



EUROPEAN CENTRAL BANK



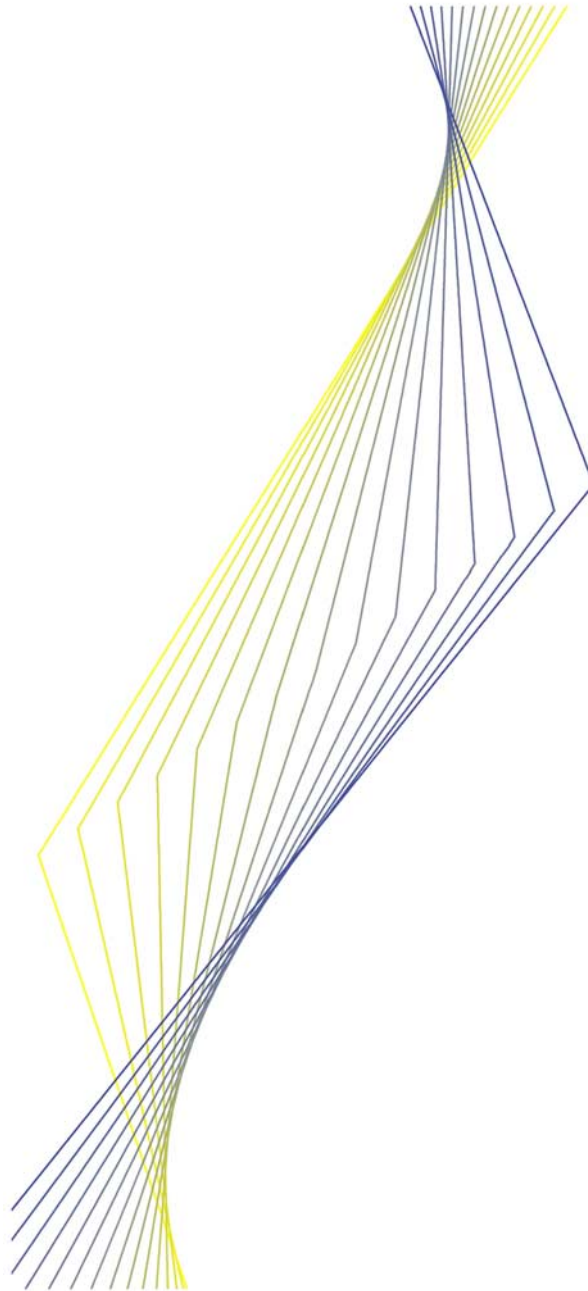
TARGET ANNUAL REPORT

May 2001





EUROPEAN CENTRAL BANK



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Introduction

In May 1995, the Council of the European Monetary Institute (EMI) agreed to start preparing the Trans-European Automated Real-time Gross settlement Express Transfer (TARGET) system, with the objectives of facilitating the implementation of the single monetary policy and providing a sound and efficient mechanism for settling same-day cross-border payments in any circumstances.

At that time, the exact starting date of Stage Three of Economic and Monetary Union (EMU) was still undecided (1 January 1997 or 1 January 1999). In addition, the names of the Member States which would adopt the euro were still unknown.

Against this background, it was agreed to connect the 15 national Real-Time Gross Settlement (RTGS) systems of the EU. The “interlinking” of the system was to be ensured by a single message carrier (SWIFT) and a series of bilateral correspondent accounts held by national central banks (NCBs). In order to overcome any difficulties arising from the different structures of the RTGS systems, it was decided to limit harmonisation to three main areas: i) the provision of intraday liquidity; ii) specific operating times; and iii) the existence of pricing policies for cross-border payments. In addition, it was decided to have common security requirements. With regard to other transfer systems, TARGET needed to operate in an environment of free competition with other large-value payment systems (LVPSs), and all large-value net settlement systems (NSSs) were obliged to settle in central bank money (see Annex 2 for more details).

TARGET successfully commenced live operations on Monday, 4 January 1999. Since then, it has contributed effectively to the implementation of the single monetary policy, the integration of the euro money market and the sound and efficient processing of large-value payments within the euro area. It soon became recognised by the banks as the *de facto* standard for making large-value cross border payments in euro. In a more general sense, the introduction of the euro and TARGET have triggered a movement towards the establishment of common business practices for making domestic and cross-border payments in the euro area and have fostered the integration of the financial market infrastructure.

The aim of this document is to report on the first two years of TARGET operations. In the first chapter, its business performance is measured on the basis of an analysis of TARGET payment flows. The second chapter assesses the technical performance of the system. The third chapter provides a description of the major developments in the organisational and operational framework. The fourth chapter sheds some light on the future development of the system and the forthcoming challenges. In order to provide a brief overview of this report, a short synopsis is contained at the beginning of each chapter. Finally, in the annexes, the reader may find a selection of statistical data, a chronology of developments in TARGET and an overview of its organisation and management structure.

Chapter I

Business performance

TARGET was created with a view to meeting three main objectives:

- to serve the needs of the Eurosystem's monetary policy;
- to increase the efficiency of intra-European cross-border payments; and
- to provide a reliable and safe mechanism for the settlement of cross-border payments.

After two years of operations, there is no doubt that TARGET has met its objectives.

Shortly after the system went live in 1999, the money market interest rate spreads throughout the euro area narrowed rapidly, thus facilitating the conduct of the single monetary policy.

The swift increase in the use of TARGET, soon after its launch, clearly indicated the overall acceptance and satisfaction of the banking community with the advantages of real-time settlement, highly automated payment processing and broad market coverage. Against this background, TARGET has contributed significantly to the development of common business practices.

Over the past two years, almost 5,000 institutions have participated in TARGET and the overall number of banks which can be addressed in TARGET (including branches and subsidiaries) has risen to over 35,000. This has helped the system to become the most widely used system in Europe for large-value euro payments. In the same period, almost 70% of the total turnover of the large-value euro payments in the euro area was processed by TARGET. It thus contributed substantially to risk reduction in the settlement of large-value transactions in euro.

Since the start of TARGET operations, all large-value NSSs in the EU have settled in central bank money without any major problems. This ensures that payments exchanged via these systems have ultimate finality at the settlement time.

The decrease in TARGET cross-border traffic on public holidays in the United States indicates that TARGET was successful in attracting a substantial share of the settlement of FX-related payments.

In 2000 TARGET processed a daily average of 188,000 payments to the value of €1,033 billion. Therefore, the system turned over an amount equivalent to the entire euro area's gross domestic product (GDP) in less than 6 days. Within TARGET, 40,000 cross-border payments were made for an amount of €432 billion.

Furthermore, the daily increase in TARGET cross-border activity over the past two years reflected the progressive integration of EU financial markets. In particular, cross-border interbank transfers in TARGET have been widely used for credit institutions' cross-border liquidity transfers. TARGET was therefore considered a key element in ensuring an efficient redistribution of liquidity across the euro area.

Although it was expected that customer payments would be processed through other systems, the use of TARGET for settling cross-border customer payments soared, in terms of volume, by 105% between 1999 and 2000. This can be explained by the progressive shift

in 1999 and 2000 of commercial payments away from correspondent banking in favour of interbank systems, such as TARGET.

I Payment flows in TARGET

This chapter provides an overview¹ of the payment flows in TARGET in the year 2000 and draws comparisons with 1999.² For this purpose, the activity of TARGET as a whole is described in some detail. A distinction is also made between TARGET domestic and TARGET cross-border payments.³ With regard to TARGET cross-border traffic, a further distinction is made between the activity of interbank⁴ and customer payments. Unless otherwise specified, figures are expressed as daily averages.

TARGET as a whole

In 2000 TARGET as a whole processed a daily average of 188,157 payments to the value of €1,033 billion.

A comparison between 2000 and 1999 shows a pronounced upward trend in the use of TARGET.

In 2000 the average turnover processed daily by TARGET as a whole rose by 12%. This growth was mainly due to the steady increase (20%) in the use of TARGET for cross-border payments. At the domestic level, the increase was more modest (6%).

In addition, in terms of volume, TARGET as a whole experienced a substantial increase (15%), mainly on account of growth in cross-border traffic (39%).

Over the past two years TARGET's market share in value has been stable at around 70% (in volume, 52%). This confirms the current market perception of TARGET as the core system for large-value euro payments.

Over the same period TARGET flows have tended to concentrate in a few systems. In 2000 five RTGS systems processed up to 78.6% of the total TARGET value and 86.8% of the volume (see Statistical Annex I, Tables I.1 and I.2).

¹ For more detailed information please refer to the tables or charts provided within the statistical annexes.

² Unless otherwise specified, the source of the data is the Interlinking Statistics Database used at the ECB, and the analysis of the data is restricted to payments sent. The times expressed in this chapter are Central European Time (C.E.T.).

³ Currently, only cross-border payments can be analysed per payment type (interbank and customer payments).

⁴ For the sake of simplicity, inter-NCB payments are included in the interbank figures because they represent only 0.1% of the total turnover of cross-border payments.

Table I
TARGET payment flows

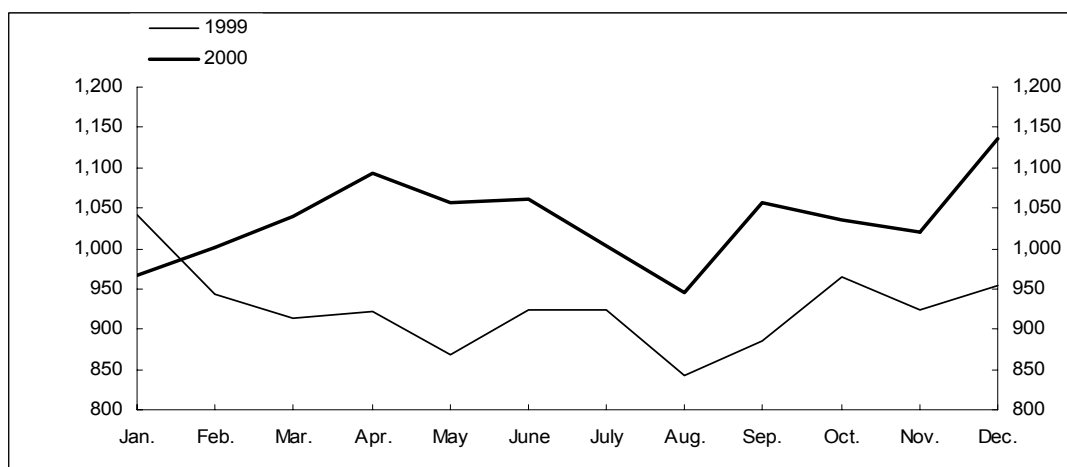
		1999	2000	change	1999	2000	change
		EUR billions			Number of payments		
				%			%
TARGET overall	Total	239,472	263,291	10%	42,257,784	47,980,023	14%
<i>of which:</i>	Daily average	925	1,033	12%	163,157	188,157	15%
Domestic	Total	146,236	153,253	5%	34,804,458	37,811,112	9%
	Daily average	565	601	6%	134,380	148,279	10%
Cross-border	Total	93,236	110,038	18%	7,453,326	10,168,911	36%
<i>of which:</i>	Daily average	360	432	20%	28,777	39,878	39%
Interbank	Total	91,042	106,167	17%	5,717,284	6,664,078	17%
	Daily average	352	416	18%	22,074	26,134	18%
Customer	Total	2,195	3,809	74%	1,736,040	3,504,833	102%
	Daily average	8	15	76%	6,703	13,744	105%

Source: ECB.

Note: In 1999: 259 operating days; in 2000: 255 operating days.

Both in 1999 and in 2000 TARGET figures seemed to be affected by seasonal behaviour (see Charts I and 2). In particular, during the month of August a significant reduction in TARGET activity was recorded.

Chart I
TARGET as a whole – value (in EUR billions)
(daily averages per month)

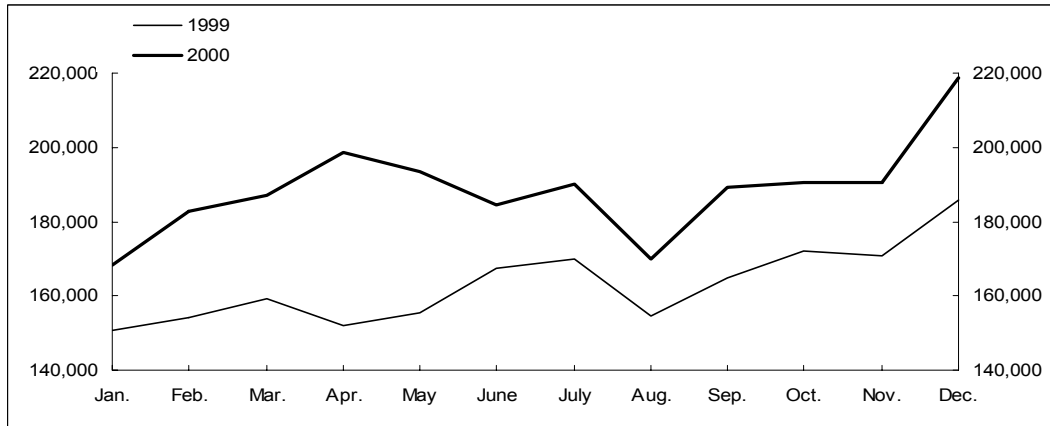


Source: ECB.

Chart 2

TARGET as a whole – volume

(daily averages per month)



Source: ECB.

TARGET domestic

In January 1999 the value of payments processed at the domestic level was exceptionally high. On a daily average, TARGET processed €687 billion. The likely explanation for the high value processed in this first month of operation are one-off structural adjustments made as a result of the introduction of the euro, in particular within the banking sector.

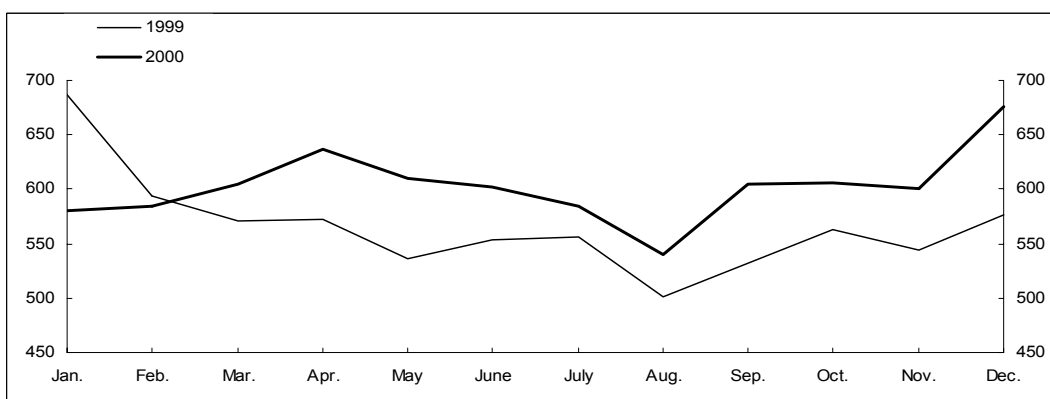
In 2000 TARGET processed a daily average of 148,279 domestic payments to the value of €601 billion. This represents a small increase by comparison with 1999.

In the same year, domestic traffic represented 58.2% (in value) and 78.8% (in volume) of TARGET as a whole. In 1999, these figures were 61.1% and 82.4% respectively.

Chart 3

TARGET domestic – value (in EUR billions)

(daily averages per month)

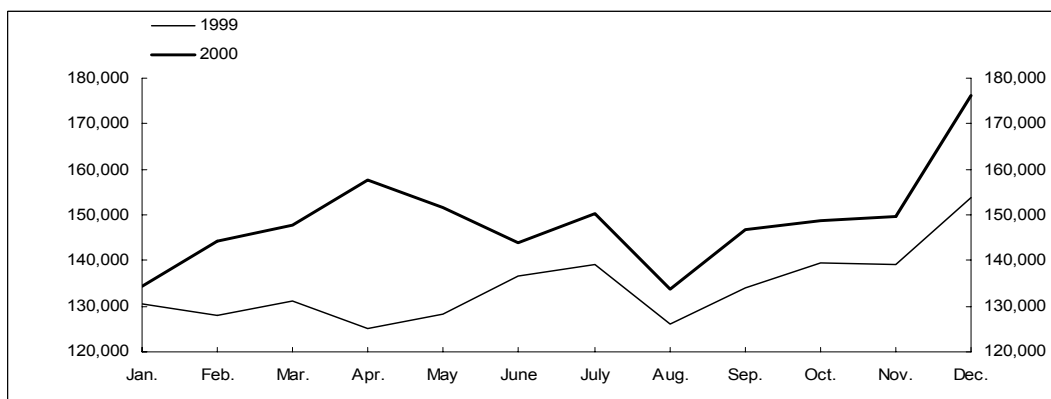


Source: ECB.

Chart 4

TARGET domestic – volume

(daily averages per month)



Source: ECB.

The distribution of the payment flows in TARGET country by country is presented in Tables I.1 and I.2 in Statistical Annex I.

Although cross-country comparisons should be made with great care, it appears that payment flows in TARGET are very concentrated.

In terms of volume, two NCBs (those of Germany and Italy) process more than two-thirds of the total number of domestic payments. In terms of value, four NCBs (those of France, Germany, Spain and Italy) process more than 70% of TARGET flows.

By contrast, four euro area NCBs (those of Ireland, Portugal, Luxembourg and Finland) together process less than 4% of the value and volume of TARGET payments.

In non-euro area countries, TARGET traffic is negligible, with the exception of the United Kingdom, which is very active, particularly in the area of cross-border payments.⁵

In France and Spain, the number of payments processed is relatively low, but the value is high. This indicates that in these countries TARGET is mainly used to process large-value payments from the financial markets.

In Germany and Italy, the number of payments processed is very high, but the average value of a payment is much lower than in the first group (€2.5 million in Germany compared with €22 million in France). This indicates that in Germany and Italy, TARGET is also widely used to process commercial payments.

5 The figures for non-euro area countries include liquidity transfers organised in such a way as to provide intraday liquidity to non-euro area RTGS systems (see Box 6). In the example of the United Kingdom, €3 billion are collected every morning by the Bank of England as a deposit in euro held with the Eurosystem. These funds are returned to the Eurosystem in the evening, before TARGET closes. Furthermore, a study conducted by the ECB at the end of 1999 over a limited period of time showed that, in addition to the above-mentioned funds, €8 billion are collected by banks in the United Kingdom on a regular basis as further liquidity provision. This is based on arrangements made independently between credit institutions in the United Kingdom and banks in the euro area.

TARGET cross-border

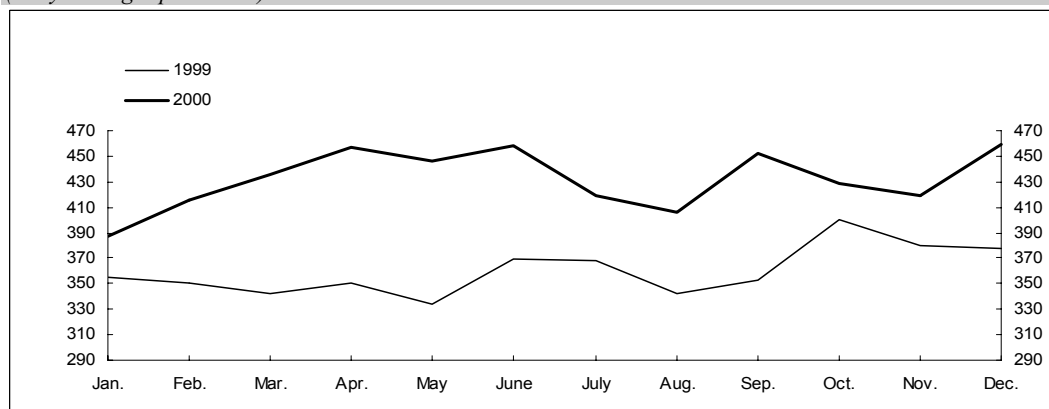
During the year 2000 TARGET processed a daily average of 39,878 cross-border payments with an average value of €432 billion, showing a substantial increase as compared with the figures for 1999 (see Table I).

Over the past two years the proportion of payments which are sent cross-border through TARGET has increased. This increase in the value of payments processed through TARGET reflects the progressive integration of financial markets in euro. The substantial increase in terms of volume reflects the progressive shift of cross-border commercial payments from correspondent banking to interbank systems, such as TARGET. In terms of value, cross-border payments accounted for 41.8% of the total in 2000, compared with 38.9% in 1999. In the same period, the share in volume grew from 17.6% to 21.2%.

Chart 5

TARGET cross-border – value (in EUR billions)

(daily averages per month)

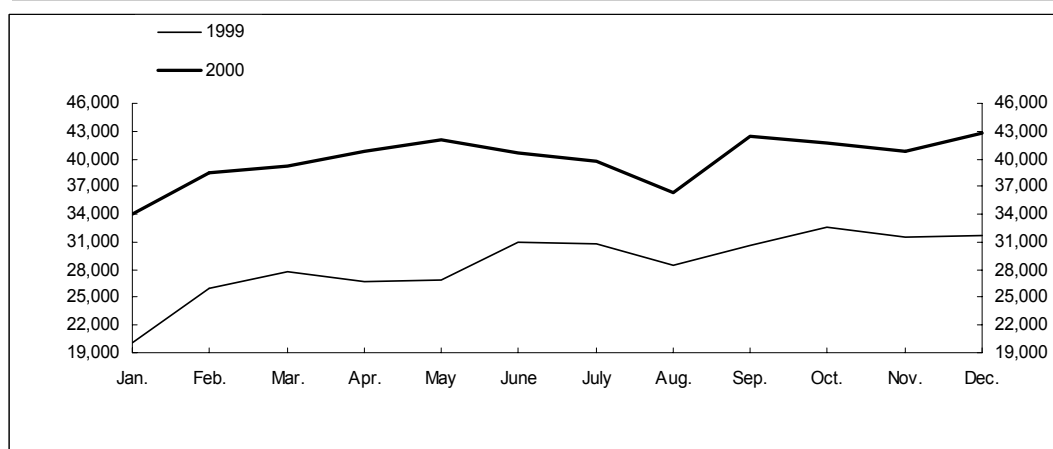


Source: ECB.

Chart 6

TARGET cross-border – volume

(daily averages per month)



Source: ECB.

In 2000, **interbank payments** represented 96.5% of the total cross-border value and 65.5% of the volume. In 1999 interbank payments stood at 97.6% and 76.7%.

Also in 2000, **customer payments** increased to 3.5% of the total cross-border value and 34.5% of the volume. In 1999 customer payments stood at 2.4% and 23.3%.

In addition, in absolute terms the increase in cross-border customer payments processed in TARGET was quite substantial, both in terms of value (76%) and, in particular, in terms of volume (105%).

2 The size of TARGET payments

The average value of individual transactions processed in TARGET as a whole decreased in 2000 as compared with 1999 (see Table 2). This is due to the increased number of cross-border customer payments (with a lower value) processed through TARGET. By contrast, the average value of interbank cross-border transfers was fairly stable, at around €16 million.

Table 2
The average size of TARGET payments (EUR millions)

	1999				2000			
	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q
TARGET overall	6.2	5.7	5.4	5.4	5.6	5.6	5.5	5.3

of which:

Domestic	4.7	4.3	4.0	3.9	4.1	4.1	4.0	4.0
Cross-border	14.1	12.4	11.8	12.1	11.1	11.0	10.8	10.4

of which:

Interbank	16.5	15.4	15.2	16.7	15.5	16.1	15.9	16.0
Customer	1.5	1.3	1.1	1.2	1.1	1.1	1.2	1.0

Source: ECB.

Over the past two years, the average value of cross-border payments has been higher than that of domestic payments. This might be explained by the large number of liquidity transfers made across the system, especially by the major credit institutions. Following the introduction of the euro, most banks have centralised their liquidity management. This new set-up entails the distribution of liquidity to the banks' branches in the morning, and these return any excess funds in the evening. The indication is that this pattern remained quite stable, particularly as regards the average value of a TARGET cross-border interbank payment made in the last hour of TARGET operations (see Statistical Annex 2, Chart 2.2).

3 Fluctuations in TARGET payment flows

Fluctuations in TARGET are mainly caused by public holidays or by the settlement of periodical transactions (e.g. term deposits) at the end of a month, quarter or semester.

Periodical peak days in TARGET

In 2000 the highest volume of payments on any single day in TARGET as a whole was recorded on 29 December (the last business day of the year), when a total of 283,745 payments were processed (i.e. almost 100,000 payments above the daily average). In terms of value, the peak day was 30 November with a total turnover of €1,551 billion.

The same peak days were recorded at the domestic level. By contrast, cross-border flows reached their yearly peak on 29 September 2000 (end of the third quarter) in terms of volume and on 30 June 2000 (end of semester) in terms of value.

Table 3
Peak days in TARGET

EUR billions	1999		2000	
TARGET as a whole	1,419	30 June	1,551	30 Nov.
domestic	921	30 June	1,032	30 Nov.
cross-border	498	30 June	586	30 June
Number of payments				
TARGET as a whole	253,246	30 Dec.	283,745	29 Dec.
domestic	219,183	30 Dec.	236,658	29 Dec.
cross-border	47,155	26 Nov.	60,770	29 Sep.

Source: ECB.

Impact of public holidays on TARGET

Looking at TARGET as a whole, the indication is that public holidays in the United States, in particular, have a substantial impact on the system's daily turnover. This is related to the fact that no EUR/USD foreign exchange transactions are settled on these days. On US public holidays, the decrease in volume, compared with the daily average for the respective month, stood at around 15%,⁶ whereas the reduction in terms of value ranged from between 10% and 25%. This decline generally tended to be compensated for by an increase of between 5% and 15%, in terms of both volume and value, on the subsequent business day.

US public holidays seem mainly to have an impact on TARGET cross-border traffic. The decrease in the cross-border flows was around 40% both in terms of volume and value, followed by a substantial rise on the subsequent TARGET business day (up to 45% in terms of volume and 30% in terms of value). During public holidays in the United States, the cross-border turnover of some of the RTGS components, such as the French and the British component, was more greatly affected than that of some of the other countries' components.⁷

Public holidays in other countries outside the euro area seem to have little effect on TARGET activity. Neither public holidays in the United Kingdom nor Japanese public holidays have a significant impact on payment volumes and values in TARGET.

These figures show that intensive use is made of TARGET for the settlement of the euro leg of EUR/USD foreign exchange transactions and that the bulk of foreign exchange transactions involving the euro is made against the US dollar.

⁶ All figures given in this chapter mainly refer to public holidays in 2000.

⁷ Settlement of the euro leg of foreign exchange transactions are also important in Germany, but transactions are settled outside TARGET, e.g. in the EAF system.

It is clear that public holidays in the euro area affect the payment traffic in TARGET, but to varying degrees. TARGET is open on several days which are public holidays in one or several countries of the euro area (see Chapter III, paragraph 3). In this respect, the following observations can be made:

- Public holidays which exist only in one country hardly have an impact on volumes and values in TARGET. However, 3 October 2000⁸ can be identified in this respect as the only public holiday which seems to have had a significant impact on TARGET activities. On that day, TARGET's turnover shrank by more than 30% in terms of volume and over 15% in terms of value against the daily average for the respective month.

Looking at this phenomenon in closer detail, this particular public holiday seems to have affected domestic activities in TARGET with a reduction of almost 40% in terms of volume and more than 20% in terms of value. This decrease at the domestic level largely reflects the market share of the German component in the domestic business of TARGET.

At the cross-border level, the German public holiday of 3 October 2000 caused a reduction of more than 5% in terms of value and more than 10% in terms of volume as compared with the daily average for the month. During the public holiday in France on 14 July 2000, the cross-border value decreased by almost 10%, while the volume dropped by only 3%.

- Public holidays celebrated in several euro area countries (e.g. Epiphany, Ascension Day, Whit Monday) seem to have a considerable impact. Depending on the countries involved, the decrease, as against the daily average for the respective month, ranged between 30% and 45% in terms of volume, whereas the reduction in terms of value varied at around 25% for TARGET as a whole. The domestic volume of TARGET declined by up to 55% in terms of volume and 45% in terms of value against the daily average for the respective month. Even at the cross-border level, the TARGET cross-border volume shrank by around 25%, whereas cross-border value fell by around 15%.

It is clear that the cross-border traffic in the RTGS components of countries with public holidays decreased even further. For example, on 12 June 2000 (Whit Monday) the cross-border traffic sent by the German component decreased by 19% in terms of value and 39% in terms of volume. Similarly, in the French component the decline in value was 22% and the decline in volume 33%. In the Dutch component, the fall in value was 15% and fall in volume was 30%. For the Belgian component, however, the reduction was even greater (42% in terms of value and 37% in terms of volume).

4 Cross-border intraday flows⁹

TARGET provides for the immediate and final settlement of all payments if sufficient funds or overdraft facilities are available on the sending institution's account with its NCB. Thus TARGET contributes to the early processing of payments on a TARGET business day. In this respect, the intraday pattern of cross-border transactions has evolved positively over the past two years. In 2000 payments were made earlier than in 1999 (see Chart 8), showing that credit institutions have generally followed the guidelines issued by the European Banking Federation (EBF), thus contributing to the settlement of cross-border large-value payments in euro.

Over the past two years, the TARGET day has, on average, begun with a high number of payments being processed in the first hour. This is mainly due to the business practice of making

⁸ Anniversary of the German Unification.

⁹ The statistics of the intraday flows at the domestic level are currently unavailable.

warehousing payments. Overall, the highest number of cross-border payments was processed in the first three hours of operations (from 7 a.m. to 10 a.m.) with nearly 50% of the total cross-border **volume** being sent via TARGET. By 5 p.m. (customer payments cut-off time) 99% of the total volume was already processed (see Charts 7 and 8).

In terms of **value**, 26% of the cross-border payments turnover was processed by 10 a.m., while 56% was processed by 1 p.m. During the day, there were two time intervals in which cross-border payments reached, on average, their highest turnover: between 9 a.m. and 12 noon and between 4 p.m. and 5 p.m. (see Charts 7 and 8).

Furthermore, the hourly average value of a cross-border interbank payment steadily increased throughout the day, from €6.2 million in the first hour to €87.8 million in the last hour of operation (see Statistical Annex 2, Chart 2.2). This is the time when the main part of the liquidity shift between the financial counterparties takes place. Similarly, the average value of a cross-border customer payment increased significantly from €463,820 in the first three hours of operations to €3.3 million in the hour just before the customer payment cut-off time of 5 p.m. (see Statistical Annex 2, Chart 2.3). From this it may be concluded that these late high-value customer payments were mainly related to corporate cash management activity.

Chart 7
TARGET cross-border intraday pattern – value and volume

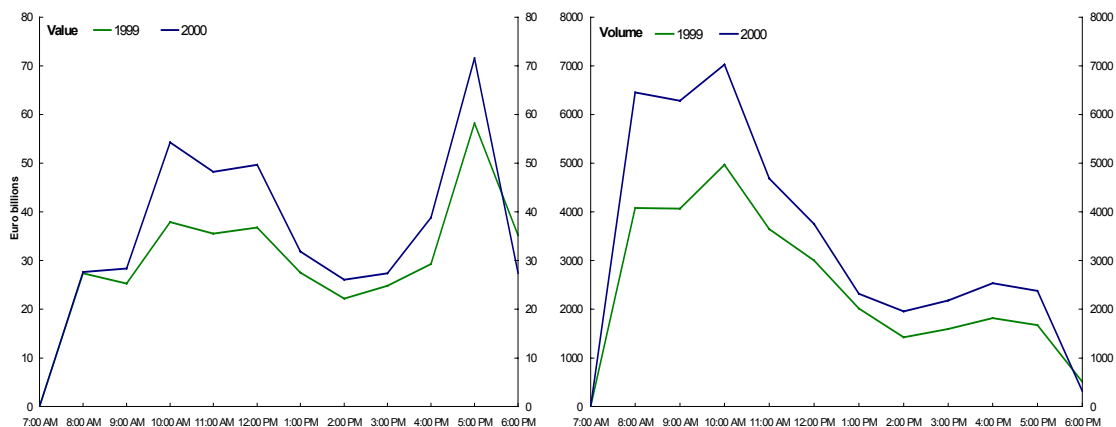
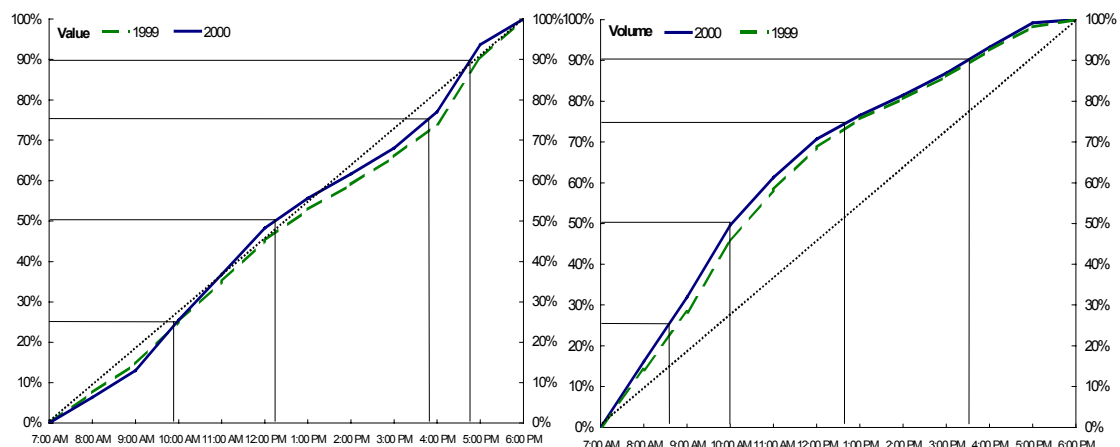


Chart 8
TARGET cross-border intraday pattern, cumulative – value and volume



Chapter II

Technical performance

Although credit institutions, the NCBs and the ECB conducted intensive tests and pre-production trials in order to be well prepared for the smooth start of TARGET live operations, a few teething problems could not be avoided in the early stages of TARGET operations in 1999.

From the point of view of the user, technical problems were mostly related to the adaptation to new message standards. These had limited business implications for TARGET. However, from 11 to 29 January 1999 inclusive, it was decided to temporarily extend the final closing time of the TARGET system until 7 p.m. in order to give banks time to adjust to the new environment.

From the point of view of the TARGET system, few major incidents required a delay in the TARGET closing time. In particular, in early 1999 few major service interruptions in interlinked RTGS systems caused substantial end-of-day liquidity imbalances within TARGET which needed to be brought back into balance through the use of standing facilities. In spite of the unavoidable fine-tuning problems encountered in the early stages of TARGET operations, overall TARGET availability soon stabilised at a high level.

The Eurosystem has always attached utmost importance to TARGET availability and for this reason the NCBs and the ECB have introduced contingency measures – at least for some critical payments – in order to ensure the continuation of daily business in the event of any problems arising within TARGET. These should cover monetary policy operations, the settlement of ancillary systems, transfers of liquidity to and from non-euro area NCBs and major liquidity transfers which are important for the smooth functioning of large-value euro payment systems and the euro money market. In this context, the Eurosystem also pays close attention to the fact that critical time-driven payments (such as CLS payments; see Chapter IV and Box 5) will further increase the need for additional requirements relating to TARGET's technical performance.

In order to increase the efficiency of cross-border payment processing, a new message type (MT103) was introduced as the main feature of the TARGET release 2000.

I TARGET availability

Following sound preparation involving intensive tests and pre-production trials, TARGET successfully went live on 4 January 1999. Over the past two years, TARGET has generally displayed a high level of availability. Local service interruptions caused only very limited problems for the system as a whole and could be solved swiftly. In this context, the experience gained over the past two years shows that incidents occurring in the late afternoon (mainly between 4 p.m. and 6 p.m.) are most critical, because it is at this time that high-value liquidity transfers and the settlement of major net systems (Euro I, EAF, SNP) take place.

Notwithstanding this, a few serious incidents occurred in TARGET, mainly in 1999, when local TARGET components were not fully operational for several hours. In these rare cases, mainly in order to avoid end-of-day liquidity imbalances within TARGET, TARGET's closing time was delayed accordingly:

- On 29 January 1999 a major service interruption in the French RTGS system caused a disruption in the execution of payments from noon until the end of the business day. This

serious interruption triggered end-of-day liquidity imbalances within TARGET which had to be rectified through recourse to the standing facilities.

- The German RTGS system encountered a few serious problems in 1999, most of which occurred in the afternoon. In these cases, TARGET's business hours had to be extended in order to provide additional time for the processing of critical payments.
- On 26 July 1999 the European Central Bank payment mechanism (EPM) was not operational. The problem was eased by switching to manual contingency procedures, but once again TARGET's business hours had to be extended.
- On 8 October 1999 the simultaneous delivery of a large number of domestic payments slowed down the German TARGET component and led to a delay in TARGET's closing time. This incident proved that the behaviour of major banks in delivering their payments via TARGET could have an impact on the smooth functioning of the system.

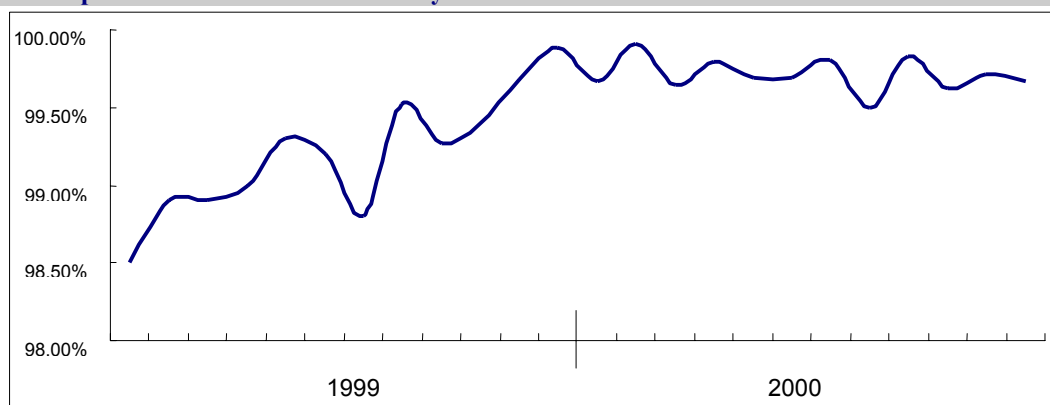
Furthermore, an incident occurred outside of the TARGET system on 1 December 1999, but involving one of the major credit institutions. It was thus decided, on an exceptional basis, to delay the closing time of the system in order to allow the counterparties involved to find appropriate solutions to the end-of-day liquidity problems.

The above-mentioned incidents in TARGET may have intrinsically posed a liquidity risk to TARGET participants. However, the contingency measures in place facilitated the successful processing of critical payments (see paragraph 2 below). In addition, the standing facilities were available for TARGET participants to support their liquidity management, if necessary.

The Eurosystem closely monitors and reviews the availability rate on a regular basis. From the very start, concrete measures have been taken to increase the availability of those national RTGS systems which have experienced technical problems. Therefore, overall TARGET availability has stabilised at a high level, which is directly reflected in the 70% decrease in the number of incidents which occurred in 2000 as compared with 1999. This indicates that the problems experienced mainly at the beginning of 1999 have been successfully overcome.

Chart 9

Developments in TARGET availability



Source: ECB.

The Eurosystem is aware of the increasing importance of TARGET to the market, as well as of the development of more demanding business needs, particularly in the context of processing critical time-driven payments (e.g. CLS; see Box 5). Thus, the improvement of TARGET availability is being given the highest priority, particularly in terms of dialogue with TARGET users (see Chapter III, paragraph 1). Furthermore, a reimbursement scheme has been put in place (see Chapter III, paragraph 2).¹⁰

2 TARGET contingency measures

Since TARGET processes high-value and urgent payments, it is subject to high demands in terms of availability. In this context, all NCBs and the ECB have developed preventive and complementary measures to ensure the continuation of daily business in the event of any problems within TARGET.

All TARGET components are required to have both business continuity and contingency measures in place. Business continuity requires that, in the event of a failure at the primary site, each national component would be able to switch to a remote secondary site and to be fully operational using automated procedures within a maximum time limit of four hours. In the event that current account information is available, a contingency plan is in place to ensure that each NCB would be able to continue processing at least the most critical payments. Contingency processing is intended to cover a limited number of critical payments (monetary policy operations, the settlement of ancillary systems, transfers of liquidity to and from non-euro area NCBs and major liquidity transfers, which are important for the smooth functioning of large-value euro payment systems and the euro money market).

As a result of the minimum level of harmonisation in TARGET, contingency measures, although compatible at the cross-border level, are not fully harmonised. The NCB affected by the malfunction must advise its credit institutions of the procedures to be followed and the selection criteria for the critical payments to be processed in the contingency mode.

In this context, it should be flagged that contingency procedures do not, in general, address the potential problem of SWIFT FIN or its underlying network services being completely unavailable. This has so far been acknowledged as a remaining risk.

3 Interbank straight-through processing (STP)

TARGET allows for fully automated processing from the sending bank's account to the beneficiary bank's account, both at the domestic and the cross-border level. This is one of the features which distinguishes TARGET processing from the traditional correspondent banking model. In particular, TARGET cross-border processing requires the Bank Identifier Code (BIC) in order to guarantee full STP real-time processing.

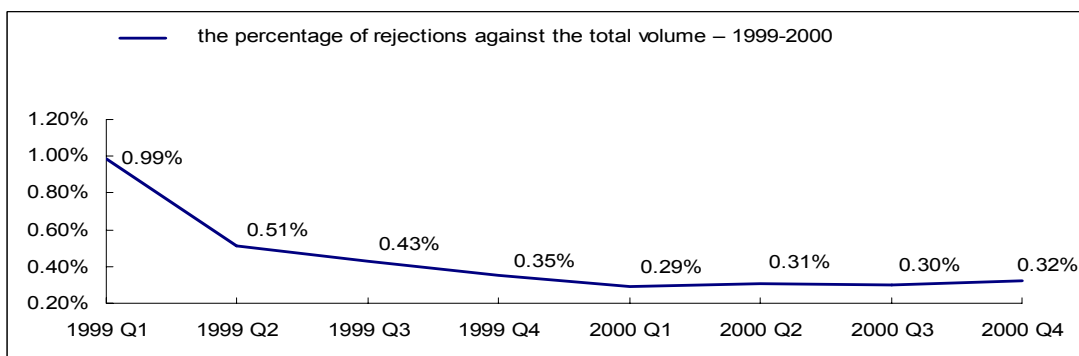
At the very beginning of TARGET operations, this new method of processing cross-border payments (i.e. the correct use of the BIC) caused some teething problems. Once these were overcome, the number of rejected payments decreased substantially (see Charts 10 and 11). Even

¹⁰ As of 1 January 2001.

after the first three months of operation the number of payments rejected by the message-receiving NCB fell by 45%, thus reflecting the fast adjustment of TARGET users to the new TARGET standards.

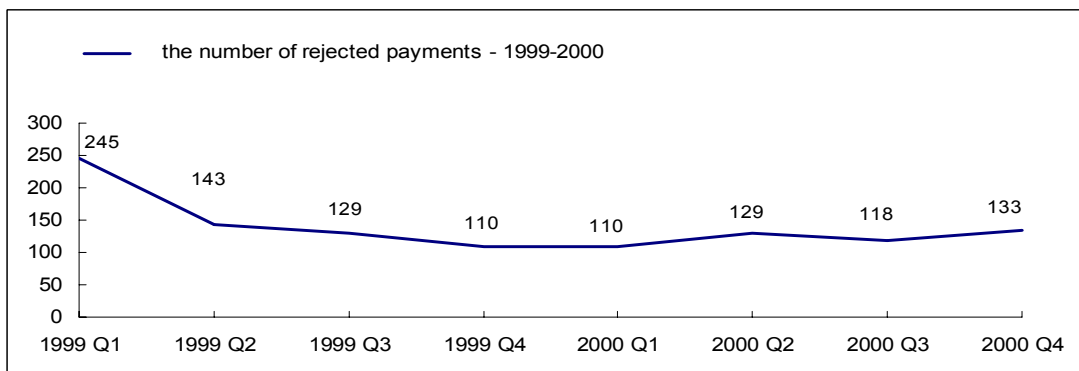
Throughout the year 2000, the percentage of rejected payments remained stable at around 0.3% of payments sent. The implementation of the new TARGET upgrade and the introduction of a new message type (MT103) in the last quarter of the year 2000 had an almost negligible impact on the number of rejections after the first few days.

Chart 10
The percentage of rejections in TARGET



Source: ECB.

Chart 11
The number of rejected payments in TARGET
(daily average on a quarterly basis)



Source: ECB.

4 Changes in the TARGET system

In line with other major system providers (e.g. SWIFT) and in order to ensure that system upgrades be managed in a professional and structured manner, it was decided to introduce enhancements to the TARGET system in yearly releases, if required. As there was no release in 1999, on account of preparations undertaken to make the systems Y2K compliant, the first common release took place on 20 November 2000.

This mainly included the introduction of a new message type, the MT103, for customer payments introduced by SWIFT. The main reasons for introducing a new message type were twofold. First,

the customer payment type MT100 was developed 25 years ago. Over the years, many customer requirements could not be accommodated, since the MT100 had reached its limits in terms of development. Second, customers and regulators¹¹ demanded greater transparency from banks in cross-border payments. In order to achieve one of its main objectives, namely to increase the efficiency of cross-border payments, the Eurosystem decided to introduce the MT103 as a facility in the TARGET system as well.

For some days after the introduction of the new message, the rejection rates of TARGET payments increased substantially, mainly on account of MT103 formatting errors. However, it only took a few days for banks to fine tune their systems and to bring the rejection rate back to its normal low level.

Box 1

Initial use of the MT103 at the cross-border level

The first survey on the initial use of the MT103 performed among the NCBs showed that the MT103 was used quite actively from the very start. On 20 November 2000, more than 6% of all cross-border customer payments in TARGET were MT103. On 29 December 2000, the percentage share of MT103 in the cross-border customer payment totals had soared to more than 27%.

Furthermore, the initial use of the MT103 differs considerably from country to country. For example, the new message already plays an important role in several countries (e.g. Belgium, Spain, Germany and the Netherlands), whereas in other countries (e.g. France) the new message type is not yet very widely used.

Box 2

Y2K

Intensive preparatory work needed to be carried out with regard to the so-called Year 2000 (Y2K) problem, which was primarily attributable to the data field defining the year. In programs with only a two-digit field, it was impossible to distinguish between the 1900s and the 2000s. In these instances, the resulting information could either be misinterpreted or could cause service interruptions.

In this respect, intensive Y2K testing in a dedicated test environment had to be carried out. Following internal tests at the central bank level, an external Y2K demonstration was organised on 25 September 1999. During this final testing round, all NCBs and several hundred credit institutions from all EU countries exchanged TARGET payments among themselves.

Following successful final testing on 1 January 2000 and the exchange of TARGET test messages between the NCBs and the ECB in the early morning hours of the first business day of 2000, the ESCB began TARGET business as usual on 3 January 2000.

¹¹ See, for example, the Directive of the European Parliament and of the Council of 27 January 1997 on cross-border credit transfers (97/5/EC), the ECB report entitled "Improving cross-border retail payment services in the euro area – the Eurosystem's view" September 1999 and the Progress report, September 2000.

Chapter III

Developments in TARGET

One of the challenges which TARGET has had to face since its introduction is the heterogeneous environment in which it has to operate. Over the past two years, TARGET has made some progress towards integrated business practices, as illustrated below.

Relations with TARGET users have improved and a reimbursement scheme was implemented on 1 January 2001. Furthermore, the Eurosystem has agreed to the introduction of a long-term calendar for TARGET operating days, as well as to the implementation of the TARGET information system, which allows information on the status of the system to be distributed simultaneously throughout the EU.

I Relations with TARGET users

Throughout 1999 and 2000 the Eurosystem maintained an ongoing dialogue with TARGET users in order to enable them to contribute to the future development of TARGET and to make the best possible use of the system. At the national level, regular meetings were held with national TARGET User Groups. In addition, meetings were organised at the Eurosystem level with representatives of market participants and the three European credit sector associations in order to discuss issues such as the optimisation of the use of TARGET and the development of the user requirements of TARGET participants in the medium and long term. Furthermore, the ECB was invited to participate in meetings organised by certain groups of market participants and by banking organisations. All such meetings aimed to ensure that the Eurosystem was aware of, and better able to respond to, participants' needs.

The dialogue with TARGET users has led to some improvements in terms of harmonisation. Furthermore, in order to meet present and future market needs, a thorough information process and an active exchange of views with TARGET users has played an important role.

As early as November 1999, the ECB published a document entitled "Cross-border payments in TARGET: A user's survey" which showed a high level of satisfaction on the part of the banks with the TARGET system and indicated two main areas in which further developments were expected, namely technical availability and harmonisation of the end-to-end service.

In addition, an "Information Guide for credit institutions using TARGET" was made available via the NCBs to all credit institutions in the EU. In December 2000 the ECB made available a revised version of the document on its website. The document provides a standard set of information on the overall functioning of the system, answers to the most frequently asked questions relating to TARGET, and seeks, in particular, to give users a clear understanding of features in the system which are common and those which are specific to each country. It is a dynamic tool, reflecting current technical and business developments with recommendations for best practices. It is planned to update this document as and when necessary with the help of the NCBs and TARGET users.

In addition, the ECB regularly reports on developments relating to TARGET, both in the TARGET section of its website and in the quarterly issues of its Monthly Bulletins. Furthermore, the ECB's website provides statistical information on TARGET.

2 TARGET reimbursement scheme

Over the past two years, TARGET has, in a few cases, faced service disruptions entailing liquidity imbalances between banks, which have resulted in substantial recourse to the standing facilities. In order to avoid any undue enrichment of the Eurosystem, a TARGET reimbursement scheme has been put in place for the benefit of TARGET participants in the event of a malfunction of TARGET.

In practical terms, i.e. whenever it has not been possible to complete the same-day processing of payment orders within TARGET, participants in the national RTGS systems are entitled to reimbursement. The reimbursement scheme is intended to compensate participants for certain additional costs incurred as a result of recourse to the standing facilities of the Eurosystem in the event of a malfunction. In order to ensure a level playing-field, the reimbursement scheme also applies to participants in national RTGS systems of non-participating NCBs.

With regard to the main principles of the reimbursement, it is a “no fault” scheme which is intended to reimburse participants for any gains made by the Eurosystem as a result of the malfunctioning. Therefore, it only covers losses incurred by the participants as a result of the rates charged or paid in relation to the standing facilities. The reference rate applicable in reimbursing participants is that of the most recent refinancing operation. The reimbursement scheme applies to domestic and cross-border payments. In the event that the malfunctioning of TARGET affects only domestic payments, the NCBs may implement alternative regimes.

The scheme does not cover indirect participants, unless such indirect participants have had recourse to the standing facilities of the NCBs on account of a malfunctioning of TARGET.

The reimbursement scheme is not intended to exclude the possibility for participants to avail themselves of other legal means in order to claim compensation in the event of a malfunction. Participants would be free to choose either: (i) to accept the arrangements of the scheme, and any receipt of reimbursement payments thereunder, without any further legal action; or (ii) to reject the arrangements of the scheme if the participant instead wishes to seek compensation for damages by other legal means.

The legal framework for this reimbursement scheme is reflected in the “TARGET Guideline”, which will be published in the Official Journal of the European Communities and will also be available on the ECB’s website.

3 TARGET calendar

The definition of TARGET closing days has consequences for financial markets as, in practice, on TARGET closing days no interbank settlements can be made in euro. Therefore, the TARGET closing days determine the value dates of the euro in the financial markets.

It has proved rather difficult to specify TARGET closing days. A different calendar has prevailed for each of the years 1999, 2000 and 2001. There will be a more definitive one as from 2002.

In 1999 TARGET was closed only on the two public holidays common to all EU countries (i.e. Christmas day and New Years day), as well as on Saturdays and Sundays. It was also closed on 31 December in order to ensure the smooth transition to the year 2000.

In 2000 four additional closing days (Good Friday, Easter Monday¹², 1 May and 26 December) were introduced. This was because the financial and social costs of keeping the TARGET system open on these traditional public or banking holidays were considered to be too high and also because the European banking industry had indicated that they would welcome the closure of TARGET on the above dates. In principle, TARGET as a whole, closed on these days. No cross-border payments can be processed on TARGET closing days. However, the NCBs of the euro area were allowed to keep their domestic RTGS systems open for limited domestic payment activities. In the non-euro area countries, the euro RTGS systems had to close on all six aforementioned days.

The regime applicable in 2001 is the same as that in 2000. However, one additional closing day, namely 31 December, will be introduced in order to safeguard the smooth conversion of retail payment systems and internal bank systems to the euro. On this day TARGET, together with the national RTGS systems, will be closed.

After two years of experience with TARGET, it was considered important to establish a long-term calendar, as the frequent calendar changes and the existence of annual calendars introduced uncertainties for financial markets. On 14 December 2000 the Governing Council of the ECB decided that, as from 2002 until further notice, TARGET would be closed on New Year's Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December as well as on Saturdays and Sundays. In order to avoid problems arising from different national TARGET operating days, it was decided that TARGET, together with all national RTGS systems, would close on these days.

On TARGET closing days, no standing facilities are available at the NCBs. The euro overnight index average (EONIA) is not published. Furthermore, the correspondent central banking model (CCBM) for the cross-border use of collateral is also closed on these days.

4 TARGET information system

One of the main concerns of the Eurosystem when setting up and running TARGET was to ensure a level playing-field for the banks operating in the EU. Consequently, on the basis of, inter alia, requests from TARGET users, the TARGET information system (TIS) was implemented on 23 October 2000.

It is a common information tool which allows all TARGET participants to simultaneously access standardised information on the status of the TARGET system via the information providers Reuters, Telerate/Bridge and Bloomberg.¹³ It provides up-to-date information on the national TARGET components, showing users whether TARGET is fully operational and, if not, stating which component has failed and the estimated duration of this malfunction. The TIS does not replace the communication channels which already exist at the domestic level.

The information is input centrally by the ECB, is simultaneously transmitted to all three providers and is consequently accessible to all TARGET participants concurrently.

The TIS helps to increase the level of transparency in the banking community and aims to reduce the level of uncertainty surrounding intraday liquidity transactions.

¹² Good Friday and Easter Monday according to the Catholic/Protestant calendars.

¹³ Reuters: page ECB46, Telerate/Bridge: pages 47556/47557, Bloomberg: page ECB17

Preliminary feedback from the banking community shows that this new information tool is highly appreciated throughout Europe.

Box 3

TARGET information system (TIS)

The following status information is provided for each RTGS system and for the EPM at the ECB:

Closing time:18:00(ECB time) ** T A R G E T **	
CROSS-BORDER FACILITIES	
NCB	Status
AT	Operational
BE	Operational
DE	Operational
DK	Operational
ES	Operational
FR	Operational
FI	Operational
GB	Operational
GR	Operational
IE	Operational
IT	Operational
LU	Operational
NL	Operational
PT	Operational
SE	Operational
ECB	Operational

Operational: the TARGET component in the relevant country is operating normally (normally between 7 a.m. and 6 p.m.);

Closed: the TARGET component has closed (normally at 6 p.m.);

Temporary interruption: next update at xx:xx: the relevant RTGS system/EPM is temporarily unavailable to process payments;

Today's operations suspended: the relevant RTGS system or the EPM has stopped processing TARGET payments and is not expected to

resume processing on the same day.

Furthermore, the closing time of TARGET is displayed in the first line of the screen. In the event of a delayed closing time for TARGET, the new cut-off time is shown.

In addition to the status of the individual systems, there is space at the bottom of the screen to accommodate free text information, should further details be deemed necessary.

Chapter IV

Outlook

Although TARGET can be considered as a success by its users, it is clear that it can still be improved.

Technical upgrades in TARGET take place in a structured way on a yearly basis taking on board new requirements, if required. Consequently, it is planned to implement the next TARGET release in November 2001 (see Box 4 below).

Box 4

TARGET release 2001

Compared with the enhancements implemented in 2000 the TARGET release 2001 will include only minor modifications. At the request of credit institutions it will include the debit timestamp for each payment processed through TARGET. Banks have indicated that they need this information as a basis for deciding on the “good value” granted to an incoming payment. The TARGET system will adopt these amendments and the “time indication” will be available for all customers participating in TARGET from mid- November 2001 onwards. In addition, the maintenance of Interlinking data formats will follow the evolution of SWIFT Standards, the amendments to which are expected to be only minor in 2001.

Furthermore, the start of the Continuous Linked Settlement (CLS) operations, which is foreseen for the fourth quarter of 2001, will not only have a significant impact on TARGET but also on payment systems in general in the euro area (see Box 5 below). It can be expected that the number of large-value payments will decrease.

With the commencement of CLS live operations the start of the TARGET business day will become increasingly important, since the settlement of participants’ operations will start immediately when TARGET opens at 7 a.m. CLS-related payments are typically time-critical, which may, if these are not made on time, have implications for other currency areas. Therefore, in order to ensure the smooth operations of the CLS, considerable efforts have been made to improve TARGET availability even further.

Box 5

CLS operations

The CLS Bank (CLSB) will provide global multi-currency settlement services for foreign exchange (FX) transactions, using a payment versus payment (PvP) mechanism, meaning that one currency leg is settled if and only if the leg in the other currency is also settled. CLSB will have an account with the ECB and will process all payments relating to the settlement in its books of the euro leg of FX transactions via the EPM and TARGET. Settlement of participants’ balances will be undertaken within a tight schedule, starting immediately when TARGET opens at 7 a.m. and ending at 12 noon.

CLS-related payments are time-critical. Since the start of TARGET live operations, all NCBs participating in TARGET and the ECB have taken preventive measures to ensure, in the first place, business continuity. In addition, alternative contingency mechanisms aimed at processing a limited number of time-critical payments have been implemented in each NCB and at the ECB. Furthermore, the Eurosystem, in co-operation with the banking sector, has been working on a framework of sound business practices to ensure that the measures mentioned above will be operationally effective. These business practices aim, inter alia, to facilitate early detection of possible problems and a timely activation of contingency procedures, as well as to contribute to the smooth functioning of these procedures. Preparations for end-to-end live trials of contingency measures are also currently being undertaken (see Chapter II, paragraph 2).

The negative impact of CLS on TARGET volumes might be compensated to some extent by the ongoing reduction in correspondent banking. In this respect, the volume of correspondent banking arrangements in the euro area has clearly been reduced since the start of EMU and there are indications that this process will continue. Indeed, it is likely that there will be an acceleration of this process in 2002, since, with the introduction of euro banknotes and coins, specific correspondent banking relations for the processing of payments in legacy currencies will no longer be necessary.

Apart from the above-mentioned aspects, which relate more to the short term than to medium term, the Eurosystem is also considering how TARGET should evolve in the medium/long term. New user requirements have been discussed with the banks. Work is being conducted to study how these user requirements can best be met.

Annexes

I TARGET statistics

It should be noted that the statistics on domestic payments collected by the NCBs reflect the different practices in the use of the RTGS systems – some NCBs included transactions relating to intraday credit, liquidity transfers, central bank operations and the settlement of ancillary systems, while others did not. Therefore caution is warranted when comparing the number and value of domestic payments processed by the different national TARGET components. The Eurosystem is currently in the process of reviewing the statistical methodology.

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I. Distribution of payment flows in TARGET

Table 1.1

Distribution of payment flows in TARGET 1999

	Total				Domestic				Cross-border			
	Value *)	%	Volume	%	Value *)	%	Volume	%	Value *)	%	Volume	%
ELLIPS (BE)	11.992	5,0%	1.522.724	3,6%	4.072	2,8%	957.055	2,7%	7.919	8,5%	565.669	7,6%
ELS (DE)	46.946	19,6%	18.706.136	44,3%	22.375	15,3%	16.038.091	46,1%	24.571	26,4%	2.668.045	35,8%
SLBE (ES)	30.713	12,8%	2.276.516	5,4%	27.113	18,5%	2.100.263	6,0%	3.601	3,9%	176.253	2,4%
TBF (FR)	66.183	27,6%	2.284.031	5,4%	51.918	35,5%	1.404.776	4,0%	14.265	15,3%	879.255	11,8%
IRIS (IE)	3.595	1,5%	423.315	1,0%	2.525	1,7%	275.832	0,8%	1.070	1,1%	147.483	2,0%
BI-REL (IT)	24.634	10,3%	10.202.441	24,1%	17.636	12,1%	9.362.795	26,9%	6.998	7,5%	839.646	11,3%
LIPS-Gross (LU)	2.827	1,2%	214.032	0,5%	711	0,5%	53.127	0,2%	2.116	2,3%	160.905	2,2%
TOP (NL)	18.150	7,6%	3.193.359	7,6%	10.299	7,0%	2.834.972	8,1%	7.851	8,4%	358.387	4,8%
ARTIS (AT)	4.026	1,7%	956.762	2,3%	2.034	1,4%	561.887	1,6%	1.991	2,1%	394.875	5,3%
SPGT (PT)	2.325	1,0%	508.724	1,2%	1.516	1,0%	325.690	0,9%	808	0,9%	183.034	2,5%
BOF-RTGS (FI)	2.799	1,2%	310.961	0,7%	1.309	0,9%	223.708	0,6%	1.490	1,6%	87.253	1,2%
EPM(ECB)	2.336	1,0%	13.649	<0,1%	-	-	-	-	2.336	2,5%	13.649	0,2%
DEBES (DK)	1.223	0,5%	61.047	0,1%	13	<0,1%	4.675	<0,1%	1.209	1,3%	56.372	0,8%
HERMES euro (GR)	331	0,1%	31.039	0,1%	5	<0,1%	7.855	<0,1%	326	0,3%	23.184	0,3%
Euro RIX (SE)	1.446	0,6%	47.155	0,1%	75	0,1%	2.960	<0,1%	1.371	1,5%	44.195	0,6%
CHAPS Euro (UK)	19.948	8,3%	1.505.893	3,6%	4.635	3,2%	650.772	1,9%	15.313	16,4%	855.121	11,5%

Source: ECB *) EUR billions

Table 1.2

Distribution of payment flows in TARGET 2000

	Total				Domestic				Cross-border			
	Value *)	%	Volume	%	Value *)	%	Volume	%	Value *)	%	Volume	%
ELLIPS (BE)	12.689	4,8%	1.780.336	3,7%	3.610	2,4%	952.805	2,5%	9.080	8,3%	827.531	8,1%
ELS (DE)	52.307	19,9%	21.520.815	44,9%	24.001	15,7%	17.840.390	47,2%	28.306	25,7%	3.680.425	36,2%
SLBE (ES)	34.232	13,0%	2.399.460	5,0%	30.136	19,7%	2.124.019	5,6%	4.096	3,7%	275.441	2,7%
TBF (FR)	68.157	25,9%	3.025.339	6,3%	52.805	34,5%	1.874.102	5,0%	15.352	14,0%	1.151.237	11,3%
IRIS (IE)	3.813	1,4%	485.075	1,0%	2.407	1,6%	294.522	0,8%	1.406	1,3%	190.553	1,9%
BI-REL (IT)	27.782	10,6%	10.400.560	21,7%	18.474	12,1%	9.234.658	24,4%	9.308	8,5%	1.165.902	11,5%
LIPS-Gross (LU)	3.700	1,4%	269.069	0,6%	1.024	0,7%	61.453	0,2%	2.676	2,4%	207.616	2,0%
TOP (NL)	19.900	7,6%	3.732.796	7,8%	10.041	6,6%	3.246.933	8,6%	9.859	9,0%	485.863	4,8%
ARTIS (AT)	5.061	1,9%	1.264.864	2,6%	2.467	1,6%	871.528	2,3%	2.594	2,4%	393.336	3,9%
SPGT (PT)	2.286	0,9%	526.089	1,1%	1.393	0,9%	317.040	0,8%	893	0,8%	209.049	2,1%
BOF-RTGS (FI)	3.092	1,2%	312.703	0,7%	1.560	1,0%	218.345	0,6%	1.533	1,4%	94.358	0,9%
EPM(ECB)	2.394	0,9%	15.130	<0,1%	-	-	-	-	2.394	2,2%	15.130	0,1%
DEBES (DK)	1.456	0,6%	79.950	0,2%	24	<0,1%	5.144	<0,1%	1.432	1,3%	74.806	0,7%
HERMES euro (GR)	214	0,1%	100.123	0,2%	9	<0,1%	14.731	<0,1%	205	0,2%	85.392	0,8%
Euro RIX (SE)	1.950	0,7%	65.593	0,1%	232	0,2%	3.388	<0,1%	1.718	1,6%	62.205	0,6%
CHAPS Euro (UK)	24.260	9,2%	2.002.128	4,2%	5.071	3,3%	752.054	2,0%	19.189	17,4%	1.250.074	12,3%

Source: ECB *) EUR billions

2. Average value of a TARGET cross-border payment – intraday pattern

Chart 2.1

Average value of a TARGET cross-border payment – intraday pattern

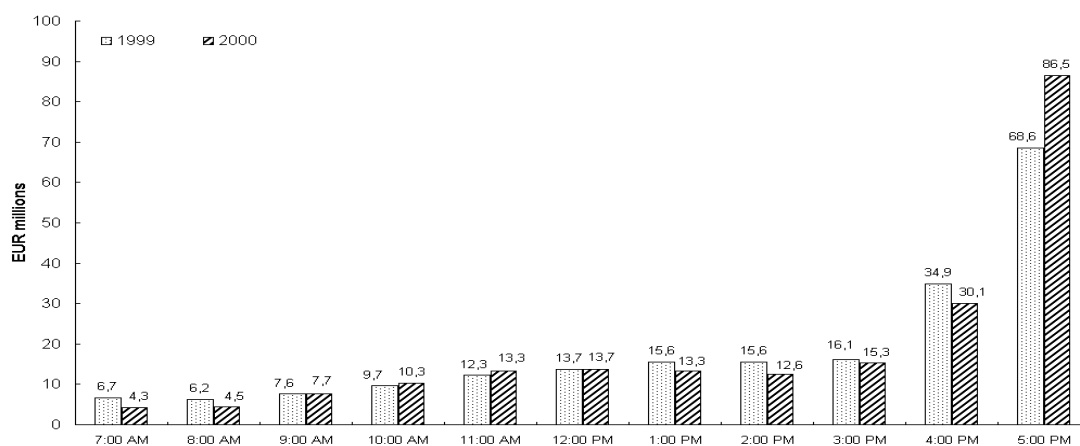


Chart 2.2

Average value of a TARGET cross-border interbank payment – intraday pattern

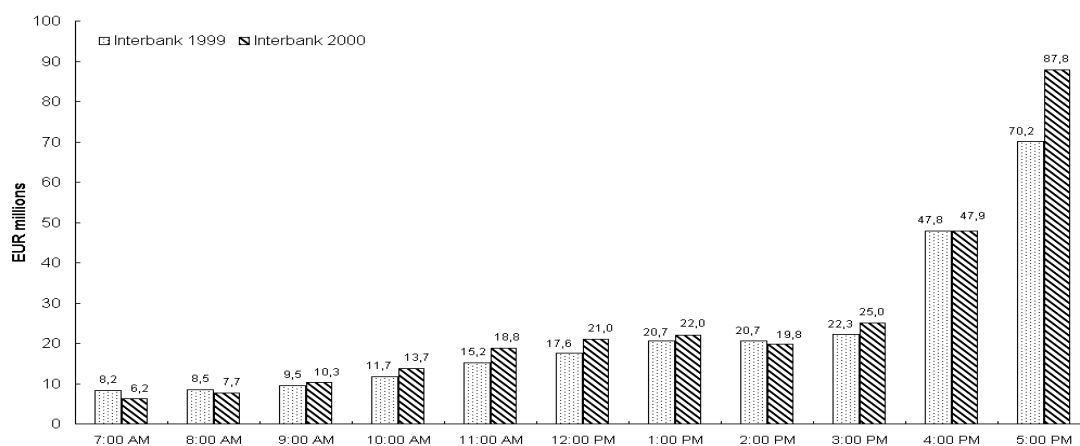
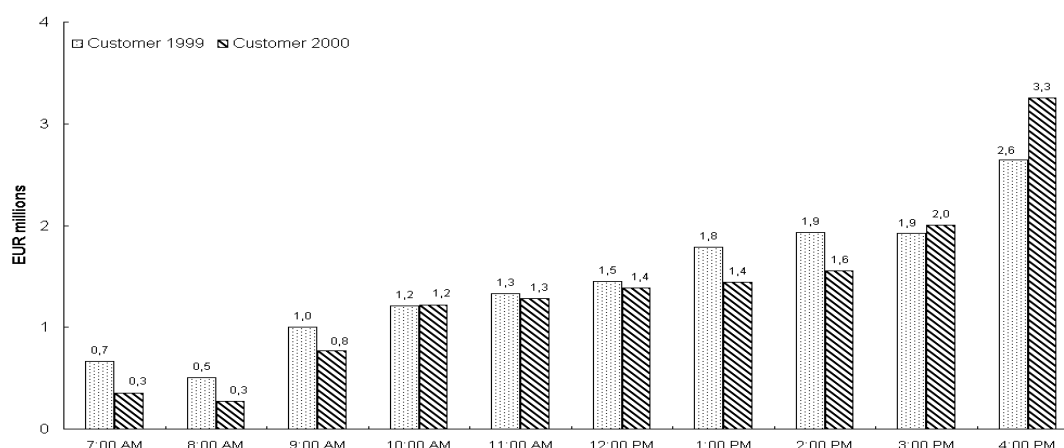


Chart 2.3

Average value of a TARGET cross-border customer payment – intraday pattern



3. TARGET cross-border intraday pattern

Chart 3.1

Intraday pattern of interbank payments – value

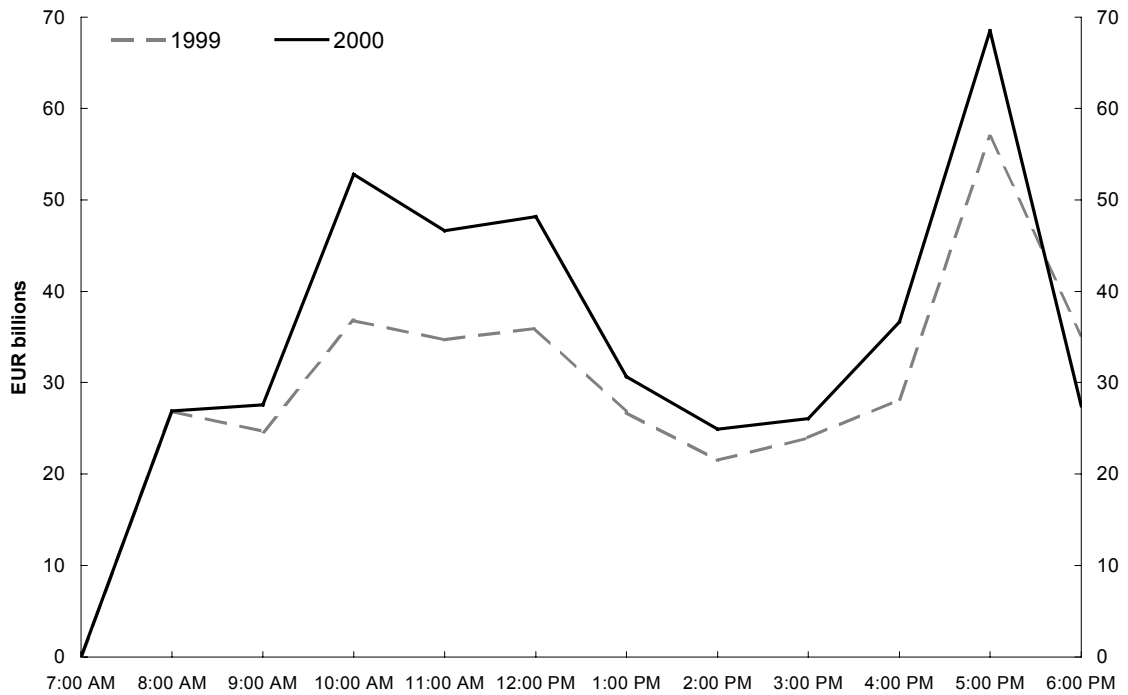


Chart 3.2

Intraday pattern of customer payments – value

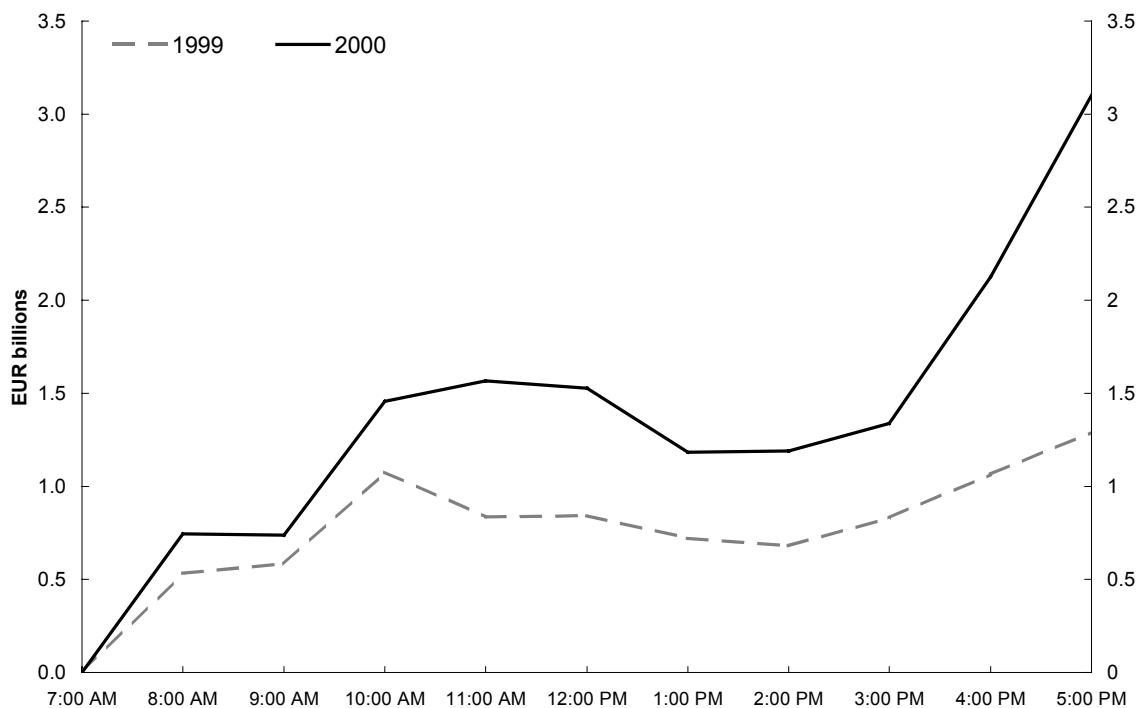


Chart 3.3

Intraday pattern of interbank payments – volume

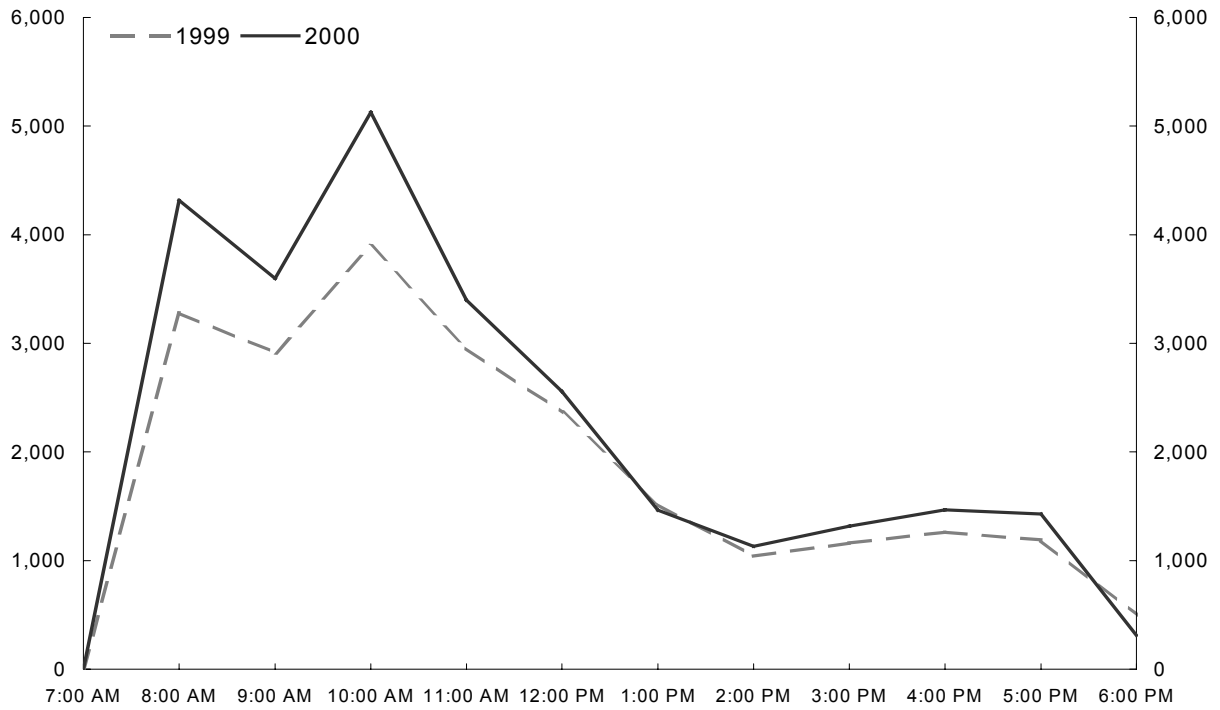


Chart 3.4

Intraday pattern of customer payments – volume

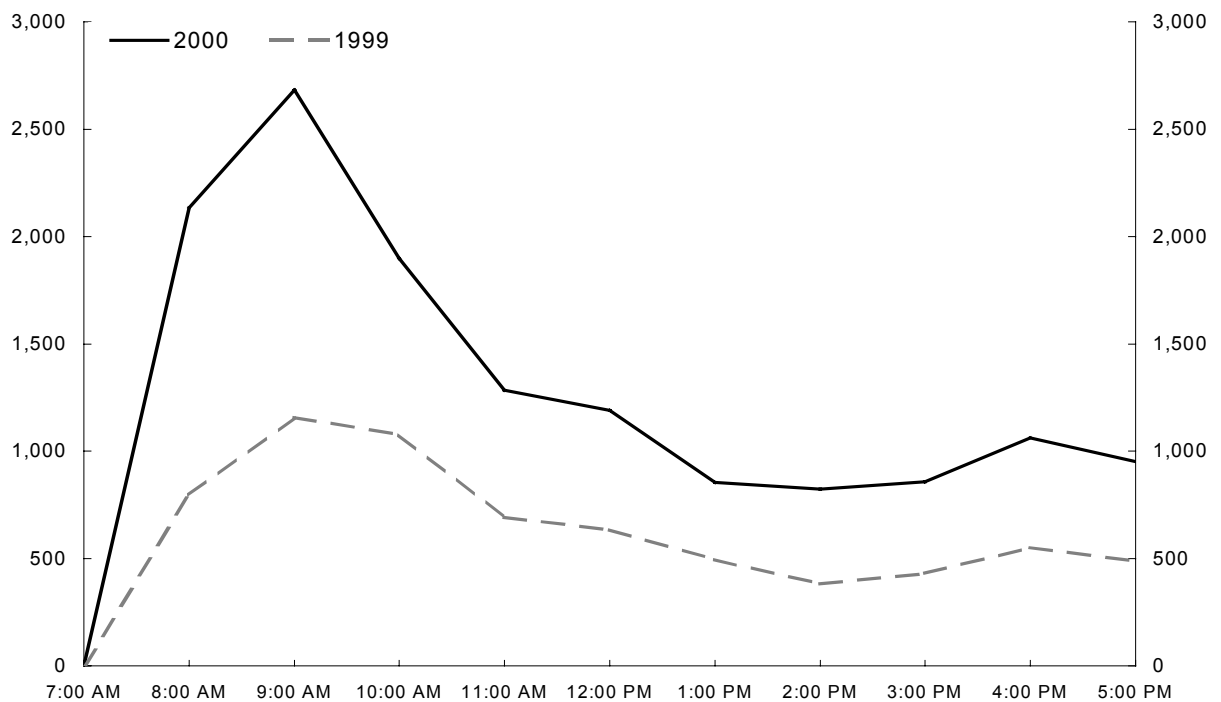


Chart 3.5

Intraday pattern for interbank payments, cumulative – value and volume

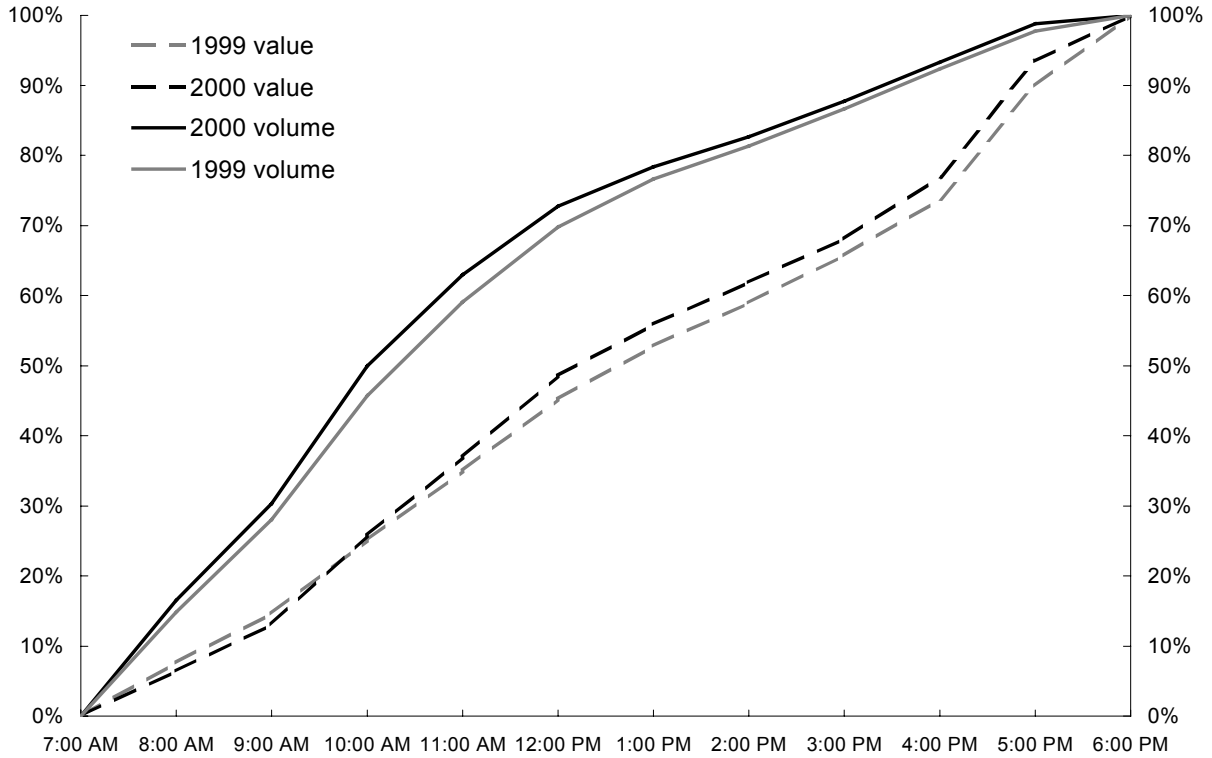
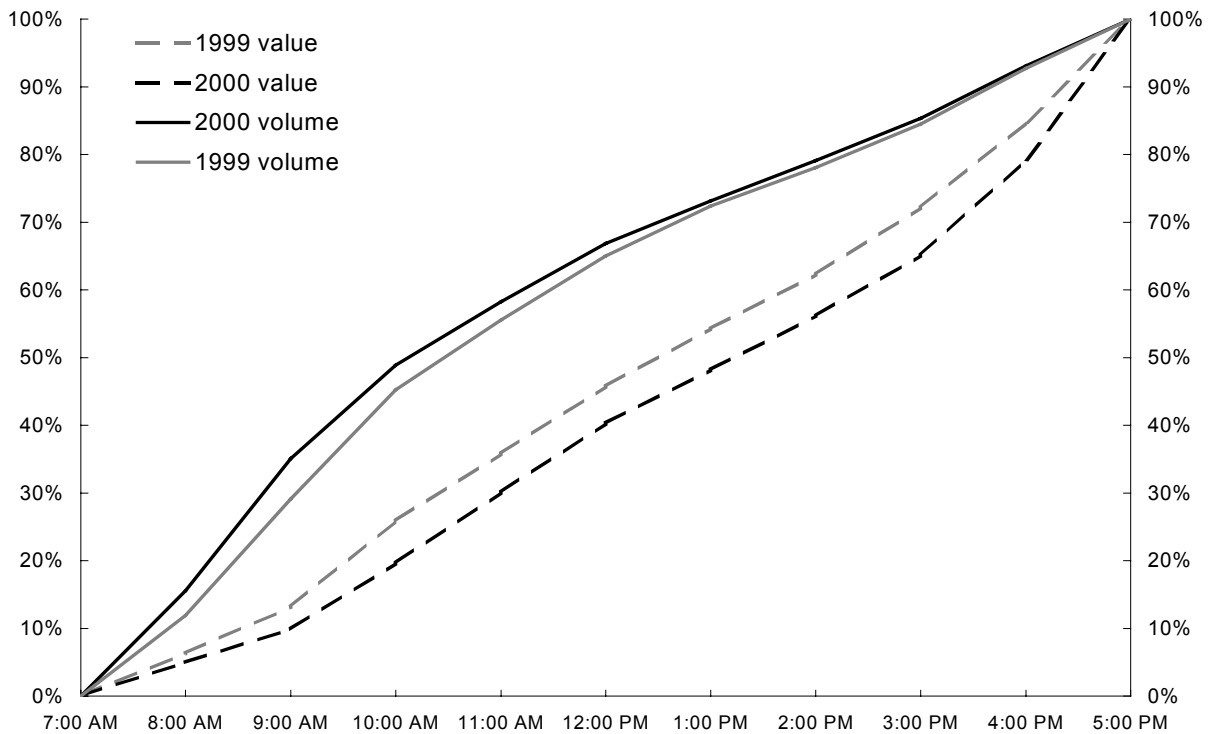


Chart 3.6

Intraday pattern for customer payments, cumulative – value and volume



2 Chronology of developments in TARGET

November 1994

The European Monetary Institute (EMI) published a report entitled “The EMI’s intentions with regard to cross-border payments in Stage Three”, which laid down the **basic principles** and **objectives** as well as the **approach to be adopted** by the EU NCBs and the EMI **in creating a new cross-border payment arrangement for Stage Three** of EMU. A system for Stage III would be set up by linking the domestic real-time gross settlement (RTGS) facilities. Only NCBs would hold settlement accounts for the banks, although the European Central Bank (ECB) would also be connected to the NCBs through the Interlinking system for the purpose of making payments for its own account, or for the account of its customers. In order 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

On the basis of 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 system arrangement for Stage III of EMU” was published. Through this report the EMI Council **defined certain basic principles** of the system and confirmed that **linkages** would be **established between national RTGS systems**. These linkages (the Interlinking system), together with the national RTGS systems, would form the TARGET system. In addition, the **RTGS systems of non-participating countries** (not identified at that stage) **could be connected to TARGET**, but only to process euro. Any participant in an RTGS system connected to TARGET would be entitled to send payments via TARGET and would be obliged to accept any 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 ensuring a level playing-field for credit institutions. **A certain level of harmonisation** was considered necessary, especially in 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 area encompassed by EMU it was necessary to harmonise the definition of assets which can be accepted by the NCBs as collateral and the conditions under which their value will be taken into account. With regard to **operating hours**, it was recognised that there would be a need for the Interlinking system and the national RTGS systems to be open for a large part of the day. Finally, the **pricing policies** should satisfy three requirements, namely of avoiding i) unfair competition with the private sector; ii) the subsidising of payments or certain kinds of payments; and iii) undue competition within TARGET.

August 1996

The EMI **further defined the features of TARGET, especially in 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 its annex entitled “Technical Annexes to the First 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 intraday for payment systems purposes. Intraday liquidity would be free of interest charges and potentially unlimited, provided that it was fully collateralised. The EMI Council also agreed that collateral would, in principle, be the same for intraday credit and monetary policy operations.

With regard to the provision of intraday credit in euro to non-EMU NCBs and to participants in the RTGS system of non-EMU countries, the EMI Council decided in December 1996 to prepare three mechanisms¹⁴ aiming at preventing intraday credit – if granted to non-euro area NCBs – from spilling over to overnight credit. The final decision on which mechanism to implement was left for the Governing Council of the ECB.¹⁵

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

With regard to its **operating times**, it was decided that, to meet market and risk management needs, TARGET should have long operating hours and that, in order to facilitate the implementation of the single monetary policy and a level playing-field for credit institutions, all TARGET components should have a common closing time. Thus, as a general rule, TARGET would open at 7 a.m. and close at 6 p.m. C.E.T.¹⁶

As regards the **relations with other funds transfer systems**, all large-value NSSs would be required to settle in central bank money (i.e. in TARGET).

September 1997

A number of features of TARGET were defined further, especially in relation to the following: i) operating days; ii) pricing policies; iii) the provision of intraday liquidity to non-euro countries; iv) the role of the ECB; and v) the provision of settlement services to cross-border large-value NSSs. These issues were elaborated, in particular, in the EMI's report entitled "Second Progress Report on the TARGET Project" and its annex entitled "Technical Annexes to the Second Progress Report on the TARGET Project".

With regard to **operating days**, there would be two common holidays for TARGET in addition to Saturdays and Sundays: Christmas Day and New Year's Day. On other days, the TARGET system would be open, although the NCBs would be given the flexibility to close their domestic systems during national holidays when the law or the banking communities so required. The Interlinking system between open RTGS systems would remain open.

As for the **pricing policies**, 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. In relation to the cross-border leg, it was agreed that the single

14 These three mechanisms are as follows: i) non-euro area NCBs would receive, and would provide to participants in their respective RTGS systems, only limited intraday credit; the size of the limit can be zero. Should a non-euro area NCB incur an overnight overdraft on one of its accounts with a euro area NCB, overnight credit would be granted at a penalty rate; ii) non-euro area NCBs 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 systems. 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; and iii) 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 clear early enough for non-euro area NCBs to be able to offset their RTGS participants' spillovers by themselves, by borrowing euro in the money market while the latter is still open. (For details, see the report entitled "The single monetary policy in Stage Three – Specification of the operational framework", EMI, January 1997.)

15 EMI Annual Report 1996, EMI, April 1997.

16 EMI Annual Report 1996, EMI, April 1997.

transaction fee would be set within the range of €1.50 to €3.00. In addition, a price differentiation, based on volume, was expected.¹⁷

In the case of one of the possible mechanisms for the provision of **intraday liquidity to non-euro area NCBs**, namely 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 decided by the Governing Council if it decided 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 NSSs; iii) process payments for its own account; and iv) maintain accounts on behalf of its institutional customers (excluding credit institutions).

The EMI Council agreed on a method for settlement of the future EBA Clearing system within TARGET. This envisages that the EBA will open a central settlement account at the ECB and may also open settlement accounts with NCBs which agree to do so.

June 1998

All the EMI Council decisions referred to above were adopted by the Governing Council of the ECB. Furthermore, the **price structure for cross-border TARGET payments was agreed** upon. The fee to be charged for cross-border payments through TARGET between direct participants would range from €0.80 to €1.75, according to the number of transactions.¹⁸ The way in which banks' customers are charged for TARGET payments would be left to the discretion of the commercial banks, i.e. would take place on a competitive basis.

July 1998

The Governing Council of the ECB decided to grant **access to TARGET** to NCBs and participants in RTGS systems operating in euro located in non-euro area countries of the EU. With regard to the **availability of intraday liquidity to non-euro area NCBs and their RTGS participants**, the ECB decided that non-euro area NCBs would at all times have to ensure an overall credit position vis-à-vis the other NCBs participating in or connected to TARGET taken together. In order to ensure the availability of intraday liquidity in their euro RTGS system, non-euro area NCBs would have to make an intraday deposit with the Eurosystem.¹⁹

November 1998

A number of **features of TARGET were defined further, especially in relation to the following**: i) access to euro RTGS systems linked to TARGET; (ii) the provision of intraday credit; (iii) central bank correspondent banking relations; and (iv) the legal framework for TARGET. These issues are addressed, in particular, in the "Third Progress Report on the TARGET Project".

Only supervised credit institutions located in the European Economic Area (EEA) could be **admitted as direct participants** in a national RTGS system. As an exception, certain other entities may also be admitted as participants in a national RTGS system upon approval by the

¹⁷ See also the EMI Annual Report 1997, EMI, May 1998.

¹⁸ See also the Annex entitled "The organisation of TARGET and its management structure" and the ECB's Press Release of 10 June 1998.

¹⁹ See also the Annex entitled "The organisation of TARGET and its management structure" and the ECB's Press Release of 8 July 1998.

relevant NCB (see the Annex entitled “The organisation of TARGET and its management structure”).

Unlimited, but fully collateralised, **intraday credit** would be provided to RTGS participants fulfilling the general counterparty eligibility criteria of the ESCB.²⁰ Unlimited intraday credit may also be granted to treasury departments of central or regional governments active in the money markets and to public sector bodies authorised to hold accounts for customers, provided that no spillover to overnight credit is possible. At their own discretion, NCBs may decide to grant intraday credit to investment firms, on condition that such investment firms be subject to a formal spillover prevention arrangement. Any arrangement in which, in specific circumstances, the NCB granted intraday credit to organisations providing clearing or settlement services would need to be approved in advance by the Governing Council of the ECB.

The **legal framework** for TARGET is based on: i) a Guideline of the ECB on TARGET, which applies to euro area NCBs and the ECB; and ii) an Agreement on TARGET, entered into by the ECB and the NCBs, which governs relations between euro area NCBs and the ECB on the one hand and non-euro area NCBs on the other, as well as relations between non-euro area NCBs. The national RTGS rules have been amended according to the terms and conditions of the Guideline and the Agreement.²¹

20 See “The Single Monetary Policy in Stage Three, General Documentation on ESCB Monetary Policy Instruments and Procedures”, ECB, September 1998, and its updated version “The Single Monetary Policy in Stage Three, General Documentation on Eurosystem Monetary Policy Instruments and Procedures”, ECB, November 2000.

21 See also the Annex entitled “The Organisation of TARGET and its Management Structure”.

3 The organisation of TARGET and its management structure

TARGET allows for the smooth implementation of the single monetary policy, facilitates the efficient functioning of the money market and improves the soundness and efficiency of cross-border payments in euro.

The system successfully commenced live operations on 4 January 1999, with some 5,000 participants throughout the EU.

Organisation

The TARGET system is the real-time gross settlement system for the euro. It is a decentralised system consisting of 15 national RTGS systems, the EPM and the Interlinking system, which is a telecommunications network interconnecting these systems.

Legal framework

The rules governing TARGET and its operations can be found in the Guideline of the ECB on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET Guideline) and the sets of rules and procedures in the national regulations and/or contractual provisions (national RTGS rules) applying to each of the national RTGS systems and the EPM. The TARGET Guideline came into effect on 1 January 1999, i.e. the starting date of Stage Three of EMU. The decision-making body for TARGET matters is the Governing Council, consisting of the governors of the euro area central banks and the members of the Executive Board of the ECB.

The TARGET Guideline applies to the ECB and the NCBs participating in the Eurosystem. It includes provisions on, inter alia, a number of minimum common features, with which each national RTGS system participating in or connected to TARGET must comply (e.g. access criteria, currency unit, pricing rules, time of operation, payment rules and intraday credit); arrangements for cross-border payments through the Interlinking system; and the management of TARGET. For the NCBs of the non-euro area countries, a TARGET Agreement provides a mechanism whereby non-euro area NCBs are able to connect to TARGET, must adhere to the rules and procedures referred to above and carry out the modifications and specifications appropriate for the non-euro area NCBs.

Participation in the system

Only supervised credit institutions as defined in the first indent of Article 1 of the First Banking Co-ordination Directive²² and which are located in the EEA can be admitted as direct participants in a national RTGS system. In addition, as an exception, the following entities may also be admitted as participants in a national RTGS system upon approval by the relevant NCB:

- the treasury departments of central or regional governments of Member States active in money markets;
- public sector bodies of Member States authorised to hold accounts for customers;
- investment firms established in the EEA which are authorised and supervised by a recognised competent authority; and
- organisations providing clearing or settlement services subject to oversight by a competent authority.

²² Which is now incorporated into the Directive 2000/12/EC of the European Parliament and the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions.

The criteria for participation in a national RTGS system are set out in the RTGS rules concerned and are available to the interested parties. All credit institutions participating in national RTGS systems automatically have access to the cross-border TARGET service.

It is also possible for credit institutions to access TARGET remotely.²³ However, remote participants can only participate in TARGET on a credit basis, i.e. they cannot have recourse to intraday credit and to the Eurosystem's credit facilities.

Types of transaction handled

TARGET can be used for all credit transfers in euro between and within the current EU countries. It processes both interbank and customer payments and there is no upper or lower limit placed on the value of payments. All payments are treated equally.

The following types of transaction are handled by TARGET: i) payments directly connected with central bank operations in which the Eurosystem is involved either on the recipient or the sender side; ii) the settlement operations of large-value netting systems operating in euro; iii) interbank and commercial payments in euro; and iv) payments between Eurosystem central banks. It is mandatory for the first two types of transaction to be settled through TARGET.

Technical infrastructure

TARGET is a decentralised system with only some functions performed centrally by the ECB. The TARGET system consists of one RTGS system in each EU country and the ECB payment mechanism. In order to allow payment orders to move from one system to another these individual components are interconnected via the Interlinking system.

TARGET allows credit institutions to use the same connection for both domestic and cross-border payments, i.e. no separate communication channel is required. All credit institutions which can be addressed in TARGET are listed in the TARGET directory, which nowadays includes almost 5,000 participants and more than 35,000 addressable entities.

In order to initiate a cross-border payment, the ordering TARGET participant simply sends the payment orders to the national RTGS system in which they participate. Since the domestic format can vary from country to country, the national RTGS systems may offer conversion features to convert domestic payments into the Interlinking format and vice versa. This means that both the sending and receiving participants are served with their own domestic formats.²⁴

At the present time the SWIFT FIN service is used as communication network for the Interlinking system. However, in order to allow for the possibility of changes in the network services, application-oriented functions (e.g. payment system functions) are clearly separated from network functions (e.g. data transmission, Message Authentication Code (MAC) calculation and MAC checking on the communication layer).

The design of the messages exchanged via the TARGET system is based on the widely used SWIFT message standards MT100, MT103 (STP and non-STP) for customer payments and MT 202

²³ Remote access to settlement facilities in TARGET is defined as the possibility for an institution, established in a country in the EEA, to become a direct participant in an RTGS system in TARGET of another country and, for that purpose, to have a settlement account in euro in its name with the central bank of that country without necessarily having established a branch or subsidiary in that country.

²⁴ Information about the mapping of domestic payment messages to and from Interlinking formats can be obtained from the "Information guide for credit institutions using TARGET".

for interbank payments. In order to avoid a merging of payment data (e.g. amount, beneficiary, etc.) and the protocol information of the communication, all messages are presented within an “envelope”, namely the SWIFT proprietary message MT198. This means that communication data are presented only in the header and the trailer of the SWIFT MT198, while the payment information itself is incorporated into the message body.

In accordance with the logic of RTGS system processing, the payment messages are processed individually, i.e. item by item. The Interlinking system uses processing cycles which are directly linked to each single payment message. This means that an open cycle can only be closed after the respective notification has been assigned to the message initiating the settlement request. A cycle is usually completed within a couple of minutes, sometimes only a few seconds.

While the above-mentioned sub-sets of SWIFT message types are used for payment system purposes, a dedicated “Interlinking design” has been created for specific Interlinking messages.²⁵

Settlement procedures

TARGET is a real-time gross settlement system. Payments are settled one by one on a continuous basis in central bank money. TARGET thus provides for immediate and final settlement of all payments provided that sufficient funds or overdraft facilities are available in the sending institution’s account with its central bank.

In order to initiate a cross-border payment, the ordering credit institution sends a payment order to the local NCB through the local RTGS system. The sending NCB checks the validity of the payment and that the receiving RTGS is operational. The sending NCB is entrusted with the task: i) of converting, if necessary, the payment order into the message standards which are used by the Interlinking system; ii) of applying the additional security features used during the communication between NCBs; and iii) of sending the message, through the Interlinking network, to the receiving NCB. Once the sending NCB has checked the validity of a payment message, the amount of the payment is irrevocably, and without delay, debited from the RTGS account of the sending credit institution and credited to the Interlinking account of the receiving NCB.

As soon as the receiving NCB receives the payment message, it checks the security features and verifies that the beneficiary bank, as specified in the payment order, is a participant in the domestic RTGS system. If this is the case, the receiving NCB converts, where appropriate, the message from Interlinking standards into domestic standards, debits the Interlinking account of the sending NCB, credits the beneficiary’s RTGS account and delivers a positive acknowledgement to the sending NCB/the ECB. Finally, the receiving NCB sends the payment information, through the local RTGS system, to the beneficiary credit institution. If the receiving bank is not a member of the RTGS system, the receiving NCB rejects the payment and asks the sending NCB to re-credit the amount to the sending bank’s account.

In normal circumstances, cross-border TARGET payments reach their destination a few minutes after being debited from the account of the sending participant.

25 TARGET messages exchanged via the Interlinking system are classified either as requests, notifications, free format or as statistical information messages: Request Messages are used when a specified action on the part of the receiving NCB/the ECB is required. Typical messages of this type are payment messages. Only payments denominated in euro can be processed via TARGET. Notification Messages are replies to requests. The notifications (or acknowledgements) can be either positive (ACK) or negative (NACK). A notification completes the communication cycle initiated by a request. Free Format Messages (IFFM) are plain text messages containing information which might be useful for either all central banks (broadcast) or one particular NCB/the ECB. By contrast with request messages, an IFFM does not require notification. Statistical Information Messages (ISIMs) contain statistical information on the Interlinking traffic between NCBs and the ECB.

Liquidity

Since TARGET settles payments in central bank money with immediate finality, settlement risk and credit risk is eliminated. In TARGET, the account of the receiving institution is never credited before the account of the sending institution has been debited. As a result, the receiving institution always has the certainty that funds received through TARGET are unconditional and irrevocable. The receiving institution is thus not exposed to credit or liquidity risk originating from such payments received.

The availability and cost of liquidity are two crucial issues with regard to the smooth processing of payments in RTGS systems. In TARGET, liquidity can be managed very flexibly and it is available at a low cost, since minimum reserves – which credit institutions are required to hold with their central bank – are available for settlement purposes during the day. Moreover, the averaging provisions applied to minimum reserves allow for flexibility in the banks' end-of-day liquidity management. The overnight lending and deposit facilities also allow for "last-minute" reactions to unexpected liquidity situations. In addition, intraday credit is provided free of charge by the Eurosystem. However, all central bank credit must be fully collateralised. The range of eligible collateral is very wide. Assets eligible for monetary policy purposes are also eligible for intraday credit.

With regard to the availability of intraday liquidity to non-euro area NCBs and their RTGS participants, the non-euro area NCBs must, at all times, ensure an overall credit position vis-à-vis the other NCBs participating in or connected to TARGET taken together. In order to ensure the availability of intraday liquidity in their euro RTGS system, non-euro area NCBs must make an intraday deposit with the ESCB. The provision of collateralised intraday credit in euro to participants in their national euro RTGS system is subject to the following conditions: (i) the maximum amount of intraday credit granted by the non-participating NCB to any single participant in its respective national RTGS system shall be €1 billion for the Bank of England, €0.650 billion for Danmarks Nationalbank, and €0.5 billion for Sveriges Riksbank; (ii) after the liquidity deadline, set at 5 p.m. C.E.T., non-euro area participants shall be allowed to make outgoing payments on a credit basis only; participants facing a debit position at the liquidity deadline must square their positions in order that they do not incur an overnight overdraft in euro; (iii) should a participant, for any reason, be unable to square its position by the close of TARGET, it shall be subject to penalties; (iv) the rate at which non-euro area NCBs may remunerate the end-of-day euro balances held by participants with them shall be the rate of the ESCB's deposit facility; and (v) the assets which can be used by non-euro area credit institutions to collateralise intraday credit shall meet the same quality standards and be subject to the same valuation and risk control rules as prescribed for collateral which is eligible for ESCB credit operations.

Box 6

The connection of euro RTGS systems of non-euro area central banks to TARGET

A unique feature of TARGET is that its euro payment services are available throughout the whole of the EU, i.e. across a wider area than that in which the single currency has been adopted. Because it is necessary for all countries which have adopted the euro to participate in TARGET, and because of the limited time available for setting up the system, all EU NCBs (including those which did not adopt the euro from the outset – Denmark, Sweden, Greece²⁶ and the United Kingdom) had to start making preparations for TARGET before knowing whether they would be part of the euro area. Thus the EMI Council agreed in 1995 that all current EU NCBs would

²⁶ Greece adopted the euro with effect from 1 January 2001.

prepare themselves for connection to TARGET. It was indicated, however, that for those countries which would not adopt the euro from the outset, the connection would be subject to certain limitations and conditions, which were left to be decided by the Governing Council of the ECB.

The TARGET Agreement (and its transposition into national RTGS rules) provides a mechanism whereby non-euro area NCBs are able to connect to TARGET, must adhere to the rules and procedures stipulated in the TARGET legal documentation and carry out the modifications and specifications appropriate for the non-euro area NCBs. Via the TARGET Agreement the changes made to the TARGET Guideline are also directly applicable to the non-euro area NCBs (see Section “Legal framework” in Annex 3).

As for the provision of intraday liquidity, the non-euro area NCBs are allowed to offer only limited amounts of intraday liquidity in euro to their credit institutions on the basis of a deposit in euro held with the Eurosystem. Safeguards have been established in order to ensure that non-euro area credit institutions will always be in a position to reimburse intraday credit in due time, thus avoiding any need for overnight central bank credit in euro. This arrangement is a very special one, as it is the first time a central bank has allowed central banks belonging to other currency areas to provide settlement facilities in its own currency. A “policy statement” issued by the ECB in November 1998 made it clear that central bank money in euro can only be provided by the central banks belonging to the Eurosystem and indicated that the possibility offered to non-euro area central banks was a specific exception.

Pricing

The price charged for cross-border payments (excluding VAT) through TARGET between direct participants is based on the number of transactions sent by a participant within a single RTGS system according to the following degressive scale:

- €1.75 for each of the first 100 transactions per month;
- €1.00 for each of the next 900 transactions per month; and
- €0.80 for each subsequent transaction in excess of 1,000 per month.

Fees are charged only by the sending NCB/the ECB to the sending participants in the national RTGS system/EPM. No fees are charged by the receiving NCB/the ECB to the receiving participant.

The cross-border TARGET fee structure does not cover the cost of the telecommunications link between the sender and the national RTGS system in which the sender is a participant. The fee for this telecommunications link is paid according to the domestic rules.

The price of domestic RTGS transfers in euro is determined at the national level by the NCBs. When determining the price structure, the NCBs take into account the principles of cost recovery, transparency and an open market economy with free competition and non-discrimination. They must also take into account the fact that the fees for domestic and cross-border transfers should be in the same range in order not to affect the single money market. These fee structures are disclosed to interested parties.

RTGS systems may charge extra fees for any additional services which they may provide (e.g. the entering of paper-based payment instructions).

Management structure

The management structure of TARGET can be divided into its day-to-day management and the activities carried out to assess, review and optimise the system.

The day-to-day management of TARGET is the responsibility of the settlement managers of the NCBs and the ECB in the case of the EPM. This is steered by the TARGET co-ordinator nominated by the ECB. The settlement managers and the TARGET co-ordinator communicate via a teleconference facility or alternative communication means several times a day.

In the event that problems arise which cannot be addressed at the level of settlement managers, these are passed on to the TARGET crisis managers for further assessment. This group will be steered by the ECB Director General – Payment Systems. The latter will refer problems to the Executive Board of the ECB for presentation to the Governing Council, as appropriate.

Activities to assess and optimise the TARGET system take place on a permanent basis in the relevant committee and its working groups which, in general, are composed of representatives of the Eurosystem central banks. The performance of TARGET as well as possible enhancements with regard to technical characteristics and organisational features are assessed and reviewed at this level. In this context, an active exchange of views and co-operation with the TARGET users play an important role. Thus, during 1999, the ECB conducted a survey on the cross-border payment service offered by TARGET, as perceived by its users. In 2000 the ECB and the NCBs maintained a fruitful dialogue with TARGET users by means of regular meetings of the national TARGET User Groups (see Chapter III, paragraph 1). In addition, meetings were organised at the Eurosystem level. The main aim of these meetings is to better understand the participants' business needs.

4 Glossary

Availability:	the criterion for evaluating a system on the basis of its back-up facilities and the possibility of switching over to them.
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 which aims to ensure that it meets agreed service levels even if one or more components of the system fail or if it is affected by another abnormal event. This includes both preventative measures and arrangements to deal with these events.
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 (or daylight overdraft, daylight exposure, intraday credit), marginal lending facility .
Correspondent banking:	an arrangement whereby one bank provides payment services and other services to another bank. 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 international boundaries, but are also found as agency relationships in some domestic contexts. A loro account is the term used by a correspondent to describe an account held on behalf of a foreign bank; the foreign bank would regard this account as its nostro account.
Correspondent central banking model (CCBM):	a model established by the European System of Central Banks (ESCB) with the aim of enabling counterparties to transfer eligible assets as collateral in a cross-border context. In the CCBM, national central banks act as custodians for one another. This means that each national central bank has a securities account in its securities administration for each of the other national central banks (and for the European Central Bank (ECB)).
Counterparty:	the opposite party in a financial transaction (e.g. in any transaction with the central bank).
Credit institution:	an institution covered by the definition contained in Article 1 (1) of Directive 2000/12/EC of the European Parliament and of the Council of 20 March 2000 relating to the taking up and pursuit of the business of credit institutions. According to this definition, a credit institution is (a) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credit for its own account, or (b) an electronic money institution within the meaning of Directive 2000/46/EC of the European Parliament and of the Council of 18 September 2000 on the taking up, pursuit and prudential supervision of the business of electronic money institutions.

Credit risk/exposure:	the risk that a counterparty will not settle an obligation in full, either when due or at any time thereafter. In exchange-for-value systems, the credit risk is generally defined to include replacement cost risk and principal risk .
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.
Cross-border settlement:	a settlement which takes place in a country other than the country or countries in which one trade counterparty or both of the parties to the trade are located.
Customer payment:	the ordering customer or the final beneficiary customer, or both, are non-financial institutions.
Daily processing:	the complete cycle of processing tasks which 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 (or daylight overdraft, daylight exposure, intraday credit):	credit extended for a period of less than one business day. Daylight 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 a national central bank and which are remunerated at a pre-specified interest rate.
EEA (European Economic Area) countries:	the EU Member States plus Iceland, Liechtenstein and Norway.
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 each defined as a final transfer.
Financial application (FIN):	the SWIFT II application within which all SWIFT II user-to-user messages are input and output. Certain user-to-SWIFT and SWIFT-to-user messages may also be sent and received within FIN.

Financial risk:	the term covering a range of risks incurred in financial transactions – both 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 pay the currency it sold but not receive the currency it bought. This is also called cross-currency settlement risk or principal risk . It is also referred to as Herstatt risk , although this is an inappropriate term given the differing circumstances in which this risk has materialised.
Gross settlement system:	a transfer system in which the settlement of funds or securities transfer instructions occurs individually.
Herstatt risk:	see principal risk .
Interbank payment:	both the ordering party and the beneficiary are financial institutions.
Interlinking:	Within the TARGET system, Interlinking provides common procedures and an infrastructure which allow payment orders to move from one domestic RTGS system to another.
Intraday credit:	see daylight credit (or daylight overdraft, daylight exposure, intraday 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 intraday credit .
Irrevocable and unconditional transfer:	a transfer which 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 sometimes 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.
Liquidity risk:	the risk that a counterparty (or participant in a settlement system) will not settle an obligation for full value when due. Liquidity risk does not imply that a counterparty or participant is insolvent, since it may be able to settle the required debit obligations at some unspecified time thereafter.
Marginal lending facility:	a standing facility of the Eurosystem which counterparties may use to receive overnight credit from a national central bank against a pre-specified interest rate.
Net settlement system (NSS):	a funds transfer or securities settlement system whose settlement operations are completed on a bilateral or multilateral net basis.

Obligation:	a duty imposed by contract or law. It is also used to describe a security, such as a bond or promissory note (containing the issuer's undertaking to pay the owner), or another financial instrument.
Payment:	the payer's transfer of a monetary claim on 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, 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.
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 .
Real time:	the processing of instructions at the time they are received rather than at some later time.
Real-time gross settlement (RTGS):	the continuous (real-time) settlement of funds or securities transfers individually on an order-by-order basis (without netting).
Real-time gross settlement (RTGS) system:	a settlement system in which processing and settlement take place on an order-by-order basis (without netting) in real-time (continuously).
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.
Repo:	see repurchase agreement .
Repurchase agreement:	an arrangement whereby an asset is sold while the seller simultaneously obtains the right and obligation to repurchase it at a specific price on a future date or on demand. Such an arrangement is similar to collateralised borrowing, with the exception that ownership of the securities is not retained by the seller. The Eurosystem uses repurchase agreements with a fixed maturity in its reverse transactions. Repurchase transactions are included in M3 in cases where the seller is a Monetary Financial Institution (MFI) and the counterparty is a non-MFI resident in the euro area. According to the Regulation of the ECB concerning the consolidated balance sheet of the MFI sector (ECB/1998/16), repurchase operations (repos) are classified as deposit liabilities since they are not marketable.

Reserve requirement:	the requirement for institutions to hold minimum reserves with the central bank. In the minimum reserve framework of the Eurosystem, the reserve requirement of a credit institution is calculated by multiplying the reserve ratio for each category of item in the reserve base with the amount of those items in the institution's balance sheet. In addition, institutions are allowed to deduct a lump-sum allowance from their reserve requirement.
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.
Settlement:	an act which discharges obligations in respect of funds or securities transfers between two or more parties. A 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 .
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 confirmation, generation, clearing and settlement of instructions.
SWIFT:	the Society for Worldwide Interbank Financial Telecommunication (S.W.I.F.T. s.c.r.l.): a co-operative organisation created and owned by banks which operates a network 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 over a payment system or through correspondent banking relationships.
Systemic risk:	the risk that the failure of one participant in a transfer system , or in financial markets generally, to meet its required obligations will cause other participants or financial institutions to be unable to meet their obligations (including settlement obligations in a transfer system) when due. Such a failure may cause significant liquidity or credit problems and, as a result, might threaten the stability of financial markets.
TARGET cross-border:	the term used to define the transactions processed via TARGET for which settlement takes place in an RTGS system other than that in which the payment instructions originated.
TARGET domestic:	the term used to define the transactions processed via TARGET for which settlement takes place within each national RTGS system .
TARGET market share:	the percentage processed by TARGET compared with the total of the large-value payments in euro exchanged via all euro large-value payment systems The other systems are Euro1 (EBA), EAF (Euro

Access Frankfurt), PNS (Paris Net Settlement) and SPI (Servicio de Pagos Interbancarios).

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) 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.

TARGET-related documents published by the ECB

This list is designed to inform readers about selected documents published by the ECB in which TARGET-related information can be found. The publications are available to interested parties free of charge from the Press Division. Please submit orders in writing to the postal address given on the back of the title page.

For a complete list of documents published by the European Monetary Institute, please visit the ECB's website (<http://www.ecb.int>).

Annual Report

"Annual Report 1998", April 1999.

"Annual Report 1999", April 2000.

"Annual Report 2000", May 2001.

Monthly Bulletin

The TARGET payment flows and new developments are published on a quarterly basis (March, June, September and December):

"The TARGET system": operational framework, payment flows in TARGET, March 1999.

"The TARGET system": operational framework, payment flows in TARGET, liquidity aspects, June 1999.

"The TARGET system": operational framework, payment flows in TARGET, September 1999.

"The TARGET system": TARGET as seen by its users, payment flows in TARGET, December 1999.

"The TARGET system", March 2000.

"The TARGET system": TARGET closing days in 2001, payment flows in TARGET, June 2000.

"The TARGET system": payment flows in TARGET, September 2000.

"The TARGET system": the TARGET Information System, TARGET reimbursement scheme, payment flows in TARGET, December 2000.

"The TARGET system": long-term calendar for TARGET closing days, information guide for credit institutions using TARGET, payment flows in TARGET, March 2001

TARGET-related article published:

"TARGET and payments in euro", November 1999.

Other publications

"The TARGET service level", July 1998.

"Third progress report on the TARGET project", November 1998.

"Payment systems in the European Union: Addendum incorporating 1997 figures", January 1999.

"Cross-border payments in TARGET: A users' survey", November 1999.

"Payment systems in the European Union: Addendum incorporating 1998 figures", February 2000.

“Interlinking: Data dictionary”, version 2.02, March 2000.

“Information guide for credit institutions using TARGET”, November 2000.

“Guideline of the European Central Bank on a Trans-European Automated Real-time Gross settlement Express Transfer system”, forthcoming.

Information brochures

“TARGET: facts, figures, future”, September 1999.

“The ECB payment mechanism”, August 2000.

“TARGET”, August 2000.