V. ECB's asset purchase programmes and changes in international investment positions of euro area countries between end-2014 and end-2016

This section looks closer at changes in the sectoral composition of gross foreign assets and liabilities which accompanied massive injections of central bank liquidity through the ECB's expanded asset purchase programme between end-2014 and end-2016. It focuses in particular on eight euro-area countries where flows of central bank reserves induced the largest changes in external positions of their national central banks. It shows that portfolio rebalancing towards foreign financial assets by the private non-banking sector in the main TARGET2 debtor countries has likely contributed to the recent divergence in TARGET2 balances. This divergence might have also reflected repayments of gross foreign liabilities by their banking sector (excluding NCBs). In other words, the private sector in the main TARGET2 debtor countries seems to have taken the opportunity offered by the increased provision of liquidity by the Eurosystem to improve its NIIP. This should make it more resilient to a possible future tightening of global financing conditions. ([153])

V.1. Introduction

This section focuses on overall changes in the sectoral composition of international investment positions of four euro-area Member States with the highest TARGET2 ([154]) claims (i.e. Germany, Luxembourg, the Netherlands and Finland) as well as four euro-area Member States with the largest TARGET2 liabilities (i.e. Italy, Spain, Greece and Portugal) between end-2014 and end-2016. It attempts to identify changes in gross foreign assets and liabilities of each sector of the economy which might have been among the main drivers of recent divergence in TARGET2 balances of some euro-area national central banks (NCBs). ([155]).

With policy rates close to their effective lower bound, the Eurosystem balance sheet has played a crucial role in the ECB's monetary policy setting in recent years. The ECB decided in September 2014 to purchase simple and transparent asset-backed securities ([156]) (ABSs) under an ABS purchase programme (ABSPP) and euro-denominated covered bonds ([157]) under its third covered bond purchase programme (CBPP3). In January 2015, the ECB announced the expanded asset purchase programme (EAPP), encompassing the existing purchase programmes (ABSPP and CBPP3) and a new public sector purchase programme (PSPP, aka QE) which was launched in March 2015.

The combined monthly purchases under the EAPP were initially set at EUR 60 billion on average and were expected to be conducted until September 2016 (with the horizon being conditional on sustainably achieving an inflation path consistent with the aim of inflation rates below, but close to, 2% over the medium term). In March 2016, the ECB decided to increase the monthly pace of asset purchases to EUR 80 billion on average and to extend the expected horizon of purchases until March 2017. At the same time, it started purchasing investment-grade euro-denominated bonds issued by non-bank corporations established in the euro area under a new corporate sector purchase programme (CSPP). Finally, in December 2016, the ECB announced that from April 2017, net asset purchases were intended to continue at a reduced monthly pace of EUR 60 billion at least until the end of December 2017.

By purchasing domestic debt securities held by non-residents, euro-area NCBs also directly affect net international investment positions (NIIPs) of other main sectors of their economies. Purchases of domestic government debt securities from non-residents ceteris paribus improve the NIIP of the

([153]) The section was prepared by Anton Jevčák and Gerda Symens. The authors wish to thank Stefan Zeugner and Martin Schmitz for useful comments.
([154]) TARGET stands for Trans-European Automated Real-time Gross settlement Express Transfer system. TARGET2 is the second generation of TARGET. It is the real-time gross settlement system owned and operated by the Eurosystem and used by both central banks and commercial banks to process payments in euro in real time.
([155]) Keeping in mind that whereas changes in TARGET2 balances only reflect net cross-border flows of central bank money, most other components of the NIIP can apart from actual financial transactions also be affected by valuation changes.
([156]) An asset-backed security is issued by a special purpose entity and backed by a specified pool of underlying assets.
([157]) Covered bonds are debt securities issued by a bank and collateralised against a pool of its assets.

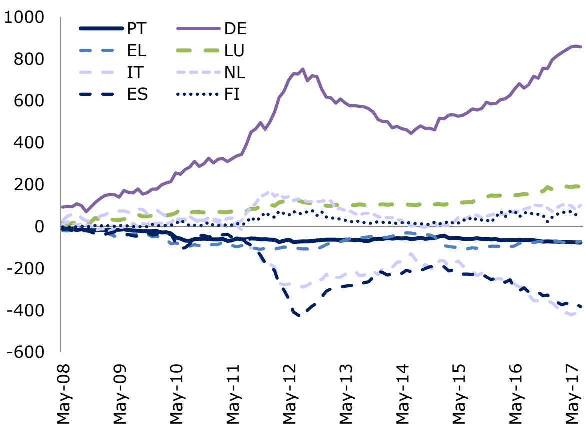
government sector, while purchases of domestic corporate debt securities as well as covered bonds and ABS held by non-residents lower foreign liabilities of the corporate and of the banking sector excluding the NCB (as long as non-residents hold their newly created euro liquidity with foreign banks). Whereas all NCBs within the Eurosystem conduct purchases under the PSPP, purchases under other programmes are only implemented by some euro-area NCBs. Nevertheless, public sector securities purchased under the PSPP accounted for 84% of net financial asset purchases under the EAPP throughout 2015 and 2016 with securities issued by supranational institutions representing 11% of the PSPP portfolio. Apart from domestic asset purchases by NCBs from non-residents, changes in the sectoral composition of the NIIP can also be induced by purchases of domestic securities from domestic residents, if these sellers (i.e. banks, households or corporations) use the newly injected euro liquidity to acquire foreign assets or repay their foreign liabilities.

V.2. Recent changes in the sectoral composition of NIIPs of the largest TARGET2 creditor and debtor countries

The Eurosystem purchased more than EUR 1.5 trillion of financial assets under the EAPP in 2015 and 2016. This led to a substantial increase in excess liquidity held by the euro-area banking sector at the Eurosystem which reached almost EUR 1.2 trillion by end-2016. In line with the portfolio balance theory (see e.g. Woodford (2012) ([158])), the increased amounts of excess liquidity were expected to stimulate demand for higher-yielding financial assets and thus lead to a further decline in financing costs in the euro area. However, while financing costs indeed declined across the euro area between early 2015 and late 2016 (as confirmed e.g. by the evolution of bank lending rates), the excess liquidity also disproportionately accumulated in certain euro-area countries.

TARGET2 balances are net claims or liabilities of euro-area national central banks vis-à-vis the ECB which result from cross-border payments settled in central bank money. Asset purchases by a NCB can thus also directly affect TARGET2 balances if the TARGET2 account used by the EAPP counterparty to receive payment for securities sold to this NCB is located in another euro-area country. In fact, according to the ECB, by early 2017, around 80% of all EAPP purchases had involved non-domestic counterparties, with around 50% of all assets purchased from non-euro-area residents. ([159])

Graph V.1: **TARGET2 balances**
(May 2008 - Jul 2017, bn Euro)



Source: ECB

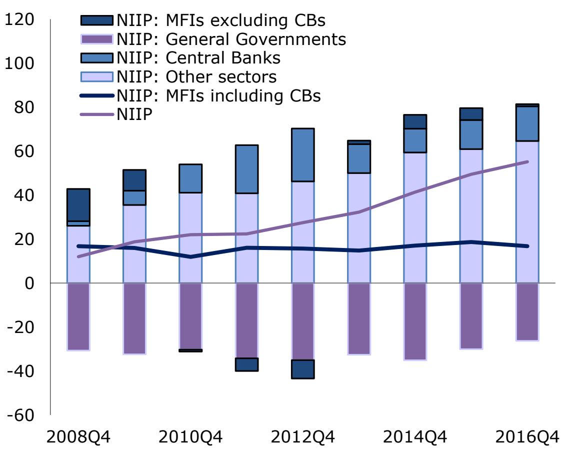
TARGET2 balances widened considerably during the euro-area crisis, between mid-2011 and mid-2012, as the most vulnerable countries experienced massive capital flight. Banks in these countries substituted Eurosystem funding for market-based funding that had dried up. As this liquidity was largely used to fund cross-border payments to banks resident in non-vulnerable countries, TARGET2 balances built-up. The cumulative TARGET2 claims of countries with positive balances thus peaked at above EUR 1 trillion in mid-2012 but then declined gradually to below EUR 600bn by mid-2014, thanks to the revival of foreign funding inflows into countries most strongly hit by the crisis. TARGET2 balances, however, started to widen again in the second half of 2014, concurrently with the start of asset purchases by the Eurosystem. The positive balance of TARGET2 creditor countries thus gradually increased again to above EUR 1 trillion in late 2016.

([158]) Woodford, M. (2012), 'Methods of Policy Accommodation at the Interest-Rate Lower Bound', presented at the Symposium on The Changing Policy Landscape in Jackson Hole on 31 August 2012.

([159]) For more detail discussion of the impact of the EAPP on TARGET2 balances see the ECB Economic Bulletin, Issue 7/2016 and Issue 3/2017 and the ECB Occasional Paper No 196.

In the case of the four largest TARGET2 creditor countries, the aggregate NIIP of their NCBs improved by EUR 230bn between end-2014 and end-2016. The improvement was substantially lower than the overall increase in their TARGET2 claims over this time period, which amounted to almost EUR 446bn, as the foreign liabilities of these NCBs also increased substantially, i.e. by EUR 242bn. This largely reflected an increase in their liabilities to non-euro-area residents (possibly related to their reserve management services ([160])) as well as higher liabilities to other euro-area residents (such as supranational institutions) and higher intra-Eurosystem liabilities (notably related to proportionately larger issuance of banknotes relative to the share of these NCBs in the ECB's capital ([161])).

Graph V.2: **TARGET2 Creditor Countries - Sectoral Composition of the NIIP**
(2008Q4-2016Q4, % of GDP)



Source: Eurostat and Commission services' calculations

On the other hand, the NIIP of their banking sector (i.e. monetary financial institutions, MFIs) excluding NCBs, deteriorated by almost EUR 200bn due to the EUR 312bn decline in their gross foreign assets between end-2014 and end-2016. As a result, the NIIP of their entire banking sector (including NCBs) "only" improved by some EUR 33bn between end-2014 and end-2016. At the same time, total gross foreign liabilities of government sectors in these creditor countries declined by EUR 294bn (as compared to EUR 395bn of domestic securities purchased under the PSPP by their NCBs) and thus induced an improvement in their aggregate NIIP by EUR 274bn.

Finally, the NIIP of other sectors ([162]) continued to follow its long-term upward trend, increasing from below EUR 2.3 trillion to above EUR 2.6 trillion. This likely mainly reflected the persistent current account surpluses of Germany, the Netherlands and Luxembourg which cumulatively amounted to almost EUR 645bn over 2015 and 2016 (while Finland actually recorded a cumulative current account deficit of EUR 3.5bn over this time period). Moreover, the change in the NIIP of other sectors masked much more substantial gross flows as their gross foreign assets holdings increased by more than EUR 2.9 trillion while their gross liabilities increased by almost EUR 2.6 trillion. This reflected the fact that these countries continued to attract large foreign capital inflows, also in the form of equity flows, such as FDIs and investments into mutual funds, which were re-channelled into foreign asset holdings.

In the main TARGET2 debtor countries, the aggregate NIIP of their NCBs deteriorated by EUR 210bn between end-2014 and end-2016. The deterioration was smaller than the overall increase in their TARGET2 liabilities over this time period which amounted to almost EUR 326bn. This was thanks to the fact that their foreign assets also increased by EUR 148bn, mainly as a result of an increase in their intra-Eurosystem claims (in particular related to the allocation of euro banknotes within the Eurosystem) as well as higher holdings of foreign securities (largely acquired through the EAPP).

In parallel, gross foreign liabilities of their banking sectors excluding NCBs declined by EUR 218bn, with their aggregate NIIP improving by EUR 184bn. Consequently, the NIIP of their entire banking sector (including NCBs) "only" deteriorated by EUR 27bn between end-2014 and

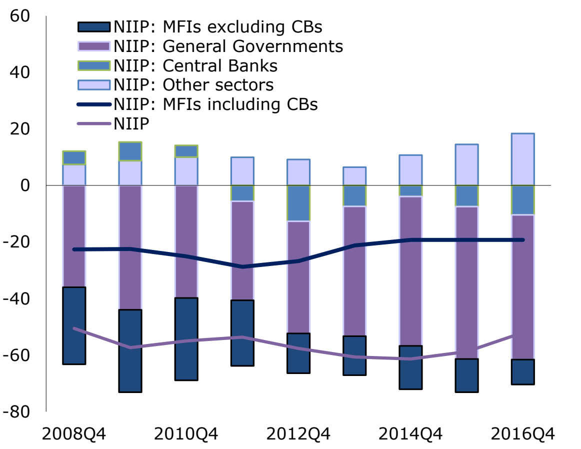
(160) The Eurosystem Reserve Management Services are a range of banking services offered by the Eurosystem to central banks, monetary authorities, state institutions and international organisations to enable them to manage their euro-denominated reserve assets comprehensively, efficiently, and in a safe, confidential and reliable environment. The full range of these services is provided by certain national central banks of the Eurosystem - Eurosystem Service Providers - within a single framework coordinated by the ECB.

(161) If the actual issuance of banknotes in circulation exceeds the NCBs' share in the ECB's capital, the surplus is recorded as net liability related to the allocation of euro banknotes within the Eurosystem under liabilities related to other operational requirements within the Eurosystem.

(162) The "other sectors" category comprises: (a) other financial institutions not covered by the MFI definition; (b) non-financial enterprises (public and private); (c) non-profit-making institutions serving households; and (d) households.

end-2016. The IIP data thus indicate that banks in the main TARGET2 debtor countries used some of central bank reserves created through the EAPP or other liquidity providing monetary policy operations to repay their debt liabilities to banks in the TARGET2 creditor countries (as reflected in the decline of their gross foreign assets).

Graph V.3: **TARGET2 Debtor Countries - Sectoral Composition of the NIIP**
(2008Q4-2016Q4, % of GDP)



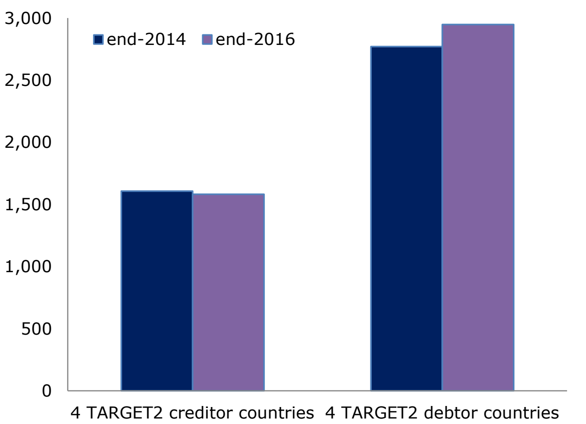
Source: Eurostat and Commission services' calculations

On the other hand, the total gross foreign liabilities of government sectors in these debtor countries actually increased by EUR 9bn (as compared to EUR 385bn of domestic securities purchased under the PSPP by their NCBs) and thus accounted for almost half of the overall deterioration in their aggregate NIIP by EUR 19bn. This was, however, solely driven by developments in Spain, where gross foreign liabilities of the government sector increased by EUR 51bn between end-2014 and end-2016 whereas they declined in the other three TARGET2 debtor countries.

Finally, the NIIP of other sectors in the debtor countries also continued to improve, increasing by EUR 253bn, thanks to an increase in their gross foreign assets by EUR 383bn. The fact that the pace of accumulation of net foreign assets by other sectors exceeded the cumulative current account surplus of TARGET2 debtor countries amounting to EUR 104bn over 2015 and 2016 suggests that portfolio rebalancing towards foreign financial assets might have also contributed to the widening in their TARGET2 balances. ([163])

Gross foreign liabilities of the government sector thus changed differently in the largest TARGET2 creditor countries (where they declined substantially) and in the TARGET2 debtor countries (where they increased somewhat) between end-2014 and end-2016.

Graph V.4: **Outstanding stocks of sovereign debt securities**
(bn Euro)



Source: Bloomberg and Commission services' calculations

This likely also reflected the fact that the amounts of outstanding sovereign debt securities changed differently for these two groups of countries over this time period. While the total outstanding stock declined by some EUR 25bn in the four TARGET2 creditor countries, it increased by almost EUR 180bn in the four largest TARGET2 debtor countries. As a result, the share of foreign ownership of general government gross debt declined from 69% by end-2014 to 59% by end-2016 for the TARGET2 creditor countries and from 49% to 47% for the TARGET2 debtor countries.

V.3. Conclusions

The implementation of the EAPP throughout 2015 and 2016 resulted in the Eurosystem buying over EUR 1½ trillion (i.e. about 14% of euro-area GDP) of euro-denominated debt securities (84% of which were originated by the public sector). The launch of the EAPP coincided with the renewed

([163]) As also indicated by the ECB Occasional Paper No 196.

divergence of TARGET2 balances. The accumulation of TARGET2 claims in few countries (most notably DE, NL, LU, FI) was mirrored by the accumulation of TARGET2 liabilities by other countries (in particular, IT, ES, EL, PT). As a result, the positive balance of TARGET2 creditor countries increased to above EUR 1 trillion by end-2016 (from around EUR 600 million at end-2014).

However, the improvement in the NIIP of NCBs in the main TARGET2 creditor countries between end-2014 and end-2016 was substantially lower than the overall increase in their TARGET2 claims over this time period. This was due to the fact that their liabilities to non-euro-area residents and to other euro-area residents as well as their intra-Eurosystem liabilities also increased considerably. At the same time, total gross foreign liabilities of government sectors in the main TARGET2 creditor countries declined significantly, inducing an improvement in their NIIP. On the other hand, foreign asset holdings of their banking sector (MFIs excluding NCBs) also declined substantially and thus to a large extent offset the improvement in the NIIP of their NCBs. Finally, the NIIP of other sectors continued to follow its long-term upward trend, reflecting to a large extent the aggregate current account surplus of these countries. As far as TARGET2 debtor countries are concerned, the NIIP of their NCBs declined between end-2014 and end-2016, although to a smaller extent than the overall increase in their TARGET2 liabilities. This was due to the fact that their foreign asset holdings also increased, mainly as a result of higher intra-Eurosystem claims as well as larger holdings of foreign securities.

While their general government's NIIP remained broadly unchanged, their banking sector (excluding NCBs) reduced sharply its foreign liabilities and thus improved its NIIP, likely to some extent also thanks to sizeable injections of liquidity into the euro-area banking system through the EAPP. Finally, other sectors increased their foreign asset holdings well in excess of the cumulated current account surplus of these countries.

Taken together these developments suggest that portfolio rebalancing towards foreign financial assets by the private non-banking sector in the main TARGET2 debtor countries likely contributed to the recent divergence in TARGET2 balances. This divergence might have also reflected repayments of gross foreign liabilities by their banking sector (excluding NCBs). The improved NIIP of the private sector in the TARGET2 debtor countries should make it more resilient to a possible future tightening of global financing conditions.