



EUROPEAN CENTRAL BANK

EUROSYSTEM

TARGET ANNUAL REPORT 2011





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2011

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INTRODUCTION

INTRODUCTION

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, for the functioning of financial markets, and in supporting financial stability. The Eurosystem's main instrument for carrying out this task¹ is the provision of payment settlement facilities. To this end, the Eurosystem operates the TARGET2 system, the second-generation Trans-European Automated Real-time Gross settlement Express Transfer system² for the euro.

TARGET2 replaced in May 2008 the first-generation system, TARGET, which was created in 1999 by the Eurosystem 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 a real-time gross settlement (RTGS) basis;
2. to increase the efficiency of inter-Member State payments within the euro area; and, most importantly,
3. to serve the needs of the monetary policy of the Eurosystem.

Similarly to its predecessor, TARGET2 settles payments related to monetary policy operations, as well as transactions 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 ancillary systems with a harmonised set of cash settlement services and supports its users with enhanced liquidity

management tools. In this manner, 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. Almost 1,000 banks in Europe use TARGET2 to initiate payments on their own behalf or on their customers' behalf. Taking into account branches and subsidiaries, almost 60,000 banks worldwide (and thus all of the customers of these banks) can be reached via TARGET2.

The 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. The 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 execution 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 The Eurosystem fulfils this task by:

- providing payment and securities settlement facilities (TARGET2) and also a mechanism for the cross-border use of collateral (the correspondent central banking model (CCBM));
- overseeing the euro payment and settlement systems;
- setting standards for securities clearing and settlement systems;
- ensuring an integrated regulatory and oversight framework for securities settlement systems;
- acting as a catalyst for change (i.e. promoting the SEPA initiative).

2 A real-time gross settlement system is a payment system in which processing and settlement take place in real time (i.e. continuously), rather than in batch processing mode. It enables transactions to be settled with immediate finality. Gross settlement means that each transfer is settled individually, rather than on a net basis. TARGET and its successor TARGET2 are examples of RTGS systems.

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 twelfth edition of the “TARGET Annual Report”. The first edition was published in 2000, covering TARGET’s first year of operation (1999). This twelfth edition takes account of the fundamental developments which took place in TARGET2 in the course of 2011. The report is addressed to decision-makers, practitioners, lawyers and academics wishing to acquire an in-depth understanding of TARGET2. It will hopefully also appeal to students with an interest in market infrastructure issues and TARGET2 in particular.

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 2011. 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 2011, as well as in-depth analysis of specific TARGET2 features. The boxes are: “The TARGET2 balances of national central banks”, “Completing the transition period in TARGET2”, “A renewed TARGET2 website: www.target2.eu”, and “TARGET2 business continuity and contingency – experience and outlook”.

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 2011

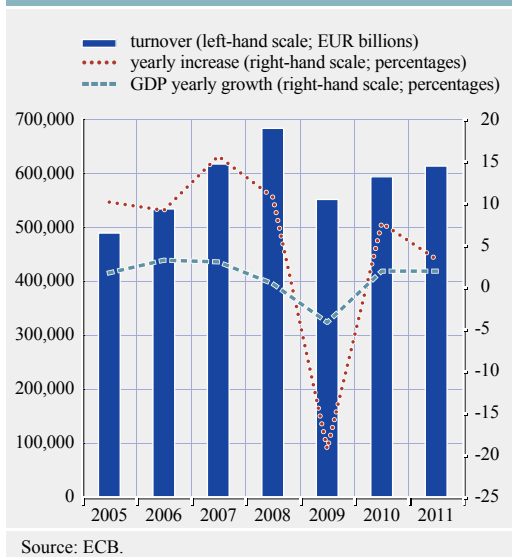
The TARGET2 system functioned smoothly in 2011 and confirmed its dominant position in the European landscape with a stable market share of 91% of the total value of payments in large-value euro payment systems. The volume of payments processed in TARGET2 rose only slightly by 1.1% compared with the previous year, reaching 89.6 million transactions, while the total value of payments increased by 3.3%, reaching a total of almost €613 trillion. The average daily volume was 348,505 transactions, with an average daily value of €2,385 billion. The availability of the Single Shared Platform (SSP) of TARGET2 reached 99.89%, having been affected by one incident in July. Finally, the highest TARGET2 daily payments volume of the year was registered on 31 January 2011, when 524,856 transactions were processed, while on 30 November the highest turnover of 2011 was registered, with a total value of €3,713 billion.

I EVOLUTION OF TARGET2 TRAFFIC

I.1 TARGET2 TURNOVER

In 2011 TARGET2 settled transactions with a total value of €612,936 billion, which corresponds to a daily average value of €2,385 billion (see Chart 1). The system's turnover increased for the second year in a row after the sharp drop registered in 2009, which was due to the effects of the financial crisis and the different statistical methodology used.³ However, the growth rate was less pronounced than in the previous year, registering 3.3% in 2011 compared with 7.6% in 2010. One of the main factors leading to this growth slowdown

Chart 1 TARGET turnover



was, in particular in the second half of 2011, the intensification of the sovereign debt crisis and the disruptions it created in the euro area money markets. As effect of the crisis, there was a contraction of the money market transactions processed in TARGET2. The Eurosystem intervened by injecting a high amount of liquidity into the euro area banking system via its non-standard monetary policy operations. The fact that those refinancing operations were offered with longer than usual maturity played

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 that such changes have 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 %
		2010	2011		2010	2011	
TARGET overall	Total	593,194	612,936	3.3	88,591,926	89,565,697	1.1
	Daily average	2,299	2,385		343,380	348,505	

Source: ECB.

Note: There were 258 operating days in 2010 and 257 in 2011.

also a role in limiting the increase of the TARGET2 turnover as the frequency of settlement of these amounts decreased.

Interbank transactions still accounted for the vast majority of the system's turnover, representing 94% of transactions between TARGET2 participants in terms of value in 2011, with the remaining share comprising customer transactions.

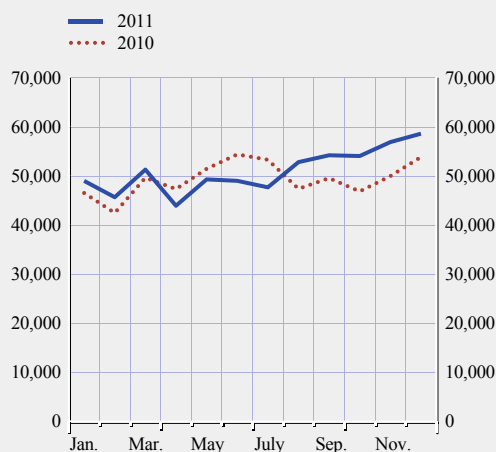
Chart 1 also shows the yearly growth of euro area GDP. When comparing it with the yearly growth of the TARGET2 turnover, it is possible to observe a certain correlation between the two, showing that the value settled in TARGET2 largely follows the evolution of economic activities in the euro area.

A comparison of the TARGET2 turnover and the euro area's annual GDP shows that TARGET2 settles the equivalent of the annual GDP in less than 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.

Chart 2 looks at the value settled in TARGET2 on a monthly basis. In the first quarter of 2011, the value settled in TARGET2 was slightly higher than that of the corresponding months in 2010. This trend inverted in April, then

Chart 2 TARGET turnover

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



Source: ECB.

recovered in August. In the last four months of the year the turnover was distinctly higher than in the same period of the previous year. The main factor influencing this trend is the higher size of deposits with central banks in the second half of 2012. This increase is particularly relevant in those countries for which the TARGET2 balances show a net inflow of liquidity (see Box 1). It should also be noted that the seasonality of TARGET2's turnover throughout 2011 was slightly more pronounced than in 2010, with a deviation of 33% between the highest and the lowest figures (compared with 28% in 2010). This pattern is also more pronounced than those observed before the financial crisis (18% in 2006 and 22% in 2007).

Box 1

THE TARGET2 BALANCES OF NATIONAL CENTRAL BANKS (NCBs)

TARGET2 allows commercial banks in Europe to settle their payments transactions on a shared platform and in central bank money, as well as allowing the settlement of Eurosystem central bank operations. When a bank makes a payment to a bank in another country in TARGET2, this changes the banks' current accounts at the respective central banks. The settlement of these cross-border payments in TARGET2 results in intra-Eurosystem balances which are

automatically aggregated and netted out at the end of each day. This leaves each central bank with a single net bilateral position (i.e. claim or liability) vis-à-vis the ECB.

Before the crisis, TARGET2 balances were relatively stable because cross-border payment flows tended to be broadly balanced across the euro area. Since the start of the crisis, TARGET2 liabilities have increased considerably for some NCBs (see Chart). This increase in TARGET2 negative balances is due to the fact that in the countries in question payment outflows in euro have not been matched by payment inflows in euro. At the same time, access to funding by private markets in those banking systems has become dramatically impaired. The net outflows in cumulative terms in those banking systems have required more central bank liquidity than usual. The Eurosystem provided these funds via its non-standard monetary policy measures and in doing so it ensured that solvent banks were not liquidity-constrained in their funding (notably by virtue of the fixed rate full allotment procedure) and supported an effective transmission of monetary policy to the wider euro area economy, thereby helping to maintain price stability over the medium term. This resulted in an uneven distribution in the provision of central bank liquidity in the Eurosystem, as reflected in the TARGET2 balances.

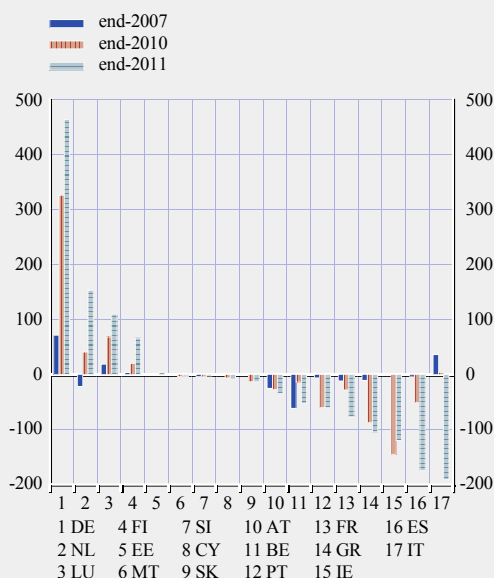
Those NCBs that provided more liquidity than usual to their banking system in net terms are the ones that have a negative TARGET2 balance vis-à-vis the ECB, while the NCBs that provided less liquidity in net terms are the ones that have a claim vis-à-vis the ECB. As the latter banking systems have net payment inflows from other euro area countries, they have ample liquidity available and they have less need than usual for recourse to monetary policy operations in order to continue lending to households and firms in their economies.

In the context of the monetary union, a TARGET2 claim is not necessarily a measure of the financial risk exposure of the NCB in question. The risk associated with the provision of central bank liquidity to banks as part of monetary policy implementation is mitigated by a risk management framework, which includes the requirement of adequate collateral valued at market prices and subject to haircuts. Besides the pledge of collateral the banks remain fully responsible for their borrowings obtained from the Eurosystem. The residual risk that may emerge despite risk management features is, as a rule, shared among the euro area NCBs according to their share in the ECB's capital.

The claims or liabilities that relate to TARGET2 are regularly published by all Eurosystem central banks as part of their balance sheets. As far as the publication of the consolidated balance sheet

TARGET2 balances of euro area NCBs

(EUR billions)



Source: ECB.

of the Eurosystem is concerned, intra-Eurosystem balances (such as those related to TARGET2) are not reflected since their sum total is zero.

Further information on the TARGET2 balances can be found in the October 2011 issue of the ECB's Monthly Bulletin and in the ECB's Annual Report for 2011.

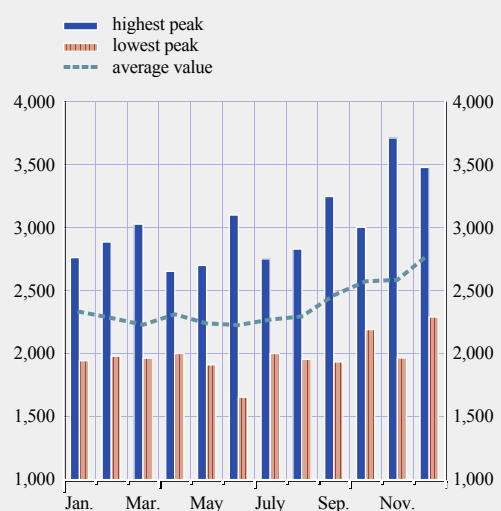
Chart 3 gives an overview of the highest and lowest values for the SSP as well as the average values for each month of 2011. Typically, for a given month, a higher level of traffic is registered on the last business day owing to reimbursements and due dates in various financial markets. As the chart shows, the effect is even more pronounced if that day is also the end of a quarter. The peak value for the year is also normally registered at the end of a quarter. However, in 2011 the peak in terms of turnover was on 30 November, with €3.7 trillion settled in the payment module. Peaks in value can also be influenced by other factors, such as the TARGET holidays or the end of a maintenance period. 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 values, they are typically observed on days that are national holidays for some Member States, for example the lowest value of 2011 was registered on 2 June, Ascension Day, which was a national holiday in many countries.

Finally, Chart 4 provides a comparison of the average daily values settled in the major payment systems worldwide over the last twelve years.⁴ It illustrates the position of TARGET2 vis-à-vis the largest payment systems in the world, namely Continuous Linked Settlement (CLS) and Fedwire Funds (the RTGS system operated by the Federal Reserve System). A common pattern can be seen in the evolution of the turnover in these three systems in recent years. After a sharp decrease in 2009 as a direct consequence of the financial crisis, the turnover in each started to grow again in 2010. However, this trend is far more pronounced in CLS than in TARGET2 and Fedwire Funds. The rapid acceleration of the average daily turnover that has taken place over the last two years in CLS is partly associated with the higher volatility in the financial markets – in particular in the forex markets – and partly with the new aggregation service introduced by CLS, which caused an increase in the turnover figures. With regard to the figures reported in Chart 4 it should be noted that Fedwire Funds and CLS figures are biased by the volatility of the euro's exchange rate vis-à-vis the US dollar.⁵

Chart 3 Daily value payment module (PM)

(2011; EUR billions)



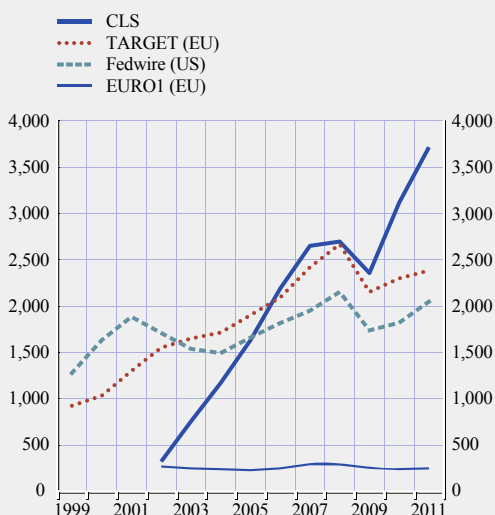
Source: ECB.

⁴ In order to achieve a meaningful comparison, the value of settlements in foreign systems has been converted into euro using the exchange rate on 31 December of the year in question.

⁵ Both Fedwire Funds and CLS publish their turnover in US dollars. The turnover in euro is calculated on the basis of the exchange rate of the ECB for the last business day of the year in question.

Chart 4 Major large-value payment systems in the world

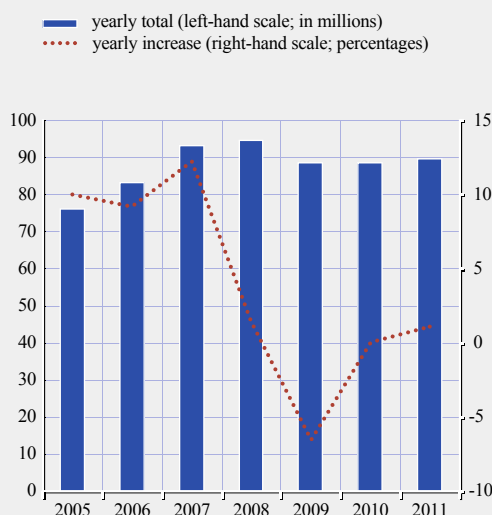
(average daily turnover in EUR billions (equivalent))



Source: ECB.

Chart 5 TARGET traffic

(number of transactions settled)



Source: ECB.

1.2 TARGET2 VOLUME

In 2011 a total of 89,565,697 transactions were settled in TARGET2, which corresponds to a daily average of 348,505 transactions. This figure is a little higher compared with 2010, having increased by 1.1%. This marginally positive trend is the result of rather diverse behaviour across countries. The increases registered in some countries were partially offset by decreases in some of the countries that have been since longer affected by the sovereign debt crisis. In the majority of countries, however, the traffic mainly stagnated in 2011. The 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. Overall, although the TARGET2 developments of the last two years present weak signs of recovery, this has not yet been sufficient to bring the TARGET2 traffic back up to the pre-crisis levels. Compared with the objectives set during the project's development phase, the level of traffic registered in the system in 2011 is short by 20 million transactions (see Section 4.2 of this Chapter).

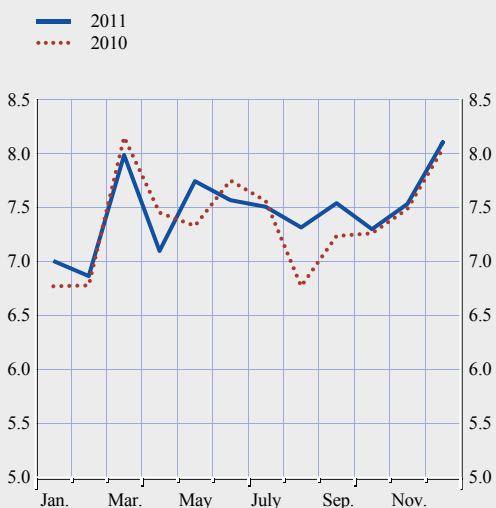
As in previous years, customer transactions represented the majority of the system's traffic and their share represented 60% of the total number of TARGET2 payments, registering an increase of 2 percentage points compared with 2010. The remaining share was accounted for by interbank transactions and operations with central banks.

Chart 6 looks at the volume settled in TARGET2 on a monthly basis. The traffic in 2011 shows a seasonal pattern that is quite typical for TARGET2. When comparing the traffic with that of 2010, one observes that until July the monthly traffic followed a pattern very similar to that of the previous year, with April and May the only months registering a more pronounced seasonality (respectively -11% and 9% on a month-by-month basis) compared with 2010.

Following a convergence of the two curves in July, the seasonality of the next two months was decidedly less pronounced in 2011, especially in August with only -2.6% on a month-by-month basis, compared to -10.4% the previous year. The exceptional trend recorded

Chart 6 TARGET traffic

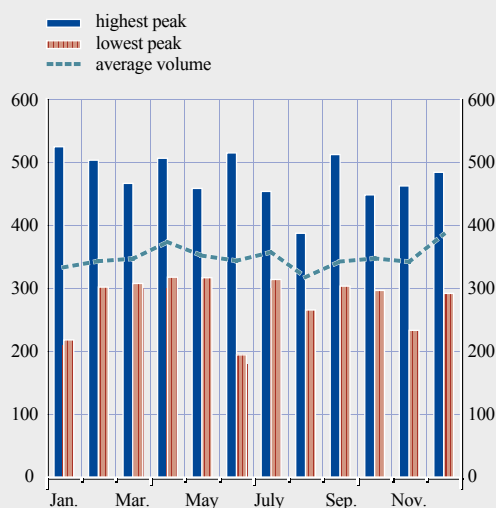
(volume on a monthly basis; in million transactions)



Source: ECB.

Chart 7 Volume PM

(2011; thousand transactions)



Source: ECB.

in August 2011 coincided with the volatility caused in the market by news of the sovereign debt crisis involving an increasing number of countries. In the last quarter of the year the curve converged with the one of 2010.

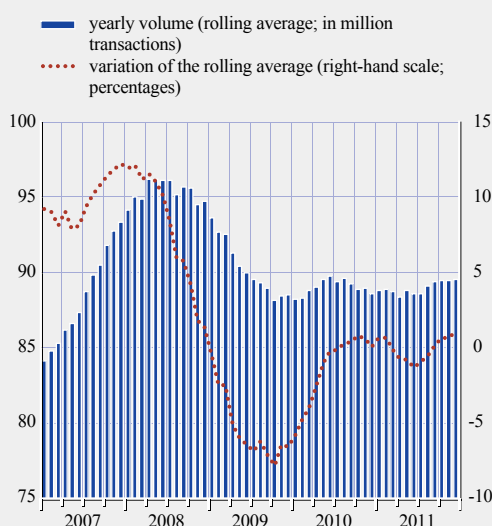
Chart 7 gives an overview of the highest and lowest recorded daily figures in terms of volume for the SSP⁶ in 2011 and the average volume for each month. As with peaks in terms of value, the highest volume figures are typically reported on the last business day of the month, with this being particularly pronounced at the end of a quarter due to several deadlines in the financial markets. The first quarter of 2011 was, however, exceptional in this respect. The highest peak in volume of the whole year was registered at the end of January, with March registering the lowest volume of the first quarter. A rise was recorded in April, namely after the Easter break. In the rest of the year the distribution was more regular. As with recorded figures in terms of value, the lowest traffic volume is, in general, recorded on days that are national holidays in some Member States, such as, in 2011, Epiphany on 6 January, Ascension Day on 2 June, 15 August and All Saints' Day on 1 November.

Chart 8 shows the yearly moving average of TARGET2 volumes (i.e. the cumulative volume processed in the preceding 12 months) for each month. This indicator helps to eliminate the strong seasonal pattern observed in TARGET2 traffic. The variation of this cumulative volume from one year to the next is also shown as a percentage. The chart shows that after a year of continuous growth, the cumulative volume started to decline in the second half of 2008 at the time when the financial crisis erupted. The number of transactions continued to drop sharply almost until the end of 2009. Since then the TARGET2 volume has roughly stabilised, registering around 90 million transactions per year, with yearly growth rates that never exceed a few percentage points.

Chart 9 presents a comparison of TARGET2 traffic with that of similar large-value payment systems in Europe (EURO1) and other currency zones (CHAPS-Sterling, Fedwire Funds,

⁶ The data presented in this paragraph only take on board the transactions settled on the SSP of TARGET2. They may therefore differ from the TARGET2 data presented in other sections of the report, which include also the traffic stemming from the proprietary home account (PHA) systems.

Chart 8 TARGET volume



CHIPS, CHATS and SIC), as well as with the SWIFT volumes (for financial application (FIN) payment messages). The chart shows the evolution of traffic in the respective systems, using the volumes recorded in January 2011 as

a basis. The pattern followed by all these market infrastructures is rather similar and shows a moderately positive trend.

1.3 MARKET SHARES OF LARGE-VALUE EURO PAYMENT SYSTEMS

TARGET2's market share is defined as the percentage of traffic processed in TARGET2 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 *Servicio Español de Pagos Interbancarios* (SEPI) in December 2004, and the French system *Paris Net Settlement* (PNS) in February 2008). In 2011 the share of TARGET2 in terms of value processed remained at a high level as in previous years, more precisely at 90.5%, with no variation compared with last year. However, during 2011 the TARGET2 share in terms of volume decreased slightly, from 59.9% in 2010 to 59%. In considering this indicator it should be noted that, although it

Chart 9 Comparison of the traffic in LVPS/SWIFT

(2011; percentages)

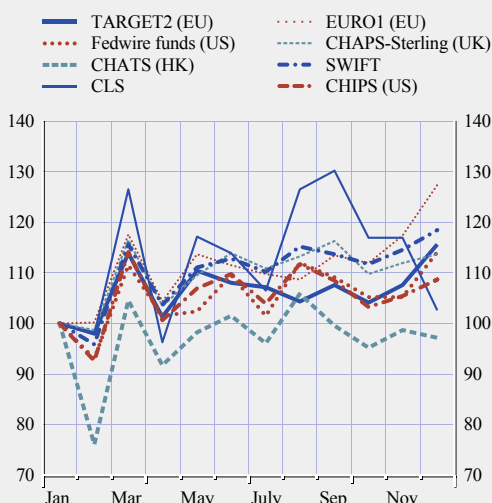
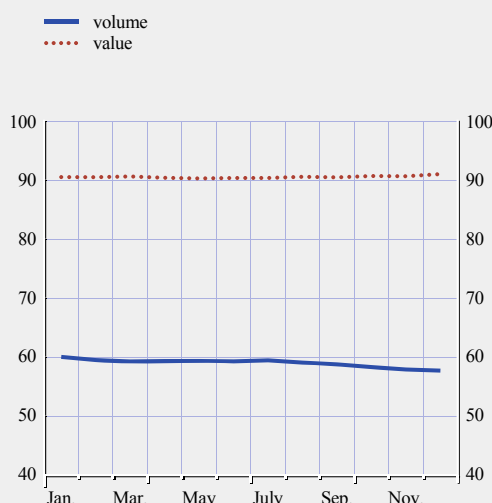


Chart 10 TARGET2 market share vs other LVPS in euro

(2011; percentages)



is referred to as the share of large-value euro payment systems, the actual composition of the traffic in the two systems is largely made up of commercial payments. For the settlement of these transactions, banks can also use other channels, such as automated clearing houses, pan-European automated clearing houses and correspondent banking. Therefore the indicator only offers an incomplete picture of the market's preferences in terms of settlement of large-value payments.

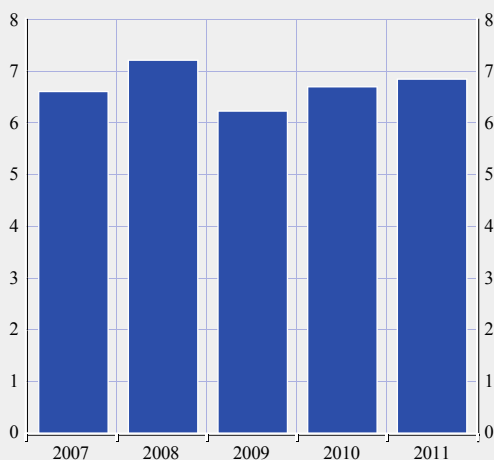
1.4 VALUE OF TARGET/TARGET2 PAYMENTS

Chart 11 shows the evolution of the value of TARGET/TARGET2 payments since 2007. The average value of a payment in 2011 stood at €6.8 million, with slight growth registered each year following the drop in 2009 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 post-Lehman crash.

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 271 payments per day with a value above €1 billion, 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 €12,000, indicating that half of the transactions processed in TARGET2 every day have a value lower than this amount. 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 evidence of it is also present in other large-value payment systems (LVPSs). In Fedwire Funds (United States), for example,

Chart 11 Average value of a TARGET payment

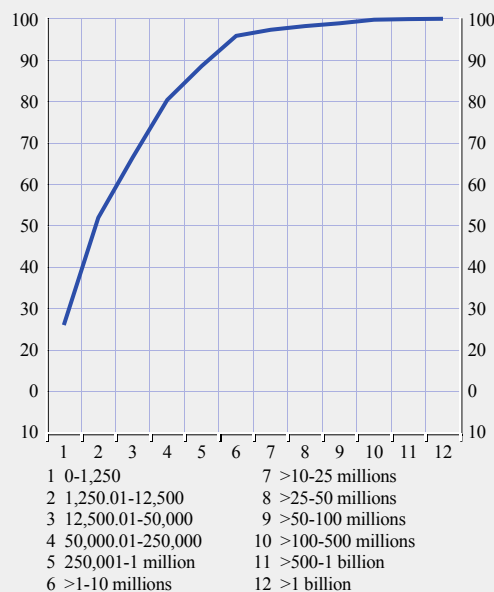
(EUR millions)



Source: ECB.

Chart 12 TARGET2 payment value band

(2011; percentages)



Source: ECB.

during the first quarter of 2010 the median value of a payment was USD 17,500, with 3% of the payments of a value lower than USD 300 and 75% lower than USD 125,000⁷.

Finally, Chart 13 provides the average value of TARGET2 payments executed at different times of the day. The very strong intraday pattern typically observed in TARGET2 in previous years was even more pronounced in 2011. The average value of the transactions is quite high before 7 a.m. CET. These transactions are the result of the night-time settlement, mainly stemming from securities settlement systems. After the opening of the system at 7 a.m. CET, the hourly average value of transactions fluctuates throughout the day and reaches another peak between 5 p.m. and 6 p.m. CET, which is a consequence of banks squaring their balances and refinancing themselves on the money market. In 2011 this peak was less pronounced than in the previous year, with the average payment value 23% lower. This development reflects the contractions in the euro area money market activities. After 6 p.m. CET the average value of payments increases

dramatically. At this time, transactions related to the use of the standing facilities with the central bank and to liquidity transfers from proprietary home accounts (PHAs) are settled. In 2011 the average payment value at this time increased by 47% compared to 2010, owing to the high incidence of recourse by banks to the standing facilities, in particular to the overnight deposits.

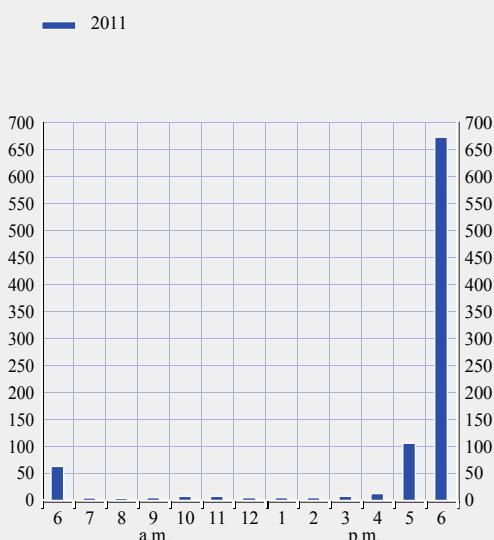
1.5 PAYMENT TYPES IN TARGET2

Charts 14 and 15 present the breakdown of the TARGET2 volume and turnover by type of transaction. 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

⁷ Bech, Morten L., Martin, Antoine and McAndrews, James, "Settlement Liquidity and Monetary Policy Implementation – Lessons from the Financial Crisis", *FRBNY Economic Policy Review*, 2012.

Chart 13 Intraday pattern

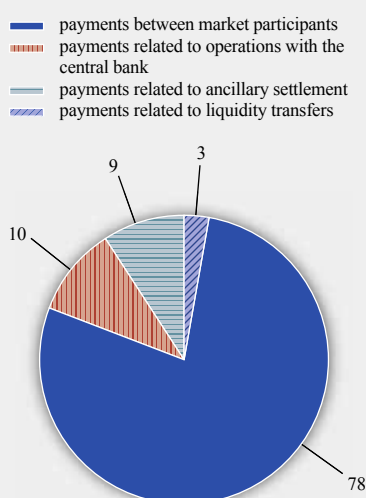
(2011; average value of a payment in EUR millions)



Source: ECB.

Chart 14 Breakdown of TARGET2 volume

(2011; percentages)

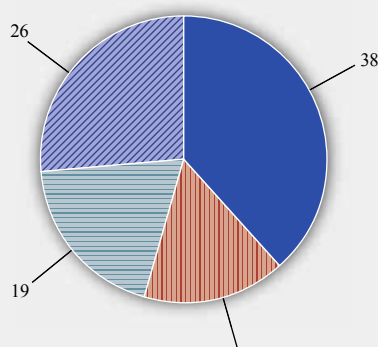


Source: ECB.

Chart 15 Breakdown of TARGET2 turnover

(2011; percentages)

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

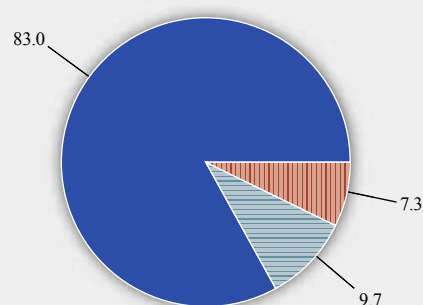


Source: ECB.

Chart 16 Use of priorities in TARGET2

(2011; percentages)

- normal
- urgent
- highly urgent



Source: ECB.

bank, accounting for 10% (including cash operations, intraday repos, payments sent on behalf of customers and inter-NCB payments), ancillary systems settlement, accounting for 9% and, last, liquidity transfers, accounting for 3%. The composition of the TARGET2 turnover is significantly different. The payments between participants represent only 38% of the total value, followed by the liquidity transfers with 26%. The rest of the turnover is shared between ancillary systems settlement and operations with the central bank, with 19% and 16% respectively. The composition of both TARGET2 volume and turnover in 2011 was rather stable compared with the previous year.

1.6 THE USE OF PRIORITISATION

When submitting payments in TARGET2, participants can assign them a specific priority: “normal”, “urgent” and “highly urgent”.⁸ In general, payments are settled immediately on a “first in, first out” (FIFO) basis, as long as sufficient liquidity is available in the RTGS account of the participant. However, if this is not the case, payments which cannot be settled immediately are queued according to their priority. Participants can reserve a certain

amount of their liquidity for each priority class, and less urgent payments are made when the excess liquidity is sufficient. This is a way of securing liquidity for more urgent payments. The priorities for pending transactions can be changed at any time via the information and control module. Chart 16 gives an overview of the use of priorities in TARGET2 in 2011. It shows that the vast majority of transactions, namely 83%, had normal priority, while only 7.3% and 9.7% were urgent and highly urgent respectively. This picture has remained rather stable since the beginning of TARGET2. Priorities are appropriately used in TARGET2 and no abuse seems to take place; in particular, banks only assign the urgent priority to a limited number of payments. Participants acknowledge the benefits brought by this feature, which supports them in the management of their liquidity.

1.7 NON-SETTLED PAYMENTS

Non-settled payments in TARGET2 are those transactions that were not processed on account

⁸ “Highly urgent” can be used only in connection with operations with central banks or ancillary systems settlement.

of a lack of funds or as a result of breaching the sender's limit at the time the system closed, and are ultimately rejected. Chart 17 shows the evolution of the daily average of non-settled payments in the course of 2009, 2010 and 2011 in terms of both volume and value. In 2011, there were on average 654 non-settled transactions every day, valuing €24 billion. Overall, non-settled payments in 2011 represented 0.18% of the total daily volume and 1% of the total daily turnover in TARGET2. The levels can be considered low and confirm that the distribution of liquidity across participants was appropriate throughout that period.

Compared with the previous year, when the non-settled payments on the SSP amounted on average to a value of €41 billion per day, there was a considerable drop in the number of non-settled payments in 2011, namely -12% in terms of volume and -68% in terms of value. This substantial drop could be attributed to the higher levels of liquidity available in the system as a consequence of the Eurosystem operations. A phenomenon similar to this one was also observed in the United States. A study by the

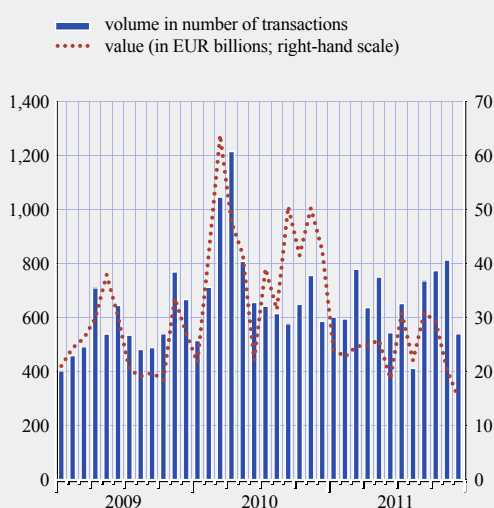
Federal Reserve System⁹ confirms that its policy measures aimed at providing liquidity and stability to the financial system during and after the crisis led to a substantial decrease in the daylight overdrafts it extended and a quickening of settlement relative to the pre-crisis period.

1.8 SHARE OF INTER-MEMBER STATE TRAFFIC

In 2011 the share of inter-Member State traffic in TARGET2 (i.e. payments exchanged between two participants belonging to different national banking communities) was 33% in value terms and 35% in volume terms. Both the value and the volume figures are higher than those reported in 2010 (which were 31% and 33% respectively). In particular, the share of inter-Member State traffic in volume terms has steadily increased over time since the advent of TARGET2. This indicates that the migration to the SSP of TARGET2 helped to further blur the distinction between *inter*-Member State and *intra*-Member State transactions;

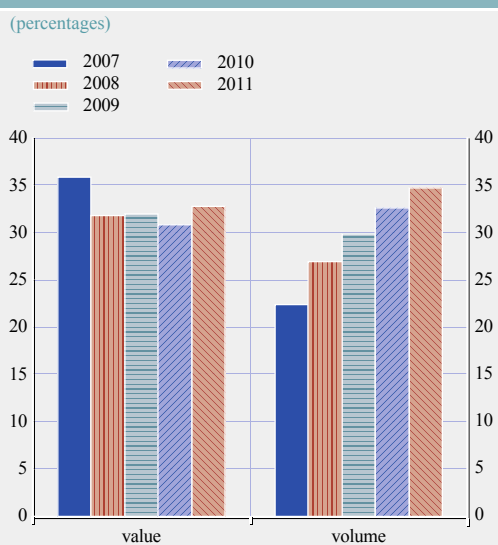
9 Bech, Morten L., Martin, Antoine and McAndrews, James, op. cit.

Chart 17 Non-settled payments on the SSP



Source: ECB.

Chart 18 Share of inter-Member States traffic



Source: ECB.

by doing so, it helped to increase the integration of the euro area money market. However, 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) make 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.

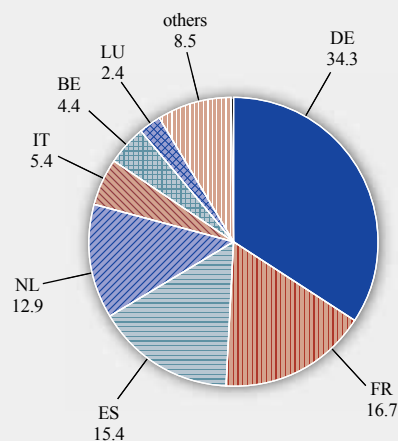
Chart 19 shows the share of turnover value that the different banking communities settled in TARGET2 in 2011. In the interests of legibility, only those countries representing more than 2% of overall TARGET2 turnover are shown.

It is evident that, as in previous years, the system's activity was highly concentrated in 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 84.7% of the value exchanged. This concentration in five countries, which was continually on the increase over the previous few years (83.8% in 2009 and 85.5% in 2010), levelled off in 2011.

Chart 20 shows the contribution of the different banking communities to TARGET2 volumes in 2011. In the interests of legibility, only those countries representing more than 2% of the overall traffic are shown. Germany remains the country where TARGET2 volumes are most concentrated, with a share that accounts for almost 50% of the volume exchanged. With Italy, the Netherlands, France and Spain, this figure increases to 86.6%. The concentration of the volume in five countries continues to be considerably high (having been 88.2% in 2009 and 87.7% in 2010). The explanation for this is similar to that for the concentration of TARGET2 turnover. The higher rate can be associated with

Chart 19 Contribution to TARGET2 turnover

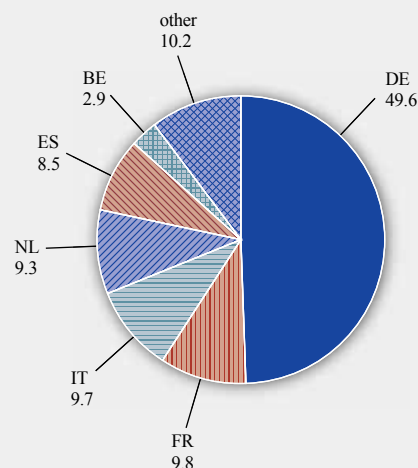
(2011; percentages)



Source: ECB.

Chart 20 Contribution to TARGET2 volume

(2011; percentages)



Source: ECB.

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.

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.

In value terms, the curve is very close to a linear distribution. This indicates that the proper circulation of liquidity among TARGET2 participants is ensuring that the turnover is evenly spread throughout the day, in turn 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 93% 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 22% of the transactions being submitted to the system after one hour of operations and 43% after three hours. One hour before the system closes, 99.6% of the TARGET2 volume has already been processed. A comparison with 2010 does not show significant deviations.

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

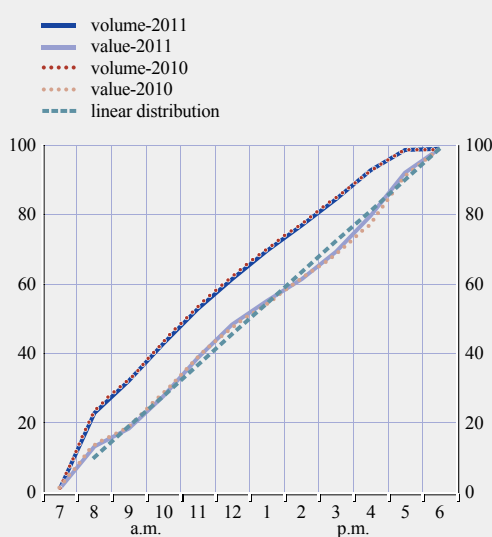
1.11 TRANSITION PERIOD

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 system 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, all central banks have phased out their PHAs, with the exception of the Deutsche Bundesbank, which was granted a temporary derogation (for further details see Box 2).

At the TARGET2 level, the number of transactions settled in the PHAs represented 2% of the whole traffic in 2011. This confirms that settlement activities on the PHAs were marginal and that, in practice, the fragmentation of participants' liquidity between the SSP and the PHAs had limited and manageable effects. The German PHA alone represented 96% of the value settled in PHAs.

Chart 21 Intraday distribution of TARGET2 traffic

(percentages)



Source: ECB.

Box 2

COMPLETING THE TRANSITION PERIOD IN TARGET2: A FURTHER STEP TOWARDS FINANCIAL INTEGRATION

At the end of 2007 the first-generation TARGET system, with a decentralised structure of interlinked national RTGS systems, was replaced by the second-generation TARGET2 system, which is centrally operated on a single technical platform, the SSP.

One of the key objectives of TARGET2 was to ensure that transactions between market participants and transactions stemming from ancillary system settlement, as well as payments related to open market operations, would ultimately be settled in the SSP. It became apparent during the project phase, however, that the domestic set-up in some countries might not allow for an immediate shift to the SSP for those types of transaction. As a result, the Eurosystem agreed on a maximum transition period of four years (from the moment the relevant central bank migrated to TARGET2) for settling such payments in the SSP. In practice, some central banks made use of that facility and settled such transactions, or a subset of them, on national proprietary systems known as PHAs.

The migration of the 21 banking communities was organised in three waves. The first took place on 19 November 2007 (Austria, Cyprus, Germany, Latvia, Lithuania, Luxembourg, Malta and Slovenia), the second on 18 February 2008 (Belgium, Finland, France, Ireland, the Netherlands, Portugal and Spain), and the third on 19 May 2008 (Denmark, Estonia, Greece, Italy, Poland and the ECB). This means that, by 18 May 2012, all communities have reached the end of the four-year transition period. Moreover, all central banks have now transferred all the above-mentioned settlement operations to the SSP.

The completion of the transition period in TARGET2 constitutes an important achievement in the field of settlement harmonisation and, more generally, in the integration of large-value payments in euro. Payments between market participants, ancillary system settlement and open market operations will now take place in central bank money and on one single platform for all 17 countries of the euro area, as well as for six other Member States. This consolidation, together with the harmonisation efforts, allows banks to optimise their processing and their liquidity management. Furthermore, it should be recalled that TARGET2 offers a harmonised set of cash settlement services in central bank money for all types of ancillary system. By using the ancillary system interface, ancillary systems are able to settle their cash positions in TARGET2 via a standardised technical interface, using standardised settlement procedures. This will eventually give rise to a substantial harmonisation of business practices, as well as a smoother and faster execution of these critical operations.

Beyond the payments sphere, TARGET2 also contributes to the efforts of the Eurosystem in terms of harmonisation and financial integration. TARGET2 provides Eurosystem central banks with specific modules to manage minimum reserve requirements, access to standing facilities or the provision of home accounting services. Although these modules are offered on an optional basis, Eurosystem central banks are increasingly subscribing to them, with a view to fully exploiting the benefits of harmonised services, particularly for multi-country financial

institutions. On 31 December 2011, there were 11 Eurosystem central banks using the standing facility module, seven using the reserve management module and four using the home accounting module. Other central banks have already signalled their intention to subscribe to the optional modules in the coming years.

2 TARGET2 SERVICE LEVEL AND AVAILABILITY

2.1 PROCESSING TIMES

In 2011 99.85% of the payments settled on the payment module of TARGET2 were processed in less than five minutes (99.74% in 2010). For 0.08% of the transactions, the processing time was between five and fifteen minutes (as in 2010), and 0.07% of the payments needed more than fifteen minutes for processing (0.18% in 2010).

Notwithstanding the incident on 25 July 2011 when the contingency module of TARGET2 had to be activated for the first time since TARGET2 went live (see Box 3), the service level increased compared with 2010 in terms of processing times, confirming 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 PHAs 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 ASI, payments settled in the first hour of operations (see below on the “morning queue effect”) and payments that were not settled because of a lack of funds or breach of the limits. In practice, around 30% of all TARGET2 payments fall into these three categories of exceptions, meaning that the statistics on processing times apply to around 70% of the system’s traffic.

With regard to other requests or enquiries,¹⁰ 99.97% (as in 2010) were processed in less than one minute and only 0.03% (as in 2010) within between one and three minutes.

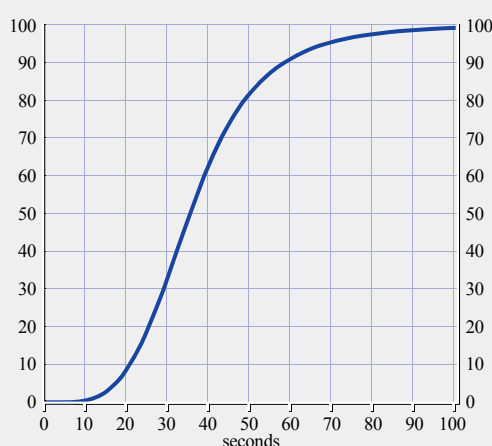
Chart 22 helps to better quantify the system’s performance by providing the distribution of processing times on the SSP, i.e. the percentage of traffic with a processing time below a certain number of seconds. The reference point taken is the peak day of the year. The chart shows that, on that day, 50% of the transactions were settled within 36 seconds and 90% within 59 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 20% of the daily volume on peak days) are already waiting for settlement, which correspond either to payments remitted by banks on previous days with a future

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

Chart 22 Distribution of processing times on the SSP, excluding first hour

(30 December 2011; percentages)



Source: ECB.

value date (i.e. “warehoused payments”) or to payments released by banks via SWIFT in the hours preceding the opening of the system. On peak days, more than 100,000 transactions may be processed in the first hour, which affects the average settlement time during this period. This huge volume of transactions normally takes around 30 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 1.6).

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 on other market infrastructures, the Eurosystem pays particular attention to ensuring the smooth operation of the system (see also Box 3 on TARGET2 business continuity and contingency). This is clearly underlined by the fact that the SSP of TARGET2 achieved 99.89% (100% in 2010) technical availability over the reporting period. The decrease is due to the incident on 25 July 2011 when the system was unavailable for around three hours. During that outage the contingency module was used for the first time in a real contingency scenario and successfully processed 42 very critical payments with a value of €6 billion, thus limiting the impact of the incident on the banking community.

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 the minimum reserve period) on TARGET2 business days, including extensions required to complete the operational day (e.g. delayed closing owing to a technical problem in TARGET2 or to major problems in ancillary system settlement in TARGET2). The availability measurement does not include systems or networks not directly managed by TARGET2 (in particular, the availability of the SWIFTNet services).

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

2.3 INCIDENTS IN TARGET2

The ECB publishes up-to-date information about the availability of TARGET2 via the TARGET2 Information System (T2IS), which is accessible via the financial information provider Reuters (page ECB46), as well as under the “Payments & Markets” section of the ECB’s website (www.ecb.int/paym/t2/html/index.en.html) and on the website www.target2.eu. All incidents relating to TARGET2 are followed up with a detailed incident report and risk management process. The aim of this approach is to learn from these events in order to avoid a reoccurrence of the incidents or incidents of a similar nature and to improve monitoring capabilities. More information on TARGET2 contingency procedures and the handling of incidents is available in Box 3.

Box 3

TARGET2 BUSINESS CONTINUITY AND CONTINGENCY – EXPERIENCE AND OUTLOOK

Since the launch of TARGET in 1999, measures to ensure business continuity have always been high on the Eurosystem's agenda. In particular, one of the reasons for migrating to the SSP of TARGET2 was to improve the system's resilience. TARGET2 offers a state-of-the-art set-up based on a "two regions, four sites" concept, which ensures much greater resilience than the first generation of TARGET. In addition, the Eurosystem saw the need to cater for contingency solutions for when the resilience measures would not help (e.g. software failure or database corruption affecting all sites) or to bridge the time gap during an inter-region failover. This led to the development of the contingency module of TARGET2.

The contingency module is technically independent from the other modules of the TARGET2 SSP and is always operated in a different region from the normal TARGET2 operations. It provides very basic payment settlement services: it is largely based on manual processing, is only accessible to the central banks' operators and starts with a zero balance on all banks' accounts. The activation of the contingency module in a crisis situation first requires an increase in the payment capacity on the banks' accounts by mobilising fresh collateral. As the number of payments that can be dealt with in contingency is limited by the manual procedures, only systemically important ones are given priority.

The contingency module has been tested regularly since the start of TARGET2. In particular, the module is activated each week for two hours in the TARGET2 test environment. Moreover, central banks regularly perform tests in the production environment by exchanging €1 payments. However, the contingency module had never had to be used in a real contingency until 25 July 2011.

On Monday, 25 July 2011, the start of TARGET2 for daylight processing at 7 a.m. CET was blocked (see Chapter 1, Section 2.3). Taking into account the business needs at this time of the day and the information received that even a failover was not expected to resolve the blockage, a decision was made at 7.18 a.m. to activate the contingency module. After the provision of liquidity on contingency accounts, payments started to be settled on the module, mainly CLS operations. The settlement of CLS operations in the contingency module limited the impact on other currencies participating in CLS, specifically those in the Far East. All in all, 42 operations were settled in the contingency module with a value of €6 billion. Shortly after 10 a.m., when normal operations had been resumed, the module was closed and the balances were transferred to the participants' RTGS accounts.

Although the overall assessment of the first use of the contingency module was quite positive, some possible improvements were identified and are being followed up. For example, measures to ensure a faster process for injecting fresh liquidity were taken by different central banks, for those where this process took comparably longer. Local communication processes to inform participants about inward payments arriving on their account in the contingency module were revised in several cases. Finally, additional end-to-end testing with the contingency module for cross-border systems settling in TARGET2 is under preparation.

This demonstrates that business continuity and contingency planning are not static activities: they require persistent attention, testing, reconsideration and updates. In this respect, the

upcoming review of the CPSS/IOSCO principles for financial market infrastructures will trigger additional review activities for TARGET2 as for any other financial market infrastructure, and is expected to result in further enhancements of what is already in place today. For example, new requirements are being introduced in relation to stress testing for different types of risk. While the focus so far has been more on operational risk, other risks, such as liquidity risk, will also have to be given the same level of attention.

The outage on 25 July represents the most serious TARGET2 incident in 2011 and, to a certain extent, since its launch in 2007. Shortly after 6.45 a.m. CET it became apparent that the payment module could not be updated to the right status to start the day-trade phase. Technical investigations showed that the problem would still exist in case of a failover to another site or even region. As a consequence, at 7.18 a.m. CET – for the first time in a real contingency situation – the contingency module was activated. The contingency module, which is hosted in a different environment from the payment module, allows the national service desks at each central bank to manually input, on behalf of their users, payments which are considered as very critical or critical¹¹ (the latter only following a decision by crisis managers,

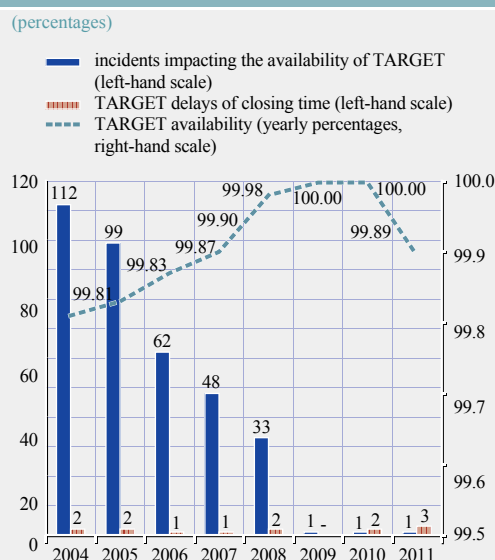
and with lower priority). After further investigation and a complete restart of the system at 9.58 a.m. CET, the payment module became available again and subsequently the contingency module was closed and current balances were transferred automatically. Although a detailed technical analysis was carried out and the necessary measures were taken to avoid a reoccurrence of such an incident, this incident has also shown the additional value the contingency module represents in limiting the impact of such a major incident. Several lessons were learned from the experience of using the TARGET2 contingency procedures and the contingency module in a real contingency scenario on the side of both the central banks and the users, e.g. regarding the timely provision of collateral. Awareness of the existing rules applicable for the identification and forwarding of payments in contingency was raised and the existing contingency testing activities with critical ancillary systems were reviewed and adjusted.

In 2011 seven incidents affected payment processing in some PHAs; however, none of these incidents affected the overall availability of TARGET2.

Additionally, it is worth mentioning some other types of incident, even though they did not affect the availability of TARGET2.

First, 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

Chart 23 TARGET incidents and delay closing



Source: ECB.

¹¹ The concept of (very) critical payment, elaborated in cooperation with the users, is described in detail in the Information Guide.

TARGET2. In 2011 the following incidents fitted into this category.

- On 20 April 2011 a program in the payment module terminated abnormally and impeded the settlement of some ancillary system files. The program was manually restarted in the payment module and all payments could be settled before the system closed.
- On 11 October 2011 the processing of some payments in the first hour was delayed by up to 30 minutes owing to a handling error.
- On 22 November 2011 problems accessing groups of accounts and co-managed accounts were experienced. The problem was identified as relating to the wrong generation of UserGroupProfiles, which are used by the information and control module to allow the “act on behalf” functionality.

Although not included in the performance indicators, incidents during night-time settlement are reported transparently and followed up accordingly. In 2011 the following incidents fitted into this category.

- On 15 February 2011 the failure of an infrastructure component caused a four-hour delay to the restart of SSP night-time settlement following the maintenance period.
- On 30 May 2011 a problem related to a middleware component caused a two-hour delay to the restart of SSP night-time settlement following the maintenance period.
- On 14 September 2011 a software failure caused a small delay (20 minutes) to the start of SSP night-time settlement.

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

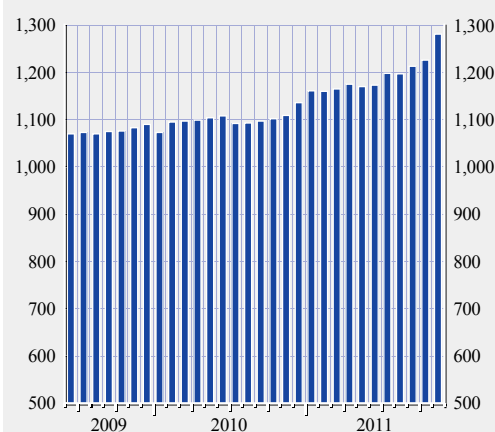
In addition, there were three incidents in 2011 (two in November, one in December), which were not related to a malfunctioning of the SSP, but where a delayed closing of TARGET2 was granted in order to avoid systemic implications. These incidents were due to major problems in ancillary systems settling in TARGET2. They were all followed up with the respective systems, which also provided an incident report including information on the measures taken to avoid reoccurrence.

3 TARGET2 PARTICIPANTS

3.1 RTGS ACCOUNTS

The number of RTGS accounts opened in TARGET2 (which encompasses the direct participants, the technical accounts, the ancillary systems accounts and the special-purpose accounts) has continued to increase. In total, 148 new RTGS accounts were opened in the last year. At the end of 2011 the total number of RTGS accounts in TARGET2 was 1,284. There are a number of reasons for this increase. First, the phasing-out of activity on local PHAs led some PHA participants that were not yet direct participants on the SSP to open RTGS accounts

Chart 24 Number of active RTGS accounts in TARGET2



Source: ECB.

on the SSP. In order to meet the requirements of these banks, in 2010 the Eurosystem developed internet-based access to TARGET2 as a possible alternative to connection via SWIFT¹². Second, as a consequence of the financial crisis, some banks requested direct access to TARGET2 in order to become eligible counterparties in monetary policy operations. Finally, some banking communities connected to TARGET2 after the migration; the last one being the Romanian banking community, which connected to TARGET2 in July 2011, bringing 23 additional direct participants into the system.

3.2 PARTICIPATION TYPES

Direct participation	976
Indirect participation	3,465
Multi-addressee – credit institution	29
Multi-addressee – branch of direct participant	1,452
Addressable BIC – correspondent	13,083
Addressable BIC – branch of direct participant	33,392
Addressable BIC – branch of indirect participant	7,580

At the end of December 2011 976 direct participants held an account on the SSP of TARGET2. Via these direct participants, 3,465 indirect participants from the European Economic Area (EEA) could settle their transactions in TARGET2, as well as 13,083 correspondents worldwide. Considering also the branches of direct and indirect participants, a total of 59,977 credit institutions around the world were accessible via TARGET2 at the end of 2011. Participants and institutions addressable via TARGET2 are listed in the TARGET2 Directory, which is available to all direct participants for information and routing purposes. Besides the direct participants that hold an RTGS account for sending payments to and receiving payments from all other direct participants, a number of banks have opted for the opening of special-purpose RTGS accounts, which are neither addressable by third parties nor reported as direct participants in the TARGET2 Directory. These special-purpose accounts are used, for instance, to fulfil reserve obligations in countries where reserves are computed on RTGS accounts.

In addition, at the end of 2011 there were 177 unpublished BICs.

3.3 ANCILLARY SYSTEMS

At the end of 2011 a total of 80 ancillary systems were settling in the TARGET2 SSP, 37 of which were retail payment systems/clearing houses, 31 were securities settlement systems and 18 were central counterparties. Two other ancillary systems were settling temporarily on a national central bank's PHA. The increase in number compared with 2010 (when there were 69 ancillary systems in total) is mainly due to the conclusion of the transition period for national PHAs to migrate to the SSP (see Box 2).

Of those 80 ancillary systems settling on the SSP, 60 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	Usage ¹⁾
Model 1 – Liquidity transfer	4
Model 2 – Real-time settlement	18
Model 3 – Bilateral settlement	20
Model 4 – Standard multilateral settlement	21
Model 5 – Simultaneous multilateral settlement	13
Model 6 – Dedicated liquidity	21
PI – Payment interface	20

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

4 TARGET2 REVENUES

4.1 ANALYSIS OF THE REVENUES COLLECTED

The pricing policy for TARGET2 entered into force after the migration of the last wave of countries on 19 May 2008. From that date onwards, participants have been billed on a monthly basis based on the single pricing structure, which applies to payment transactions

12 Further details can be found in Box 4 of the TARGET Annual Report 2010.

initiated both on the SSP and on the PHAs¹³ of the NCBs. Based on 2011 figures, the following observations can be made.

- The SSP alone generates 98% of overall TARGET2 revenues, while local PHAs account for the remaining part. This is roughly in line with the distribution of volumes, as the SSP contributes the same proportion to overall TARGET2 traffic.
- 87% of the direct participants in the SSP opted for the flat fee option (i.e. option A), while 13% opted for the degressive fee option (i.e. option B).¹⁴ This illustrates that TARGET2 is still capable of attracting both the major players in the euro area and, at the same time, a large number of small and medium-sized institutions.
- The participants opting for pricing option B generate in total around 88%¹⁵ of the traffic on the SSP. As a result of this concentration effect, 31% of all SSP transactions were priced at the lowest pricing band, i.e. €0.125. This demonstrates that key participants, in particular multi-country banks, benefited from the attractive degressive fee option offered by TARGET2 and from the competitive group pricing offers.¹⁶
- Transactions exchanged between credit institutions generate 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 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. While the objective was met in the year the system was launched, the overall economic slowdown and exceptional market conditions in the following years made it impossible to meet the targeted 6% increase.

According to the estimation of an annual increase of 6%, TARGET2 should have processed 108.7 million transactions in the calendar year 2011. The objective was not met, however, and the total number of transactions was 20 million below this estimation, owing to the ongoing impact of the financial crisis. The Eurosystem is closely monitoring the situation.

5 TARGET2 RISK MANAGEMENT AND OVERSIGHT ACTIVITIES

5.1 TARGET2 RISK MANAGEMENT

Managing information security risks is a key element of the governance structure of TARGET2. In order to meet this responsibility, the Eurosystem has established a comprehensive risk management¹⁷ 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.

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

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

15 Core pricing participants, central banks using ASI for “other purposes”, ancillary systems and liquidity pooling.

16 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.

17 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).

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 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 TARGET2 risk management framework reassures the Eurosystem, as well as TARGET2 users, that the overall security situation in TARGET2 is kept at a satisfactory level. In this context, it is worth mentioning that incidents were reported, resolved and their root causes addressed, and that they did not affect the security and operational reliability of TARGET2 in 2011.

5.2 OVERSIGHT ACTIVITIES

TARGET2 is overseen by the ECB, which has the leading and coordinating role, and by 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.

In 2011 the TARGET2 oversight function monitored the operational performance of TARGET2, assessed changes in the system and monitored TARGET2 compliance with previously issued oversight recommendations.

The comprehensive assessment of the TARGET2 design against the Core Principles for Systemically Important Payment Systems was finalised in May 2009. While the overall outcome of the assessment was positive and did not reveal any serious concerns regarding the compliance of the TARGET2 design with the applicable Core Principles, the report highlighted five issues (not having an adverse impact on the design of TARGET2) that still needed to be addressed by the operator. Since 2009 the TARGET2 oversight function has monitored the actions undertaken by the operator in order to address the open issues. As a result, the recommendations on change and release management as well as on the involvement of users in the future development of TARGET2 were closed in 2010 and the recommendations on operational overhead costs and the level of cost recovery for the liquidity pooling functionality were closed in 2011. Therefore, currently only the recommendation on the investigation of technical options for the real-time synchronisation of the two processing regions and the provision of additional collateral in contingency processing remains open.

The assessment of TARGET2's compliance with the "Business continuity oversight expectations for systemically important payment systems" was completed in July 2010. The overseers concluded that the business continuity framework of TARGET2 is, in general, well established and ensures a sufficiently high and consistent level of resilience. Nevertheless, the TARGET2 oversight function issued a few recommendations to the TARGET2 operator. In 2011 the TARGET2 oversight function closed all but one of the recommendations on the basis of information provided by the operator on the undertaken actions.

Furthermore, the oversight function regularly monitors the implementation of the new TARGET2 releases. In 2011 the SSP release 5.0 was assessed. The overseer analysed both the content of the new release and the process of how its implementation has been managed by the system operator. The overseer concluded that the changes are in line with the Core Principles and several of them eliminate certain current weaknesses in the system and will result in better services for TARGET2 customers.

Moreover, in 2011 the oversight function conducted regular oversight activities of TARGET2. They covered mainly the monitoring of the system's performance, including the analysis of incidents (including an assessment of the major incident on 25 July 2011, on the basis of which they issued a number of recommendations), statistical data and information on the risk situation.

The NCBs of Austria, Germany, Greece, Lithuania and Poland reported to the ECB on the oversight activities performed with respect to their PHAs in 2011. Among others, Austria, Lithuania and Poland reported on the monitoring of the phasing-out of the PHAs, which went smoothly in all cases.

Considering the results of all the above-mentioned assessments and taking into account the stable operational performance of TARGET2 throughout 2011, the overseers concluded that the overall risk situation of TARGET2 was satisfactory.

6 SYSTEM EVOLUTION

The most important change implemented in TARGET2 in 2011 was the technical implementation of an alternative network for central banks, which will allow the timely execution of critical payments on behalf of their participants in the (very unlikely) case of a prolonged SWIFT outage, in a more efficient way.

Apart from this feature, TARGET2 did not undergo any major changes in 2011. Some minor changes were implemented to further fine-tune the system with regard to both user functionalities and some central bank services in TARGET2.

In 2011 the Eurosystem also finalised the content of SSP release 6.0. Owing to its slim content, it was unanimously agreed with the TARGET2 user community to deliver this content of only three minor change requests together with SSP release 7.0 in November 2013. This will allow all stakeholders to focus on preparations for interfacing TARGET2 with TARGET2-Securities, a major task which will place a high demand on the resources of all parties concerned.

As regards the yearly releases beyond 2013, the Eurosystem has already announced its intention to progressively migrate TARGET2 to the new set of industry standards ISO 20022.¹⁸

¹⁸ More information on this strategy can be found in Box 1 of the TARGET Annual Report 2010.

CHAPTER II

THE TARGET2 SYSTEM

I FROM THE FIRST-GENERATION TARGET SYSTEM TO TARGET2

1.1 THE FIRST-GENERATION TARGET SYSTEM

With the establishment of the monetary union in 1999, the need arose 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, 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).

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 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, but it also became increasingly used for other types of transaction, including commercial payments.

After its inception in 1999 TARGET became a benchmark for the processing of euro payments in terms of speed, reliability, opening times and service level. It also contributed to the integration

of financial markets in Europe. Moreover, the establishment of TARGET supported the rapid integration of the euro area money markets by providing its users with a common payment and settlement infrastructure.

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

1.2 FROM TARGET TO TARGET2

Over its years of operation, TARGET successfully met its main objectives: it supported the implementation of the single monetary policy, 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.¹⁹ 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, 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

¹⁹ While inter-Member State payments were subject to degressive transaction fees (from €1.75 down to €0.80), intra-Member State transaction fees were not harmonised and were fixed by individual central banks

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.

1.3 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 80 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.

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”).

2 SYSTEM RULES

2.1 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 GFS is intended for informational purposes for users, while a more detailed and updated explanation is available in the User Detailed Functional Specifications (UDFS). The UDFS provides information on the core services (Book 1) and the optional services (Book 2) offered by the SSP, as well as on XML messages (Book 4). The latest version of books 1, 2 and 4 of the UDFS (i.e. version 5.01) was made available to the user community in October 2011.

The User Handbook for the information and control module of the SSP describes the module's online information tools and control measures, which allow access to the other relevant modules of the SSP. The latest version of the User Handbook (version 5.0) was made available to the user community in September 2011.

2.2 TARGET2 GUIDELINE

In June 2007 the Eurosystem adopted the TARGET2 Guideline, which repealed 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.²⁰ 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.²¹ The TARGET2 Guideline is regularly updated in order to take into account technical or organisational changes in TARGET2, as well as changes in EU legislation. The updates are published on the ECB's website and in the Official Journal of the European Union.²²

3 PARTICIPATION OF NON-EURO AREA CENTRAL BANKS

On 24 October 2002 the Governing Council of the ECB decided that, after joining the EU, the NCBs of the new Member States would be given the same rights and obligations with regard to TARGET connection as the non-euro area NCBs already participating in the system.²³ 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

20 No national derogations have been identified so far by the NCBs.

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

22 The last update was Guideline of the ECB of 14 October 2011 amending Guideline ECB/2007/2 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET2) (ECB/2011/15).

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

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 July 2011, after having carried out the necessary preparations and testing activities, Banca Națională a României (Romanian National Bank) and its national user community connected to TARGET2. In total, 24 central banks of the EU and their respective user communities are connected to TARGET2: the 18 euro area central banks (including the ECB)²⁴, and six central banks from non-euro area countries.²⁵

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.

4 COOPERATION WITH USERS AND INFORMATION GUIDES

4.1 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 2011. 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, which has recently been redesigned (see Box 4). As a further method of providing information, the Eurosystem publishes a TARGET newsletter twice a year. 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).

²⁴ The central banks of Austria, Belgium, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Portugal, Slovenia, Spain and the Netherlands, as well as Malta and Cyprus, which joined the euro area in January 2008, Slovakia, which joined the euro area in January 2009, and Estonia, which joined the euro area in January 2011.

²⁵ Denmark, Poland, Latvia, Lithuania, Bulgaria and Romania.

Box 4

A REDESIGNED TARGET2 WEBSITE: WWW.TARGET2.EU

The TARGET2 website is a communications tool for updating the user community and the general public on the most relevant documentation on TARGET2. Via this website, the Eurosystem regularly publishes and updates general information as a means of support for TARGET2 participants.

Where we started

The TARGET2 website was launched in April 2005 with the aim of integrating the various information sources in order to create a “one-stop shopping” experience. At first, the website primarily served the TARGET2 user communities by helping them prepare for their migration to the SSP of TARGET2. A technically centralised system and the provision of common services highlighted the need to disseminate the same information simultaneously throughout all the national user communities. The TARGET2 website became a broad communication tool, supplementing communication at the national level. The TARGET2 website fulfilled its objective as an information source for project-related issues, with the participants completing the migration to the new TARGET2 system in May 2008. In those early stages, the Eurosystem opted to restrict access to the TARGET2 website to TARGET participants and other directly involved parties (e.g. vendors and service providers). In addition, central banks outside the European Union often requested access to the website to follow up on the most recent developments in TARGET2.

Since then, following the migration, the contents of the TARGET2 website have focused more on the present operational phase. In 2009 the TARGET2 website was thoroughly redesigned, although the overall “one-stop shopping” philosophy remained the same: supporting TARGET2 participants by providing all TARGET2-related information and documentation in one place.

Welcome to www.target2.eu!

It goes without saying that, as a general rule, websites risk getting left behind by the speed at which the internet evolves. A credible website needs to stay up to date, evolve and reinvent itself continuously in order to keep up. That is exactly what the TARGET2 website is trying to do with its new philosophy and new contents since its renewed go-live date on Friday, 13 January 2012, an audacious date choice! Growing from its initial set-up as an aid for the process of migration to TARGET2, through the second phase of providing information on daily TARGET2 operations, the TARGET2 website has now evolved into a broad two-way communication platform, open not only to TARGET2 participants, but more widely to everyone interested in TARGET2, whether banks, students, non-European central banks, journalists or the general public at large.

To serve this purpose, the TARGET2 website has lifted its restricted access and is now accessible without a user ID or password. The new TARGET2 website is fully integrated into the ECB’s public website (www.ecb.europa.eu) and can be accessed by clicking the “Payments & Markets” tab and then on the vertical banner “TARGET2”. The TARGET2 website can also be accessed directly at www.target2.eu. For easier and faster access, please add the TARGET2 website to your favourites list.

Let's take a closer look at its contents. A snapshot of the homepage of the TARGET2 website is shown below. On the homepage you can find a definition of TARGET2, a video explaining this definition, a box showing the current operational status of the system and a list of TARGET2 facts for the previous year, updated at the time of publication of the TARGET Annual Report. In the banner on the right, you will find the main communication channels, including the TARGET2 Hotline, which can be used for sending questions directly to the TARGET team, the quarterly TARGET newsletters and the TARGET Annual Reports. In the banner on the left, you will find a range of detailed information, divided into two parts: "About", which provides information mainly intended for the general public, and "For professional use", which provides information mainly intended for TARGET2 participants.

The "About" page explains why TARGET2 is needed and who is participating, provides some statistics and describes its main features. In addition, the page provides information on the legal background as well as the history of TARGET2.

The page entitled "For professional use" provides specialised information for TARGET2 participants relating to the ongoing development of TARGET2 in yearly releases, its fee structure, additional business services and other channels for specialised communication with the TARGET2 user community.

The homepage of the TARGET2 website

The screenshot shows the TARGET2 website homepage. At the top, there is a navigation bar with links: Home, Site Directory, Glossary, Links, Contact, Disclaimer & Copyright, and Search. Below this is a language selector set to English. The main header features the European Central Bank logo and a banner with the text "The European Central Bank | Press | Events | Publications | Statistics | The euro | Monetary Policy | Payments & Markets". The breadcrumb trail indicates the current location: Home > Payments & Markets > TARGET2.

The main content area is titled "TARGET2" and includes a definition: "TARGET2 is the real-time gross settlement (RTGS) system owned and operated by the Eurosystem. TARGET stands for Trans-European Automated Real-time Gross settlement Express Transfer system. TARGET2 is the second generation of TARGET." It also states that payment transactions are settled one by one on a continuous basis in central bank money with immediate finality.

A "Status of the TARGET2 system" box indicates that the system is operating normally, with a last update on Wednesday, 30 May 2012 at 07:00. It notes that the system will be updated if interruptions impact on payments processing.

A video player titled "WHAT IS TARGET2? A VIDEO INTRODUCTION" is embedded, showing a woman talking on a phone and a server room.

A sidebar on the right contains links for "Contact" (TARGET2 Hotline), "Publications and Press releases" (TARGET Annual Reports, TARGET Newsletters), and "Glossary" (TARGET2 glossary).

A "TARGET2 facts" box lists statistics for 2011: 976 direct participants, 3,465 indirect participants, 13,083 correspondents, a daily average of 348,505 payments, a daily average value of €2,385 billion, an average value of a TARGET2 transaction of €6.8 million, two-thirds of all TARGET2 payments (i.e. 67%) had a value of less than €50,000 each, 11% of all payments had a value of over 1 EUR million, a peak in volume turnover on 31 January 2011 with 524,856 transactions and a peak value turnover of €3,713 billion, a share in total large-value payment system traffic in euro of 91% in value terms and 59% in volume terms, a technical availability of 99.89%, and that 99.85% of TARGET2 payments were processed in less than five minutes.

The TARGET2 website also has a page which provides a “History of updates”. In addition to this overview, the user community is made aware of any new information or documentation available on the website. A notification is sent to the NCBs announcing the new entry, and this is passed on to participants in the respective national user communities. In parallel, a notification is sent to the Secretariat of the TARGET Working Group of the European Credit Sector Associations, so that the information can be passed on to its members.

If you are reading a paper version of this TARGET Annual Report, then we strongly encourage you to experience the site for yourself next time!

4.2 INFORMATION GUIDE FOR TARGET2 USERS

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

The latest version of the information guide (version 5.0) was made available to the user community on 21 November 2011. The information guide is intended solely to provide information on the TARGET2 system and should not be seen as a legal or contractual document.

4.3 INFORMATION GUIDE FOR TARGET2 PRICING

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

ANNEXES

I FEATURES AND FUNCTIONALITIES OF TARGET2

SYSTEM STRUCTURE

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

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

BUSINESS CONTINUITY

The business continuity concept of TARGET2 consists of a two-region/two-site architecture.

There are two regions for payment processing and accounting services, and in each region there are two distinct sites. The principle of region rotation is applied, thus ensuring the presence of experienced staff in both regions.

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

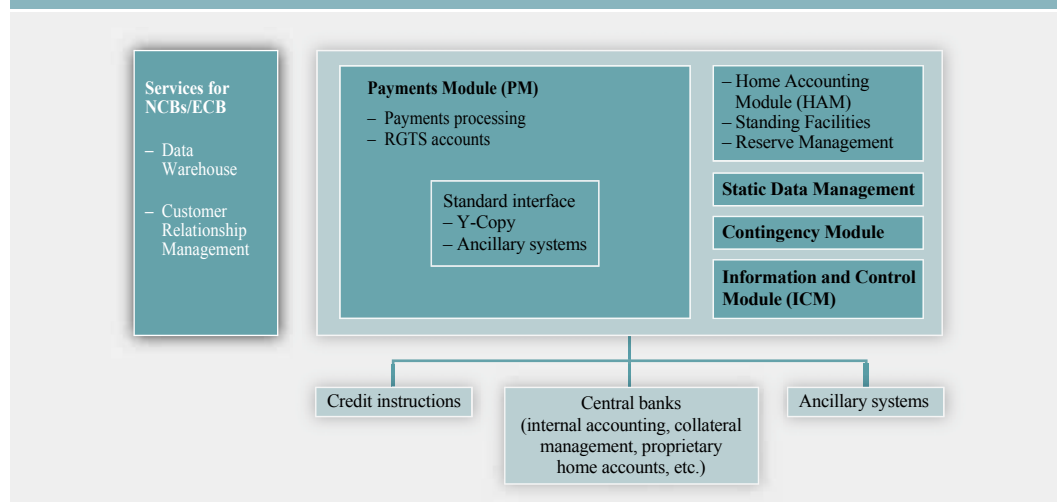
PARTICIPATION

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

Chart I.1 Structure of the SSP



Source: ECB.

(ii) settle directly with their respective NCB.

Direct participants are responsible for all payments sent from or received on their account by any TARGET2 entity (i.e. indirect participants, addressable BICs and multi-addressee access entities as described below) registered through them.

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

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

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

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.

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 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 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

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.

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 degressive transaction fee is applied to all payments of the group as if they had been sent from one account.

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

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 the 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

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 payment module or the home accounting module) 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
Flat rate		€0.80
Optional fees		
Unpublished BIC	Monthly	€30

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

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 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

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.

7 See also EMI Annual Report, May 1998.

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 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

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.

own discretion, NCBs could decide to grant intraday credit to investment firms, subject to a formal spillover prevention arrangement. Any arrangement under which an NCB grants intraday credit, in specific circumstances, to organisations providing clearing or settlement services would have to be approved in advance by the Governing Council.

4 JANUARY 1999

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

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

MARCH 1999

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

JULY 1999

Owing to rather low payment traffic on traditional public (or bank) holidays, and at the request of the European banking industry, the Governing Council decided on six closing days in 2000 in addition to Saturdays and Sundays.

These were New Year’s Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December. These were de facto non-settlement days for the money market and the financial markets in euro, as well as for foreign exchange transactions involving the euro. However, in euro area countries where one or other of these days was not a public holiday, the national RTGS system would remain open for limited domestic payment activity.¹³

MAY 2000

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

OCTOBER 2000

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

NOVEMBER 2000

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

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.

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.

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.

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).

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 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

¹⁹ "TARGET2: Principles and structure".

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

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) was implemented on 23 November, enhancing the system's real-time online monitoring tool and implementing the new message standard MT202COV, among other new features.

FEBRUARY 2010

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

NOVEMBER 2010

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

JULY 2011

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

NOVEMBER 2011

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

3 GENERAL TERMS AND ACRONYMS

COUNTRIES

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

OTHERS

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

ISIM	Interlinking statistical information message
ISO	International Organization for Standardization
ITES	Interlinking test environment system
LVPS	Large value payment system
MAC	Message authentication code
MT103	Message type
MT103+	Message type
MT202	Message type
MT202COV	Message type
NCB	National central bank
NMP	National migration profile
NSS	Net settlement system
PHA	Proprietary home account
PM	Payment module
PSMN	Payment settlement message notification
PSMR	Payment settlement message request
PSPWG	Payment Systems Policy Working Group
PSSC	Payment and Settlement Systems Committee
PvP	Payment versus payment
Repo	Repurchase operation
RTGS	Real-time gross settlement
SFD	Settlement Finality Directive
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).

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 PSMDs from the sending NCB/the ECB and payment settlement message notifications (PSMDNs) (see above) from the receiving NCB/the ECB. The sender of the PSMD 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 Pikasiirot ja Sekit-järjestelmä (POPS).

Transfer: Operationally, the sending (or movement) of funds or securities, or of rights relating to funds or securities, from one party to another party by: (i) the conveyance of physical instruments/ money; (ii) accounting entries on the books of a financial intermediary; or (iii) accounting entries processed through a funds and/or securities transfer system. The act of transfer affects the legal rights of the transferor, the transferee and possibly third parties with regard to the money, security or other financial instrument being transferred.

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

ADDITIONAL TABLES AND CHARTS

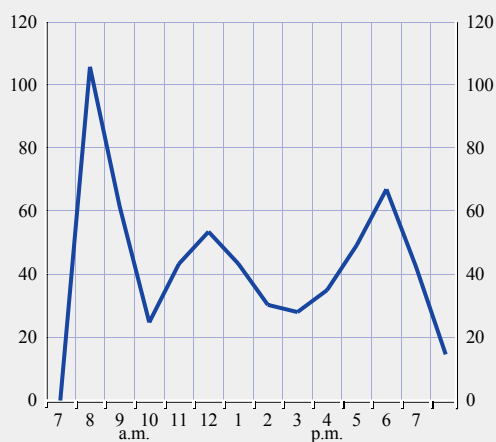
Distribution of payment flows in TARGET2

	2011				2010			
	Value ¹⁾	%	Volume	%	Value ¹⁾	%	Volume	%
AT	6,939	1.1	1,617,473	1.8	6,988	1.2	1,358,693	1.5
BE	27,207	4.4	2,638,198	2.9	24,590	4.1	2,439,058	2.8
BG	286	0.0	105,201	0.1	181	0.0	66,661	0.1
CY	429	0.1	132,313	0.1	455	0.1	120,144	0.1
DE	210,260	34.3	44,431,306	49.6	213,841	36.0	44,690,126	50.4
DK	3,332	0.5	197,100	0.2	3,405	0.6	201,967	0.2
EE	304	0.0	84,640	0.1	84	0.0	33,429	0.0
ES	94,391	15.4	7,583,861	8.5	88,311	14.9	7,532,420	8.5
EU	9,359	1.5	97,351	0.1	9,502	1.6	86,020	0.1
FI	12,101	2.0	403,646	0.5	9,061	1.5	409,895	0.5
FR	102,300	16.7	8,773,644	9.8	94,072	15.9	8,217,403	9.3
GR	5,999	1.0	1,506,157	1.7	7,180	1.2	1,523,333	1.7
IE	5,284	0.9	1,124,547	1.3	7,642	1.3	1,279,956	1.4
IT	33,052	5.4	8,646,238	9.7	33,197	5.6	8,681,492	9.8
LT	123	0.0	54,996	0.1	97	0.0	43,002	0.0
LU	14,711	2.4	829,760	0.9	10,258	1.7	782,472	0.9
LV	228	0.0	307,374	0.3	200	0.0	287,051	0.3
MT	109	0.0	18,389	0.0	76	0.0	16,876	0.0
NL	79,204	12.9	8,349,981	9.3	77,458	13.1	8,592,558	9.7
PL	299	0.0	513,042	0.6	180	0.0	214,307	0.2
PT	5,670	0.9	1,070,279	1.2	5,152	0.9	1,085,055	1.2
RO	50	0.0	111,702	0.1				
SI	595	0.1	780,959	0.9	581	0.1	779,975	0.9
SK	707	0.1	187,540	0.2	682	0.1	150,033	0.2
Total	612,936		89,565,697		593,194		88,591,926	

1) In EUR billions.

Chart 1 Intraday pattern of interbank payments – value

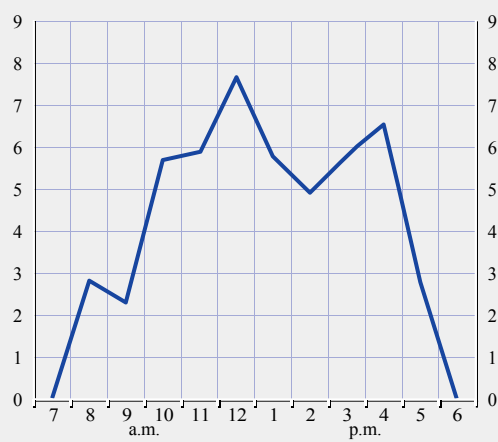
(2011; EUR billions)



Source: ECB.

Chart 2 Intraday pattern of customer payments – value

(2011; EUR billions)



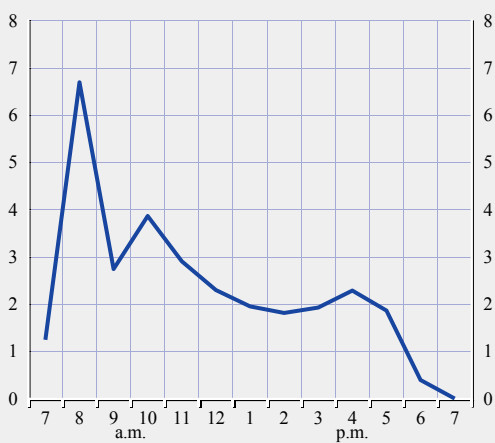
Source: ECB.

CHAPTER I

From the
first-generation
TARGET system
to TARGET2

Chart 3 Intraday pattern of interbank payments – volume

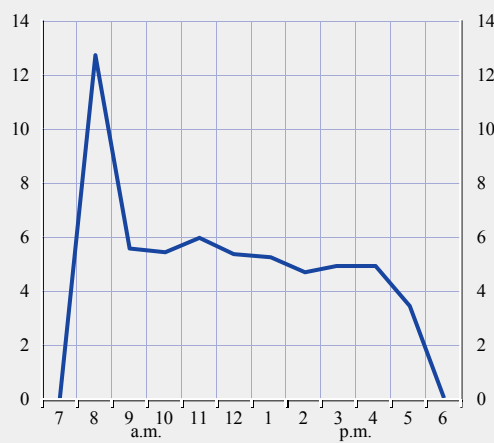
(2011; millions)



Source: ECB.

Chart 4 Intraday pattern of customer payments – volume

(2011; millions)



Source: ECB.

