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## Discussion of 'TARGET2 and central bank balance sheets'

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**Discussion of  
“TARGET2 and Central Bank  
Balance Sheets”<sup>1</sup>**

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<sup>1</sup> The paper of “TARGET2 and central bank balance sheets” is forthcoming in *Economic Policy*, 2014. This working paper is an extended version of the authors’ discussion that is forthcoming in the same issue.

The paper “Target2 and Central Bank Balance Sheets” by Karl Whelan has been presented at the Economic Policy Panel in Dublin in April 2013. It contains a summary – and critical review - of a debate that has been started by Hans-Werner Sinn, who interpreted large imbalances in the TARGET2 system as sign of balance of payments crisis within the Euro-Area. Sinn had raised the issue, in a column on VOXEU.ORG (2011a), where it currently ranks as the second most read article of all times and in a longer research article, jointly with Timo Wollmershäuser (2011 and 2012 a, b).

Clearly, the topic is one of most controversially debated issues in contemporary economic policy research. Prof. Whelan has been among the first commentators who have rejected concerns about large imbalances in the TARGET2 system. He argues that these concerns are overrated and suggests that policy makers should not focus on “balance sheet items relating to TARGET2” (p.38).

The present working paper is an extended version of my comments in Dublin, where I illustrated that Whelan *errs on the other side*. In my response, I focused on the following four critical points:

First, the author chooses the example of *deposit flight* to illustrate TARGET2 mechanics. This is not representative for most countries and misses the welfare implications. Deposits that have been moved across borders are typically not the household deposits of “Mr. A”, who wire transfers his savings to Germany. To a large extent, TARGET2 balances have rather been driven by a *flight from low quality assets* that was facilitated by lower collateral standards.

Secondly, the author argues that TARGET2 liabilities have “not reflected discretionary actions by peripheral central banks or governments” (p.38). He rejects the tragedy-of-the-commons argument in Tornell (2012) and Dinger et al (2012), by referring to the joint decisions at the ECB council. However, it is not (only) the decision making, but rather the *implementation* of policies that creates the common pool problem. The paper neglects several channels through which countries can indirectly affect their TARGET2 balances.

Third, the policy proposal in the paper – the redemption of TARGET2 liabilities with collateral from monetary policy operations – provides no workable solution to the problem of large imbalances. A substantial part of this collateral is government bonds. Using this collateral to redeem TARGET2 liabilities would indirectly facilitate government financing in times of crisis. It would undermine the conditionality typically attached to other rescue funds, such as the IMF or the ESM.

Finally, the paper does not give fair credit to earlier academic contributions on the topic. Capital flight via the target system has been analyzed by Garber (1998). Sinn and Wollmershäuser (2012 a,b) provided the first analysis of Europe’s balance of payments crisis. They also constructed the first TARGET2 data set. Their analysis of break-up scenarios is similar to the one presented in this paper.

I do not see that the present paper uncovers mistakes in these articles. Moreover, it adopts part of the discussion. The close link between TARGET2 balances and central bank credit is an original finding of Sinn and Wollmershäuser (2011, 2012a). Also the notion that capital flight leads to Target2 imbalances is not contrary to their paper, but rather an integral part of their analysis. The paper seems to reduce the article by Sinn and Wollmershäuser to emphasize the current account only (p. 17). This is not a correct citation of their work. The strong conclusions reached in the present paper (“flawed”, “inaccurate”, etc.) follow from this misinterpretation – and are thus unfounded.

## The wrong starting point

In the example of the paper, “Mr. A” deducts money from his account in Spain and wire transfers it to another account in Germany. This transaction – in monetary union with free movement of capital – should be feasible and not restricted. The central bank of Spain passively accommodates the transaction by providing refinancing credit to Bank Santander. This helps Santander to avoid losses on “fire sales” of assets. The TARGET2 clearing system will display claims and liabilities among central banks simply as a by-product of this transaction.

In most countries, however, there has not been substantial flight of deposits by private households or firms that corresponds to TARGET2 changes. Figure 1, below, shows data from the aggregate bank balance sheets: In Spain, the decline in deposits of private households or firms is substantially smaller than the increase in TARGET2 liabilities. In Ireland, it stayed roughly constant throughout the crisis. In Italy and Portugal, non-bank deposits even increased. In Greece deposits declined, but only after their TARGET2 balance had already fallen by more than 50bn. €<sup>2</sup>

Figure 8 in the paper, that aims to document the deposit flight, shows the “Other investment” series of the Spanish balance of payments, which is indeed “mainly accounted for by deposits” (p.21). Note, however, that private non-bank deposits are only a very small component. The largest part is deposits by banks (See Carstensen et. al (2012), Sinn and Wollmershäuser (2012b) and Westermann (2012)).

Furthermore, the balance sheet of Santander should stay constant in the example, as the central bank merely replaces the deposits that Mr. A withdraws.<sup>3</sup> From July 2011 to July 2012 – the period of the most rapid increase in TARGET2 - the aggregate bank balance sheet of Spain, however, increased by 118bn. euros. In Italy, it even increased by 402 bn. € during the same period.<sup>4</sup> This is inconsistent with the passive accommodation of Mr. A’s transaction.

Finally, the example does not take into account that the bulk of Target2 imbalances occurred after the collateral standards have been dramatically reduced and thus misses the welfare implications of capital flight.<sup>5</sup> After a wide range of additional assets became eligible as collateral for refinancing credit, there has been an increase in refinancing credit, TARGET2 liabilities, and the aggregate bank balance sheet at the same time.

The process that explains the largest TARGET2 increases appears to be better described as a “flight from low quality assets”, than a “flight of deposits”. As discussed in the next section, the former, clearly entails different welfare and policy implications than the latter.

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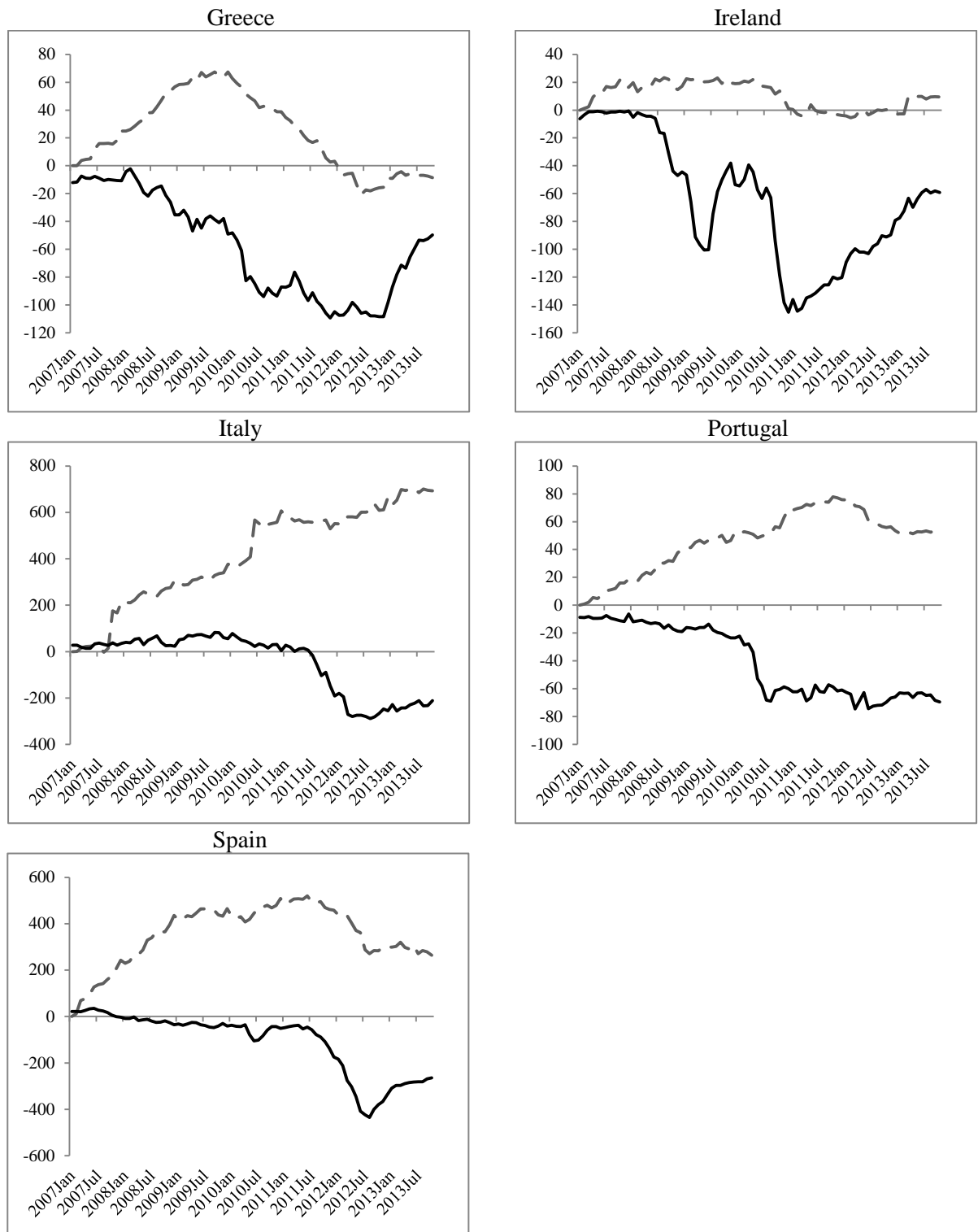
<sup>2</sup> The aggregate bank balance sheet of Germany, which separately records deposits from German residents, and other Euro-Area residents, also does not display an increase in the latter group.

<sup>3</sup> „Santander’s total amount of assets remains unchanged“ (p.9).

<sup>4</sup> In Ireland, the aggregate bank balance sheet actually contracted substantially since February 2011. In Portugal it also increased, in Greece it roughly stayed constant.

<sup>5</sup> See Sinn and Wollmershäuser (2011, 2012a), Cour-Thimann (2013), Portrafke and Reischmann (2013) and Auer (2013) for an analysis of the time-series dynamics of Target2 balances.

**Figure 1: Non-Bank Deposits (dashed lines) & Target2-balances (solid lines)**



Notes: The figure shows the Target2-liabilites (solid line), and non-bank deposits (dashed line). In bn € For the latter it shows the cumulative changes since 2007.

### **A Welfare criterion is missing**

To illustrate this point, take a Friedman-type example: Suppose “Mr. A” would take a Spanish government bond, put it in his backpack and take the train to Frankfurt. Upon arrival, he would still find Spanish bonds in his backpack, and realize that he cannot trade them into Bunds without losses. This kind of “capital flight” is unsuccessful from Mr. A’s perspective, and it entails no welfare implications for taxpayers in either country.

However, if Mr. A is a bank that uses the government bond as collateral at the central bank, he can wire-transfer newly created money to Germany and buy Bunds. In this case, central banks will build up claims and liabilities and the taxpayers of both countries are involved. As owners of their central banks, they are now indirectly exposed to the default risk of the collateral.

The key question that needs to be addressed to evaluate this process is, what haircuts did the Euro-system take – and did they provide better conditions than the market? Drechsler et al. (2013) find for instance that haircuts were relatively stable around 10% throughout the crisis. This holds even for Greek sovereign debt in the end of 2011, shortly before its debt restructuring, where the average Euro-system haircut was around 8%. Empirically, they find that risk shifting has been a significant determinant of borrowing from the lender of last resort during the crisis.

The capital flight via the Euro-system of central banks (i.e. the flight from low quality assets) creates Target2 imbalances and, unlike a deposit flight, it is consistent with an increase in total bank assets.

More generally, the paper is lacking a welfare criterion on which the conclusions are based. The paper argues that TARGET2 helps banks to avoid losses from fire-sales that otherwise “could have damaged their solvency” (p.9). Over an extended period of time, however, this would be in conflict with the rule that the ECB should lend to solvent banks only. The author needs to show that this policy constitutes an improvement in the sense of Pareto, where some benefit, while no one else loses, or at least in the sense of Kaldor-Hicks, where the gains of some must be larger than the losses of others. In the paper there is no such analysis.

### **The tragedy of the commons**

The paper ignores research that starts from a welfare analysis, such as Tornell (2012) and Dinger et al. (2012). Both papers show that the monetary expansion, facilitated by TARGET2, is not a welfare maximizing policy from a taxpayer’s point of view. While Tornell (2012) illustrates this point in a political economy model with rent seeking, and discusses the importance of conditionality, Dinger et. al (2012) add a common-pool problem to a standard Barro-Gordon model of time inconsistency. Also Helpman’s (1981) classical paper on the welfare implications of one-sided and two-sided exchange rate pegs could have been a good starting point.

Instead, the paper rejects the tragedy-of-the-commons argument in this literature based on the decision-making process at the ECB. For instance, it points out that the reduction of collateral standards has been a joint decision of the governing council.<sup>6</sup> The common-pool problem, however, does not only exist in the voting of the ECB-council,<sup>7</sup> but rather in the *implementation* of the policies. The paper neglects several channels through which countries can have an indirect influence on their TARGET2 balances:

First, national regulators of each country in the Eurosystem (often the central bank) are responsible for supervision of banks. They can indirectly affect the amount of refinancing credit, by declaring a troubled bank as solvent and thus eligible for refinancing credit.<sup>8</sup>

Let us consider the national central bank's (or national regulators) decision problem when assessing whether a private bank is solvent or not: it will compare the *marginal benefit* of not having to bear the resolution cost for taxpayers, with the *average cost*, which might occur in terms of inflation, or write-downs on losses at the later stage. The former (inflation) would spread across Europe in an integrated economy, and the later (losses) will be shared with the ECB's capital key.<sup>9</sup> It is a classical textbook-type tragedy of the commons setup, where marginal gain is compared to average cost. Thus the incentives to classify the banks as "solvent" are overwhelmingly large.

To illustrate this point, since the beginning of the financial crisis in 2007/8, more than 400 banks have been closed in the US, while only very few banks have been closed in Europe. Instead, the Euro-system has become one of the main lenders to the private banking system.<sup>10</sup> Thimann (2013) has therefore argued that a common supervision will have a dampening effect on TARGET2 imbalances.

Secondly, the government has the power to influence the amount of collateral. It can, for instance, issue more government bonds. The net new issuance of long term governments bonds in Spain was 48bn€ in 2011 and 62bn€ in 2012.<sup>11</sup> Alternatively, it can give government guarantees to other bonds or securities, which turn them into an eligible collateral item. During the 1<sup>st</sup> LTRO, in December 2011, such guarantees mobilized additional collateral for instance in Italy.

Third, central banks have the *option* to implement certain decisions of the ECB council. While seven central banks opted to implement "specific national eligibility criteria" for collateral (ECB press release of December 8<sup>th</sup>, 2011) and made concrete proposals to the ECB, the other central banks did not.

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<sup>6</sup> "There is essentially no room for NCBs to operate independently from the Governing Council in ways that deliberately increase their TARGET2 liabilities" (p.11 and 12).

<sup>7</sup> See von Hagen & Süppel (1994).

<sup>8</sup> See the guideline of the European Central Bank of September 20<sup>th</sup>, 2011 on monetary policy instruments and procedures of the Eurosystem. On page 14, it states that banks supervised by at least one "competent national authority" can be accepted as counterparties.

<sup>9</sup> Except ELA.

<sup>10</sup> See Figure 2 in Dinger, Steinkamp and Westermann (2012).

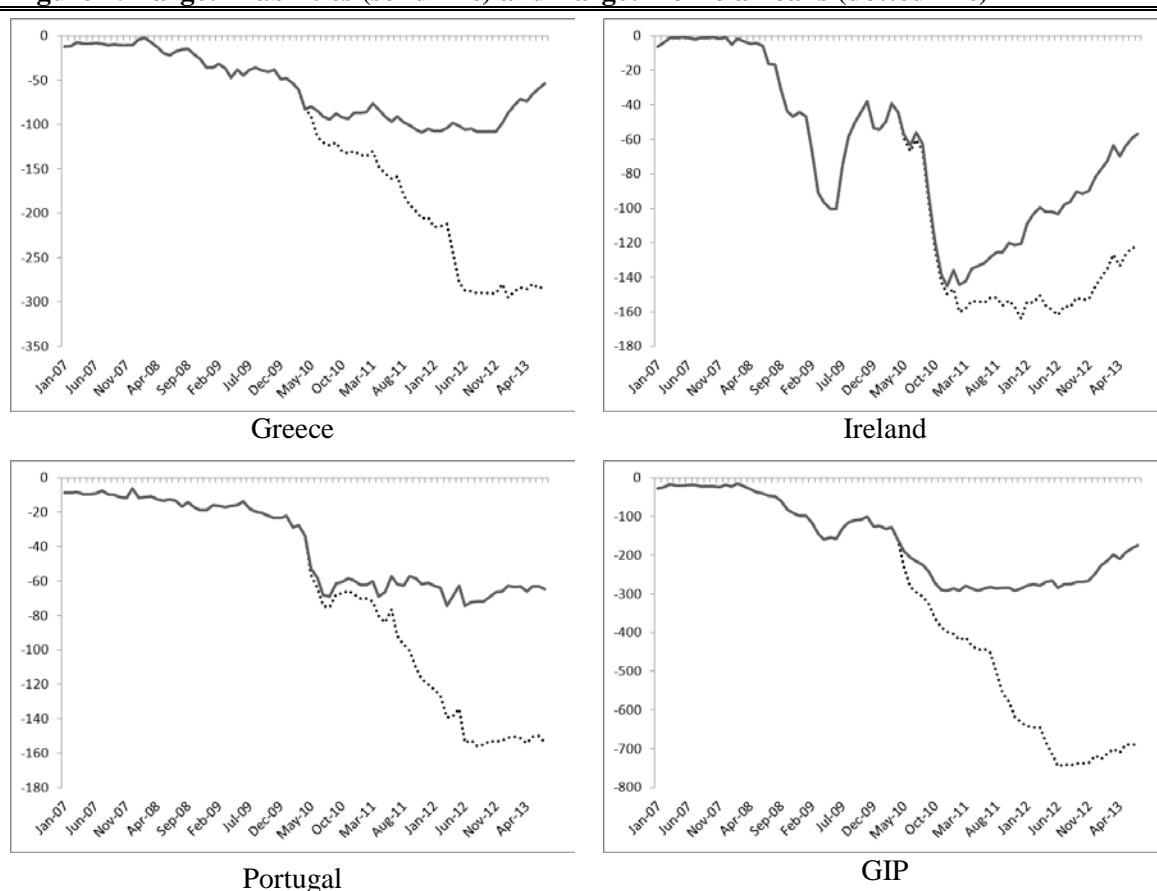
<sup>11</sup> The 40bn Euros from the ESM not included.

## The political economy

There is not only a static common pool problem. Sinn (2012) called the Target2-system a “trap” because of the political economy argument that the bailout by central banks forces future bailouts by governments and rescue funds. The timing matters: If the Euro-system of central banks has already provided refinancing credit, the policy makers have little choice, but bailing out the banks, if needed. After the central banks provided the money already, associated losses would be borne by taxpayers – shifting the loans to the ESM or other rescue funds is akin to ex-post providing the democratic legitimation.

Tornell (2012) provides a formal analysis of a dynamic common pool problem with rent-seeking lobby groups that take advantage of this mechanism. He argues that despite its strength the central bank becomes vulnerable to the lobbying of special interest groups.

**Figure 2: Target2 liabilities (solid line) and Target2+official loans (dotted line)**



Notes: The figure shows the Target2-liabilities (solid line) and the sum Target-liabilities and official capital inflows (dotted line). Official capital inflows include all official rescue loans (ESM, EFSF, IMF etc) and ECB Government bond purchases via its Securities Markets Programme (SMP). All numbers in bn. €

Sinn (2012) and Tornell and Westermann (2012) point out that since the beginning of the crisis, there has been a continuous stream of additional funds, coming from different sources. Figure 2 shows that official rescue packages can indeed be viewed as a continuation of TARGET2 loans. While in several countries the TARGET2 balances have improved recently, this has also been due to the fact that official loans have replaced their Target-debt.



Whelan correctly argues that some Germans also benefited from this process, as banks were able to unwind their investments. Tornell (2012) points out that this is part of a stable political economy equilibrium. However it does not mean that there is a net welfare gain. Instead, the TARGET2 clearing system has shortcomings that can be criticized from both debtor and creditor country perspectives.

## Semantics

Much of the article appears not to challenge the basic facts discussed above, but rather to argue that the critics have gone overboard, when communicating these issues to a broader audience. The author analyses policy op-eds with academic rigor, but focuses on *semantics*, rather than *content* and *policy implications* of these articles.

Did the critics go too far when using what the authors calls "colorful" language? Maybe. I accept the papers general point that the sensitive state of the Euro crisis requires responsible wording of policy statements. But at the same time, when dropping the technical jargon, there is essentially no difference between the earlier literature, and the mechanics displayed in this paper:

First, the term "printing" of money is of course a simplification that is used to communicate the issue to a broad audience. But there is no economic difference whether the new money is created on paper, or electronically on the banks reserve accounts.

Second, there is no economic difference between "TARGET liabilities" and "TARGET loans". Clearly, there is no formal loan contract. However the money that is available to countries with liabilities is a real transfer. It helps to finance the current account, it helps to facilitate capital flight and it helps to avoid bank closures. Also for the rest of the Euro-system, it is equivalent to an actual loan. If the liabilities are not repaid, the losses will be shared with the ECB's capital key.

Third, there is no significant economic difference between the selling of an asset and the repayment of loans that are collateralized with such assets. In both cases the key question is whether the central bank accepted prices (in the former case) or haircuts (in the latter case) that beat the current market conditions. As discussed above in the section on welfare issues, it matters whether the central banks facilitated a *capital flight from low quality assets*. Mexico is a clear example of the former (as discussed in an earlier Economic Policy article of Sachs, Tornell and Velasco (1996)). Tornell and Westermann (2012) have pointed out that a similar process is at work in the Euro Area and warned that – if reforms do not take place – this central bank policy can be very costly to taxpayers.

Finally it is hard to follow the papers points on why the term "stealth bailout" should not be adequate. The author argues (i) it indeed was a bailout. On page 9 it is argued that without TARGET2, bank would have had "solvency" problems and (ii) there was communication failure by the ECB and even today the data are not available for all countries (p.38). The combination of the two seems to support, rather than contradict the term used by Sinn and Wollmerhäuser.

I do not think these issues are overrated by the commentators. The Bundesbank currently still has claims of more than 500bn€ The peak value of 751 bn. € constituted a magnitude that was more than twice the total federal budget of Germany. And the maximum bailout – for the ESM – that was approved in the German Parliament was only 211bn €

## **The data**

The first panel data set on TARGET2 balances has been assembled by Sinn and Wollmershäuser (2011), based on data of the Central Bank Survey of the International Financial Statistic, IFS. Their approach was adopted by the ECB in their monthly bulletin (2011, see p.37, footnote 5). Tornell and Westermann (2011) also construct a proxy based on the balance of payments statistics in the IFS.

The Institute of Empirical Economic Research, Osnabrück University, has furthermore analyzed central bank balance sheets of the euro area since November 2011. As a service to the profession, the data, as well as a detailed description of the sources, are available on a continuously updated web-page, the “Euro Crisis Monitor” ([www.eurocrisismonitor.com](http://www.eurocrisismonitor.com)).

In the present paper, the author – despite his criticism – adopts the sources and proxies used by the Euro Crisis Monitor. There is not a single country for which he finds a closer proxy or a better source.

He furthermore claims that “all of the figures are published TARGET2 balances” (p.20). This is not correct. For instance the series of Ireland requires assumptions to construct a monthly proxy. Also Portugal is proxied indirectly by “overnight liabilities of the Banco de Portugal” (p.55), which have corresponded to TARGET2 balances in the past. Similar proxies are available for most of the countries. The paper therefore falls short of what would have been possible with publicly available data.

Whelan points out that some central banks “thankfully ... publish either the TARGET2 balance or figures that are very close to them” (p. 15). Note, however, that some of them only did so *after* Sinn and Wollmershäuser raised this issue. In the monthly bulletin of the Bundesbank, it was initially buried in a series called “other items”. Also in the Balance of Payments statistics of the IMF, a close proxy was included under “other investment, monetary authorities” – a series the IFS-online database has discontinued, when revising the balance of payments methodology last year.

## **Positive aspects?**

Despite my overall critical assessment of this article, I believe the paper helps to further push a necessary discussion in several dimensions. A useful point of paper is for instance to deepen the debate on the redemption of TARGET2 balances. Such redemption is indeed necessary to close a loop-hole in the original setup. Sinn and Wollmershäuser have suggested a redemption with priority government bonds, collateralized with future tax credit or real estate.<sup>12</sup> Whelan alternatively suggests that collateral from monetary policy operations could be used.

However, in many countries government bonds are an important part of these monetary policy assets. This has a direct impact on the financing possibilities of countries in crisis. The new issuance of bonds will always be feasible, as long as banks can use them as collateral for fresh loans from the central banks. Using them to redeem TARGET2 liabilities, would in a crisis situation again be akin to Euro-system lending to governments short of funds.

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<sup>12</sup> Steinkamp and Westermann (2013) show in survey data that expectations about such a senior claim already exist. Although de jure not collateralized, de facto, the markets already expect a solution similar to the one proposed by Whelan or Sinn and Wollmershäuser.

Secondly, I support the authors request to the ECB to make the original TARGET2 data available for all countries. Indeed this would be simple to implement and would avoid the discussions on data contained in this paper and comment to it. It is not only important for a transparent discussion of the welfare implications of TARGET2 imbalances, but also for financial markets to be able to correctly price sovereign risk.

Finally, the comparison to the Federal Reserve System in the US is useful. But the present paper does not seem to go beyond what has been known from the analysis of James and Sinn (2013), who also draw this analogy. Further extensions of this research should focus on this institutional comparison.

### **The role of TARGET2 and conclusions**

The author does not challenge the view that non-standard measures of monetary policy could bring about unintended consequences that can be criticized. But he argues that it is largely unrelated to the TARGET2-clearing system that has been introduced with the new currency and has been revised in November 2007. In my view this is not correct, as all three elements have been critical: The full allotment policy, the reduction of collateral standards and the TARGET2 clearing system. The combination of the three has led to the explosive imbalances that reached their peak with slightly more than 1 trillion Euro in August 2012.

Why is Target2 part of it? Because it created a *common pool* that has been used excessively. In a single country, the domestic monetary expansion is limited by the demand for money. In the countries in crisis there was no such money demand for domestic purposes (a point stressed by Sinn and Wollmershäuser). The TARGET2 system created a common pool in the sense that each central bank indirectly gained access to providing money, demanded for transactions to other countries. It thus enabled them to extend much more refinancing credit than they otherwise could have done.

TARGET2 is not the only item, but it is one of the critical items that have created imbalances in the Euro-system that appear unsustainable without major reform.

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