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**TARGET (im)balances at record level: Should we worry?**  
- London School of Economics -

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In-depth analysis for the ECON Committee

TARGET (im)balances at record level: Should we worry? MONETARY DIALOGUE November 2017







DIRECTORATE GENERAL FOR INTERNAL POLICIES  
POLICY DEPARTMENT A: ECONOMIC AND SCIENTIFIC POLICY

# TARGET (im)balances at record level: Should we worry?

IN-DEPTH ANALYSIS

## Abstract

According to the ECB, the recent rise in TARGET 2 balances could be seen as the result of the decentralised implementation of the extended asset purchase programme (APP). The programme entails cross-border payments by the purchasing NCBs, with around 50% of involved counterparties resident outside the euro area, including the UK. These counterparties access the TARGET system via a limited number of financial centres, particularly Germany and, to a lesser extent, the Netherlands. According to the ECB, the increase in TARGET balances stemming from the concentration of cross border flows due to APP transactions would reflect technical features of the euro-area financial structure rather than evidence of financial stress. However, these imbalances recently may be well indicative of a persistent fragmentation within the euro area's financial markets as well as uneven liquidity allocation; the risks of which may be understated. Against this background, the paper discusses what the underlying factors behind the recent rise of TARGET2 (im)balances are, and the risks associated to rising Target (im)balances for the ECB's monetary policy.

This document was requested by the European Parliament's Committee on Economic and Monetary Affairs.

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## LIST OF ABBREVIATIONS

- APP** Asset Purchase Programme
- BoP** Balance of Payment
- CA** Current Account
- EA** Euro area
- ECB** European Central Bank
- EFSF** European Financial Stability Facility
- KA** Capital Account
- MROs** Main Refinancing Operations
- NCB** National Central Bank
- PSPP** Public Sector Purchase Programme
- TARGET** Trans-European Automated Real-time Gross settlement Express Transfer
- TLTRO** Targeted Long Term Refinancing Operations

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## EXECUTIVE SUMMARY

### Background

Since much of the EU money market integration (after 1999) is attributable to the establishment of the TARGET system, the close monitoring of TARGET2 performance and imbalances could assist the ECB in adopting targeted measures. It is interesting to note that such TARGET2 imbalances have in fact resumed more recently. It is well known that TARGET2 imbalances rose substantially during the sovereign debt crisis. According to the ECB (2017), the recent rise in TARGET 2 balances could be seen as the result of the decentralised implementation of the extended asset purchase programme (APP). The programme entails cross-border payments by the purchasing NCBs, with around 50% of involved counterparties resident outside the euro area, including the UK. These counterparties access the TARGET system via a limited number of financial centres, particularly Germany and, to a lesser extent, the Netherlands. According to the ECB, the increase in TARGET balances stemming from the concentration of cross border flows due to APP transactions would reflect technical features of the euro-area financial structure rather than evidence of financial stress. However, the risks associated with persistently high levels of Target (im)balances remain unclear. These imbalances recently may be well indicative of a persistent fragmentation within the euro area's financial markets as well as uneven liquidity allocation.

### Aim

- Against this background, the paper asks to what extent the ECB's APP is working properly;
- It analyses what the underlying factors behind the recent rise of TARGET2 (im)balances are;
- It discusses whether these imbalances are expected to persist and/or how are they are going to be absorbed;
- Finally, it evaluates the risks associated to rising TARGET2 (im)balances and what the governance and monetary policy implications of these persisting imbalances are for the ECB's monetary policy and the stability of the euro area.

## 1. GENERAL INFORMATION

### KEY FINDINGS

- TARGET balances act as a payments equilibrating mechanism inside the euro area.
- Today, the accumulation of imbalances does not go hand in hand with soaring spreads in the euro area periphery. Hence, there is no evidence of financial stress as in the past.
- While TARGET2 imbalances certainly reflect also technical features related to the implementation of the APP, as the ECB suggests, cross-border flows signal that the liquidity released by central banks' asset purchases in peripheral countries is being used to buy euro assets in Germany, or anyway in the core.
- Investors' shortening positions in the peripheral countries and lengthening positions in the core countries are still a sign of financial fragmentation and lack of confidence in the area.
- The existence of a large positive TARGET2 balance in some euro-area countries does not entail a risk of inflation. The Eurosystem has the ability to absorb all the excess liquidity where necessary.
- The banking system cannot permanently rely on central bank money for funding. Peripheral countries cannot continue to substitute inflows of foreign private sector liquidity with TARGET2 liabilities. They should return to private markets and attract funds from investors in the rest of the euro area.
- The possibility (rather than the action) of outright ECB purchases of sovereign debt through the OMTs could induce international and European investors and banks to buy such bonds. A reflow of foreign investment into government bond markets in the periphery would help reduce TARGET2 imbalances.
- A factor contributing to the persistence of these imbalances, at least up until 2018, is that banks with excess liquidity have – for now – no price incentives to lend in the interbank market owing to the particularly low interest rates and the narrow width of the corridor between the ECB's main refinancing and deposit facility rate.
- Assuming – as the ECB claims – that the QE purchases are the dominant factor behind the recent rise in Target balances, the total TARGET balances are expected to rise, albeit at a slower pace, consistent with the expectation of the PSPP tapering.
- Since 2007, the increasing risks for Germany associated with the Bundesbank's TARGET2 balance have been offset to a large extent by a significant decline in private German bank exposures to the periphery.
- If the German private sector is not willing to accumulate claims to the rest of the euro area banks, this will result in official TARGET2 settlements' imbalances.
- In order to shield the TARGET2 balances from this accumulation of German CA-balances, the willingness of Germany to hold private claims against the rest of the area must continue to increase.
- Large additions of liquid assets through the APP can trigger sudden changes in the willingness of private agents in Germany to hold private claims against the other euro area countries. The problem will not go away as long as Germany will not be willing to reduce its CA surpluses.

## 2. THE TARGET 2 SYSTEM DURING “NORMAL TIMES”

### KEY FINDINGS

TARGET balances act as a payments equilibrating mechanism inside the euro area.

If the German private sector is not willing to accumulate claims to the rest of the euro area banks, this will result in official TARGET2 settlements' imbalances.

TARGET2 is the real-time gross settlement (RTGS) system owned and operated by the Eurosystem. The system plays a key role in ensuring the smooth conduct of monetary policy, the correct functioning of financial markets in the euro area.

The settlement of cross-border payments between participants in TARGET2 results in intra-Eurosystem balances – these are reported on each NCB's balance sheets as TARGET2 claims, if positive, or TARGET2 liabilities, if negative, *vis-à-vis* the Eurosystem. TARGET2 balances during the sovereign debt crisis reflected funding stress in the banking systems of crisis-hit countries. They should however be interpreted with care as they also reflect transactions among multi-country banking groups.<sup>1</sup>

### 2.1. The TARGET 2 system: how does it work?

The best way to understand how the TARGET2 mechanism works is to look at a some stylized balance sheets facts and identities (see also De Grauwe, 2016; Cecchetti et al., 2012). Let us start with a simple CA transaction based on a representative financial intermediary: an individual in one euro area country (say, Italy) purchases a good or service from an individual in another euro area country (say, Germany). The individual buyer in Italy needs to make the payment to the seller in Germany. Figure 1 shows the payment flow: a transfer from one customer's deposit in Italy to another in Germany (1).

Because this is a cross-border interbank transaction, Banca d'Italia and the Bundesbank will have to be involved. The Italian representative commercial bank will see its reserves with the own NCB fall (2A). Concomitantly, the German bank's reserve account at the Bundesbank will increase (2B).

As a part of the transaction, the two central banks will need to settle their accounts with each other – this happens through the Eurosystem, on the ECB's balance sheet. When the transaction is settled, Banca d'Italia will see its liabilities to the ECB increase (3A), with the ECB's liabilities to the Bundesbank increasing at the same time (3B). In order to replenish its reserve shortfall, the Italian bank has a number of routes. It can try to attract new deposits, it can borrow on the interbank market, it can sell assets, or it can borrow from the central bank. In a two country world, if the Italian bank decides to borrow on the interbank market, say, taking a loan from the representative German bank, the result would be **a cross-border capital transaction, which would net out the initial deposit outflow** (4). That is, **the reserves of the two commercial banks will be unaffected since the German bank will *de facto* fund the deposit outflow from the Italian bank, by holding claims on the Italian commercial bank.**

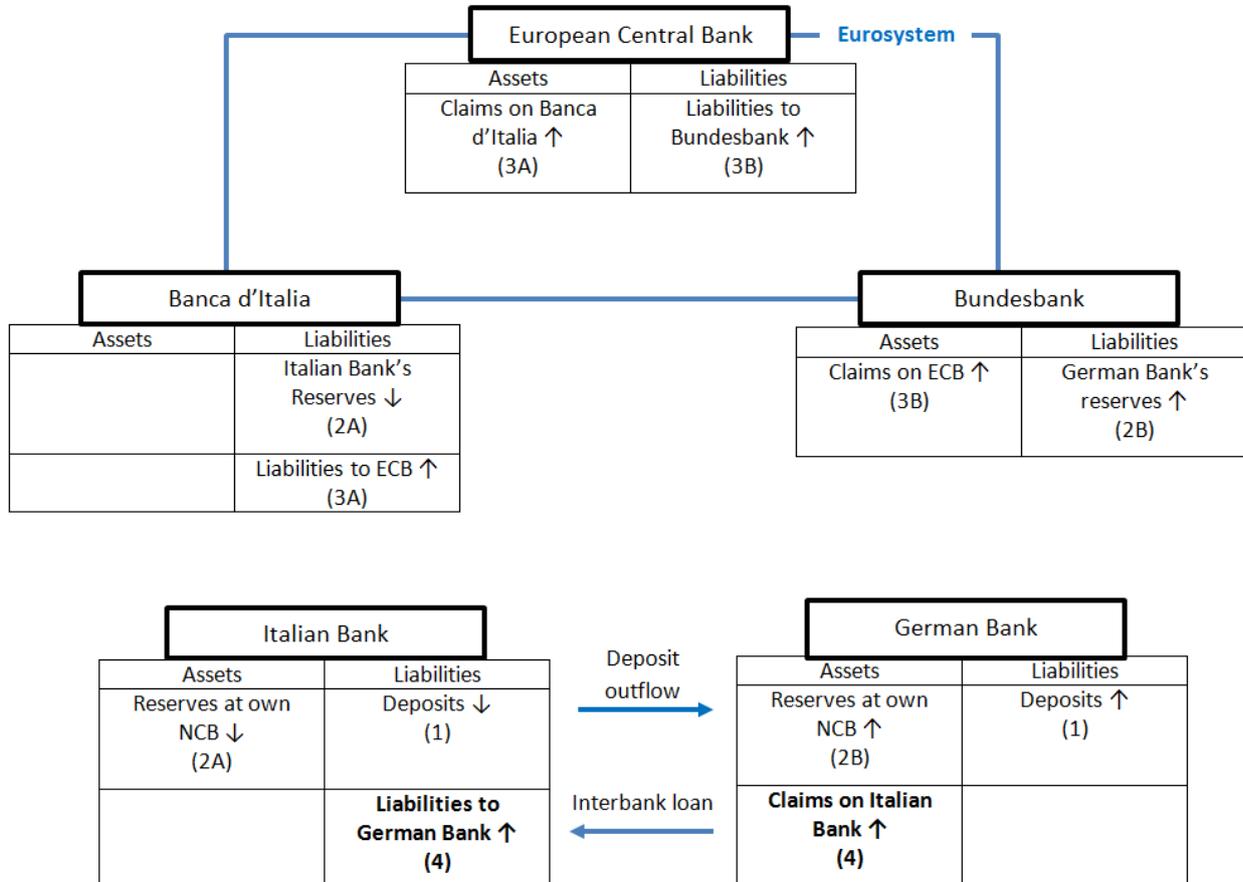
<sup>1</sup> According to the BIS, the interpretation of the role assumed by TARGET2 balances falls into two categories (Cecchetti et al., 2012). The first one interprets these balances as current account financing, which can be labelled as flow interpretation. Proponents of this view include most prominently Sinn and Wollmershäuser (2011, 2012); Fahrholz and Freytag (2012). The second category interprets TARGET2 balances as a “capital account reversal”, that is a symptom of a balance of payments crisis (see Buiter et al., 2011, Mody and Bornhorst, 2012; Bindseil and König, 2012; and Cecioni and Ferrero, 2012).

To see what is happening, it is useful to remember the Balance of Payment identity:

$$\text{Current account} + \text{Capital Account} + \text{Official Settlements Balance} \equiv 0$$

The last term is typically where each country's changes in foreign reserves, if outside a currency union, or, as in this case, changes in official TARGET balances show up. The identity tells us that the sum of the changes in TARGET2 balances, private and intergovernmental international capital flows, and current account imbalances is zero.

**Figure 1: Current and capital account transactions within the Eurosystem**



The intuition here is that, outside of a currency union, when a country starts experiencing a capital outflow arising from a loss of confidence or run on the sovereign, the outflows are limited by the pool of the country's foreign exchange reserves. In the case of the Eurosystem, TARGET2 balances do a similar job. Here, the only limit on capital outflows, hence the only limit on the liability that the country's NCB can avail with respect to the rest of the euro area, is the collateral that the country's banking sector uses during the ECB's refinancing operations.

With the onset of the crisis, interbank borrowing became increasingly difficult. As a result, the Eurosystem started its full allotment refinancing operations, providing liquidity through fixed rate tender procedures with full allotment for as long as necessary.

With the ECB's full allotment, the Italian bank in the example above could count on borrowing from the central bank, hence replenishing its reserves, at a fixed rate. However, the Italian bank's participation in the ECB's refinancing operation changes the balance sheets of the two NCBs, as well as the ECB's, with official settlements in the TARGET2

balances doing the job previously done by the capital account: acting as a payments equilibrating mechanism inside the euro area.<sup>2</sup>

We explore this in details in Box 1.<sup>3</sup>

### **Box 1: The emergence of creditor and debtor NCBs**

Until the crisis, the increase of the euro area periphery banking system's balance sheet was mainly driven by foreign deposits. With the outbreak of the financial crisis, funding sources started to decline in the euro area periphery, especially since May 2010. In Germany this development was mirrored by a rise in foreign claims before the crisis and its gradual reversal since 2008.

Without a lender of last resort, the run on banks triggered by the flight of foreign (i.e., German) deposits would have ended up with the collapse of the banking system in many peripheral countries while, in Germany, banks would have realised considerable losses.

This was not the case in the euro area. Peripheral banks were progressively excluded from the wholesale funding market as German banks reduced their exposure to them against the back of insolvency concerns. The ECB responded by acting as "lender of last resort" through central bank refinancing of the banking sector. In this respect, the TARGET2 system guaranteed banks in the periphery unlimited credit lines from the Eurosystem at the ECB's main refinancing rate.

Let us reconsider the example of the Italian and German banks in Figure 1. In Figure 2, in particular, we show the dynamics of the TARGET2 balances **if the German private sector is not willing to accumulate claims to the Italian banks**, hence reducing its exposure. This will result into the **Italian banks being progressively excluded from the interbank market**, hence limiting the scope of adjustments through the capital account, and **resulting in TARGET2 imbalances**.

If German banks decide to reduce their exposure to Italy, this will result into a flight of German capital, out of Italy and back to Germany. In Figure 2, the foreign claims (5) of the German banking sector will be declining, reflecting a reduction of foreign funding in the Italian bank's balance sheet.

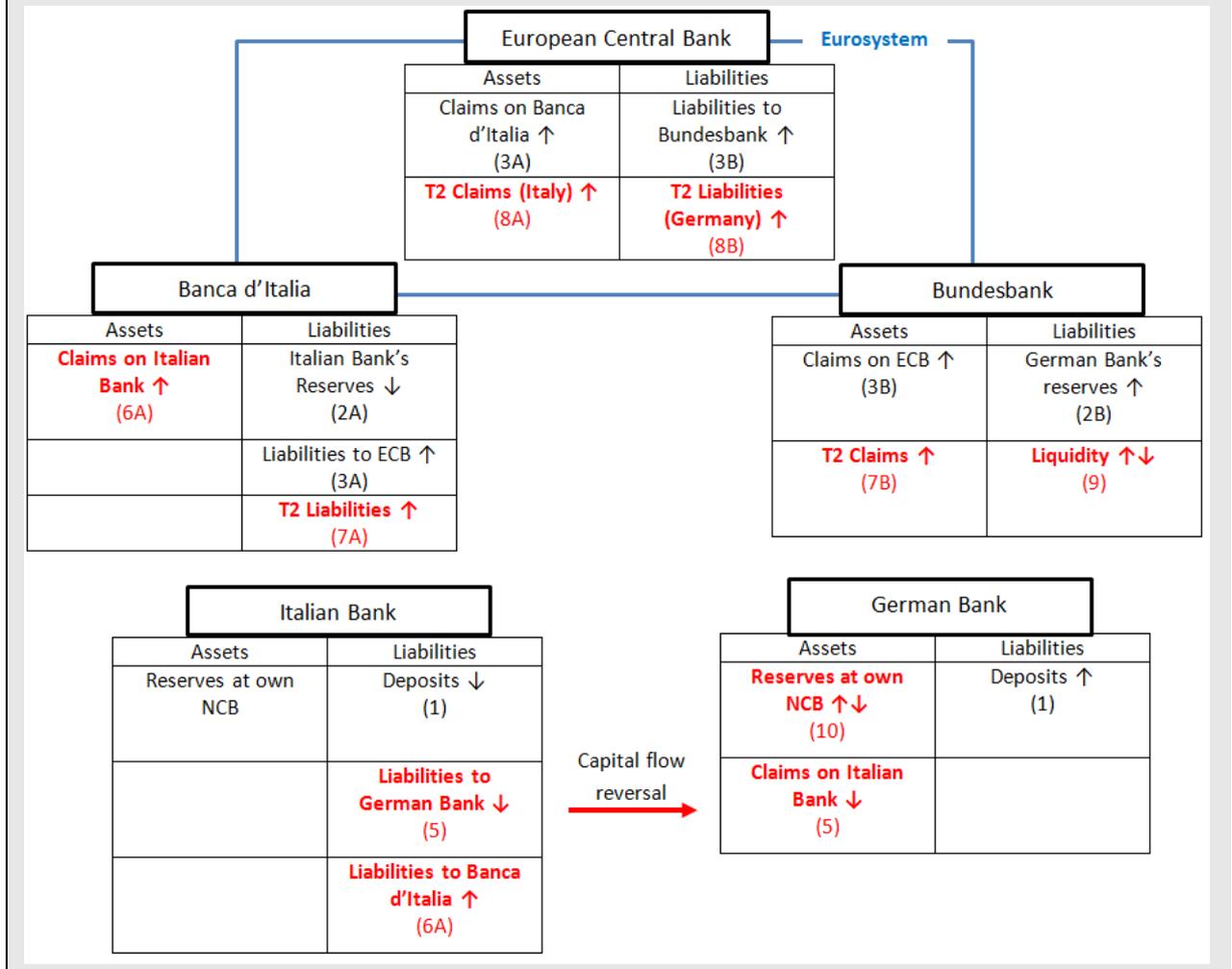
The Italian bank can decide to fill the gap left by the reduction in (foreign) liabilities by borrowing directly from the central bank (6A). This will show up as an increase in the asset side of Banca d'Italia balance sheet (6A). It will also correspond to a similar increase in Banca d'Italia TARGET2 liabilities (7A), mirrored by an increase on the assets side of the ECB (8A). As the Eurosystem intermediates the transfer of bank deposits to the Bundesbank via official TARGET2 settlements, the ECB's TARGET2 liabilities to the Bundesbank will increase (8B) and the Bundesbank TARGET 2 claims will go up at the same time (item 7B). The Bundesbank will book the TARGET2 outflow among its assets (item 6B) and credits the proceeds on the account of the recipient German bank (item 9).

<sup>2</sup> Looking at balance of payments (BOP) identities, Cecioni and Ferrero (2012) argue that TARGET2 imbalances are correlated to the recourse to monetary policy refinancing operations, via NCBs' balance sheets, but they are not directly caused by them. Similarly, Auer (2014) examined the extent to which changes in national TARGET2 balances could be statistically associated with cross-border private capital flows and current account (CA) balances. He shows that while the CA and changes in TARGET2 balances were unrelated until the beginning of 2007, since then the relation between these two variables became statistically significant. This reflected the "sudden stop" in private sector capital that then funded CA imbalances. Auer examined next how different types of private capital flows have evolved over the last years and how this can be related to changes in TARGET2 balances, finding deposit flight by private customers, a retrenchment of cross-border interbank lending, and an increase in bank's holdings of high-quality sovereign debt as some of the main causes. For a broader discussion see also Whelan (2011, 2012), Buiters et al. (2011a; b), Buiters and Rahbari (2012), Bindseil and König (2011), Deutsche Bundesbank (2011), ECB (2011).

<sup>3</sup> For a similar discussion see Abad et al. (2011), Cecchetti et al. (2012).

The German banking system, whose claims on the central bank have increased, now holds liquidity in excess of their reserve requirements (10). In order to absorb this extra supply of liquidity, German banks will reduce their reliance on refinancing operations at the Bundesbank, which is equivalent to declining claims of the Bundesbank on German banks and a reduction of liquidity overall (hence, reversing items (9) and (10) in Figure 2).<sup>4</sup>

**Figure 2: Intra-Euro area adjustments via TARGET 2 and ECB refinancing**



<sup>4</sup> Abad et al. (2011) discuss how, in order to absorb the excess liquidity, the Bundesbank could also sell debt instruments to German banks.

### 3. DO TARGET 2 IMBALANCES REFLECT RISK?

#### KEY FINDINGS

Today, the accumulation of imbalances does not seem to go hand in hand with soaring spreads in the euro area periphery.

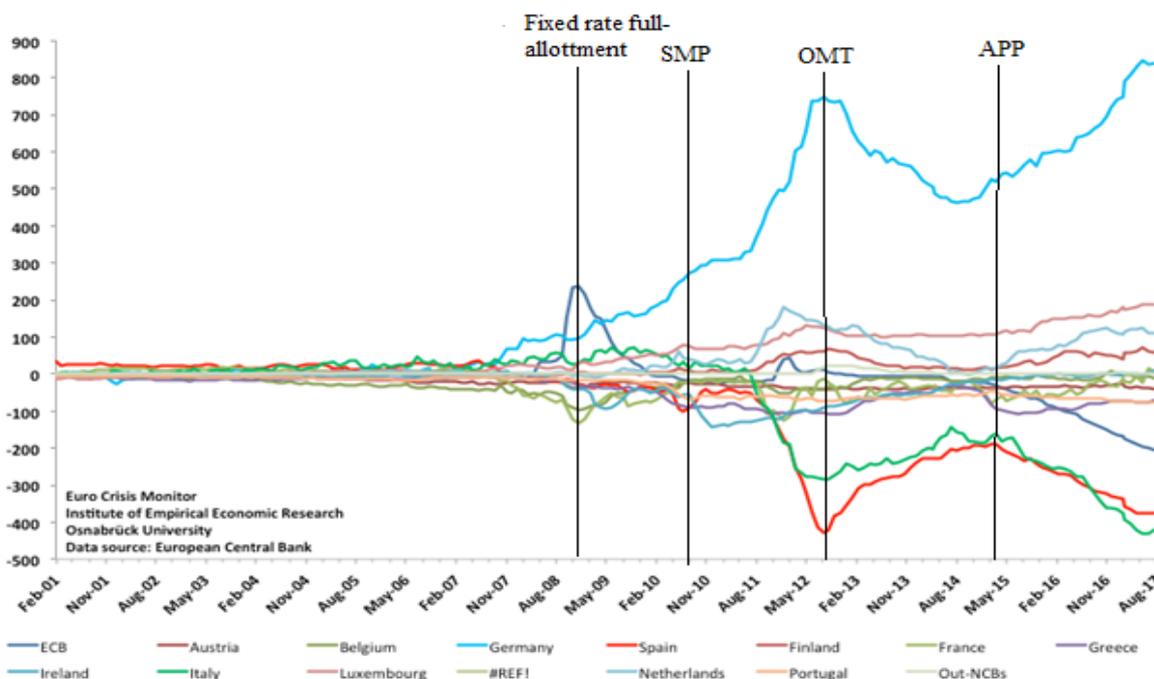
While TARGET2 imbalances certainly reflect also technical features related to the implementation of the APP, cross-border flows signal that the liquidity released by central banks' asset purchases in peripheral countries is being used to buy euro assets in Germany, or in the core.

In addition, the increasing risks for Germany associated with the Bundesbank's TARGET2 balance have been offset to a large extent by a significant decline in private German bank exposures to the periphery.

#### 3.1. TARGET 2 imbalances during the financial crisis

Against the backdrop of capital outflows from the periphery and the lack of access of the banking sector in the periphery to the interbank market, TARGET2 liabilities for peripheral countries increased, as explained in Box 1. Outflows from peripheral countries started to moderate gradually, mainly starting from Draghi's announcement of the OMTs (Figure 3). Since then, banks in the periphery started to reduce their reliance on ECB funding, and TARGET2 imbalance started to normalize again, reaching a minimum at the beginning of 2015 (minus EUR 165 billion in Italy, minus EUR 19 billion in Spain and plus EUR 460 billion in Germany).<sup>5</sup>

**Figure 3: Official TARGET2 Balance (EUR Billion)**



**Source:** Euro Crisis Monitor.

During the crisis, the Eurosystem credit was more than simply financing ongoing balance sheets' gaps; it was also redistributing existing stocks of claims from the private to the

<sup>5</sup> For further details, see BBVA Research (2016).

public sector. In other words, **private sector claims (liabilities) were gradually substituted by NCBs' TARGET2 claims (liabilities) vis-à-vis the ECB**. The risks that were previously entirely borne on the private sector of creditor countries (i.e., Germany) were then shared across the euro area's NCBs. As underlined by Cecchetti et al. (2012), changing TARGET2 balances did not only reflect the adjustments of German banks, it also reflected private sector's *flight-to-quality* and the pricing in of a possible euro area break-up (the so-called redenomination risk).

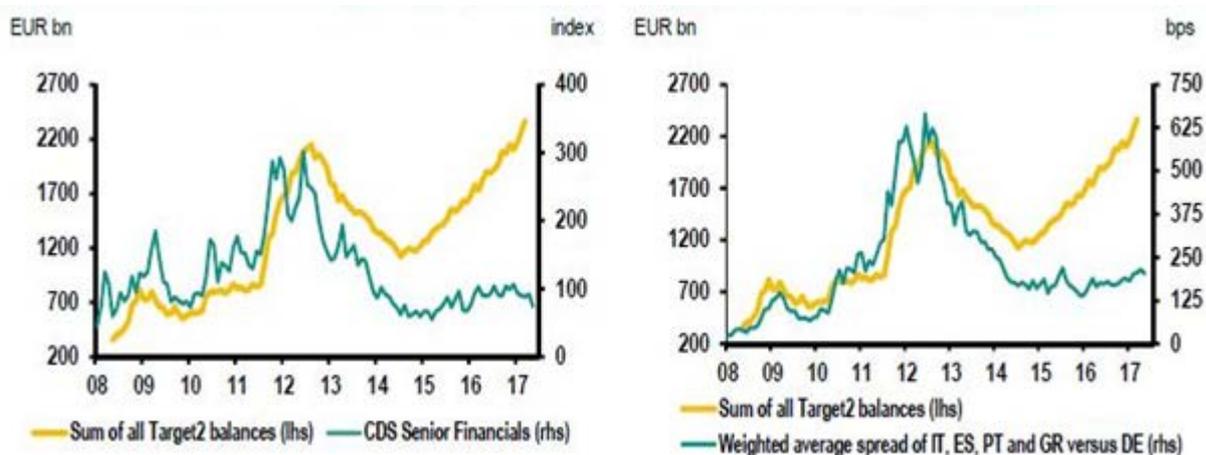
### 3.2. Central Bank's purchases and the reoccurrence of TARGET 2 imbalances

Target 2 imbalances are sharply rising in Spain, Italy (liabilities) Germany (claims) once again, getting closer to August 2012 record levels, when the financial and sovereign debt crisis reached its pick. Since the launch of the AAP in March 2015, TARGET2 liabilities increased by EUR 141 billion in Spain and by EUR 192 billion in Italy, while Germany TARGET2 claims have increased by EUR 240 billion. As observed in the figure below, **the situation is very different – however – from what observed during 2012-13, where the accumulation of imbalances went hand in hand with soaring spreads in the euro area periphery** (Figure 4).

**Figure 4: Target balances and spreads**

(a) Target balances and CDS Spread

(b) Target balances and periphery spread



**Source:** Eurozone Watch (2017).

In the ECB's (2017) and Bundesbank's interpretation, the current widening in TARGET2 imbalance is linked to the APP but – unlike previous episodes – it is not related to lack of access to funding markets for peripherals financial institution or governments, as banks in the periphery have access to funding markets, while remaining reliant on ECB funding through the TLTROII. According to ECB (2017), the launch of the APP is having a direct impact on TARGET2 balances, in particular, as the implementation of Eurosystem purchases could entail cross-border payment by the purchasing NCB as securities can be bought from a range of counterparties, including those located outside the Eurozone, such as the UK, which participate via other NCB, mainly German and, to a lesser extent, the Dutch and Luxembourg central banks. This is the case as soon as the NCB purchases securities from a non-domestic bank, thus giving rise to cross-border flows of central bank money, increasing its TARGET2 liabilities. According to the ECB, around 80% of Eurosystem purchases by volume have been carried out through non-domestic counterparties. Moreover, 60% of purchases have been made from counterparties that participated in TARGET2 via Germany (or foreign bank's German subsidiaries); which should explain the fuelling of TARGET2 claims in Germany, the Netherlands and Luxembourg. We find this analysis not convincing, however. The non-domestic counterparties sell government bonds

and obtain reserves from the Eurosystem. The key question is what they do with these reserves? They are likely to diversify and buy other assets. Only if they decide to buy German assets will this lead to TARGET2 claims of Germany. We explore this issue in detail in Section 3.2.4.

### 3.2.1. To what extent is the ECB's APP working properly?

The accumulation (and later reversion) of TARGET2 balance prompt the question of what is the actual ECB's APP effectiveness.

As the ECB's APP continues, investors in core states like Germany and the Netherlands have been selling more bonds than their respective NCB has been able to buy from investors in other member states. This is very different from what is happening in the large economies of Italy and Spain, where the government debt tends to be held by domestic investors. When Banca d'Italia – for example – buys an Italian government bond from a German insurer, liquidity will flow directly into the German financial system and will be negatively (positively) accounted in the TARGET2 balance of Banca d'Italia (Bundesbank). Not *vice versa*.

The key problem is henceforth that changing **TARGET2 balances** could be again the reflection not only the stock adjustments within the Eurosystem, but they **reflect investors' shortening positions in the peripheral countries and lengthening positions in the core countries**. The liquidity injection of the ECB via asset purchases is not flowing towards the real economy; it may just be contributing to increase excess of liquidity particularly in the core countries. Mainly, the liquidity released by central banks' asset purchases in peripheral countries is being used to buy euro assets in Germany, or in the core. Thus, while TARGET2 balances cannot be read as an indicator or financial stress as in the past, cross-border flows seem to signal that those investors that sell securities from peripheral countries prefer to transfer the money to other euro area banks or to buy assets elsewhere in the euro area, thus reducing their exposure to the periphery. **This has to do with the fact that financial integration in the euro area is still fragmented** (Macchiarelli and Koutroumpis, 2016). In addition, if the German holders of, say, Italian bonds decide after the APP not to hold Italian assets anymore and buy German assets instead, something must have changed with their optimal portfolio rebalancing across the euro area. This could have to do with the fact that German bond holders trust the Italian government but no other private Italian issuers, for instance.

The decomposition in Figure 5, confirms the direct effect of the mechanics of QE on the TARGET2 balances in a country like Italy, as described by the ECB. Indeed, the green bars – starting from early 2015 – began to grow again, signalling in this way a gradual release of government securities by foreign investors, possibly due to the purchases made by the Banca d'Italia on international markets.

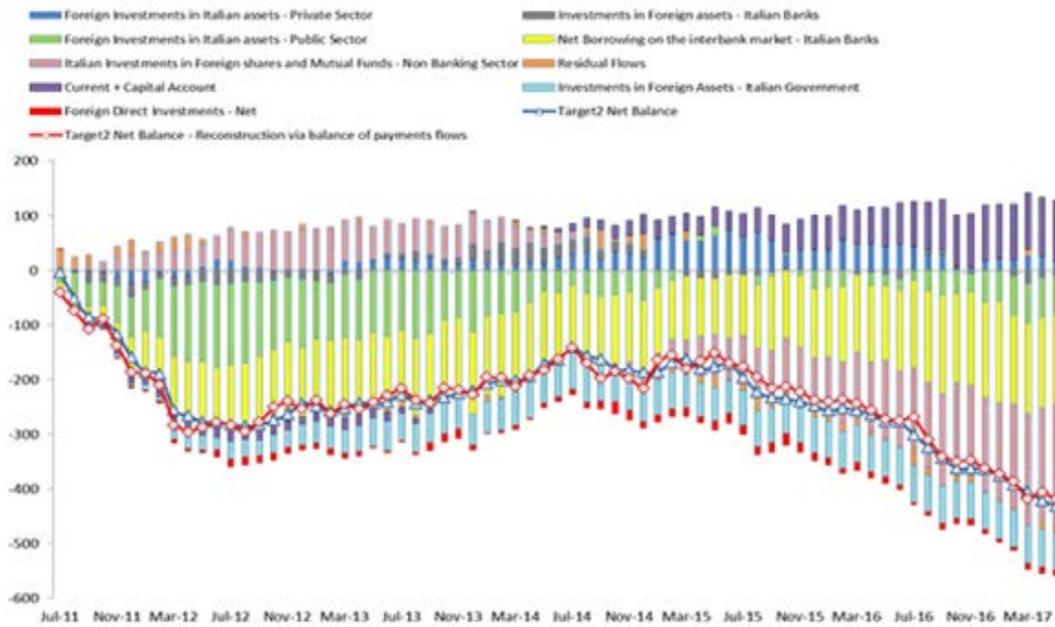
In Italy, however, about 65 per cent of the debt is owned by locals, while in Spain this percentage is around 50 per cent. This suggests that other forces should have played a role.<sup>6</sup>

As underlined by Minenna (2017), together with the launch of the PSPP, Italy experienced a reallocation of the non-financial private sector wealth from government bonds to foreign bonds, shares and mutual funds (pink bars in Figure 5). Since 2015, over EUR 250 billion were reinvested by Italian non-financial enterprises in companies resident in Luxembourg, the Netherlands and Germany, where much of these transactions were allowed by the monetary policy of Banca d'Italia, though the APP, purchasing government bonds from private investors, thus providing the liquidity.

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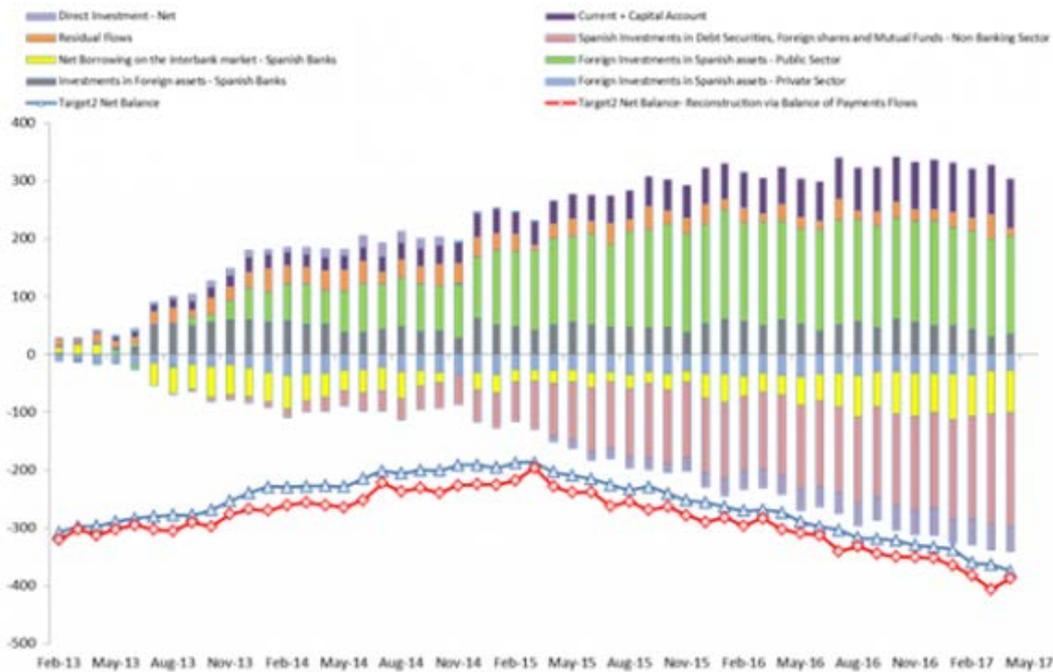
<sup>6</sup> For a complete analysis see also Minenna (2017).

**Figure 5: Italy – TARGET 2 Net Balance**



**Source:** Banca d'Italia from Minenna (2017). **Note:** Blue – Foreign investment in Italian assets, Private sector; Light Green - Foreign investment in Italian assets, Public sector; Pink – Italian investment in Foreign shares and Mutual Funds, Non-Banking; Purple – CA and KA; Red – FDI, Net; Grey – Investment in foreign assets, Italian banks; Yellow – Net borrowing on the interbank market, Italian banks; Orange – Residual Flows; Light blue – Investment in Foreign Assets, Italian Government.

**Figure 6: Spain – TARGET 2 Net Balance**

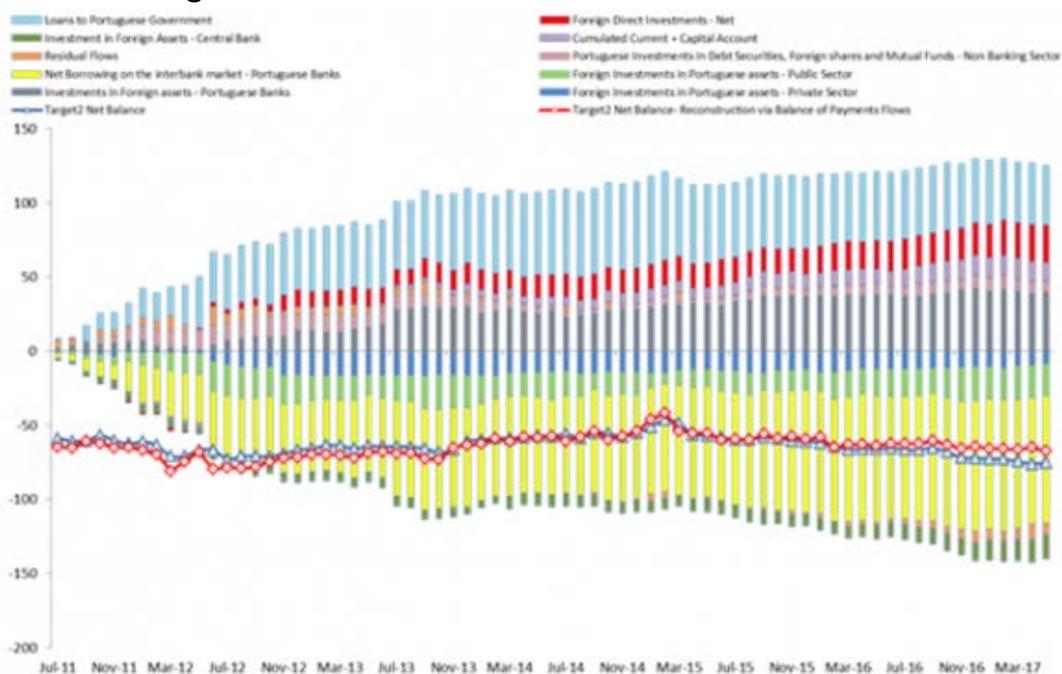


**Source:** Banco de España from Minenna (2017). **Note:** Violet – Direct investment, Orange – Residual Flows; Yellow – Net Borrowing on the interbank market, Spanish banks; Grey – Investment in foreign Assets, Spanish banks; Purple – CA and KA; Pink – Spanish investment in Debt Securities, Foreign shares and Mutual Funds, Non-Banking; Blue - Foreign investment in Spanish assets, Private sector; Light Green - Foreign investment in Spanish assets, Public sector.

Similar conclusions can be drawn from the analysis of Spain's balance of payments (Figure 6). From 2015, the TARGET2 balance of which has been gradually deteriorating coinciding with the launch of the APP. The decomposition proposed by Minenna (2017) suggests the growth of non-financial private sector foreign investments (pink bars, corresponding to roughly EUR 82 billion over 2015-2017), the selling of government assets by foreign investors to the Banco de España (green bars, €23 billion) and the reduction in the foreign borrowing of the banking sector (yellow bars, €30 billion) to be the main determinants of this trend.

In the period of APP implementation, the data for Portugal do not show evidence of capital low reversals (Figure 7). Indeed, investment flows in the non-financial private sector remain in positive territory (pink bars), signalling a prevalence of FDI inflows (Minenna, 2017). The deterioration of the TARGET2 balance for Portugal seems rather to be attributable primarily to a moderate selling of government bonds by foreign investors (about EUR 10 billion) to the Banco de Portugal, a further deterioration of interbank lending conditions (EUR 10 billion), and a reduction in the Portuguese Government's debt towards the EFSF (EUR 10 billion) (Minenna, 2017).

**Figure 7: Portugal – TARGET 2 Net Balance**



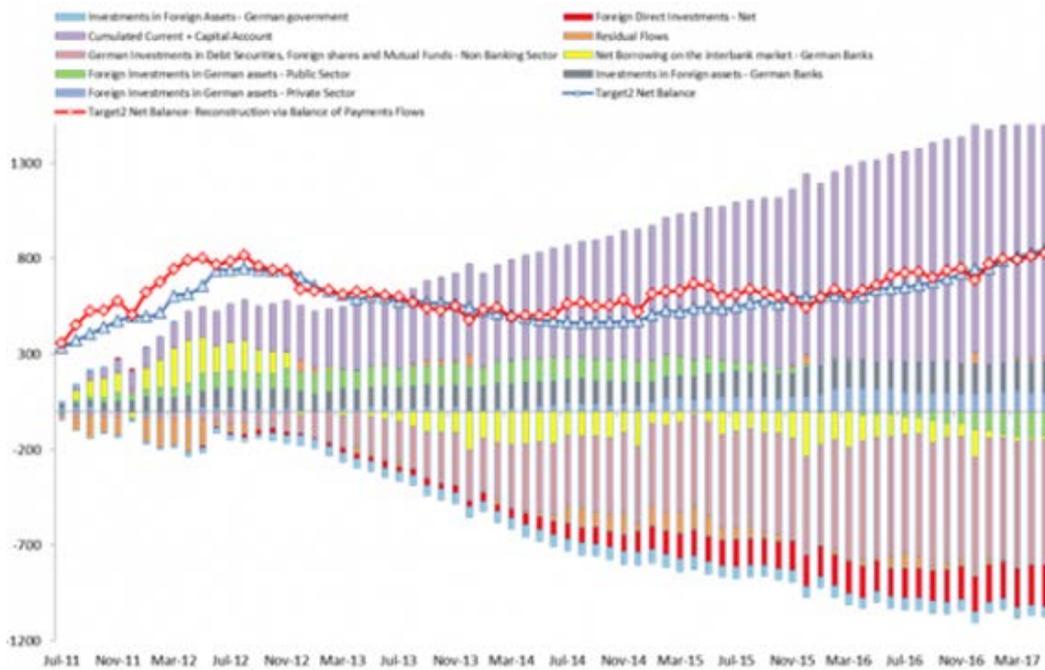
**Source:** Banco do Portugal from Minenna (2017). **Note:** Light blue – Loans to Portuguese Government; Green – Investment in Foreign Assets, Central Bank; Orange – Residual Flows; Yellow – Net Borrowing on the interbank market, Portuguese banks; Grey – Investment in foreign Assets, Portuguese banks; Red – FDI, Net; Purple – CA and KA; Pink – Portuguese investment in Debt Securities, Foreign shares and Mutual Funds, Non-Banking; Blue - Foreign investment in Portuguese assets, Private sector; Light Green - Foreign investment in Portuguese assets, Public sector.

For the Bundesbank, Figure 8 shows two main channels of transmission, both actually reducing TARGET 2 claims for Germany: the reduction in the amount of government bonds held by foreign investors (green bars – EUR 240 billion) due to purchases by the Bundesbank, and the growth of non-financial private sector investment abroad (pink bars).

Nonetheless, the TARGET2 balance rose by about EUR 365 billion in less than 3 years for Germany, with claims back to EUR 840 billion (August 2017), amounting to close to half of Germany's entire net foreign assets. This phenomenon can be attributable to the uninterrupted growth of the cumulative surplus of the German current account in Germany.

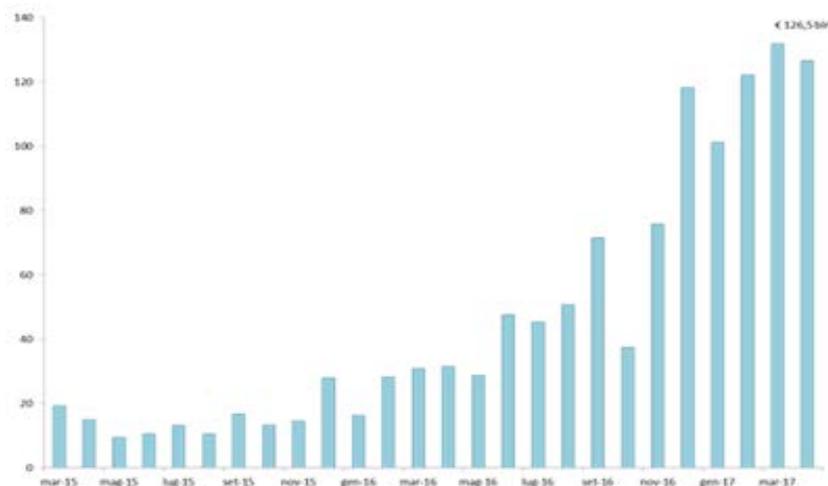
Regarding the Bundesbank's intermediation role in the operations of banks outside the euro area, these show up as euro deposits of non-euro area residents. Compared to the change in TARGET2 balance in the reference period (EUR 307 billion), non-euro area residents' deposits with the Bundesbank increased indeed by about EUR 110 billion, as the ECB (2017) suggests.

**Figure 8: Germany – TARGET 2 Net Balance**



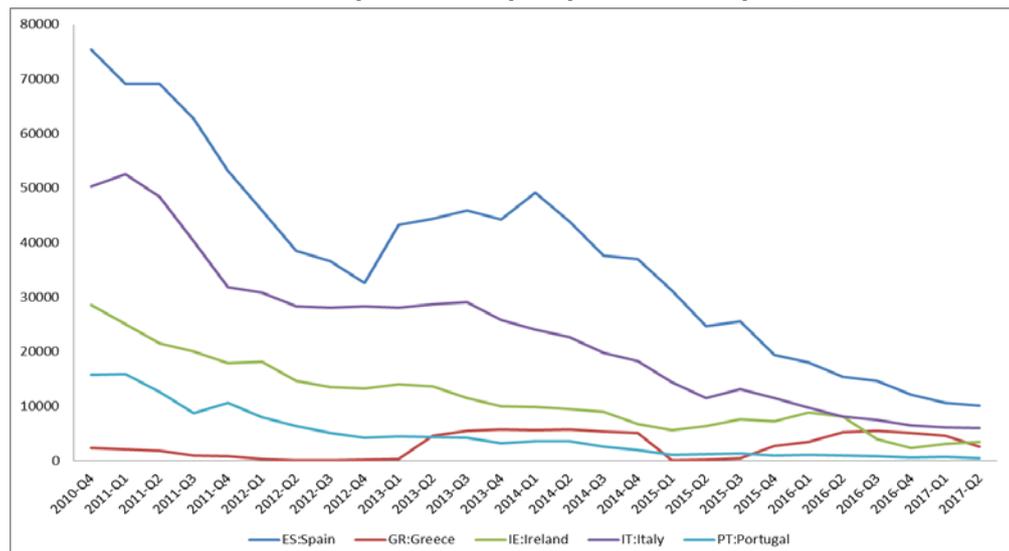
**Source:** Bundesbank from Minenna (2017). **Note:** Light blue – Investment in Foreign Assets; Purple – CA and KA; Pink – German investment in Debt Securities, Foreign shares and Mutual Funds, Non-Banking; Blue - Foreign investment in German assets, Private sector; Light Green - Foreign investment in German assets, Public sector; Red – FDI, Net; Orange – Residual Flows; Yellow – Net Borrowing on the interbank market, German banks; Grey – Investment in foreign Assets, German banks.

**Figure 9: Bundesbank – Deposits of Non-Euro Area Residents**



**Source:** Bundesbank from Minenna (2017).

However, at the same time, the increasing risks for Germany associated with the Bundesbank's TARGET2 balance have been offset to a large extent by a significant decline in private German bank exposures to the periphery (Figure 10).

**Figure 10: German banks' exposure to peripheral Europe (USD Million)**

**Source:** BIS consolidated banking statistics (on an ultimate risk basis).

### 3.2.2. Governance and monetary policy implications

Since much of the EU money market integration (after 1999) is attributable to the establishment of the TARGET system, the close monitoring of TARGET2 performance and imbalances could assist the ECB in adopting targeted measures.

There is no doubt that an increase in TARGET2 imbalances would certainly fuel criticism to ECB policies in Germany and elsewhere in the euro area. The growth of the Bundesbank's balance sheet with persistent claims under TARGET2 not only reflects technical features of the euro-area financial structure and the APP implementation (ECB, 2017), but also underlines the tensions caused by the reluctance of the German private sector to channel funds back to the periphery.

Now that the figures are rising again, this inevitably will put the ECB in an uneasy situation. Particularly, the Eurosystem purchases of bonds from institutional investors through banks under the APP is creating a situation where the extra liquidity available in the economy is not absorbed evenly but it gets deposited at banks in euro area countries enjoying the highest rating, i.e. the "core" (see also De Nederlandsche Bank, 2016). This is not surprising given that risk perceptions within the euro area have not yet completely normalized, as many of the institutional investors selling under QE prefer to hold deposits indeed. As a result, APP purchases undertaken by NCBs of peripheral countries are leading to additional bank deposits in countries like Germany, and to a lesser extent, the Netherlands, Finland, and Luxemburg. Rising TARGET2 imbalances are thus currently reflecting an uneven distribution of liquidity created by QE across the euro area.

In a well-functioning monetary union, the liquidity created by QE should more or less be absorbed proportionally by the banking system of each member state, thereby not leading to any imbalances (this reallocation is certainly also affected by the growth rates of GDP in specific countries - countries that grow faster (e.g. Germany) will tend to absorb liquidity more). Here, the current build-up of TARGET imbalances shows that risk perceptions and fragmentation have not yet disappeared, mainly with regard to specific euro area countries.

De Grauwe and Ji (2012) argue that, also in the extreme case of a euro break up, the risk of losing TARGET2 claims for surplus countries does not exist, by managing euro-to-mark conversion. More generally, from a monetary policy point of view, the increase of TARGET2 imbalances does not interfere with price stability objective of the ECB. In particular, **the**

**existence of a large positive TARGET2 balance in some euro-area countries does not entail a risk of inflation. The Eurosystem has the ability to absorb all the excess liquidity where necessary.** In addition, in the Eurosystem the increase of TARGET2 imbalances does not create any specific risk not already contained in monetary policy refinancing operations, which for the NCBs in the euro area is mitigated by the existing collateral requirements in the standard MROs. In a way, large TARGET2 imbalances could also be seen as a force holding the euro area together. Several countries, most notably Germany, would be highly reluctant to accept a euro break-up that would inflict large losses on the German taxpayers and public.

Nevertheless, the banking system should not enduringly rely on central bank money as the main funding source. Going forward, peripheral countries cannot continue to substitute (the lack of) inflows of foreign private funds with TARGET2 liabilities. On the contrary, they should return to private markets and attract funds from investors in the rest of the area. For this purpose, the restoration of confidence in both the banking sector and in the sustainability of public finance will be key.

Particularly, to the extent that TARGET2 imbalances reflect investors' mistrust, the implementation of monetary measures where the ECB would be directly involved could lead banks to reinvest in the periphery. **The possibility (rather than the action) of outright ECB purchases of sovereign debt through the OMTs could encourage – for instance – international and European investors and banks to buy such bonds. A reflow of foreign funds into the government bond markets, particularly in the periphery, would help reduce TARGET2 imbalances.**

### 3.2.3. Are TARGET 2 imbalances expected to persist?

According to the ECB (2017), a factor contributing to the persistence of these imbalances, at least up until 2018, is that **banks with excess liquidity have – for now – no price incentives to lend in the interbank market owing to the particularly low interest rates and the narrow width of the corridor between the main refinancing and deposit facility rate.** This should change as soon as economic growth will normalize and the ECB will be in the position to move interest rates up.

**These TARGET2 balances are anyway expected to increase further during the duration of the APP, albeit at a slower pace** once the monthly purchases will be scaled back from EUR 60 billion to EUR 30 billion, according to the projections.

### 3.2.4. TARGET2 balances and German current account surpluses

The relation between the German current account position and TARGET2 balances is important in order to understand the movements in these balances. In Figure 11 we show the cumulated current account balances of Germany *vis-à-vis* the Eurozone countries since 2001. At the end of 2016, these amounted to almost EUR 900 billion (the total cumulated CA surpluses amounted to more than EUR 2 trillion). This means that Germany has now accumulated (net) financial claims against the other euro area countries amounting to close to EUR 900 billion. These are total net claims both private and public. We now come to the key of the relationship between the CA and TARGET2. Following up from the discussion in Section 2, in order for the increasing net claims (cumulative CA surpluses) to keep the TARGET2 balances unchanged, Germany must be willing to hold these accumulated CA-balances in the form of private claims against the euro area countries. As these cumulated CA-balances continue to increase, German private investors must be willing to hold increasing amounts of private claims. In fact there is worse. Since these cumulate CA-balances are increasing faster than the German GDP and German total wealth, German investors must be willing to increase the share of claims on the rest of the euro area in

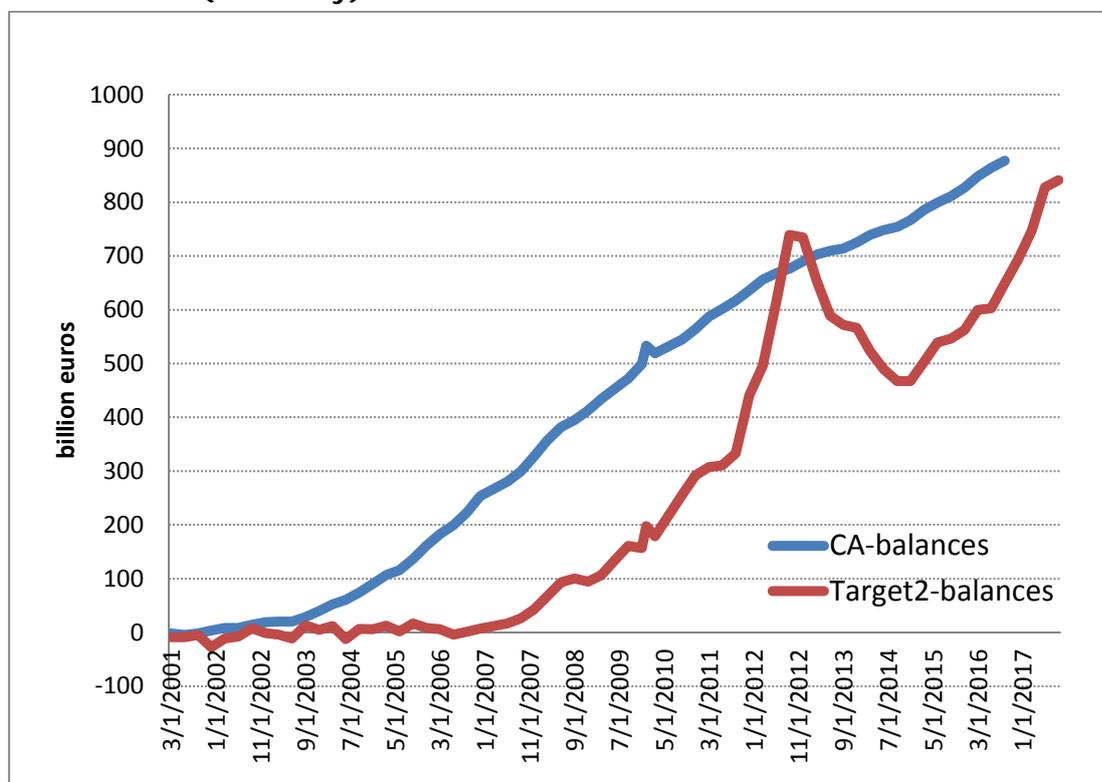
their total portfolio. If there is no such willingness, inevitably the accumulated CA-balances will take the form of TARGET2 balances.

Figure 11 suggests that the German willingness to hold the claims generated by current account surpluses in the form of private claims has weakened significantly, leading to an inexorable increase in TARGET2 balances. Let us go through the detail of the movements of these balances since the start of the Eurozone.

We can see from Figure 11 that the build-up of current account surpluses initially (until 2006) did not trigger increases in German TARGET2 claims. Thus, during 2001-06 the counterpart of these accumulated surpluses was a build-up of private claims against the other euro area countries. This changed dramatically after the start of the financial crisis. From 2007 until 2012, the private German sector reduced its net foreign claims dramatically. The reverse side of the coin was an equally dramatic increase of TARGET2 claims of Germany. Put differently, **the result of the sovereign debt crisis was a shift of private net claims to public net claims of Germany, because of the unwillingness of the private sector to hold these private claims.**

As confidence was restored after the OMT-announcement in September 2012, the German private sector restored part of its claims to the rest of the area which had the effect of reducing the TARGET2 claims. This was only partial and temporary, however.

**Figure 11: Cumulative CA-balance vis-à-vis the euro area and TARGET2-balances (Germany)**



Source: CA-balances: Deutsche Bundesbank; Target2-balances: ECB.

The start of the QE-program led to a new phase in the build-up of TARGET2 claims. We have already discussed some of the reasons why this build-up occurred in Section 2. We can now rephrase it in the following way. **The APP changed the composition of portfolios of wealth-owners in the euro area. As a result of QE, government bonds were removed from these portfolios and central bank liquidity took the place of the bonds.** Investors will typically rebalance their portfolios and use the liquidity to buy other

assets. If this rebalancing had been neutral, i.e. holders of, say, Italian government bonds would have replaced these with other Italian assets, then the QE-program would have had no impact on TARGET2. But that did not happen. Investors holding government bonds from periphery countries decided to invest the liquidity in assets issued by Germany (and a few other core countries). This must have been driven by lack of confidence in the periphery assets. This by itself reduced the net private claims of Germany *vis-à-vis* the Eurozone countries and thus necessarily increased TARGET2 claims of that country.

We can now conclude the following. The large accumulation of German current account balances is the fundamental reason of the instability of the TARGET2 balances. As these current account balances increase exponentially, they increase the German claims on the euro area countries. **In order to shield the TARGET2 balances from this accumulation of German CA-balances, the willingness of Germany to hold *private* claims against the euro area must continue to *increase*.** This makes the system fragile. Changes in confidence in the solvency of some countries, or **large additions of liquid assets (through QE) can trigger sudden changes in the willingness of private agents in Germany to hold private claims against the other euro area countries. When that happens we observe surges in the TARGET2 balances.**

This problem will not go away. In fact it will grow worse as there is no indication that Germany is willing to reduce its current account surpluses. These create a huge overhang of German claims on the rest of the euro area and also create a potential of massive switches in the nature of these claims. German economists have a habit at pointing the finger to the TARGET2 balances as a source of potential instability. In fact it is the build-up of current account surpluses that is source of instability.

### OPEN QUESTIONS

- The current European market of securities and settlement is still rather fragmented. As peripheral countries cannot continue to substitute inflows of foreign private sector liquidity with TARGET2 liabilities, this will put a great onus of responsibility on the APP exit strategy. Is the ECB concerned about the fact that the banking system is mostly and permanently relying on central bank money for funding?
- Should the accumulation of TARGET imbalances continue, as expected, with the development of the APP, and in the light of a lack of willingness in Germany to reduce its CA surpluses, will the ECB be ready to consider the issuance of bonds for which members of the euro area would be jointly liable (i.e. Eurobonds)?
- Would the ECB consider a more direct involvement in the APP programme (currently the ECB exposure in the PSPP is capped at 20%) – or the use of the OMTs, going forward – in order to restore confidence and ensure a reflow of funds in the area periphery?

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