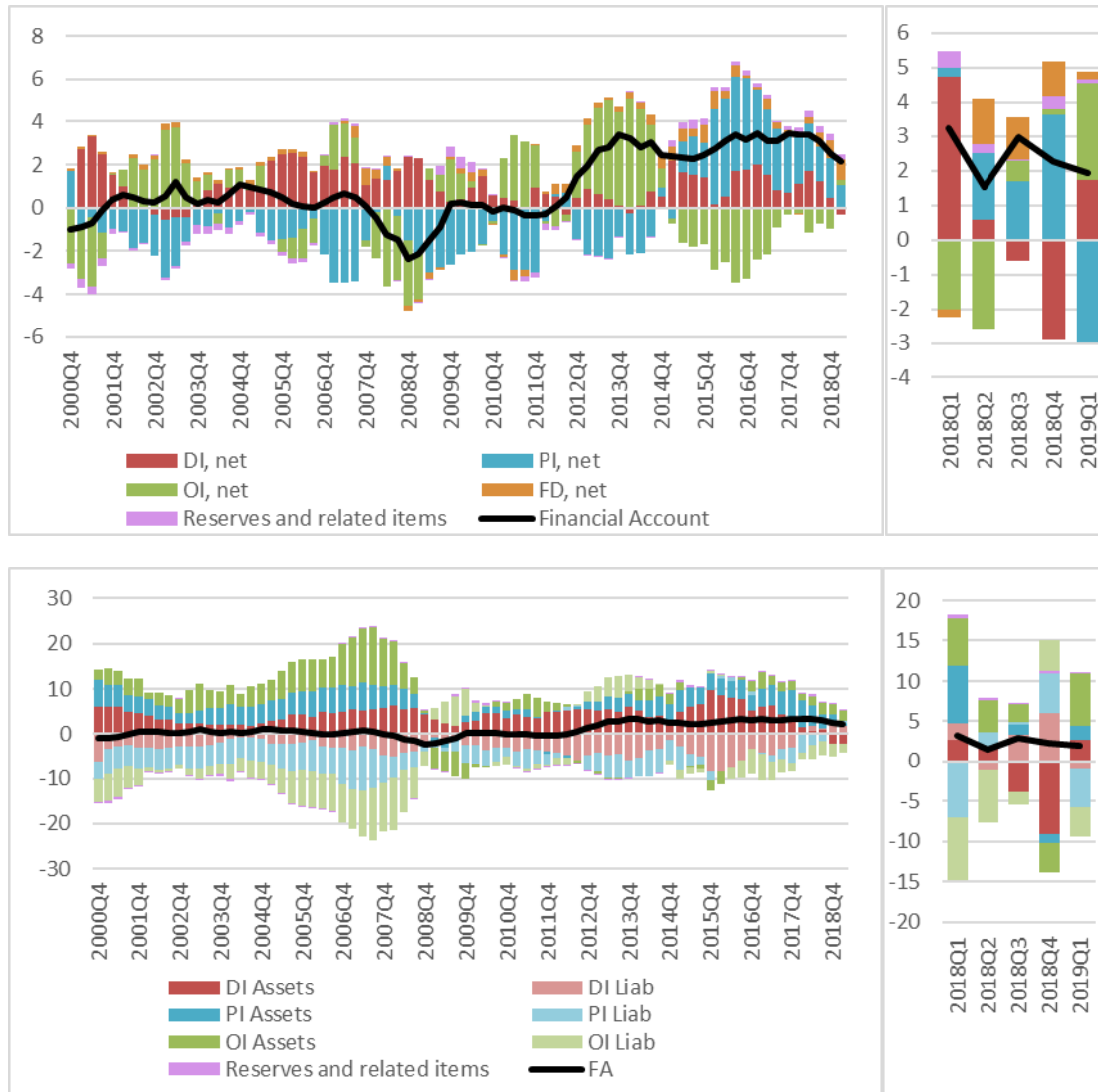
Figure 149: Deficit Emerging net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

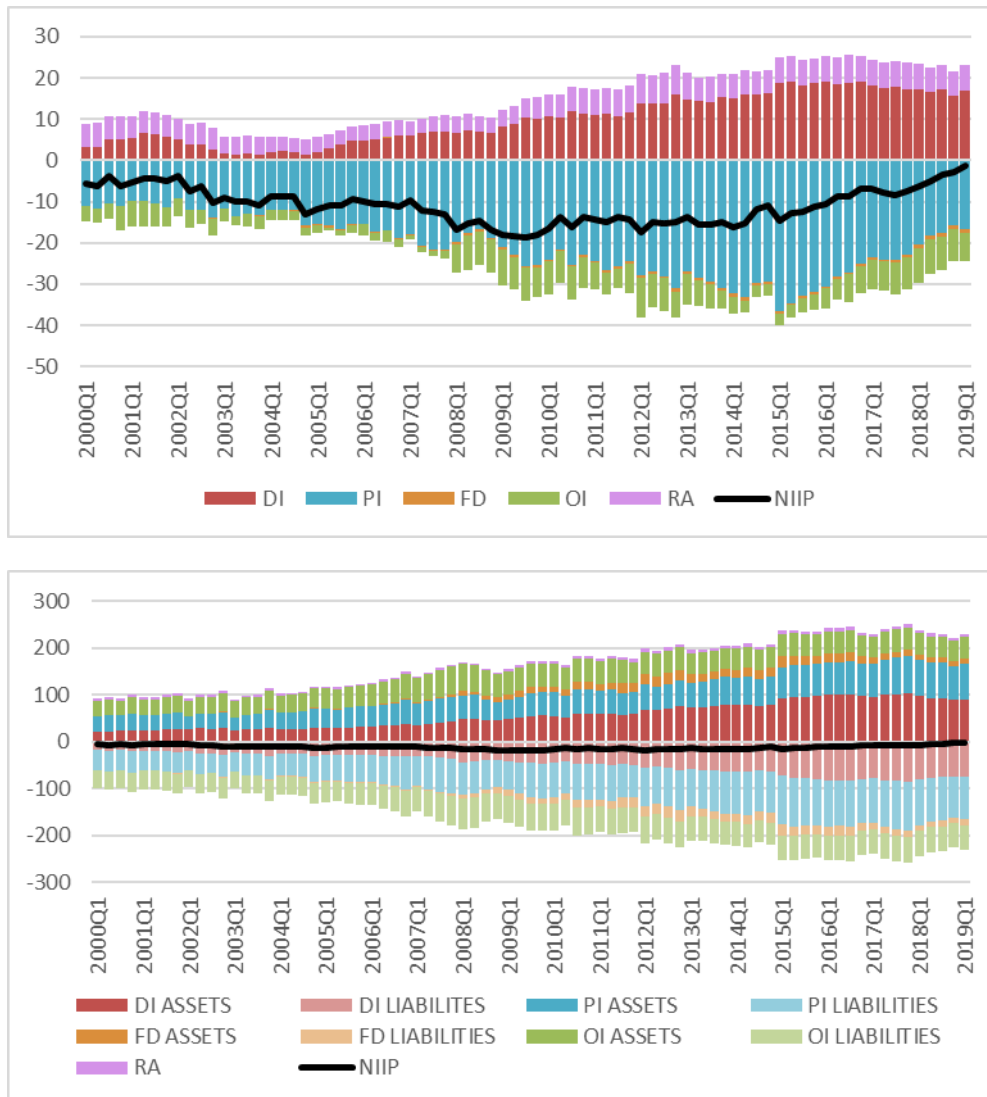
Figure 150: Euro Area net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

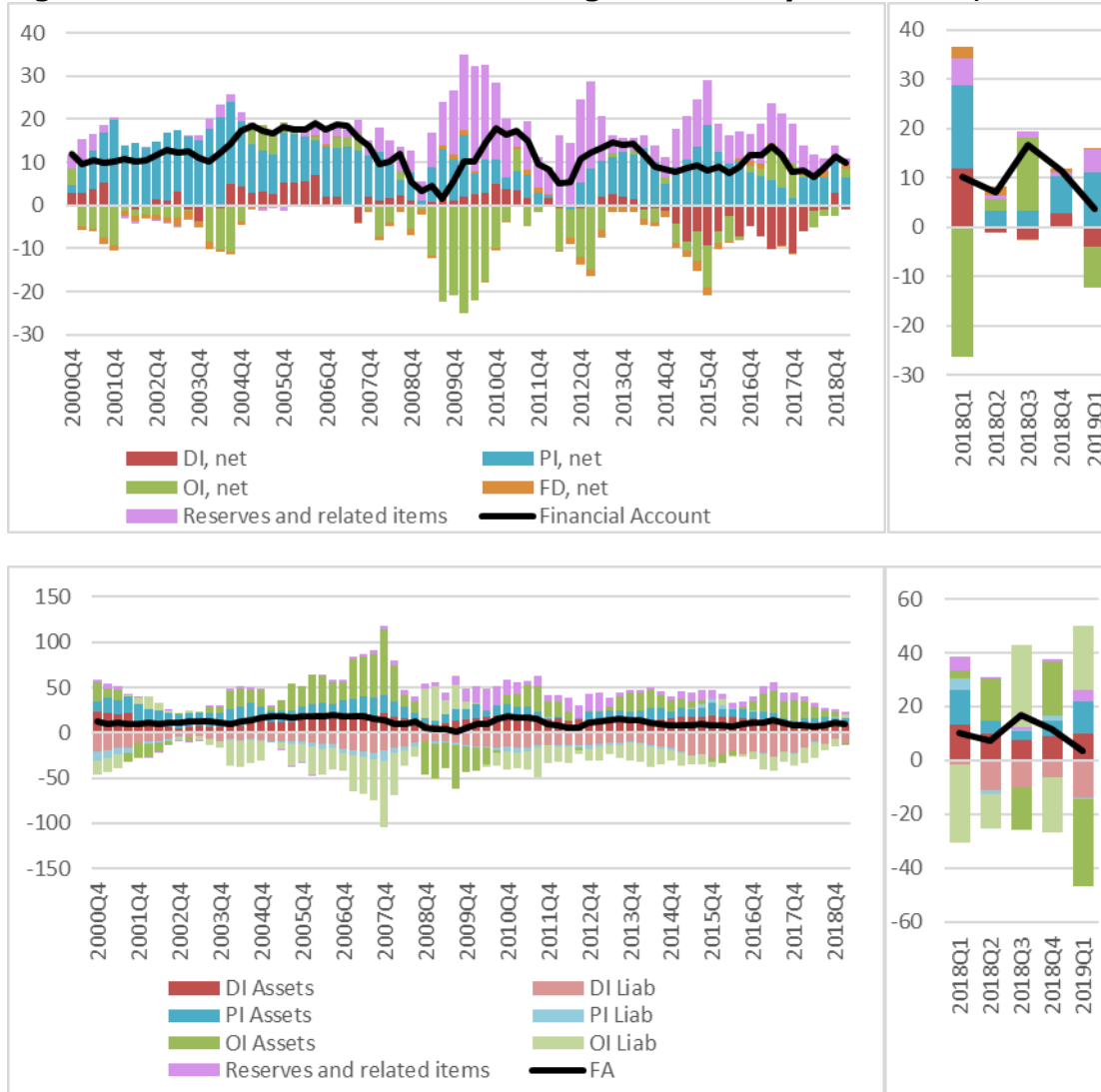
Figure 151: Euro Area net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

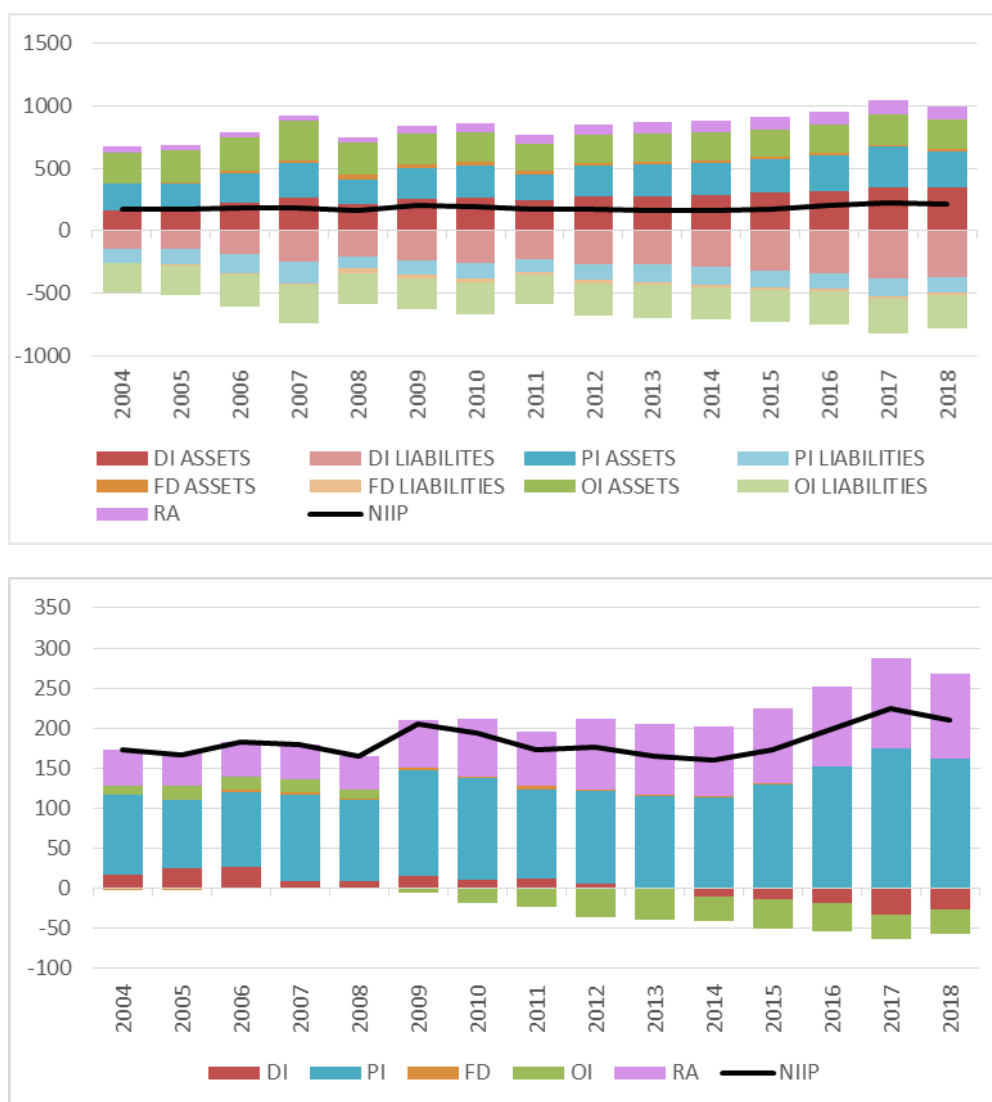
Figure 152: Financial centres net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

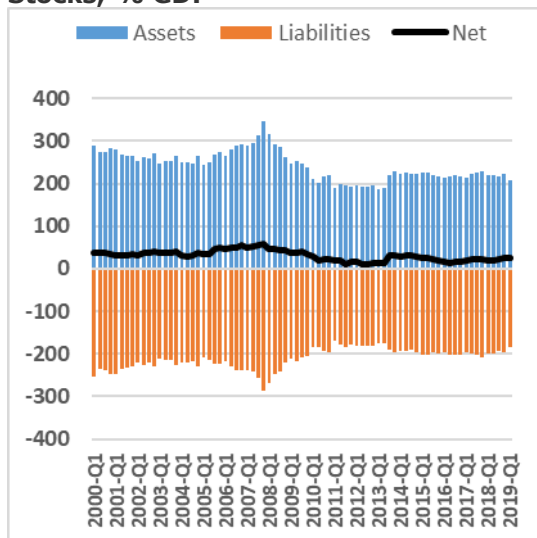


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

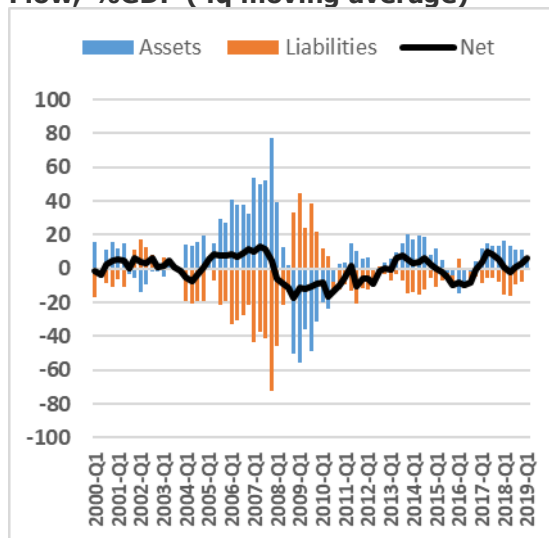
Notes: Both the NIIP positions and GDP are measured in USD

Figure 154: Financial centres, BIS LBS

Stocks, % GDP



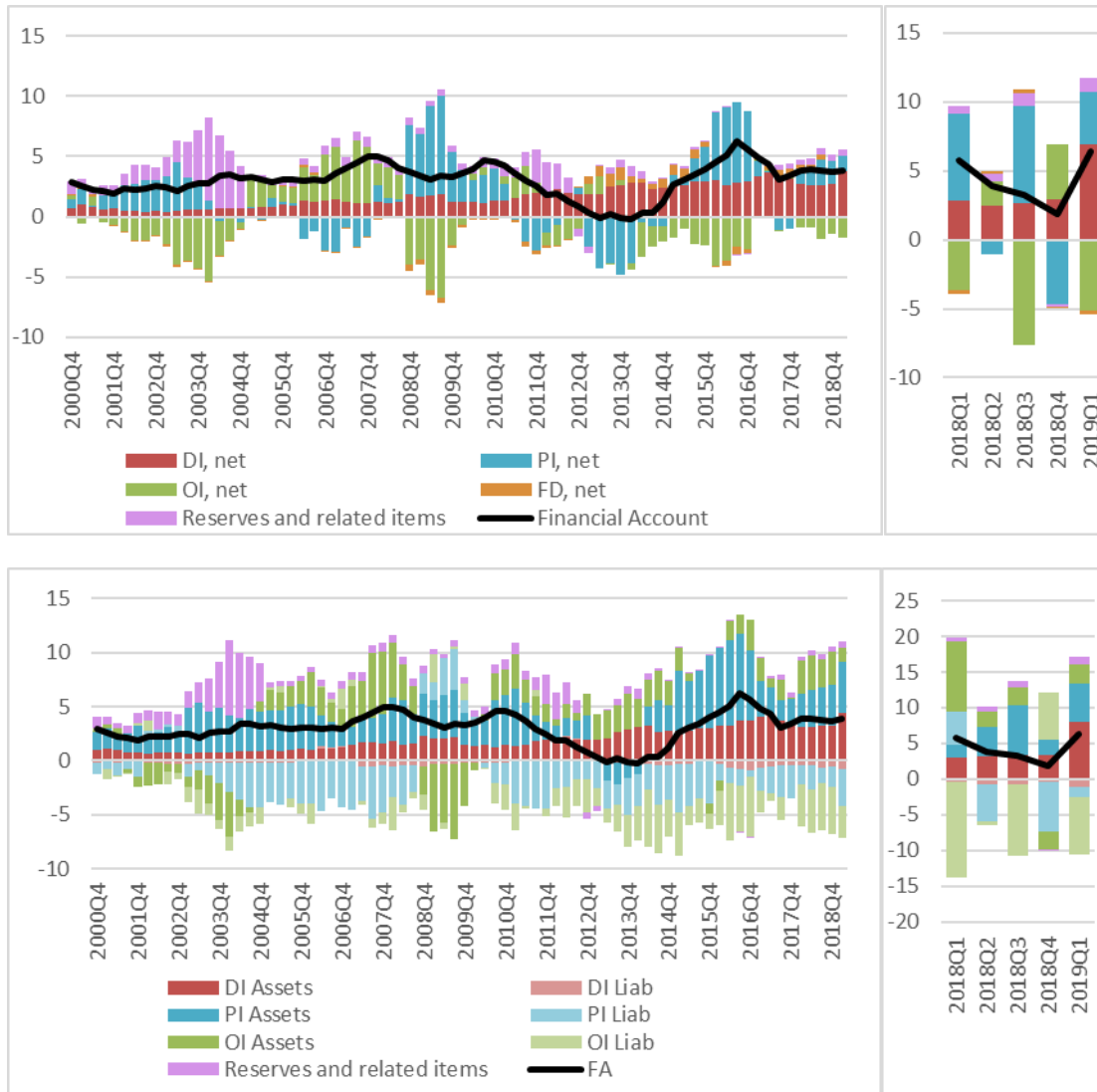
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics

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

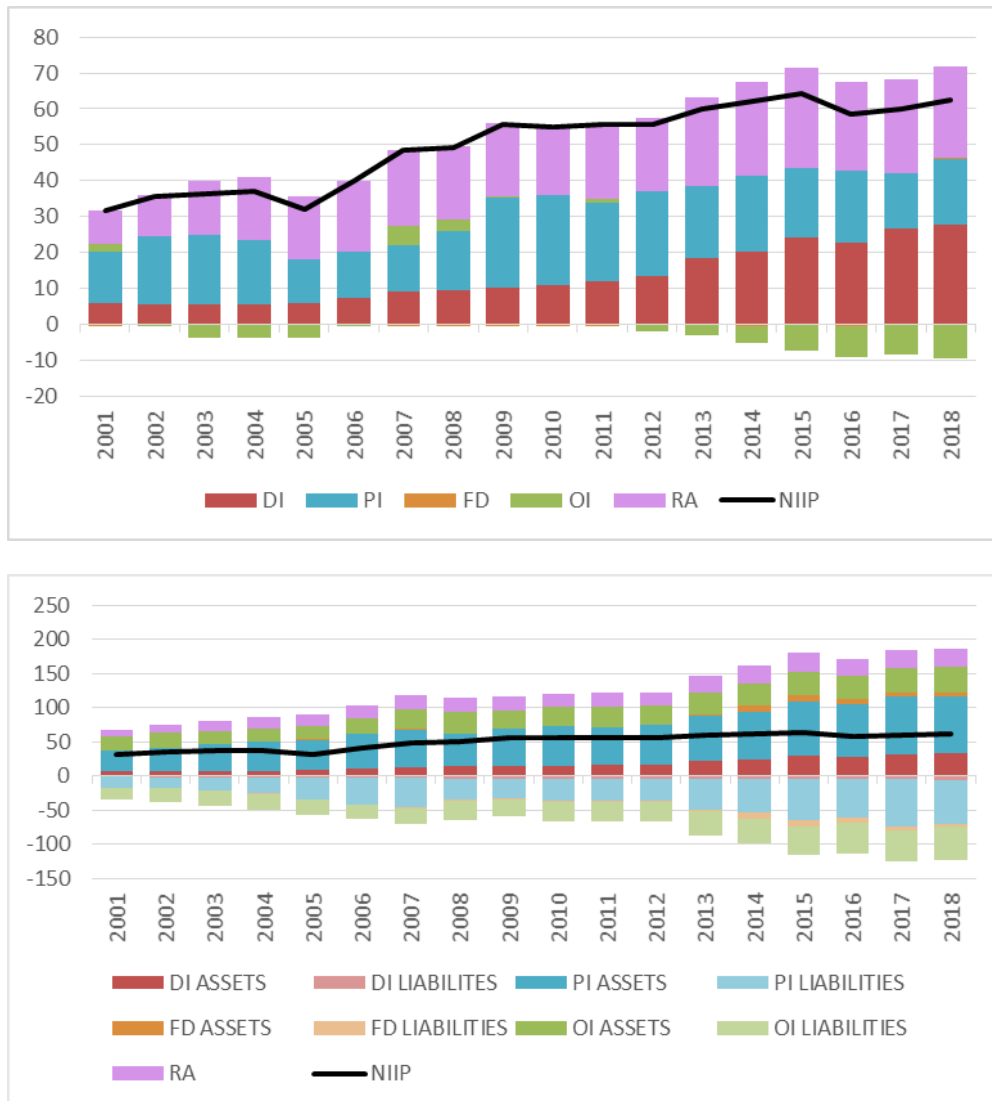
Figure 155: Japan net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

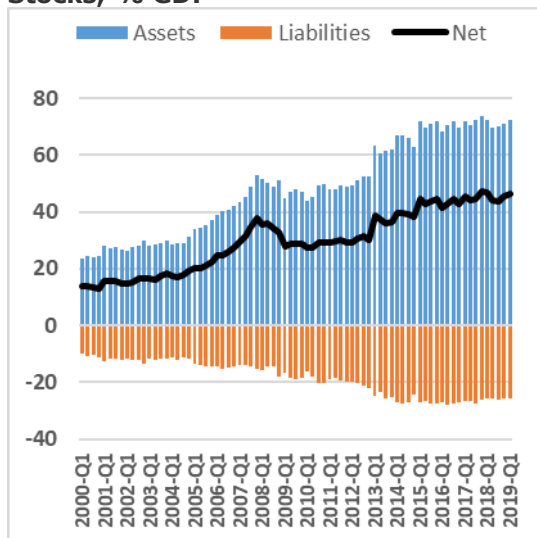


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

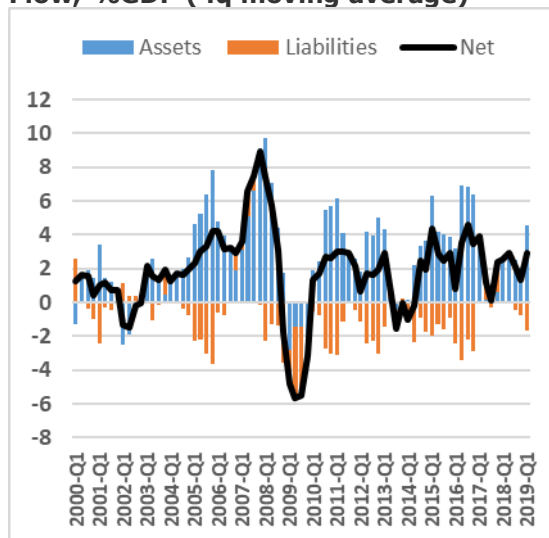
Notes: Both the NIIP positions and GDP are measured in USD

Figure 157: Japan, BIS LBS

Stocks, % GDP



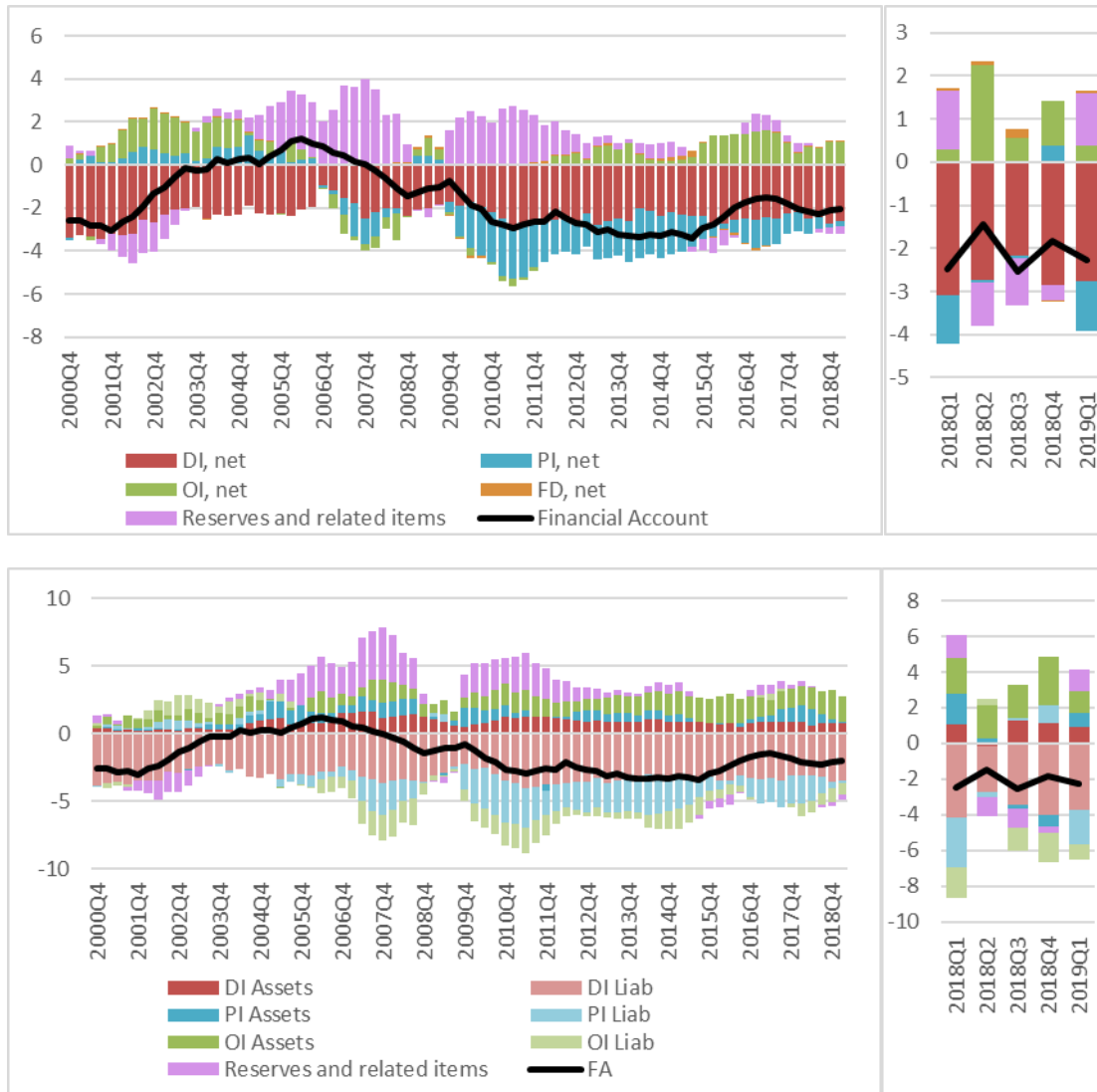
Flow, %GDP (4q moving average)



Source: BIS Locational Banking Statistics.

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

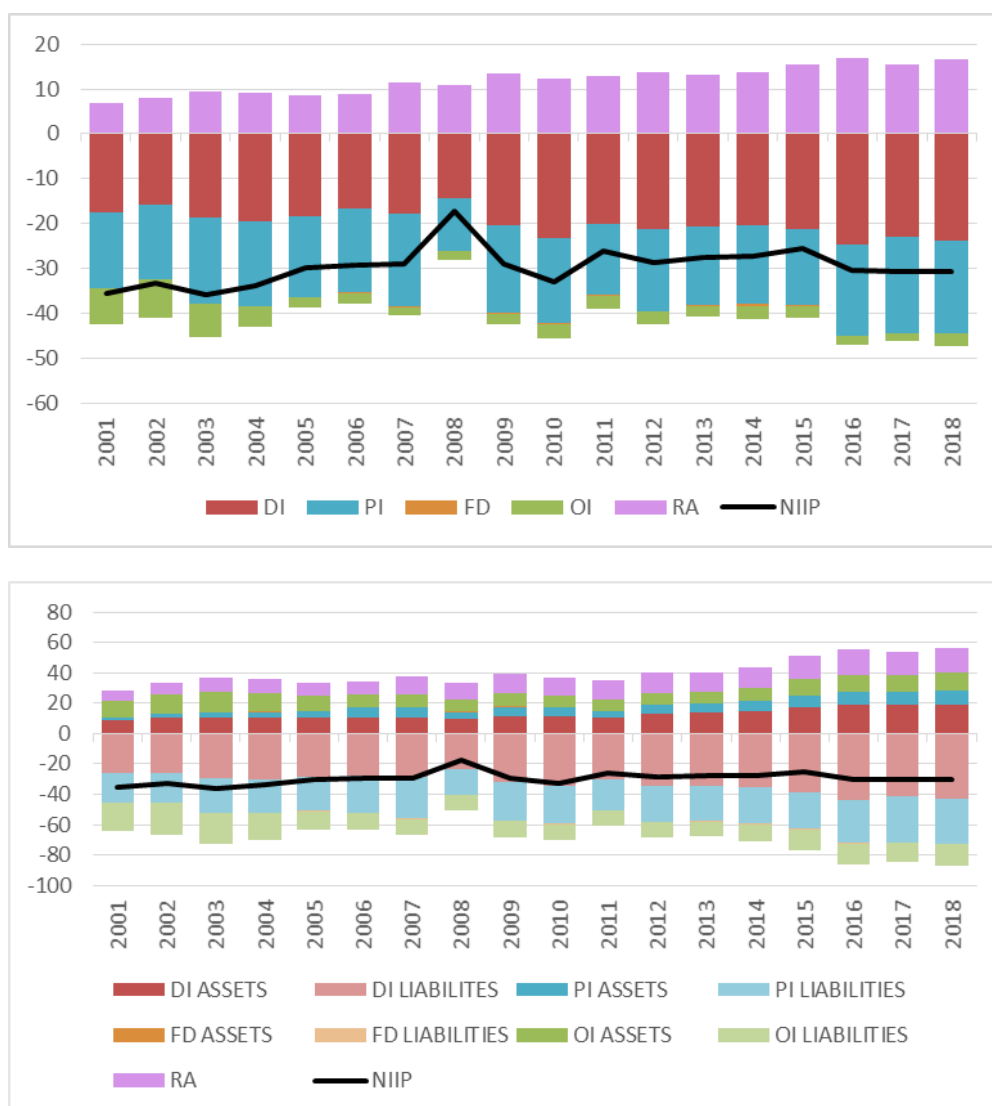
Figure 158: Latin America net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

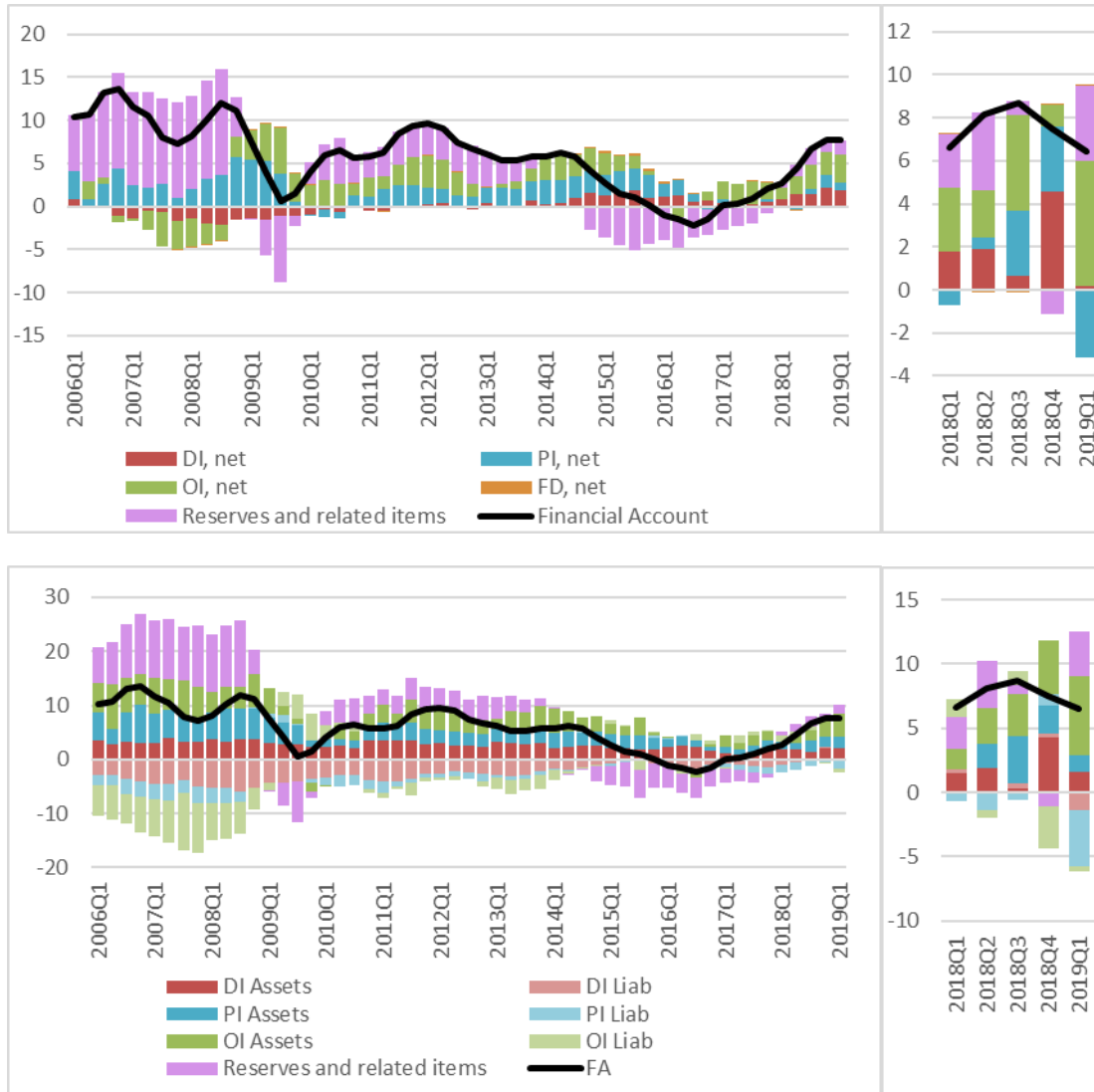
Figure 159: Latin America net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

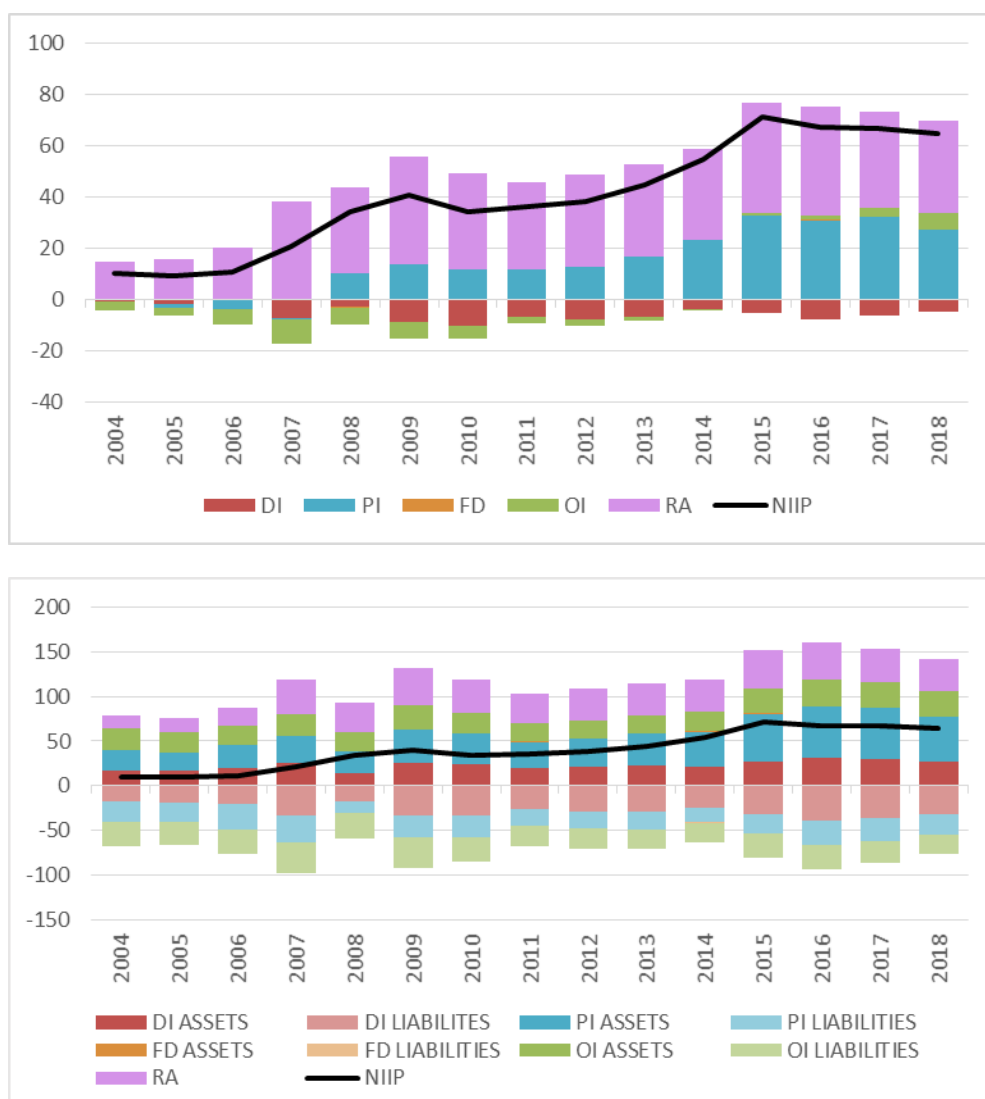
Figure 160: Oil net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

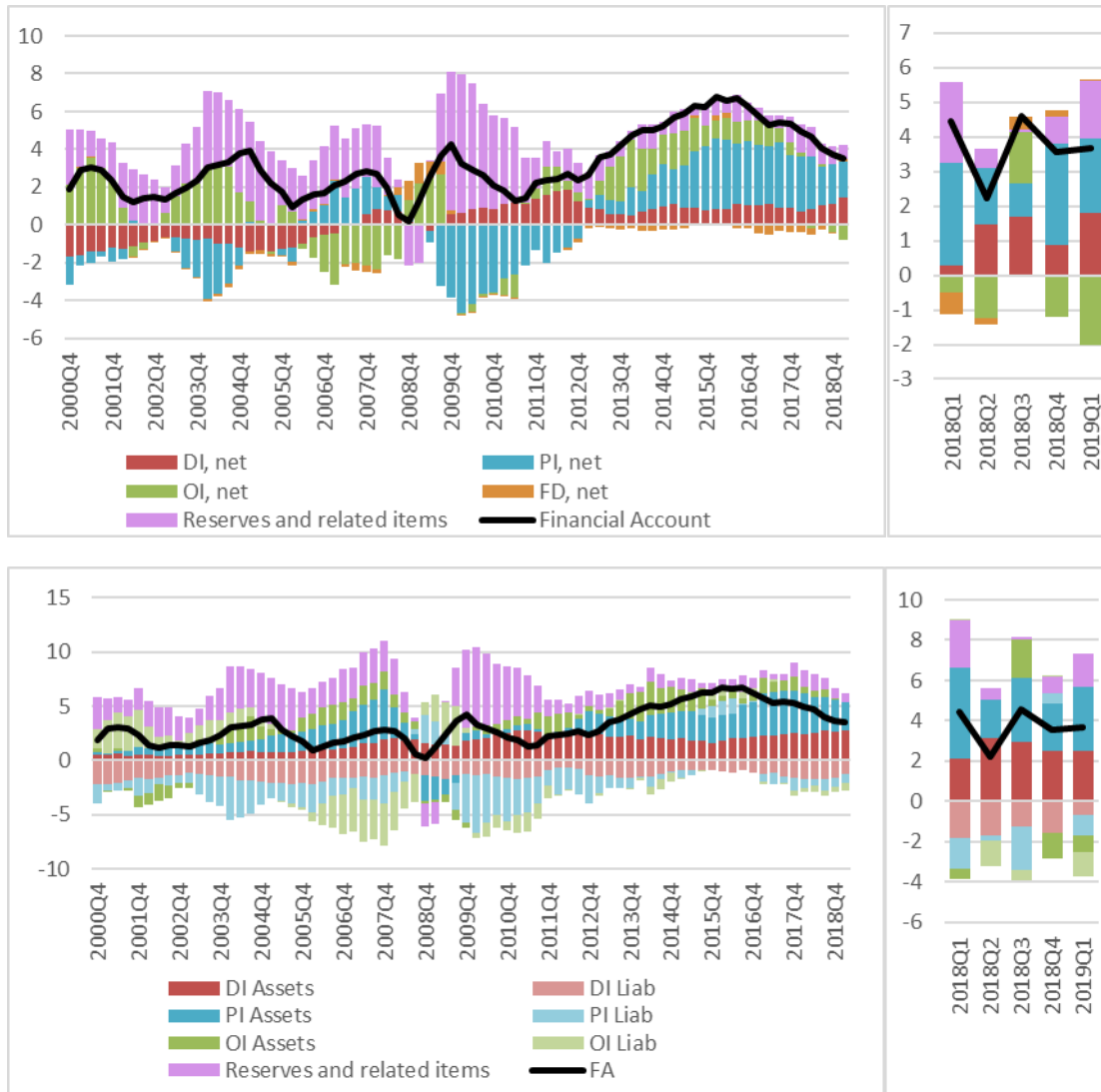
Figure 161: Oil net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

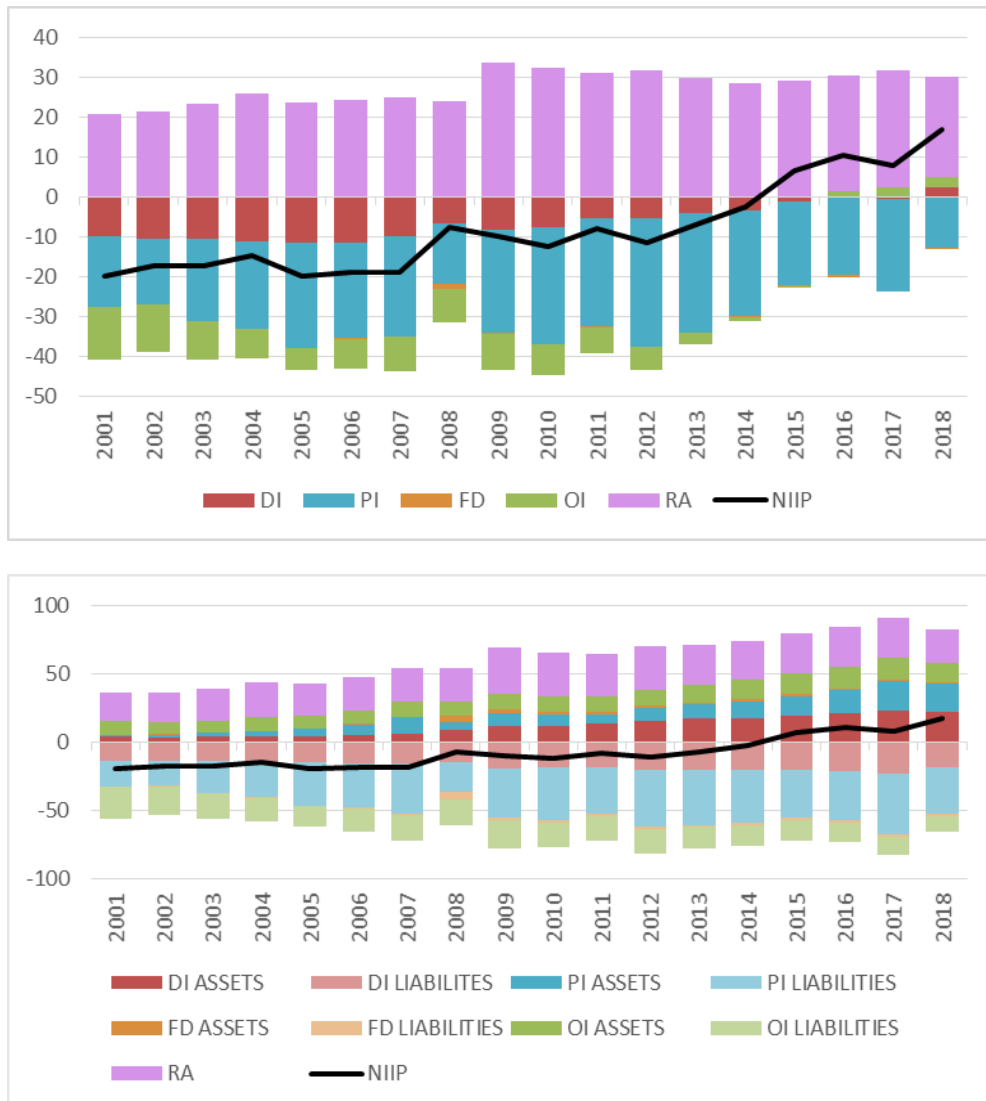
Figure 162: Surplus Asia net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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.

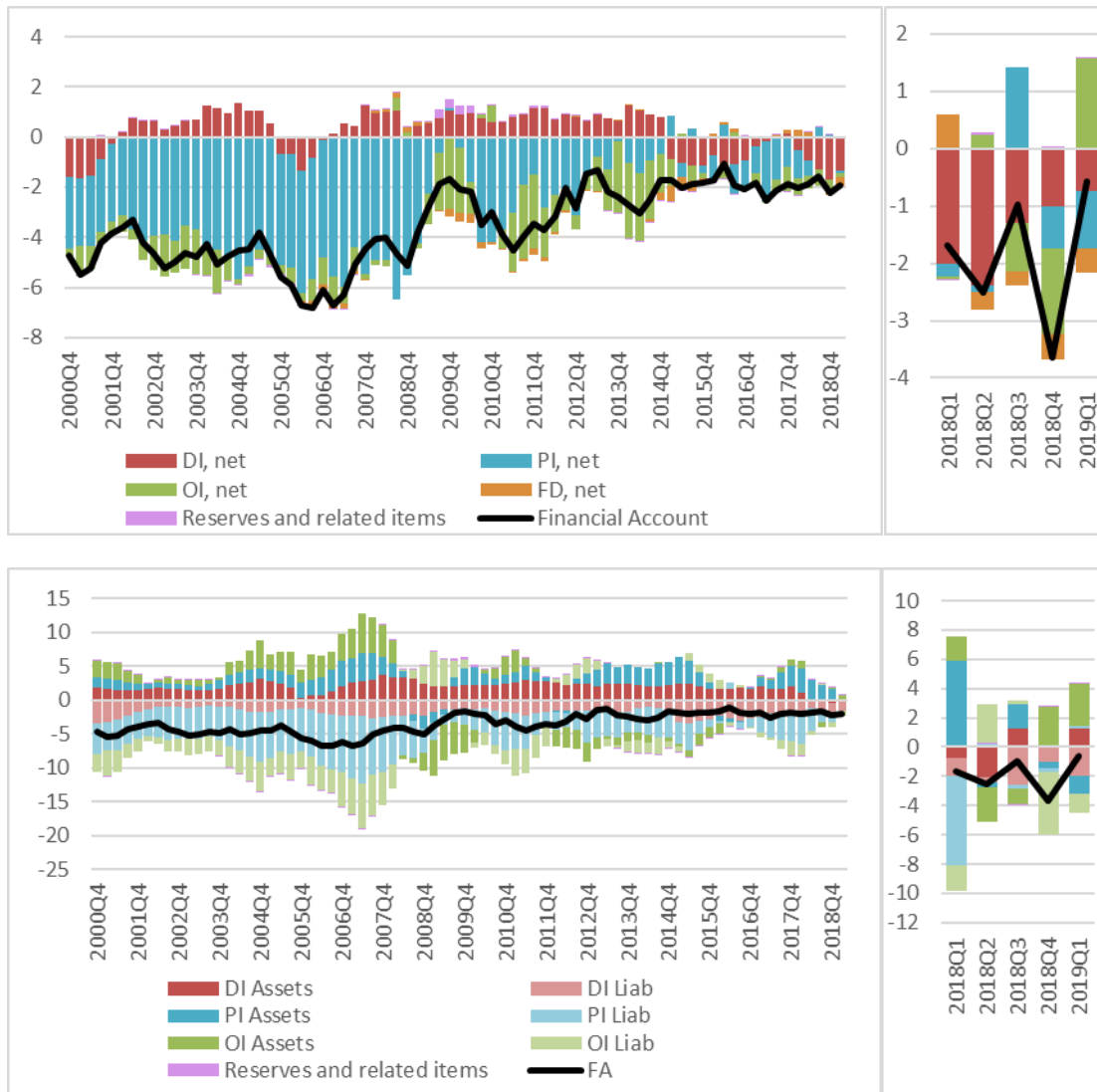
Figure 163: Surplus Asia net and gross international investment position by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

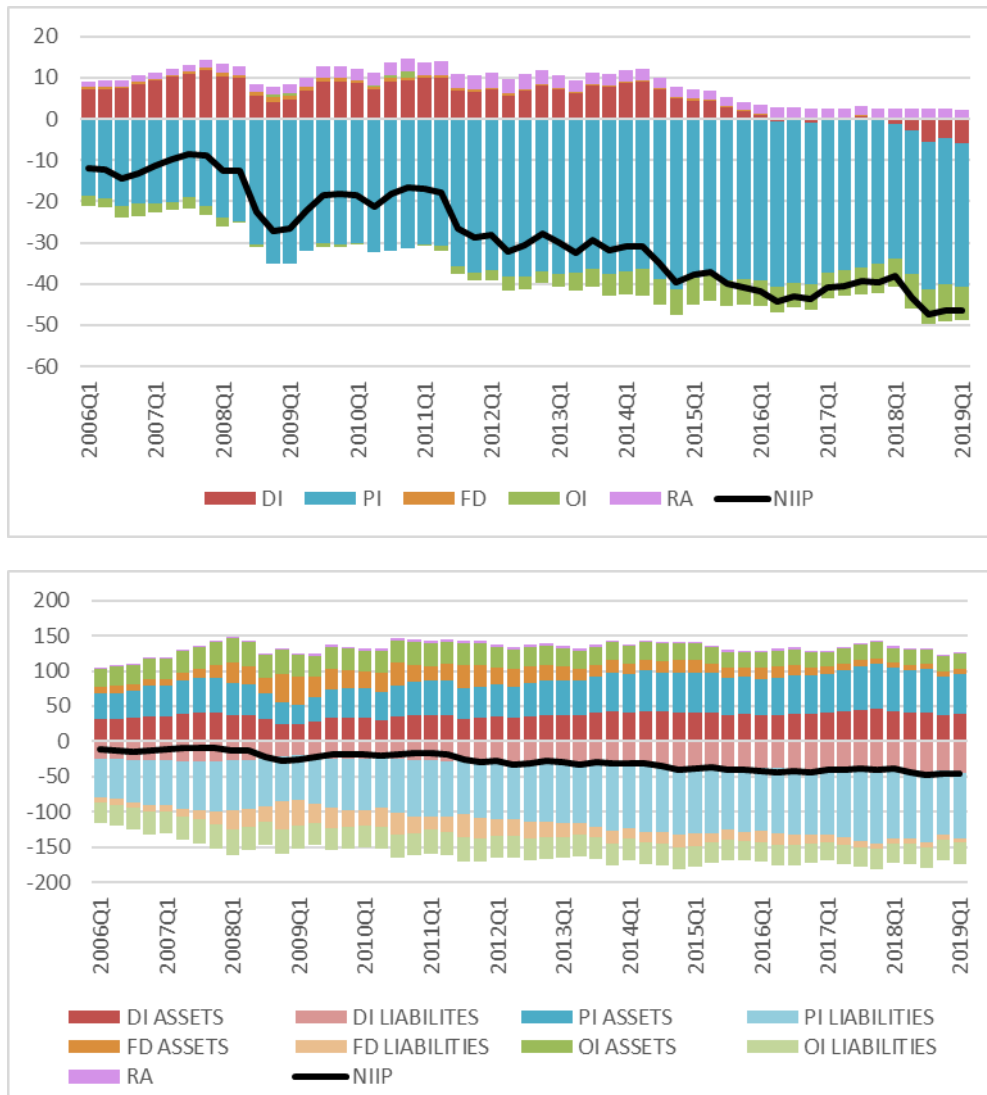
Figure 164: United States net and gross flows by instrument, % of GDP



Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

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

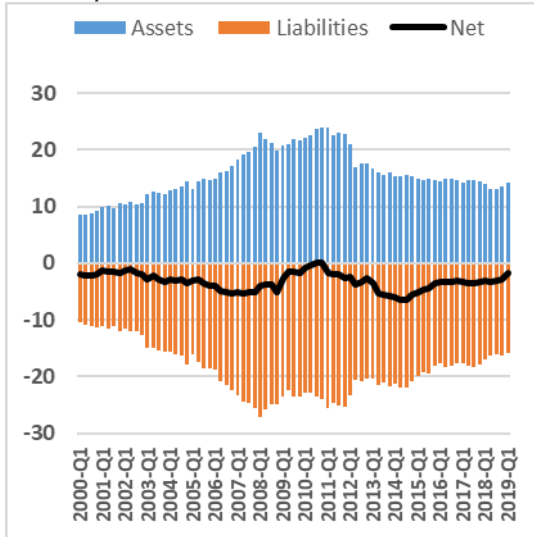


Source: IMF, International Financial Statistics (IFS) and World Economic Outlook (WEO), April 2019.

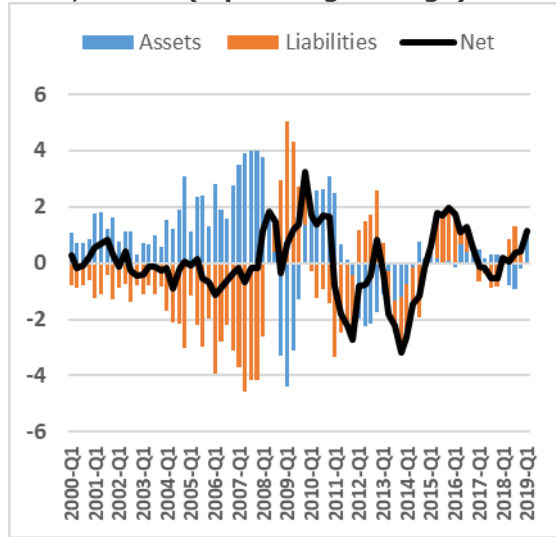
Notes: Both the NIIP positions and GDP are measured in USD.

Figure 166: 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

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