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# Nature of TARGET2 Imbalances

**SUMMARY:** There is no consensus among economists regarding the nature of TARGET2 assets and liabilities recorded on the balance sheets of euro area national central banks, the exact reasons for their build-up in recent years and the possible ways of their management. The paper points out that TARGET2 balances are shaped concurrently by endogenous and exogenous factors. The common banking supervision system and the quantitative easing programme of the ECB may ease the imbalances, reduce the dynamics of TARGET2 balances, and alleviate currently perceived risks.<sup>1</sup>

**KEYWORDS:** interbank settlements; euro area; imbalance; monetary policy; TARGET2

**JEL CODE:** E42, E58, F33

The liabilities and assets recorded by the TARGET2 interbank payment and settlement system on the balance sheets of euro area central banks have been building up continuously since 2007. The national central bank of Germany has piled up assets amounting to EUR 500 billion in the span of a few years, while the central banks of Spain and Italy together accumulated roughly the same amount of liabilities. The evaluation of the financial costs of a country's default, the possible breakup of the euro area or the exit of certain countries largely depends on the correct interpretation of TARGET2 balances (Sinn, 2012b). This study sets out to explore the economic nature of balances; describes the evolution of the imbalance and seeks to identify the real economic and financial processes behind the building up of central bank TARGET2 balances. It also attempts to give theoretical solutions to the problem.

The first chapter discusses the real economic developments behind the accumulation of

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liabilities and assets. The second chapter presents and puts into context the positions taken by economists in the topic at hand, and synthesises the relationship between the various interpretations and the real economy reasons giving rise to the imbalances. Moreover, the chapter sheds light on the euro area's Banking Union ambitions and on the close links between the escalation of imbalances and the deceleration options available. The third chapter describes previous proposals put forward with regard to the settlement of liabilities and assets and, drawing on the technical features of the European Central Bank's quantitative easing, introduces a possible new solution.

## TARGET2 BALANCES BEFORE AND AFTER THE CRISIS

### Technical background of the imbalances

The second generation of the *Trans-European Automated Real-time Gross Settlement Express Transfer System* (TARGET2) was implemented

in 2008 as one of the largest interbank payment and settlement systems of the world, with the European Central Bank at the helm. Covering the entire euro area, the clearing network processed 92.6 million transactions, representing a total value of EUR 493 trillion in 2013 (ECB, 2014). All payments were executed within 5 minutes without exception. The TARGET2 system is one of the safeguards of the smooth functioning of the single currency area.

Technically speaking, TARGET2 balances are generated based on bilateral settlements as a result of individual payment transactions (see Chart 1). Since balances are recognised in central bank balance sheets on net terms, stocks reflect the position of individual central banks vis-à-vis the entire euro area. In this sense, therefore, items are generated as a result of multilateral settlements.

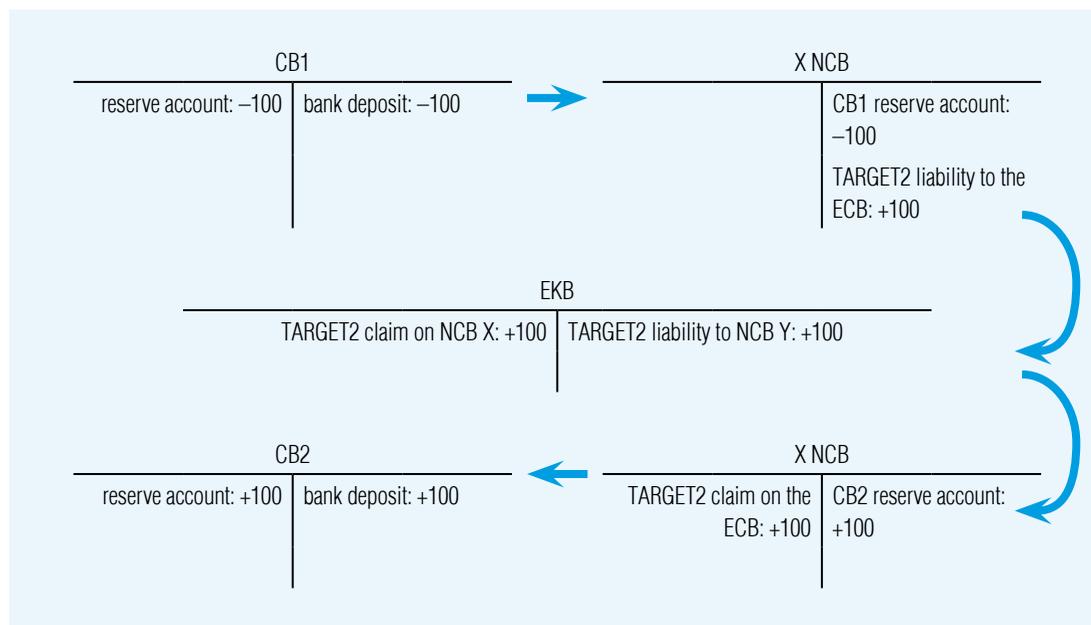
Legally, the assets acquired as a result of monetary policy measures and from operating the payment system constitute the property of national central banks and are recognised in their balance sheets (ECB, 2012b). Apart from a few special items, Member States of the euro area bear the losses incurred by national central banks together, in proportion to their contributions to the subscribed capital of the ECB.

The transaction presented in Chart 1 may arise out of several reasons: it could represent FDI flows between countries, or international payments following the sales of goods and services. Before the 2007 crisis, commercial banks financed their liquidity needs arising from transactions in the interbank market (Cecchetti, McCauley and McGuire, 2012).

After the outbreak of the crisis, borrowing in interbank markets became increasingly dif-

Chart 1

**SETTLEMENT IN TARGET2\***



\*ECB: European Central Bank;  
 NCB X and NCB Y: the national central banks of country X and country Y;  
 CB1 and CB2: commercial banks in country X and country Y  
 Source: own editing

difficult. Changes in the regulatory environment, however, offered new options to commercial banks. From October 2008, refinancing operations under the ECB's fixed-rate full allotment policy have become generally available, providing prompt refinancing to commercial banks at any time, at a fixed interest rate (ECB Directorate, 2011). In these operations, interest rates are fixed and, depending on the collateral available, the ECB may provide liquidity to cover the entire demand. Parallel to the introduction of the new refinancing operations, the ECB continuously broadened the range of securities accepted by it as eligible collateral (ECB, 2015a).

If commercial banks opt for central bank financing instead of raising funds in the dried-up interbank market, they follow the procedure presented in *Chart 2*, which is a slightly modified version of *Chart 1*.

If Country X transfers larger amounts of euro to Country Y than vice versa for a sustained period, TARGET2 liabilities will accu-

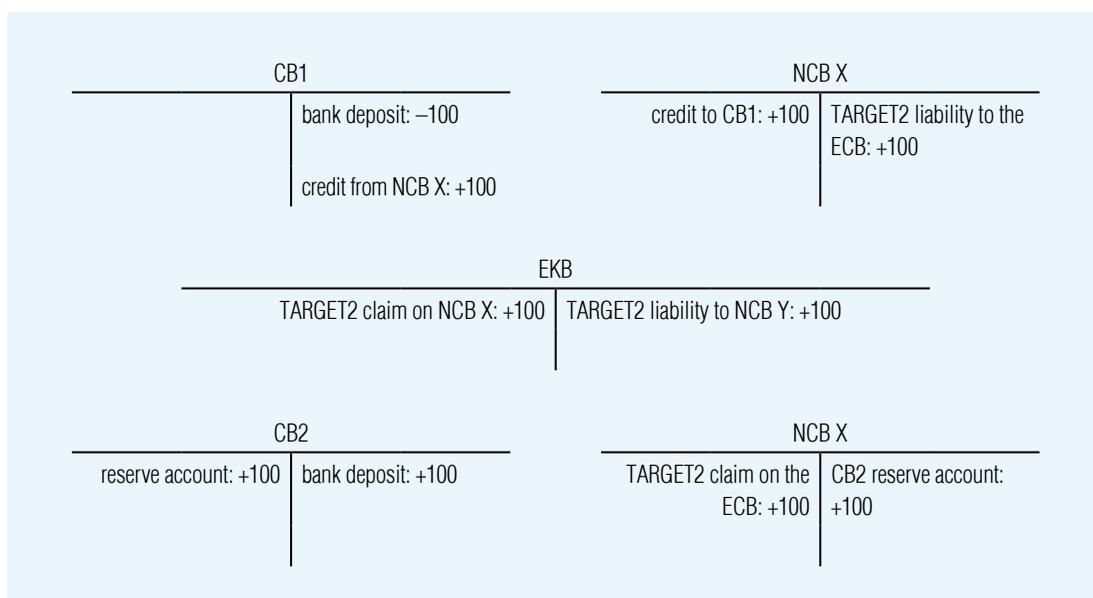
mulate in the balance sheet of NCB X, while TARGET2 assets will build up in the balance sheet of NCB Y. Technically speaking, this is the phenomenon that gives rise to imbalances in the system. The literature typically associates Germany with Country Y and Country X represents any country from the periphery economies. Before the onset of the crisis, TARGET2 balances fluctuated around 0; from 2008, however, both the assets and the liabilities of individual countries embarked on a sharp rise (*see Chart 3*).

### Reasons behind the imbalances

As a result of the single monetary policy and diverse potential growth rates, periphery countries obtained financing at negative real interest rates in pre-crisis years (Surányi, 2008). With the crisis spreading through the economies, yields began to diverge, which rendered capital market financing expensive

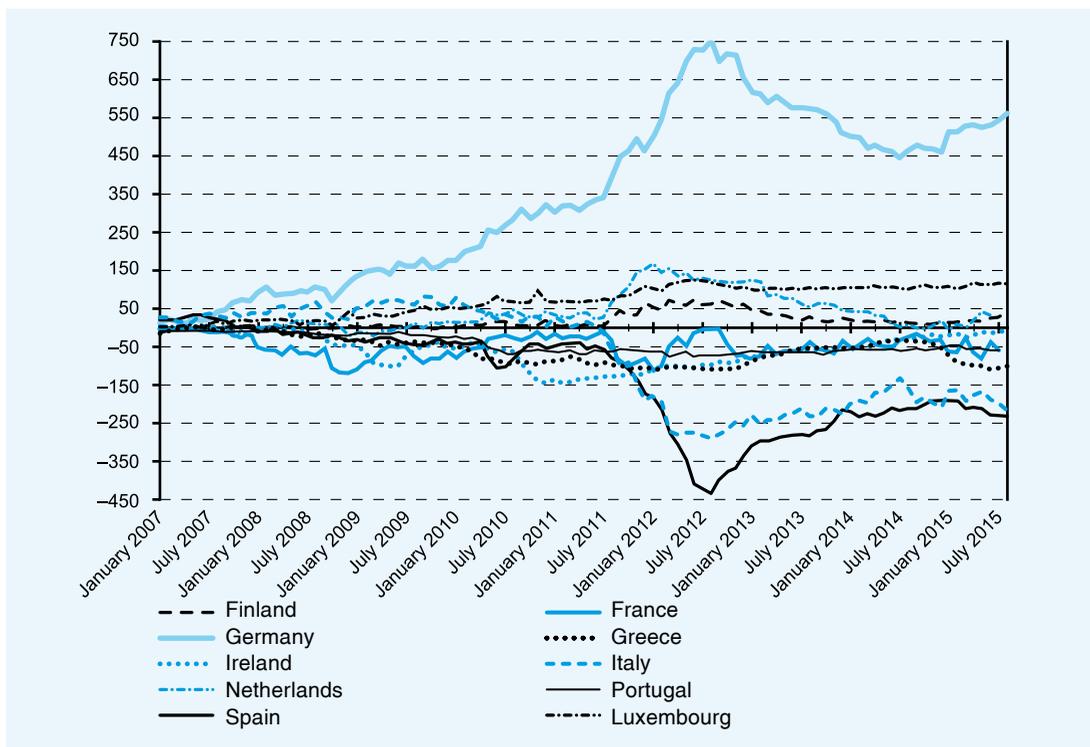
Chart 2

### POST-2007 MECHANISM



Source: own editing

**TARGET2 BALANCES (EUR BILLION)**



Source: Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University, 17/09/2015

and called into question the sustainability of outstanding debt. The fixed-rate full allotment policy and the easing of the ECB’s collateral criteria, however, allow periphery countries to this date to maintain their current account deficits (Sinn and Wolmershauser, 2011).

This gave rise to the phenomenon of credit shifts (Sinn and Wolmershauser, 2011). Since German commercial banks have no need for financing due to the liquidity inflows, the Bundesbank finances periphery countries indirectly, instead of the German banking system, and thus the assets of peripheral commercial banks serve as collateral.

According to Sinn (2011), with this fiscal-oriented monetary measure, the ECB practically bailed out periphery countries. Lending becomes a fiscal move as any credit losses will be sustained by the central budget – ultimate-

ly, the taxpayers – of the countries concerned. Sinn argues that, while the ECB’s measure was necessary amid the conditions of the most severe liquidity crisis, it is highly questionable why it maintains the fixed-rate full allotment tenders to this date.

Tornell (2013) goes as far as to call TARGET2 a transfer mechanism, owing to its three main institutional characteristics:

- the ECB’s bylaws do not impose any upper limit on the size of an NCB’s TARGET2 liabilities;
- there is no explicit upper bound on the maturity of TARGET2 liabilities;
- decisions at the ECB are made by majority voting and one-country one-vote applies; therefore, since borrower countries in the system are in majority, creditor countries can easily be outvoted by borrowers.

The current account deficit did not pressure periphery countries into adopting structural reforms. Although the ECB emphasised the importance of fiscal austerity and advocated the commencement of economic changes, it was to no avail: with the policy pursued, it generated the exact opposite effect. The question is, whether this was a well thought out fiscal bailout on the part of the ECB – in which case, it overstepped its competence –, or simply the endogenous consequence of the previously defined statutory criteria for the functioning of the single currency area.

The imbalances observed can be equally explained by goods market and capital market developments. Transfers boosting TARGET2 balances are not always initiated by private individuals or corporations, but often reflect interbank transactions, i.e. the flight of banking sector participants from low quality assets, leading to portfolio rearrangements (Westermann, 2014). This phenomenon of risk shifting leads to the accumulation of TARGET2 liabilities by peripheral central banks toward the German central bank. As the collateral value of lower quality securities is also lower, the risk associated with these papers is shifted to the central bank. The fiscal nature of monetary policy also manifests itself in this regard, owing to the rules pertaining to the bearing of expected losses.

According to *Cecchetti et al.* (2012), imbalances are driven by two types of capital flows. In the first case, random investors (mainly from Germany) reduce their assets in periphery countries, leading to the reversal of capital inflows. Propped up by central bank refinancing, peripheral banks repay the capital, giving rise to position changes in TARGET2, whereby German commercial banks gain access to excess liquidity. As credit extended by the banking sector is repaid, some of the liabilities are redistributed from the private sector of periphery countries to the public sector, namely,

to the ECB and to the European System of Central Banks.

In the second case, capital flows are driven by the hedging of redenomination risk. Since German bank groups are concerned about a sharp devaluation should the drachma be re-adopted, the German member bank no longer extends financing to the Greek member bank. Instead, claims on the German bank appear in the balance sheet of the Greek member bank.

## THE ENDOGENOUS AND EXOGENOUS NATURE OF TARGET2 BALANCES

### The endogenous approach

*Whelan (2013)* views TARGET2 balances as endogenous variables. According to his interpretation, imbalance is seen as a mere by-product of pre-agreed policy decisions taken with a view to establishing, operating and maintaining the single currency area. Its endogenous nature, in turn, is demonstrated by the fact that individual countries have no control over changes in TARGET2 balances. With the central bank standing facility and in line with the principle of equal treatment, all commercial banks have access to refinancing, given that it is an essential component in the functioning of the single currency area. This is why *Whelan (2013)* claims the term “TARGET2 credit” is misleading. Indeed, while traditional lending involves active participants, TARGET2 balances evolve passively (automatically) in order to ensure free capital flows between countries. Imbalances pose risks nevertheless; however, the assets and liabilities of the national central banks of the euro area vis-à-vis each other – some of which may have originated outside of TARGET2 – should be discussed in general terms (*intra-Eurosystem balances*).

Whelan (2013) points out that, for example, owing to the accounting rules pertaining to banknote issuance, even in case of a “switch-off” of the settlement system, inter-bank balances would keep piling up. In other words, the problem does not lie within the TARGET2 mechanism; it is simply a tool of the single currency area. Switching off the system would hinder the free flow of capital, calling into question the basic principles of the European integration.

According to the endogenous position, any restrictions on the size of the balances would be the end of the euro area. If the ECB did not provide refinancing for the execution of the required transfers, the national economies of the periphery would collapse (Febrero and Uxó, 2013). Furthermore, if we accept this interpretation of TARGET2 balances, we must question the soundness of the argument about the ECB’s bailout of periphery countries. Indeed, the provision of central bank refinancing should not be seen as an independent and voluntary monetary policy step, as it merely follows completely different economic processes automatically.

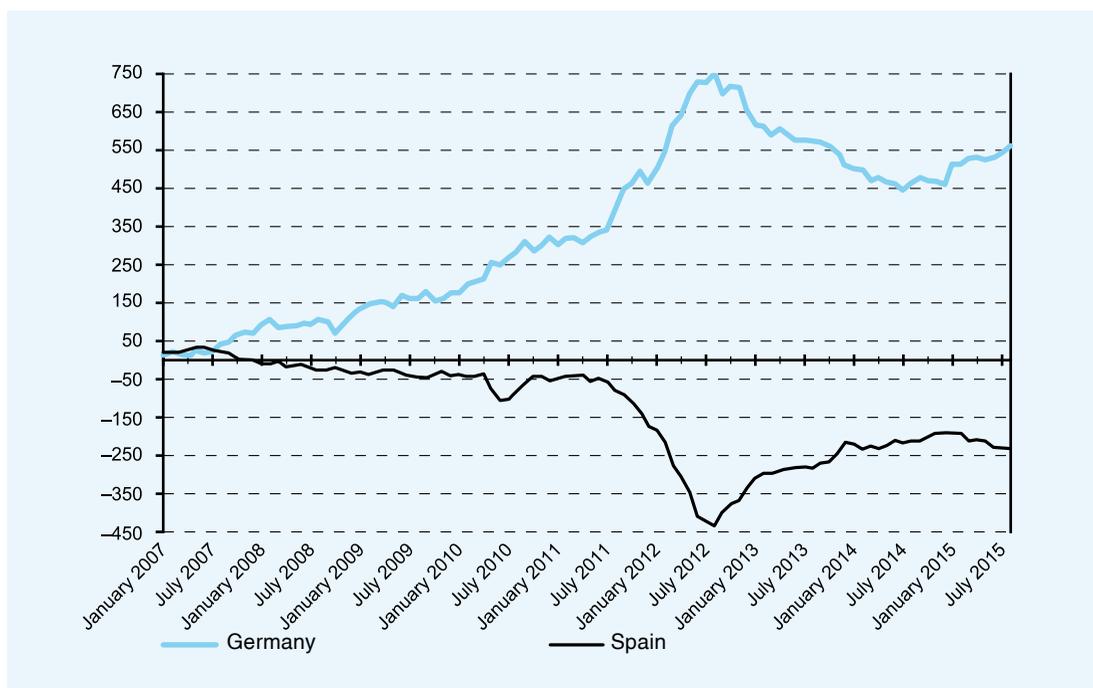
*Westermann (2014)* rejects the endogenous interpretation on the grounds that national central banks and governments can exert, at the very minimum, an indirect effect on the size of the balances during the execution. For example, responsibility for banking supervision and for assessing the solvency of a commercial bank lies with national regulators. By increasing the issuance of government securities, the government is in a position to mobilise additional collateral within the banking sector, or it may even offer government guarantees to certain assets to turn them into eligible collateral items. Sinn (2011, 2012a, 2012b) had viewed the situation similarly from the start: in his assessment, peripheral central banks simply resorted to cranking up the money-printing press of the euro area.

### Distinguishing between the reasons of the imbalances

Developments in TARGET2 balances may be attributed to endogenous and exogenous factors, with both explanations having some justification. The exogenous interpretation is appropriate when the current account deficit is financed through TARGET2. Accordingly, it is a valid argument that central bank lending permitted the maintenance of deficit in periphery countries, allowing these economies to put off the painful and consistent process of restructuring. By contrast, the capital transfer explanation reflects an endogenous point of view, given that financial flows, in this case, were always initiated by private parties or corporations outside of the periphery. The accumulating liabilities and assets of national central banks merely track private sector transactions in line with the operational mechanism of the TARGET2 system.

Both Cecchetti et al. (2012) and *Auer (2012)* demonstrated the explanatory power of both the current account and the capital flow explanations, albeit to a different degree in space and time. The EEAG (European Economic Advisory Group) (2012) pointed out that, while the TARGET2 balances of Ireland and Italy are linked to capital outflows, a quarter of Spain’s current account deficit is financed from TARGET2 liabilities. Cecchetti et al. (2012) found evidence that changes in current account balances, in general, had explained changes in TARGET2 balances fairly well for a few years after the outbreak of the crisis. However, from 2012 TARGET2 balances were definitely driven by other factors as well, as they changed far more drastically than current accounts. The striking departure of the TARGET2 balances of the Spanish and the German central banks can be attributed to the OMT programme launched in the wake of *Mario Draghi’s* infamous statement,

TARGET2 BALANCES III



Source: Euro Crisis Monitor, Institute of Empirical Economic Research, Osnabrück University, 17/09/2015

namely, that within the scope of its mandate, “the ECB is ready to do whatever it takes to preserve the euro”<sup>2</sup> (see Chart 4). Although no effective purchases have been made under the programme to date, the announcement itself was enough to push down, as intended by the programme, the yields on Spanish, Irish, etc. government securities. Confidence in the government securities of periphery countries returned to a certain degree. As shown in the chart, Spain may have seen the reversal of a significant capital outflow during the period. This exerted an impact on the endogenous component of TARGET2 balances. German FDI not only trickled back to Spain, but also to other countries in the periphery. For these reasons I maintain that developments in TARGET2 balances can be divided into an endogenous and an exogenous component in each country.

The tragedy of the commons – an exogenous explanation

Arguments based on the tragedy of the commons are part of the exogenous interpretation, and are linked to the regulatory background of TARGET2 imbalances and the functioning of the euro area. *Dinger, Steinkamp and Westermann (2012)* emphasise that, starting from 2007, the ECB’s monetary policy has provided substantial leeway to national central banks in determining the magnitude of domestic refinancing; moreover, NCBs have access to the common pool of euro area-wide money demand. In modelling the “tragedy of the commons” problem, the author assumes that the positive effects of increased central bank lending are perceived only in the given country, while inflationary effects are spread across euro area countries.

Tornell (2013) tracks back the emergence of TARGET2 imbalances to a scenario he terms the “dual tragedy-of-the-commons”. The first scenario is an inter-country commons-problem, which arises because the size of the funds provided by euro area national central banks is not determined by a single power. Indeed, in addition to the central decision of the ECB, each national central bank has control over the extension of credit independently. Indirectly, each national central bank has access to the common pool of euro area-wide money demand, which gives rise to a commons-problem.

The second scenario is a ‘within-country commons-problem’. As these countries are not dictatorships, decisions are not concentrated in a single hand. The national central bank, commercial banks and the fiscal authority all have specific powers and decision-making competence. In such a system, the central bank is subject to a significant pressure to finance the state indirectly and to declare a bank solvent when it is de facto insolvent. This generates strong temptations for powerful groups to influence the central bank, as it can extend any amounts of continuous credit. And, thanks to the single currency area and the TARGET2 mechanism, it can do so without having to worry about the devaluation of the currency, given that it has access to a continuous “line of credit”. Tornell (2013) found evidence that the ECB’s generous financing becomes squandered as, instead of increasing the consumption of domestic participants, it only leads to higher capital outflows.

In my view, the problem surrounding the regulatory environment can be captured in a situation when a national central bank extends credit to a distressed commercial bank. It can do so, for instance, by accepting a bank’s non-performing assets (outstanding bad loans) as collateral. Why would it choose to do so? Because, on the one hand, by doing so it can

protect the national economy from a severe shock or at least put off the emergence of the shock, which is a far better outcome – both from a political and an economic perspective – than an instant bank failure and the ensuing panic. On the other hand, should the refinancing loans extended to the given bank default, local taxpayers will have to shoulder the losses only to the extent of the country’s contribution to the ECB’s subscribed capital. The central bank, therefore, makes an optimal individual decision in a non-cooperative game. If, however, all national central banks decided to act along these lines, depending on the actual number of bank failures, total losses may rise to a magnitude that would no longer benefit the taxpayers of the country concerned.

### Banking Union as a possible solution

The problem of the commons, as a possible interpretation of the European monetary policy mechanism, calls attention to the dilemmas associated with the regulatory environment. The evolution of TARGET2 imbalances are likely to be largely affected by the SSM (Single Supervisory Mechanism) programme launched on 4 November 2014, which is a great step forward to the establishment of the Banking Union. Let us assume that periphery countries let their TARGET2 balances surge intentionally, in other words, in line with the exogenous explanation, the imbalances are stemming from loans borrowed from the ECB. In this case, the single banking supervision will put an end to the accumulation of imbalances. Indeed, there will no longer be an opportunity to grant further loans to insolvent banks or to accept toxic assets as collateral. In reality, however, the exogenous argument only partly accounts for the imbalances; therefore, the SSM may only curb the further growth of the “exogenous component” of TARGET2

balances by preventing the common-problems. This would be a great achievement in itself, as it would encourage periphery countries to implement structural changes and contain their current account deficits. However, it remains to be seen how effective the ECB's supervisory activity will be in practice, and to what extent it will be capable of cooperating with banks and local supervisory authorities.

## POSSIBLE SOLUTIONS

Before discussing possible solutions to the imbalances, an important question should be addressed. Why is it important to settle or resolve anything? It is quite possible, that the TARGET2-related ballooning of the ECB's balance sheet in the aftermath of the crisis is only a technical consequence. However, it is also possible that the endogenous approach does not hold, which means that the TARGET2 balances have been manipulated, albeit to a different degree in individual countries, and the system has been "taken advantage of". On the other hand, irrespective of whether the system is endogenous or exogenous, large external imbalances are extremely costly and pose severe risks.

### Risks and costs of imbalances

At present, Germany has the largest central bank exposure. At the time this study was prepared, the TARGET2 balances of even the Finnish and the Dutch central banks – formerly major net lenders – dropped to near-zero. Only the national central bank of Luxembourg has a positive balance, although it is rather minor compared to that of the Bundesbank's balance sheet. In any event, the TARGET2 system poses risks to the taxpayers of these two countries. It should be added that

under the current deficit management rules, the arbitrary tool applied by the central bank poses financial risks to taxpayers, since any resulting losses are recapitalised based on the central budget. With regard to the claims of individual central banks vis-à-vis each other, the question remains the same: where do the expected losses stem from?

In view of real economic developments, the possibility of the collapse of the currency area or the exit of certain countries should not be underestimated. Greece has faced a possible exit more than once in recent years as a realistic alternative. The implications of such scenarios have been discussed by Sinn and *Wolmmer-shauser* (2011) already. According to Whelan (2013), the costs would depend on the exit scenario. It is currently unknown whether Greece would renege its TARGET2 liabilities immediately upon its exit, or it would redenominate its liabilities and continue to maintain them. There is even a remote possibility that Greece would remain in TARGET2 and maintain its EUR-denominated TARGET2 balance as a real and repayable debt. There is no one-size-fits-all scenario for an exit from the euro area but even if there was, it could only serve as a recommendation, given that a legitimate Greek parliament could override the relevant rules by legislation. It is impossible to assign probability of occurrence to various exit scenarios. Without a doubt, in some scenarios the ECB will have to sustain losses. In such a case, besides German taxpayers, the taxpayers of all remaining countries would have to share the losses. The implications of a complete breakup of the euro area are even more uncertain, and could pose even graver risks, especially to Germany and Luxembourg.

Besides the risks and expected losses of the uncertain scenarios, mention should be made of the real costs arising from the imbalances. *Erlor and Hohberger* (2014) found that at the end of 2013 Germany faced current costs of

around EUR 15 billion in real terms from holding TARGET2 claims. The authors' argument is based on the fact that the nominal interest on TARGET2 balances – which is in line with the interest rate of the ECB's main refinancing operation – can be converted to a real interest amount through an adjustment by the real exchange rate. Accordingly, taking into account – among other things – the changes in the consumer price indices of Germany and the euro area (excluding Germany) since the launch of the TARGET2 mechanism, the real income resulting from TARGET2 claims can be calculated. On this basis, the system functions as a redistribution mechanism.

#### Settlement via government security issuance

From the start, Sinn (2011) has argued that TARGET2 liabilities should be settled by marketable instruments (assets), such as government papers. The budget could assume the central bank's liabilities by issuing new government securities. The idea itself is not to be shunned as both cases involve public debt. The EEAG proposed a similar solution in 2012, suggesting that central bank claims vis-à-vis each other could be settled by government securities backed by real estate collateral or securities offering pre-emption rights to tax revenues. According to Whelan (2013), such a scenario would lead to a striking surge in government paper issuance.

In my opinion, periphery countries should not be pressured into government security issuance beyond the extent of the endogenous component of their TARGET2 balances. A part of the exogenous component of the balances, in turn, would simply disappear with the elimination of the incentives for excessive recourse to central bank refinancing. On the downside, the other component would still cause an alarming increase in public debt.

Moreover, government securities with pre-emption rights would sharply deteriorate the credit rating of the countries, as the probability of default would increase significantly for ordinary creditors.

#### How does the Fed settle similar accounts?

One of the first recommendations of Sinn (2011) was for the ECB to follow the lead of the system applied in the United States. Technically speaking, there are similarities between the 12 federal reserve banks (which comprise the Federal Reserve System) and the 19 national central banks of the euro area. The balances generated by member banks of the Fed are similar in nature to those existing between European central banks. In the United States, these TARGET2-type assets and liabilities are referred to as interdistrict settlement accounts (Fed, 2015). Reserve banks have a stake in the portfolio used for open market operations (SOMA – System Open Market Accounts), and the securities held in the account are re-allocated across reserve banks each year on the basis of their assets and liabilities, on a bilateral basis. If reserve bank X has liabilities to reserve bank Y, X will relinquish a portion of its stake in the SOMA portfolio to Y (Federal Reserve Bank of New York, 2009). In addition, they do not settle accounts on the basis of actual total amounts, but in accordance with the average liability increment compared to the previous year. Consequently, even in the USA balances will retain a certain size.

However, it is an important difference between the ECB and the Fed, that the Fed keeps track of balances essentially on a bilateral basis. This is closely linked to the issue of central bank loss bearing as in this regard, the ECB has a rather peculiar practice. The main difference stems from the fact that the USA is

a closely-knit system of federal states which, contrary to the European Union, have a common fiscal policy. In view of these circumstances, any comparison between the ECB and the Fed – suggesting that the ECB may consider adopting the Fed’s method – should be made with extreme caution. Indeed, this would raise such profound economic issues pertinent to the euro area, whether it would be possible to maintain a successful monetary policy without the backing of a common fiscal policy. However, the US system may offer some useful ideas even without debating this issue.

*Mehrling (2012)* proposed a solution to the settlement of TARGET2 claims based on the US settlement system and the OMT programme: The ECB may consider compiling a portfolio from the government papers of periphery countries in the context of the OMT, and the share of the Bundesbank in this portfolio would replace its TARGET2 claims. Although the debt overhang would be settled through government securities as marketable assets, this should not be viewed on par with the potential solutions discussed in the previous chapter. Mehrling’s proposal has some similarities to the Fed’s system, and the portfolio itself could be the first step toward the creation of a common European government paper. Since the OMT programme has not progressed beyond its announcement and numerous legal debates – with no operative asset purchases in sight – Mehrling’s proposal remained mute. Some other developments, however, may steer the processes towards a similar direction.

### The latest development: the ECB’s quantitative easing

At the time of the preparation of this study, the quantitative easing programme of the ECB was in full swing. In the past six months

a new asset purchase programme has been launched (in several steps) that does not involve sterilisation. In other words, the ECB purchases corporate bonds and government securities in the secondary market without neutralising the growth of broad money (the monetary base). In point of fact, it is precisely through this step that the ECB wishes to exert an upward pressure on inflation to reach a level of around 2 per cent. One pillar of the entire programme involves the purchase of securities of the general government sector, amounting to EUR 60 billion per month. In addition to government securities, purchases are extended to the bonds of major development banks and similar international institutions (e.g. the European Atomic Energy Community) (ECB, 2015b, 2015c, 2015d). The securities of the public sector may alone compose such a large portfolio that could replace TARGET2 claims. Even corporate bonds could be included in such a portfolio provided that they are evaluated on the basis of higher discount rates corresponding to their risk level.

While this is more similar to the Fed’s practice, there are still significant differences. During the implementation of the quantitative easing, the national central banks of the euro area contribute to the asset purchases in proportion to the capital subscription keys. Besides corporate securities and the bonds of large international institutions, they purchase the government papers of their own countries. In addition, while losses are borne by national central banks in proportion to the capital subscription keys in the case of the full portfolio of corporate papers, only 20 per cent of government paper purchases fall under the regime of full risk-sharing<sup>3</sup> (ECB, 2015c). This means that at present, *Chart 5* is not an accurate representation of the portfolio accumulated during the period of quantitative easing. Therefore, the balance sheet of the ECB cannot be consolidated, as losses and gains from

Chart 5

**QUANTITATIVE EASING (UP TO 20 PER CENT OF THE PROGRAMME'S VALUE)**

ECB consolidated balance sheet	
Government papers of euro area countries	Shares of national central banks (according to capital subscription keys)
Bonds of development banks and international institutions	
Corporate bonds	

Source: own editing

these assets are not shared between euro area countries at a 100 per cent as is the case with standard assets. Nevertheless, the chart shows the actual status up to 20 per cent of the value of the asset purchase programme, given that each national central bank enjoys the gains and suffers the losses in proportion to its capital subscription key up to 20 per cent even in

the case of government securities. For the time being, therefore, a European SOMA portfolio could be set up to this extent.

Otherwise, a portfolio without corporate bonds would be very close to a common European government security. If the assets concerned were held – both from a legal and an accounting perspective – by an SPV (Special

Chart 6

**THE SPV AND THE SETTLEMENT MECHANISM**

SPV	
Government papers of euro area countries	Shareholder's equity: the various shares of national central banks (initially according to capital subscription keys, and subsequently reallocated on a regular basis)
Bonds of development banks and international institutions	
Corporate bonds	

NCB X		NCB Y	
Stake in SPV: –	TARGET2 liability: –	Stake in SPV: +	TARGET2 claim: –

Source: own editing

Purpose Vehicle) set up particularly for this purpose, securities issued by it could be traded in the market, which would entail a shared European risk. In any event, even without the possibility of open market trading, national central banks could recapitalise an SPV according to capital subscription keys, and place 20 per cent of the assets purchased under the quantitative easing programme in its balance sheet. From that point on, national central banks would bear the costs of their stake in the SPV (as an asset) on their own. Once this condition is met, TARGET2 balances could be settled through the reallocation of central bank shares – which, initially, correspond to the capital subscription keys – in the SPV. *Chart 6* illustrates the SPV and the settlement mechanism. It is important to stress that the procedure would not alter the efficiency of the quantitative easing as it is not linked to a specific country or its central bank from the perspective of its operational impact mechanism. Thus, the aforementioned mechanism could take advantage of the programme as an added bonus.

## CONCLUSIONS

The TARGET2 imbalances of euro area national central banks resulted, on the one hand, from changes in the regulatory environment, and on the other hand from economic developments. Of the real economic reasons of the imbalances, the current account approach attributes an exogenous characteristic to the system and assumes that periphery countries maintained their current account deficit intentionally, which led to the extreme accumulation of liabilities. By contrast, the capital account approach assumes that the evolution of TARGET2 claims and liabilities is an endogenous process, reflecting the transactions of independent real economy

participants. Evidence shows that the system correlates both with changes in the current account and capital flows, although to a different degree in space and time. Consequently, changes in TARGET2 balances can be divided into an endogenous and an exogenous component in each country, which means that both approaches are, in part, correct.

The recently launched Single Supervisory Mechanism – the framework for a single, EU-level banking supervision system – could be a great step forward in preventing the further accumulation of imbalances. In case of the successful implementation of a central decision-making process regarding the solvency of commercial banks and the adequacy of collateral, national central banks will no longer have an opportunity to abuse the system. Thus, a common banking supervision could eliminate the possibility of ‘tragedy of the commons’ situations, which previously contributed to the exogenous increase in central bank TARGET2 lending.

An example could be seen in the United States for the possible settlement of similar claims and liabilities. While the ECB is unable to adopt the Fed’s system owing to a number of fundamental differences, the US system may still offer some useful ideas. The solution proposed in the study is in fact based on the system used by federal reserve banks for the settlement of interbank transactions. The ECB may consider to set aside 20 per cent of the assets purchased during the period of quantitative easing to create a portfolio similar to the Fed’s SOMA portfolio. Transferring these assets to an SPV set up for this purpose and recapitalised in accordance with the capital subscription keys would not alter the quantitative easing programme in the economic sense. However, it would provide an opportunity to settle TARGET2 claims and liabilities gradually by the reallocation of shares in the portfolio.

NOTES

- <sup>1</sup> This article was written with the support of the Pallas Athéné Domus Scientiae Foundation.
- <sup>2</sup> “Within our mandate, the ECB is ready to do whatever it takes to preserve the euro.” (Mario Draghi, 2012)
- <sup>3</sup> The 20 per cent cannot be raised to 100 per cent because that would be tantamount to a real fiscal policy move. This was a main reason why the OMT was criticised, mainly by Germany (Financial Times, 2014).

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