



EUROPEAN CENTRAL BANK

EUROSYSTEM

TARGET ANNUAL REPORT 2010





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2010

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As at 19 May 2011

ISSN 1830-2025 (online)



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INTRODUCTION

INTRODUCTION

TARGET2 is the second-generation Trans-European Automated Real-time Gross settlement Express Transfer system¹ for the euro. It is operated by the Eurosystem and went live between November 2007 and May 2008, replacing the first generation system, TARGET.

The Eurosystem has the statutory task of promoting the smooth operation of payment systems. This is crucial for a sound currency and for the conduct of monetary policy, the functioning of financial markets, and the maintenance of banking and financial stability. The Eurosystem's main instrument for carrying out this task, among other,² is the provision of payment settlement facilities. To this end, in 1999, it created the TARGET system for the settlement of large-value payments in euro, offering a premium payment service which transcends 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 an 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 settles payments related to monetary policy operations, as well as payments related to other payment and securities settlement systems. TARGET2 provides intraday finality, i.e. settlement is final for the receiving participant once the funds have been credited. The money received is central bank money and 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 a harmonised set of cash

settlement services to ancillary systems and supports its users with enhanced liquidity management tools. With that, it has contributed to financial integration, financial stability and liquidity efficiency in the euro area.

TARGET2 is accessible to a large number of participants. Most credit institutions use it to make payments on their own behalf or on behalf of other (indirect) participants. More than 850 banks use TARGET2 to initiate payments on their own 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 addressed via TARGET2.

Market infrastructure for payments is one of the three core components of the financial system, together with markets and institutions. A payment is defined as the process by which cash, deposit claims or other monetary instruments are transferred between economic agents. A market infrastructure for payments consists of the set of instruments, networks, rules, procedures and institutions that ensures the circulation of money. The principal objective of a market infrastructure for payments, such as TARGET2, is to facilitate the conduct of transactions between economic agents and to support the efficient allocation of resources in the economy.

The complexity and, in particular, importance of the market infrastructure for payment

1 A real-time gross settlement 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 second-generation successor TARGET2 are examples of RTGS systems.

2 The Eurosystem fulfils this task by:

- providing payment and securities settlement facilities (TARGET2) and also a mechanism for the cross-border use of collateral (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; and
- acting as a catalyst for change (i.e. promoting the SEPA initiative).

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.

THE REPORT AND ITS STRUCTURE

This report is the eleventh edition of the “TARGET Annual Report”. The first edition was published in 2000, covering TARGET’s first year of operation (1999). This eleventh edition takes account of the fundamental developments which took place in TARGET2 in the course of 2010. The report is addressed to decision-makers, practitioners, lawyers and academics wishing to acquire an in-depth understanding of TARGET2. It will hopefully also be of interest to students with an interest in market infrastructure issues and TARGET2 in particular.

With regard to the report’s structure, Chapter I provides information on the TARGET2 traffic activity, its performance and the main developments that took place in 2010. Chapter 2 provides an overview of the current TARGET2 system. The report is complemented by annexes that provide details of the main features of TARGET2, a chronology of developments in TARGET/TARGET2, a list of general terms and acronyms, and a glossary.

Throughout the report, the reader can find boxes providing detailed information on topics of particular relevance in 2010, as well as in-depth analysis of specific TARGET2 features. The boxes are: “The ISO 20022 strategy for TARGET2”, “The interactions between TARGET2, CCBM2 and T2S”, “Liquidity saving features and their use”, and “Internet-based access to TARGET2”.

In the following paragraphs, 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 2010

The TARGET2 system functioned smoothly in 2010 and confirmed its dominant position in the European landscape with a market share of 91% of the total value of payments in large-value euro payment systems. In 2010 the total number of payments processed by the TARGET2 system remained stable, having increased only by 0.1%. By contrast, the total value increased by 7.6% on the previous year. The average daily volume totalled 343,380 transactions and represented an average daily value of €2,299 billion. The availability of the Single Shared Platform (SSP) of TARGET2 reached 100%. Finally, on 30 June 2010, TARGET2 reached a peak of 504,124 transactions, representing a value of €3,673 billion.

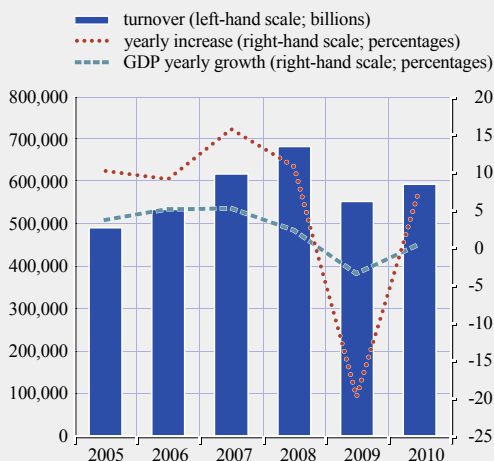
I EVOLUTION OF TARGET2 TRAFFIC

I.1 TARGET2 TURNOVER

In 2010 TARGET2 settled transactions with a total value of €593,194 billion, which corresponds to a daily average value of €2,299 billion (see Chart 1). The system's turnover increased this year after a sharp drop in 2009 due to the effects of the financial crisis and the different statistical methodology used.³ When comparing the TARGET2 turnover with the euro area's annual GDP it is possible to see that TARGET2 settles the equivalent of it in around four days of operations. This indicates the efficiency of TARGET2, which provides intraday finality for transactions and allows the funds credited to the participant's account to become immediately available for other payments. Consequently, the same euro can be reused several times by several TARGET2 participants within the same day. As in previous

Chart 1 TARGET turnover

(valued settled per year; in EUR billion)



Source: ECB.

years, interbank transactions accounted for a vast majority of the system's turnover, at a share of 94%, with the remaining proportion being made up of customer transactions.

Chart 1 also shows the yearly growth of euro area GDP. When comparing it with the yearly growth of the TARGET2 turnover, it is possible to observe a certain correlation between the two indicators, showing that the value settled in TARGET2 largely follows the evolution of economic activities in the euro area.

³ With the new TARGET2 statistical methodology adopted in 2009, the transactions that are made for purely technical reasons or that are due to the accounting structure of TARGET2 have been excluded from the reporting, and only the transactions causing a change of the legal ownership of the money are taken into account. The effects these change has on the volumes in TARGET2 are very small. However, the effects on the values are significant.

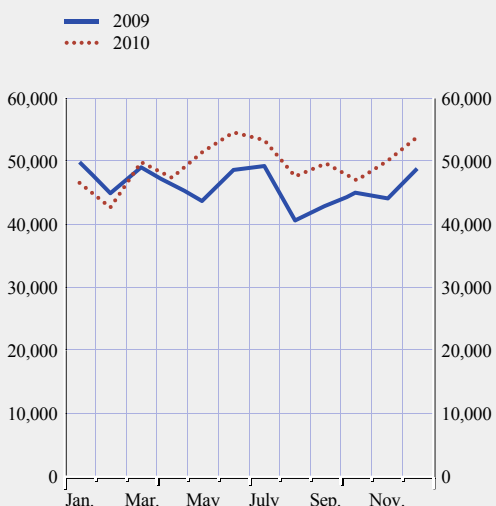
Table 1 Evolution of TARGET2 traffic

		EUR billions		Change	Number of payments		Change
		2009	2010	%	2009	2010	%
TARGET overall of which	Total	551,174	593,194	7.6	88,516,538	88,591,926	0.1
	Daily average	2,153	2,299		345,768	343,380	

Source: ECB.

Chart 2 TARGET2 turnover

(total value exchanged on a monthly basis in EUR billion)



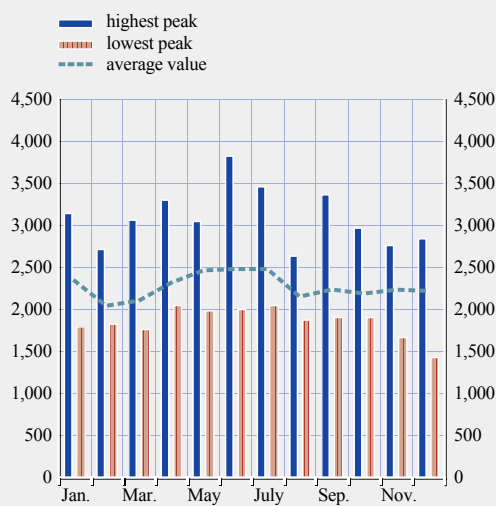
Source: ECB.

The main reason for the increase in the value of TARGET2 traffic in 2010 was the fact that some European banks progressively normalised their refinancing behaviours. The contribution of the Eurosystem's open market operations to banks' refinancing activities decreased during the last few months of the year, indicating that banks had a higher recourse to the money market to meet their short-term money demand. This was particularly the case in Germany, where the TARGET2 turnover was 25% higher than the previous year. This substantial increase mainly involves the domestic interbank traffic, while the other market segments grew in 2010 by a lower proportion.

Chart 2 looks at the value settled in TARGET2 on a monthly basis. In each month in 2010, the value settled in TARGET2 was higher than that of the corresponding month in 2009, with the exception of the first two months. This phenomenon is due to the fact that, towards the beginning of the year, the interbank market conditions started to normalise again, bringing the TARGET2 turnover back towards levels registered before the crisis. It should also be noted that the seasonality of TARGET2's turnover

Chart 3 Daily turnover PM

(2010; EUR billion)



Source: ECB.

throughout 2010 was slightly more pronounced than in 2009, with a deviation of 28% between the highest and the lowest figures (compared with 23% in 2009). This pattern is slightly above that observed before the financial crisis.

Chart 3 gives an overview of the highest and lowest peaks for the SSP as well as the average values for each month of 2010. In general, for a given month, a higher level of traffic is registered on the last business day owing to reimbursements and due dates in various financial markets. The effect is even more pronounced if that day is also the end of a quarter, which was the case for the highest peak in 2010, recorded on 30 June. Peaks in value can also be influenced by other factors, such as the TARGET holidays. For instance the highest turnover in April was not observed on the last business day of that month but on the business day following the Easter break, during which the system is closed for four consecutive days. As regards the lowest peaks, they are typically observed on national holidays in some Member States, for example Epiphany on 6 January, Whit Monday on 24 May, Corpus Christi on 3 June or All Saints' Day on 1 November.

Finally, Chart 4 provides a comparison of the average value settled in the major payment systems worldwide over the last eleven years.⁴ It illustrates the position of TARGET vis-à-vis the largest payment systems in the world, namely Continuous Linked Settlement (CLS) and Fedwire Funds, which is the RTGS systems operated by the Federal Reserve System. The traffic evolution in these three systems shows similar patterns over the last five years. In 2009, in particular, their growing trend suddenly inverted as a direct consequence of the financial crisis, but picked up again in 2010. Among the three systems, however, CLS showed a faster acceleration in the average value of payments compared with the others. This is associated with high volatility in the financial markets, especially during May and June when the forex markets were particularly volatile (see Section 1.4), which caused an increased number of instructions to be settled in the system. When reading the figures reported in Chart 4 it should be taken into account that Fedwire Funds and CLS figures are biased by the volatility of the euro's exchange rate vis-à-vis the US dollar.⁵

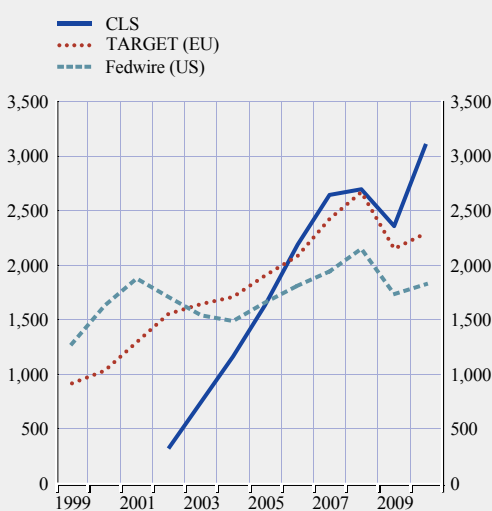
1.2 TARGET2 VOLUME

In 2010 a total of 88,591,926 transactions were settled in TARGET2, which corresponds to a daily average of 343,380 transactions. This figure is stable compared with 2009, with only a 0.1% variation. The stable trend is, however, the result of rather diverse behaviour across countries. Drops in the volume of payments were registered for instance in the Netherlands and Austria, whereas increases were reported in France and Belgium. These upward/downward fluctuations at the country level are either linked to changes in the participants' rules for routing payments (mainly in the field of retail payments) or to country-specific situations. As in previous years, customer transactions represented the majority of the system's traffic and their share remained stable at 58% of the total number of TARGET2 payments. The remaining part corresponded to interbank transactions.

- 4 For a meaningful comparison, the value exchanged in foreign systems has been converted into euro using the fixing rate on the last business day for each year.
- 5 Both Fedwire and CLS publish their turnover in US dollars. The turnover in euro is calculated on the basis of the reference rate of the ECB for the last business day of the year.

Chart 4 Major-large value payment systems in the world

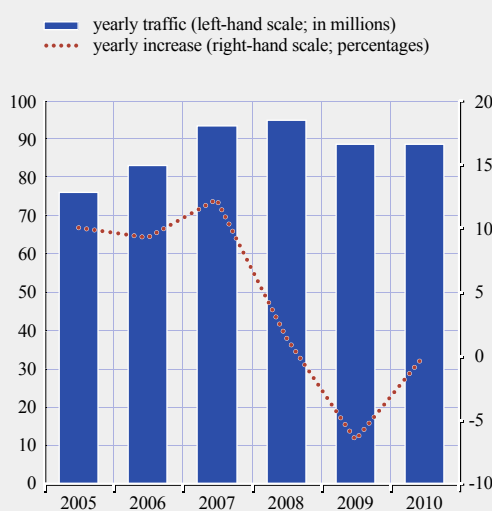
(daily turnover in EUR billion (equivalent))



Source: ECB.

Chart 5 TARGET traffic

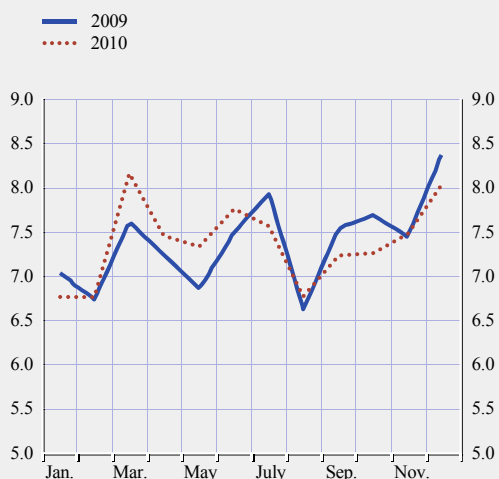
(number of transactions settled)



Source: ECB.

Chart 6 TARGET2 traffic

(volume exchanged on a monthly basis; in millions)



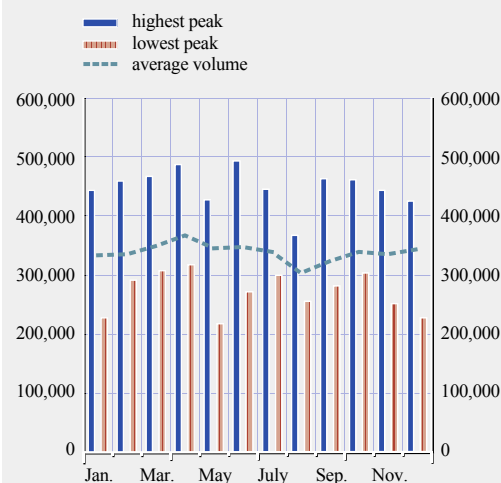
Source: ECB.

Chart 6 looks at the volume settled in TARGET2 on a monthly basis. The traffic in 2010 shows a seasonal pattern that is quite typical for TARGET2. When comparing the traffic with that of 2009, one observes that, in the first half of the year, with the exception of the first two months, the traffic was higher (+17% on a month-by-month basis), while in the second half of the year, the volume was overall lower than last year (-15% on a month-by-month basis). The two curves converged in February, August and November, when the traffic was similar to the previous year in terms of volume.

Chart 7 gives an overview of the highest and lowest peak for the SSP⁶ and the average volume for each month of 2010. As is the case with the peaks recorded in value terms, the highest figures are typically reported on the last business day of the month. This is the case for 10 months out of the 12, with even higher figures at the ends of quarters. The lowest traffic is, in general, recorded on national holidays in some Member States, such as Epiphany on 6 January, Ascension Day on 13 May, Bastille Day on 14 July, All Saints' Day on 1 November or Christmas Eve on 24 December.

Chart 7 Daily volume PM

(2010)



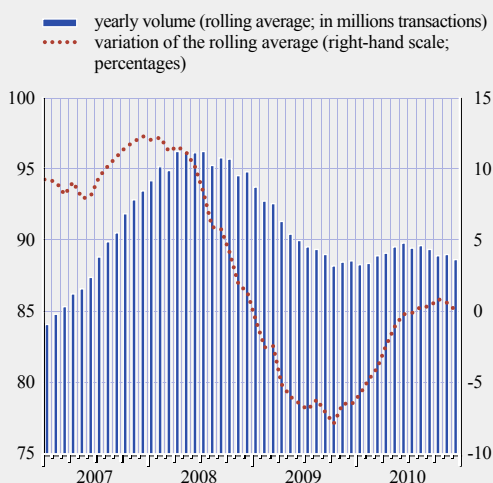
Source: ECB.

Chart 8 shows the yearly moving average of TARGET 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, together with the financial crisis, a period of decline started in the second half of 2008, and the number of transactions dropped sharply until almost the end of 2009. Around that time, the average rose again and remained stable until February 2010, when it started to decline again almost constantly throughout the year. Although, in the third quarter of 2010, the level of traffic seemed to stabilise at the level of mid-2007, in the fourth quarter, it continued to decrease below that level.

Chart 9 presents a comparison of TARGET2 traffic with that of similar large-value payment

⁶ The data presented in this paragraph only take on board the transactions settled on the Single Shared Platform of TARGET2. They may therefore differ from the TARGET2 data presented in other sections of the report, which also include also the traffic stemming from the Proprietary Home Account (PHAs) systems.

Chart 8 TARGET2 volume



systems in Europe (EURO1) and other currency zones (CHAPS-Sterling, Fedwire Funds, CHIPS, CHATS and SIC), as well as with the SWIFT volumes (for FIN payment messages). The chart

shows the evolution of traffic in the respective systems, using the volumes recorded in January 2010 as a basis. The pattern followed by all these market infrastructures is rather similar and globally shows a positive (albeit moderated) trend. There is, however, an exception with CLS, which showed a peak in traffic during the month of May and partially in June. This was an exceptional period for both the forex industry as a whole and for CLS in particular as a result of sustained market volatility. As a consequence, CLS settled a record number of instructions.

1.3 MARKET SHARES OF LARGE-VALUE PAYMENT SYSTEMS

TARGET's market share is defined as the percentage of traffic processed in TARGET out of all traffic flowing through all large-value payment systems operating in euro, namely TARGET2 and EURO1, the system operated by EBA Clearing. These remained the only two large-value payment systems for the euro, after two other large-value payment systems ceased operations (i.e. the Spanish system

Chart 9 Comparison of the traffic in LVPS/SWIFT

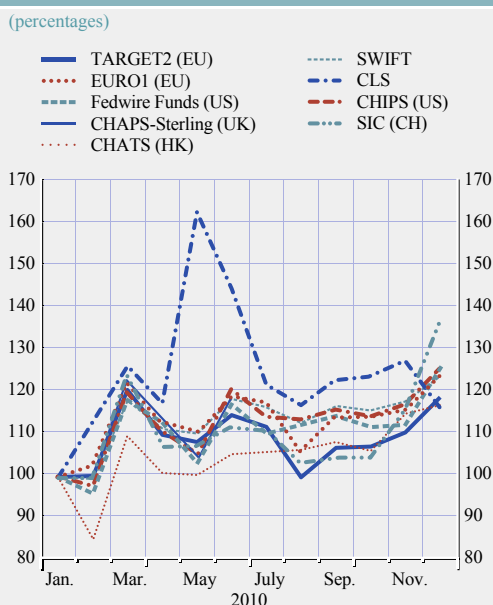
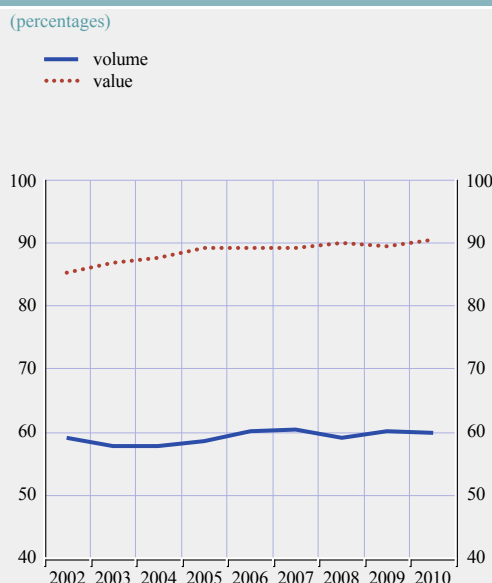


Chart 10 TARGET market share vs other LVPS in euro



Servicio Español de Pagos Interbancarios (SEPI) in 2004, and the French system *Paris Net Settlement* (PNS) in February 2008). In 2010 the share of TARGET2 remained at the high levels observed in previous years, more precisely at 90.5% in value terms (89.4% in 2009) and at 59.9% in volume terms (60.3% in 2009). This confirms that TARGET2 remained the market's preferred system for processing large-value payments in euro. The steady figures observed over the last few years also indicate that the rules banks are using for routing their transactions to either TARGET2 or EURO1 are globally relatively stable.

1.4 VALUE OF TARGET/TARGET2 PAYMENTS

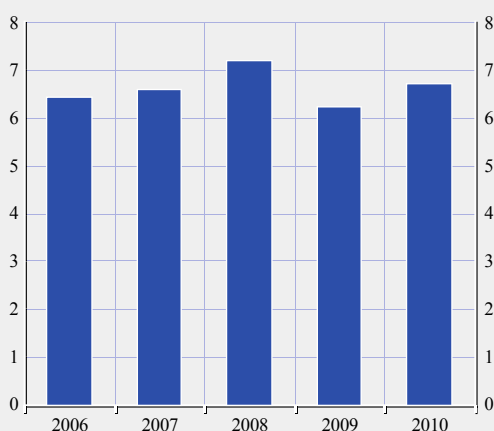
Chart 11 shows the evolution of the value of TARGET/TARGET2 payments since 2006. The average value of a payment in 2010 stood at €6.7 million, stabilising after the fluctuation of the two last years, due to the effects of the crisis. The exceptionally high average value registered in 2008 (€7.2 million) was caused by peculiar circumstances linked to the financial turmoil

and the high amounts processed in connection with refinancing operations. The level recorded in 2010 was roughly similar to that recorded before the financial crisis.

Chart 12 illustrates the distribution of TARGET2 transactions per value band, indicating the percentage of the volume that is below certain thresholds. As in previous years, two-thirds of all TARGET2 transactions were for values of less than €50,000, and payments in excess of €1 million only accounted for 11% of the traffic. On average, there were 274 payments with a value above €1 billion per day, which accounted for 0.08% of payment flows. From this wide distribution of transaction values, it results that the median payment in TARGET2 is around €10,000. This figure 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. This phenomenon is not isolated, however, and strong evidence of it is observed when

Chart 11 Average value of a TARGET payment

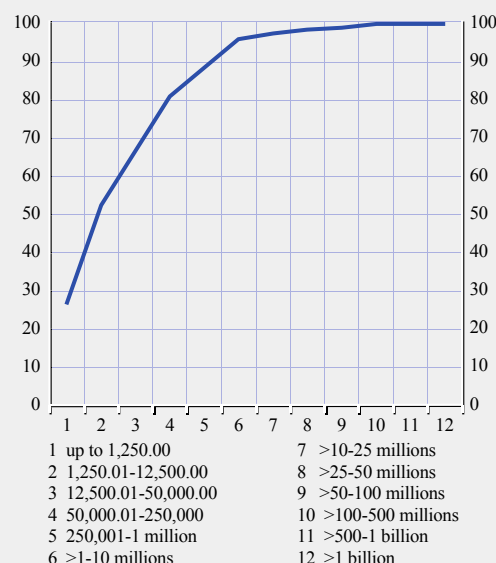
(EUR million)



Source: ECB.

Chart 12 TARGET2 payment value band

(2010; percentages)



Source: ECB.

taking into account the median payment of major payment systems around the world. For instance, in Fedwire Funds and CHIPS (both in the United States) the median payment values were equivalent to slightly higher than €28,000, and two-thirds of transfers were for amounts of less than €80,000.⁷ In CHAPS (United Kingdom) and in LVTS (Canada) the median values were equivalent to approximately €35,000. This reconfirms that the large-value transactions are offset by a large number of smaller ones.

Finally, Chart 13 provides the average value of TARGET2 payments executed at different times of the day. The chart confirms the very strong intraday pattern observed in previous years. The average value of the transactions is quite high before 7 a.m. CET. These transactions are the result of the night-time settlement. After the opening of the system at 7 a.m. CET, the hourly average value of transactions increases steadily throughout the day and reaches another peak between 5 p.m. and 6 p.m. CET, which is a consequence of banks' refinancing operations on the money market. After 6 p.m. the average value of payments increases dramatically. At this time, transactions related to the use of

the standing facilities with the central bank and liquidity transfers from proprietary home accounts (PHAs) are settled.

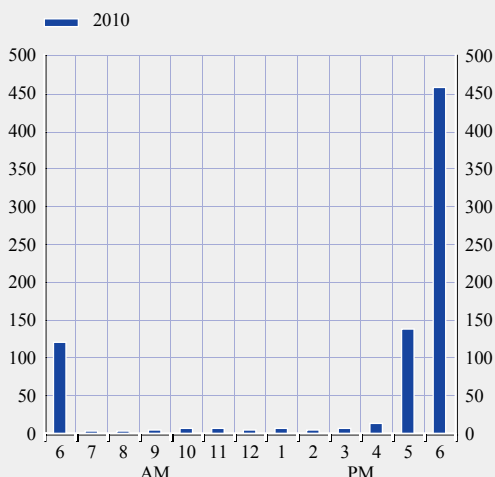
1.5 PAYMENT TYPES IN TARGET2

Charts 14 and 15 present the breakdown of the TARGET2 volume and turnover by type of transactions. Four categories are represented: payments among participants, payments related to operations with the central banks, ancillary systems settlement and liquidity transfers among participants belonging to the same group. More than three-quarters of the TARGET2 volume is represented by payments between participants, namely interbank traffic or customer payments. The rest consists of operations with the central bank for 12% (including cash operations, intraday repos, payments sent on behalf of customers and inter-NCB payments), ancillary systems settlement for 8% and, ultimately, liquidity transfers for 3%.

7 Federal Reserve Board, A summary of the roundtable discussion on the role of wire transfers in making low-value payments, May 2006 (<http://federalreserve.gov/paymentsystems/lowvaluepay/default.htm>)

Chart 13 Intraday pattern

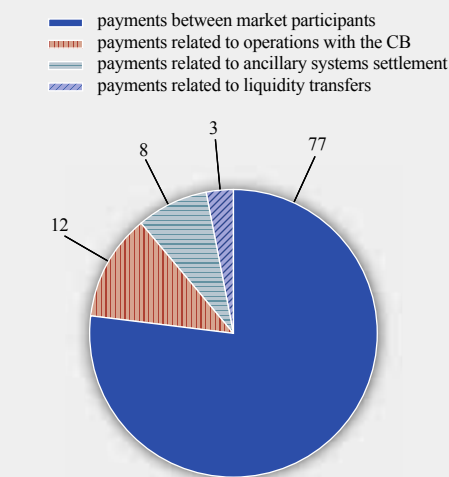
(2010; average value of a payment in EUR millions)



Source: ECB.

Chart 14 Breakdown of TARGET2 volume

(2010; percentages)

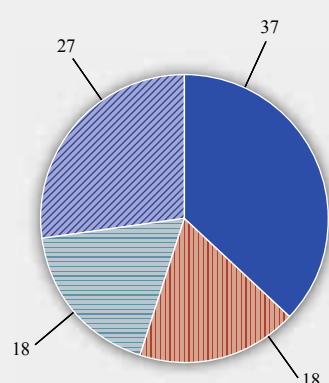


Source: ECB.

Chart 15 Breakdown of TARGET2 turnover

(2010; percentages)

- payments between market participants
- payments related to operations with the CB
- payments related to ancillary systems settlement
- payments related to liquidity transfers

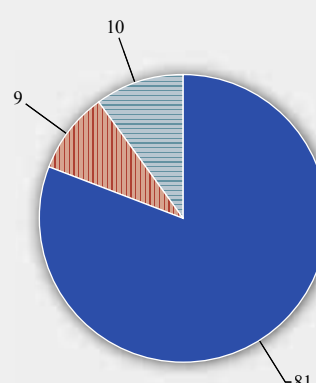


Source: ECB.

Chart 16 Use of priorities in TARGET2

(percentages)

- normal
- urgent
- highly urgent



Source: ECB.

the TARGET2 turnover is significantly different. The payments between participants represent only 37% of the value, followed by the liquidity transfers with 27%. The rest of the turnover is shared equally between operations with the central bank and ancillary systems settlement, with 18% respectively.

1.6 THE USE OF PRIORITISATION

In TARGET2 participants can submit payments assigning them a specific priority: “normal”, “urgent” and “highly urgent”⁸ (see Box 3). Priorities can also be used in connection with liquidity reservation. 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, while less urgent payments are made when the excess liquidity is sufficient. This is a way of securing expensive liquidity for more urgent payments. The priorities can also be changed at any time via the information and

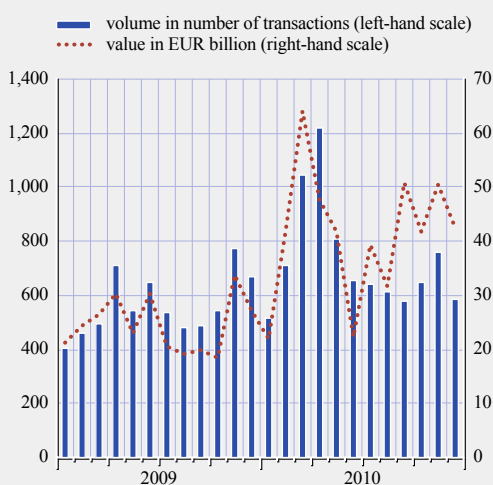
control module (ICM) for pending transactions. Chart 16 gives an overview of the use of priorities in TARGET2. It shows that the vast majority of transactions, namely 81%, had normal priority, while only 9% and 10% respectively were urgent and highly urgent. This picture has remained rather stable since the beginning of TARGET2. Priorities are adequately 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.

1.7 NON-SETTLED PAYMENTS

Non-settled payments in TARGET2 are those transactions that were not processed on account of a lack of funds or for breaching the sender’s limit at the time the system closed, and are ultimately rejected. Chart 17 shows the evolution of non-settled payments in the course of 2009 and 2010 in terms of

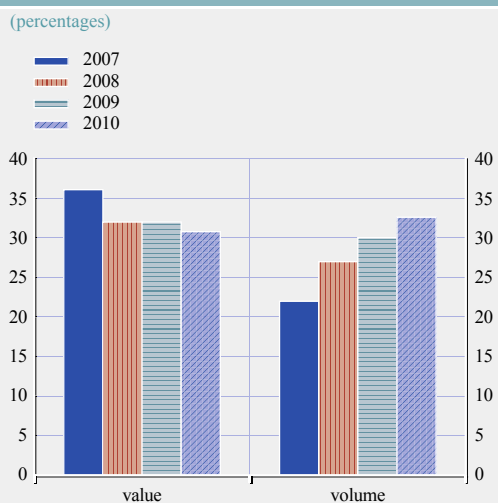
⁸ That priority can only be used in connection with operations with central banks or ancillary systems settlement.

Chart 17 Non-settled payments on the SSP



Source: ECB.

Chart 18 Share of inter-Member State traffic



Source: ECB.

both volume and value. On a daily average, there were 730 non-settled payments on the SSP for a value of €41 billion, representing 0.21% of the overall volume and 1.8% of the total turnover respectively settled per day in TARGET2. In 2010 these figures were slightly higher than those of the previous year, namely 560 transactions for €25 billion. Although higher, the levels can be still considered low and confirm that the distribution of liquidity across participants was fairly appropriate throughout that period. In particular, the increase registered in April and May can be largely explained due to technical problems by a handful of participants that erroneously sent payments after the cut-off.

1.8 SHARE OF INTER-MEMBER STATE TRAFFIC

In 2010 the share of inter-Member State traffic in TARGET2 (i.e. payments exchanged between two participants belonging to different national banking communities) was 31% in value terms and 33% in volume terms. The value figures are relatively similar to those reported in 2009 (i.e. 32%), whereas the volume figures continued to increase more substantially over the year (i.e. from 29% in 2009).

The migration to the SSP of TARGET2 helped to further blur the distinction between *inter-Member State* and *intra-Member State* transactions. The fact that 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. For this reason, TARGET2 statistics published by the Eurosystem (within the scope of this report or on an ad hoc basis) makes less and less reference to such a distinction.

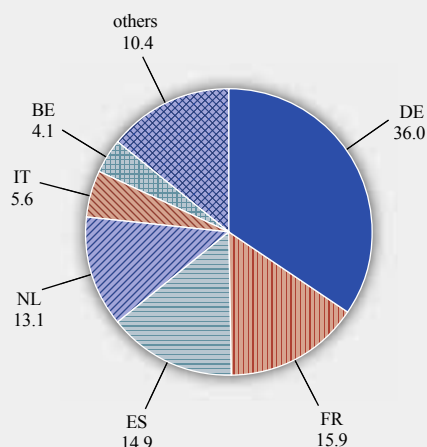
1.9 SHARES OF NATIONAL BANKING COMMUNITIES

TARGET2 runs on a single platform from which it provides settlement services to all its participants irrespective of the country from which they connect. However, it is still possible to break down the turnover and volume by national banking communities contributing to TARGET2 traffic.

Chart 19 shows the share of turnover value the different banking communities settled in TARGET2. In the interests of legibility, only those countries representing more than 2% of overall TARGET2 turnover are represented.

Chart 19 Contribution to TARGET2 turnover

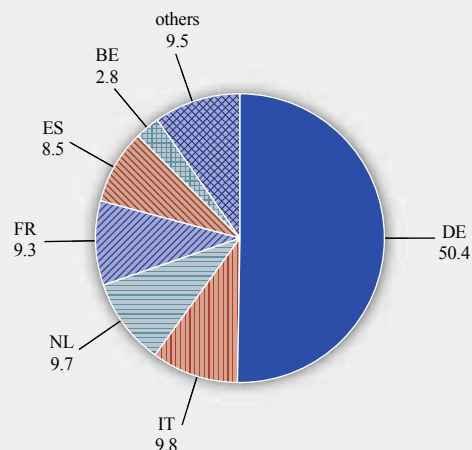
(percentages)



Source: ECB.

Chart 20 Contribution to TARGET2 volume

(percentages)



Source: ECB.

It is evident that, as in previous years, the system's activity is highly concentrated on a small number of banking communities. Five countries – Germany, France, Spain, the Netherlands and Italy – were the main contributors to TARGET2 turnover and together accounted for 85.5% of the value exchanged. This concentration on the top five countries has increased continuously over the last few years (82% in 2008 and 83.8% in 2009). The higher rate can be associated with the fact that, since November 2007, it has been possible in the TARGET2 system to consolidate the activities of banking groups around a single RTGS account held by the group's head office, hence increasing the concentration in countries where a majority of these groups are incorporated.

Chart 20 shows the contribution of the banking communities to TARGET2 volumes. In the interests of legibility, only those countries representing more than 2% of the overall traffic are represented. Germany remains the country where TARGET2 volumes are more concentrated, with a share that accounts for half of the volume exchanged. Adding Italy, the Netherlands, France and Spain, this figure increases to 87.7%. Here, the concentration rate

around the five biggest countries is still around considerably high values (88.2% in 2009 and 86% in 2008). The explanation is similar to that given for the higher concentration of TARGET2 turnover.

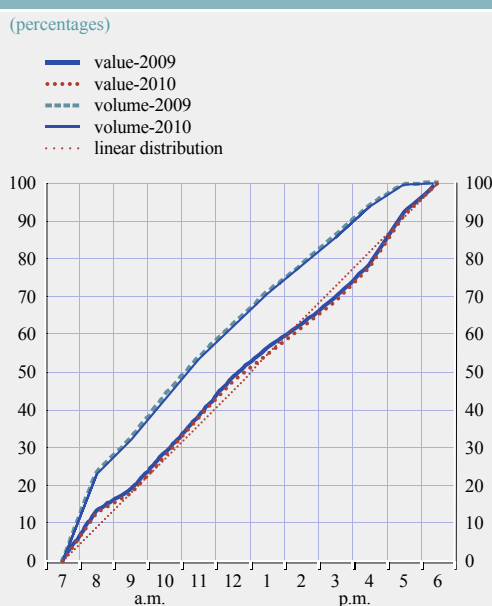
1.10 PATTERN OF INTRADAY FLOWS

Chart 21 shows the intraday distribution of TARGET2 traffic, i.e. the percentage of daily volumes and values processed at different times of the day. The dotted lines represent the distribution in 2009.

In value terms, the curve is very close to a linear distribution. This indicates that the proper circulation of liquidity among TARGET2 participants ensures that the turnover is evenly spread throughout the day, thereby ensuring the smooth settlement of TARGET2 transactions. At 1 p.m. CET, 55% of the value exchanged in TARGET2 has already been settled, a figure which reaches 92% one hour before the end of the day. The curve largely replicates the developments of the previous year.

In volume terms, the curve is well above the linear distribution, with 23% of the transactions

Chart 21 Intraday distribution of TARGET2 traffic



being submitted to the system after one hour of operations and 43% after three hours. One hour before the system closes, 99.7% of the TARGET2 volume has already been processed. Comparison with 2009 does not show significant deviations.

This regular distribution of the settlement activities throughout the day, without any strong peak, is a very important asset for TARGET2. For the Eurosystem, acting as operator of the system, this avoids concentrating the operational risk at certain times of the day.

1.11 TRANSITION PERIOD

In 2005 the Governing Council of the ECB agreed on a maximum transition period of four years after the migration to TARGET2 for settling transactions between market participants and transactions stemming from ancillary systems' settlement, as well as payments related to open market operations in the central banks' local PHAs. Since the completion of the migration in May 2008,

some central banks, such as those of Belgium and Portugal that were still operating a PHA for settlement purposes, undertook serious efforts to shorten the transition period.

At the TARGET2 level, the number of transactions settled in the PHAs represented 1% of the whole traffic in 2010. This confirms that settlement activities on the PHAs are marginal and that, in practice, the fragmentation of participants' liquidity between the SSP and the PHAs had limited and manageable effects. At the end of 2010, only 6 of the 23 central banks connected to TARGET2 were still operating local PHAs for settlement purposes. The German PHA alone represented 98% of the value settled in PHAs.

2 TARGET2 SERVICE LEVEL AND AVAILABILITY

2.1 PROCESSING TIMES

In 2010, 99.74% of the payments settled on the SSP of TARGET2 were processed in less than five minutes (99.96% in 2009). For 0.08% of the transactions, the processing time was between five and fifteen minutes (0.04% in 2009), and 0.18% of the payments needed more than fifteen minutes for processing (0% in 2009).

Although there was a small degradation of service compared with the figures of the previous year, the processing times of payments illustrate the high level of performance of the SSP of TARGET2.

The processing times of payments are only measured for payments settled on the SSP. Payments settled on the PHA are excluded from this reporting. The calculation of the processing times covers all payments made to the payment module of the SSP, with the exception of ancillary systems settlement transactions using the ancillary system interface (ASI), payments settled in the first hour of operations and payments that were not settled because of a lack of funds or breach of the limits. In practice 32.58% of all TARGET2 payments fall into

these three categories of exceptions, meaning that the statistics on processing times apply to 67.42% of the system's traffic.

With regard to other requests or enquiries,⁹ 99.97% (99.99% in 2009) were processed in less than one minute and only 0.03% (0.01% in 2009) within between one and three minutes.

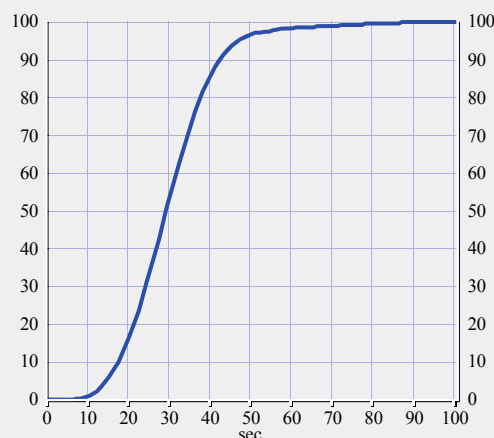
Chart 22 helps us to better quantify the system's performance by providing the distribution of processing times on the SSP, i.e. the percentage of traffic with a processing time below a certain number of seconds. The reference point taken is the peak day of the year. The chart shows that, on that day, 50% of the transactions were settled within 29 seconds and 90% within 42 seconds, thereby confirming the system's high level of performance.

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 10% of the daily volume) are already waiting for settlement, which correspond 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 batch of transactions normally takes between 3 and 30 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). In addition, attention is drawn to the possibilities offered in TARGET2 to reserve funds for highly urgent and urgent payments (see Section 1.7).

Chart 22 Distribution of processing times on the SSP

(peak day; percentages)



Source: ECB.

2.2 TECHNICAL AVAILABILITY

In light of the importance of TARGET2 for the functioning of the financial system and the knock-on effects that any potential malfunctioning could have to 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% technical availability over the reporting period.

The technical availability is measured 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 minimum reserve period) on TARGET2 business days, including all the extensions required to complete the operational day. The availability measurement does not include systems or networks not directly managed by TARGET2 (in particular, the availability of the SWIFTNet services).

The technical availability is not intended to measure the impact of partial outages involving the SSP of TARGET2. For example, an incident

⁹ This figure covers the InterAct messages received by the SSP, both in U2A and A2A mode.

only affecting the processing of ancillary systems' transactions, without having any effect on other payment processing, cannot be measured with this figure, although it has an overall impact on 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.

2.3 REPORTED INCIDENTS

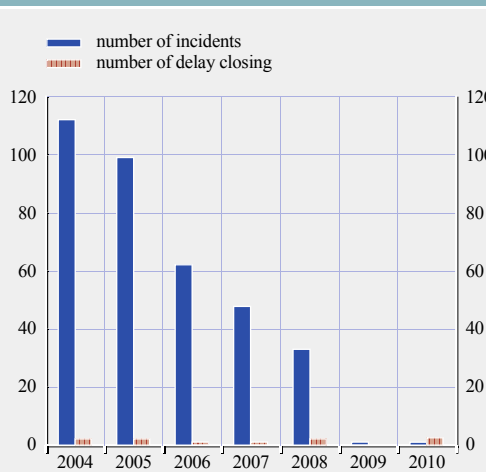
In 2010, as in 2009, one PHA incident affected the overall availability.

Two technical problems, one at the level of an ancillary system (8 July 2010) and one at the level of a central bank (13 September 2010), required a prolongation of the operational day by one hour in each case.

Because of the technical set-up of the SSP, some incidents only partly affected the processing of transactions, without making the system totally unavailable. For that reason they did not have any impact on the availability of TARGET2. In 2010 the following incidents fitted into this category:

- On 29 March 2010 the SSP faced a slowdown in processing transactions in the payment module due to a deadlock situation, which meant that only a few payments were settled for two hours in the early afternoon. Moreover the access to some ICM screens was temporarily not available for the same reasons. The problem also affected transactions using the optimisation procedures. A workaround circumvented the deadlock situation and gave back full capacity to the SSP settlement procedures. As a consequence about 60,000 payments were settled with a delay of more than 15 minutes. The root cause of the deadlock was identified and the problem was fixed.
- On 30 April 2010, in preparation for a migration of the SSP storage infrastructure, some maintenance activities were performed

Chart 23 TARGET incidents and delay closing



Source: ECB.

which delayed payment processing in the SSP for 40 minutes in the morning. As a result, 0.63% of the April payments were settled after more than 15 minutes. Rules for allowing such activities have been revised to avoid reoccurrence, particularly during business hours.

- On 1 July 2010 and 30 November 2010 some users faced long ICM response times and some ancillary system files were detected as being processed slower than usual. The SSP operational team recognised an unusual consumption of the system's resources. Additional mainframe processing resources were provided and these solved the problems on the spot. The underlying reasons were identified in both cases and the respective "bug fixes" were implemented at the system level.
- On 21 July 2010 a disconnection from the SWIFT network occurred for two minutes which impacted Realtime and Store&Forward traffic. After the reconnection all messages had been processed except 16 outgoing Store&Forward messages, which had to be resent. Investigations showed that the outage was due to a link failure of one of SWIFT's network partners.

Although not included in the performance indicators, incidents during the night-time settlement are reported transparently and followed up accordingly. In 2010 the following three incidents fitted into this category:

- On 15 February 2010 the process of acquiring all store and forward FileAct messages was stopped, due to a failure within the component managing the FileAct flows, as a result of a parameter change. All instructions channelled during the night through FileAct were acquired at 9.03 a.m. CET. As a consequence of this incident additional night-time automatic call-in features were implemented.
- On 7 September 2010, following a software failure, the resumption of the night-time settlement after the maintenance period was delayed by 5.5 hours. As a consequence all the files submitted by the ancillary systems from 1 a.m. CET could not reach the platform. The start-up process was improved subsequently to deal with such failures.
- On 27 September 2010, during the maintenance window, an automatic process failed and blocked a restart of the night-time settlement. Following manual intervention the second night-time settlement resumed at 5.37 a.m. CET when all night-time transactions still pending were processed. The root cause of the problem was identified and fixed.

As indicated above, corrective measures were implemented with the aim of preventing such interruptions from reoccurring in the future.

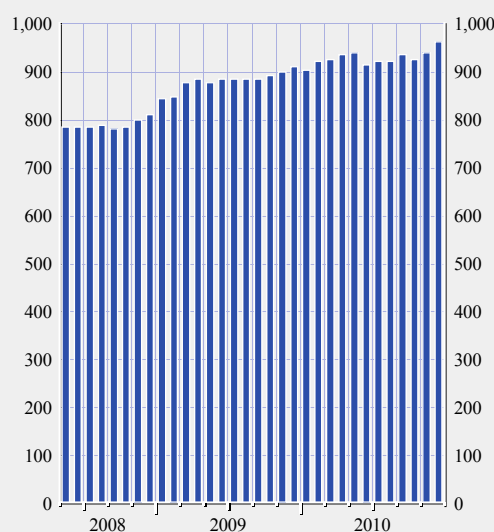
To help users cope with incidents, the ECB publishes up-to-date information about the availability of TARGET2 by means of the TARGET2 Information System (T2IS), which is accessible via the financial information provider Reuters (page ECB46) and under the “Payments & Markets” section of the ECB’s website (www.ecb.int/paym/t2/html/index.en.html).

3 TARGET2 PARTICIPANTS

3.1 RTGS ACCOUNTS

The number of RTGS accounts opened on TARGET2 (which encompasses the direct participants, the technical accounts, the ancillary systems accounts and the special-purpose accounts) has continued to increase. In total, 52 new RTGS accounts were opened in the last year, making a total of 178 new accounts opened since the end of the migration in May 2008. At the end of 2010 the total number of RTGS accounts in TARGET2 was 961. There were two reasons for this: first, the introduction of internet-based access to TARGET2 and, more generally, the phasing-out of the activity on local PHAs led some PHA participants that are not yet direct participants on the SSP to open RTGS accounts on the SSP. Second, some banking communities connected to TARGET2 after the migration, the last one being the Bulgarian banking community that connected to TARGET2 in February 2010, bringing 18 additional direct participants into the system.

Chart 24 Number of RTGS accounts in TARGET2



Source: ECB.

3.2 PARTICIPATION TYPES

Direct participation	866
Indirect participation	3,585
Multi-addressee – credit institution	26
Multi-addressee – branch of direct participant	1,432
Addressable BIC – correspondent	12,950
Addressable BIC – branch of direct participant	27,991
Addressable BIC – branch of indirect participant	12,646

At the end of December 2010, 866 direct participants held an account on the SSP of TARGET2. Via these direct participants, 3,585 indirect participants from the European Economic Area (EEA) could settle their transactions in TARGET2, as well as 12,646 correspondents worldwide. Considering also the branches of direct and indirect participants, a total of 59,496 credit institutions around the world were accessible via TARGET2 at the end of 2010. 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 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.

3.3 ANCILLARY SYSTEMS

At the end of 2010, a total of 69 ancillary systems were settling in TARGET2. Among them, 31 were retail payment systems/clearing houses, 25 were securities settlement systems and 6 were central counterparties. The vast majority of these systems – 67, to be precise – were settling directly on the SSP of TARGET2, while the other two were settling temporarily on the PHA of a national central bank (NCB). Of those ancillary systems settling on the SSP, 50 were making use of the ASI, a feature which was developed to facilitate and harmonise the cash settlement of these systems in TARGET2.

The use of the six available ASI models is shown in the following table.

ASI settlement model	Use ¹⁾
Model 1 – Liquidity transfer	2
Model 2 – Real-time settlement	15
Model 3 – Bilateral settlement	17
Model 4 – Standard multilateral settlement	19
Model 5 – Simultaneous multilateral settlement	12
Model 6 – Dedicated liquidity	15
PI – Payment interface	17

1) The number of times each model is used is higher than the number of ancillary systems that opted for the ASI because one 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 in application of the single pricing structure, which applied to payment transactions initiated both on the SSP and on the PHAs¹⁰ of the NCBs. Based on 2010 figures, the following observations can be made:

- The SSP alone generated 99.04% of overall TARGET2 revenues, while local PHAs accounted 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.
- 86% of direct participants in the SSP opted for the flat fee option (i.e. option A), while 14% opted for the degressive fee option (i.e. option B).¹¹ This illustrates that TARGET2 is still capable of attracting both the major players in the euro area and,

¹⁰ These cover bank-to-bank payments, as well as ancillary system settlement and open market operations.

¹¹ Option A (i.e. a monthly fee of €100 and a flat transaction fee of €0.80) targets 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.

at the same time, a large number of small and medium-sized institutions.

- The participants opting for the pricing option B generated in total around 89%¹² of the traffic on the SSP. As a result of this concentration effect, 29.83% of all SSP transactions were priced in 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.¹³

Transactions exchanged between credit institutions generated, exactly like last year, around 92% of TARGET2 volumes, with the remaining 8% attributable to ancillary system transactions.

4.2 COST RECOVERY OBJECTIVES

The objective set by the Governing Council of the ECB is that TARGET2 should recover all its costs (with the exception of a public good factor) over the six-year amortisation period, i.e. between May 2008 and April 2014. 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 increase by an average of 6% per year. This objective was not met in 2009 with a total of 87.06 million transactions due to the overall economic slowdown and exceptional market conditions. In order not to draw any premature conclusions, no amendments to TARGET2's core pricing was foreseen for that time as the final objective could still be achieved. Similarly, in 2010, the objective was not met either. Following the estimation of the annual increase of 6%, TARGET2 should have processed 102.58 million transactions, but the number of

transactions in 2010 was 15.23 million less due to the ongoing impact of the financial crisis.

It is important to note that the cost recovery is not set as an annual objective, but rather as an average over the six-year amortisation period. The situation will therefore be continuously monitored and, if necessary, reassessed on the basis of the financial performance of 2011.

5 TARGET2 RISK MANAGEMENT AND OVERSIGHT ACTIVITIES

5.1 TARGET2 RISK MANAGEMENT

Managing risks to information security is a key element of the governance structure of TARGET2. In order to meet this responsibility, the Eurosystem has established a comprehensive risk management¹⁴ 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 life-cycle of TARGET2.

In particular, TARGET2's risk management processes aim at: (i) monitoring developments to ensure that progress on the implementation of security controls in response to issues resulting from risk assessments is satisfactory; (ii) learning from operational experience to ensure that appropriate measures are taken to prevent an incident from reoccurring; and (iii) identifying proactively new threats and vulnerabilities that could occasionally emerge from the changing environment in which the TARGET2 system operates and, if needed, initiating deliberations

¹² Participants of the Core Pricing, CBs using ASI for "other purposes", Ancillary systems and Liquidity pooling.

¹³ 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.

¹⁴ 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).

regarding the implementation of additional security controls in order to prevent these threats from materialising.

Updated information obtained from the risk management processes is reported on a regular basis in the form of an action plan. Progress made with regard to the implementation of mitigating measures listed in the action plans is monitored with the aim of ensuring that satisfactory progress is being made and of creating awareness of any potential security problems that might arise.

In conclusion, the consistent use of the dynamic modules and processes of the TARGET2 risk management framework reassures the Eurosystem, as well as TARGET2 users, that the overall security situation in TARGET2 will be kept at a satisfactory level. In this context, it is worth mentioning that no incidents that seriously affected the security and operational reliability of TARGET2 were observed in 2010.

5.2 OVERSIGHT ACTIVITIES

The migration from the decentralised architecture of the first-generation TARGET system to the technically centralised platform of TARGET2 led to some amendments in the allocation of tasks and responsibilities between the oversight function of the ECB and the oversight functions of the participating NCBs. The Governing Council of the ECB entrusted the ECB's oversight function with the task of leading and coordinating all TARGET2 oversight activities. The ECB overseers act in close cooperation with the overseers from the participating NCBs. The latter remain responsible for the conduct of 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.

A comprehensive assessment of the TARGET2 design against the Core Principles for Systemically Important Payment Systems was initiated in 2006 and the interim results were submitted to the decision-making bodies of the

ECB in April 2008. The final report on the "Oversight assessment of the TARGET2 design" was approved by the Governing Council in May 2009. A shortened version of the assessment report was published on 15 May 2009.¹⁵

While the overall outcome of the assessment was positive and did not reveal any serious concerns regarding compliance of the TARGET2 design with the applicable Core Principles, the report highlighted the following issues (not having an adverse impact on the design of TARGET2) that still needed to be addressed by the operator:

- (1) investigation of technical options for the real-time synchronisation of the two processing regions and the provision of additional collateral in contingency processing;
- (2) work on operational overhead costs;
- (3) improvements to change and release management;
- (4) work to better involve users in the future development of TARGET2;
- (5) work on the level of cost recovery for the liquidity pooling functionality.

Throughout 2009 and 2010 the TARGET2 oversight function monitored activities undertaken by the operator to address the above open issues. In March 2010 the overseer concluded that the new procedures introduced by the operator allowed for an orderly change and release management procedure, including sufficient participation of TARGET2 users in the change management process as well as transparency of the rules concerning the collection and evaluation of changes, communication to users at various stages of the release management process and the implementation of new requirements, and closed the above recommendations 3 and 4.

¹⁵ See http://www.ecb.europa.eu/pub/pdf/other/assessment_target2designagainstcoreprinciples200905en.pdf

Furthermore, following the publication of the Business Continuity Oversight Expectations (BCOE) for Systemically Important Payment Systems (SIPS) in May 2006, the SIPS operators were expected to implement and test the oversight expectations by June 2009. In July 2010 the TARGET2 oversight function completed the assessment of TARGET2 compliance with the BCOE initiated in 2009. The overseers concluded that the business continuity framework of TARGET2 was in general well-established and ensured that a sufficiently high and consistent level of resilience was achieved. Nevertheless, the TARGET2 oversight function issued a few recommendations to the TARGET2 operator. Throughout 2010 the overseer discussed with the operator these recommendations and the best way of addressing them.

Furthermore, the oversight function regularly monitors the implementation of the new TARGET2 releases. In 2010 the SSP release 4.0 was assessed, in particular the implementation of the internet-based access. The overseer assessed both the content of the new release and the process of how its implementation had been managed by the system operator. The overseer concluded that the changes were in line with the Core Principles and that several of the changes eliminated certain current weaknesses in the system and would result in better services for TARGET2 customers.

Moreover, the oversight function conducted regular oversight activities of TARGET2 in 2010, mainly covering the monitoring of system performance, including the analysis of incidents, statistical data and information on the risk situation.

Ad hoc TARGET2 oversight activities concerned the connection to TARGET2 of Bulgaria.

The NCBs of Austria, Germany, Greece, Lithuania and Poland reported to the ECB on the oversight activities performed with respect to their PHAs in 2010.

Considering the results of all the above-mentioned assessments and taking into account the stable operational performance of TARGET2 throughout 2010, the overseers concluded that the overall risk situation of TARGET2 was satisfactory.

6 SYSTEM EVOLUTION

In 2010 TARGET2 was enhanced with the introduction of an additional service, namely internet-based access to the system. This service enables TARGET2 users to access the system through the internet and not exclusively through the SWIFT network. This feature is of particular benefit for smaller banks. For more information on this, see Box 4.

Beyond that, only minor changes were implemented in release 4.0, which served to further fine-tune the system in accordance with changes requested by the TARGET2 user community. The system release also improved some central bank services in TARGET2 and introduced a few changes to prepare the system for interfacing with the future Eurosystem collateral management service CCBM2.

In 2010 the Eurosystem also finalised the content of the SSP release 5.0, which is scheduled to go live on 21 November 2011. The most important change will be the implementation of an alternative network for central banks, which will allow the timely execution of (very) critical payments on behalf of their participants in a more efficient way in case of a SWIFT outage.

The Eurosystem continues to pay close attention to the development and continuous evolution of TARGET2 beyond the annual releases, with the aim of meeting market demands and fulfilling the objectives of TARGET2 under the principle of full cost recovery. During 2010 the Eurosystem started to work on two strategic initiatives that will greatly contribute to the development of the system. These initiatives are highly relevant for TARGET2 and are considered to equip TARGET2 well for future

challenges, for the benefit of its users as well as for financial stability and financial integration considerations.

The first initiative is the elaboration of a strategy for increasing the use of the ISO 20022 standards in TARGET2 (see Box 1).

Box 1

THE ISO 20022 STRATEGY FOR TARGET2

ISO 20022 has been at the core of discussions in the financial industry for the past few years, as it aims to increase both the efficiency and interoperability of financial institutions, market infrastructures and end-users. In this sense, ISO 20022 has obtained the support of the European authorities, since it helps to foster implementation of the Lisbon agenda.

So far, implementation of the ISO 20022 standards has varied quite substantially from one business area to the other. For example, the securities side is particularly advanced in comparison with the cash/treasury side. The reason for this is twofold: first, because securities applications have so far used ISO 15022, a more elaborate set of standards closer to ISO 20022, which made the migration easier and cheaper; and second, because implementing ISO 20022 contributes to the removal of the first Giovannini barrier, to which all securities stakeholders are committed.

In the cash area, TARGET2 can already be considered rather advanced, as it already makes use of formats that are very close to ISO 20022 XML messages for its ASI and ICM. In light of this, in the course of 2010, the Eurosystem started to reflect on the benefits that TARGET2 participants could draw from extending the use of ISO 20022 standards in the system.

Besides the general advantages that the ISO 20022 may bring in terms of efficiency and interoperability, the Eurosystem considered two additional elements. First, the close linkages of TARGET2 to other Eurosystem projects, such as TARGET2 Securities (T2S) or Collateral Central Bank Management (CCBM2), that are based on the new ISO 20022 standards (see Box 2). The interlinkages between these systems and the adaptation necessary to interface them could generate synergies for increasing the use of the new technology in TARGET2. Furthermore, at the time when the Eurosystem reflections started, the European Commission was working on a regulation to impose an end-date for the migration to SEPA instruments, also based on ISO 20022.

The Eurosystem brought together these elements in a “step-by-step” strategy aimed at expanding the use of ISO 20022 in TARGET2 in the medium term. The move to ISO 20022 is considered an issue of strategic importance for the system that should be seen as a cornerstone in the development of TARGET2. Therefore, in view of the long-term effect on the scope of the system such changes would have, a market consultation was launched in October and November 2010, in the interest of elaborating a strategy that creates synergies for all stakeholders and contributes to a higher efficiency of the industry.

The responses to the consultation were fairly similar. Banks acknowledged the advantages associated with the use of ISO 20022 and, in general, expressed their support for its use in TARGET2. However, some concerns were expressed on the timing for the different phases, in particular regarding the migration of retail payments to ISO 20022. Furthermore, some banks

insisted that TARGET2 should not be seen as an isolated system and invited the Eurosystem to take on board the evolution of the other infrastructures and communities worldwide.

The Eurosystem has recently announced its revised strategy, which takes into account market feedback, as well as the strategic importance of the move to ISO for TARGET2. The strategy, to be implemented in the context of the annual releases, includes three subsequent steps:

- (1) adaptations to T2S;
- (2) implementation of ISO 20022 messages for customer payments;
- (3) possible further compliance.

(1) Interconnection with TARGET2 Securities – release 7.0 (November 2013)

The go-live of T2S in 2014 will have consequences for TARGET2, because TARGET2 will have to cater for its connection with T2S which may have an impact on its participants. In line with the requirements of the T2S Programme Board, according to which T2S should exclusively be based on ISO 20022, the Eurosystem proposes that TARGET2 implements an interface with T2S using ISO 20022. Such a development will create opportunities and synergies that would perfectly fit with the wider TARGET2 strategy for ISO 20022. The Eurosystem identified several options for the infrastructure-to-infrastructure interface, among which the users expressed their preference for creating a single interface to manage liquidity in the two systems. Liquidity management features will also be developed according to ISO standards, enabling TARGET2 participants to reap all the benefits brought by T2S.

(2) Implementation of ISO 20022 customer payments in TARGET2 – possibly in release 8.0 (November 2014)

Despite being a large-value payment system, TARGET2 processes a large share of retail payments (more than 50% on average), and retail payments have become de facto part of the TARGET2 business model. Originally linked to the SEPA initiative, the implementation of ISO 20022 customer payments in TARGET2 is considered, in the bigger picture of the move to ISO 20022, as an issue of strategic importance. The Eurosystem notes that banks may draw greater benefits from this migration if it is done in combination with their move to T2S, and will therefore implement it after the adaptation to T2S. The ISO 20022 customer payments will be introduced in parallel to the current MT103 standards, which will remain, for example, for extra-European traffic.

(3) Possible further compliance – possibly in release 9.0 (November 2015)

Once TARGET2 has increased its ISO 20022 capability in the field of retail payments (with the implementation of SEPA credit transfers) and in the field of cash management and treasury transactions (with an enhanced TARGET2 interface with T2S), the compliance may also be extended to the other activities of TARGET2. The other activities at stake, which would still be using legacy standards, are mainly the reporting messaging (MT900 debit advice, MT910 credit advice, MT940/950 account statements), interbank credit transfers (MT202) and more marginally direct debit (MT204). There are pros and cons related to this step. On the one hand, these messages are well-established and extensively used by banks, and banning them from TARGET2 would represent huge costs for them. On the other hand, the Eurosystem is willing

to promote as much as possible the use of ISO 20022 standards as a means of increasing the efficiency of the banking industry in line with the Lisbon strategy. Consequently the Eurosystem envisages a flexible coexistence of legacy and ISO 20022 standards in the coming years, rather than a forced migration, and considers that further reflection on this step will be needed once it is clear how the implementation of the rest of the strategy unfolds.

In view of its strategic importance, a detailed analysis will be undertaken with market participants to define the content of each release. To this end, discussions have already started.

The second strategic initiative is related to interoperability between TARGET2, CCBM2 and T2S. Overall the interplay of these three systems will improve the efficiency of liquidity and collateral in the euro area (see Box 2).

Box 2

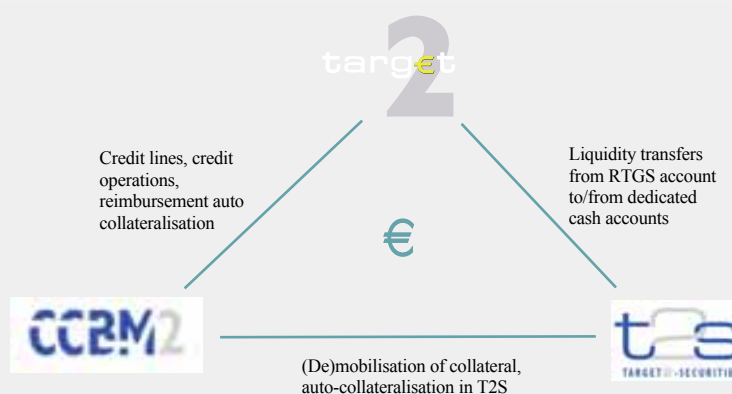
THE INTERACTIONS BETWEEN TARGET2, CCBM2 AND T2S

TARGET2 has been key for the financial integration of the euro area. With its single shared platform that came along with harmonised services and single service prices, it has allowed both banks and ancillary systems to benefit from efficiency and resilience gains. TARGET2 is now considered the core system for managing and holding euro liquidity. In the future TARGET2 will form, together with CCBM2 and T2S, a service triangle, sometimes referred to as the “magic triangle”. The interplay of these three systems will contribute further to financial integration, financial stability as well as liquidity and collateral efficiency. As with TARGET2, the two new systems will also support banks’ different business models.

Within the service triangle, TARGET2 will be a core system as the hub for euro liquidity. T2S will be an integrated system and receive cash from TARGET2 for fuelling dedicated cash accounts (DCAs). DCAs are solely used for the settlement of the cash leg related to securities transactions. In addition, T2S will offer the functionality of intraday auto-collateralisation, thereby fostering further liquidity and collateral efficiency. Whereas, during the day, a bank can freely transfer cash between DCAs and TARGET2 PM accounts and use auto-collateralisation, towards the end of the day, TARGET2 will be the single system for pooling euro liquidity. In other words, balances on DCAs will be sent back to TARGET2 and T2S auto-collateralisation will be reimbursed towards the TARGET2 end-of-day. As a result, all liquidity will be pooled in TARGET2 thus allowing money market participants to centrally manage their liquidity positions by investing surpluses or levelling out liquidity needs.

The introduction of T2S, which will be based on ISO 20022, has also been taken on board as integral part of the TARGET2 strategy towards ISO 20022 (see Box 1). TARGET2 will fully support ISO 20022 for its connection with T2S. Banks that are ready to use ISO 20022 messages will hence be able to process T2S cash side-related messages in the ISO 20022 standard. However, in answering a demand from banks, TARGET2 will help those banks that will not be ready to process ISO 20022 messages with new value-added services. More precisely, TARGET2 will

Chart



Source: ECB.

allow those banks to process T2S related cash messages with the current TARGET2 interfaces and formats.

The main relation between TARGET2 and CCBM2 lies in collateral management, including the management of intraday credit, credit lines, recourse to the marginal lending facility or the cash settlement of monetary policy operations. CCBM2 will allow a much more efficient collateral management and not distinguish between domestic and cross-border traffic. At the same time, CCBM2 will support the T2S auto-collateralisation. Overall this is sought to further increase the collateral and liquidity efficiency.

To ensure the proper functioning of the service triangle in the future, dedicated task forces have been set up at both the Eurosystem level and with industry representatives. These task forces complement the communication with broader audiences and have a mandate to identify and address the various levels of interactions, whether they are at the functional, operational or technical levels.

CHAPTER II

THE TARGET2 SYSTEM

I THE FIRST-GENERATION TARGET SYSTEM

With the establishment of the monetary union in 1999, there arose a need to develop a payment service for the purposes of what would be the single monetary policy and which would facilitate the circulation of the euro between the Member States in a fast and reliable way. At that time, the majority of Member States already had their own RTGS systems, but only for the settlement of transactions in their national currencies. Given the need to be ready in time for the introduction of the euro, this did not leave sufficient time to build a fully-fledged single RTGS system. As a result, the TARGET system was originally built by linking together the different RTGS structures that existed nationally and defining a minimum set of harmonised features, basically for sending and receiving payments across national borders (i.e. inter-Member State payments). At national level, central banks continued to function as they did for the settlement of payments within their banking community (i.e. intra-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 which consisted of 17 national RTGS systems and the ECB payment mechanism (EPM) and was available for credit transfers in the countries that had adopted the euro as their currency.

Similarly to TARGET2, TARGET offered unlimited (collateralised) intraday credit free of interest, immediate finality and high-speed processing of transactions, thus facilitating participants' cash management. 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. Besides these operations, TARGET users increasingly began using the system for

other types of transaction, including commercial payments.

The use of the first-generation TARGET system was supported by a transparent pricing structure, according to which inter-Member State payments were subject to degressive transaction fees (from €1.75 down to €0.80). However, intra-Member State transaction fees were not harmonised and were fixed by individual central banks.

The rapid integration of the euro area money markets was closely related to the establishment of the TARGET system. 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 by providing its users with a common payment and settlement infrastructure.

Most of TARGET's first-generation features explained here are still valid today or have been enhanced in the second-generation system, TARGET2.

2 THE SECOND-GENERATION TARGET SYSTEM (TARGET2)

2.1 FROM TARGET TO TARGET2

Over its years of operation, TARGET successfully met its main objectives: it supported the implementation of the single monetary policy, it contributed to reducing systemic risk and it helped banks to manage their euro liquidity at national and cross-border level. However, TARGET presented some shortcomings largely attributable to its decentralised structure, which called for a redesign of the system. Market participants increasingly called for an enhanced and more harmonised service offered at the same price across the EU. Furthermore, cost-efficiency was also considered problematic by the Eurosystem, as the revenues generated

did not cover a sufficient proportion of the costs. Finally, in the context of EU enlargement, the new Member States that were expected to connect to the system would have considerably increased the number of TARGET components. In order to meet these challenges, the Eurosystem started to examine the options for the evolution of TARGET.

In October 2002 the Governing Council of the ECB defined the principles and structure of the next-generation TARGET system, TARGET2, which would offer harmonised core services, to be provided by a single technical platform and priced according to a single price structure. Thanks to the new approach, the Eurosystem would achieve lower costs and at the same time recover a very large part of the total cost of TARGET2. A “public good” factor corresponding to the positive externalities generated by TARGET2 (e.g. in terms of the reduction of systemic risk) would be defined, for which costs would not have to be recovered. Finally, 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 monetary policy and lender of last resort relationships.

TARGET2 was successfully launched in November 2007. In TARGET2, 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 provide the SSP for TARGET2 and operate it on behalf of the Eurosystem. The migration took place in three subsequent 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. The last countries to successfully connect to TARGET2 were Denmark, Estonia, Greece, Italy and Poland in May 2008.

The ECB also connected to TARGET2 as part of this third wave.

2.2 HARMONISED SERVICES

Thanks to the move from a decentralised multi-platform system to a technically centralised 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. The main advantage for ancillary systems is that they are able to access any account in TARGET2 via a standardised interface. There are currently 69 ancillary systems settling in TARGET2. Before the launch of TARGET2, each ancillary system had its own procedure for settlement. Now TARGET2 offers six generic procedures for the settlement of ancillary systems (two real-time and four batch procedures), thereby allowing the substantial harmonisation of business practices.

TARGET2 offers new liquidity management features that have made it possible for 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. Within a group of accounts, group pricing is possible, which means a degressive transaction fee applies to all of the group’s payments as if they were sent from one account. In addition, TARGET2 also offers its users liquidity-saving features to optimise the liquidity requirements of the system. Examples are payment queues, gridlock resolution mechanisms and priorities and reservation (see Box 3 for further detail).

The TARGET2 system 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.

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

Box 3

LIQUIDITY-SAVING FEATURES AND THEIR USE

Since the 1980s, when RTGS systems started to become increasingly widespread, designers and operators have been searching for ways to mitigate the high liquidity requirements of such systems. Deferred net settlement systems, which had prevailed up until then, had been more efficient by construction. This search for the optimal use of liquidity led to a number of developments, including the following three examples.

- **Payment queues:** queuing facilities allow participants of an RTGS to submit payments even when the account balance is insufficient. The payment is queued until incoming transactions have sufficiently increased the balance.
- **Gridlock resolution mechanisms:** queues can lead to gridlock situations whereby a number of participants can only release their queued payments if the other participants release their queues as well, but where this is impossible because each bilateral relationship is locked. In such situations, the payment systems can analyse all queues and discover ways of unlocking bilateral relationships, for instance by taking into account the multilateral situation.
- **Priorities and reservations:** assigning priorities to payments and making liquidity reservations for each priority class is a way of securing expensive liquidity for more urgent payments. Less urgent payments are executed when the excess liquidity is sufficient.

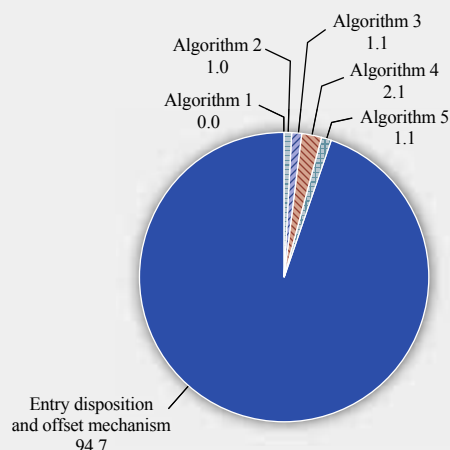
In general, increased visibility within the system, thanks to the user-friendly interface, is also indirectly contributing to more efficient liquidity management. TARGET2 offers online information tools that allow access to all information needed in relation to the payment and liquidity situation of RTGS participants. Therefore, balances and payment queues can be actively managed.

When the Eurosystem decided to develop TARGET2, it was able to draw on the rich experience of the NCBs, which had developed a wide variety of such liquidity-saving features. These features were well-established with the respective participant communities. In addition, the development of a new system meant it was possible to introduce state-of-the-art liquidity-saving features right from the outset. Discussions with users during the project phase helped in the design of such features, which took into account both the banks’ needs on the one hand and technical constraints on the other.

ALGO5: this a function for resolving ancillary system transactions within ancillary system procedure 6 only (settlement on dedicated accounts).

Chart B Share of settled payments per settlement type by volume

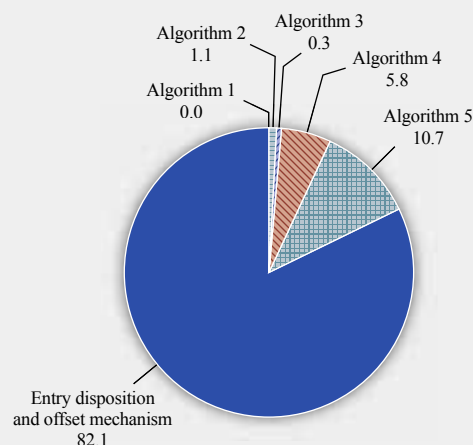
(2010; percentages)



Source: Eurosystem.

Chart C Share of settled payments per settlement type by value

(2010; percentages)



Source: Eurosystem.

In volume terms, approximately 5.3% of all incoming payment instructions in TARGET2 in 2010 were settled using algorithms. The rest were settled via first-entry processing (approximately 88%) and its offsetting mechanism (approximately 6%) (not visible in the graph). Of this 88% of payments, none were queued or subject to an algorithm.

Chart C shows that, in 2010, 82.1% of turnover was treated by the entry disposition and 17.9% by TARGET2 optimisation procedures. While, in volume terms, a small percentage is settled using the TARGET2 optimisation procedures, in value terms, the share of the use of algorithms covers almost one-fifth of the overall traffic. This shows that large-value payments benefited from the use of optimisation procedures.

Overall, use of liquidity-saving features may depend on several factors. First, it is expected to vary depending on the liquidity situation. Overall use of such features can be expected to be high in tight liquidity situations and low in an environment where liquidity is abundant. Consequently, the relatively low level of recourse to the optimisation procedures in 2010 does not indicate that the liquidity-saving features are inefficient, but that the participants had a sufficient level of liquidity.

An additional factor to take into account is the variety of practices all over Europe. Whereas some banking communities have past experience with these liquidity-saving features and are thus ready to use them, most other communities only submit transactions once the required liquidity is available on the respective accounts.

To gauge the efficiency of the existing liquidity-saving features in TARGET2, the Eurosystem intends to perform a series of simulations using the new TARGET2 simulator tool. One way of shedding light on the effectiveness of the current set-up will be the simulation of a number of scenarios with varying liquidity levels in the system.

3 SYSTEM RULES

3.1 SPECIFICATIONS

The General Functional Specifications (GFS) provide a high-level overview of the SSP for TARGET2 and its functional specifications. The latest version of the GFS (version 2.1) was made available to the user community in June 2007. The User Detailed Functional Specifications (UDFS) provide a more in-depth and detailed explanation of the core services (Book 1) and the optional services (Book 2) offered by the SSP, as well as XML messages (Book 4). The latest version of books 1, 2 and 4 of the UDFS (i.e. version 4.01) was made available to the user community in October 2010.

The user handbook for the information and control module (ICM) of the SSP describes the ICM'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 4.0) was made available to the user community in October 2010.

3.2 TARGET2 GUIDELINE

In June 2007 the Eurosystem finalised the TARGET2 Guideline, which repeals the guideline governing the operation of the first-generation TARGET system. The new TARGET2 Guideline provides the basis on which the NCBs establish their TARGET2 component systems, governed by their national legislation. It contains the main legal elements of TARGET2,

including governance arrangements and audit rules. In addition, to ensure the maximum legal harmonisation of the rules applicable to TARGET2 participants in all jurisdictions concerned, the Guideline includes harmonised conditions for participation in TARGET2. These conditions have been drafted in a way that allows the Eurosystem NCBs to implement them in an identical manner, with certain derogations only in the event that national laws require other arrangements.¹⁷ Moreover, the harmonised conditions already contain alternatives which enable NCBs to customise their implementation in line with the requirements of national law. This approach implements the decision of the Governing Council of the ECB in October 2005 to “legally construct TARGET2 as a multiple system, but aiming at the highest degree of harmonisation of the legal documentation used by the central banks within the constraints of their respective national legal framework”.

The TARGET2 Guideline was published in the Official Journal of the European Union in September 2007 and is also available on the ECB's website in all EU languages.¹⁸ An updated version of the TARGET2 Guideline was published on 15 September 2010.¹⁹ The new version includes the provisions related to internet-based access to TARGET2 (for more information, see Box 4)

¹⁷ No national derogations have been identified so far by the NCB's

¹⁸ See <http://www.ecb.int/ecb/legal/1003/1349/html/index.en.html>

¹⁹ Guideline of the ECB of 15 September 2010 amending Guideline ECB/2007/2 on a Trans-European Automated Real-time Gross settlement Express Transfer (TARGET2) (ECB/2000/12)

Box 4

INTERNET-BASED ACCESS TO TARGET2

Internet-based access is an alternative mode of connecting to the SSP that offers direct access to the main TARGET2 services without requiring a connection to the SWIFT network. It went live on 22 November 2010 in the context of release 4.0.

The new service was developed by the Eurosystem to meet the needs of small and medium-sized European banks in particular. Even though they have low-volume payment traffic,

some smaller European institutions are interested in holding an account with the central bank. This will materialise particularly in countries where proprietary home accounts (PHAs) will be phased out.

The vast majority of PHA customers are small and medium-sized institutions that hold a PHA in order to access the central bank's services or to comply with reserve requirements. Once PHAs are discontinued, these small and medium-sized institutions will need to hold an RTGS account with their NCB in order to continue to have direct access to monetary policy operations.

Internet-based participants are direct participants and hold an RTGS account with their NCB, but are subject to some functional restrictions in comparison with participants connected via the standard SWIFT connection. To give a general overview, internet-based participants are able to monitor their RTGS account via the information and control module (ICM) and to issue TARGET credit transfers via specific ICM screens, including MT103 and MT202. They can manage limits and reservations, as well as manage queues and settle their position in the ancillary system's settlement. Conversely, they are not able to issue direct debits, nor download the TARGET2 Directory, which can only be accessed online.

Although it encompasses a limited range of features compared with the standard SWIFT connection, internet-based access ensures a comparable level of security. The total confidentiality and integrity of the messages are preserved via an encryption functionality and non-repudiation is also granted. User authentication is based on certificates issued by a recognised certification authority, acting on behalf of the Eurosystem on the basis of an agreement with the participating central banks. The service is optional and the price consists of a fixed monthly fee of €70.

4 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.²⁰ Different technical options for such connections, including variants avoiding the need for individual 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.

In February 2010, after having carried out the necessary preparations and testing activities, Българска народна банка (Bulgarian National Bank) and its national user community connected to TARGET2. In total, 23 central banks of the EU and their respective user communities are connected to TARGET2: the 18 euro area central banks (including the ECB),²¹ and five central banks from non-euro area countries.²² Recently, contacts have been

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

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

22 Denmark, Poland, Latvia, Lithuania and Bulgaria.

established with Banca Națională a României, since it has expressed an interest in joining TARGET2. Romania's connection to TARGET2 is envisaged for July 2011, following completion of the necessary preparatory work.

Although connected to the former TARGET system via the local component CHAPS euro, the Bank of England decided to discontinue its connection on 16 May 2008, which was the last operational day of TARGET's first-generation system. Likewise, although connected to the former TARGET system via the local component E-RIX, Sveriges Riksbank decided to discontinue its connection on 31 December 2006.

5 COOPERATION WITH USERS AND INFORMATION GUIDES

5.1 USER COOPERATION

During its development, TARGET2 benefited greatly from cooperation between the Eurosystem and future users of the system. This cooperation continues every year with the release management process. The interaction and exchange of views with users 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 user-consultation process has always been very fruitful, and, to the extent possible, the different needs of national stakeholders are taken into account.

The Eurosystem maintains close relations with TARGET2 users and regular meetings are held at national level between the NCBs connected to the system and the respective national user groups. In addition to the cooperation at the national level, joint meetings of the Eurosystem Working Group on TARGET2 (WGT2) and the TARGET Working Group (TWG), which comprise representatives of the European

banking industry, take place regularly at a pan-European level. Four such joint meetings took place in 2010. Operational issues, in particular regarding the management of new system releases, are discussed in the joint TWG-WGT2 meetings. 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.

Relevant information of interest to the user community is published regularly on the dedicated TARGET2 website, on the ECB's website and on the websites of the NCBs. As a further method of providing information, the Eurosystem publishes twice a year a TARGET2 newsletter. In addition, the contents of the TARGET2 website were brought into line with the current operational phase, and new information was made available such as regular updates on the TARGET2 performance indicators (traffic volumes and values, and system availability).

5.2 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 in order to give their operators a better understanding of the overall functioning of the system and enable them to make use of it as efficiently as possible. Moreover, it answers the most frequently asked questions relating to TARGET2. In addition to information on the operational procedures in normal circumstances, the information guide also provides information for abnormal and contingency situations.

The latest version of the information guide (version 4.0) was made available to the user community on 22 November 2010. The information guide is intended solely to provide information on the TARGET2 system and should not be seen as a legal or contractual document.

5.3 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 and ancillary system services) and a detailed guide to the billing principles for the various types of transaction, as well as the entities to be invoiced. This information guide serves as reference documentation on pricing and billing issues, but does not confer any legal rights on operations or entities.

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 are used (FIN, InterAct, FileAct and Browse) to enable standardised communication between the TARGET2 system and its participants.

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.

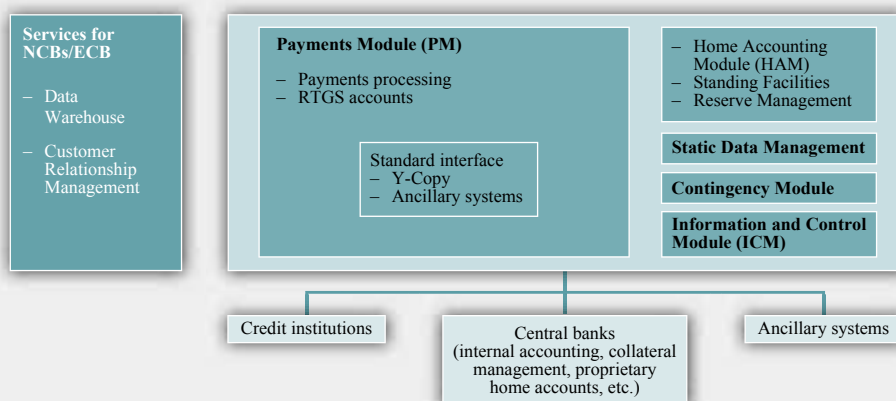
PARTICIPATION

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.

Chart I.1 Structure of the SSP



Source: ECB.

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 has been granted).

Finally, 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.

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 (ASI) 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 working days in advance.

Unless participants have indicated a settlement time, payment orders are settled immediately or at least by the end of the business day, provided that sufficient funds are available and no liquidity limits and/or reservations are opposed. 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 where 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 by-passing principle. This means that they are settled immediately (independently of other queued normal payments accepted at an earlier time), provided that

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.

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 the settlement of ancillary systems. 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 all kinds of ancillary system, 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 the settlement of ancillary systems (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, in addition to Saturdays and Sundays, 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 has the same operating dates and times as the first-generation TARGET system. 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 6.45 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 the functionality. Alternatively, banks may decide not to participate in night-time settlement. The night-time window generally increases the efficiency of night-time settlement and favours initiatives such as cross-system delivery versus payment.

PRICING

The pricing scheme for TARGET2 core services is as follows:

Option A			
Monthly fee			€100
Flat transaction fee			€0.80
Option B			
Monthly fee			€1,250
Band	Volume		Price
	From	To	
1	1	10,000	€0.60
2	10,001	25,000	€0.50
3	25,001	50,000	€0.40
4	50,001	100,000	€0.20
5	above	100,000	€0.125

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 €1,200 per account per annum for the consolidated account information option and €2,400 per account per annum 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 digressive 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.

Type of participation	Monthly fee per account/BIC
Direct participation	€100 or €1,250 depending on the scheme chosen (see the TARGET2 core pricing scheme above)
Multi-addressee access	€80 per BIC address in addition to BIC of account of the direct participant
Unpublished account in the PM of the SSP	Direct participants which do not wish their BIC to be published in the TARGET2 directory will pay €30 per account (BIC) per month in addition to the monthly fee above

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

In addition, direct participants are charged a one-off registration fee of €20 for each registration of an indirect participant and €5 for each registration of an addressable BIC (including the BICs of branches of direct and indirect participants) in the TARGET2 Directory.

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

Fees		
Fixed fee	Monthly	€70
PM account	Monthly	€100
Transaction fee	Per item	€0.80
Optional fees		
Unpublished BIC	Monthly	€30

The pricing scheme for ancillary systems interacting with TARGET2 is set out in the table below.

All NCBs, irrespective of their individual migration dates, have applied TARGET2 prices since 19 May 2008, i.e. since the third migration group joined the shared platform.

1 A) Monthly fee plus regressive transaction fee			1 B) Monthly fee plus flat transaction fee		
Monthly fee:			€1,250	Monthly fee: €100	
		Volume (monthly)			
Band	From	To	Transaction fee:	Flat rate transaction fee:	€0.80
1	0	5,000	€0.60		
2	5,001	12,500	€0.50		
3	12,501	25,000	€0.40		
4	25,001	50,000	€0.20		
5	50,001		€0.125		
2) Fixed fee I: (flat rate)					
Monthly fee per ancillary system:			€1,000		
3) Fixed fee II: (based on daily underlying gross value)					
	(EUR millions/day)	Annual fee	Monthly fee		
	€0-1,000	€5,000	€417		
	€1,001-2,500	€10,000	€833		
	€2,501-5,000	€20,000	€1,667		
	€5,001-10,000	€30,000	€2,500		
	€10,001-50,000	€40,000	€3,333		
	Above €50,000	€50,000	€4,167		

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.

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

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.

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 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

⁷ See also EMI Annual Report, May 1998.

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

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.

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 (EPM).

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 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.

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.

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

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

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

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.

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

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

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).

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

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

¹⁹ "TARGET2: Principles and structure".

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

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 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) took place together with the regular annual releases 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.

3 GENERAL TERMS AND ACRONYMS

COUNTRIES

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

OTHERS

ASI	Ancillary system interface
BIC	Bank Identifier Code
BIS	Bank for International Settlements
CCBM	Correspondent central banking model
CCBM2	Collateral central bank management (the second-generation CCBM)
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 System
EMU	European 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
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
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
SSP	Single Shared Platform
SSS	Securities settlement system
STP	Straight-through processing
SWIFT	Society for Worldwide Interbank Financial Telecommunication
SWIFTNet	Store and forward messaging
FIN	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**.

Bank 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).

Collateral central bank management (CCBM2): The Eurosystem's harmonised solution for collateral management based on a common technical platform.

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.

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

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.

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).

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.

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 settlement 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.

