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What TARGET balances are and how they emerge

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Against all odds, the debate over TARGET balances in the Eurosystem has become a perennial issue. A position in the balance sheets of the Eurosystem's national central banks that was known to only a few experts some years ago is now a familiar term to broad sections of the general public. The high sums of money involved are sure to attract people's attention. Germany's TARGET claims, for example, now amount to nearly EUR 1,000 billion. That is a sum that cannot be overlooked.

A number of economists have also commented on this topic in the German media this year. They have engaged in a sometimes fierce debate on sovereignty over the interpretation of the character of TARGET balances, the causes of their increase and the risks associated with them. In many aspects, they hold diametrically opposed positions. What is more, the debate has acquired symbolic meaning with respect to the future of the euro. But the high complexity of the topic makes it hard to form an opinion. TARGET balances are both a position in the central banks' balance sheets and a component of their external assets. Their variations are reflected in the balance of payments as a consequence of intra-European flows of capital and goods. Thus, they form the junction between a number of economic processes in the present and in the past.

Our paper attempts to shed light on this issue and systematically explain what TARGET balances are and what they are not. What is clear is that the construction of the monetary union still has many gaps that have to be closed. The TARGET2 system, however, is not part of it and hardly suitable as a measure of the viability of the monetary union. As a condensate of cross-border payments in the monetary union, however, the TARGET balances provide useful and timely information about the intra-European movement of capital. This helps to arrive at a better understanding of the processes in the European financial system and to identify tensions.

TARGET balances are the result of payments originating in the private sector

In order to describe the character of TARGET balances, we must look at their origin. They are the claims and liabilities between the euro area national central banks within the TARGET2 system, a key building block of financial infrastructure in Europe. It is used to settle cashless payments, e.g. bank transfers, in real-time within the member states of the monetary union or across borders. The payments are initiated mostly by commercial banks, businesses or private individuals. Hidden from our view, TARGET2 is omnipresent in our everyday transactions – whether in card payments at the supermarket checkout or in payroll disbursements.

The system is very powerful.[1] Last year, payments totalling EUR 432.8 trillion were processed and 89 million transactions completed using TARGET2. That means the TARGET2 system takes less than seven days to generate turnover in the equivalent of the currency union's annual GDP. All regulated financial institutions of the European Economic Area (EEA) can obtain direct access to the TARGET2 system.[2] To this end they need to hold a corresponding account with one of the participating national central banks. In addition to the Eurosystem, these are currently Bulgaria, Croatia, Denmark, Poland and Romania. Banks from the EEA whose national central banks do not participate in TARGET2 can take part through one of the other central banks. So for example, a financial institution from the UK can currently hold a TARGET account with the Deutsche Bundesbank[3]. All payments in the TARGET2 system are settled in central bank money, that is, through euro balances in central bank accounts, the reserves.

Figure 1: Payment transactions between German banks

Reported in the (simplified) balance sheet of the Deutsche Bundesbank

Assets	Bundesbank	Liabilities
Loans to commercial banks		Cash
Securities purchases		Reserve account DE-Bank A +100
		Reserve account DE-Bank B -100

Figure 1 illustrates a payment transaction within Germany. A customer of bank B instructs their bank to transfer EUR 100 to a customer of bank A. In order for bank A to be able to credit the amount to the customer's account with bank A, it must receive an equal amount from bank B. Bank B therefore transfers EUR 100 from its reserve account with the Deutsche Bundesbank to the account of bank A.

Figure 2: Cross-border payments between banks in the euro area

Reported in the (simplified) balance sheets of the Eurosystem central banks

Bundesbank

Assets	Liabilities
Loans to commercial banks	Cash
Securities purchases	Reserve account DE-Bank +100
Target claim +100	

Banca d'Italia

Assets	Liabilities
Loans to commercial banks	Cash
Securities purchases	Reserve account IT-Bank -100
	Target liabilities +100

Consequently, the claims which bank A has in the form of central bank reserves rises by EUR 100 and those of bank B decrease accordingly. The transfer does not change the total available central bank liquidity but merely the way it is distributed in the German banking system.

TARGET balances emerge as a result of the decentralised structure of the European monetary union

A cross-border payment transaction within the euro area is in principle no different from a national payment transaction. As a result of the decentralised structure of the currency union, two central banks of the Eurosystem are now involved because the commercial banks of the member states do not hold their reserve accounts with the ECB but with the central bank of their respective country of domicile. The link between the involved central banks is created by the TARGET2 system. Figure 2 shows the resulting changes in the balance sheets of the national central banks. If the customer of an Italian commercial bank now wishes to transfer EUR 100 to a customer of a German bank, to make the payment the Italian commercial bank's reserve account with the Banca d'Italia is debited with EUR 100 and EUR 100 is credited to the German commercial bank's account with the Deutsche Bundesbank. To prevent these accounting operations from creating an imbalance on the balance sheets of the central banks, a TARGET claim of the Deutsche Bundesbank vis-à-vis the Eurosystem and a TARGET liability of the Banca d'Italia vis-à-vis the Eurosystem is created in the same amount at the same time. If the cross-border payments are not offset over time, on the one hand this leads to the accumulation of claims and liabilities at the central banks vis-a-vis the Eurosystem. On the other hand, central bank money is accumulated in the country that is the net payment recipient. However, the total quantity of central bank money in the euro area does not change.

TARGET balances therefore are nothing other than offset entries in balance sheets in the context of cross-border payment transactions within the euro area. The sum total of all TARGET claims and liabilities in the Eurosystem is always zero. They are necessary because the Eurosystem consists of a network of national central banks with their own balance sheets. As the implementation of monetary policy and payment transactions is the joint responsibility of the Eurosystem, it is legitimate, as proposed by Martin Hellwig, to imagine national central banks as subsidiaries of a supra-regional head office, the ECB.[4] In a centrally structured monetary union with the ECB as the only central bank, he added, cross border transactions would also merely lead to transfers between the reserve accounts of the participating commercial banks on the liabilities side of the common central bank.

Positive TARGET balances do not constitute a loan from the Bundesbank to another member state of the currency union

Critics of the TARGET system[5] often interpret the TARGET claims of the Bundesbank as a loan from the Bundesbank or the German state to the other member states. That is not the case. As illustrated above, TARGET claims accrue to the Bundesbank because money flows to German banks in the form of account balances as a result of economic decisions. Accordingly, the TARGET claims do not constitute an entitlement to repayment through the Eurosystem either. For a better understanding it is useful to imagine a similar payment transaction with cash. In this case, the German payee would receive EUR 100 in cash from the Italian payer. It is clear that this transaction does not give rise to a loan with a repayment claim. The German payee, in reliance on the value of the euro, accepted irredeemable claims against the Eurosystem as means of payment. It makes no difference whether the amount in euros exists as paper money or in the form of a central bank balance. The fact that TARGET claims do not have any loan features also becomes clear from the fact that they decrease ('are redeemed') as soon as payments from Germany flow into other euro countries.

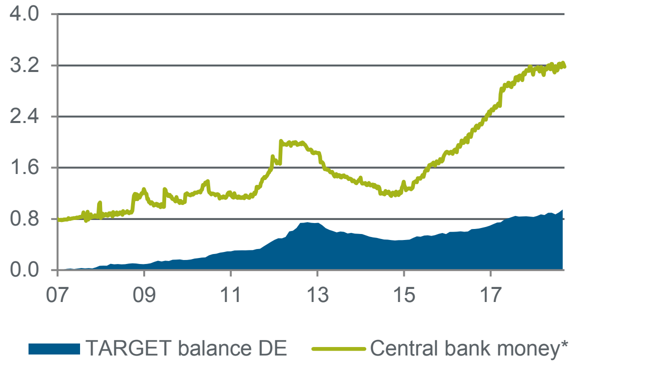
Moreover, the Bundesbank also has liabilities to the Eurosystem in a significant amount to reflect the disproportionately high volume of banknotes in circulation in Germany. In July this balance sheet position amounted to EUR 420 billion. As in the case of the TARGET balances, this liability does not constitute a loan either.

The level of TARGET balances is coupled with monetary policy. It is wrong to infer that this is a misuse of the TARGET system.

Even if TARGET claims are not loans themselves, there is an albeit indirect correlation between lending and the development of the TARGET balances. This correlation is hidden in the monetary policy of the Eurosystem. Central bank money is generated from lending under the Eurosystem to the commercial banks or from the purchase of securities. The aim is to supply the commercial banks with sufficient liquidity for them to be able to lend money to the remaining economic actors (enterprises, households, the state). As payments under the TARGET2 system are executed exclusively in the form of central bank money, the mirror image of the formation of TARGET balances, as explained above, is the redistribution of reserve balances between the euro countries. A necessary prerequisite for the build-up of high TARGET claims is therefore the existence of abundant excess liquidity. Only when the commercial banks have more central bank liquidity at their disposal on a sustained basis than they are required to hold as a minimum reserve does the possibility emerge of a sizeable redistribution of liquidity between the states of the Eurosystem.

The very expansionary monetary policy in response to the financial and economic crisis therefore coincides with the growth of the TARGET balances, as illustrated in Figure 3. The Bundesbank holds the highest TARGET claims by a wide margin. In July 2018 they amounted to more than EUR 900 billion. Luxembourg was second with EUR 215 billion and the Netherlands came in third place with EUR 133 billion. As mirror opposites of this, the TARGET liabilities are highest in Italy, with EUR 471 billion, and Spain with EUR 403 billion. The liabilities of the ECB itself are also substantial, at EUR 252 billion.

Figure 3: High liquidity is a prerequisite for high TARGET balances



*Central bank money = cash + liabilities under the Eurosystem to commercial banks of the euro area

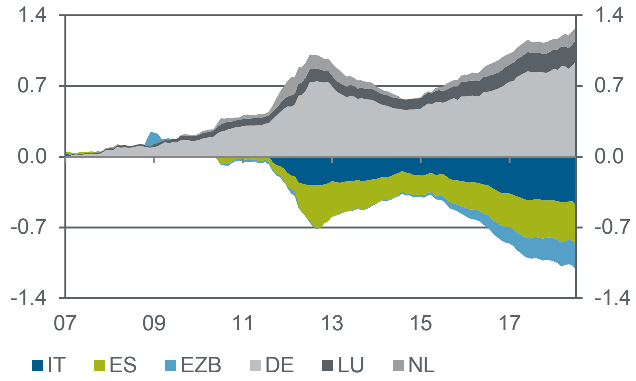
Source: ECB, own calculation

However, it is inadmissible to infer from this that the target system is being misused through money creation. After all, the member states of the currency union have agreed that the decisions on the quantity of money creation and monetary policy instruments are taken by the Governing Council of the ECB. Furthermore, the provision of central bank money is subject to clear rules that must be followed by the national central banks.

TARGET balances are not to be understood bilaterally

A national central bank always has TARGET claims and liabilities to the Eurosystem as a whole and they are the result of all cross-border transactions with euro reserves. The determinants of TARGET balances are therefore complex and variable. Bilateral trade imbalances are often referred to in a bid to explain the build-up of TARGET balances. This is an inadmissible simplification. Trade flows do play a role but just as important are purely financial transactions, payment transactions with counterparties outside the euro area, investor behaviour and characteristics of the financial infrastructure.

Figure 4: TARGET balances over time



Source: ECB, own calculation

The increase in TARGET balances began with the crisis in the interbank market...

The growth in TARGET balances basically took place in two phases (see also Figure 4). The first phase comprised both the global financial market crisis and the immediately ensuing euro crisis. First, the money market dried up as a result of mistrust among the banks. Banks took back liquidity they had previously lent by cancelling interbank loans. This already led to increased payment flows to Germany because a large portion of the funds resulting from the sizeable trade surpluses vis-a-vis the rest of the currency union had been invested in the European deficit countries through interbank loans in the previous years. The process intensified even more as doubts mounted over the southern European countries' debt sustainability and at times the idea circulated that certain countries would leave the euro area. German banks and other financial investors subsequently moved quickly to reduce their exposure to southern Europe (sudden stop). In order to stabilise the financial system, the ECB accommodated the high liquidity requirements through refinancing operations to enable the southern European banks to repay the interbank loans that had been called in and meet other payment obligations vis-a-vis German counterparties. At the height of the crisis, Germany's TARGET claims grew by EUR 30 billion per month and Italy's liabilities by EUR 20 billion per month.

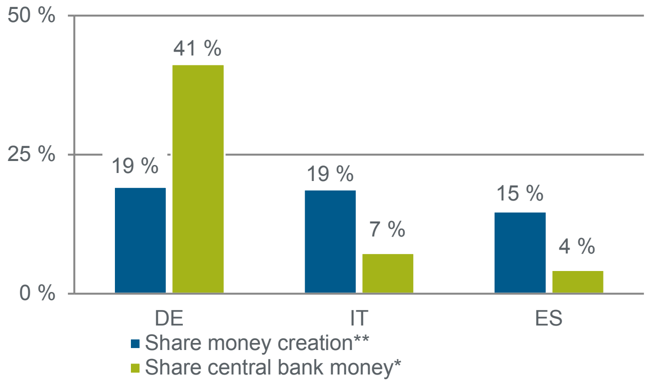
This momentum ended as the financial markets settled down in mid-2012 when the ECB announced its OMT programme ('whatever it takes'). At the end of the first phase, the TARGET claims of the Bundesbank peaked at EUR 750 billion and Italy's liabilities at EUR 285 billion. The German banks (and other investors), in turn, had significantly reduced their exposure to southern Europe and built up excess reserves with the Bundesbank at low interest rates. This phase was generally characterised by a renationalisation of the euro area banking system. Between mid-2012 and the end of 2014, the normalisation at the financial markets led to a partial decrease of both the TARGET balances and the excess liquidity.

... and continued with the start of QE

Since the national central banks of the Eurosystem began to purchase public-sector assets in large quantities under the

PSPP in 2015, however, the TARGET balances began to expand again in a second phase. Germany's TARGET claims grew again by around EUR 380 billion during this period (some EUR 9 billion per month) while Italy's liabilities rose by EUR 312 billion (around EUR 8 billion per month). Unlike in the first phase, there has not been any significant stress in the financial system in the euro area since the start of QE with the exception of the most recent turmoil surrounding Italy since the new government took office. Besides, the majority of the euro countries now have a current account surplus, including Italy and Spain. Neither capital flight nor the financing of current-account deficits can therefore be identified as the causes of the increase. Detailed studies by the ECB and the Deutsche Bundesbank have revealed that the causes are rather to be found in the ECB's bond purchase programme itself in combination with Frankfurt's role as an international financial hub.[6]

Figure 5: Central market money flows to Germany



*Central bank money = cash + liabilities under the Eurosystem to commercial banks of the euro area
**Money creation = asset purchases + loans under the Eurosystem to commercial banks of the euro area

Source: ECB, own calculations

The asset purchases are executed by all national central banks of the Eurosystem and the ECB in proportion to their capital shares. Essentially, the central banks purchase bonds issued by the national government and finance the purchases by creating new central bank reserves. The sellers of the bonds, however, are often non-euro area residents and often execute the transaction through correspondence banks that hold reserve accounts with the Bundesbank. The latter acts as a gateway to the euro financial market, as do the Netherlands or Luxembourg. If the Banca d'Italia purchases Italian government bonds from a UK national, for example, it transfers the central bank money thus generated to the account of the correspondence bank with the Bundesbank and the TARGET claims (liabilities) of the Bundesbank (Banca d'Italia) grow in the same proportion. Portfolio adjustments triggered by asset purchases can also cause the same movement. When euro-area residents purchase US government bonds, for example, this transaction is often executed by a transfer to a correspondence bank as well.

The relevance of this mechanism becomes clear when we look at the balance sheet of the Deutsche Bundesbank. It shows that the liabilities of the Bundesbank to non-euro area residents have grown by roughly EUR 150 billion since the start of the asset purchase programme (data as at July 2018). This is equal to around 40 % of the total TARGET increase. Moreover, purchases by the ECB necessarily result in liquidity flows to other national central banks, including to Germany, because the ECB itself does not maintain any accounts for commercial banks. The ECB's high TARGET liabilities (EUR 251 billion) are also a result of this. Likewise, the sale of bonds from the remaining euro area by German investors also leads to an increase in TARGET balances and excess reserves. As a result of Frankfurt's gateway function as a financial hub, a large portion of the central bank money created by the asset purchase programme on a decentralised basis is concentrated in Germany (Figure 5). This can also be observed for the Netherlands and Luxembourg to a lesser extent.

The TARGET balances reflect German investors' preferences

Simulation calculations performed by Eisenschmidt et al[7] demonstrate that the TARGET claims are growing at a slower rate than can be inferred from the isolated liquidity flows of the asset purchases. Without considering the asset purchases, the TARGET balances therefore would have declined further. It is true, however, that central bank money accumulated in Germany hardly flows into the rest of Europe in a second round, thereby also reducing the effectiveness of the expansionary monetary policy. One reason may be found in German investors' investment preferences. They appear to prefer secure, domestic investments. These are often savings deposits with banks. Sufficient domestic investment opportunities are lacking as a result of enterprises' structurally weak investment activity and the state's debt-reduction policy. That is why cross-border interbank loans (and further foreign investments of banks) were an important channel for investing German financial assets abroad. Since the financial crisis, this outlet has been partly blocked. The TARGET balances will decrease as soon as monetary policy has normalised and the European banks expand their cross-border business activities again. The completion of the banking union would speed up these processes significantly.

And the risks?

The growth in TARGET balances is often regarded as a major hidden risk for the German state and taxpayers as they would represent irrecoverable debts should the euro area fall apart. The following can be said in this regard:

1. As long as the euro area exists, the TARGET balances will be nothing more than pure accounting positions for ensuring cross-border payments in the euro area. Restricting TARGET would also spell the end of free capital movement in the euro area.

2. The TARGET balances of the Bundesbank vis-a-vis the Eurosystem do not actually contain any new risks, they are just easier to identify. After all, as a country with high current account surpluses Germany systematically and inevitably

accumulates new claims on other countries that always come with default risks. Germany's net external assets stood at EUR 8.4 trillion at the end of the first quarter. TARGET balances have a sizeable share in this of more than 10 %. But the remaining positions of direct investments, securities and other capital investments are in no way risk-free either. Furthermore, the economic and financial systems of the euro area are closely interwoven so that high costs would be inevitable for Germany should one country leave the euro area.

3. Central banks are no ordinary economic entities. Therefore, they cannot become illiquid because they produce their currency themselves. What will happen to the TARGET balances should a country leave the euro area is therefore primarily a legal and political issue and difficult to predict. One thing that could be done, for example, is to convert the TARGET balance of the exiting country into a non-interest-bearing receivable. In a monetary system built on trust, such as the one we have, trust in the central bank is in any case more important than the structure of the balance sheet. This will be the case if the central bank retains its capacity to steer monetary policy and to credibly signal its intention and ability to continue ensuring price stability and growth-friendly allocation of money. The market stakeholders' current willingness to hold large amounts in the reserve accounts of the Deutsche Bundesbank shows that they regard their assets to be very safe there and do not see drastic reductions or losses of purchasing power as a realistic risk. ■

[1] For the following data and facts, cf.: ECB, Target Annual Report 2017, May 2018, URL: **https://www.bundesbank.de/resource/blob/732824/84178596a31c63e539d7bb7e06a04bba/mL/target-annual-report-2017-data.pdf**

[2] The European Economic Area is composed of the EU, Norway, Lichtenstein and Iceland.

[3] The list of banks that have direct access to TARGET 2 with the Deutsche Bundesbank is accessible on the website of the Deutsche Bundesbank at **https://www.bundesbank.de/resource/blob/603550/dd8f1bc2011809e92cc64d08a813ae65/mL/dikrekte-teilnehmer-an-target2-bundesbank-data.pdf**

[4] Hellwig, M., 'Wider die deutsche Target-Hysterie' *(Against the German TARGET hysteria* - our title translation, in German only), F.A.S., 29 July 2018.

[5] Cf. e.g. Sinn, H.-W., 'Fast 1000 Milliarden Euro' *(Almost 1,000 billion euros* - our title translation, in German only), FAZ, 17 July 2018.

[6] Cf. ECB, 'TARGET balances and the asset purchase programme', Economic Bulletin 7/2016, and Bundesbank, 'The impact of Eurosystem securities purchases on the TARGET2 balances', Monthly Report March 2016.

[7] Eisenschmidt, J., et al., 'The Eurosystem's asset purchase programme and TARGET balances', ECB Occasional Paper No 196, September 2017.