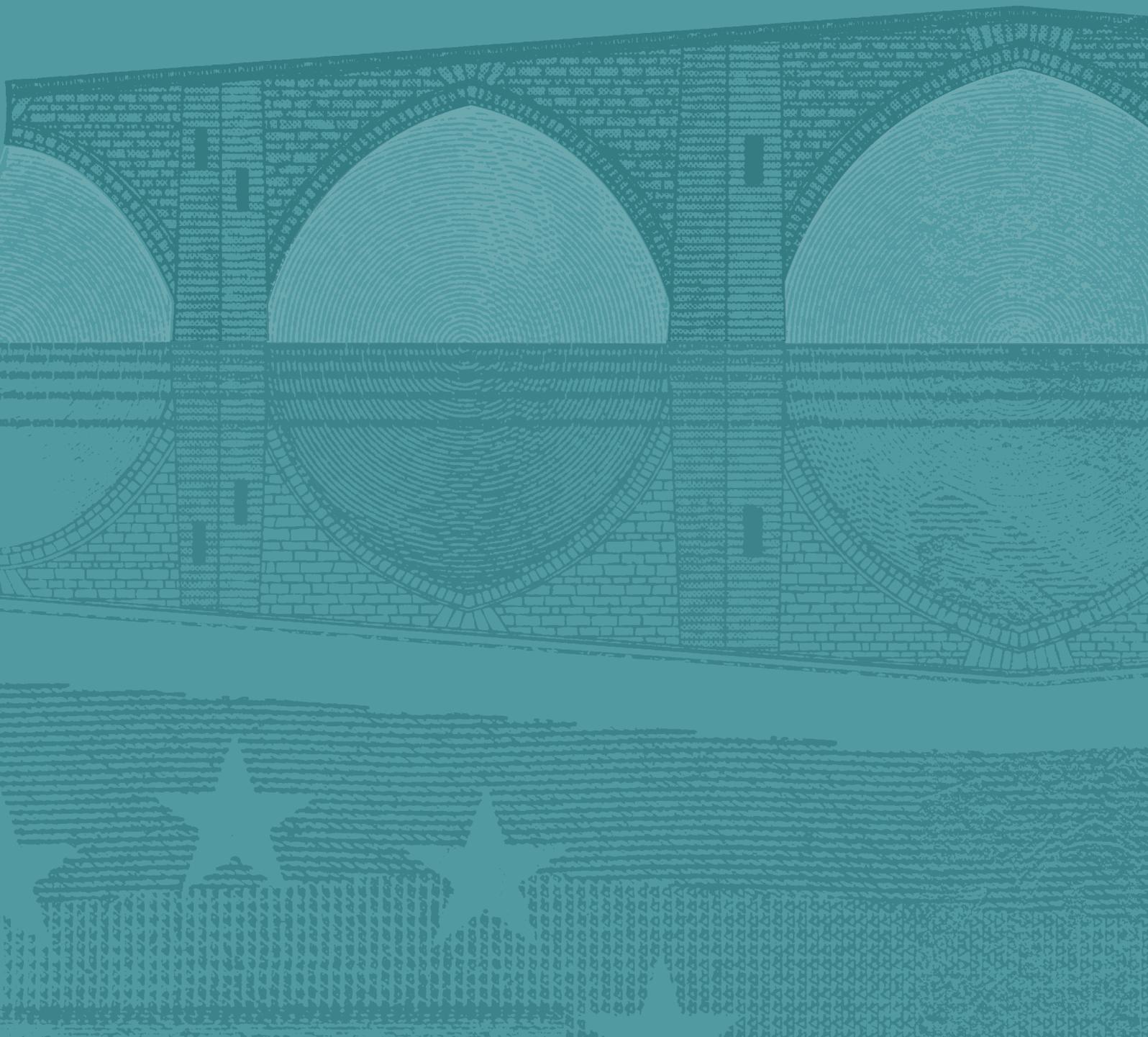




EUROPEAN CENTRAL BANK

EUROSYSTEM

TARGET ANNUAL REPORT 2013





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2013

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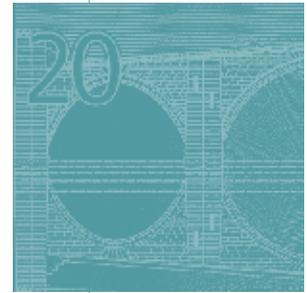
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ISSN 1725-4884 (online)

ISBN 978-92-899-1364-5 (online)

EU catalogue number QB-AC-14-001-EN-N (online)



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INTRODUCTION

The Eurosystem has the statutory task of promoting the smooth operation of payment systems. This is crucial for a sound currency, for the conduct of monetary policy, for the functioning of financial markets, and in supporting financial stability. The Eurosystem's main instrument for carrying out this task¹ is the provision of payment settlement facilities. To this end, the Eurosystem operates the TARGET2 system, the second-generation Trans-European Automated Real-time Gross settlement Express Transfer system² for the euro.

The market infrastructure for payments³ is one of the three core components of the financial system, together with markets and institutions. It consists of the set of instruments, networks, rules, procedures and institutions that ensures the circulation of money. The principal objective of this segment of the financial system is to facilitate the execution of transactions between economic agents and to support the efficient allocation of resources in the economy.

The complexity and importance of the market infrastructure for payment handling has greatly increased over the last two decades, owing to the high growth in volumes and values of financial activities, financial innovation and advancements in information and communication technologies.

In May 2008 TARGET2 replaced the first-generation system, TARGET, which was created in 1999 by the Eurosystem for the settlement of large-value payments in euro, offering a central bank payment service across national borders in the European Union (EU).

TARGET was developed to meet three main objectives:

1. to provide a safe and reliable mechanism for the settlement of euro payments on a real-time gross settlement (RTGS) basis;
2. to increase the efficiency of inter-Member State payments within the euro area; and, most importantly,
3. to serve the needs of the monetary policy of the Eurosystem.

Similarly to its predecessor, TARGET2 is used for the settlement of payments connected with monetary policy operations, of interbank payments, and of transactions related to other payment and securities settlement systems (i.e. ancillary systems). As TARGET2 provides intraday finality, i.e. settlement is final for the receiving participant once the funds have been credited, it is possible to reuse these funds several times a day.

In addition, TARGET2 offers harmonised services at the EU level and a single pricing structure. It provides ancillary systems with a harmonised set of cash – settlement services and supports

- 1 The Eurosystem fulfils this task by:
 - providing payment and securities settlement facilities (TARGET2) and also a mechanism for the cross-border use of collateral (the correspondent central banking model (CCBM));
 - overseeing the euro payment and settlement systems;
 - setting standards for securities clearing and settlement systems;
 - ensuring an integrated regulatory and oversight framework for securities settlement systems;
 - acting as a catalyst for change (i.e. promoting the SEPA initiative).
- 2 A real-time gross settlement (RTGS) system is a payment system in which processing and settlement take place in real time (i.e. continuously), rather than in batch processing mode. It enables transactions to be settled with immediate finality. Gross settlement means that each transfer is settled individually, rather than on a net basis. TARGET and its successor TARGET2 are examples of RTGS systems.
- 3 A payment is defined as the process by which cash, deposit claims or other monetary instruments are transferred between economic agents.

its users with enhanced liquidity management tools. In this manner, it contributes to financial integration, financial stability and liquidity efficiency in the euro area.

TARGET2 is accessible to a large number of participants. More than 1,700 credit institutions in Europe use TARGET2 to make payments on their own behalf, on behalf of other (indirect) participants or on their customers' behalf. Taking into account branches and subsidiaries, almost 60,000 banks worldwide (and thus all of the customers of these banks) can be reached via TARGET2.

THE REPORT AND ITS STRUCTURE

This report is the fourteenth edition of the “TARGET Annual Report”. The first edition was published in 2000, covering TARGET’s first year of operation (1999). As in previous years, the report presents the main facts relating to the TARGET system, taking into account the developments which took place in TARGET2 in the course of 2013. The report is mainly addressed to decision-makers, practitioners, lawyers and academics wishing to acquire an in-depth understanding of TARGET2. It will hopefully also appeal to students with an interest in market infrastructure issues and TARGET2 in particular.

Chapter I of the report provides information on the TARGET2 traffic activity, its performance and the main developments that took place in 2013. Chapter 2 provides a general overview of the TARGET2 system. The report is complemented by annexes that present details of the main features of TARGET2, a chronology of developments in TARGET/TARGET2, a list of general terms and abbreviations, and a glossary.

In addition to the core content, the report includes three boxes, providing detailed information on topics of particular relevance in 2013 or an in-depth analysis of a specific TARGET2 feature. The boxes focus, respectively, on the impact of the newly adjusted statistical methodology of TARGET2, on the TARGET2 simulator and on the liquidity implications of the connection of TARGET2-Securities (T2S) to TARGET2. In the report, the references made to the first-generation TARGET system (which was in operation from January 1999 to May 2008) are also applicable to its second generation, TARGET2 (which has been in operation since November 2007).

CHAPTER I

TARGET2 ACTIVITY IN 2013

The TARGET2 system functioned smoothly in 2013 and confirmed its leading position in the European landscape, processing 91% of the total value of payments in large-value euro payment systems. The volume of payments processed in TARGET2 rose by 2.1% compared with 2012, reaching 92.6 million transactions. The value of payments totalled €493 trillion in 2013; the sharp decrease of 22.2% compared with the previous year's value is due to a change in the statistical methodology and to the end of the transition period (see Box 1 entitled "Changes to the statistical framework of TARGET2" and Section 1.13 of Chapter 1 entitled "Transition period"). The average daily volume was 363,099 transactions, with an average daily value of €1,935 billion. The availability of the Single Shared Platform (SSP) of TARGET2 reached 100%. Finally, the highest TARGET2 daily payments volume of the year was registered on 2 April 2013, when 596,940 transactions were processed, while on 30 January the highest daily turnover of 2013 was registered, with a total value of €2,805 billion.

Box 1

CHANGES TO THE STATISTICAL FRAMEWORK OF TARGET2

An accurate statistical framework is essential for the operators of a payment system such as TARGET2, in order that they can closely monitor the evolution of its traffic and ensure the comparability of the data with other systems worldwide. Developing such a framework requires us to ask a question which may at first appear rather simple: what is a payment?

Not every book entry in the system can be counted as a payment. A transfer of funds between two participants, i.e. with a change in the legal ownership of central bank money, is clearly a payment, whereas a transfer of liquidity from a participant's main account to a sub-account held only for technical reasons should not be counted as a payment.

The statistical framework of TARGET2 was already adjusted in 2009 in order to eliminate some technical transactions that were artificially inflating the system's indicators. In order to ensure a clean cut-off between the data from before and after the change, the adjustment was implemented at the beginning of the calendar year, i.e. in January 2009. This change to the methodology nevertheless introduced a certain discontinuity in the time series, which limited the ability to compare the statistical indicators across the years. The impact was particularly significant for the value-based indicators, but less so for the volume-based indicators, owing to the fact that the technical transactions affected by the changes are limited in number but tend to be for very high amounts.

Later, further adjustments were found necessary and were introduced from January 2013 onwards. The reasons for these changes were twofold.

- When setting up the TARGET2 statistical framework, it had been agreed that overnight deposits made by participants on the Single Shared Platform (SSP) of TARGET2 as part of the ECB standing facilities would be included in the calculation of the system's traffic and turnover. In the first years of operation of TARGET2, the size of these deposits was marginal in comparison with the turnover settled on the SSP. In more recent years, and in part as a consequence of the non-standard monetary policy measures used by the Eurosystem

in response to the financial crisis, the size of these deposits increased considerably, to the extent that it was felt that they were presenting a distorted view of TARGET2 traffic. This justified excluding overnight deposits from the TARGET2 statistical indicators. Even though the size of the deposits started to decrease after July 2012, i.e. when the rate applicable to the overnight deposit rate was brought to zero, over the whole year the deposits held on the SSP accounted for around 10% of the turnover of TARGET2. Here again, the value-based indicators were significantly affected, as shown in Section 1.1 of Chapter 1, while the impact on the volume-based indicators was negligible. As a side effect, since overnight deposit transactions are operations between the “local” central bank and its counterparties, this adjustment to the statistical framework led to an apparent decrease of the share of intra-Member State transactions in the system’s turnover.

- As detailed in Section 1.13 of Chapter 1, the transition period has ended and all TARGET2 payments are now settled on the SSP, thereby completing the technical consolidation of all settlement activities on the Eurosystem’s single platform. The proprietary home account (PHA) applications of central banks, which were previously running in parallel with the SSP, have now either been phased out or are limited to non-settlement activities, e.g. the fulfilment of reserve requirements or the provision of intraday credit. While in the past data on payments had to be collected from both the SSP and the PHAs and subsequently combined, the end of the transition period now enables us to rely on a single source of data, the data warehouse of the SSP. This new approach considerably simplifies the collection of data and the production of indicators, thus reducing the time lag for the publication of monthly statistics on the TARGET2 pages of the ECB website. It has also helped to eliminate some remaining technical transactions between the PHAs and the SSP, which were still included in the statistics. In parallel to these technical adjustments and simplification, the end of the transition period also led to a number of changes in the set-up of participants’ accounts or liquidity management practices that ultimately had indirect effects on the TARGET2 traffic. These changes typically took place in banking communities where intraday credit lines were provided on the local PHAs and where participants used to regularly execute liquidity transfers between their PHAs and RTGS accounts to adjust their balances to their liquidity needs. Now that the PHAs have been phased out, the credit lines are directly granted on the RTGS accounts, and an adjustment of liquidity between the PHAs and the SSP is no longer necessary.

I EVOLUTION OF TARGET2 TRAFFIC

I.1 TARGET2 TURNOVER

Chart 1 shows the evolution of the TARGET2 turnover over the last six years. In 2013 the transactions settled in TARGET2 amounted to a total value of €493.5 trillion, which corresponds to a daily average value of €1.9 trillion. After a substantial drop due to the impact of the financial crisis¹, TARGET2 settlement volumes recovered steadily from 2009 until 2012 with a growth rate ranging from more than 7% in 2010 to slightly above 3% in the following two years. The sudden drop between 2012 and 2013 shown in the chart is mainly due to two phenomena. First, there was a further change in the statistical methodology, whereby some transactions ceased to be included in the aggregate representing the turnover as of January 2013. At the same time, the end of the transition period (see Section 1.13 of Chapter 1) led to a lower level of interaction with the PHAs

¹ The change in value from 2008 to 2009 was also affected by a statistical reclassification, whereby only the transactions implying a change in the ownership of the funds were counted.

Table I Evolution of TARGET2 traffic

| | Value (EUR billions) | | | Volume (number of transactions) | | |
|-----------------|----------------------|---------|------------|---------------------------------|------------|------------|
| | 2012 | 2013 | Change (%) | 2012 | 2013 | Change (%) |
| TARGET2 overall | | | | | | |
| Total | 643,132 | 493,442 | -22.2 | 90,671,378 | 92,590,134 | 2.1 |
| Daily average | 2,477 | 1,935 | -21.9 | 354,185 | 363,099 | 2.5 |

Source : ECB.

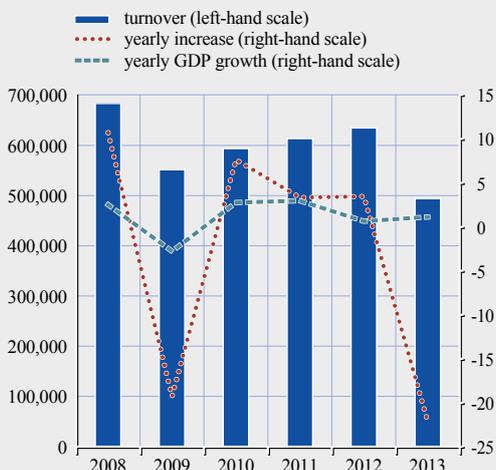
Notes: In January 2013, in order to improve the quality of TARGET2 data, a new methodology was implemented for data collection and reporting. The change resulted in a decrease in the value-based indicators. This should be considered when comparing data from before and after the implementation date. There were 256 operating days in 2012 and 255 in 2013.

(e.g. less repatriation of funds at the end of the day). As a result, the turnover in 2013 was 22% lower than in the previous year. An extensive explanation of the changes impacting the turnover is given in Box 1 – “Changes to the statistical framework of TARGET2”. Owing to the complexity of the events that affected the values traded in TARGET2, it is difficult to estimate how high the turnover would have been if they had not materialised. It seems reasonable, however, to presume that, in the absence of such events, the turnover would have been roughly in line with that of the previous year. While this “virtual” growth does not show in the chart owing to the changes in the statistical methodology, it can be estimated by considering the annual GDP growth in 2013. As illustrated in Chart 1, over time the TARGET2 turnover roughly correlates to the growth in euro area GDP. This finding is rather intuitive as the volumes settled in TARGET2 broadly mirror the developments of the economic activity in the euro area.

In 2013 interbank transactions (i.e. transactions exclusively involving credit institutions) accounted for 91% – i.e. the vast majority – of the TARGET2 turnover. The remaining traffic was composed of customer transactions (i.e. transactions sent and/or received on behalf of a non-bank party, be it an individual or a corporate).

Chart 1 TARGET turnover

(EUR billions; percentages)



Source: ECB.

Chart 2 Average daily TARGET2 turnover

(EUR billions)



Source: ECB.

Chart 2 illustrates the average daily turnover for each month in 2013, making a comparison with the averages of the previous year. The chart indicates that the seasonal pattern of TARGET2 was more stable in 2013. Indeed, between June and August 2012 there was a dramatic drop in the average daily turnover, mainly resulting from the change in behaviour of market participants after the rate cut in July 2012² leading to a drop in transfers to the overnight deposit facility. As already indicated, statistics in 2012 still included some overnight deposit transactions, which was no longer the case in 2013 (see Box 1). In 2013 the average daily turnover calculated on a monthly basis was relatively stable, with limited variations. The seasonality of the value is less pronounced than that of the volume (see Section 1.2 of Chapter 1, Chart 6).

Chart 3 Monthly peaks, troughs and averages of TARGET2 daily

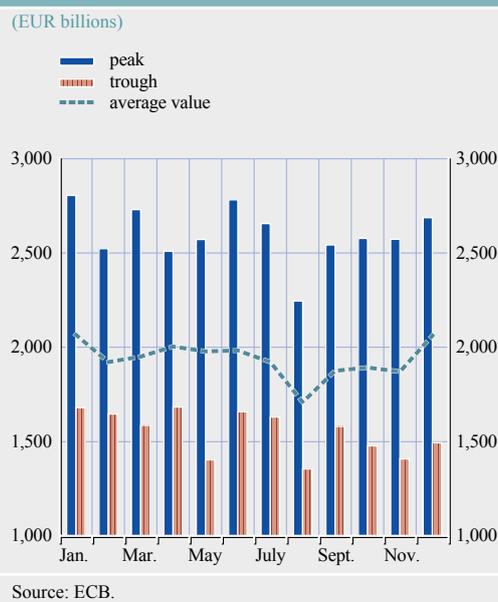


Chart 3 displays the highest and lowest daily TARGET2 values of each month of 2013, as well as the average daily values for each month. Similarly to previous years, the days with the highest peaks tended to be at quarter ends, typically on the last day of the month owing to reimbursements and due dates in various financial markets. This was the case for example in March and June 2013. The highest peak in turnover of the year, however, was registered on 30 January, when TARGET2 settled €2,805 billion.

Throughout 2013 the seasonality of TARGET2's turnover, expressed by the difference between the highest and the lowest value, was 52%, in line with the 56% of the previous year. The gap remains rather significant, despite transfers to the deposit facility being excluded from the calculation of the turnover. In place of these transactions, and in place of relevant monetary policy operations (e.g. three-year longer-term refinancing operations) such as those that took place in 2012, in 2013 there were volatile variables affecting the TARGET2 traffic, such as events in the financial market, which create a more significant level of seasonality in the system from day to day.

Peaks and troughs in the system's values can also be influenced by other factors, such as TARGET2 holidays or the end of reserve maintenance periods. For example, the lowest values are typically observed on days that are national holidays in some Member States, such as Ascension Day in May, or during the summer holidays.

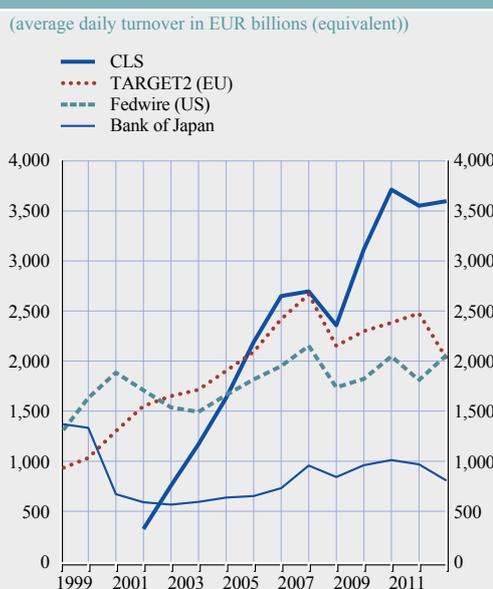
Finally, Chart 4 provides a comparison of the average daily values settled in the major payment systems worldwide over the last twelve years.³ It illustrates the position of TARGET2 vis-à-vis the largest payment systems in the world, namely Continuous Linked Settlement (CLS), Fedwire Funds (the RTGS system operated by the Federal Reserve System) and the Bank of Japan Financial Network System (BOJ NET). Some common patterns can be seen in the evolution of the turnover

² The Eurosystem deposit facility rate was cut to 0%.

³ In order to achieve a meaningful comparison, the value of settlements in foreign systems has been converted into euro using the exchange rate on 31 December of the year in question.

in the four systems until 2011, only with few exceptions, but in 2012 the turnover grew only in TARGET2 and decreased in the other systems. Unfortunately, a comparison of the evolution in 2013 is difficult owing to the change in the TARGET2 statistical methodology. What can be observed in the other systems is that while in CLS and Fedwire the turnover increased, for the Bank of Japan the growth was negative in 2013. Overall, the rapid acceleration in the average daily turnover that took place between 2009 and 2011 in CLS was partly associated with the higher volatility in financial markets – in particular in the forex markets – and partly with the new aggregation service introduced by CLS, which caused an increase in the turnover figures. In general, it should be taken into account that the trends observed are also a result of the volatility of the euro’s exchange rate vis-à-vis the US dollar, which distorts the figures reported in Chart 4 in respect to both Fedwire Funds and CLS.⁴

Chart 4 Major large-value payment systems in the world



Source: ECB.

1.2 VOLUME OF TRANSACTIONS IN TARGET2

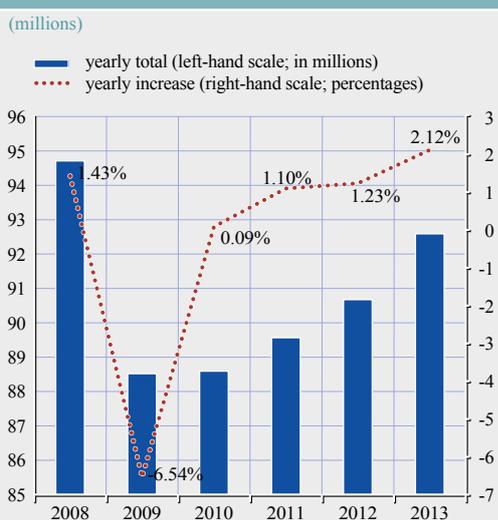
In 2013 TARGET2 settled a total of 92,590,134 transactions, corresponding to a daily average of 363,099 payments. Compared with the previous year, these figures are slightly higher, having increased by 2.1% and 2.5% respectively. As shown in Chart 5, this year’s results confirm the moderately growing trend the TARGET2 volumes have been exhibiting since the sharp decline due to the financial crisis in 2009. While the change in the statistical methodology mentioned in the previous section had a negligible effect on the TARGET2 volumes, the main contributors to the volume growth were the large banking communities such as Germany, France and Italy. In the latter in particular, the new settlement modalities adopted by the local CSD led to substantial growth in terms of both volume and value. In general, it was observed that the additional traffic was mainly brought to TARGET2 by the largest participants, partly by banks with headquarters in the United States and the United Kingdom.

Notwithstanding the growth path of the last three years, the TARGET2 volumes have not yet reached pre-crisis levels. Moreover, in the absence of factors that will significantly boost the traffic and given the continued weak economic recovery, the volume of transactions settled in the system is likely to remain on this moderate growth path, at least in the short term.

The levels of traffic that TARGET2 has recorded since the outbreak of the financial crisis are well below the objectives set during the project’s development phase. As explained in Section 4.2 of Chapter 1, the traffic recorded in 2013 is around 30 million transactions below the estimates made during the project phase. Since, in addition, the growth rate is not sufficient to restore pre-crisis

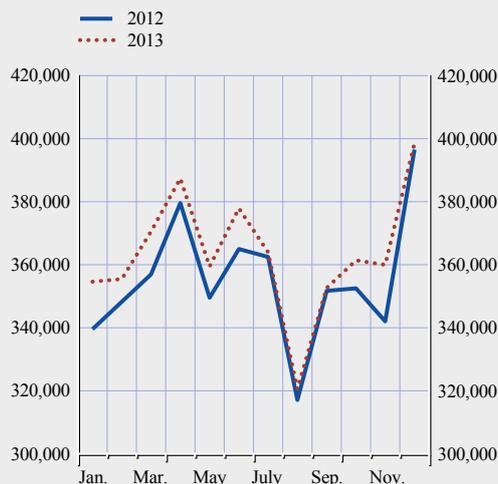
⁴ Both Fedwire Funds and CLS publish their turnover in US dollars. The turnover in euro is calculated on the basis of the exchange rate of the ECB for the last business day of the year in question.

Chart 5 TARGET traffic



Source: ECB.

Chart 6 Average daily TARGET2 volumes per month



Source: ECB.

levels, the Eurosystem decided to apply a new pricing scheme as of January 2013 in order to meet the cost recovery objective. Details of the new pricing scheme are reported in Annex 1.

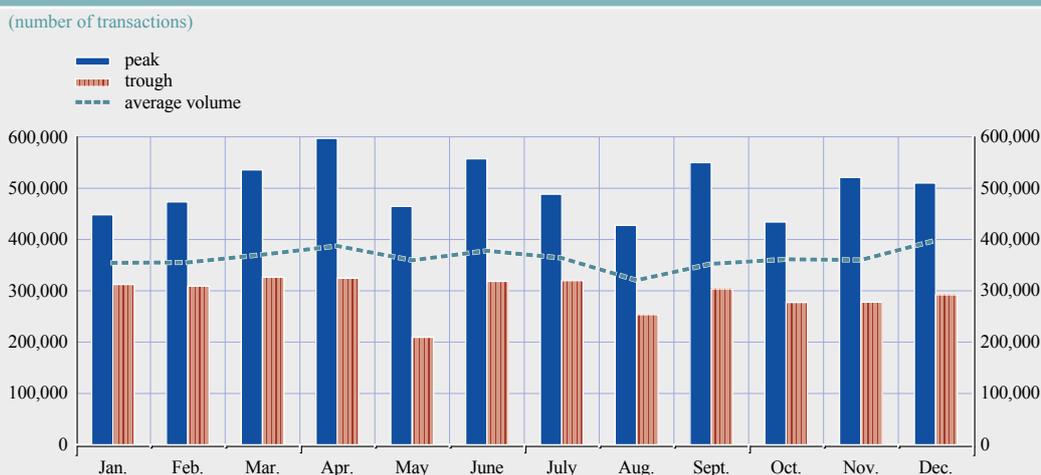
As in previous years, in 2013 the main contributor to the TARGET2 volumes was the category of customer payments, with a share of 64%. The remaining part was split between interbank payments and operations with central banks.

Chart 6 shows the average daily volume settled in TARGET2 on a monthly basis and illustrates its yearly seasonality. The developments in volume in 2013 were extremely similar to those of 2012 and reveal a seasonal pattern that is rather typical for TARGET2, and which is more pronounced than the monthly seasonality of the value. For the volume as for the value, the months with higher traffic are mostly at quarter ends, while the months recording lower traffic are those with bank holidays in several countries, such as May, or summer holidays, such as August.

Chart 7 shows the peaks and troughs in terms of daily volume for the Single Shared Platform (SSP)⁵ in 2013 and the average daily volume for each month. As with figures in terms of value, the peaks typically fall on the last day of the month, and are especially pronounced at the end of the quarter for the same reasons (i.e. deadlines in financial markets or for corporate business). In 2013, the highest daily volume was registered on 2 April – the first business day after the Easter break at the end of March. As in previous years, the highest average daily volume was registered in December, reflecting the effect of the numerous end-of-year payments in the system. Similarly to the figures in terms of value, the lowest traffic volume is, in general, recorded on days that are national holidays in some Member States, such as, in 2013, Ascension Day on 9 May, 15 August, and All Saints' Day on 1 November.

⁵ The data presented in this paragraph only take into account the transactions settled on the SSP of TARGET2. They may therefore differ from the TARGET2 data presented in other sections of the report, which, until the end of the transition period, also included the traffic stemming from the proprietary home account (PHA) systems (see Section 1.13 of Chapter 1).

Chart 7 Monthly peaks, troughs and averages of TARGET2 daily volumes in 2013



Source: ECB.

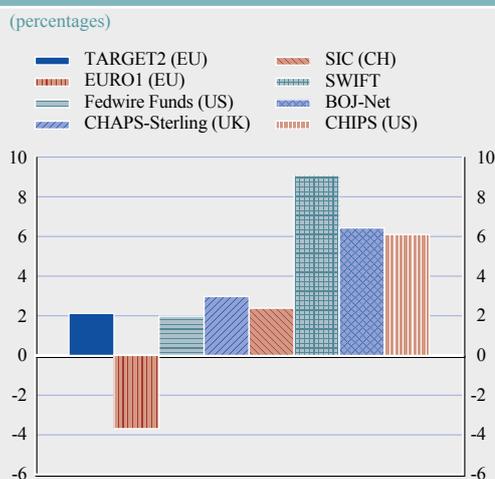
Chart 8 shows the yearly moving average of TARGET2 volumes (i.e. the cumulative volume processed in the preceding 12 months) for each month. This indicator helps to eliminate the strong seasonal pattern observed in TARGET2 traffic. The variation of this cumulative volume from one year to the next is also shown as a percentage. The chart shows that, after a year of continuous growth, the cumulative volume started to decline in the second half of 2008 at the time when the financial crisis erupted. The number of transactions continued to drop sharply almost until the end of 2009. After that the TARGET2 volumes were roughly stable until the end of 2011, when they started to register a constant moderate growth rate that never exceeded a few percentage points. The number of transactions per year reached in December 2013 is still almost 4 million units below the peak reached in April 2008.

Chart 8 TARGET2 volumes



Source: ECB.

Chart 9 Comparison of the changes in traffic in some major large-value payment systems and SWIFT (2012-2013)



Source: ECB.

Chart 9 compares the growth rate (between 2012 and 2013) of the traffic in TARGET2 with the growth rates of the major payment systems worldwide. The chart reveals that, while the majority of the systems, including TARGET2, registered a moderate positive growth rate, EURO1's traffic declined over that period. At the other end of the spectrum, the traffic in SWIFT increased considerably in 2013. A further analysis of SWIFT's traffic per geographic area would actually show that the increase was mainly driven by the Asian market, which is currently the principal driver of their growth.

I.3 COMPARISON WITH EURO1

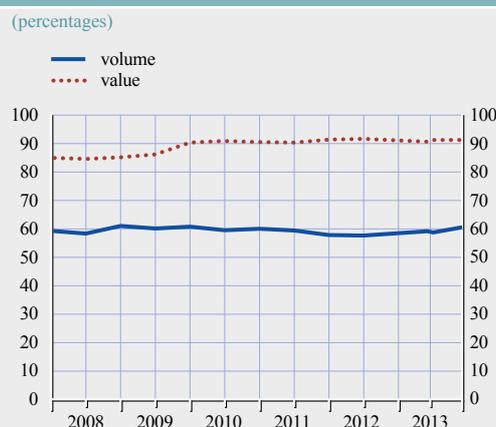
EURO1 is the only competitor of TARGET2 in the landscape of large-value payment systems denominated in euro⁶. The position of TARGET2 in this landscape is therefore defined as its relative share vis-à-vis EURO1, and this is depicted in Chart 10. The two systems are different by design, since EURO1 operates on a net settlement basis and only achieves final settlement in central bank money at the end of the day. Furthermore, they respond in part to different business cases, since only TARGET settles ancillary system transactions and payments related to monetary policy operations. However, the actual composition of the traffic in the two systems is largely made up of commercial payments. This helps to explain in part the relative share of TARGET2 vis-à-vis EURO1, as shown in Chart 10. In 2013 TARGET2 processed 91% of the value settled by large-value payment systems in euro, largely in line with the result of last year (91.6%). In terms of volume, the relative share of TARGET2 in 2013 was 59.1%, exhibiting a growing trend, especially in the second half of the year, after the slight decline in 2012.

A deeper analysis of the traffic evolution in the two systems would reveal that in the last five years EURO1 grew at a faster pace than TARGET2 in the low-value segment (i.e. payments below €50,000), while it gained less ground than TARGET2 in the higher-value segments. It should be kept in mind, however, that Chart 10 does not provide a full picture of the banks' routing preferences for interbank and customer payments. Indeed, for the settlement of these transactions banks can also use other channels such as clearing houses, pan-European clearing houses and correspondent banking. The indicators offer only a partial picture of the market's preferences related to the settlement of large-value euro-denominated transactions.

I.4 VALUE OF TARGET/TARGET2 PAYMENTS

Chart 11 shows the evolution of the average value of TARGET/TARGET2 payments since 1999. In 2013, the average value of a TARGET2 payment stood at €5.3 million. As with the other charts in this report, the sharp drop in the last year is due to the changes in the statistical methodology explained in Box 1. It is therefore difficult to compare the 2013 average payment

Chart 10 Market share of volumes and values settled in TARGET2 vis-à-vis EURO1¹⁾



Source: ECB.

1) This chart is not affected by the change in the statistical methodology since the calculation of the share takes into account only interbank and customer payments, excluding the transactions with the central banks that were mostly affected by the methodological change.

⁶ Over the years, two other large-value payment systems in euro, the Spanish system Servicio Español de Pagos Interbancarios (SEPI) and the French system Paris Net Settlement (PNS), ceased operations.

value with the previous years, when a constant slight growth was registered each year after the drop in 2009 due to the financial crisis. Interestingly, the exceptionally high average value registered in 2008 (€7.2 million) was caused by peculiar circumstances linked to the financial turmoil and the post-Lehman crash.

Chart 12 illustrates the distribution of TARGET2 transactions per value band, indicating the volume shares that come below certain thresholds. This picture remains largely unchanged from year to year, and for 2013 shows that more than two-thirds of all TARGET2 transactions were for values lower than €50,000 and that payments in excess of €1 million only accounted for 12.1% of the traffic, a percentage that is slightly higher than the 11% of the previous year. It is interesting to note how the payment value band distribution was not affected by the changes in the statistical methodology which, by eliminating transactions related to the recourse to the deposit facility and some ancillary system transactions, excluded from the calculations payments that are usually of a high amount. On the contrary, the share of transactions above €1 million increased in 2013, confirming that TARGET2 traffic is growing relatively more in the high-value segment.

On average, there were 224 payments per day with a value above €1 billion, which accounted for 0.1% of payment flows. From the wide distribution of transaction values, the median payment in TARGET2 is calculated as roughly €12,000, indicating that half of the transactions processed in TARGET2 every day have a value lower than this amount. This figure, which has remained stable over recent years, confirms that, even though TARGET2 was designed primarily to settle large-value payments for interbank operations, it offers a range of features attracting a high number of low-value transactions, most of which are of a commercial nature. Interestingly, for the moment this pattern has not been affected by the developments around SEPA such as the increasing usage of SEPA Credit Transfers. This confirms that TARGET2 does not substitute, and is not

Chart 11 Average value of a TARGET payment

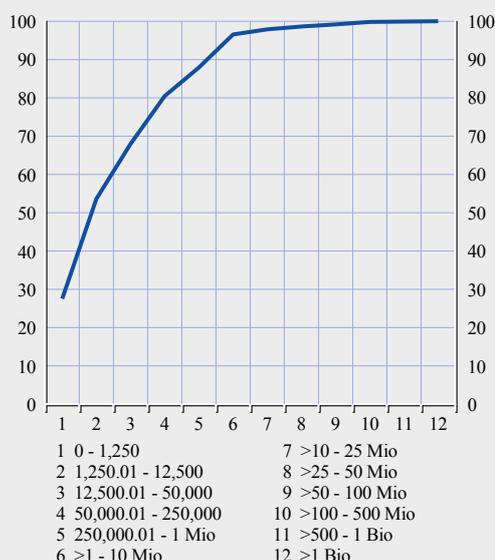
(EUR millions)



Source: ECB.

Chart 12 Distribution of TARGET2 transactions across value bands in 2013

(percentages)



Source: ECB.

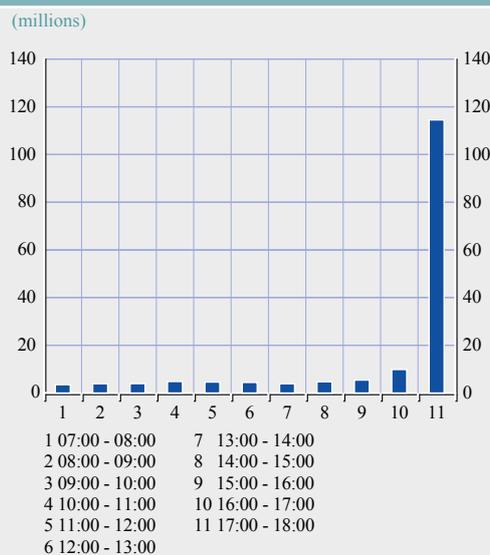
directly competing with, retail systems. On the contrary, TARGET2 complements the service provided by retail systems by allowing real-time settlement in central bank money, which is particularly relevant for urgent customer transactions.

This phenomenon, however, is not isolated, and a similar picture is also characteristic of other large-value payment systems.

Finally, Chart 13 provides the average value of TARGET2 payments executed at different times of the day. The chart indicates that in 2013, as in previous years, TARGET2 settlement was marked by a strong intraday pattern. After the opening of the system at 7 a.m. CET, the hourly average value of transactions fluctuates minimally throughout the day. Between 10 a.m. and 11 a.m. the average value slightly increases owing to the settlement of CLS transactions and other ancillary systems around this time.

A more visible increase is registered between 4 p.m. and 5 p.m., when ancillary systems such as EURO1 settle their cash balances in TARGET2. The last hour of operations, between 5 p.m. and 6 p.m., is reserved for interbank transactions. The average size of payments increases dramatically over this time owing to banks squaring their balances and refinancing themselves on the money market. Compared with the previous year, the average payment value in this time frame decreased by 60%, since the transactions related to the recourse to the deposit facility, which are settled at this time, are no longer included in the statistics. This chart does not take into account the payments that take place before the start and after the end of the business day, since these transactions refer to the night-time settlement (see Section 1.9 of Chapter 1) and to pure accounting, e.g. liquidity transfers from proprietary home accounts (PHAs) and fuelling of sub-accounts, among other things.

Chart 13 Intraday pattern (2013)



Source: ECB.

1.5 NIGHT-TIME SETTLEMENT IN TARGET2

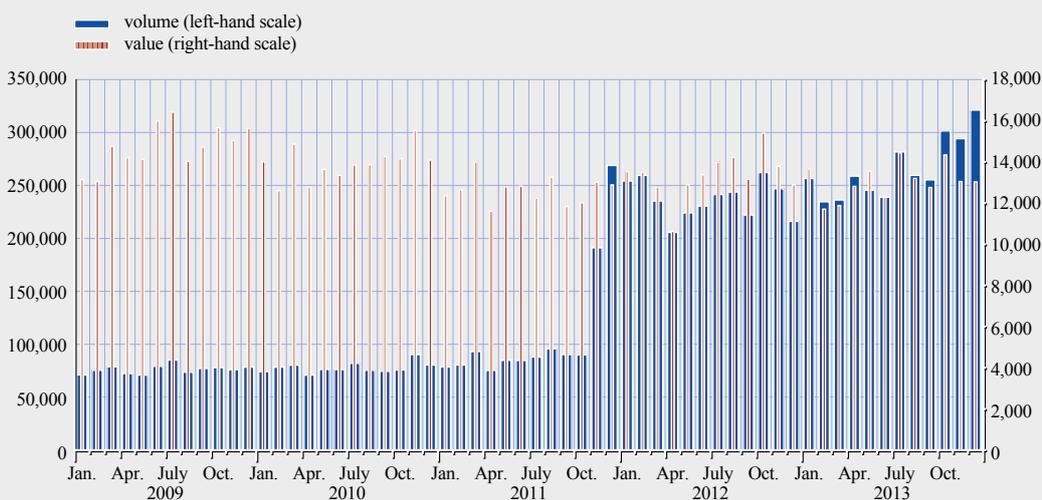
TARGET2 is open to its customers for regular payment business from 7 a.m. until 6 p.m., the so-called day-trade phase. Beyond this, the system also offers the possibility of settling payments during the night, i.e. outside the regular opening hours. This service is, however, restricted to the settlement of ancillary systems connected via the Ancillary System Interface (ASI) using model 6 (see Section 3.3 of Chapter 1). Other operations, such as bank-to-bank transactions or customer payments, are allowed only during the day.

There are two night-time settlement windows: 7.30 p.m. to 10 p.m. and 1 a.m. to 6.45 a.m. The two windows are separated by a technical maintenance window, during which no settlement operations are allowed.

The fact that at night the system is closed to any other form of payments processing allows ancillary systems to profit from stable and predictable liquidity situations of banks, thereby settling their transactions efficiently and safely. On average, in 2013 around 11,000 payments representing a

Chart 14 Night-time settlement in TARGET2

(number of transactions; EUR billions)



Source: ECB.

value of €205 billion were settled every night in TARGET2. In earlier years, the night windows were mainly used by securities settlement systems. However, in recent years retail payment systems have shown an increasing interest in the service, as it helps the participating banks to comply with various provisions of the Payment Services Directive⁷. Indeed, the average nightly settlement volume increased by 10% in 2013 compared with the year before.

Chart 14 shows how the volume and value settled in TARGET2 during the night have evolved since 2009. The increase in volume in November 2011 corresponds to a retail payment system in Germany starting to make use of the night settlement services in TARGET2. In 2012 securities settlement systems accounted for 33% of the night-time volume and 92% of the value, with the remainder accounted for by retail payment systems.

1.6 PAYMENT TYPES IN TARGET2

Charts 15 and 16 present the breakdown of the TARGET2 volume and turnover by type of transaction. The traffic is divided into four categories: payments to third parties (e.g. interbank transactions or customer transactions), payments related to operations with the central bank (e.g. monetary operations or cash transactions), ancillary system settlement, and liquidity transfers among participants belonging to the same group⁸. More than three-quarters of the TARGET2 volume is represented by payments to third parties, namely interbank traffic or customer payments. Ancillary system settlement represents 13% of the total volume, 7% is generated through operations with the central bank, and the remaining share of 3% is linked to liquidity transfers. These shares are broadly unchanged compared with previous years, with the exception of the operations with the central bank, which declined slightly (from 9% to 7%, while ancillary system transactions increased by the same percentage). Turning to the turnover, the composition is visibly different, as payments between

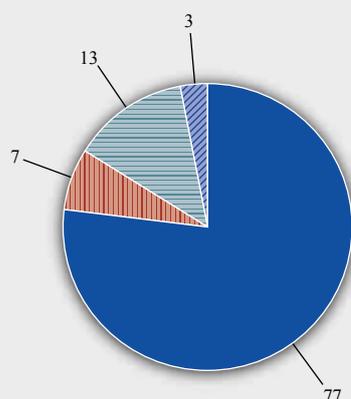
⁷ Directive 2007/64/EC on payment services in the internal market.

⁸ A transaction will be seen as intragroup if it takes place between two accounts the BICs of which start with the same eight characters, or if it takes place between two accounts that are part of the same liquidity pooling arrangement.

Chart 15 Breakdown of TARGET2 volumes in 2013

(percentages)

- payments between market participants
- payments related to operations with the central bank
- payments related to ancillary settlement
- payments related to liquidity transfers

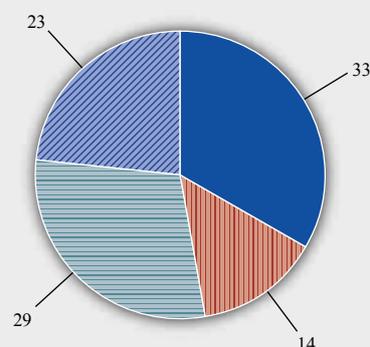


Source: ECB.

Chart 16 Breakdown of TARGET2 value in 2013

(percentages)

- payments between market participants
- payments related to operations with the central bank
- payments related to ancillary settlement
- payments related to liquidity transfers



Source: ECB.

participants represent only one-third of the total value. In contrast to previous years, the second highest share is no longer composed of operations with the central bank, which in 2013 represented only 14% of the turnover, almost half the share of the previous year. In this case too, the drop is due to the change in the statistical methodology that excluded some transactions with the central bank from the computation of the total. Owing to the exclusion of these transactions, the relative share of payments related to ancillary system settlement has increased substantially (+33%), accounting now for 29% of the TARGET2 value. The rest of the turnover results from liquidity transfers, with a share of 25%.

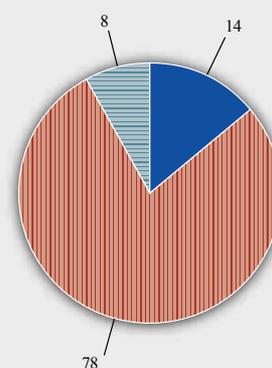
1.7 THE USE OF PRIORITISATION

When submitting payments in TARGET2, participants can assign them a specific priority: “normal”, “urgent” or “highly urgent”⁹. In general, payments are settled immediately on a “first in, first out” (FIFO) basis, as long as sufficient liquidity is available in the RTGS account of the participant. However, if this is not the case, payments which cannot be settled immediately are queued according to their priority. Participants can reserve a certain amount of their liquidity for each priority class, and less urgent payments are made when the excess liquidity is sufficient. This is a way of

Chart 17 Use of priorities in TARGET2 in 2013

(percentages)

- highly urgent
- normal
- urgent



Source: ECB.

⁹ “Highly urgent” can be used only in connection with operations with central banks or ancillary system settlement.

securing liquidity for more urgent payments. The priorities for pending transactions can be changed at any time via the information and control module.

Chart 17 gives an overview of the use of priorities in TARGET2 in 2013. It shows that the vast majority of transactions, namely 78%, had normal priority, while only 8% and 14% were urgent and highly urgent respectively. This pattern has remained broadly stable since the beginning of TARGET2. Priorities are appropriately used in TARGET2 and no abuse seems to take place; in particular, banks only assign the urgent priority to a limited number of payments. Participants acknowledge the benefits brought by this feature, which supports them in the management of their liquidity.

1.8 NON-SETTLED PAYMENTS

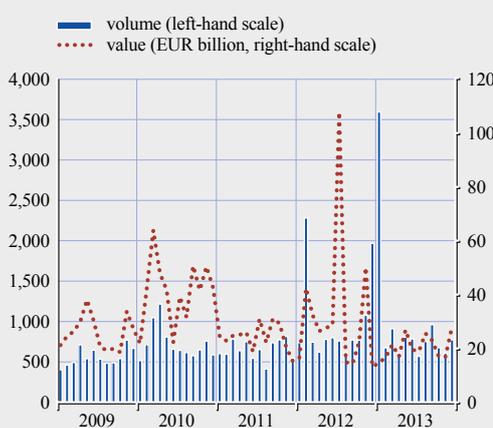
Non-settled payments in TARGET2 are those transactions that are not processed by the end of the business day owing to a lack of funds in the account to be debited or as a result of breaching the sender's limit, and are ultimately rejected. Chart 18 shows the evolution of the daily average of non-settled payments on a monthly basis between 2009 and 2013 in terms of both volume and value. The average daily number of non-settled transactions in 2013 was 976, a result that was very much affected by a peak in January, when an incident affecting one ancillary system file prevented many transactions from settling. The average daily value of non-settled payments amounted to €20 billion, more than 40% down from last year's value. Overall, non-settled payments in 2013 represented 0.27% of the total daily volume and 1% of the total daily turnover in TARGET2. The levels can be considered low and confirm that the distribution of liquidity across participants was appropriate throughout that period. Moreover, compared with 2012 these levels declined, and remained quite stable from February 2013 onwards.

1.9 SHARE OF INTER-MEMBER STATE TRAFFIC

In 2013 the share of inter-Member State traffic in TARGET2 (i.e. payments exchanged between participants belonging to different national banking communities) amounted to 35% in value terms and 37% in volume terms. The share of value increased in 2013 by 5 percentage points after a drop in 2012, and the share of inter-Member State traffic in volume continued its steady increase, rising from 35% to 37%.

The higher share of recorded inter-Member State values in 2013 can mostly be attributed to the change in the statistical framework in 2013, which further amplified the increase in the cross-border share, since certain domestic transactions of high value (e.g. recourse to deposit facilities) were disregarded as of 2013. At the same time, an increase in the share of cross-border transactions in the money market was observed. The stable increase in cross-border volumes over the years indicates that TARGET2's migration to the SSP helped to further blur the distinction between inter-Member State and

Chart 18 Non-settled payments on the SSP

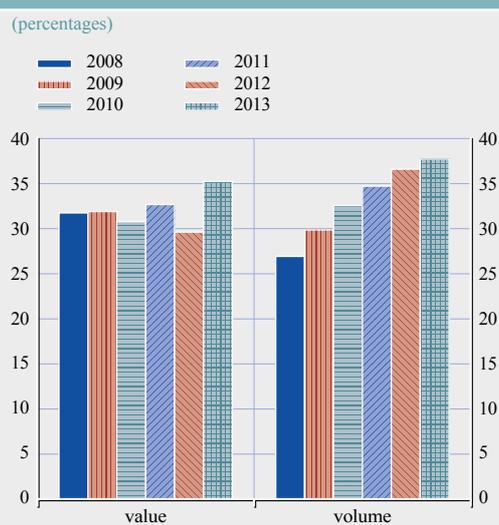


Source: ECB.

intra-Member State transactions. However, whether a payment is sent to or received from a given banking community may have more to do with the bank's internal organisation than the real geographical anchorage.

In Chart 19, an inter-Member State payment is identified on the basis of the national banking communities of the sending and receiving direct participants on the platform. Since it is also possible to connect remotely to TARGET2 as an indirect participant, the evolution of the cross-border share in volume terms was also computed on the basis of the originator and beneficiary of the payment, taking into account the full payment chain information (i.e. originator-sending settlement bank-receiving settlement bank-beneficiary). This exercise was carried out for the value and revealed that cross-border payments represented a share of 49% in 2013. Therefore, taking into account the full payment chain, the cross-border share in volume terms is higher compared with that based only on the sending and receiving direct participants.

Chart 19 Share of inter-Member State traffic in TARGET2



Source: ECB.

1.10 MONEY MARKET TRANSACTIONS IN TARGET2

Market participants use TARGET2 for settling unsecured money market transactions in central bank money. By applying the Furfine algorithm¹⁰ it is possible to identify which TARGET2 transactions are related to money market loans, or more precisely to the unsecured overnight money market. This dataset is unique and is updated regularly to obtain information about the money market. It is essential for analysing monetary policy implementation and is also of high relevance for TARGET2 operations given that the money market: i) represents an important vehicle for the redistribution of liquidity among TARGET2 participants; and ii) is a large-value and time-critical area of business that the operator needs to be aware of, in particular when dealing with abnormal situations.

The dataset is developed using the TARGET2 simulator (see Box 2) and provides data starting from June 2008. In 2013 money market transactions represented around 1% of all TARGET2 transactions in terms of value. This is considerably lower than at the time TARGET2 completed its migration and is attributable to the Lehman bankruptcy and, in particular, the sovereign debt crisis. Since these episodes, turnover in the unsecured overnight money market segment has fallen (see Chart 20).

The dataset is used to analyse the time at which the lending leg of a money market loan is settled and repaid. Charts 21 and 22 show that lending and repayment take place throughout the day, albeit with certain peak times.

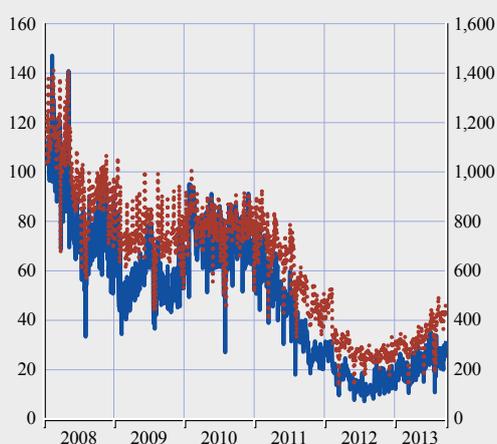
10 For further information, see the TARGET Newsletter, issue number 6, December 2012, available at http://www.ecb.europa.eu/paym/t2/shared/pdf/newsletter/Target_Newsletter_06.pdf?31ead78fc590785f89b8d8ba7760aa5f

Chart 20 Unsecured overnight money market in TARGET2

(daily totals)

y-axis: EUR billions (left-hand scale);
number of transactions (right-hand scale)

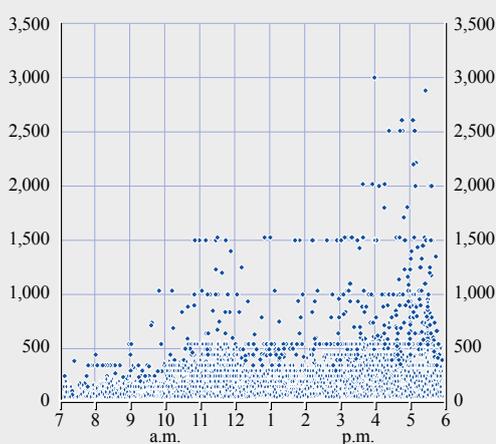
— value
••••• volume



Source: ECB.

Chart 21 Unsecured overnight money market in TARGET2 (2013): lending leg

(value; EUR millions)



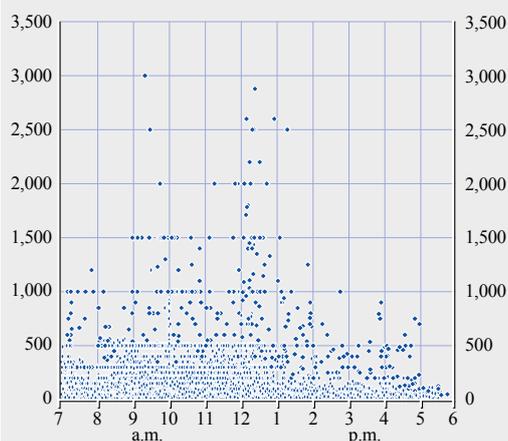
Source:

Charts 21 and 22 Settlement of unsecured overnight money market loans in TARGET2 in 2013 (lending leg and repayment leg)

Chart 23 complements this analysis by showing the cumulative distribution across the day. In terms of lending, 40% of the value is settled by 1 p.m., while 90% is settled by 5 p.m. This confirms

Chart 22 Unsecured overnight money market in TARGET2 (2013): repayment leg

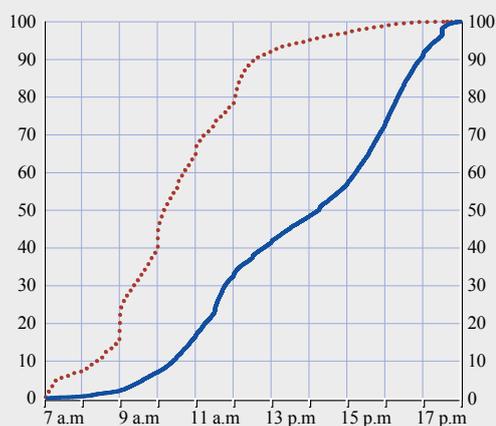
(value (EUR millions))



Source:

Charts 23 Cumulative distribution of money market transactions across the day in 2013 (in value terms)

— lending leg
••••• repayment leg



the assumption that the last few hours of TARGET2 operations are particularly important for the interbank market. In terms of repayment, 50% of the loans are repaid by 10 a.m. and 90% by 1 p.m. These patterns ensure that the repaid liquidity can be reused for payment purposes.

Box 2

THE TARGET2 SIMULATOR

The TARGET2 simulator is an analytical tool that allows various studies to be conducted on the basis of TARGET2 payments data at Eurosystem level.

In general, a simulator replicates a real-life process over time, such as that of a payment system. Simulations show how the output of a process could be affected by:

- changes to the initial state of a process, but without the process itself being changed;
- changes to the process itself without the initial state being changed;
- a combination of changes in the initial state and changes to the process itself.

Simulations can be used for several purposes, such as:

- optimising the parameters of the payment system or use of the system's features by participants;
- replicating different internal or external events in order to understand their implications for payment processing and liquidity positions – such scenarios may be related to simulated events that could cause operational or financial risk;
- understanding network interdependencies and effects – in particular, this information can give an insight into the payment system's possible channels of contagion and the creation of systemic risk.

Computer simulations are a powerful tool for analysing and understanding payment systems, and they can help to improve the settlement system functionality or identify risks in the payment system network. Running the analysis over time series makes it possible to see how a chosen scenario and its consequences may develop. A simulator can also play an important role when developing a new payment system or planning changes to an existing one, as it can facilitate developments and assess the impact of system parameter changes.

The TARGET2 simulator is based on the generic BoF-PSS2 simulator¹ and was created for the sole use of the central banks of the Eurosystem. The TARGET2 simulator includes the logic of all TARGET2 algorithms and is fed with real data relating to TARGET2 participants and transactions. It aims to replicate the production system's settlement procedures as realistically as possible and uses participants' opening balances, credit lines, bilateral limits, reservations and

¹ The first generic payment systems simulator was created and distributed by the Bank of Finland in 2004 with the name BoF-PSS2.

transaction data as input. The Governing Council of the ECB made the decision to develop the simulator as a standard toolset for TARGET2 operations and oversight back in 2009.

In view of the sensitivity of the TARGET2 data that are held within the TARGET2 simulator and the results of the simulations, the Eurosystem developed a very strict and restrictive framework aimed at ensuring the confidentiality of the data and professional secrecy. The TARGET2 simulator is only accessible to a small number of authorised central bank users working within TARGET2 operations and oversight. The users are designated by the Eurosystem and bound by the rules of professional conduct and secrecy. Any sharing of the outcome of the analysis requires the prior approval of all central banks. A precondition for this approval is that the data are sufficiently anonymised.

The TARGET2 simulator provides the Eurosystem with both the required data and the analytical tools to gain an in-depth understanding of the system and the payment flows it channels, and allows for a wide variety of detailed simulations. The simulations make it possible to make policy recommendations that ensure that TARGET2 is used efficiently, and that it runs effectively and soundly. Moreover, the TARGET2 simulator contributes to the assessment of compliance with specific oversight requirements, especially those defined in the CPSS-IOSCO Principles for financial market infrastructures (PFMIs). The simulator is therefore an important tool for both overseers and operators.

From a TARGET2 operations point of view, the best possible understanding of the TARGET2 system and its participants' payment behaviour should be achieved in order to strive for:

- the highest level of resilience and full awareness of the implications of contingency and crisis situations, as well as the risks of contagion and systemic crisis, irrespective of whether an abnormal situation is caused by an internal or external event and whether it is of an operational, financial or legal nature;
- the highest level of efficiency in processing TARGET2 payments and making use of liquidity both system participants' level .

Ensuring the resilience of TARGET2 has always been a key commitment for TARGET2 operations and a focus of oversight. With the support of the TARGET2 simulator, the system's resilience is being explored both from the angle of the system's participants and that of quantifying liquidity levels. The simulator makes it possible to test a wide variety of risk scenarios using real TARGET2 data and to assess their impact, *ceteris paribus*. Such scenarios include, for example, a participant technically failing to send payments or the problem of multiple participants with common characteristics (e.g. geographical region or type of risk exposures) simultaneously failing to satisfy their payment obligations. The aim is to understand the potential implications for the system of unsettled payments and to identify the counterparties with the largest exposures and the channels through which shocks could be propagated. Such simulations will help the Eurosystem to identify the most critical participants in TARGET2 and to verify whether the tools and procedures currently available are appropriate or could be improved further.

An additional benefit of simulations is that they help in preparing to deal with unexpected events that could disrupt the settlement of payments in TARGET2. With reference to the simulation-based analysis of unexpected events in TARGET2, the Eurosystem is able to assess the structural

elements with an impact on the stability of the system before the situation occurs in the real environment. This analysis supports the design and assessment of new or additional contingency arrangements and procedures. For example, the simulator makes it possible to measure the implications of an operational failure within TARGET2 or relating to a specific participant (bank or ancillary system). By using the TARGET2 simulator, the Eurosystem can use ex ante results from simulations to predict the expected levels of queued or unsettled messages and is aware of situations in which an incident may justify a delayed closing of the system. The simulator can also be used for the ex post analysis of incidents. For instance, the Eurosystem can run and modify the same problem that occurred in the production environment to understand the impact on the system and to consider different remedies.

The Eurosystem is also undertaking a thorough review of the liquidity management features and the liquidity optimisation algorithms available in TARGET2 in order to assess their efficiency. The aim of this analysis is, first, to carry out a comprehensive review of how current liquidity-saving features are used (i.e. payment prioritisation, liquidity reservation, bilateral/multilateral limits and liquidity pooling) and, second, to complement the analysis with simulations to measure the efficiency of the TARGET2 algorithms compared with a system that would not have these features available or one where the use of these features would be different.

Finally, the simulator makes it possible to assess the impact of scenarios involving reduced global liquidity levels on the effectiveness of the existing TARGET2 liquidity-saving and management features and whether adjustments or changes would increase or decrease their effectiveness. These results can provide an important insight into the system's ability to settle payments under different liquidity conditions, as well as the liquidity channels and possible remedies in terms of system parameters and participants' use of the system's features.

1.11 SHARES OF NATIONAL BANKING COMMUNITIES

The two following charts break down the volume and the turnover of TARGET2 according to the share of the national banking communities contributing to its traffic.¹¹ For the sake of readability, only those countries representing more than 2% of overall TARGET2 turnover are shown.

In terms of volume, in 2013, similarly to previous years, the biggest contributor to TARGET2 traffic was Germany, which accounted for half of the transactions settled in the system. Adding Italy, France, the Netherlands and Spain, this figure increases to 87.4%, in line with what was observed in previous years.

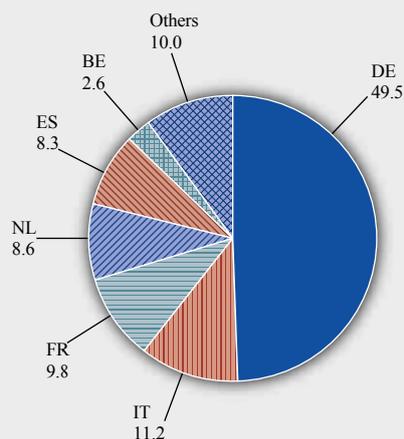
As regards turnover, the picture is again largely similar to the year before, with Germany accounting for slightly over 30% of the overall value, followed by France, the Netherlands, Spain and Italy. The top five countries by turnover generated 83% of the total value settled in TARGET2 in 2013. The concentration of turnover has remained stable over the years.

It should be noted that the high concentration of both TARGET2 values and volumes in certain countries is not only the result of the size of particular markets. The higher rates in both cases can also be associated with the fact that, since November 2007, the TARGET2 system has allowed the

¹¹ "TARGET2 national banking community" refers to the national central bank with which a financial institution holds its account. For example, a French bank that has its account with Deutsche Bundesbank will contribute to the German share. Moreover, it should be noted that TARGET2 statistics count the debit side of a transaction (i.e. the sending of a credit transfer and the receipt of a direct debit).

Chart 24 Country contribution to TARGET2 volume

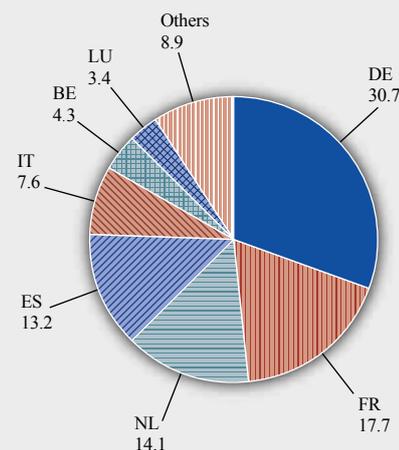
(percentages)



Source: ECB.

Chart 25 Country contribution to TARGET2 value

(percentages)



Source: ECB.

activities of banking groups to be consolidated around a single RTGS account held by the group's head office, thereby increasing the concentration in countries where a large number of these groups are incorporated.

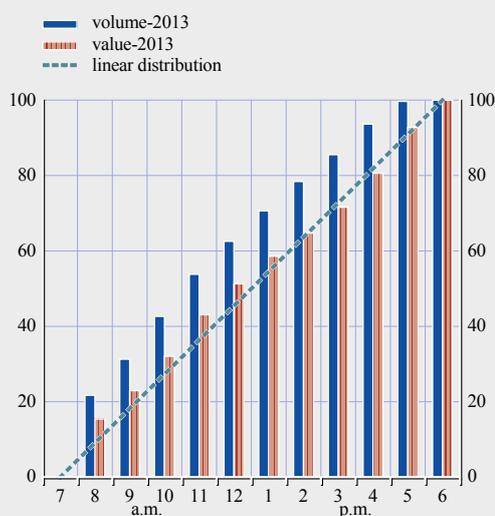
1.12 PATTERN OF INTRADAY FLOWS

Chart 26 shows the intraday distribution of TARGET2 traffic, i.e. the percentage of daily volumes and values processed at different times of the day in 2013. This indicator is an important one for the operator of TARGET2 as it represents the extent to which settlement is evenly spread throughout the day or concentrated at certain peak times. Ideally, the value/volume distribution should be as close as possible to the linear distribution to avoid liquidity and operational risk.

In value terms, the path is typically very close to a linear distribution, indicating an even spread throughout the day, which in turn ensures the smooth settlement of TARGET2 transactions. Such a regular distribution of settlement activities throughout the day, without any significant peaks, is a very important asset of TARGET2, as it means there is no concentration of risk at certain times of the day.

Chart 26 Intraday distribution of TARGET2 traffic

(percentages)



Source: ECB.

In volume terms, the curve is well above the linear distribution, with 22% of transactions being submitted to the system by one hour after the start of operations, which includes transactions sent during the night by participants and warehouse payments, and 43% by three hours after the start. By one hour before the system closes, 99.7% of the TARGET2 volume has already been processed. A comparison with previous years shows no significant deviations.

1.13 TRANSITION PERIOD

In 2005 the Governing Council of the ECB agreed on a transition period following the migration to TARGET2, during which the settlement of transactions between market participants and transactions stemming from ancillary system settlement, as well as payments related to open market operations may still take place in the central banks' local proprietary home accounts (PHAs). In practice, a very marginal number of transactions were settled in the PHAs during the transition period (2% in 2012). The very last transactions settled in the PHAs took place in September 2013, a month which marked the end of the transition period and the full technical consolidation of all payment activities in TARGET2.

Throughout the transition period the number of participants in TARGET2 increased continuously as a consequence of this shift of settlement activities from the PHAs to the SSP. This increase was even more pronounced in 2013, as shown in Section 3.8 of Chapter 1.

Some central banks have maintained their PHAs and use them for operations other than payment settlement, e.g. provision of intraday credit, minimum reserve or standing facilities.

2 TARGET2 SERVICE LEVEL AND AVAILABILITY

In 2013 100% of the payments settled on the payment module of TARGET2 were processed in less than five minutes (99.98% in 2012). No transactions needed a processing time of between five and fifteen minutes (0.02% in 2012), and no payment needed more than fifteen minutes for processing (0.00% in 2012). All payments were therefore settled in less than five minutes.

Compared with the figures for the previous year, there was even a further improvement in the service and processing times of payments, confirming the high performance level of the SSP of TARGET2. This good performance is very beneficial for the banking community, in particular when taking into account the real-time management of their liquidity.

The processing times of payments are only measured for payments settled on the SSP. Payments still settled in the PHAs in 2013 are excluded. The calculation of the processing times covers all payments made to the payment module of the SSP, with the exception of ancillary system settlement transactions using the ASI, payments settled in the first hour of operations (see below on the "morning queue effect") and payments that were not settled because of a lack of funds or breach of the limits. In practice, around 30% of all TARGET2 payments fall into these three categories of exceptions, meaning that the statistics on processing times apply to around 70% of the system's traffic.

With regard to other requests or enquiries,¹² 99.95% (99.99% in 2012) were processed in less than one minute and only 0.05% (0.01% in 2012) in one to three minutes.

¹² This figure covers the InterAct messages received by the SSP, both in U2A and A2A mode.

Chart 27 helps to better quantify the system’s performance by providing the distribution of processing times on the SSP, i.e. the percentage of traffic with a processing time below a certain number of seconds. The reference point taken is the peak day of the year recorded by the SSP, 2 April 2013, when 596,940 payments were settled. The chart shows that, on this day, 50% of the transactions were settled within 31 seconds and 90% within 46 seconds, thereby confirming the system’s high performance level.

A specific phenomenon is worth reporting in the context of TARGET2 performance: the “morning queue effect”. When TARGET2 starts daylight operations at 7 a.m. CET, a very high number of transactions (about 20% of the daily volume on peak days) are already waiting for settlement, corresponding either to payments remitted by banks on previous days with a future value date (i.e. “warehoused payments”) or to payments released by banks via SWIFT in the hours preceding the opening of the system. On peak days, more than 100,000 transactions may be processed in the first hour, which affects the average settlement time during this period. This huge volume of transactions normally takes around 30 to 45 minutes to be processed. In order to neutralise this effect, the first hour of operations is excluded when the TARGET2 processing times are calculated.

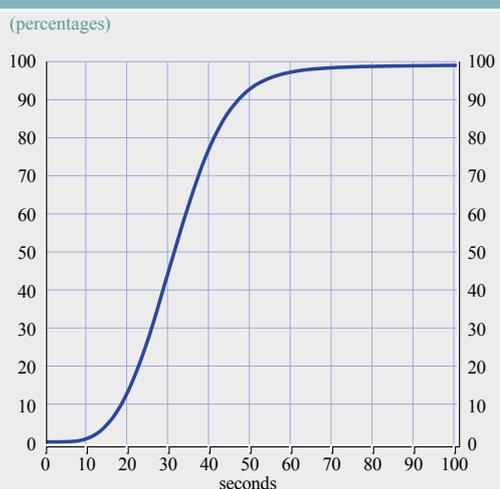
Specifically in the first hour, the use of urgency flags (“urgent” and “highly urgent”) is still highly recommended for payments considered as time-critical transactions (such as CLS). Using urgency flags circumvents settlement delays and puts critical payments automatically at the top of the queue. In addition, attention should be drawn to the possibilities offered in TARGET2 to reserve funds for highly urgent and urgent payments (see Section 1.7 of Chapter I on the use of prioritisation).

2.1 TECHNICAL AVAILABILITY

In the light of the importance of TARGET2 for the functioning of the financial system and the knock-on effects that any potential malfunctioning could have on other market infrastructures, the Eurosystem pays particular attention to ensuring the smooth operation of the system. This is clearly underlined by the fact that the SSP of TARGET2 achieved 100% (100% in 2012) technical availability over the reporting period.

Technical availability is measured on TARGET2 business days, during the day trade phase from Monday to Friday between 7 a.m. and 6.45 p.m. CET (7 p.m. on the last day of the minimum reserve period), including extensions required to complete the operational day (e.g. delayed closing owing to a technical problem in TARGET2 or to major problems in ancillary system settlement in TARGET2). The availability measurement does not include systems or networks not directly managed by TARGET2 (in particular, the availability of the SWIFTNet services). Incidents occurring during night-time settlement are not included either.

Chart 27 Processing times on 2 April 2013, excluding first hour



Source: ECB.

Technical availability is not intended to measure the impact of partial outages involving the SSP of TARGET2. For example, incidents only affecting the processing of ancillary system transactions without any effect on other payment processing activities cannot be measured within this figure, although they have an overall impact on and are taken into account when assessing the system's performance. However, such incidents are, where applicable, considered for the measurement of processing times and, in addition, are reported transparently and followed up accordingly.

2.2 INCIDENTS IN TARGET2

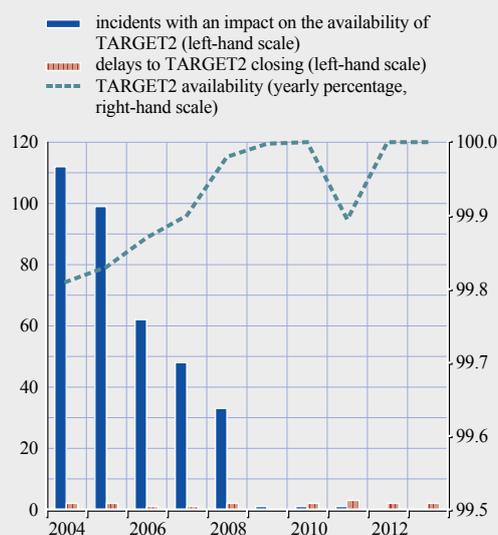
The ECB publishes up-to-date information about the availability of TARGET2 via the TARGET2 Information System (T2IS), which is accessible via the financial information provider Reuters (page ECB46), as well as under the "Payments & Markets" section of the ECB's website (www.ecb.int/paym/t2/html/index.en.html) and on the website www.target2.eu. All incidents relating to TARGET2 are followed up with a detailed incident report and risk management process.¹³ The aim of this approach is to learn from these events in order to avoid a reoccurrence of the incidents or incidents of a similar nature and to improve monitoring capabilities.

It is worth mentioning two incident categories in particular, which may affect the availability indicator for TARGET2.

First, there were some incidents which, thanks to the technical set-up of the SSP, only partly affected the processing of transactions, without making the system totally unavailable. For that reason, they did not have any impact on the TARGET2 availability indicator. In 2013 the following incidents fitted into this category.

- On 17 July 2013, at around noon, the SSP faced a short technical problem that caused a delay to a few ancillary settlement files¹⁴ of up to 30 minutes. No other traffic was affected. The service was reactivated within half an hour and a couple of ancillary system messages were delayed by a few minutes.
- On 26 September 2013, in the late afternoon, the SSP was affected by a technical problem that caused a delay in the processing of ancillary system files. This led to a delayed closing of TARGET2 by two hours. No other traffic besides ancillary system files was affected.
- On 15 November 2013 the information and control module (ICM) was unavailable for the first business hour, owing to connectivity problems. This did not have an impact on settlement activity.

Chart 28 TARGET2 incidents and delays in closing



Source: ECB.

¹³ In 2013 two incidents affected payment processing in a PHA, however none of these incidents had an effect on the overall availability of TARGET2.

¹⁴ Affecting ancillary system model 5 files only.

Second, although not included in the performance indicators, incidents during night-time settlement are reported transparently and followed up accordingly. In 2013 the following incidents fitted into this category.

- On 27 December 2013, one hour after closing the normal business day for TARGET2 operations, the SSP experienced problems with the loading of static data in the standing facilities module. This problem caused a delay in the processing of standing facilities refunds, and required a manual intervention to restore the missing attribute within the static data table. This led to a delay in the next process of about one additional hour.

For all of these incidents, the root causes were identified and corrective measures were implemented with the aim of preventing such interruptions from reoccurring.

In addition to the above-mentioned incident, on 28 October TARGET2 experienced a second delay in closing in 2013. This incident was not related to the SSP malfunctioning, but to a major problem relating to an ancillary system settling in TARGET2. The closing of TARGET2 was delayed by two hours to avoid system-wide implications. Such incidents are followed up with the respective systems, which must provide an incident report including information on the measures taken to avoid a reoccurrence.

3 TARGET2 PARTICIPANTS

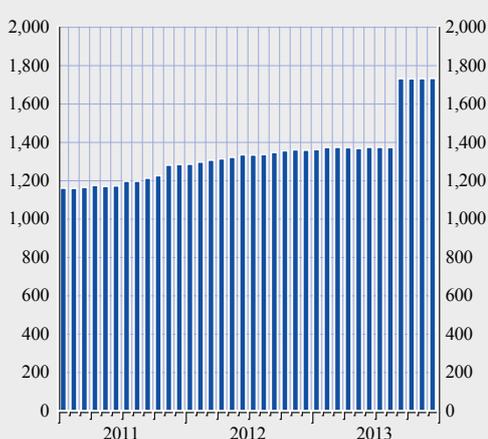
3.1 RTGS ACCOUNTS

The number of RTGS accounts opened in TARGET2 (encompassing the direct participants, the technical accounts, the ancillary system accounts and the special-purpose accounts) has continued to increase. In total, 374 new RTGS accounts were opened in 2013. At the end of the year the total number of RTGS accounts in TARGET2 was 1,733. The increase in 2013 resulted mainly from the phasing-out of the German PHA at the end of September 2013, which led to a considerable number of PHA users that were not yet direct participants in TARGET2 opening RTGS accounts on the SSP with the option of accessing TARGET2 via the internet as an alternative to connection via SWIFT. For further details, see Section 1.13 of Chapter 1.

Internet-based participation

Internet-based participation was introduced in November 2010 to allow small banks to obtain a direct connection to TARGET2 without necessarily being connected to the SWIFT network. The service is mainly designed for low-volume participants that are interested in holding an account directly with their central bank, either an RTGS account or a home accounting module (HAM) account (provided the respective central bank opted for this

Chart 29 Number of RTGS accounts in TARGET2 (2011-2013)



Source: ECB.

module). While in recent years the number of internet-based participants has been relatively modest (68 at the end of 2012), it increased significantly in 2013 with the phasing out of the last PHAs still offering payment settlement services. More precisely, at the end of 2013 there were 393 participants connected to their RTGS accounts through the internet and 116 HAM account holders. Internet-based participation is subject to a monthly fee of €70.

3.2 PARTICIPATION TYPES

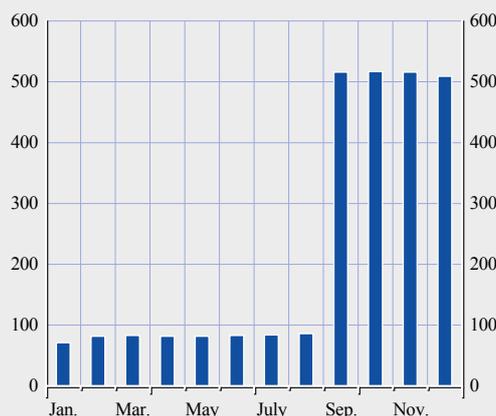
At the end of December 2013, 1,003 direct participants held an account on the SSP of TARGET2 and were registered as such in the TARGET2 directory. Via these direct participants, 862 indirect participants from the European Economic Area (EEA) could settle their transactions in TARGET2, as well as 4,959 correspondents worldwide.

Considering the branches of direct and indirect participants as well, a total of 56,941 credit institutions around the world were accessible via TARGET2 at the end of 2013. In comparison with 2012, there were 2,524 fewer indirect participants, representing a considerable decline and reflecting reclassifications triggered by the introduction of an additional TARGET2 participation type at the end of 2012, together with a new pricing schedule effective as of 1 January 2013. For instance, a number of banks which were previously registered as indirect participants reclassified themselves as an “addressable BIC – branch of direct participant”. These changes as compared with 2012 should not be seen as a modification of the TARGET2 participation structure or tiering, but rather as an administrative adjustment following the clarification of definitions of participation types.

Participants and institutions addressable via TARGET2 are listed in the TARGET2 directory, which is available to all direct participants for information and routing purposes. Besides the direct participants that hold an RTGS account for sending payments to and receiving payments from all other direct participants, a number of banks have opted for the opening of special-purpose RTGS accounts, which are neither addressable by third parties nor reported as direct participants in the TARGET2 directory. These special-purpose accounts are used, for instance, to fulfil reserve obligations in countries where reserves are computed on RTGS accounts. There were 572 of these accounts, also called “unpublished BICs”, at the end of 2013 (214 in 2012).

Chart 30 Internet-based participants 2013

(RTGS and HAM accounts)



Source:

Table 2 Participation types

| | |
|---|--------|
| Direct participation | 1,003 |
| Indirect participation | 862 |
| Multi-addressee – credit institution | 34 |
| Multi-addressee – branch of direct participant | 1,559 |
| Addressable BIC – correspondent (including central bank customers) | 4,959 |
| Addressable BIC – branch of direct participant or entity that is part of the same group | 33,483 |
| Addressable BIC – branch of indirect participant or entity that is part of the same group | 4,163 |
| Addressable BIC – branch of correspondent or entity that is part of the same group | 10,878 |

3.3 ANCILLARY SYSTEMS

At the end of 2013 a total of 83 ancillary systems were settling on the TARGET2 SSP, including 35 retail payment systems/clearing houses, 32 securities settlement systems and 6 central counterparties. This is a slight increase in number compared with 2012 (when there were 82 ancillary systems in total).

Of the 83 ancillary systems settling on the SSP, 62 were making use of the ASI, a feature which was developed to facilitate and harmonise the cash settlement of these systems in TARGET2. The number of times each of the six available ASI models were used is shown in Table 3.

Table 3 ASI settlement model

| | Usage ¹⁾ |
|--|---------------------|
| Model 1 – Liquidity transfer | 4 |
| Model 2 – Real-time settlement | 19 |
| Model 3 – Bilateral settlement | 22 |
| Model 4 – Standard multilateral settlement | 21 |
| Model 5 – Simultaneous multilateral settlement | 14 |
| Model 6 – Dedicated liquidity | 23 |

1) The total number of times the models were used is higher than the total number of ancillary systems that opted for the ASI because an ancillary system may make use of more than one model.

4 TARGET2 REVENUES

4.1 ANALYSIS OF THE REVENUES COLLECTED

The pricing policy for TARGET2 entered into force after the migration of the last wave of countries on 19 May 2008. From that date onwards, participants have been billed on a monthly basis based on the single pricing structure, which applies to payment transactions initiated both on the SSP and on the PHAs¹⁵ of the national central banks. Based on 2013 figures, the following observations can be made.

- The SSP alone generates 99.6% of overall TARGET2 revenues, while local PHAs account for the remaining part. This is roughly in line with the distribution of volumes, as the SSP contributes the same proportion to overall TARGET2 traffic.
- 92% of the direct participants in the SSP opted for the flat fee option (i.e. option A), while 8% opted for the degressive fee option (i.e. option B).¹⁶ This illustrates that TARGET2 is still capable of attracting both the major players in the euro area and, at the same time, a large number of small and medium-sized institutions.
- The participants opting for pricing option B generate, in total, around 88% of the traffic on the SSP and almost 70% of TARGET2 revenues.¹⁷ As a result of this concentration effect, 32% of all SSP transactions were priced at the lowest pricing band, i.e. €0.125. This demonstrates that key participants, in particular multi-country banks, benefited from the attractive degressive fee option offered by TARGET2 and from the competitive group pricing offers.¹⁸
- Transactions exchanged between credit institutions generate around 88% of TARGET2 volumes, with the remaining 12% attributable to ancillary system transactions.

¹⁵ These cover bank-to-bank payments, as well as ancillary system settlement and open market operations.

¹⁶ Option A (i.e. a monthly fee of €100 and a flat transaction fee of €0.80) is intended for small and medium-sized institutions submitting less than 5,750 TARGET2 transactions per month. For institutions making greater use of TARGET2, option B (i.e. a monthly fee of €1,250 and a degressive transaction fee of between €0.60 and €0.125) is proposed.

¹⁷ These are accounted for by core pricing participants, central banks using ASI for “other purposes”, ancillary systems and liquidity pooling.

¹⁸ Some specific features of TARGET2 (e.g. liquidity pooling or multi-addressee access) offer the possibility of applying the degressive transaction fee to all payments initiated from accounts belonging to the same group.

- 80% of the TARGET2 revenues were variable, i.e. came from transaction fees, while fixed subscription fees accounted for 20%.

4.2 COST RECOVERY OBJECTIVES

The objective initially set by the Governing Council of the ECB in 2007 was that TARGET2 should recover all its costs (with the exception of the “public good factor”) over the six-year amortisation period, i.e. between May 2008 and April 2014. This covers the development costs, running costs, overhead costs and capital costs. At the time of the development of TARGET2, a number of assumptions were made regarding the volume of operations when considering the recovery of the costs of TARGET2. It was estimated that in the first year of TARGET2 operations (i.e. from May 2008 to April 2009), TARGET2 would have to settle a total of 93.05 million transactions and that this figure would then have to increase by an average of 6% per year. While the objective was met in the year the system was launched, the overall economic slowdown and exceptional market conditions in the following years made it impossible to meet the targeted 6% increase. Indeed, since the launch of TARGET2, the system has even seen an average annual decrease in traffic of 0.8%.

Against this background, the Eurosystem decided to amend the single pricing scheme of TARGET2 as of January 2013. The changes brought to the pricing scheme consisted in increasing the fixed users’ periodic fee, while the transaction fees remained unchanged. The new pricing scheme represents an acceptable compromise, with a limited increase in the participants’ fees and a reasonable extension of the system’s payback period. At the end of this payback period, or at an earlier point in time if market conditions become more favourable, the Eurosystem will carefully reconsider the single pricing scheme of TARGET2, taking into account the expected costs of TARGET2’s migration to ISO 20022 in 2017.

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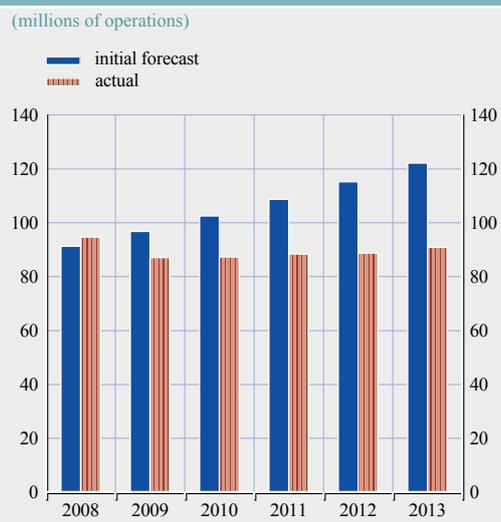
5 TARGET2 RISK MANAGEMENT AND OVERSIGHT ACTIVITIES

5.1 TARGET2 RISK MANAGEMENT

Managing information security risks is a key element of the governance structure of TARGET2. In order to meet this responsibility, the Eurosystem has established a comprehensive risk management¹⁹ framework comprising, among other things, a fact-finding analytical part, as well as dynamic elements, to ensure that information security is continuously monitored and maintained throughout the lifecycle of TARGET2.

¹⁹ In the context of this section, risk management concerns information security issues. It does not cover the management of financial risks (i.e. credit and market risks).

Chart 31 TARGET2 yearly traffic versus initial forecast



Source: ECB.

In particular, TARGET2's risk management processes aim to: (i) monitor developments to ensure that progress on the implementation of security controls in response to issues resulting from risk assessments is satisfactory; (ii) enable those involved to learn from operational experience and thereby ensure that appropriate measures are taken to prevent an incident from reoccurring; and (iii) proactively identify new threats and vulnerabilities that could occasionally emerge from the changing environment in which the TARGET2 system operates and, if needed, initiate deliberations regarding the implementation of additional security controls in order to prevent these threats from materialising.

To create awareness of any potential security problems, updated information obtained from the risk management processes is reported on a regular basis. Furthermore, the progress made with regard to the implementation of mitigating measures listed in the action plans is monitored to ensure that satisfactory progress is being made.

In conclusion, the consistent use of the TARGET2 risk management framework reassures the Eurosystem, as well as TARGET2 users, that the overall security situation in TARGET2 is kept at a satisfactory level. In this context, it is worth mentioning that incidents which occurred in 2013 were reported and resolved, their root causes were addressed, and they did not affect the security and operational reliability of TARGET2.

5.2 OVERSIGHT ACTIVITIES

TARGET2 is overseen by the ECB, which has the leading and coordinating role, and by participating national central banks. The latter remain responsible for the oversight of the local features of TARGET2 and contribute to the oversight of the central features of the system (i.e. the SSP) on a "no compulsion, no prohibition" basis.

The regular oversight activities in 2013 included the monitoring of the system's operational performance as well as of relevant business developments, the follow-up to incidents, and the assessment of changes in the system. The latter included, in particular, the assessment of a new contingency channel for communication between central banks in the event of the unavailability of normal network services.

Moreover, the TARGET2 oversight function carried out a gap analysis of the system against the new CPSS-IOSCO Principles for financial market infrastructures (PFMIs). The new requirements introduced by the PFMI include the analysis of tiered participation arrangements, the establishment of a comprehensive risk management framework and the analysis of general business risks. The few areas for improvement identified in the gap analysis related to the new principles.

The Eurosystem also conducted an analysis of TARGET2 interdependencies, including system-based, institution-based and environmental interdependencies (including those which could arise from the connection with T2S), with the objective of increasing the overseer's and operator's awareness of risks stemming from such interdependencies. The need to address risks stemming from interdependencies is recognised in the PFMI. The analysis of TARGET2 interdependencies focuses on the risks that other entities pose to TARGET2 and contributes to the identification of entities which are critical for TARGET2's performance, as well as to the assessment of related risks and of the effectiveness of the risk management measures applied by the TARGET2 operator.

Finally, the Deutsche Bundesbank continued to report on the performance of the German PHA. Following the closure of the German PHA on 23 September 2013, there are no PHAs remaining in TARGET2.

6 SYSTEM EVOLUTION

SSP release 6.0, which had initially been foreseen for November 2012, was rescheduled with the agreement of the TARGET2 user community. It was deemed that the effort required to issue a new release would have been disproportionately large compared with the added value of the release itself, owing to its very limited content. Therefore, it was decided to incorporate release 6.0 in the major release 7.0.

Release 7.0 was mainly dedicated to the preparation of the SSP for T2S (for further details on the connection of T2S to TARGET2, see Box 3 “Liquidity management implications with the start of T2S”). Differently from any previous release, the go-live date of the release was organised in two steps. With the first step in November 2013, the new interface for T2S was technically implemented, but the corresponding features were kept dormant and their activation date will be the same as the go-live date of T2S, i.e. 22 June 2015.

Moreover, in accordance with an announcement by SWIFT, with release 7.0 TARGET2 implemented a new version of the cash management message standards on the SSP called camt5, also in preparation for interacting with T2S, and at the same time discontinued the support of the version denominated camt3.

As regards the future yearly releases, the parallel activities related to the connection of TARGET2 to T2S and to the implementation of ISO 20022 compliant messages in TARGET2 (November 2017) leave limited resources on the part of both the Eurosystem and the banks. For this reason, the content of the next releases until 2016 will be kept as limited as possible.

The ISO 20022 strategy for TARGET2 was announced by the Eurosystem at the Sibos event in October 2012. All SWIFT FIN MT standards currently used in TARGET2 for payment purposes will be replaced by their MX equivalent in November 2017. There will be no coexistence between the “old” MT and “new” MX standards and TARGET2 will not offer any conversion feature. The content of the MX equivalent messages will ensure complete interoperability (content-wise) with the legacy standards, following a like-for-like approach.

The implementation details of the strategy are being worked out in close cooperation with the user community. This year saw two consultations. The first aimed at keeping the migration mainly at a technical level, while limiting – to the extent possible – any business impact for the participants. The second aimed at collecting feedback on the “General Functional Specifications” (GFS), a functional document providing a high-level description of the migration of TARGET2 to the new standards.

With regard to the next milestones of the strategy, it is foreseen that an enhanced version of the GFS will be released in March 2015. Moreover, the release of the “User Detailed Functional Specifications” (UDFS) in June 2015 will complete the functional design of the migration project. Meanwhile, the Eurosystem will start planning the organisation of other phases of the strategy, mainly the testing activities.

Box 3

LIQUIDITY MANAGEMENT IMPLICATIONS WITH THE START OF T2S

The introduction of T2S will result in considerable changes to euro liquidity management in central bank money via TARGET2.

With the advent of T2S, the future single technical platform for securities settlement operated by the Eurosystem, dedicated cash accounts (DCAs) denominated in euro will be opened by national central banks for market participants, as is the case now for TARGET2 RTGS accounts. T2S will receive central bank liquidity in euro from TARGET2 which will then be credited to DCAs in T2S. These accounts will be used solely for the settlement of the cash leg of related securities transactions. Even though they will be technically operated on the T2S platform, DCAs will legally be part of TARGET2. The legal framework applicable to DCAs will be similar to the framework that applies to TARGET2 payment module (PM) accounts and will be laid out in future versions of TARGET2 Guideline, which includes an annex with applicable “Harmonised tConditions”. This documentation is currently being updated. Banks and other eligible entities can request to open a DCA and to have access to auto-collateralisation services with their relevant national central bank, subject to the fulfilment of the eligibility criteria. The TARGET2 Information Guide will cover DCAs and the related liquidity management from an operational point of view.

Liquidity on DCAs is “dedicated” for the provision of cash for securities settlement transactions. At an aggregated level, the liquidity on DCAs can only have two external sources: i) transfer of central bank money from TARGET2 RTGS accounts to DCAs; and ii) central bank credit provided by means of central bank auto-collateralisation. Liquidity on DCAs is not to be used for general payment purposes and carrying either a positive or negative balance overnight is not permitted. As a consequence, at the end of each day, DCA balances must be brought back to zero by transferring any remaining liquidity back to TARGET2 and auto-collateralisation credit must be paid back.

Chart A Stylised bookings on a Dedicated Cash Account

| D | Dedicated Cash Account | C |
|---|------------------------|--|
| Cash provision for securities settlement | | Liquidity transfer from T2 (incl. SO) |
| Liquidity transfers to certain other DCAs | | Cash proceedings of securities settlement |
| Repaying auto-collateralisation | | Liquidity transfers of certain other DCAs |
| Liquidity transfer to T2 (incl. sweep) | | Cash proceedings of auto-collateralisation |
| ΣD | | ΣC |

At the end of the day ΣD equals ΣC , i.e. zero balance

Source:

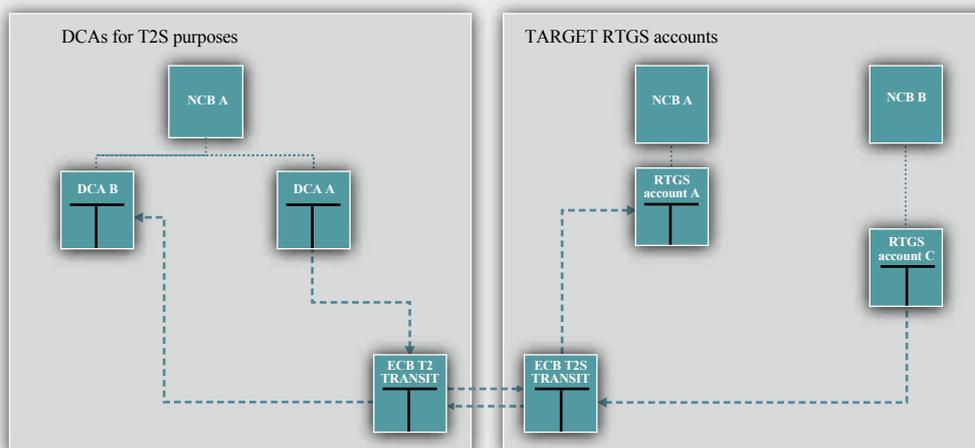
Liquidity flows

For transferring liquidity from a TARGET2 PM account to a DCA and vice versa, two transit accounts will be involved, one in TARGET2 and one in T2S. These transit accounts are specific accounts opened in the books of the ECB and will allow for the monitoring of the flow of liquidity between TARGET2 and T2S (see Figure 2).

Overall, for liquidity transfers to and from DCAs, the following principles will apply.

- A DCA can be funded from any and/or several TARGET2 PM account(s).
- Liquidity can be sent from a DCA to any TARGET2 PM account and vice-versa. Liquidity transfers between DCAs are only allowed if they are linked to the same TARGET2 “main” account or if they belong to the same legal entity (same BIC11).
- Liquidity transfers can be initiated by the RTGS account holder at any time between the start of TARGET2 night-time settlement at 7.30 p.m. until the cut-off time at 5.45 p.m. (with the exception of during the maintenance window from 10 p.m. to 1 a.m.).

Chart B Liquidity flows



| Notation | Description |
|----------------|---|
| NCB A | National Central Bank A |
| DCA A | Dedicated Cash Account of bank A |
| DCA B | Dedicated Cash Account of bank B |
| ECB T2 transit | Transit account in the books of the ECB to settle liquidity transfers received from/sent to TARGET2 RTGS accounts |

| Notation | Description |
|-----------------|--|
| NCB B, NCB C | National Central Bank B, National Central Bank C |
| RTGS account A | T2 RTGS Account of bank A (main account), which would receive liquidity at EoD from DCA A |
| RTGS C | T2 RTGS account of bank C that is the liquidity provider for the DCA of bank B |
| ECB T2S transit | Transit account in the books of the ECB to settle liquidity transfers sent to/received from DCAs |

- Liquidity can be sent to TARGET2 PM accounts from the start of T2S night-time settlement until the cut-off time of 5.45 p.m. (with the exception of during the maintenance window from 3 a.m. to 5 a.m.). The automated sweep at 5.45 p.m. will send all remaining liquidity back to each of the DCAs' main RTGS accounts.
- No balances are allowed to remain on DCAs overnight.
- Auto-collateralisation positions can be repaid at any time on an intraday basis, provided that sufficient liquidity is held on the relevant DCA. If auto-collateralisation positions have not been repaid by 4.30 p.m. and there is not sufficient liquidity on the DCA, the automated reimbursement may lead to a collateral relocation and the auto-collateralisation position will be converted into TARGET2 intraday credit (subject to a penalty fee).

TARGET2 interface to T2S

The TARGET2 interface to T2S has been created to address the liquidity interlinkage between T2S and TARGET2 as it is critical that liquidity flows between the two infrastructures will interact smoothly in all circumstances. The functionalities of the TARGET2 interface to T2S were implemented with TARGET2 release 7.0 in November 2013, but will remain dormant until T2S goes live. This involved a number of mandatory changes in order to support the technical connection of the two infrastructures with the use of appropriate communication protocols. Moreover, the TARGET2 interface to T2S contains functionalities to exchange liquidity between the two infrastructures using ISO 20022 compliant messages, which is the standard employed by T2S. Furthermore, this interface offers TARGET2 participants various optional services that aim at facilitating liquidity management. Some examples are the ability to push and pull liquidity from DCAs via a functionality of the T2 ICM, the possibility to view the balances of both T2 RTGS accounts and DCAs aggregated on one screen or conversion services between legacy and ISO20022 standards. For details concerning functionalities offered by the TARGET2 interface to T2S, please refer to the TARGET2 website at www.target2.eu.

With the introduction of T2S, banks will need to decide whether or not to open one or more DCAs and how they will monitor liquidity and settlements as well as liquidity adjustments between the two sets of accounts. Compared with the current situation, the introduction of T2S should facilitate banks' liquidity management and TARGET2 provides a variety of functions to support this within the TARGET2 interface to T2S. Moreover, the Eurosystem is developing sound operational procedures in order to deal with any potential abnormal situations. These procedures are essential to prevent knock-on effects in the unlikely event of major incidents. The operational procedures will also encompass a communication framework that will allow TARGET2 users to obtain real-time information concerning the status of the system(s). The procedures will be available in the Information Guide for TARGET2 users and will also be explained in information sessions organised by the national central banks and the Eurosystem.

Testing and migration

Last but not least, no rollout of a major market infrastructure project would be possible without sufficient testing and migration preparation.

As regards testing, the initial phases will involve the CSDs and central banks only. Market participants will join the testing at the community testing stage, and all T2S actors, including DCA account holders directly connected to T2S for the first time, will be involved at this point. The connectivity set-up for the payment banks will be put in place up to three months before the start of the community testing stage. The certification process, similar to the one used for the central banks and CSDs in an earlier stage, will need to be performed at the beginning of the respective testing wave schedule (in the first two to four weeks of community testing). With regard to the certification of the directly connected DCA account holders, communication takes place via the respective central banks.

As regards migration, CSDs will migrate to T2S in different waves. According to current planning, the first wave of CSDs will start using T2S for live operations on 22 June 2015, which also marks the go-live date of T2S. Three further migration waves are planned for the months that follow, as well as a contingency wave not earlier than May 2017. Regardless of which wave a market participant's CSD is in, that participant's central bank will be in a position to open DCAs for market participants that signed up for it within the deadlines indicated by the CB, subject to the eligibility requirements to be outlined in the updated TARGET2 Guideline.

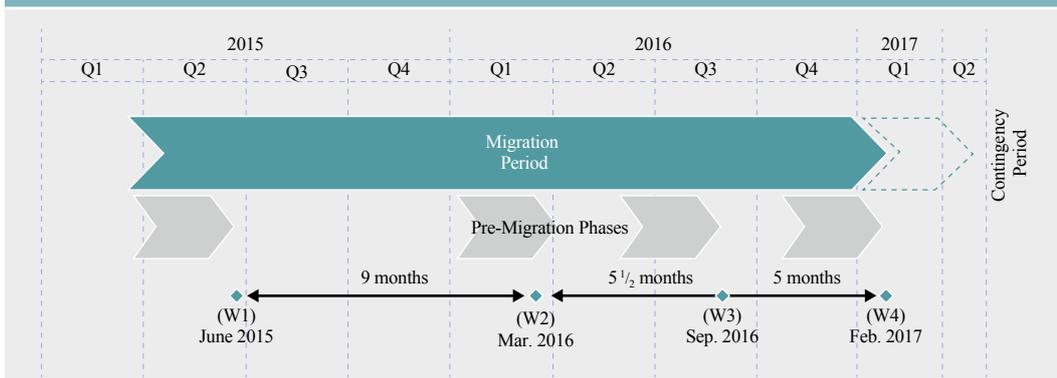
The following shows the schedule of the CSD migration waves.

| First wave 22 June 2015 T2S Go Live | Second wave 28 March 2016 | Third wave 12 September 2016 | Fourth wave 6 February 2017 |
|--|--|---|---|
| Bank of Greece Securities Settlement System (BOGS) | Euroclear Belgium | Clearstream Banking (Germany) | Centrálny depozitár cenných papierov SR (CDCP) (Slovakia) |
| Depozitarul Central (Romania) | Euroclear France | KELER (Hungary) | Eesti Väärtpaberikeskus (Estonia) |
| Malta Stock Exchange | Euroclear Nederland | LuxCSD (Luxembourg) | Euroclear Finland |
| Monte Titoli (Italy) | Interbolsa (Portugal) | Oesterreichische Kontrollbank (Austria) | Iberclear (Spain) |
| SIX SIS (Switzerland) | National Bank of Belgium Securities Settlement Systems (NBB-SSS) | VP Lux (Luxembourg) | KDD – Centralna klirinško depotna družba (Slovenia) |
| | | VP Securities (Denmark) | Lietuvos centrinis vertybinių popierių depozitoriumas (Lithuania) |
| | | | BNY Mellon CSD (Belgium) |
| | | | LCD – Latvijas Centralais depozitārijs (Latvia) |

The following diagram provides a graphical representation of the overall migration process.

More information on T2S can be found at www.t2s.eu.

Chart C



Note: More information on T2S can be found at www.t2s.eu.

CHAPTER 2

THE TARGET2 SYSTEM

I FROM THE FIRST-GENERATION TARGET SYSTEM TO TARGET2

I.1 THE FIRST-GENERATION TARGET SYSTEM

With the establishment of the monetary union in 1999, it became crucial to develop a payment service for the purposes of the future single monetary policy and which would facilitate the circulation of the new currency between the Member States in a fast and reliable manner. At that time, the majority of Member States already had their own RTGS systems, which were, however, limited to the settlement of transactions in their national currencies. Given the need to be ready in time for the introduction of the new currency, the TARGET system was originally built by linking together the different RTGS structures that existed nationally and defining a minimum set of harmonised features, allowing for the sending and receiving of payments across national borders (i.e. inter-Member State payments).

TARGET, the first-generation RTGS system for the euro, commenced operations on 4 January 1999 following the launch of the euro. It had a decentralised technical structure, consisting of 17 national RTGS systems and the ECB payment mechanism, and was available for credit transfers in the countries that had adopted the euro as their currency.

Similarly to TARGET2, TARGET offered such features as unlimited (collateralised) intraday credit free of interest, immediate finality, and high-speed processing of transactions, thus facilitating participants' cash management. In principle, TARGET was originally intended for the processing of large-value payments in euro, especially payments related to monetary policy operations involving the Eurosystem or the settlement of systemically important payment and settlement systems. However, it soon became widely used for other types of transaction, including commercial payments.

After its inception in 1999 TARGET became a benchmark for the processing of euro payments in terms of speed, reliability, opening times and service level. It also contributed to the integration of financial markets in Europe. Moreover, the establishment of TARGET supported the rapid integration of the euro area money markets by providing its users with a common payment and settlement infrastructure.

I.2 FROM TARGET TO TARGET2

Over its years of operation, TARGET successfully met its main objectives: it supported the implementation of the single monetary policy, contributed to reducing systemic risk and helped banks to manage their euro liquidity at national and cross-border level. However, TARGET also presented some shortcomings, which were largely attributable to its decentralised structure and which called for a redesign of the system. Market participants increasingly indicated a need for an enhanced, harmonised service, which could be offered at the same price across the EU.¹ Furthermore, the cost-efficiency of the system was problematic for the Eurosystem, as the revenues generated by TARGET did not cover a sufficient proportion of its costs. Finally, in the context of anticipated EU enlargement, the new Member States that were expected to connect to the system would considerably increase the number of TARGET components.

¹ While inter-Member State payments were subject to degressive transaction fees (from €1.75 down to €0.80), intra-Member State transaction fees were not harmonised and were fixed by individual central banks.

In order to meet these challenges, in October 2002 the Governing Council of the ECB defined the principles and structure of TARGET2 – the next-generation TARGET system, which would offer harmonised core services on a single technical platform and which would be priced according to a single price structure. As a result of the new approach, the Eurosystem envisaged lower costs, which, together with the investment costs, would be recovered via the system’s fees.² The Governing Council acknowledged that, despite the technical consolidation of TARGET2, the decentralised nature of the relationships that the NCBS had with the counterparties in their respective countries would be preserved, including those relating to monetary policy functions.

TARGET2 was successfully launched in November 2007 and the decentralised structure of the first-generation TARGET system was progressively replaced by a single technical platform, the “Single Shared Platform” (SSP). Three Eurosystem central banks – the Banca d’Italia, the Banque de France and the Deutsche Bundesbank – jointly provided the SSP for TARGET2, and they operate it on behalf of the Eurosystem. The migration to the new platform took place in three waves. The first group of countries (Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg, Malta and Slovenia) migrated in November 2007, followed by the second migration group (Belgium, Finland, France, Ireland, the Netherlands, Portugal and Spain) in February 2008, and the third in May 2008 (Denmark, Estonia, Greece, Italy, Poland and the ECB component).

1.3 HARMONISED SERVICES

As a result of the move from a decentralised multi-platform system to a technically integrated platform, TARGET2 can offer harmonised services at EU level, ensuring a level playing field for banks across Europe. A single price structure applies to both domestic and cross-border transactions. Moreover, TARGET2 provides a harmonised set of cash settlement services in central bank money for all kinds of ancillary system, such as retail payment systems, money market systems, clearing houses and securities settlement systems. Currently there are 83 ancillary systems settling in TARGET2. All of them are able to access any account in TARGET2 via a standardised interface. While before the launch of TARGET2 each ancillary system had its own procedure for settlement, now the system offers six generic procedures designed for ancillary systems (two real-time and four batch procedures), thereby allowing the substantial harmonisation of business practices.

For its participants TARGET2 offers specific liquidity management features that allow banks, in particular multi-country banks, to further consolidate their internal processes, such as treasury and back office functions, and to better integrate their euro liquidity management. For example, participants are able to group some of their accounts and pool the available intraday liquidity for the benefit of all the members of the group. In addition, for a group of accounts it is possible to benefit from a special TARGET2 group pricing scheme, i.e. a degressive transaction fee, which applies to all of the group’s payments as if they were sent from one account. TARGET2 participants can also make use of liquidity-saving features to optimise the liquidity requirements of the system, such as payment queues, gridlock resolution mechanisms and priorities and reservation.

The TARGET2 system also provides its participants with further tools to streamline their payment and liquidity management in euro. Today, managers of cash and collateral wish to have automated processes to optimise payment and liquidity management, as well as appropriate tools to monitor their activities and facilitate accurate funding decisions, preferably with the possibility of managing all of their central bank money flows from a single location.

² In this context, owing to the special role of TARGET2, a “public good” factor corresponding to the positive externalities generated by TARGET2 (e.g. in terms of the reduction of systemic risk) was defined, for which costs would not have to be recovered.

More details on the features and functionalities of TARGET2 can be found in Annex 1 (“Features and functionalities of TARGET2”).

2 SYSTEM RULES

2.1 SPECIFICATIONS

The TARGET2 General Functional Specifications (GFS), made available to the user community in June 2007, provide a high-level overview of the SSP for TARGET2 and a description of its functions. While the GFS is provided for informational purposes for users, a more detailed and updated explanation of the SSP is available in the User Detailed Functional Specifications (UDFS). The UDFS provides information on the core services (Book 1) and the optional services (Book 2) offered by the SSP, as well as on XML messages (Book 4). The latest version of books 1, 2 and 4 of the UDFS (i.e. version 7.0) was made available to the user community in October 2013.

The User Handbook for the information and control module of the SSP describes the module’s online information tools and control measures, which allow access to the other relevant modules of the SSP. The latest version of the User Handbook (version 7.0) was made available to the user community in September 2013.

2.2 TARGET2 GUIDELINE

In June 2007 the Eurosystem adopted the Guideline on TARGET2, which repealed the guideline governing the operation of the first-generation TARGET system. Since 2007 the TARGET2 Guideline has been regularly updated to take into account technical changes in TARGET2 and changes in EU legislation, as well as to ensure clarity. In 2012 the decision was taken to “recast” the Guideline, i.e. to produce a consolidated version incorporating all the changes made since 2007. In addition to this consolidation, it was decided, in the interests of transparency, to incorporate articles which had previously been viewed as solely internal to the Eurosystem, and which had been included in a “non-public Guideline on TARGET2”. These articles include, among other things, the legal basis for the inter-NCB balances in TARGET2. With the inclusion of these articles in the public Guideline, the non-public Guideline has also been repealed and not replaced. The new Guideline on TARGET2 was adopted on 5 December 2012.

TARGET2 is legally structured as a multiplicity of payment systems and is governed by the Guideline on TARGET2, which spells out, among other things, the TARGET2 governance arrangements and audit rules. Annexes to the TARGET2 Guideline form the basis on which the ECB and the NCBs set the terms and conditions for their individual TARGET2 component systems, according to the legislation applicable to them. The annexes set out the basis for participation in TARGET2 (Annex II) and for access to intraday credit (Annex III), including the rights and obligations of the participants. In particular, Article 39(1) of Annex II requires that TARGET2 participants comply with the legislation on prevention of money laundering applicable to them. Material breach by a participant of the conditions for participation in TARGET2 may lead to suspension or termination of their participation in the system.

3 PARTICIPATION OF NON-EURO AREA CENTRAL BANKS

On 24 October 2002 the Governing Council of the ECB decided that, after joining the EU, the NCBs of the new Member States would be given the same rights and obligations with regard to TARGET connection as the non-euro area NCBs already participating in the system.³ Different technical options for such connections, including variants avoiding the need for separate euro RTGS platforms, were developed and presented to the NCBs of the new Member States on a “no compulsion, no prohibition” basis. Only when new Member States join the euro area does connection to TARGET become mandatory, as its use is mandatory for the settlement of any euro operations involving the Eurosystem.

For NCBs which have not yet adopted the euro, participation in TARGET2 is optional and facilitates the settlement of euro-denominated transactions in these countries. In the course of the development of TARGET2, 21 of the 28 central banks comprising the European System of Central Banks (ESCB) confirmed their connection to the new system.

The system now encompasses Bulgaria and Romania, which connected in February 2010 and July 2011 respectively, following the necessary preparations and testing activities. Thus, currently 24 EU central banks and their respective user communities are connected to TARGET2: the 19 euro area central banks (including the ECB),⁴ and five central banks from non-euro area countries.⁵

4 COOPERATION WITH USERS AND INFORMATION GUIDES

4.1 USER COOPERATION

The development of TARGET2 benefited greatly from the close interaction between the Eurosystem and future users of the system. This cooperation on issues related to the system’s operation and further development still continues. It is particularly visible in the yearly release management process. Among other things, the involvement of users has greatly improved the understanding of market requirements and is instrumental in ensuring the smooth implementation of changes to the system and high levels of acceptance by the users.

The Eurosystem maintains close relations with TARGET2 participants through regular meetings held between the NCBs connected to the system and the respective national user groups. In addition to the cooperation within national communities, at the European level semi-annual meetings are organised bringing together the Eurosystem, the Working Group on TARGET2 (WGT2) and the TARGET Working Group (TWG), the two working groups comprising representatives of the European banking industry. Two such joint meetings took place in 2013. Overall, operational issues, in particular regarding the management of new system releases, are discussed in these joint meetings and strategic issues are addressed in the Contact Group on Euro Payments Strategy (COGEPS), a forum in which the senior management of commercial and central banks is represented.

3 At the time, the Bank of England, Danmarks Nationalbank and Sveriges Riksbank.

4 The ECB and the central banks of Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Slovenia, Spain and the Netherlands, as well as Malta and Cyprus, which joined the euro area in January 2008, Slovakia, which joined the euro area in January 2009, Estonia, which joined the euro area in January 2011 and Latvia, which joined the euro area in January 2014.

5 Denmark, Poland, Lithuania, Bulgaria and Romania.

Relevant information of interest to the user community is published regularly on the dedicated TARGET2 website, which also features regular updates on the TARGET2 performance indicators (traffic volumes and values, and system availability). As a further method of providing information, the Eurosystem publishes a TARGET newsletter twice a year.

4.2 INFORMATION GUIDE FOR TARGET2 USERS

The “Information guide for TARGET2 users” aims to provide banks and ancillary systems using TARGET2 with a standard set of information which gives their operators a better understanding of the overall functioning of the system and enables them to make use of TARGET2 as efficiently as possible. In addition to information on operational procedures under normal circumstances, the information guide also provides information for abnormal and contingency situations and answers the most frequently asked questions relating to TARGET2.

The latest version of the information guide (version 5.1) was made available to the user community on 19 November 2012.⁶

4.3 INFORMATION GUIDE FOR TARGET2 PRICING

The “Information guide for TARGET2 pricing” provides TARGET2 users with a comprehensive overview of the pricing schemes related to TARGET2 (core services, liquidity pooling, ancillary system services, entities to be invoiced) and a detailed guide to the billing principles for the various types of transaction. This information guide serves as a reference document for pricing and billing issues, but does not confer any legal rights on operations or entities.

⁶ The information guide is intended solely to provide information on the TARGET2 system and should not be seen as a legal or contractual document.

ANNEXES

I FEATURES AND FUNCTIONALITIES OF TARGET2

SYSTEM STRUCTURE

A modular approach was adopted for the development of TARGET2's single technical infrastructure, the SSP (see the chart below). Every module in the SSP is closely related to a specific service (e.g. the payment module for the processing of payments). Some of the modules (the home accounting module, the standing facilities module and the reserve management module) can be used by the individual central banks on an optional basis. Central banks which do not use these modules may offer the respective services via proprietary applications in their domestic technical environments.

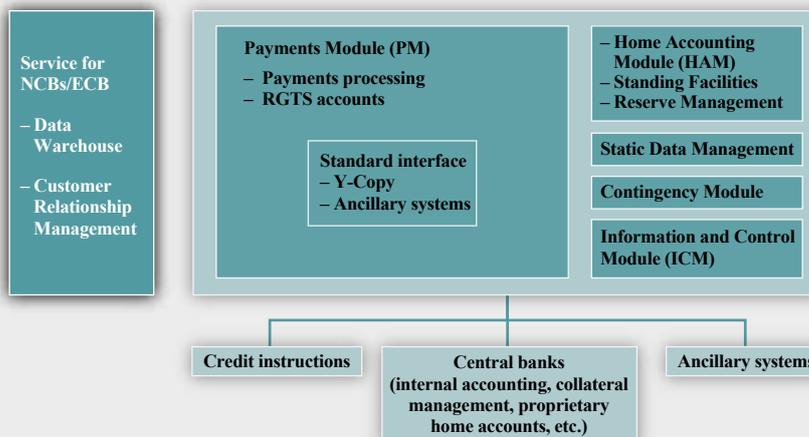
SWIFT standards and services (FIN, InterAct, FileAct and Browse) are used to enable standardised communication between the TARGET2 system and its participants. Since November 2010 a secured connection via the internet has been available for TARGET2 participants in addition to the SWIFT connection.

BUSINESS CONTINUITY

The business continuity concept of TARGET2 consists of a two-region/two-site architecture. There are two regions for payment processing and accounting services, and in each region there are two distinct sites. The principle of region rotation is applied, thus ensuring the presence of experienced staff in both regions.

TARGET2 offers the highest possible level of reliability and resilience, as well as sophisticated business contingency arrangements commensurate with the systemic importance of the TARGET2 infrastructure.

Chart 32 Structure of the SSP



Source: ECB.

PARTICIPATION

A number of options are provided for accessing TARGET2. These include direct and indirect participation, “addressable BICs” and “multi-addressee access”, also known as “technical BIC access”.

The criteria for direct participation in TARGET2 are the same as for the original TARGET system. Direct participants hold an RTGS account in the payment module of the SSP with access to real-time information and control features. They are therefore able to:

- (i) submit/receive payments directly to/from the system; and
- (ii) settle directly with their respective NCB. Direct participants are responsible for all payments sent from or received on their account by any TARGET2 entity (i.e. indirect participants, addressable BICs and multi-addressee access entities as described below) registered through them.

Indirect participation implies that payment orders are always sent to/received from the system via a direct participant. Payments are settled in the direct participant’s account in the payment module of the SSP. Indirect participants are registered by and are under the responsibility of the direct participants which act on their behalf, and are listed in the TARGET2 directory. Only supervised credit institutions established within the EEA can become indirect participants.

Another category of access which was already available in the original TARGET system is that of TARGET2 addressable BICs. Any direct participant’s correspondent or branch that holds a BIC is eligible to be listed in the TARGET2 directory, irrespective of its place of establishment. Moreover, the Eurosystem has not established any financial or administrative criteria for such addressable BICs, meaning that it is up to the relevant direct participant to define a marketing strategy for offering such a status. It is the responsibility of the direct participant to forward the relevant information to the appropriate NCB for inclusion in the TARGET2 directory.¹ Addressable BICs always send and receive payment orders to/from the system via a direct participant, and their payments are settled in the account of that direct participant in the payment module of the SSP.

Although there is no difference between an indirect participant and an addressable BIC² in functional terms, only indirect participants are recognised by the TARGET2 system and, as such, benefit from the protection of the Settlement Finality Directive (in the countries where such protection is granted).

With the multi-addressee access to TARGET2, direct participants are able to authorise branches and other credit institutions belonging to their group, and located in EEA countries, to channel payments through the direct participant’s main account without its involvement by submitting/receiving payments themselves directly to/from the system. This offers a direct participant’s affiliate banks, or a group of banks, greater efficiency in their liquidity management and payments business. The payments are settled on the account of the direct participant.

¹ For routing purposes, an indirect participant/addressable BIC can only be linked to one direct participant.

² The TARGET2 directory distinguishes between indirect participants and addressable BICs.

PROCESSING OF PAYMENTS

TARGET2, like its predecessor TARGET, offers its participants settlement services in euro. Any euro payment which participants wish to process in real time and in central bank money can be executed in TARGET2. TARGET2 supports the SWIFTNet FIN payment types MT103/103+, MT202/202COV and MT204. Each payment order can be assigned a specific payment priority (“normal”, “urgent” or “highly urgent”). In addition, ancillary systems connected via the ancillary system interface are able to send XML payment messages. Furthermore, the increased time criticality of payments is taken into account by enabling payments to be submitted with a debit time indicator, such as those needed in the context of CLS. Payments to TARGET2 can be submitted up to five business days in advance.

Unless participants have indicated a settlement time, payment orders are settled immediately or at the latest by the end of the business day, provided that sufficient funds are available and no liquidity limits and/or reservations are imposed. For highly urgent and urgent payments, the “first in, first out” (FIFO) principle applies, i.e. they are settled in chronological order. Urgent and normal payments are not settled if highly urgent payments are queued. The only exception is that payments with lower priority will be executed if – and only if – this allows an offsetting transaction to be settled, and the overall effect of this offsetting results in a liquidity increase for the participant in question. Normal payments are also settled in accordance with the FIFO bypassing principle. This means that they are settled immediately (independently of other queued normal payments accepted at an earlier time), provided that sufficient funds are available. Payment orders that are not settled as described in the entry disposition are placed in queues in accordance with their assigned priority. The settlement of queued payments is made as effective as possible by several optimisation procedures on a continuous basis. The participant can also influence the processing of payments by moving payment orders to either the front or the end of the respective queue.

LIQUIDITY MANAGEMENT

The following sources of liquidity can be used in TARGET2: balances on RTGS accounts, provision of intraday liquidity and offsetting of payment flows (i.e. the use of algorithms to settle a number of queued payments). As in the original TARGET system, intraday credit is granted to participants by the respective NCB against eligible collateral.

A direct participant in the payment module has the option to control the use of available liquidity by means of a reservation and a limit system, which may be combined as required. In TARGET2, it is possible for participants to reserve liquidity for urgent and highly urgent payments and to dedicate liquidity to ancillary system settlement. Participants can also define bilateral and multilateral sender limits and actively manage their payment queues (e.g. by changing the priority or the order of queued transactions).

Furthermore, banks can use a liquidity pooling functionality within a group to view and use their liquidity, irrespective of the RTGS account on which it is held.

Liquidity pooling is achieved by grouping a number of accounts. TARGET2 offers two variants for liquidity pooling: (i) aggregated liquidity; and (ii) consolidated account information. In the aggregated liquidity option, a payment order submitted by a participant belonging to a group of accounts is settled if the payment amount is smaller than or equal to the sum of the liquidity available on all accounts (including credit lines, if any) in the group; otherwise the payment order is

queued. The consolidated account information option is an information tool: it gives comprehensive information to the participant subscribing to the service about the liquidity position of all of the entities of the group at any given moment. Such information is also provided in the aggregated liquidity option. However, in the consolidated account information option, payment amounts are checked only against the liquidity available on the individual RTGS account of the sending participant. In this option, the liquidity available on other accounts in the group is not used to settle the payment. In the event of insufficient liquidity on the sending bank's account, money needs to be transferred to that account.

Only credit institutions directly participating in the system are able to use the consolidated account information option. Owing to business and legal constraints, the virtual account option is only available for accounts of euro area banks held with euro area central banks.

It is only possible to establish a group of accounts for the consolidated account information or aggregated liquidity options among credit institutions fulfilling certain legal criteria.

ONLINE INFORMATION AND CONTROL

TARGET2 users have access, via the information and control module (ICM), to comprehensive online information and control of balances and payments. Through the ICM, TARGET2 users have access to the payment module and the static data (management) module. Depending on the decision of the respective central bank with regard to the use of the optional modules offered by the SSP, participants may also have access to the home accounting facility of the central banks and the applications for reserve management and standing facilities. Only data for the current business day are available through the ICM, the only exception being warehoused payments that have been delivered to TARGET2 up to five business days in advance. Users of the ICM are able to choose what information they receive and when. Urgent messages (e.g. system broadcasts from central banks and warnings concerning payments with a debit time indicator) are displayed automatically on the screen.

ANCILLARY SYSTEMS

TARGET2 provides cash settlement services in central bank money for a wide variety of ancillary systems, including retail payment systems, large-value payment systems, foreign exchange systems, money market systems, clearing houses and securities settlement systems. The main advantage of TARGET2 for ancillary systems is that they are able to access any account on the SSP via a standardised interface. TARGET2 offers six generic procedures for ancillary system settlement (two real-time procedures and four batch procedures), which represents a substantial harmonisation of current practices.

OPERATING DATES AND TIMES

The TARGET2 system is closed on Saturdays and Sundays and on the following days:

- New Year's Day
- Good Friday (Catholic/Protestant)
- Easter Monday (Catholic/Protestant)
- 1 May (Labour Day)
- Christmas Day
- 26 December

TARGET2 is open from 7 a.m. to 6 p.m. CET on each of its working days, with a cut-off time of 5 p.m. CET for customer payments.

However, TARGET2 starts the new business day on the evening of the previous day. The night-time window is available from 7.30 p.m. to 7.00 a.m. CET the next day, with a technical maintenance period of three hours between 10 p.m. and 1 a.m. CET. The night-time window³ facilitates the night-time settlement of the different ancillary systems in central bank money with finality, and also supports cross-system settlement during the night. During the night-time window, liquidity transfers via the ICM between RTGS accounts and the dedicated sub-accounts are technically possible. Ancillary systems and their participants are able to choose whether or not to enable this liquidity transfer functionality, or to limit it. The night-time window generally increases the efficiency of night-time settlement and favours initiatives such as cross-system delivery versus payment for securities systems.

PRICING

The pricing scheme for TARGET2 core services valid as of 1 January 2013 was:

| Core pricing scheme for direct participants: | | | | | Before |
|--|---------------|---------|---------|--------|-----------|
| Option A | | | | | |
| Monthly fee | | | | € 150 | € 100 |
| Flat transaction fee | | | | € 0,8 | unchanged |
| Option B | | | | | |
| Monthly fee | | | | €1,875 | € 1,250 |
| Degressive transaction fee: | | | | | |
| Band | Volume | | Price | | |
| | from | to | | | |
| 1 | 1 | 10,000 | € 0.6 | | unchanged |
| 2 | 10,001 | 25,000 | € 0.5 | | unchanged |
| 3 | 25,001 | 50,000 | € 0.4 | | unchanged |
| 4 | 50,001 | 100,000 | € 0.2 | | unchanged |
| 5 | above 100,000 | | € 0.125 | | unchanged |

The liquidity pooling service (aggregated liquidity option and consolidated account information option) is an optional and separately priced core service. The liquidity pooling service is charged at €100 per account per month for the consolidated account information option and €200 per account per month for the aggregated liquidity option (which includes the consolidated account information option). Furthermore, within a group of accounts (with either the consolidated account information option or the aggregated liquidity option), group pricing applies, which means that the degressive transaction fee is applied to all payments of the group as if they had been sent from one account.

³ Only procedure 6 (settlement on dedicated liquidity accounts) of the generic settlement procedures of the SSP's ancillary system interface is offered during the night-time window.

The following pricing scheme applies to the various types of participation in TARGET2, in addition to TARGET2 transaction fees.

| Type of participation | Fee | Frequency | Description | Before |
|---|----------------|-----------|--|----------------|
| Direct participation | €150 or €1,875 | monthly | Depending on the chosen scheme | €100 of €1,250 |
| Multi-addressee access | €80 | monthly | Per BIC address in addition to the BIC of the account of the direct participant | unchanged |
| Indirect participation | €20 | monthly | Direct participants are charged for each indirect participant | one-off |
| Addressable BICs – correspondents | €5 | monthly | Direct participants are charged for each addressable BIC | one-off |
| Addressable BICs – branches of direct and indirect participants, branches of correspondents and addressable BIC holders that are members of the same group* | €5 | one-off | Direct participant are charged for each registration of an addressable BIC | unchanged |
| Unpublished BIC | €30 | monthly | Direct participants (SWIFT-based or internet-based) which do not wish their BIC to be published in TARGET2 Directory | unchanged |

* As defined in Article 1 of Harmonised conditions for participation in TARGET2

The pricing for internet-based participants consists of a monthly fixed fee of €70 (regardless of whether the account is held in the payment module or the home accounting module) together with additional fees as shown in the table below (similar to the core pricing scheme above).

| Core pricing scheme for internet-based participants | |
|---|-------|
| Fixed monthly fee | 70 |
| Monthly fee for RTGS account | €150 |
| Flat transaction fee | €0,80 |

2 CHRONOLOGY OF DEVELOPMENTS IN TARGET

NOVEMBER 1994

In November 1994 the EMI published a report entitled “The EMI’s intentions with regard to cross-border payments in Stage Three”, which set down the basic principles and objectives as well as the approach to be adopted by NCBs and the EMI in creating a new cross-border payment arrangement for Stage Three of EMU. A system for Stage Three would be established by linking the domestic RTGS facilities. Only the NCBs would hold settlement accounts for banks, although the ECB would also be connected to the NCBs through the interlinking mechanism for the purpose of making payments for its own account or for the account of its customers. To ensure a level playing field for the banks, and to facilitate the creation of a single money market, some harmonisation of the operating features of the domestic RTGS systems was deemed necessary.

MAY 1995

Following the decision of the EMI Council to establish the TARGET system, the report entitled “The TARGET system – Trans-European Automated Real-time Gross settlement Express Transfer system, a payment arrangement for Stage Three of EMU” was published in May 1995. In this report the EMI Council defined certain basic principles of the system and confirmed that links would be established between national RTGS systems. These links (the interlinking mechanism), together with the national RTGS systems, would form the TARGET system. In addition, the RTGS systems of non-participating countries (which were not identified at that stage) could be connected to TARGET, but only to process euro. Any participant in any RTGS system connected to TARGET would be entitled to send payments via TARGET and would be obliged to accept any such payment processed through TARGET. Domestic RTGS systems would retain their specific features insofar as this was compatible with the single monetary policy of the Eurosystem and with maintaining a level playing field for credit institutions. A certain level of harmonisation was considered necessary, especially in the following three areas: (i) the provision of intraday liquidity; (ii) operating time; and (iii) pricing policies.

With regard to intraday liquidity, in order to provide equal access to central bank credit throughout the euro area, it was necessary to harmonise the definition of assets that can be accepted by the NCBs as collateral and the conditions under which their value is taken into account. With regard to operating hours, it was recognised that the interlinking mechanism and the national RTGS systems would need to be open for a large part of the day. Finally, the pricing policies should satisfy three requirements: (i) to avoid unfair competition with the private sector; (ii) to avoid the subsidisation of payments or certain kinds of payment; and (iii) to avoid undue competition within TARGET.

AUGUST 1996

In the summer of 1996 the EMI further defined the features of TARGET, in particular with regard to the following areas: (i) the provision of intraday liquidity; (ii) pricing policies; (iii) operating time; and (iv) relations with other transfer systems, as described in the “First progress report on the TARGET project” and in the “Technical annexes to the first progress report on the TARGET project”.

Intraday liquidity would be provided by NCBs making use of two facilities: fully collateralised intraday overdrafts and intraday repurchase agreements. If reserve requirements were to be imposed for monetary policy reasons, reserve balances would be available on an intraday basis for payment system purposes. Intraday liquidity would be free of interest and potentially unlimited, provided

it was fully collateralised. The EMI Council also agreed that collateral would, in principle, be the same for intraday credit as for monetary policy operations.

DECEMBER 1996

With regard to the provision of intraday credit in euro to non-euro area NCBs and to participants in RTGS systems of non-euro area countries, the EMI Council decided in December 1996 to prepare three mechanisms⁴ aimed at preventing intraday credit granted to non-euro area NCBs from spilling over to overnight credit. The final decision on which mechanism to implement was left to the Governing Council.⁵

The EMI Council agreed that the TARGET pricing policy should have one major objective, namely cost recovery, and that it should take three main constraints into account: it should not affect monetary policy; it should maintain a level playing field for all participants; and it should contribute to risk-reduction policies in payment systems.

With regard to operating times, it was decided that, in order to meet market and risk management needs, TARGET should have long operating hours and, in order to facilitate the implementation of the single monetary policy and maintain a level playing field for credit institutions, all TARGET components should have a common closing time. It was therefore decided, as a general rule, that TARGET would open at 7 a.m. and close at 6 p.m. CET.⁶ With regard to relations with other funds transfer systems, it was decided that all large-value net settlement systems would be required to settle in central bank money (i.e. through TARGET).

SEPTEMBER 1997

A number of TARGET features were defined in more detail, in particular with regard to the following areas: (i) operating days; (ii) pricing policies; (iii) the provision of intraday liquidity to non-euro area countries; (iv) the ECB's role; and (v) the provision of settlement services to cross-border large-value net settlement systems. These issues were clarified in an EMI report entitled "Second progress report on the TARGET project", and in the "Technical annexes to the second progress report on the TARGET project".

With regard to operating days, it was decided that, in addition to Saturdays and Sundays, there would be two common holidays for TARGET: Christmas Day and New Year's Day. On other days, the TARGET system would be open, although NCBs would be allowed to close their domestic systems during national holidays if so required by law or by the banking communities. The interlinking mechanism between open RTGS systems would remain open.

4 First, non-euro area national central banks would receive from and provide to participants in their respective RTGS systems only limited intraday credit, or none at all. Should a non-euro area national central bank incur an overnight overdraft on one of its accounts with a euro area national central bank, overnight credit would be granted at a penalty rate. Second, non-euro area national central banks would be allowed to incur unlimited intraday overdrafts in euro and could, in turn, grant unlimited collateralised intraday credit to participants in their respective RTGS system. The risk of spillover of intraday credit into overnight credit would be contained through a system of penalties and sanctions applied in the event of overnight overdrafts. Third, participants in RTGS systems in non-euro area countries would be required to complete their operations some time before the closing time of TARGET in order to allow any shortage of funds to become apparent early enough for non-euro area national central banks to be able to offset their RTGS participants' spillover by borrowing euro in the money market while it was still open. (For details, see the report entitled "The single monetary policy in Stage Three – Specification of the operational framework", EMI, January 1997.)

5 EMI Annual Report 1996, April 1997.

6 *ibid.*

In the area of pricing policies, it was decided that a common transaction fee for cross-border TARGET transfers would be charged, based on the principle of full cost recovery and in line with EU competition policy. The pricing of domestic RTGS transfers in euro would continue to be determined at the national level, taking into account that the price of domestic and cross-border transfers in euro should be broadly similar. With regard to the cross-border leg, it was agreed that a single transaction fee would be set within the range of €1.50 to €3.00. In addition, a price differentiation based on volume was envisaged.⁷

With regard to one of the possible mechanisms for the provision of intraday liquidity to non-euro area NCBs, namely an earlier closing time for non-euro area NCBs connected to TARGET, the EMI Council agreed that the earlier cut-off time should not apply to the processing of payments by the non-euro area NCBs, but rather to their use of intraday credit in euro. The time of this liquidity deadline would be determined by the Governing Council, if it chose to implement this option.

Furthermore, it was agreed that the ECB would perform the following functions in TARGET: (i) provide end-of-day and possibly other control procedures for the TARGET system; (ii) provide settlement services to cross-border large-value net settlement systems; (iii) process payments for its own account; and (iv) maintain accounts on behalf of its institutional customers (excluding credit institutions).

For the provision of settlement services to cross-border large-value net settlement systems, the EMI Council agreed on a method for the settlement of the future European Banking Association (EBA) clearing system within the euro area. This envisaged that the EBA would open a central settlement account at the ECB and perhaps also settlement accounts with NCBs.

JUNE 1998

All the EMI Council decisions referred to above were adopted by the Governing Council. Furthermore, a price structure for cross-border TARGET payments was agreed, ranging from €0.80 to €1.75 for direct participants, depending on the number of transactions.⁸ The way in which banks' customers would be charged for TARGET payments was left to the discretion of the commercial banks.

JULY 1998

The Governing Council decided to grant access to TARGET to NCBs and participants in euro RTGS systems located in Member States outside the euro area. With regard to the availability of intraday liquidity to non-euro area NCBs and their RTGS participants, the ECB decided that, at all times, non-euro area NCBs would have to maintain an overall credit position vis-à-vis the other NCBs participating in or connected to TARGET taken as a whole. In order to ensure the availability of intraday liquidity in its euro RTGS system, each non-euro area NCB would have to make an intraday deposit with the Eurosystem.

NOVEMBER 1998

A number of TARGET features were defined in more detail, in particular with regard to the following areas: (i) access to euro RTGS systems linked to TARGET; (ii) provision of intraday

⁷ See also EMI Annual Report, May 1998.

⁸ See also the ECB's press release of 10 June 1998.

credit; (iii) central bank correspondent banking relations; and (iv) the legal framework for TARGET. These issues were addressed in the “Third progress report on the TARGET project”.

Only supervised credit institutions located in the EEA could be admitted as direct participants in a national RTGS system. However, certain other entities could also be admitted as participants in a national RTGS system subject to the approval of the relevant NCB.

Unlimited, but fully collateralised, intraday credit would be provided to RTGS participants fulfilling the general counterparty eligibility criteria of the ESCB.⁹ Unlimited intraday credit could also be granted to treasury departments of central or regional governments active in the money markets, as well as to public sector bodies authorised to hold accounts for customers, provided that no spillover to overnight credit was possible. At their own discretion, NCBs could decide to grant intraday credit to investment firms, subject to a formal spillover prevention arrangement. Any arrangement under which an NCB grants intraday credit, in specific circumstances, to organisations providing clearing or settlement services would have to be approved in advance by the Governing Council.

4 JANUARY 1999

On this day TARGET went live,¹⁰ successfully linking 15 national RTGS systems and the ECB payment mechanism.

However, since the banks needed time to adapt to the new payment system environment and to new treasury management practices, the ESCB provided an “extended service window” between 11 January and 29 January 1999 by delaying the closing time of TARGET by one hour from 6 p.m. to 7 p.m. CET. To avoid any abuse of this arrangement, a special fee of €15 was levied for each payment made during the extra hour. Since the banks gradually adjusted to a more efficient way of managing their liquidity, it was not necessary to continue to extend the opening hours.¹¹

MARCH 1999

With regard to TARGET operating days, in 1999 the system was supposed to remain closed on New Year’s Day and Christmas Day only. However, in order to safeguard the smooth transition to the year 2000, the Governing Council decided that, as an exception, TARGET would also remain closed on 31 December.¹²

JULY 1999

Owing to rather low payment traffic on traditional public (or bank) holidays, and at the request of the European banking industry, the Governing Council decided on six closing days in 2000 in addition to Saturdays and Sundays. These were New Year’s Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December. These were de facto non-settlement days for the money market and the financial markets in euro, as well as for foreign exchange

⁹ See “The single monetary policy in Stage Three: General documentation on ESCB monetary policy instruments and procedures”, ECB, September 1998, and the latest version entitled “The implementation of monetary policy in the euro area: General documentation on Eurosystem monetary policy instruments and procedures”, ECB, September 2006.

¹⁰ For an overview of TARGET developments in 1999, see the ECB’s 1999 Annual Report, April 2000.

¹¹ See also the ECB’s press release of 11 January 1999 and the March 1999 issue of the ECB’s Monthly Bulletin.

¹² See also the ECB’s press releases of 3 September 1998 and 31 March 1999.

transactions involving the euro. However, in euro area countries where one or other of these days was not a public holiday, the national RTGS system would remain open for limited domestic payment activity.¹³

MAY 2000

The Governing Council decided on the TARGET operating days for 2001. These were the same as for 2000, with the exception of one additional closing day on 31 December, which was introduced in order to safeguard the smooth transition of retail payment systems and internal bank systems to euro banknotes and coins.¹⁴

OCTOBER 2000

The TARGET Information System was introduced, providing TARGET users with information on the status of the system.

NOVEMBER 2000

The TARGET 2000 upgrade successfully went live. This was the first common TARGET software release since the system commenced live operations in January 1999. The upgraded software included the new common message format for customer payments, MT103, and the STP version, MT103+.

DECEMBER 2000

A long-term calendar was established for TARGET operating days, applicable as from 2002 until further notice. Accordingly, in addition to Saturdays and Sundays, TARGET would be closed on New Year's Day, Good Friday (Catholic/Protestant), Easter Monday (Catholic/Protestant), 1 May (Labour Day), Christmas Day and 26 December. On these closing days, TARGET as a whole, including all the national RTGS systems, would be closed. A long-term calendar was deemed necessary to eliminate uncertainty for financial markets and to avoid problems arising from different national TARGET operating days. On TARGET closing days, no standing facilities would be available at the NCBs. These days would not be settlement days for the euro money market or for foreign exchange transactions involving the euro. Neither would EONIA be published. Furthermore, the CCBM for the cross-border use of collateral would also be closed on TARGET closing days.¹⁵

JANUARY 2001

On 1 January 2001 Greece became the twelfth Member State to adopt the single currency. As a result, the Bank of Greece became a member of the Eurosystem and began participating in TARGET, bound by the same rules as the NCBs of the other participating Member States and the ECB.¹⁶

¹³ See also the ECB's press release of 15 July 1999.

¹⁴ See also the ECB's press release of 25 May 2000.

¹⁵ See also the ECB's press release of 14 December 2000.

¹⁶ See also the ECB's press release of 28 February 2002.

APRIL 2001

In accordance with its policy of transparency through the publication of its legal instruments, the ECB published the Guideline of the ECB on TARGET (TARGET Guideline).¹⁷ The TARGET Guideline, which came into force on 1 January 1999, sets out the legal framework for TARGET and lays down the rules governing TARGET and its functions as they apply to the Eurosystem.

NOVEMBER 2001

As a further step towards the consolidation of large-value payment systems in the euro area, the Deutsche Bundesbank shut down the German hybrid system Euro Access Frankfurt (EAF) on 5 November 2001. On the same day, the Bundesbank launched RTGS^{plus}, the new German TARGET component replacing the former Euro Link System (ELS).

The global TARGET 2001 maintenance release successfully went live on 19 November 2001. The release consisted mainly of the introduction of new SWIFT standards, the validation of negative payment settlement message notifications (PSMNs),¹⁸ and the introduction of a time indication (field 13C, debit stamp) to be transported through the interlinking mechanism and to be made available to credit institutions.

OCTOBER 2002

The Governing Council of the ECB took a strategic decision on the direction of the second generation of the TARGET system (TARGET2) in order to ensure that TARGET would continue to meet customers' future requirements and to accommodate the EU enlargement process.

On 24 October 2002 the Governing Council decided that acceding country central banks would have the possibility, but not the obligation, to connect to TARGET from the date of their joining the EU. Participation in TARGET would become compulsory only on joining EMU.

NOVEMBER 2002

The 2002 TARGET maintenance release successfully went live on 18 November 2002. The release consisted mainly of the introduction of the mandatory validation that MT103+ customer transfers contain a correct IBAN.

The Governing Council decided on the policy framework for the TARGET compensation scheme applicable in the event of a TARGET malfunction.

DECEMBER 2002

The Eurosystem launched a public consultation on 16 December 2002 to collect the views of the entire community of TARGET users on the approach to be chosen for TARGET2, as well as on its service level.¹⁹

¹⁷ Guideline of the European Central Bank of 26 April 2001 on a Trans-European Automated Real-time Gross Settlement Express Transfer system (Target) (ECB/2001/3), Official Journal L 140, 24 May 2001, p. 72. The Guideline is also available on the ECB's website.

¹⁸ A negative PSMN provides the rejection code (reason for the rejection).

¹⁹ "TARGET2: Principles and structure".

JANUARY 2003

On 9 January 2003 the Governing Council of the ECB decided to establish an oversight framework for TARGET. In this respect, two operational objectives for TARGET oversight were identified. First, TARGET oversight would have to verify that the system's existing and envisaged set-up and procedures were compatible with the Core Principles for Systemically Important Payment Systems. Second, any case of non-compliance with the Core Principles would have to be brought to the attention of the decision-making bodies of the ECB so that, if required, measures could be considered and implemented to ensure full compliance with the Core Principles.

JULY 2003

A summary of all the responses to the public consultation ("TARGET2: Principles and structure"), together with the individual contributions, was published on the ECB's website on 14 July 2003.²⁰ All respondents welcomed the Eurosystem's initiative to improve the functionality and performance of TARGET. The banking industry stressed the importance of users being involved in the TARGET2 project. In addition, the contributions received in the public consultation process served as a basis for determining the core features and functions of TARGET2.

The TARGET compensation scheme, which replaced the former reimbursement scheme, came into force on 1 July 2003. It was introduced for the benefit of TARGET participants in the event of TARGET malfunctioning. In designing the scheme, existing market practices were taken into account. The conditions for compensation offers and payments are set out in the TARGET Guideline. The scheme applies to all national RTGS systems participating in or connected to TARGET, and covers both intra and inter-Member State TARGET payments. A malfunctioning of the ECB payment mechanism affecting TARGET participants would also be covered by the compensation scheme. However, the scheme does not apply to customers in the ECB payment mechanism. Its procedures are largely standardised in order to keep the administrative burden low.

NOVEMBER 2003

The 2003 TARGET release successfully went live on 17 November 2003. The main feature of the release was the removal of the customer transfer message type MT100 from the TARGET system. SWIFT stopped supporting this message type and, as TARGET is based on SWIFT messaging standards, TARGET had to follow suit.

JUNE 2004

The 2004 TARGET release successfully went live on 14 June 2004. This release took into account a change in the SWIFT validation rule for IBANs, which came into force on the same day. The change consisted of adding a further six countries.

DECEMBER 2004

On 16 December 2004 the Governing Council of the ECB accepted the offer made by three NCBs (Deutsche Bundesbank, Banque de France and Banca d'Italia) and approved the building of a

²⁰ "Summary of comments received on TARGET2: Principles and structure".

Single Shared Platform (SSP) for the second-generation TARGET system (TARGET2). Further details on the characteristics of TARGET2 were made available in February 2005.

MARCH 2005

Poland was the first of the ten new Member States to join TARGET. On 7 March 2005 Narodowy Bank Polski's euro RTGS system (SORBNET-EURO) was connected to TARGET via the Banca d'Italia's RTGS system (BIREL).

NOVEMBER 2006

On 20 November 2006 Estonia was the second of the new Member States to join TARGET. Eesti Pank's euro RTGS system was also connected to TARGET via the Banca d'Italia.

JANUARY 2007

Slovenia joined the euro area. For efficiency reasons, Banka Slovenije decided not to develop its own euro RTGS system, but to use the Deutsche Bundesbank's RTGS system to connect to TARGET. Banka Slovenije commenced operations as a member of the Eurosystem on 2 January 2007.

Following its decision not to join TARGET2, in 2006 Sveriges Riksbank prepared for the disconnection of its TARGET component, E-RIX, effective on 2 January 2007. The majority of Swedish participants anticipated the disconnection and made alternative arrangements to remain connected to TARGET (e.g. either as a direct participant via another central bank, as an indirect participant or through correspondent banking).

NOVEMBER 2007

On 19 November 2007 the Eurosystem successfully launched the SSP of TARGET2. On the same day the first migration group – composed of the NCBs and the respective TARGET user communities in Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg, Malta and Slovenia – was connected to TARGET2.

FEBRUARY 2008

On 18 February 2008 the second migration group – comprising the NCBs and the respective TARGET user communities in Belgium, Finland, France, Ireland, the Netherlands, Portugal and Spain – successfully connected to TARGET2.

MAY 2008

On 19 May 2008 the third and final migration group – comprising the NCBs and the respective TARGET user communities in Denmark, Estonia, Greece, Italy and Poland, as well as the ECB – successfully connected to TARGET2.

NOVEMBER 2008

After having successfully carried out the necessary acceptance and user tests, SSP release 2.0 went live on 17 November 2008. The elements constituting release 2.0 were the adaptations to the SWIFT standards 2008, the implementation of SWIFT Cash Management Standard CAMT 4.0, and a number of bug fixes.

DECEMBER 2008

On 22 December 2008 TARGET2 reached a peak of 576,324 transactions, which represents an all-time high for the system (including the original TARGET) since its launch in January 1999.

JANUARY 2009

Slovakia adopted the euro on 1 January 2009. On the next day, Národná banka Slovenska and its national user community started sending and receiving euro payments via TARGET2.

MAY 2009

Exceptionally, two new system releases were scheduled for 2009. The first one (release version 2.1) was an intermediate release that went live on 11 May to enable the cross-CSD settlement functionality in the ancillary system interface. The second one is explained in the next paragraph.

NOVEMBER 2009

The second release in 2009 (release version 3.0) was implemented on 23 November, enhancing the system's real-time online monitoring tool and implementing the new message standard MT202COV, among other new features.

FEBRUARY 2010

After having carried out all the preparatory work, Българска народна банка (Bulgarian National Bank) and its national user community connected to TARGET2. This connection brought 18 new participants to TARGET2 (16 commercial banks, one ancillary system and Българска народна банка (Bulgarian National Bank)).

NOVEMBER 2010

The yearly release in 2010 (release version 4.0) went live on 22 November. Since then, TARGET2 users have been able to access the SSP through the internet and not solely through the SWIFT network. This feature improves access to TARGET2 primarily for smaller banks. In addition, SSP release 4.0 brought some minor changes to fine-tune the services for the banking community as well as some services for the central banks.

JULY 2011

On 4 July the Banca Națională a României (Romanian National Bank) and its national user community connected to TARGET2 after having completed all the preparatory work. As a result, 23 new participants joined TARGET2 (22 commercial banks and the national central bank).

NOVEMBER 2011

The yearly release in 2011 (release version 5.0) was implemented, as always, during the third weekend of November to coincide with the SWIFT Standard Release. The most important change to TARGET2 in 2011 was the technical implementation of an alternative network for central banks in case of a SWIFT outage, which allows for the timely execution of (very) critical payments on behalf of the participants in a more efficient way.

SEPTEMBER 2012

On 19 September 2012 the Eurosystem approved, for the first time since TARGET2 began operations, amendments to the TARGET2 pricing policy. They entered into force in January 2013.

OCTOBER 2012

The strategy for the migration of TARGET2 to ISO 20022 was approved. According to the strategy, in the future TARGET2 will use a new set of ISO 20022-compliant payment messages. The migration will follow the “like-for-like approach”, which ensures full compatibility with the legacy standards. There will be no overlap between the old and new standards, and the date for the migration is November 2017.

JANUARY 2013

In the context of the introduction of the new pricing scheme a new participation type was introduced: “addressable BIC – branch of correspondent”. This new category allows a more precise differentiation among the various categories of participants in the SSP.

NOVEMBER 2013

The yearly release in 2013 (release version 7.0) was implemented, on the same weekend of November as the SWIFT Standard Release. The most important change to TARGET2 in 2013 was the connection of TARGET2 to T2S. The new software for this was implemented on the SSP but will not be activated until the T2S go-live date.

3 GENERAL TERMS AND ABBREVIATIONS

COUNTRIES

| | | | |
|----|----------------|----|----------------|
| BE | Belgium | LU | Luxembourg |
| BG | Bulgaria | HU | Hungary |
| CZ | Czech Republic | MT | Malta |
| DK | Denmark | NL | Netherlands |
| DE | Germany | AT | Austria |
| EE | Estonia | PL | Poland |
| IE | Ireland | PT | Portugal |
| GR | Greece | RO | Romania |
| ES | Spain | SI | Slovenia |
| FR | France | SK | Slovakia |
| IT | Italy | FI | Finland |
| CY | Cyprus | SE | Sweden |
| LV | Latvia | UK | United Kingdom |
| LT | Lithuania | | |

OTHERS

| | |
|----------|--|
| ASI | Ancillary system interface |
| BIC | Business Identifier Code |
| BIS | Bank for International Settlements |
| CCBM | Correspondent central banking model |
| CET | Central European Time |
| CLS | Continuous Linked Settlement |
| CM | contingency module |
| CPSS | Committee on Payment and Settlement Systems |
| EAF | Euro Access Frankfurt |
| EBA | European Banking Association |
| ECB | European Central Bank |
| ECBS | European Committee for Banking Standards |
| EEA | European Economic Area |
| ELS | Euro Link System |
| EMI | European Monetary Institute |
| EMU | Economic and Monetary Union |
| EONIA | Euro overnight index average |
| EPM | ECB payment mechanism |
| ERM II | Exchange rate mechanism II |
| ESCB | European System of Central Banks |
| EU | European Union |
| EUR, € | Euro |
| EURO1 | EU-wide payment system of the EBA |
| FIN | Financial application; store and forward messaging service on the SWIFT network |
| FIN copy | Function of the SWIFT network whereby instructions may be copied and optionally authorised by a third party before being released to the beneficiary |
| Forex | Foreign exchange |
| GFS | General functional specifications |
| IBAN | International Bank Account Number |
| ICM | Information and control module |

| | |
|--------------|---|
| IFFM | Interlinking free format message |
| IMF | International Monetary Fund |
| ISIM | Interlinking statistical information message |
| ISO | International Organization for Standardization |
| ITES | Interlinking test environment system |
| LVPS | Large-value payment system |
| MAC | Message authentication code |
| MT103 | Message type |
| MT103+ | Message type |
| MT202 | Message type |
| MT202COV | Message type |
| NCB | National central bank |
| NMP | National migration profile |
| NSS | Net settlement system |
| PHA | Proprietary home account |
| PM | Payment module |
| PSMN | Payment settlement message notification |
| PSMR | Payment settlement message request |
| PSPWG | Payment Systems Policy Working Group |
| PSSC | Payment and Settlement Systems Committee |
| PvP | Payment versus payment |
| Repo | Repurchase operation |
| RTGS | Real-time gross settlement |
| SFD | Settlement Finality Directive |
| SO | Standing order |
| SSP | Single Shared Platform |
| SSS | Securities settlement system |
| STP | Straight-through processing |
| SWIFT | Society for Worldwide Interbank Financial Telecommunication |
| SWIFTNet Fin | Store and forward messaging service for financial institutions on the SWIFTNet platform |
| TARGET | Trans-European Automated Real-time Gross settlement Express Transfer system |
| TARGET2 | Second-generation TARGET system |
| T2S | TARGET2-Securities system |
| TCP/IP | Transmission control protocol/ internet protocol |
| T2IS | TARGET2 Information System |
| TWG | TARGET Working Group |
| UDFS | User Detailed Functional Specifications |
| WGT2 | Working Group on TARGET2 |

4 GLOSSARY

Ancillary system interface (ASI): A standardised interface to the TARGET2 payment module that can be used by ancillary systems to perform the cash clearing of their business.

Availability: A criterion for evaluating a system on the basis of its back-up facilities and the possibility of switching over to them. See **TARGET availability**.

Business Identifier Code (BIC): A universal means of identifying (financial) institutions in order to facilitate the automated processing of telecommunication messages in financial environments.

Business continuity: A payment system or securities settlement system arrangement that aims to ensure that the system meets agreed service levels even if one or more components fail or if it is affected by another abnormal event. This includes both preventive measures and arrangements to deal with these events. See **TARGET contingency measures**.

Central bank credit (liquidity) facility: A standing credit facility which can be drawn upon by certain designated account holders (e.g. banks) at a central bank. The facility can be used automatically at the initiative of the account holder. The loans typically take the form of either advances or overdrafts on an account holder's current account which may be secured by a pledge of securities or by repurchase agreements. See **daylight credit, marginal lending facility**.

Clearing/clearance: The process of transmitting, reconciling and, in some cases, confirming payment orders or security transfer instructions prior to settlement, possibly including the netting of instructions and the establishment of final positions for settlement. Sometimes the terms are used (imprecisely) to include settlement.

Continuous Linked Settlement (CLS) Bank: CLS Bank provides global multi-currency settlement services for foreign exchange transactions, using a payment-versus-payment (PvP) mechanism, meaning that a foreign exchange operation is settled only if both counterparties simultaneously have an adequate position in the currency they are selling.

Collateral: Assets pledged (e.g. by credit institutions with central banks) as a guarantee for the repayment of loans, as well as assets sold (e.g. to central banks by credit institutions) as part of repurchase agreements.

Correspondent banking: An arrangement whereby one credit institution provides payment and other services to another credit institution. Payments through correspondents are often executed through reciprocal accounts (nostro and loro accounts), to which standing credit lines may be attached. Correspondent banking services are primarily provided across national borders, but are also provided in some domestic contexts, where they are known as agency relationships. A loro account is the term used by a correspondent to describe an account held on behalf of a foreign credit institution; the foreign credit institution would in turn regard this account as its nostro account.

Correspondent central banking model (CCBM): A mechanism established by the ESCB within the TARGET system to enable counterparties to obtain credit from the central bank of the country in which they are based using collateral held in another country. In the CCBM, an NCB acts as custodian for the other NCBs with regard to the securities held in its domestic securities settlement system (SSS).

Counterparty: The opposite party in a financial transaction (e.g. any party transacting with a central bank).

Credit institution: (i) An undertaking whose business is to receive deposits or other repayable funds from the public and to grant credit for its own account; or (ii) an undertaking or any other legal person, other than those under (i), which issues means of payment in the form of electronic money.

Credit risk/exposure: The risk that a counterparty will not settle an obligation in full, either when due or at any time thereafter. Credit risk includes the replacement cost risk and the principal risk. It also includes the risk of settlement bank failure.

Credit transfer: A payment order or, sometimes, a sequence of payment orders made for the purpose of placing funds at the disposal of the beneficiary. Both the payment instructions and the funds described therein move from the bank of the payer/originator to the bank of the beneficiary, possibly via several other banks as intermediaries and/or more than one credit transfer system.

Credit transfer system: A funds transfer system through which payment orders move from (the bank of) the originator of the transfer message or payer to (the bank of) the receiver of the message or beneficiary.

Customer payment: A payment where the originator or the final beneficiary, or both, are not financial institutions.

Daily processing: The complete cycle of processing tasks that needs to be completed in a typical business day, from start-of-day procedures to end-of-day procedures, including the backing-up of data.

Daily settlement: The completion of settlement on the day of value of all payments accepted for settlement.

Daylight credit: Credit extended for a period of less than one business day. Daylight credit (also referred to as intraday credit) may be extended by central banks to even out mismatches in payment settlements. In a credit transfer system with end-of-day final settlement, daylight credit is, in effect, extended by a receiving institution if it accepts and acts on a payment order even though it will not receive final funds until the end of the business day.

Deposit facility: A standing facility of the Eurosystem which counterparties may use to make overnight deposits at an NCB, which are remunerated at a pre-specified interest rate.

Direct debit: A pre-authorised debit on the payer's bank account initiated by the payee.

Economic and Monetary Union (EMU): The Treaty describes the process of achieving EMU in the EU in three stages. Stage One of EMU started in July 1990 and ended on 31 December 1993; it was mainly characterised by the dismantling of all internal barriers to the free movement of capital within the EU. Stage Two began on 1 January 1994, and provided for, inter alia, the establishment of the EMI, the prohibition of financing of the public sector by the NCBs, the prohibition of privileged access to financial institutions by the public sector and the avoidance of excessive government deficits. Stage Three started on 1 January 1999 with the transfer of monetary competence to the

ECB and the introduction of the euro. The cash changeover on 1 January 2002 completed the set-up of EMU.

European Economic Area (EEA) countries: The EU Member States plus Iceland, Liechtenstein and Norway.

EONIA (euro overnight index average): A measure of the effective interest rate prevailing in the euro interbank overnight market. It is calculated as a weighted average of the interest rates on unsecured overnight lending transactions denominated in euro, as reported by a panel of contributing banks.

ERM II (exchange rate mechanism II): The exchange rate arrangement that provides the framework for exchange rate policy cooperation between the euro area countries and the EU Member States that are not participating in Stage Three of EMU.

Exchange-for-value settlement system: A system which involves the exchange of assets, such as money, foreign exchange, securities or other financial instruments, in order to discharge settlement obligations. These systems may use one or more funds transfer systems in order to satisfy the payment obligations which are generated. The links between the exchange of assets and the payment system(s) may be manual or electronic.

Final (finality): Irrevocable and unconditional.

Final settlement: Settlement which is irrevocable and unconditional.

Final transfer: An irrevocable and unconditional transfer which effects a discharge of the obligation to make the transfer. The terms “delivery” and “payment” are both defined as a final transfer.

Financial application (FIN): A SWIFT-offered application enabling financial institutions to exchange structured message-based financial data worldwide in a secure and reliable manner.

Financial risk: A term covering a range of risks incurred in financial transactions, e.g. liquidity and credit risks. **See also liquidity risk, credit risk/exposure.**

Foreign exchange settlement risk: The risk that one party to a foreign exchange transaction will transfer the currency it has sold, but not receive the currency it has bought. This is also called cross-currency settlement risk or principal risk. (Sometimes it is additionally referred to as Herstatt risk, although this is an inappropriate term given the differing circumstances in which this risk materialises. See **Herstatt risk**.)

Gridlock: A situation which can arise in a funds or securities transfer system, in which a failure to execute one or more transfer instructions (because the necessary funds or securities balances are unavailable) prevents the execution of a substantial number of other instructions from other participants. See also **queuing, systemic risk**.

Gross settlement system: A transfer system in which the settlement of funds or securities occurs individually (on an instruction-by-instruction basis).

Herstatt risk: The risk of loss in foreign exchange trading as a result of one party delivering foreign exchange, while the counterparty financial institution fails to complete its end of the contract. This is also referred to as settlement risk. See **foreign exchange settlement risk**.

Hybrid system: A payment system which combines characteristics of RTGS systems and netting systems.

Information and control module: A mandatory and unique functional interface between TARGET2 direct participants and the Single Shared Platform (SSP).

Inter-Member State payment: A payment between counterparties maintaining an account with different central banks.

International Bank Account Number (IBAN): The IBAN concept was developed by the European Committee for Banking Standards (ECBS) and by the International Organization for Standardisation (ISO), and is an internationally agreed standard. It was created as an international bank identifier, used to uniquely identify the account of a customer at a financial institution, to assist error-free customer payments between Member States, and to improve the potential for straight-through processing (STP), with a minimum amount of change within domestic schemes.

Incident: A situation that prevents the system from functioning normally or causes substantial delays.

Interbank payment: A payment where both the originator and the final beneficiary are financial institutions.

Interlinking mechanism: One of the components of the TARGET system. The term is used to designate the infrastructures and procedures which link domestic RTGS systems in order to enable the processing of inter-Member State payments within TARGET.

Internet-based access: A connection mode to the Single Shared Platform (SSP) that offers direct access to the main TARGET2 services. It is an alternative to connecting via the SWIFT network.

Internet-based participant: A direct participant that connects to TARGET2 via the internet. See also **internet-based access**.

Intraday credit: See **daylight credit**.

Intraday liquidity: Funds which can be accessed during the business day, usually to enable financial institutions to make payments in real time. See also **daylight credit**.

Intra-Member State payment: A payment between counterparties maintaining an account with the same central bank.

Irrevocable and unconditional transfer: A transfer that cannot be revoked by the transferor and is unconditional (and therefore final).

ISO 20022: International standard for developing financial message standards, the methodology of which features the representation of business processes and related transactions in a formal but syntax-independent notation.

Large-value funds transfer system: A funds transfer system through which large-value and high-priority funds transfers are made between participants in the system for their own account or on behalf of their customers. Although, as a rule, no minimum value is set for the payments they carry, the average size of payments passed through such systems is usually relatively large. Large-value funds transfer systems are also known as wholesale funds transfer systems.

Large-value payments: Payments, generally of very large amounts, which are mainly exchanged between banks or between participants in the financial markets and usually require urgent and timely settlement.

Legal risk: The risk of loss owing to the unexpected application of a law or regulation or because a contract cannot be enforced.

Liquidity risk: The risk that a counterparty will not settle an obligation at its full value when due, but instead on some unspecified date thereafter.

Message authentication code (MAC): A hash algorithm parameterised with a key to generate a number which is attached to the message and used to authenticate it and guarantee the integrity of the data transmitted.

Marginal lending facility: A standing facility of the Eurosystem which counterparties may use to receive overnight credit from an NCB at a pre-specified interest rate against eligible assets. See also **central bank credit (liquidity) facility**.

MT202COV: The MT202COV is a general-use message, which means that registration in a Message User Group is not necessary in order to send and receive this message. The message contains a mandatory sequence to include information on an underlying customer credit transfer and has a maximum message length of 10,000 characters.

Net settlement system (NSS): A funds transfer system, the settlement operations of which are completed on a bilateral or multilateral net basis.

Obligation: A duty imposed by contract or by law.

Operational risk: The risk of human error or a breakdown of some component of the hardware, software or communications system which is crucial to settlement.

Oversight of payment systems: A central bank task, principally intended to promote the smooth functioning of payment systems. The objectives of oversight are to protect the financial system from the possible domino effects which may occur when one or more participants in the payment system encounter credit or liquidity problems, and to foster the efficiency and soundness of payment systems. Payment systems oversight addresses a given system as a whole (e.g. a funds transfer system) rather than individual participants. It also covers payment instruments.

Pan-European automated clearing house (PE-ACH): A business platform for the processing of euro payment instruments which is made up of governance rules and payment practices and supported by the necessary technical platform(s).

Payment: The payer's transfer of a monetary claim to a party acceptable to the payee. Typically, claims take the form of banknotes or deposit balances held at a financial institution or at a central bank.

Payment message/instruction/order: An order or message to transfer funds (in the form of a monetary claim on a party) to the account of the beneficiary. The order may relate either to a credit transfer or to a debit transfer. See also **credit transfer, direct debit, payment**.

Payment system: A payment system consists of a set of instruments, banking procedures and, typically, interbank funds transfer systems which facilitate the circulation of money.

Payment settlement message notification (PSMN): The response to a payment settlement message request (PSMR) (see below), which can be either positive or negative. It is normally positive (indicating that the beneficiary's settlement account in the receiving NCB's/the ECB's books has been successfully credited), but may also be negative, in which case it is returned to the sending central bank with an error code.

Payment settlement message request (PSMR): The settlement of TARGET payments between Member States involves the exchange of PSMRs from the sending NCB/the ECB and payment settlement message notifications (PSMNs) (see above) from the receiving NCB/the ECB. The sender of the PSMR requests the receiver to process a payment; this message requires a positive or negative PSMN from the receiver.

Payment versus payment (PvP): A mechanism in a foreign exchange settlement system which ensures that a final transfer of one currency occurs if, and only if, a final transfer of the other currency or currencies takes place.

Principal risk: The risk that a party will lose the full value involved in a transaction (credit risk). In the settlement process, this term is typically associated with exchange-for-value transactions when there is a lag between the final settlements of the various legs of a transaction (i.e. the absence of delivery versus payment). The principal risk which arises from the settlement of foreign exchange transactions (foreign exchange settlement risk) is sometimes called cross-currency settlement risk or Herstatt risk. See **credit risk/exposure**.

Queuing: An arrangement whereby transfer orders are held pending by the originator/deliverer or by the system until sufficient cover is available in the originator's/deliverer's clearing account or under the limits set against the payer; in some cases, cover may include unused credit lines or available collateral.

Real-time processing: The processing of instructions at the time they are received rather than at some later time.

Remote participant: A participant in a system which has neither its head office nor any of its branches located in the country where the system is based.

Remote access to TARGET: The possibility for an institution established in one country in the European Economic Area (EEA) to become a direct participant in the RTGS system of another country and, for this purpose, to have a settlement account in euro in its own name with the NCB of the second country without necessarily having established a branch or subsidiary in that country.

Repurchase agreement: An agreement to sell an asset and to repurchase it at a specified price on a predetermined future date or on demand. Such an agreement is similar to collateralised borrowing, although it differs in that the seller does not retain ownership of the assets.

Repurchase operation (repo): A liquidity-providing reverse transaction based on a repurchase agreement.

Reserve requirement: The minimum amount of reserves a credit institution is required to hold with the Eurosystem. Compliance is determined on the basis of the average of the daily balances over a maintenance period of around one month.

Retail payments: This term describes all payments which are not included in the definition of large-value payments. Retail payments are mainly consumer payments of relatively low value and urgency.

Real-time gross settlement (RTGS): The continuous (real-time) settlement of funds or securities transfers individually on an order-by-order basis with intraday finality (without netting).

RTGS system: A settlement system in which processing and settlement take place on an order-by-order basis (without netting) in real time (continuously).

Settlement: An act which discharges obligations in respect of funds or securities transfers between two or more parties. Settlement may be final or provisional. See **gross settlement system, net settlement system, final settlement**.

Settlement risk: A general term used to designate the risk that settlement in a transfer system will not take place as expected. This risk may comprise both credit and liquidity risk.

Single Shared Platform (SSP): TARGET2 is based on a single technical platform, known as the Single Shared Platform, which includes payment and accounting processing services and customer-related services.

Standing facility: A central bank facility available to counterparties on their own initiative. The Eurosystem offers two overnight standing facilities: the marginal lending facility and the deposit facility.

Straight-through processing (STP): The automated end-to-end processing of trades/payment transfers, including the automated completion of generation, confirmation, clearing and settlement of instructions.

Swap: An agreement on the exchange of payments between two counterparties at some point(s) in the future in accordance with a specified formula.

SWIFT (S.W.I.F.T. s.c.r.l.) (Society for Worldwide Interbank Financial Telecommunication):

A cooperative organisation created and owned by banks which operates a network designed to facilitate the exchange of payment and other financial messages between financial institutions (including broker-dealers and securities companies) throughout the world. A SWIFT payment message is an instruction to transfer funds; the exchange of funds (settlement) subsequently takes place through a payment system or through correspondent banking relationships.

Systemic risk: The risk that the inability of one institution to meet its obligations when due will cause other institutions to be unable to meet their obligations when due. Such failure may cause significant liquidity or credit problems and, as a result, could threaten the stability of or confidence in markets.

Systemically important payment system: A payment system is deemed systemically important if, in the event of being insufficiently protected against risk, disruption within it could trigger or transmit disruption to participants or cause broader systemic disruption in the financial area.

Transmission control protocol/ internet protocol (TCP/IP): A set of commonly used communications and addressing protocols; TCP/IP is the de facto set of internet communication standards.

TARGET availability: The ratio of time when TARGET is fully operational to TARGET opening time.

TARGET: Trans-European Automated Real-time Gross settlement Express Transfer system: the Eurosystem's real-time gross settlement system for the euro. The first-generation TARGET system was replaced by TARGET2 in May 2008.

TARGET2: The second-generation TARGET system. It settles payments in euro in central bank money and functions on the basis of a single shared IT platform, to which all payment orders are submitted for processing.

TARGET2-Securities: The Eurosystem's single technical platform enabling central securities depositories and NCBS to provide core, borderless and neutral securities settlement services in central bank money in Europe.

TARGET business continuity: The ability of each national TARGET component to switch to a remote secondary site in the event of a failure at the primary site, with the goal of enabling normal operations to resume within the shortest time possible.

TARGET contingency measures: Arrangements in TARGET which aim to ensure that it meets agreed service levels during abnormal events even when the use of an alternative site is not possible or would require too much time.

TARGET market share: The percentage processed by TARGET of the large-value payments in euro exchanged via all euro large-value payment systems. The other systems are EURO1 (EBA) and Pankkien On-line Pikasiirrot ja Sekit-järjestelmä (POPS).

Transfer: Operationally, the sending (or movement) of funds or securities, or of rights relating to funds or securities, from one party to another party by: (i) the conveyance of physical instruments/

money; (ii) accounting entries on the books of a financial intermediary; or (iii) accounting entries processed through a funds and/or securities transfer system. The act of transfer affects the legal rights of the transferor, the transferee and possibly third parties with regard to the money, security or other financial instrument being transferred.

Transfer system: A generic term covering interbank funds transfer systems and exchange-for-value systems.

ADDITIONAL TABLES AND CHARTS

| Distribution of payment flows in TARGET2 | | | | | | | | | |
|--|-------------------------|-------------|-------------------|-------------|-------------------------|-------------|-------------------|-------------|--|
| | 2013 | | | | 2012 | | | | |
| | Value (EUR billions) | Percentages | Volume | Percentages | Value (EUR billions) | Percentages | Volume | Percentages | |
| AT | 5,308 | 1.1 | 1,203,469 | 1.3 | 6,486 | 1.0 | 1,717,949 | 1.9 | |
| BE | 21,402 | 4.3 | 2,377,168 | 2.6 | 26,634 | 4.2 | 2,548,400 | 2.8 | |
| BG | 337 | 0.1 | 185,649 | 0.2 | 313 | 0.0 | 140,818 | 0.2 | |
| CY | 144 | 0.0 | 222,441 | 0.2 | 701 | 0.1 | 156,910 | 0.2 | |
| DE | 151,591 | 30.7 | 45,811,977 | 49.5 | 195,561 | 30.8 | 44,956,404 | 49.6 | |
| DK | 3,461 | 0.7 | 195,749 | 0.2 | 2,896 | 0.5 | 200,343 | 0.2 | |
| EE | 275 | 0.1 | 106,418 | 0.1 | 320 | 0.1 | 92,099 | 0.1 | |
| ES | 65,095 | 13.2 | 7,676,862 | 8.3 | 88,333 | 13.9 | 7,618,477 | 8.4 | |
| EU | 7,513 | 1.5 | 150,506 | 0.2 | 8,893 | 1.4 | 141,671 | 0.2 | |
| FI | 9,894 | 2.0 | 406,988 | 0.4 | 21,872 | 3.4 | 412,543 | 0.5 | |
| FR | 87,565 | 17.7 | 9,116,908 | 9.8 | 110,252 | 17.4 | 8,660,482 | 9.6 | |
| GR | 8,618 | 1.7 | 1,094,548 | 1.2 | 5,021 | 0.8 | 1,109,668 | 1.2 | |
| IE | 3,720 | 0.8 | 915,285 | 1.0 | 4,398 | 0.7 | 1,027,144 | 1.1 | |
| IT | 37,465 | 7.6 | 10,381,309 | 11.2 | 32,663 | 5.2 | 8,918,385 | 9.8 | |
| LT | 75 | 0.0 | 110,761 | 0.1 | 137 | 0.0 | 125,752 | 0.1 | |
| LU | 17,009 | 3.4 | 1,121,502 | 1.2 | 18,015 | 2.8 | 898,312 | 1.0 | |
| LV | 132 | 0.0 | 349,817 | 0.4 | 186 | 0.0 | 328,026 | 0.4 | |
| MT | 99 | 0.0 | 60,269 | 0.1 | 261 | 0.0 | 40,285 | 0.0 | |
| NL | 69,341 | 14.1 | 7,981,616 | 8.6 | 105,508 | 16.6 | 8,484,736 | 9.4 | |
| PL | 323 | 0.1 | 811,432 | 0.9 | 301 | 0.0 | 814,715 | 0.9 | |
| PT | 2,735 | 0.6 | 1,090,288 | 1.2 | 3,709 | 0.6 | 1,066,552 | 1.2 | |
| RO | 105 | 0.0 | 211,433 | 0.2 | 115 | 0.0 | 219,510 | 0.2 | |
| SI | 607 | 0.1 | 687,768 | 0.7 | 714 | 0.1 | 713,241 | 0.8 | |
| SK | 627 | 0.1 | 319,971 | 0.3 | 840 | 0.1 | 278,956 | 0.3 | |
| Total | 493,442 | | 92,590,134 | | 634,132 | | 90,671,378 | | |

Chart 33 Intra-day pattern of customer payments in 2013 – volume



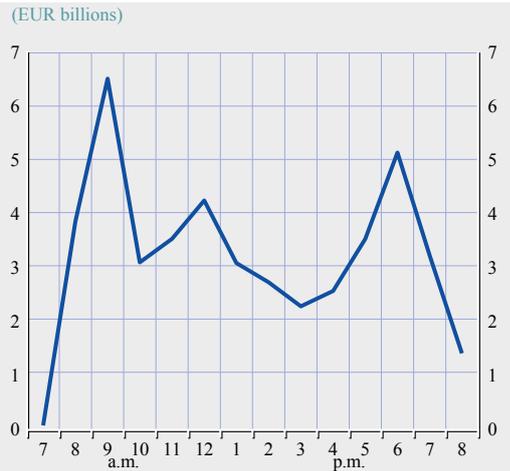
Source: ECB.

Chart 34 Intra-day pattern of customer payments in 2013 – value



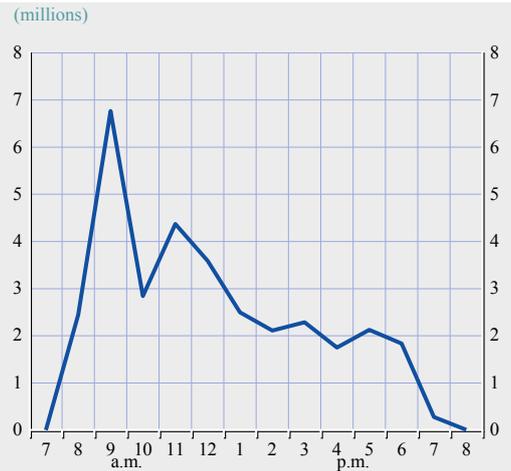
Source: ECB.

Chart 35 Intra-day pattern of interbank payments in 2013 – value



Source: ECB.

Chart 36 Intra-day pattern of interbank payments in 2013 – volume



Source: ECB.

