Why the German TARGET balance is currently falling no further in spite of more restrictive monetary policy

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Abstract

Under the monetary policy purchase programmes, euro area central banks frequently purchased securities via international banks that, for historical and institutional reasons, often settle their payments by accessing TARGET via the Bundesbank. Such purchases – mostly of government bonds – have, since 2015, contributed to a relatively steady increase in Germany's TARGET claims to over €1 trillion. An opposing effect could be expected from the reduction of the monetary policy asset portfolios if said banks with deposits at the Bundesbank as well as their customers were to increasingly purchase newly issued securities from non-resident issuers. This would result in liquidity flowing out of Germany, and the German TARGET balance, taken in isolation, would decline. Since mid-2023, however, Germany's TARGET claims have predominantly been moving sideways. Thus far, then, the balance sheet run-off in the context of a restrictive monetary policy has not led to a decline of the same magnitude in Germany's TARGET claims as previously, when the build-up of assets on the balance sheet resulted in a rise in the TARGET balance.

This appears to be chiefly due to a change in investor behaviour in the market for euro-denominated government bonds. In other euro area countries, predominantly domestic investors have of late been purchasing government bonds, with the result that little liquidity has flowed out of Germany. Furthermore, unusually strong foreign demand for German government bonds has generated liquidity inflows. However, the development of TARGET balances is influenced by numerous other factors, meaning that clear-cut drivers of future developments cannot currently be determined.

How TARGET balances arise

TARGET[1] balances arise from cross-border payments within the euro area that are settled via TARGET Services. This platform is used by commercial banks as well as central banks in order to make payments in central bank money. The payments take a variety of different forms, such as securities transactions and customer transfers. In the past, TARGET balances have frequently been a subject of economic policy debate, as major imbalances may also indicate macroeconomic tensions (Deutsche Bundesbank, 2017). TARGET balances arise when central bank money created in one euro area country as a result of monetary policy measures, for example, is transferred to another country via TARGET. Due to the decentralised structure of the Eurosystem, intraday bookings of cross-border transactions in TARGET Services lead to a change in the total amount of holdings on accounts held with a national central bank. At the end of the business day, a multilateral netting procedure consolidates these changes into a single claim on or liability to the European Central Bank (ECB), known as the TARGET balance. In simplified terms, a positive balance or TARGET claim implies that since the introduction of the euro as the single currency, more central bank money has flowed into a country than out of it, whilst a negative balance or TARGET liability indicates a net outflow of this liquidity.

The German TARGET balance in the balance of payments

Although there is no consistent causal relationship between the change in the TARGET balance and specific components of the balance of payments (Eisenschmidt et al., 2017), an examination of the balance of payments yields valuable insights into potential factors that could influence the German TARGET balance. The balance of payments systematically records all transactions between residents and non-residents over a specific period of time based on the double-entry accounting system. Changes in the *Bundesbank's net foreign investment* fall under other investment and essentially reflect changes in Germany's TARGET balance (Deutsche Bundesbank, 2023).

At the beginning of 2023, Germany's TARGET claims declined significantly at first. This could be attributable to the fact that non-euro area investors with deposits at the Bundesbank withdrew their liquidity at the turn of the year (*Foreign deposits at Bundesbank,* Figure 1).[2] Liquidity also flowed out of the German banking sector in the latter part of 2023 (*Banks' net foreign funding*). Taken in isolation, these outflows should have resulted in further declines in the German TARGET balance. It is, however, striking that such liquidity outflows from the Bundesbank and commercial banks were accompanied by increased foreign investment in German government bonds. This suggests that non-resident investors substituted their deposits with German government bonds, with the result that their liquidity remained in Germany. Ultimately, then, these shifts have no reducing impact on the development of Germany's TARGET balance and are likely to be partially responsible for its sideways movement.

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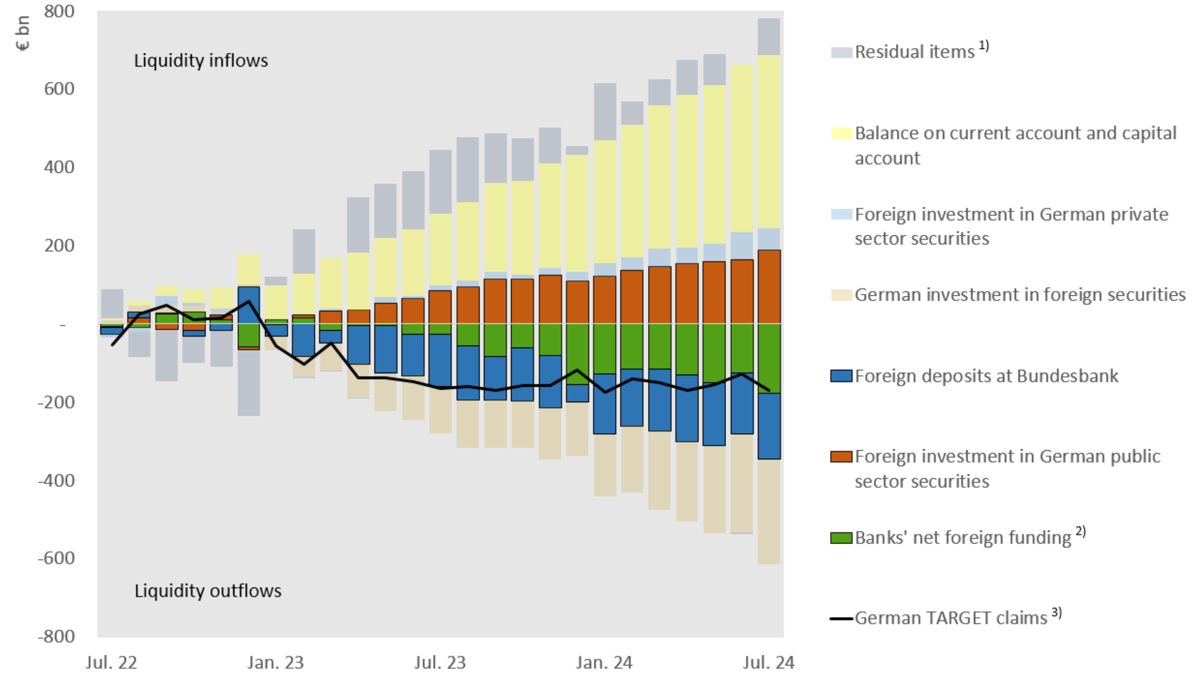
[1] TARGET stands for "Trans-European Automated Real-time Gross Settlement Express Transfer".

[2] Within the Eurosystem reserve management services (ERMS) framework, the Bundesbank offers custodial services to central banks, monetary authorities and government institutions outside of the euro area. These services make it possible for these organisations to keep their euro-denominated foreign reserve assets secure and liquid.

*Figure 1: Germany's TARGET claims and simplified balance of payments, month-end values cumulated as from July 2022 in € bn**



* For German investments abroad: Positive (negative) values indicate a reduction (increase) in Germany's foreign assets. For foreign investments in Germany: Positive (negative) values indicate an increase (decrease) in Germany's foreign liabilities. [1)]Includes direct investments, financial derivatives, other investments, and statistically unclassifiable transactions. [2)] Difference between foreign capital investments in Germany and domestic capital investments abroad; excluding securities investments. Excludes Deutsche Bundesbank. [3)] Largely reflects changes in the Bundesbank's other capital investments on the asset side; displayed as a line for better visualization, rather than a stacked column.

Source: Deutsche Bundesbank; authors' representation.

Monetary policy tightening – Eurosystem balance sheet reduction not a structural driver of Germany's TARGET balance thus far

The shifts observed within the balance of payments are likely to be connected to the Eurosystem's monetary policy tightening. In July 2022, for example, net purchases under the asset purchase programme (APP) were ended. In addition, the key interest rates were subsequently raised several times as from the end of July 2022. Since March 2023, portfolio holdings have been gradually scaled back (Deutsche Bundesbank, 2024a).

The APP and the subsequent pandemic emergency purchase programme (PEPP) were key factors behind the German TARGET balance rising from 2015 onwards (Bettendorf and Jochem, 2021; Eisenschmidt et al., 2024).[3] This was primarily due to euro area central banks buying securities not only from domestic banks, but also via banks in other euro area countries as well as banks outside the euro area that are connected to TARGET Services via branches in the European Economic Area (EEA). Many credit institutions domiciled outside the EEA settle their payments by accessing TARGET via the Bundesbank for historical and institutional reasons. If another Eurosystem central bank bought a security via such a credit institution, this

[3] The fiscal policy measures taken by the European Union in response to the coronavirus pandemic, which are financed jointly through the issuance of bonds, are also likely to have impacted on TARGET balances since 2020 (Drott et al., 2022).

led to an inflow of central bank money to Germany and consequently caused a rise in the German TARGET claims.

An opposing effect would occur from the reduction of the monetary policy asset portfolio if buyers used liquidity held with the Bundesbank to purchase foreign securities again. All other things being equal, this would result in liquidity flowing out of Germany, and Germany's TARGET balance would decline.[4] The transmission mechanism can be illustrated using the following example.

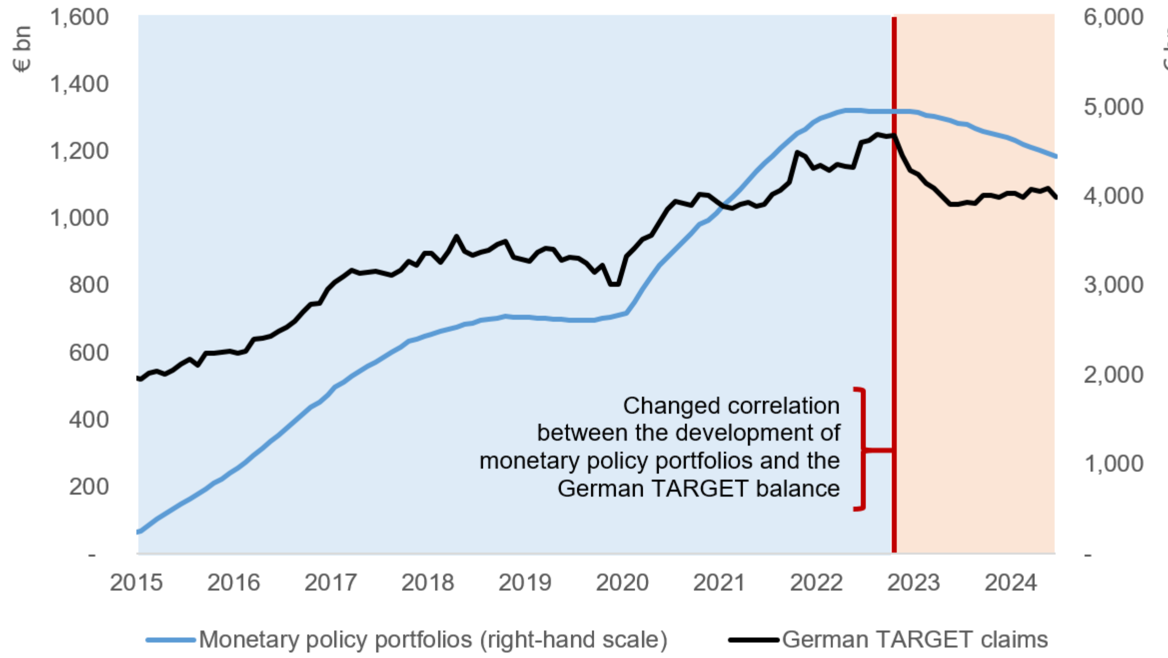
The Banca d'Italia purchases an Italian government bond under the APP from a non-European investor via the branch of an Anglo-Saxon bank that has an account with the Bundesbank. If the seller of the securities does not then transfer its liquidity to another country in the euro area, Germany's TARGET claims and Italy's TARGET liabilities would rise by the purchase amount. When the bond reaches maturity, the Italian government issues a new bond. If the branch of the Anglo-Saxon bank with deposits at the Bundesbank, or one of its customers, buys this new Italian government bond, money flows from Germany "back" to Italy. As a result, Germany's TARGET claims and Italy's TARGET liabilities would go back down to their starting level.

However, the relationship between the development of Germany's TARGET balance and monetary policy portfolios that has existed since 2015 has evidently changed in the new monetary policy environment (Figure 2). In order to identify a potential structural break, an ARIMA model[5] is estimated. The residuals of the model are divided into two periods, and each possible point in time is analysed to see whether there are any statistically significant differences between the two periods. 29 December 2022 marks the point at which the likelihood of a structural break is highest statistically. This shows that, from that date onwards, the model no longer records the same dynamic as before, suggesting a fundamental change in the relationship. Up to that point, the deposit facility rate had been raised within just a few months from -0.5% to 2% and the two-tier system for remunerating excess liquidity holdings had been suspended. The partial reduction of the monetary policy portfolios began around two months later. An adapted Prais-Winsten ordinary least squares (OLS) method, which controls for a serial correlation in the error terms, is used to estimate the dependence of the German TARGET balance on the Eurosystem's total net asset purchases before and after the structural break (Drott et al., 2022). The analysis shows that, in the period from 2015 up until the structural break, a change in the monetary policy portfolios of €1 led to a change in the German TARGET balance of €0.14. After the structural break, this effect diminished considerably, with the result that a comparable change in the monetary policy portfolios resulted in the balance changing by only €0.03. Thus, virtually no notable relationship between the development of monetary policy portfolios and Germany's TARGET balance has existed since the structural break.

[4] Distorting effects arising from reinvestments that deviate from the capital key owing to the smooth implementation of the APP (European Central Bank, 2023) and PEPP (Schnabel and Rahmouni-Rousseau, 2024) or from different weighted average maturities of monetary policy asset holdings are likely to be intertemporal or negligible in terms of their scope.

[5] The model is estimated using the *auto.arima* function from the R package *forecast* on an ARIMA (0,1,0), which corresponds to a random walk. This model was selected due to its suitability for modelling time series with trend behaviour.

Fig. 2: Correlation of the TARGET balance and monetary policy portfolios, monthly averages in € bn



Source: European Central Bank; author's calculations.

The role of government bond markets

The observed change in the relationship between monetary policy portfolios and the TARGET balance falls in a period in which the Eurosystem also gradually raised interest rates in addition to reducing its monetary policy portfolios. Changes in the interest rate level create fundamental incentives for financial market participants to modify their portfolios (Deutsche Bundesbank, 2018; Deutsche Bundesbank, 2022).[6] There is ample evidence of this effect, particularly when interest rates fall as investors tend to invest in riskier forms of investment (European Central Bank, 2019; Deutsche Bundesbank, 2020). Conversely, a rise in interest rates should have the opposite effect and, say, boost demand for (government) bonds because banks, for instance, only make hesitant adjustments to the interest rates on their customer deposits. At the same time, many governments have increased their debt, especially since the outbreak of the coronavirus pandemic, while bonds, which previously had been used as collateral for long-term refinancing operations, have been freed up. This led to a significant rise in the availability of government bonds, which had to be absorbed by private investors (Deutsche Bundesbank, 2024b; Ferrara et al., 2024).

These observations in the balance of payments and the historical relationship between monetary policy portfolios and the TARGET balances suggest that it would be prudent to take a look at the Eurosystem's securities holdings statistics. This data can help to better identify movements in the government bonds market and to trace the potential impact on TARGET

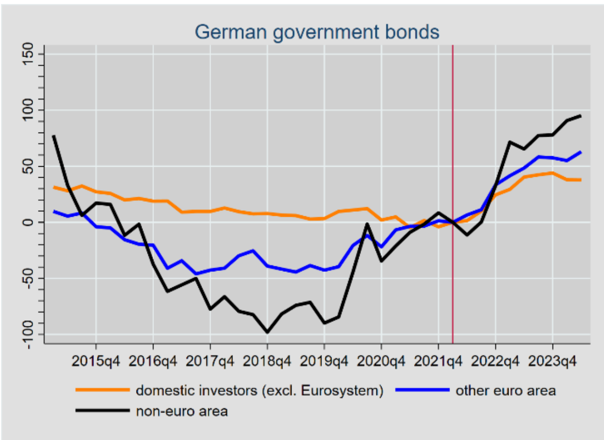
[6] Other major drivers behind portfolio shifts are economic activity in Germany and abroad, developments in equity markets, uncertainty, commodity prices and the international interest rate environment.

balances.[7] In principle, the effect of monetary policy asset purchase programmes on TARGET balances would be symmetrical if the investors that had previously sold to the Eurosystem were to reappear again as buyers. However, changes in securities holdings statistics indicate that there has been a certain shift in the buyer structure since net asset purchases came to an end.

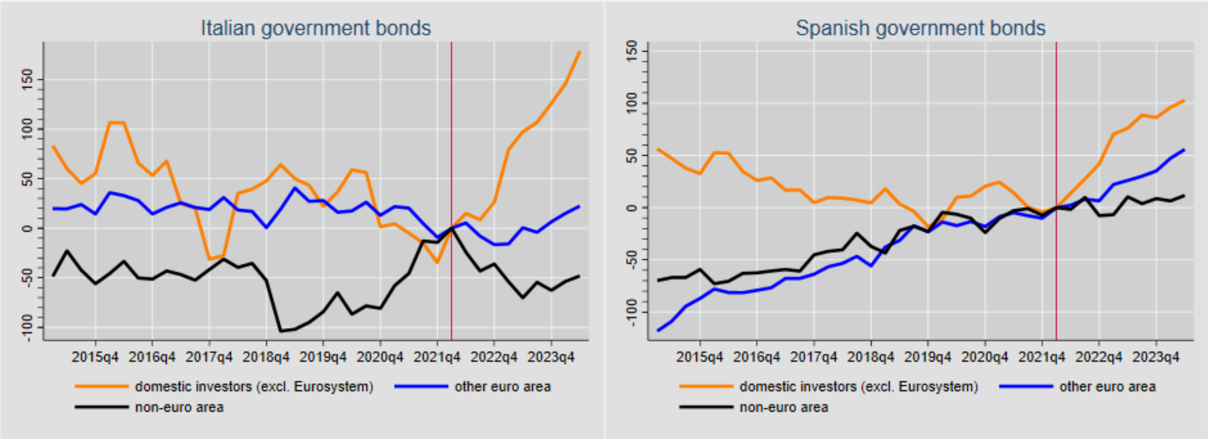
These shifts are only likely to have a significant impact on TARGET balances, however, where the government bond markets in question are sizeable. To better understand changes in government bond markets and their potential impact on TARGET balances, only the three countries with the largest TARGET balances are shown below.[8] These countries are Italy and Spain, which together make up around 55% of all TARGET liabilities, and Germany, which holds around 65% of all TARGET claims. Alongside France, these three countries also have the largest government bond markets in the euro area. Although France has a large market for government bonds, it has a relatively small TARGET balance.

The creditor structure of the three government bond markets named is fairly heterogeneous. Excluding monetary policy portfolios, non-euro area investors are the most important holders of German government bonds. Italian and Spanish government bonds, by contrast, are primarily held by domestic investors. Over the course of the monetary policy purchases, non-euro area investors were, correspondingly, also the largest sellers of German government bonds (Figure 3). Although domestic holders of Spanish and Italian government bonds made sales to the Eurosystem, they reduced their holdings to a lesser degree due to increased new issuance in the period under review.

Fig. 3: Change in euro sovereign bond holders by source compared to Q1 2022



[7] Identifying clear interrelationships is not possible here, however. It would also have to be known exactly where the security and the liquidity used to buy it came from and where they are headed.
[8] The observations hold true even when considering an aggregate of all countries with TARGET claims or liabilities.



In billion Euro nominal values indexed to 2022Q1. Only central government. Does not include entire universe of government bonds outstanding.

Source: ESCB (SHSS database) and authors' calculations.

Since the end of net purchases, domestic investors' purchasing activity has been striking. In Spain and Italy in particular, but also in Germany, they are purchasing exceptionally large volumes of government bonds at an exceptionally fast pace by historical standards. One likely driver for these unusual levels of domestic demand – especially from private households and other actors without accounts at central banks – could be that banks have been slow to pass on interest rates to their private and business customers. This may have strengthened the already traditionally high private investor demand for government bonds in Italy and Spain (Pavot and Valenta 2021). Another contributing factor in Italy's case may have been the BTP Valore bonds, which are specifically dedicated to private investors. These offer tax incentives, low minimum investment amounts and commission-free purchases (Ministerio dell'Economia e delle Finanze 2024).

Fundamentally, domestic purchases of government bonds have no effect on a country's respective TARGET balance, as the liquidity used to fund them is usually sourced from within its borders. If high domestic demand squeezes out foreign investors, however, this counteracts liquidity inflows. The shrinking yield spread between Italian, Spanish and German government bonds during the period under review is a sign that high domestic demand may have reduced demand from foreign investors to some extent. This could have reduced Spanish and Italian TARGET liabilities and German TARGET claims to a lesser degree than expected.

This trend is supported by the observation that non-euro area investors are primarily buying German government bonds. These purchases are, for historical and institutional reasons, mostly settled via branches of foreign commercial banks in Germany directly and therefore may have little influence on Germany's TARGET balance. On the other hand, the comparatively high demand for German government bonds from other euro area countries may in fact have had a direct upward effect on Germany's TARGET claims. Buyers included investment funds from Luxembourg, Dutch pension funds and Italian banks, but also Italian households. These households represent a small group of buyers when it comes to German government bonds, but a notable one compared with other households.[9]

[9] Italian households hold about one-fifth of all German Federal securities held by households (German households hold around one-half).

Overall, these observations could provide an explanation as to why the correlation between the TARGET balance and monetary policy portfolios has shifted since 2022, leading to a break in the relationship.

Conclusion

The analysis shows that the relationship between the development of the German TARGET balance and monetary policy portfolios weakened significantly following the period of monetary policy tightening starting in 2022. The market for government bonds in particular, which is of vital importance to monetary policy implementation, reveals multiple factors that contributed to this change.

1. *Relatively high purchases of German government bonds from other euro area countries*: this led to liquidity inflows to Germany and, taken in isolation, increased Germany's TARGET balance.
2. *Purchases by non-euro area investors*: these often have no influence on Germany's TARGET balance, as the liquidity used is often already held in Germany. However, when said liquidity was not used to purchase issues from other euro area countries, the fact that it remained in Germany could at least have prevented a reduction in Germany's TARGET claims. This goes hand in hand with ...
3. ... *high domestic demand for government bonds in other euro area countries*: this weakened the incentives that would otherwise draw liquidity out of Germany into other countries, which also counteracted a reduction in Germany's TARGET balance.

Looking ahead, given the reduction in the gap between the interest rates on securities and deposits that has emerged recently as well as the renewed drop in interest rates, domestic demand for government bonds could decline again. This would potentially strengthen the outflow of liquidity from Germany and could lead to a reduction in German TARGET claims. However, any further developments will strongly depend on the Eurosystem's future monetary policy stance and the macroeconomic conditions in Member States. Continued monitoring and analysis of investors' investment behaviour and cross-border liquidity flows help foster a better understanding of the dynamics of TARGET balances in the context of monetary policy developments.

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