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TARGET2 Imbalances in the Euro Area

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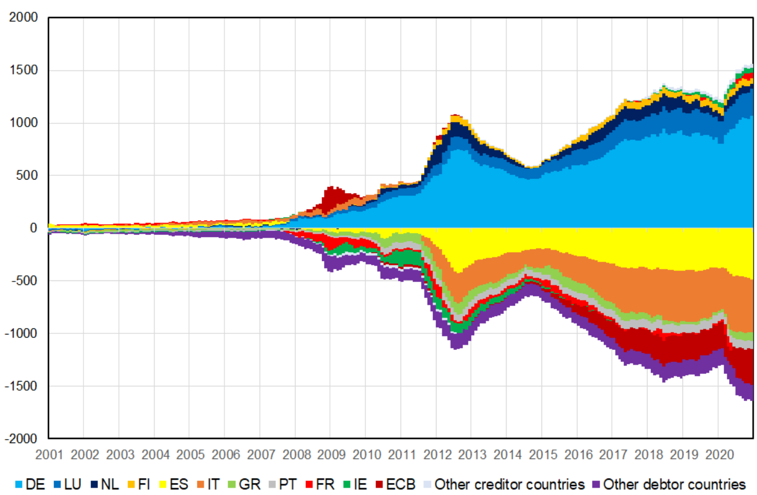
- The Trans-European Automated Real-time Gross Settlement Express Transfer System, or TARGET2, allows financial transactions to be settled between commercial banks located in different euro-area countries via a clearing system between national central banks (NCBs) and the European Central Bank (ECB). Transactions accumulate in net terms, resulting in a balance which is recorded on the balance sheet of each NCB.

- TARGET2 balances are therefore an accounting representation of the cross-border economic and financial relationships that the free movement of capital in the euro area entails. In addition to trade in goods and services and portfolio investments, these balances reflect a variety of different types of flows of funds: flows between subsidiaries or branches of the same banking group that participate in TARGET2 via different NCBs, flows resulting from non-standard monetary policy measures, and "technical" flows associated with the location of accounts for the settlement operations of securities.

- Since the euro was created, TARGET2 balances have gone through several distinct phases. Prior to 2008, balances were practically zero: current account imbalances between euro-area countries were settled by means of interbank liquidity transfers. After the 2008 financial crisis and the 2012 sovereign debt crisis, TARGET2 balances rose dramatically due to tensions on the interbank market and a flight of deposits from "peripheral" countries (Italy, Greece, Spain, Portugal, Ireland) toward "core" countries (Germany, Netherlands, Luxembourg), before gradually going back down. Since 2015, balances have been picking up again as a result of the ECB's asset purchase programmes. Today, balances are more a reflection of the differences in size between Europe's financial markets than the result of market tensions, interbank market fragmentation or capital flight.

- TARGET2 balances are expected to decrease as the ECB tapers off its asset purchase programmes and, more generally, as progress is made on the Banking Union and the Capital Markets Union.

TARGET2 balances over time (in €bn)



Source: ECB.

1. A payment system integral to a decentralised monetary union

1.1 The TARGET system

TARGET is a payment system developed and operated by the Eurosystem[1] for the real-time gross settlement of large-value domestic and cross-border transactions in euros. Its first iteration was launched in January 1999 along with the introduction of the euro and replaced by TARGET2 in May 2008. It is a real-time gross settlement (RTGS) system, with "gross" meaning that settlement takes place on a transaction-by-transaction basis, without clearance between payments, and "real-time" meaning that transactions are processed immediately (for example, on 30 September 2019, more than 90% of transactions were settled in under 40 seconds).[2]

The system plays a key role in the effective circulation of liquidity within the European banking system, making it essential for EU-wide financial integration. As of 2021, there are 25 central banks and their national user communities that participate in TARGET2: the ECB, the 19 NCBs of the euro area, and the NCBs of 5 non-euro-area EU countries. According to the ECB, there are more than 1,700 commercial banks that use TARGET2 to carry out euro-denominated transactions. Factoring in subsidiaries and branches, TARGET2 is used by more than 55,000 banks (and their customers). Today the platform is mainly used to process monetary policy and interbank market operations and to settle market infrastructure operations (securities settlement systems, euro payment systems and clearing houses).

1.2 How TARGET2 works

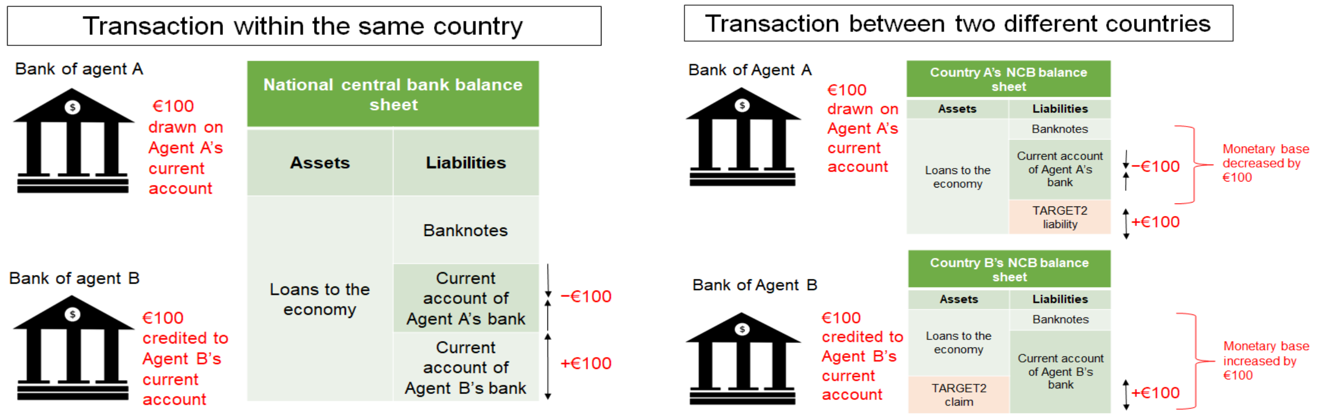
NCBs, the "banks for banks," receive "deposits" (reserves) from the commercial banks that participate in TARGET2. These reserves allow for the flow of payments between commercial banks. For payments within the same country, the NCB simply transfers the corresponding funds from the account of Bank A to the account of Bank B (see Chart 1a). The country's total bank reserves, which make up most of the monetary base (or M0),[3] are unaffected.

If Bank A and Bank B are in two different euro-area countries, cross-border payments are processed through their respective NCBs. More specifically, NCB A transfers bank reserves (from the monetary base) to NCB B. This in turn leads to a "TARGET2 liability" for NCB A and a "TARGET2 claim" for NCB B (see Chart 1b). The TARGET2 balance on an NCB's balance sheet is the accumulation of all such transactions in net terms. It corresponds to the NCB's overall claims and liabilities over time toward the ECB, which functions as the central clearing house for the system. NCBs are therefore not indebted toward one another but to the ECB.

A clearing system such as TARGET2 is a key component of a decentralised monetary union (i.e., in which participating central banks keep their balance sheets separate) and helps maintain the "singleness" of the currency – in other words, that the euro retains the same value throughout all euro-area countries. If there were no national central banks or if two of them were to merge, transactions between them would be directly cleared within the supranational central bank and there would be no TARGET2 balances, akin to transactions between two counterparties in the same country. Overall, the system is based on the free movement of capital throughout the euro area and the singleness of the currency.

(1) The Eurosystem comprises the European Central Bank and the national central banks of countries whose currency is the euro. Its mandate is to define and implement a single monetary policy for all countries in the euro area.
(2) ECB (2020) TARGET2 Annual Report 2019.
(3) The rest of the monetary base consists of banknotes in circulation.

Chart 1: Two examples of interbank payments



Source: DG Trésor.

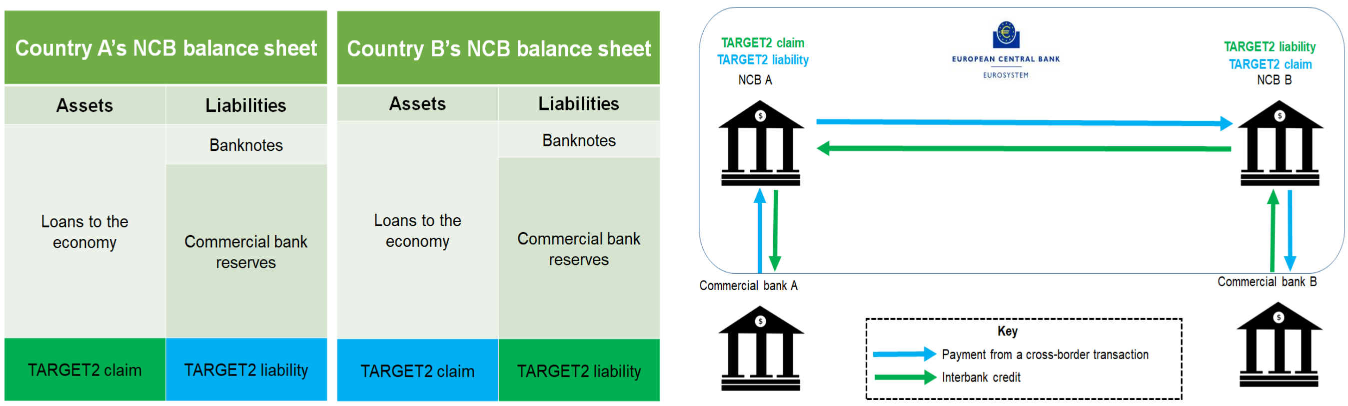
2. TARGET2 balances were initially small and stable

Prior to 2008, TARGET2 balances were practically zero, in a context where banks were using the private interbank market to directly manage liquidity supply and demand and where the ECB's refinancing operations took the form of auctions. The liquidity available from the ECB could be more expensive than what was available on the market, which meant it was little used by banks. During this period, current account imbalances between euro-area countries were offset via interbank liquidity transfers, which kept TARGET2 balances even. For example, if Germany's current account surplus meant German banks had a liquidity surplus, they could lend it to Italian or Spanish banks that had a shortage of liquidity. These cross-flows kept TARGET2 balances even among countries despite significant external imbalances. Take for example the case of a bank of a Spanish importer making a payment on behalf of its customer to the bank of a German supplier. Instead of keeping the funds on reserve with the Bundesbank, the German bank would lend it out to Spanish banks on the interbank market. At the central bank level, liquidity was flowing in both directions and TARGET2 balances were minimal.

Box 1: TARGET2 balances prior to 2008

Prior to 2008, cross-border payment flows (blue arrows) were offset by interbank credit flows in the opposite direction (green arrows). For example, TARGET2 balances were relatively even, since current account imbalances within the euro area were offset by excess liquidity being reallocated to meet refinancing needs on the euro-area interbank market.

Simplified diagram of two TARGET2 countries prior to the 2008 crisis



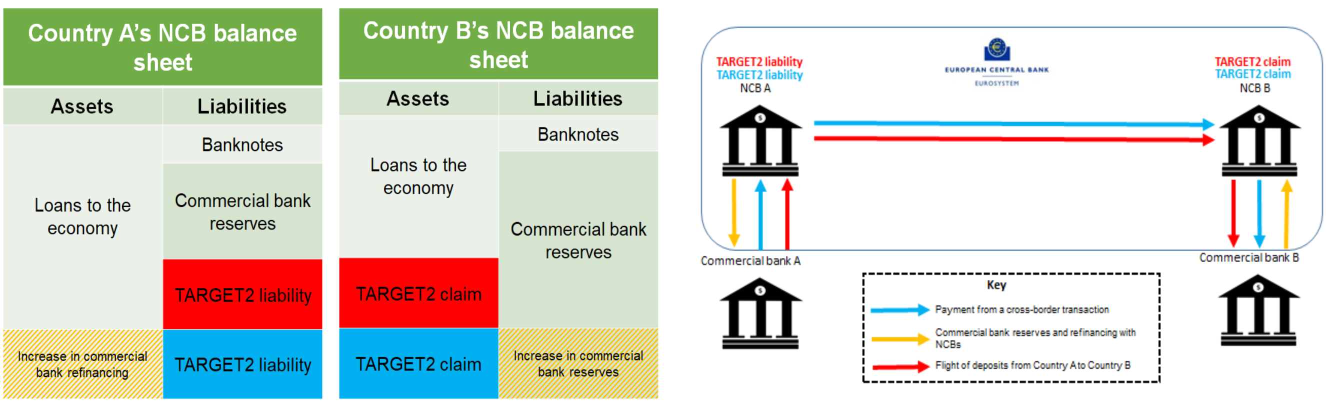
3. Balances shot up after the 2008 financial crisis and the 2012 sovereign debt crisis

Following the 2008 financial crisis and the 2012 sovereign debt crisis, TARGET2 balances increased dramatically due to tensions on the interbank market and the flight of deposits from "peripheral" countries (Italy, Greece, Spain, Portugal, Ireland) into "core" countries (Germany, Netherlands, Luxembourg),[4] before gradually going back down again. Total TARGET2 national surpluses stood at €1,100bn in mid-2012 and then gradually declined to stabilise at around €600bn by the end of 2014. The drying up of unsecured interbank transactions after the 2008 crisis (see Chart 3) led the ECB to offer unlimited (but collateralised) refinancing, which replaced the cross-border interbank transactions that had been keeping TARGET2 balances even among countries. The phenomenon grew in some countries after the 2012 sovereign debt crisis and the loss of trust in certain banking systems. In some southern European countries (Italy, Spain, Greece), banks saw a flight of deposits to economies perceived to be a safe haven, such as Germany, thereby increasing their TARGET2 deficits. The TARGET2 system, which is vital to the functioning of the euro area with its decentralised structure, played a crucial stabilising role throughout these crises, allowing solvent banks in countries under high financial stress to cover their liquidity needs. Since 2013, some southern European countries have returned to a current account surplus, enabling TARGET2 balances to come down somewhat.

Box 2: Impact of crises and ECB response on TARGET2 balances

Following the 2008 crisis, to address the drying up of liquidity on the euro-area interbank market, the ECB updated its refinancing terms, offering unlimited liquidity at a fixed interest rate (subject to sufficient collateral). The flow of interbank credit that had been offsetting flows of cross-border payments in relation to goods and services transactions between different countries disappeared (green arrows, now gone), since liquidity needs were now being met via ECB refinancing (yellow arrows). This is in addition to the flight of deposits from "peripheral" countries to "core" countries, which resulted in a one-way transfer of TARGET2 balances (red arrows). These two new trends contributed to an increase in TARGET2 balances.

Simplified diagram of two TARGET2 countries after the 2008 crisis

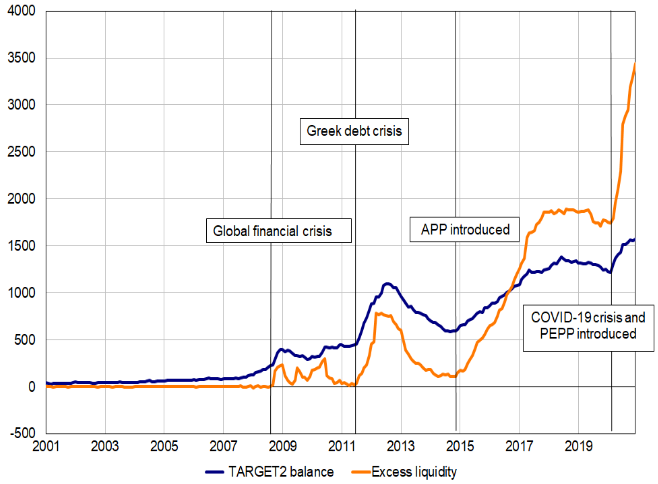


(4) Auer R. A. (2014), "What Drives TARGET2 Balances? Evidence from a Panel Analysis", *Economic Policy*, 29(77), 139-197.

4. New increase in balances due to ECB non-standard policy measures

Although TARGET2 imbalances are a direct result of the increased intermediation role assumed by the ECB in countervailing the financial fragmentation of the euro area, they can also be attributed to the significant injections of liquidity into the Eurosystem (see Chart 2) after the ECB began introducing asset purchase programmes in 2015.[5] The Eurosystem has experienced several phases of liquidity surplus increases[6] since 2008, corresponding to the phases of increased TARGET2 imbalances.

Chart 2: Excess liquidity and TARGET2 balance in the euro area (in €bn)



Source: Reuters, ECB.
How to read this chart: The TARGET2 balance corresponds to the total of all positive balances.

4.1 Impact of asset purchase programs on TARGET2 balances

The sharp increase in TARGET2 balances since 2015 can be mainly attributed to the ECB launching its asset purchase programme (APP) in a currency union with multiple financial markets of vastly differing sizes, and where external deficits have all but disappeared among euro-area countries. TARGET2 balances stood at more than €1,600bn at year-end 2020. Due to the decentralised nature of the Eurosystem and the characteristics of its asset purchase programmes, national central banks are tasked with making purchases of securities issued by entities in their home jurisdiction.

When the NCB of Country A purchases a financial security from a commercial bank in its jurisdiction, it records the security as an asset on its balance sheet and increases the commercial bank's reserves by the same amount, which is recorded as a liability on the NCB's balance sheet. The transaction has no effect on the NCB's TARGET2 balance.

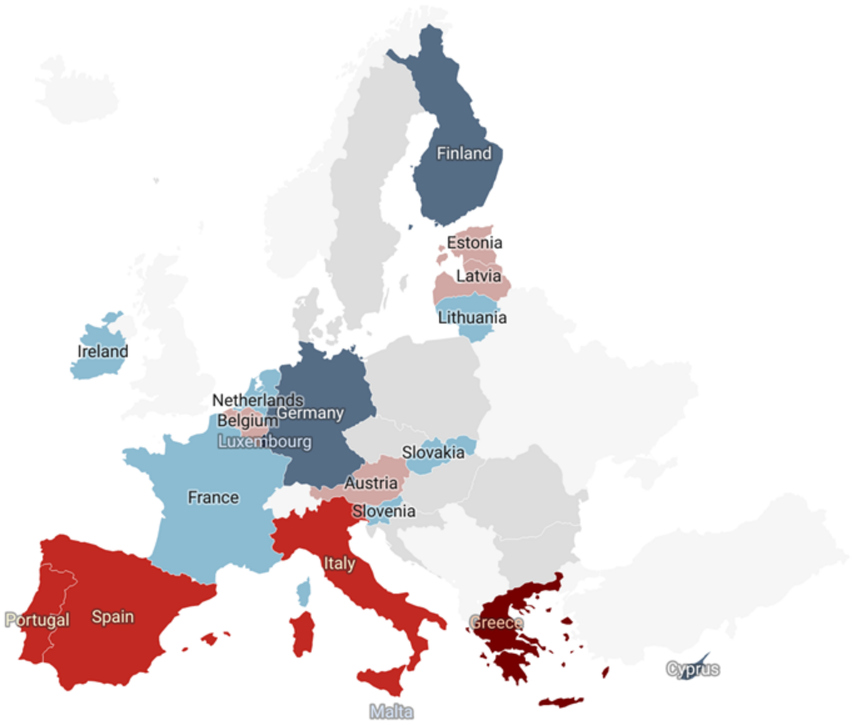
However, roughly 80% of purchases are from non-domestic counterparties, and 50% of total purchases are from counterparties outside the euro area, most of them in the United Kingdom. The majority of these non-domestic counterparties transit through subsidiaries in Germany or the Netherlands in order to access the TARGET2 transfer system, which results in uneven cross-border financial flows within the euro area, which in turn has an impact on the TARGET2 central account and the balance sheets of the NCBs.[7] So when the NCB of Country A purchases a security from a commercial bank in Country B, it cannot increase the reserves of the bank outside its jurisdiction. It goes through the NCB of Country B, which makes the payment to the commercial bank selling the security on its behalf. The NCB of Country A receives and records the security under its assets, but in exchange it records a TARGET2 liability instead of increasing bank reserves.

Furthermore, the development of the secured interbank market and the introduction of Basel III prudential rules have resulted in banks holding a larger supply of safe assets, which has further inflated TARGET2 balances: commercial banks have been purchasing securities in countries with the largest financial markets, driving up the accumulated TARGET2 liabilities of their NCBs.

Since the mid-2010s, the main TARGET2-liability countries (in €bn) have been Greece, Ireland, Portugal, Spain and Italy, and the biggest surplus countries have been Germany, the Netherlands, Finland and Luxembourg (see Chart 3). The liabilities of the Bank of Italy and the Bank of Spain are quite high, standing at around €500bn (which represents roughly 28% of Italy's GDP and 40% of Spain's). Conversely, the Bundesbank has a credit of around €1,100bn (roughly 32% of Germany's GDP).

(5) Grossmann-Wirth V. and B. Hallinger (2018), Post No. 93: "Monetary Policy and Liquidity Concentration in the Euro Area", *Eco Notepad*, Banque de France.
(6) Excess liquidity is defined as the bank reserves held in the central bank over and above legal reserve requirements.
(7) Eisenschmidt J., Kedan D., Schmitz M., Adalid R. & P. Papsdorf (2017), "The Eurosystem's Asset Purchase programme and TARGET Balances", *ECB Occasional Paper* (196).

Chart 3: TARGET2 balances in December 2020 by country (as a % of GDP)



Source: ECB, Eurostat.

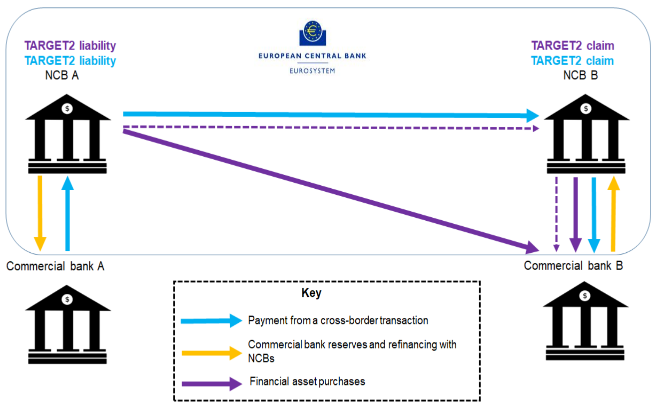
Box 3: Impact of asset purchases on TARGET2 balances

The asset purchase programs introduced since 2015 have cause TARGET2 imbalances to grow again. Due to the concentration of financial actors in the euro area's largest financial markets (Germany, Luxemburg and the Netherlands), which also serve as representatives for counterparties outside the euro area, NCBs go through the TARGET2 system to purchase financial instruments under the asset purchase programmes. For example, if NCB A wants to purchase a security from a commercial bank in Country B, it will go through NCB B, which makes the payment on its behalf, thereby creating a TARGET2 claim for NCB B and a TARGET2 liability for NCB A (purple arrows).

Simplified diagram of two TARGET2 countries as from 2015

Country A's NCB balance sheet	
Assets	**Liabilities**
Loans to the economy	Banknotes
	Commercial bank reserves
	TARGET2 liability
Commercial bank refinancing	TARGET2 liability

Country B's NCB balance sheet	
Assets	**Liabilities**
Loans to the economy	Banknotes
	Commercial bank reserves
TARGET2 claim	
TARGET2 claim	Commercial bank reserves

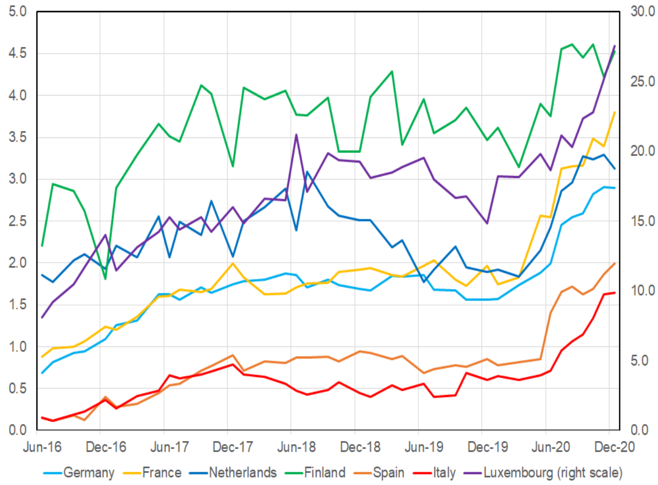


4.2 A persistent drying up of cross-border interbank financing in the euro area

Eurosystem balance sheet data disaggregated by country show a persistent drying up of cross-border interbank financing in the euro area, which has led to the ECB taking on a central intermediation role. Long-term refinancing operations (LTROs), particularly targeted long-term refinancing options (TLTROs), offer attractive conditions, with rates approaching the deposit facility rate (currently at –0.5%) before the COVID-19 crisis, and represent a more attractive source of refinancing than the BCE's main refinancing operations (MRO) rate (currently 0.0%) or the interbank market rate. Accordingly, some banks, particularly in southern European countries (Spain and Italy), continue to turn to the ECB for most of their refinancing needs, in particular via these instruments, since the ECB has further incentivized these banks to borrow from it rather than on the interbank market. At the same time, as the interbank rate (EONIA and its successor) approached the deposit facility rate (see Chart 4), it eliminated any incentive for banks with excess liquidity (primarily those in France, Germany, the Netherlands, Finland and Luxembourg; see Chart 5)[8] to lend on the interbank market. Excess liquidity has therefore remained concentrated among the euro area's "core" countries. In the absence of these long-term refinancing operations, a portion of the excess liquidity concentrated in "core" countries would directly fund the refinancing needs of "peripheral" countries on the interbank market and reduce a portion of TARGET2 imbalances.

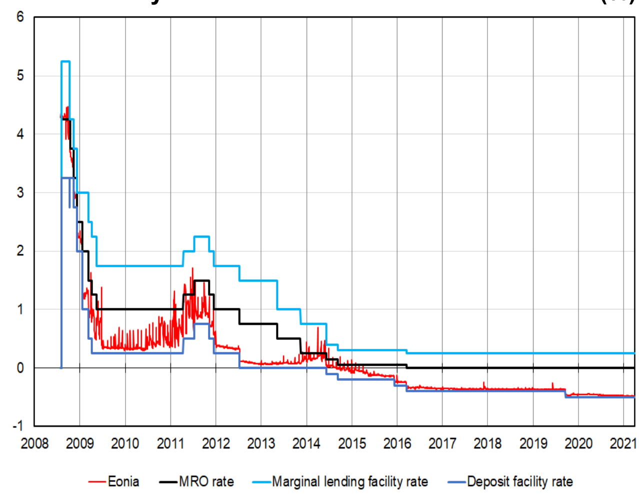
More recently, the ECB's response to the COVID-19 crisis caused a new increase of TARGET2 balances, notably with the introduction of the pandemic emergency purchase programme (PEPP), which has a total envelope of €1,850bn until March 2022. Furthermore, relaxed access conditions for TLTROs have enabled banks to meet their liquidity needs, but have also further increased the ECB's intermediation role.

Chart 4: Excess liquidity by country (% of GDP)



Source: Reuters, ECB, Eurostat, DG Trésor calculations.

Chart 5: Key ECB interest rates and interbank rate (%)



Source: Reuters, ECB.

The increase in these imbalances under the TARGET2 payment system should not be seen as problematic. On the contrary, it is evidence of resilience in a time of great crisis: after helping European peripheral countries overcome the drying up of their financing in the early 2010s, these increased imbalances are now the direct result very accommodative monetary policy, which generates particularly substantial excess liquidity in some countries due to the size of their financial market.

(8) At year-end 2020, excess liquidity stood at nearly 277% of GDP in Luxembourg. Up to the beginning of 2020, France and Germany had roughly the same level of excess liquidity.

These imbalances should even out, over time, with the normalisation of the ECB's monetary policy and the harmonisation of the euro area's banking and finance sectors in order to stimulate cross-border interbank exchanges, which will allow the ECB to gradually reduce its intermediation role in the banking sector. This will, however, require a deeper integration of the Economic and Monetary Union, in particular via the Banking Union and the Capital Markets Union.

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