

# TARGET Balances— An Anchor of Stability

by Marcel Fratzscher, Philipp König, and Claudia Lambert

The debate about TARGET2, the payment system of the European System of Central Banks (ESCB), has resulted in controversial discussions in Germany in recent years. The present study by DIW Berlin concludes that fears often expressed in this context of the risks to Germany are largely unfounded. Germany is—in contrast to what is often claimed—one the beneficiaries of the Target system. In particular, the fact that in the course of the crisis, financial risks could easily be reduced thanks to TARGET2 was beneficial for both the German government and private investors. Since the outbreak of the crisis, German investors pulled almost €400 billion euros from the crisis countries and they continue to hold around €740 billion in assets there.

TARGET2 (T2) is the payment system of the Eurosystem, the European Central Bank (ECB), and the national central banks of the euro area countries. Payments via T2 are processed in central bank money (synonymous for central bank liquidity). The accounts of the financial institutions participating in the payment system are held by the national central bank of the country where these institutions are licensed.<sup>1</sup> The national central bank records a T2 asset on its balance sheet when a bank receives payments in euros from other European countries. Conversely, a T2 liability is recorded at the central bank whenever the commercial bank makes a transfer abroad. At the end of the day, all assets and liabilities of this kind are consolidated into a single position against the ECB which acts as the central counterparty.

If the T2 position eventually booked is an asset against the ECB, then the country is a net recipient of central bank money. In the case of a liability owed to the ECB, the country's banks transferred more central bank money abroad than they have received.

## What Happens When a Country Leaves the Monetary Union?

T2 positions are a mirror image of the cross-border use of liquidity previously borrowed from the central bank; consequently, they are initially without additional risk that extends beyond that of providing central bank liquidity.<sup>2</sup>

However, in the case of a member country, whose national central bank has a balance of T2 liabilities, exiting the currency union, it is possible that the remaining Eurosystem loses its T2 claims.

<sup>1</sup> For the sake of simplicity, financial institutions participating in the target payments scheme will simply be referred to as banks.

<sup>2</sup> See also "Liquiditätsmanagement des Eurosystems im Zeichen der Krise," Wochenbericht des DIW Berlin, no. 44 (2013).

In case of exit, the right of the national bank of the exiting country to issue central bank money denominated in euro is terminated. But previously incurred euro liabilities owed to the ECB are not terminated. As a result, when a country leaves the system, its T2 liabilities turn into foreign currency debt, which may no longer be serviced.

The Eurosystem would then split up the resulting losses in accordance with the ECB's capital key<sup>3</sup> (which would then be recalculated) among the remaining national central banks.

For example, the German Central Bank and/or the Federal Republic of Germany would have to bear at least 27 percent (current capital share) of such losses. If, say, Greece exited, then this amount would currently be around 14.5 billion euros (T2 positions only).<sup>4</sup>

At the current point in time, it is completely unclear as to how a member country would exit the Monetary Union and how high the recovery values of individual claims would be if this were to happen. The cost of exiting is therefore difficult to assess. However, the frequently made assumption that all claims would be wiped out is—given the historical experiences of managing sovereign debt crises—hardly plausible.<sup>5</sup>

### TARGET2 Payment System ...

In the context of the crisis in the euro area, the debate about TARGET2 positions has received unexpected attention and, in recent years, has become a subject of interest not only to professionals but also to the general public. However, while alleged risks have been extensively discussed, many important aspects have been ignored.

#### ... has Allowed German Investors to Reduce Risks in Crisis Countries

German banks and investors have reduced their claims against Greece, Italy, Ireland, Portugal, Spain, and Cyprus since 2007 to around €400 billion (see Tables 1 to

3).<sup>6</sup> Since 2007, German banks have withdrawn around €360 billion, in particular bank loans, from the entire euro area. This includes €312 billion from the crisis countries. Furthermore, German investors also reduced their securities holdings in the six crisis countries by approximately €90 billion. Yet, remaining German foreign investment is still significantly high—approximately €2.4 trillion in the euro area, plus an additional €2.4 trillion in the rest of the world. In total, German foreign asset holdings are almost twice the annual economic output of Germany in 2012.

Four important conclusions can be derived from the available data:

- German investors have reduced their investments in virtually all regions of the world; bank loans in particular were affected, while portfolio investments declined predominantly in the crisis countries. A substantial share of the pre-crisis capital inflows into these countries was repatriated.
- Not only German investors repatriated their capital, but, at the same time, foreign investors have also significantly reduced their investments in Germany. This reflects the growing fragmentation of financial and capital markets in the euro area.
- The volume of these capital flows is considerable. The flow of capital from the rest of the euro area to Germany amounts to approximately €400 billion which corresponds to around 15 percent of German output in 2012. A more severe crisis in the euro area would therefore result in potentially high costs for German investors, should borrowers go bankrupt or should the access to assets be limited.
- Germany would not only have to bear these losses but its exports would also be severely affected by a worsening of the crisis. Between 2009 and 2012, Germany exported goods valued at €428 billion (see Table 4) to the crisis countries of the euro area.

The fact that German investors were able to reduce their investments in these countries on a large scale without causing more serious distortions in financial markets is mainly due to the provision of unlimited liquidity as part of the full allotment procedure of the Eurosystem and the smoothly functioning TARGET2 payment system. This prevented widespread fire sales of assets below their fundamental value in the crisis countries. At the same time, the liquidity support strengthened financial stability in Germany: without it and the T2 payment system, some of the assets would have defaulted. In the

<sup>3</sup> The capital key quantifies the share of equity that was paid in by the respective member states when the ECB was founded.

<sup>4</sup> If the entire Monetary Union were to collapse, then the German Central Bank would still have claims denominated in euros against the ECB, an institution which would no longer exist. As a result, all countries with net claims would probably share the liquidation value of the ECB. This, however, would (at the current juncture) not suffice to redeem all T2 claims.

<sup>5</sup> See F. Sturzenegger and J. Zettelmeyer, *Debt Defaults and Lessons from a Decade of Crises* (Cambridge, Massachusetts: 2006).

<sup>6</sup> See also H.-W. Sinn and T. Wollmershäuser, „Target-Salden und die deutsche Kapitalbilanz im Zeichen der europäischen Schuldenkrise,“ *Kredit und Kapital* 45 (4), (2012): 465–487.

Table 1

**Other Investments from and in Germany**

In billions of euros

	Claims			Liabilities			Net assets		
	2008	2013	Change	2008	2013	Change	2008	2013	Change
<b>Euro area</b>	<b>1,125.76</b>	<b>764.96</b>	<b>-360.79</b>	<b>788.86</b>	<b>572.06</b>	<b>-216.79</b>	<b>336.90</b>	<b>192.90</b>	<b>-144.00</b>
GIIPS & Cyprus	590.48	277.84	-312.64	346.75	226.65	-120.10	243.73	51.19	-192.53
Non-GIIPS & Cyprus	535.28	487.12	-48.16	442.11	345.42	-96.69	93.17	141.71	48.53
<b>EU</b>	<b>1,759.14</b>	<b>1,189.73</b>	<b>-569.41</b>	<b>970.46</b>	<b>787.38</b>	<b>-183.08</b>	<b>788.68</b>	<b>402.36</b>	<b>-386.32</b>
Non-euro area	633.38	424.77	-208.61	181.60	215.31	33.71	451.78	209.46	-242.32
<b>World</b>	<b>2,823.90</b>	<b>2,008.69</b>	<b>-815.21</b>	<b>1,281.20</b>	<b>1,153.12</b>	<b>-128.08</b>	<b>1,542.70</b>	<b>855.57</b>	<b>-687.13</b>

Sources: BIS consolidated banking statistics; calculations by DIW Berlin.

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German investors have significantly reduced their receivables from the crisis countries.

Table 2

**Portfolio investments from and in Germany**

In billions of euros

	Claims			Liabilities			Net claims		
	2007	2011	Change	2007	2011	Change	2007	2011	Change
<b>Euro area</b>	<b>1,207</b>	<b>1,222</b>	<b>15</b>	<b>1,052</b>	<b>973</b>	<b>-79</b>	<b>156</b>	<b>249</b>	<b>94</b>
GIIPS & Cyprus	474	385	-89	261	221	-40	213	164	-48
Non-GIIPS & Cyprus	734	837	103	791	752	-39	-57	85	142
<b>EU</b>	<b>1,407</b>	<b>1,459</b>	<b>52</b>	<b>1,239</b>	<b>1,167</b>	<b>-73</b>	<b>168</b>	<b>292</b>	<b>124</b>
Non-euro area	200	237	37	188	194	6	12	43	30
<b>World</b>	<b>1,783</b>	<b>1,840</b>	<b>57</b>	<b>2,193</b>	<b>2,179</b>	<b>-14</b>	<b>-410</b>	<b>-339</b>	<b>71</b>

Sources: IMF; CPIS; calculations by DIW Berlin.

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German investors have reduced their securities investments in the crisis countries; at the same time, investors from the crisis countries also reduced their investment in Germany.

Table 3

**Foreign Direct Investments from and in Germany**

In billions of euros

	Claims			Liabilities			Net claims		
	2009	2011	Change	2009	2011	Change	2009	2011	Change
<b>Euro area</b>	<b>327</b>	<b>385</b>	<b>59</b>	<b>402</b>	<b>437</b>	<b>35</b>	<b>-75</b>	<b>-51</b>	<b>24</b>
GIIPS & Cyprus	70	72	2	54	54	0	16	18	2
Non-GIIPS & Cyprus	257	314	57	348	383	35	-91	-69	22
<b>EU</b>	<b>483</b>	<b>556</b>	<b>73</b>	<b>471</b>	<b>522</b>	<b>52</b>	<b>12</b>	<b>33</b>	<b>21</b>
Non-euro area	156	171	15	69	86	17	87	85	-2
<b>World</b>	<b>778</b>	<b>932</b>	<b>154</b>	<b>638</b>	<b>707</b>	<b>70</b>	<b>140</b>	<b>225</b>	<b>84</b>

Sources: IMF; CDIS; calculations by DIW Berlin.

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German direct investment in the crisis countries remained moderate with virtually no change; direct investment from the crisis countries remained unchanged.

Table 4

**Cumulative Trade Flows for Germany between 2009 and 2012**

In billions of euros

	Exports	Imports	Trade surplus
Euro area	1,560	1,462	97
GIIPS & Cyprus	428	314	114
Non-GIIPS & Cyprus	1,132	1,149	-16
EU	2,320	2,076	244
Non-euro area	760	613	147
World	3,728	3,231	498

Sources: IMF, Direction of Trade Statistics; calculations by DIW Berlin.

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Germany exports more goods to the crisis countries than it imports.

event of bankruptcy of foreign borrowers, German investors would have to accept massive depreciations; in turn, this would have reduced, among other things, the core capital<sup>7</sup> of German banks and probably necessitated additional government rescue packages.

**... does Not Restrict Lending to Households and Businesses in Germany**

Thanks to payment inflows from abroad, German banks were able to reduce their recourse to monetary policy refinancing operations during the crisis. Consequently, the Bundesbank recorded a reduction in claims against German banks. At the same time, it recorded additional T2 assets against the ECB resulting from payment inflows to Germany. This fact has raised fears that the German economy could be stripped of its loans because T2 receivables from the ECB were interpreted as foreign loans which are no longer available in Germany.<sup>8</sup>

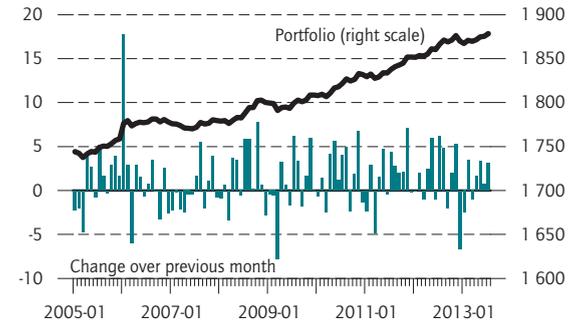
<sup>7</sup> Measured according to Tier 1 capital—relevant to, among other things, banking regulations—the equity capital ratio of German banks in 2012 was 11.9 percent. Measured according to the ratio of tangible equity to tangible assets, however, it was only 2.2 percent. See IMF, Global Financial Stability Report, October 2012 (International Monetary Fund, 2012).

<sup>8</sup> See also H.-W. Sinn and T. Wollmershäuser, „Target-Kredite, Leistungsbilanzsalden und Kapitalverkehr: Der Rettungsschirm der EZB,“ ifo Working Paper, no. 105 (June 24, 2011): “Since the Bundesbank did not issue the credit to a German transportation company via a German commercial bank but via the European central banking system and a Greek commercial bank to a Greek transportation company, the truck is delivered to a Greek instead of a German transportation company. For jobs at the German truck manufacturer, both amount to the same thing, and also the amount of money that circulates in Germany after the transaction is the same. The only difference is that the truck now operates in Greece instead of Germany.” 29. It should be noted here that

Figure 1

**Long-Term Loans from German Commercial Banks to German Companies and Private Households**

In billions of euros



Source: German Central Bank.

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Long-term lending to the private sector continued to grow in Germany, even during the crisis.

However, based on the available data, this claim cannot be put to a test since the volume of loans not granted is not observable; hence, empirically, a corresponding relationship can neither be proved nor disproved.<sup>9</sup>

However, the Bundesbank statistics related to the development of lending to companies and households by German banks did not show a general decline (see Figures 1 to 3). Loans to the German private sector actually increased from the outbreak of the crisis to date. Only short-term lending declined between 2009 and 2011, but then increased again and has been moving sideways since the end of 2011.

In addition, economic theory suggests that there is no cause for the concern that higher T2 claims could reduce lending in Germany, since commercial bank lending is not controlled by the central bank but by the commercial banks themselves. The key determinants here include the creditworthiness of borrowers, the internal risk management of the commercial bank, the regulatory conditions, or the overall economic situation.<sup>10</sup>

Sinn and Wollmershäuser do not revisit this issue in later versions of this article without giving reasons. However, in connection with the facts outlined above, they used the term *crowding out of refinancing credit*, according to which liquidity inflows from the T2 system to banks in non-crisis countries mean that they can cover their liquidity needs without recourse to central bank facilities. A detailed description of this situation and the underlying balance-sheet mechanics were already available in U. Bindseil and P. King (2011).

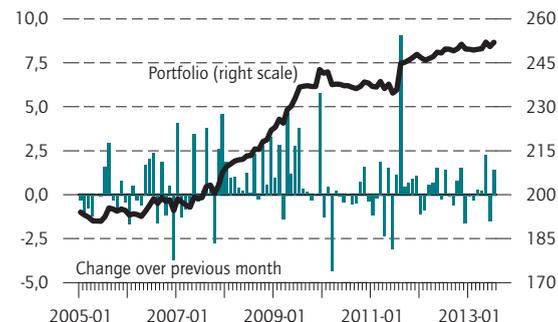
<sup>9</sup> See also U. Bindseil, P. König, and P. Cour-Thimann, „Target2 and Cross-border Interbank Payments during the Financial Crisis“ in: H.-W. Sinn, (pub.) „The European Balance of Payments Crisis,“ CESifo Forum, vol. 13 (2012).

<sup>10</sup> See, for example, X. Freixas and J.C. Rochet, The Microeconomics of Banking (Cambridge, Massachusetts: 2008). J. Tobin, „Commercial Banks as

Figure 2

**Medium-Term Loans from German Commercial Banks to German Companies and Private Households**

In billions of euros



Source: German Central Bank.

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Medium-term lending to the private sector continued to grow in Germany, even during the crisis.

Commercial banks must keep a minimum of liquidity at the central bank, first, to be legally competent, settle financial transactions, and manage their liquidity, and second, to meet minimum reserve requirements. However, liquidity inflows from abroad do not negatively affect this mechanism. If conditions remain unchanged, an influx of liquidity from the crisis countries to Germany in fact increases German banks' ability to remain liquid without additional central bank credit.

**... and Provision of Liquidity by Eurosystem Has Stabilizing Effect**

According to some critics of the T2 system, it will prevent necessary economic adjustments such as reducing current account deficits.

For an economy with an independent monetary and exchange rate regime, a fast and effective way to partially adjust to a flight of capital is to devalue its currency, which would improve its international price competitiveness and its current account position.

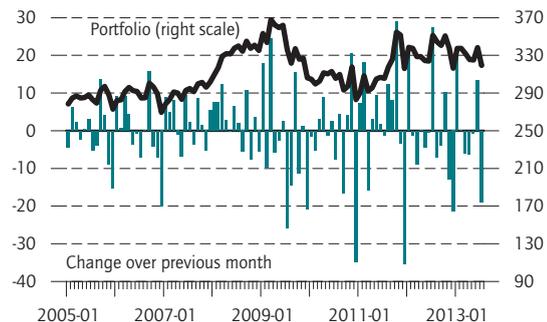
Within a monetary union, however, the exchange rate mechanism is deactivated such that the corresponding adjustment has to be made in other ways, in particular, through economic reforms and by reducing prices of

Creators of Money," in: D. Carson (pub.) Banking and Monetary Studies (Homewood, Illinois: 1963), 408-419; C. A. E. Goodhart, „Money, Credit, and Banking Behavior: Need For A new approach," National Institute Economic Review 214 (2010) F73 - F82.

Figure 3

**Short-Term Loans from German Commercial Banks to German Companies and Private Households**

In billions of euros



Source: German Central Bank.

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Short-term loans declined between 2009 and 2010 but then rose again and are now largely moving sideways.

tradeable (transportable) goods and services. Certainly, the reform packages needed, from decision-making to implementation and development, will take a long time.

ECB liquidity support and the ability to use this liquidity within the euro area via the T2 system have helped overcome the flight of capital and facilitated the adjustment of current accounts in the crisis countries. Although consequences such as excessive indebtedness in the corporate and banking sector, unemployment, and a massive drop in production could not be prevented, they were at least minimized, because it became possible to make the adjustment gradually rather than abruptly.

However, the consequences of the alternative course of action—no liquidity provision resulting in a sudden enforced adjustment—would have been fatal both for the crisis countries themselves and for the euro area as a whole. The result would have been a much sharper decline in imports in the crisis countries which would also have severely affected German exports (see Table 4). Assets in the crisis countries would have been massively devalued, resulting in high private and corporate over-indebtedness. This would have led to bankruptcies and loan defaults which themselves would also have ultimately affected the other euro area countries and Germany. The risk that the crisis would have spread to other healthy countries in the euro area would have been considerable. Without the provision of additional liquidity, many banks and therefore national economies would probably start to waver and ultimately sail a course towards insolvency—not simply because the national economies would actually be insolvent but because mar-

ket participants would become incapacitated due to a lack of liquidity.

In this context, the question that needs clarification is how the risk of default by governments and banks is linked to the respective T2 positions. On the one hand, one could argue that market participants would infer from high T2 positions the unwillingness of an ailing government or a bank to undertake reforms. In this case, a deterioration in the T2 position would lead to a higher risk of default. On the other hand, it is possible that the causality is reversed. Then, a higher risk of default would lead to increased capital flight abroad and thus higher T2 liabilities.

Indeed, there is only a significant correlation between changes in CDS premiums (credit default swaps as a measure of the default risk for governments and banks), and changes in T2 positions (see Table 5) for Spain, Italy, and Ireland. However, this still says nothing about the actual causal direction of this relationship. A common test of causality (Granger causality) for Ireland and Spain shows that a higher probability of default by the government leads to higher T2 positions; conversely, a higher T2 position does not lead to a greater default risk. In contrast, there is no significant causal relationship for the remaining crisis countries and Germany (see Table 6).

This result shows that an increased likelihood of insolvency led to outflows of capital abroad and thus exacerbated the liquidity situation of these countries. This is not to say that these countries were actually insolvent. Rather, it shows that the increased T2 positions were a result of the gloomy economic situation in these countries; yet, they did not further exacerbate it.

### ... is Not a Fiscal Bailout Program

In the course of the T2 debate, the question arose as to whether Target positions constituted refinancing loans to governments and therefore can be classified as monetary financing.<sup>11</sup> It is true that the stabilizing effects of the Target mechanism allow governments to delay necessary fiscal consolidation. This may, on the one hand, contribute to a lack of confidence in financial markets but, on the other hand, the liquidity provided by the Target system is preventing an even deeper recession and will ultimately prevent the collapse of domestic markets.

11 H.-W. Sinn and T. Wollmershäuser, „Target-Salden.“

Table 5

### Correlation between Changes in the Target Position and Default Risk<sup>1</sup>

	Target
<b>Germany</b>	
CDS government	0.0053
CDS bank	0.2115
<b>Spain</b>	
CDS government	-0.2824*
CDS bank	-0.3827***
<b>Italy</b>	
CDS government	-0.3556**
CDS bank	-0.4142***
<b>Greece</b>	
CDS government	-0.0440
CDS bank	-0.2675*
<b>Ireland</b>	
CDS government	-0.3775**
CDS bank	-0.3131**
<b>Portugal</b>	
CDS government	0.2254
CDS bank	0.0887

1 Calculations for the period after 2009 from monthly data; positive target position = receivable, negative target position = liability; significant levels: \*\*\* 1 percent, \*\* 5 percent, \* 10 percent.

Sources: Reuters; Credit Market Analysis (CMA); calculations by DIW Berlin.

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For many countries, there is a correlation between changes in target positions and CDS premiums.

It should also not be overlooked that increasing T2 positions (whilst simultaneously recourse to central bank facilities) is, initially, purely mechanical in nature. If, for example, in times of crisis, there are capital flows from crisis countries to more stable countries in the Monetary Union, by definition a build-up of T2 liabilities in crisis countries and T2 claims in more stable countries occurs. By providing an effective payment system, the Eurosystem is fulfilling its tasks as laid down in the Treaty on the Functioning of the European Union (TFEU).

### Reducing the Risks from Target Positions

...

One proposal to limit the risks associated with the Target system is to introduce an explicit upper limit for T2 positions.<sup>12</sup> The problem is that such a limit would destabilize the Monetary Union and increase the risk of an

12 H.-W. Sinn, „The ECB’s Secret Bailout Strategy,” April 29, 2011, <http://www.projectsyndicate.org/commentary/the-ecb-s-secret-bailout-strategy>.

Table 6

**Correlation between Target Positions and Default Probabilities**

Granger causality test

	CDS govern- ment	CDS bank	Target
<b>Germany</b>			
CDS government, Granger causality for			-
CDS bank, Granger causality for			-
Target, Granger causality for	-	-	
<b>Spain</b>			
CDS government, Granger causality for			+
CDS bank, Granger causality for			-
Target, Granger causality for	-	-	
<b>Italy</b>			
CDS government, Granger causality for			-
CDS bank, Granger causality for			-
Target, Granger causality for	-	-	
<b>Greece</b>			
CDS government, Granger causality for			-
CDS bank, Granger causality for			-
Target, Granger causality for	-	-	
<b>Ireland</b>			
CDS government, Granger causality for			+
CDS bank, Granger causality for			-
Target, Granger causality for	-	-	
<b>Portugal</b>			
CDS government, Granger causality for			-
CDS bank, Granger causality for			-
Target, Granger causality for	-	-	

Sources: Reuters; Credit Market Analysis (CMA); calculations by DIW Berlin.

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There is no Granger causality relationship between changes in target positions and those of CDS premiums for most countries.

exit. Firstly, it would trigger costly circumvention measures in which previously cashless cross-border transactions would then be made partly in cash. Secondly, there would be a real threat from speculative attacks and the return of crises through self-fulfilling prophecies, which—just think of the crisis of the European exchange-rate mechanism in the 1990s— would induce the risk of exit from the Monetary Union, and therefore the possibility of suffering losses on T2 claims.

**... using the American Solution?**

More recently, it has been proposed that the »American system« be applied to the Monetary Union.<sup>13</sup> Even wit-

<sup>13</sup> See H.-W. Sinn, Die Target-Falle: Gefahren für unser Geld und unsere Kinder (Munich: 2012).

hin the American central bank system, there are positions similar to the T2 positions (known as ISA positions) on the balance sheets of the individual district reserve banks resulting from processing cashless payments between the reserve districts. These positions are partly offset annually, whereby district banks with ISA assets receive an additional share of the securities portfolio of the central bank system, while reducing the share of district banks with liabilities. This procedure is sometimes interpreted as a hard budget constraint for the relevant districts so that their introduction to the euro area could pave the way for a system of “fair and free exchange” with “budget restrictions which reflect the real scarcity of resources.”<sup>14</sup>

The opinion that the annual settlement procedure in the US would be tantamount to a budget constraint is, however, doubtful. The annual settlement historically dates back to the time of the gold standard and is implemented to adjust the ratio of banknotes to gold certificates on the balance sheets of the district banks. Here, the average ISA position of the previous year is compensated for by adjusting the district banks’ shares in the securities portfolio of the Federal Reserve System. This is purely an accounting procedure.<sup>15</sup> The district central bank receives no assets it can sell at its own discretion. The securities portfolio is managed centrally by a portfolio manager appointed by the New York Fed, not decentral-ly at the level of the individual district central banks.<sup>16</sup>

The reallocation of the portfolio shares within the settlement leads only to a reallocation of profits from the portfolio. This has no consequence in the US, as the largest share of central bank profits is already transferred to the US Treasury Department.<sup>17</sup>

It is also worth noting that the Federal Reserve has no explicit rules on how to proceed if a district central bank no longer owns sufficient shares in the portfolio to settle its average position.<sup>18</sup> If the American system were to introduce a binding restriction, then it would also need to specify a consequence of what would happen if the

<sup>14</sup> See H.-W. Sinn, „Die Target-Verluste im Fall des Auseinanderbrechens des Euro—Eine Replik auf DeGrauwe und Ji,“ ifo Schnelldienst 66 (01) (2013): 23.

<sup>15</sup> See J. Klose and B. Weigert, „Das Verrechnungssystem der Federal Reserve und seine Übertragbarkeit auf den Euroraum,“ Wirtschaftsdienst 92 (4), (2012): 243–250.

<sup>16</sup> P. Cour-Thimann, „Target Balances and the Crisis in the Euro Area,“ Cesifo Forum, no. 14, (2013).

<sup>17</sup> The remaining share of the profits from the district central banks is transferred to the *member banks*.

<sup>18</sup> See Financial Accounting Manual for Federal Reserve Banks, last modified September 3, 2013, www.federalreserve.gov/monetarypolicy/files/BSTfinaccountingmanual.pdf.

settlement could not be carried out. However, it is not plausible to assume that in such a case, the respective reserve district would be declared insolvent and no further payments could be processed from this district.

Furthermore, the introduction of the American system to the euro area is simply not possible because of lack of a suitable portfolio. The Federal Reserve system as a whole always has a sufficiently large portfolio of securities for the settlement because the Federal Reserve implements its monetary policy through outright purchases of securities. In contrast, the Eurosystem undertakes credit transactions, hence a corresponding portfolio could not be built up in the first place.

Although this argument is countered by the proposal to introduce a new national security to the euro area that can be used to compensate for T2 positions,<sup>19</sup> it is unclear how the national central banks would receive the securities needed for compensation. A purchase on the primary market of the respective home governments could be interpreted as monetary financing which is prohibited in the euro area.<sup>20</sup> In addition, this settlement procedure creates a direct link between banking and sovereign debt. A run on the banks in one country would immediately increase its sovereign debt. This runs counter to current efforts to decouple the already close links between banking and sovereign risks in the euro area. Ultimately, it is still unclear as to why this new security should be more valuable and less risky than other bonds issued by the respective governments.<sup>21</sup>

The introduction of the American system in the euro area would generally be problematic and fraught with many difficulties. In addition, it also induces, at least in the United States, no hard budget constraints. While the introduction of such restrictions in the euro area may make sense under certain circumstances, their introduction indirectly via the payment system that serves as the backbone of the Monetary Union would only contribute to its destabilization.

### ... Using the European Solution!

Losses from Target positions arising due to a member state leaving the Monetary Union could be reduced by

<sup>19</sup> See H.-W. Sinn, „Die Target-Verluste im Fall des Auseinanderbrechens des Euro.“ ifo Schnelldienst 66 (01): 14-24.

<sup>20</sup> See article 123 (1) of the Treaty on the Functioning of the European Union. For a more detailed discussion, in particular the problem of purchases in the secondary market, see S. Burgold and P. Voll, „Begrenzung von Target2 Risiken – ein kritischer Überblick,“ Perspektiven der Wirtschaftspolitik, special issue, no. 13 (2012): 103-121.

<sup>21</sup> J. Klose and B. Weigert, „Das Verrechnungssystem.“

implementing monetary policy centrally rather than by the national central banks.

In order for payments to be implemented through T2 at all, a central bank must provide the banking sector with appropriate liquidity as part of its monetary operations. To achieve this, it enters into corresponding collateralized credit agreements with the banks in its country; if a bank defaults on its liabilities, the national central bank can access the collateral to make good any potential losses.

What happens if a member state with T2 liabilities leaves the Monetary Union? The counter position to its T2 liabilities are recorded on the asset side of the balance sheet (either claims against banks in the country or securities outright holdings by the national central bank). These assets cover the T2 positions in principle, but the rest of the Eurosystem has no access to them after the country exits and only has the T2 claims from the national central bank. If monetary policy were fully centralized, for example, at the ECB in Frankfurt, the ECB could enter the credit contracts and receive access rights to the collateral on behalf of the entire Eurosystem.<sup>22</sup> In the event of a country leaving the Monetary Union, the remaining Eurosystem would have a claim against the banks (and not against a national central bank or government). If these banks became insolvent, the remaining Eurosystem could access the collateral to cover any losses.

If this procedure were introduced, the T2 positions would disappear from the balance sheets because payments would only be transacted through one simple balance sheet. Capital flows would continue and the possibility of capital flight would also remain. However, potential losses due to the exit of a member state would—at least partially—be covered.

However, it is possible that, in the event of a member state exiting the Monetary Union and a new national currency being introduced, the securities would also be re-denominated, so that, in certain cases, claims might no longer be covered completely.

These two objections, however, apply equally to the newly introduced compensation securities mentioned in the American solution above.

<sup>22</sup> At the same time, this would also mean that the national central banks would not be obliged to make final purchases of assets for monetary policy reasons or for investment or risk-control reasons.

## Conclusion and Outlook

There is no alternative to the current structure of payments in the euro area via the Target system for the stability of the Monetary Union in its current state. To protect the Eurosystem against risks arising from the possibility of exit of individual members, a more centralized monetary system, as envisaged by the »European solution«, may effectively reduce the exposure to exit risks, insofar as the contractual structure of this proposal can minimize any legal uncertainties. The introduction of the »American system« and thus a regular settlement, however, does not seem to be a viable means of ensuring a stable monetary union, in particular due to the resulting close link between banking and sovereign risks.

Increasing imbalances in T2 positions between the countries have ultimately occurred by three mechanisms: the flight of capital from the crisis countries—also by German investors—the inactivity in the interbank market, through which the commercial banks lend virtually no money, and the resulting liquidity support from the ECB.

The build-up of excess liquidity, the T2 imbalances, and the rising demand for liquidity by banks from the crisis countries at the Central Bank are a consequence of the crisis and stem from changes in the behavior of market participants. In this situation, the Eurosystem replaces the interbank market to prevent liquidity-induced bankruptcies and provide the crisis countries time to make necessary adjustments through economic reforms.

Although the euro area has taken some steps to overcome the crisis; the willingness of the banks to lend to each other is, however, still not fully restored. There still remains a lack of confidence; banks from non-crisis countries with ample liquidity prefer to deposit their money with their national central bank rather than lend it to other institutions.

Once confidence has been restored, the European Central Bank will be in a position to curtail the provision of unlimited liquidity. Only then will Target balances be reduced again.

The return of confidence also goes hand in hand with a fundamental decision for Europe. The Target debate is a discussion about the pros and cons of the idea of European unity. It should be clear that certain decisions could result in the collapse of the European currency area with all the negative consequences that would bring in its wake.

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