III.1. Recent capital flow developments in the euro area (34)

This section examines recent trends in balance of payment flows to and from euro area economies. Current account imbalances have receded in the euro area, reducing vulnerable countries' net funding requirements. This external rebalancing has been largely matched by lower net debt inflows. Furthermore, since the crisis a clear change in the composition of gross capital flows is detectable in the form of the pre-crisis debt bias largely disappearing. The section further assembles evidence of a gradual normalisation of financial market conditions and its impact on both capital flows and sectoral balance sheets, finding that deposit flight and safe haven flows have receded in the second half of 2012. Furthermore, monetary financial institutions appear to be engaging in cross-border debt deleveraging and net claims of central banks on the ECB seem to no longer be building up.

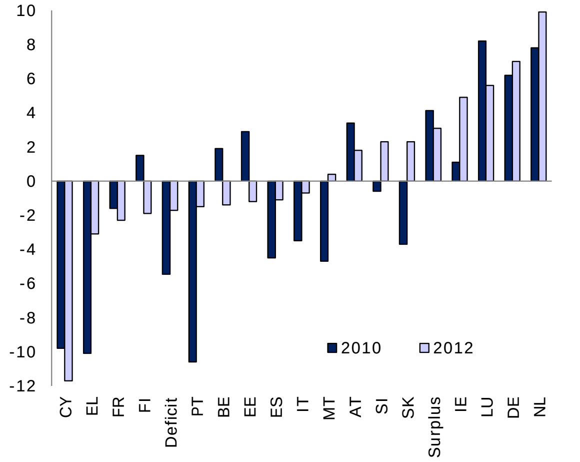
Introduction

The effect of the economic and financial crisis on euro area countries' external positions has been examined recurrently by the European Commission and, as a result, is becoming better understood. (35) Graph III.1.1 shows the narrowing of current account divergences that took place between 2010 and 2012, revealing a substantial improvement in deficit countries' average balances and a more moderate reduction in the average surplus position.

Against the background of pronounced market turmoil, financial fragmentation and redenomination fears, which gripped parts of the euro area in 2011 and 2012, international capital flows have been severely affected at the global and euro area level. (36) Leading on from this, this special topic examines in more detail the financial flows that form the counterpart to current account positions, in particular concentrating on qualitative and quantitative changes in both net and gross flows of financial capital in economies of the euro area. It further investigates how the external balance sheets of different institutional sectors of euro area Member States have been affected by these financial flow developments.

Graph III.1.1: **Current account positions**

(% of GDP, 2010 and 2012)



Source: Eurostat.

Developments in net financial flows

The financial account measures the flows of cross-border financial transactions that, in a balance of payments accounting sense, form the necessary counterpart to economic transactions such as goods and services trade that are recorded in the current account. Unless there are large recording errors, omissions, reclassifications or valuation changes in the balance of payments, the financial account should generally behave as a mirror image to the current account, only entered with the opposite sign in the balance of payments.

Two broad types of financial flows can be distinguished for the purpose of the analysis at hand. Debt-type instruments comprise all form of fixed income products (bonds and notes), as well as loans and deposits between residents and non-residents. Equity-type instruments capture all forms of foreign direct investment, as well as portfolio investment in corporate shares. This distinction is both empirically relevant and economically meaningful. Advanced economies

(34) Section prepared by Anton Jevcak and Robert Kuenzel.
(35) See D'Auria, F., I. in' t Veld and and R. Kuenzel (2012), 'The dynamics of international investment positions', *QREA* Vol. 11, No. 3 and Jevcak, A., R. Kuenzel and R. Setzer (2012), 'Capital Flows into vulnerable countries: official and private funding trends', *QREA* Vol. 11, No. 1.
(36) For a comprehensive analysis of capital flows in the global and euro area economy see Lane, P.R. (2013), 'Capital flows in the Euro area', *European Economy, Economic Papers*, No. 497.

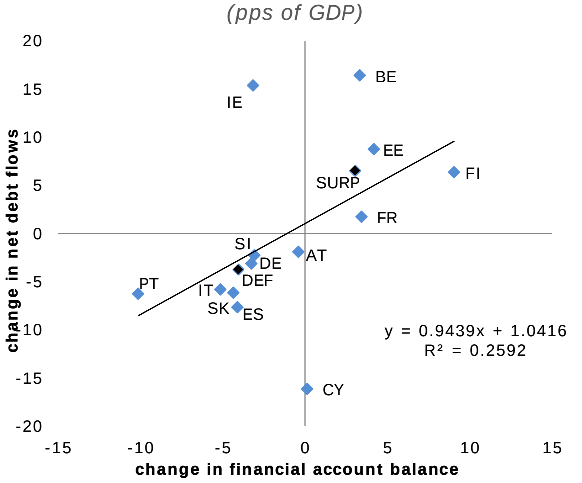
typically show a higher equity share in foreign liabilities than developing economies (Lane and Milesi-Ferretti 2007). Faria et al. (2007) also find that larger, more open economies with higher institutional quality have a greater equity share in foreign liabilities.

From an economic perspective, equity investment allows for the sharing of macroeconomic risks since the yield return on equity products is state-contingent, as dividends fall or are cancelled in unprofitable times. Debt-type instruments, by contrast, feature a fixed payment schedule whose disruption can fuel adverse feedback dynamics, especially during a financial crisis where the capacity of banks and governments to support distressed debtors falls (Lane 2013 op. cit.). Ultimately, the extent to which a country is able to share and transfer income losses abroad will depend crucially on the size and structure of foreign equity and debt liabilities.

From an aggregate macroeconomic viewpoint, the return on both equity and debt instruments has major determinants in common, including the strength of domestic economic activity and overall credit conditions. However, because the global macrofinancial imbalances that arose prior to the crisis were predominantly debt-related (rather than being obvious equity bubbles), one might therefore expect changes to the macroeconomic outlook during crisis times to particularly affect international debt flows. (37)

Returning to the opening observation that current account positions have narrowed particularly on the side of deficit countries since the start of the crisis, Graph III.1.2 plots the change in financial account balances of euro area countries against the change in external net debt flows. The reduction in financial account balances for the group of deficit countries (DEF) corresponds to an improvement in their current account position, while financial account balance of surplus countries (SURP) increased as they reduced their net lending abroad. The regression line further shows that these changes are associated with commensurate changes in debt flows. On average, a 1 p.p. of GDP reduction in the financial account balance is associated with a 0.9 p.p. reduction in net debt flows. This suggests that the lion's share of external adjustment during the euro area crisis has been met through lower net flows of debt, as might be expected on the basis of the preceding theoretical considerations. This pattern also squares with more generally observed trends of private sector debt reduction in bad economic times. (38)

Graph III.1.2: **Change in debt and financial account flows between 2010 and 2012**



(1) A positive (negative) change signifies an increase in the financial account balance, i.e. higher (lower) net capital inflows or lower (higher) net outflows.
Source: DG ECFIN calculations basd on Eurostat data.

Although debt flows are clearly being affected more systematically than equity, (39) the 'debt' category contains a diverse set of assets, and care must be taken in economically interpreting the corresponding flows. Debt comprises not only government and corporate bonds, private sector bank loans and deposits, but also 'TARGET 2' (T2) assets and liabilities (40). These notional net claims between euro area central banks (CBs) and

(37) A further reason for this supposition is that credit risk has since the crisis befallen the government sector, which does not issue equity liabilities.

(38) See Cuerpo C., I. Drumond, J. Lendvai, P. Pontuch and R.l Raciborski (2013), 'Indebtedness, deleveraging dynamics and macroeconomic adjustment', *European Economy, Economic Papers,* No. 477 and Ruscher, E. and D. Wolff, 'Corporate balance sheet adjustment: stylized facts, causes and consequences', *European Economy, Economic Papers*, No. 449.

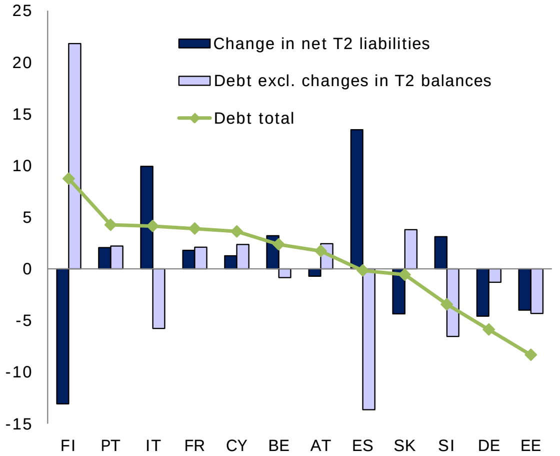
(39) A replication of Graph III.1.2 using equity flows on the vertical axis instead shows no correlation at all.

(40) The Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET) is now in its second generation (TARGET2) and settles cross-border transfers of CB deposits. T2 generates counter-balancing credit claims between each national central bank and the ECB, which are automatically aggregated and netted out at the end of each day. Resulting net claims or liabilities of CBs vis-à-vis the ECB resulting from cross-border T2 payments are included in the monetary authority's contribution to a country's international investment position, while their (transactional) changes are recorded in the BoP under "other investments: loans/currency and deposits".

the ECB have risen to prominence since 2011 due to the unique mechanics of intra-euro area capital flight intermediated by the Eurosystem. As demonstrated in a previous edition of the Quarterly Report, T2 balances have to a large extent mirrored net private sector capital flows between euro area members and have thus acted as a stabiliser for the balance of payments during the crisis. ([41])

Graph III.1.3: **Net debt flow decomposition**

(2011-12 annual average, pps of GDP)



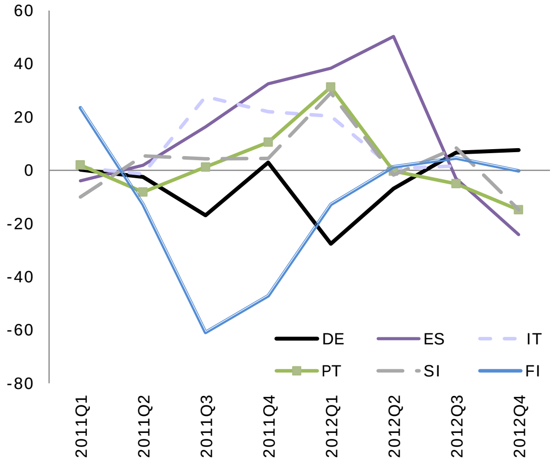
(1) Change in net T2 liabilities approximated by net flows in Other Investment reported by monetary authorities.
Source: DG ECFIN calculations basd on Eurostat data.

The next question therefore should be whether the above association of net debt and financial account flows predominantly reflects changes in T2 balances, and how important (if at all) these have been in overall debt flows of particular Member States.

Graph III.1.3 paints a mixed picture for the countries depicted, which are those where net financial flow data related to T2 balances is available. In the majority of countries, the now-familiar pattern of opposing movements between the evolution of net T2 liabilities and non-CB debt flows is visible. Among these countries Italy and Spain stand out, where overall net debt flows were small but masked big shifts in the composition of debt liabilities – in other words, increases in net T2 liabilities reflected private capital outflows. ([42]) By contrast, in 5 of 12 countries changes in net T2 liabilities have been positively correlated with private debt flows, with 3 of these countries (PT, FR and CY) recording net debt inflows. These trends were significant for the 2011-12 period overall, but Graph III.1.4 shows that since mid-2012 changes in T2 balances have largely reversed:

Graph III.1.4: **Quarterly change in net TARGET 2 liabilities**

(% of GDP, 2011-2014Q4)



(1) Change in net T2 liabilities approximated by net flows in Other Investment reported by monetary authorities.
Source: DG ECFIN calculations basd on Eurostat data.

After widening significantly in 2011 and remaining high in the first half of 2012 (especially in Spain), net T2 flows have more or less entirely reversed from Q3 onwards. As of Q4 2012, Spain, Portugal, Slovenia and Italy recorded a reduction in net T2 liabilities, while T2 balances also stabilised in Finland and declined in Germany. To the extent that the widening of T2 balances can be interpreted as a reflection of intra-euro area capital flight from vulnerable parts of the euro area, developments in the second half of 2012 would then suggest that these outflows have started to reverse.

Aside from T2 developments, the second half of 2012 also showed a noticeable improvement in underlying private capital flows into vulnerable economies. Portugal, Italy and Spain all showed a noticeable improvement in net 'other investment' if when excluding T2 changes, leaving net flows close to zero in the second half of 2012 following large gyrations in 2010 and 2011. This relative improvement is also evident for portfolio

([41]) See Jevcak, A., R. Kuenzel and R. Setzer (2012).
([42]) Finland and Portugal show somewhat surprising developments. Finland recorded very large net deposit inflows from non-euro area Scandinavian banks, whose safe-haven reputation attracted large €-denominated deposits from vulnerable Member States. See Section 3.3 of Finland's recent in-depth review: http://ec.europa.eu/europe2020/pdf/nd/idr2013_finland_en.pdf Portugal showed comparatively small T2 balance changes relative to IT and ES, and these were limited to Q4 2011 and Q1 2012, reversing sharply in H2 2012.

investment flows in the second half of 2012, as these three economies are all recording net inflows of portfolio investment again as of Q4 2012. This considerable recovery was overwhelmingly driven by returning investment into domestic debt securities, whereas net flows into equity securities have shown only minor fluctuations on a net basis throughout the crisis.

Overall, this normalisation of external funding flows would accord with a more general impression of economic and financial tail risks having been reduced in the euro area and financial markets having somewhat stabilised. Decisive policy actions since the summer of 2012 by Member States and European institutions, including by the ECB, have supported this easing of macrofinancial risks.

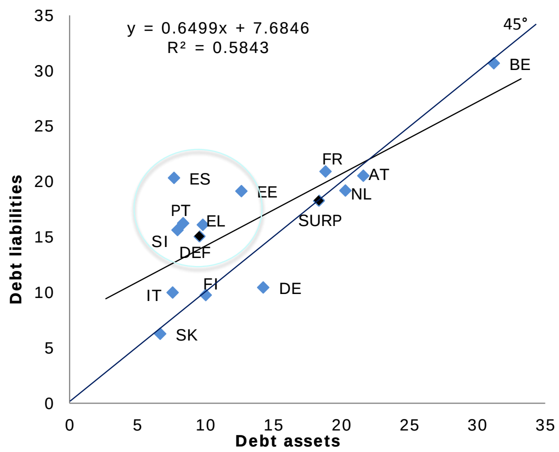
Gross debt flows and external deleveraging

While a reduction in net debt inflows is in principle positive from the perspective of external debt sustainability, everything else being equal, a change in net capital flows may be small compared to the net international investment position (NIIP). This makes a net flow adjustment a necessary, but not sufficient condition for ensuring external debt sustainability. Furthermore, a separate type of macrofinancial risk is associated with large gross external asset and liability positions build up through large gross financial flows, even if net capital flows and thus the NIIP remain unaffected. These risk factors are those commonly associated with financial leverage, i.e. a high (or rising) ratio of financial assets or liabilities to common equity – though in a macroeconomic context, external leverage can be defined as an economy's gross stock of foreign assets or liabilities to GDP. With external leverage liquidity risks increase, as does the value at risk from possible mismatches in the currency, asset and maturity composition of assets and liabilities. It is therefore not surprising that balance sheet shrinkage of various sectors of the euro area economy has been such a ubiquitous hallmark of the crisis aftermath, given the fundamental reduction of risk appetite by economic agents and investors and the perceived widening of tail risks.

Graphs III.1.5 and III.1.6 examine the extent to which external leveraging and deleveraging have been apparent in gross debt flows before and after the crisis. Graph III.1.5 shows that in the pre-crisis period (2004-2007) deficit countries showed a particular bias towards net debt liability accumulation, while surplus countries flows were debt-neutral on balance; the greater the upwards vertical distance to the 45 degree line, the greater the average annual net inflow of debt. The significantly positive y-axis intercept confirms an overall net debt liability bias, while the slope coefficient below unity implies that this debt bias decreased with overall leverage. These findings square fully with a large body of literature on pre-crisis financial trends. (43)

Graph III.1.5: **Gross Debt Flows**

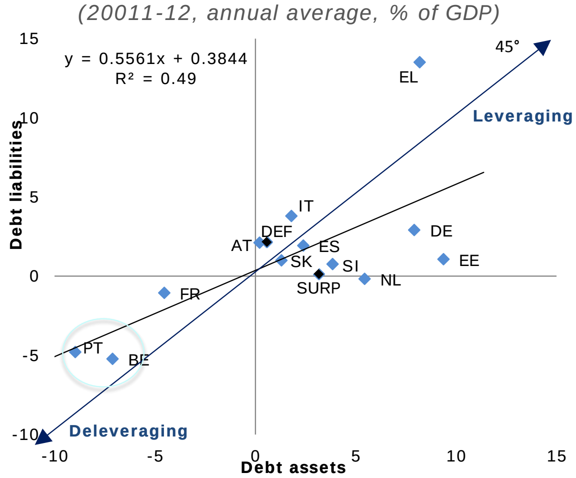
(2004-07, annual average, % of GDP)



Source: DG ECFIN calculations basd on Eurostat data.

Graph III.1.6: **Gross Debt Flows**

(20011-12, annual average, % of GDP)



Source: DG ECFIN calculations basd on Eurostat data.

By contrast, Graph III.1.6 shows a significant change in gross debt accumulation in the period of 2011-12 for all countries examined. Generally

(43) See Lane (2013) for an overview.

speaking, much lower gross debt flows are evident, implying that even where gross flows are still positive, the pace of debt leveraging has slowed down relative to the pre-crisis trend in Graph III.1.5. However, only for countries in the south-western quadrant (BE, PT, FR) can outright debt deleveraging be said to be occurring. Taken in the aggregate, the net debt liability bias has disappeared (intercept close to zero, flatter slope).

Net IIP developments by sector

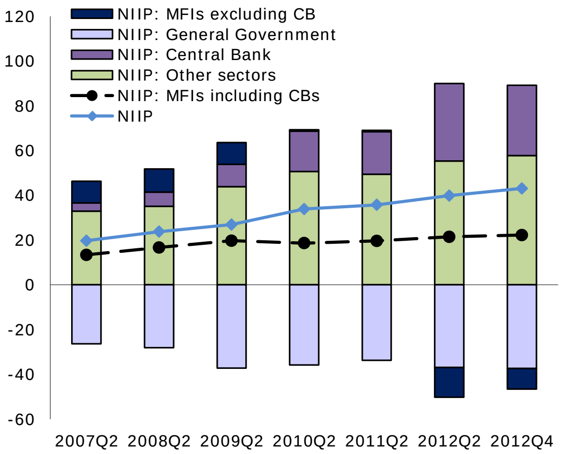
The preceding sections have revealed significant quantitative and qualitative changes in capital flows to euro area economies. This final section puts these changes in the context of wider external balance sheet developments in the euro area. Using the quarterly IIP data available in Eurostat, it is possible to assign external assets and liabilities to one of the following four sectors: 1) central bank, 2) general government, 3) monetary financial institutions (MFIs) and 4) other sectors. (44) However, a complete set of sectoral quarterly IIP data dating back to the outset of financial crisis in summer of 2007 is only available for 10 euro-area countries. (45) Country-level data are aggregated for countries with a positive net international investment position (NIIP) into "surplus countries" (BE, DE, FI, LU and NL) and, for countries with negative NIIP, "deficit countries" (EE, EL, ES, PT and SL). (46)

Surplus countries

The overall NIIP of surplus countries improved from 20% of GDP in Q2 2007 to 43% of GDP in Q4 2012, but its underlying sectoral composition changed in some cases by even larger magnitudes. As Graph III.1.7 shows, the main change concerns net foreign assets of CBs, which increased by almost 30 p.p. over this period, consistent with the T2 flow developments mentioned earlier, while the NIIP of other sectors (i.e. households and non-financial corporations) also improved by 25 p.p.. By contrast, MFIs' NIIP shrank by some 20 p.p., and that of general government by about 10 p.p.

Graph III.1.7: **Surplus Countries - Sectoral Composition of the NIIP**

(2007Q2-2012Q4, % of GDP)



Source: DG ECFIN calculations basd on Eurostat data.

A decomposition of the sectoral NIIP evolution into gross foreign assets and liabilities reveals that the deterioration in the NIIP of MFIs was mainly induced by a reduction in its gross foreign assets, suggesting cross-border deleveraging**.** On the other hand, the deterioration in the NIIP of the general government was driven by an increase in its gross foreign liabilities, ostensibly due to greater safe-haven inflows of debt financing. At the same time, the improvement in the NIIP of CBs and other sectors was induced by increases in their gross foreign asset holdings, in the former case related to rising T2 balances. This suggests that CB deposit inflows and related increases in T2 balances of CBs in surplus countries (47) were mainly driven by falling exposure of the domestic financial sector to other parts of the euro area (48), accentuated by increased non-resident holdings of domestic government securities due to "flight-to-safety" financial flows. On the other hand, the surplus of domestic savings over investment seems to have been mainly channelled into the accumulation of foreign assets by the non-financial private sector.

(44) This includes households and non-financial corporations. Direct investment positions are wholly attributed to this sector.
(45) These are Belgium, Germany, Estonia, Greece, Spain, Finland, Luxembourg, Netherlands, Portugal and Slovenia
(46) The deficit and surplus groupings in this section aim to match the preceding section in as far as possible, given different data availability between BoP flow and stock data. The main difference is the inclusion of Greece in the stock data of this section, unlike in the preceding part, where no recent data is available.
(47) As far as financial account flows are concerned, CB deposit inflows can either be generated by a reduction in gross foreign assets or by an increase in gross foreign liabilities. While changes in the IIP can in principle also result from valuation effects, these do not affect T2 balances, which are denominated in euro at fixed values and are thus only affected by BoP flows.
(48) For example, after an increase from below €200bn in 1999 to above €750bn by late 2008, claims of banks located in Germany on entities located in euro-area member states with negative NIIPs in 2012 (FR, IT, ES, PT, EL, CY, SL, IE, SK, EE) started to decline rapidly, falling to below EUR 450bn by end-2012.

Some reversals in the aforementioned longer-term trends in sectoral NIIPs could be observed in the second half of 2012. The NIIP of CBs peaked at 35% of GDP in Q2 2012 before contracting to 31% of GDP by the end of 2012. At the same time, the NIIP of the MFI sector excluding CBs improved over the second half of 2012, while the NIIP of the general government sector broadly stabilised.

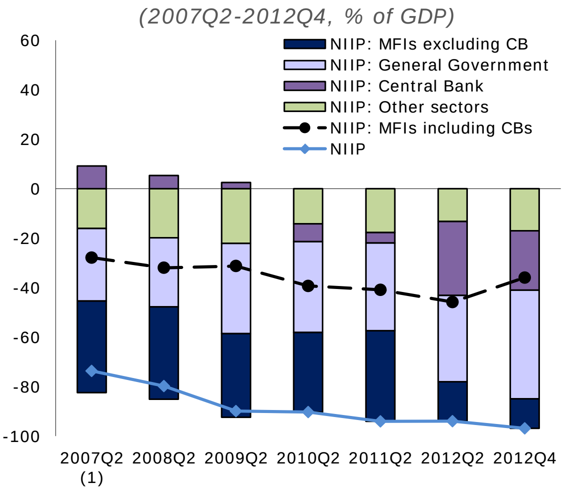
Deficit countries

Graph III.1.8 plots the corresponding NIIPs for deficit countries. The deterioration in the NIIP of deficit countries from -74% of GDP in Q2 2007 to -97% of GDP in Q4 2012 was also accompanied by substantial changes in sectoral NIIPs. While the NIIP of CBs deteriorated by more than 30 p.p., again in line with T2 trends, MFIs excluding CBs improved their NIIP by 25p.p.. In addition, the NIIP of the general government sector also declined by almost 15p.p.. The NIIP of other sectors, however, did not exhibit a clear trend, remaining broadly unchanged over the period.

Domestic MFIs improved their NIIP in a balanced manner by both increasing their foreign asset holdings and by decreasing their foreign liabilities. On the other hand, the deterioration in the NIIP of CBs stems fully from the increase in their gross foreign liabilities, driven by rising T2 liabilities. In addition, the further decline in the NIIP of the general government sector also resulted from an increase in its gross foreign liabilities. Overall, this suggests that net outflows of CB deposits resulting in growing T2 liabilities of CBs in deficit countries were mainly driven by the domestic commercial banking sectors which acquired foreign assets (flight to safety) while also repaying their external liabilities. At the same time, the gap between the level of domestic savings and investment seems to have been predominantly covered by foreign borrowings of the general government sector.

Latest data show the NIIP of CBs improving in deficit countries throughout the second half of 2012 to -24% of GDP by end-2012. The recent reversal in net CB deposit flows was likely mainly related to the non-resident funding of the general government sector, which increased over the second half of 2012 (after having broadly stagnated since mid-2009) as MFIs continued to reduce its net foreign liabilities.

Graph III.1.8: **Deficit Countries - Sectoral Composition of the NIIP**



(1) 2007Q4 data used for Greece.
Source: DG ECFIN calculations basd on Eurostat data.

Conclusions

External adjustment during the euro area crisis has been largely met through lower net inflows of debt, as theory would suggest. The pace of gross foreign debt accumulation slowed considerably in the period of 2011-12 for all countries examined, while the pre-crisis bias towards net debt accumulation has disappeared. However, outright debt deleveraging has so far been observed only in three countries (BE, PT, FR). Furthermore, analysis of recent capital flows to and from euro area economies suggests a relative normalisation in the sense that the previous built-up of T2 claims has begun to reverse. Furthermore, there are signs in more vulnerable economies that portfolio capital flows are returing as sources of external funding.

Sectoral analysis of NIIPs suggests that cross-border deleveraging of MFIs accounted for most of the net inflows of CB deposits and the related increase in T2 claims of CBs in surplus countries. Increased non-resident holdings of domestic government securities, arguably related to "flight-to-safety" financial flows, will have also contributed to this. On the other hand, net outflows of CB deposits from deficit countries resulted in growing T2 liabilities of CBs and were mainly related to cross-border activities of domestic MFIs, which acquired foreign assets and simultaneously also lowered their external liabilities. Nevertheless, these longer-term trends have begun to be reversed in the second half of 2012, in line with a relative financial market stabilisation in this period.