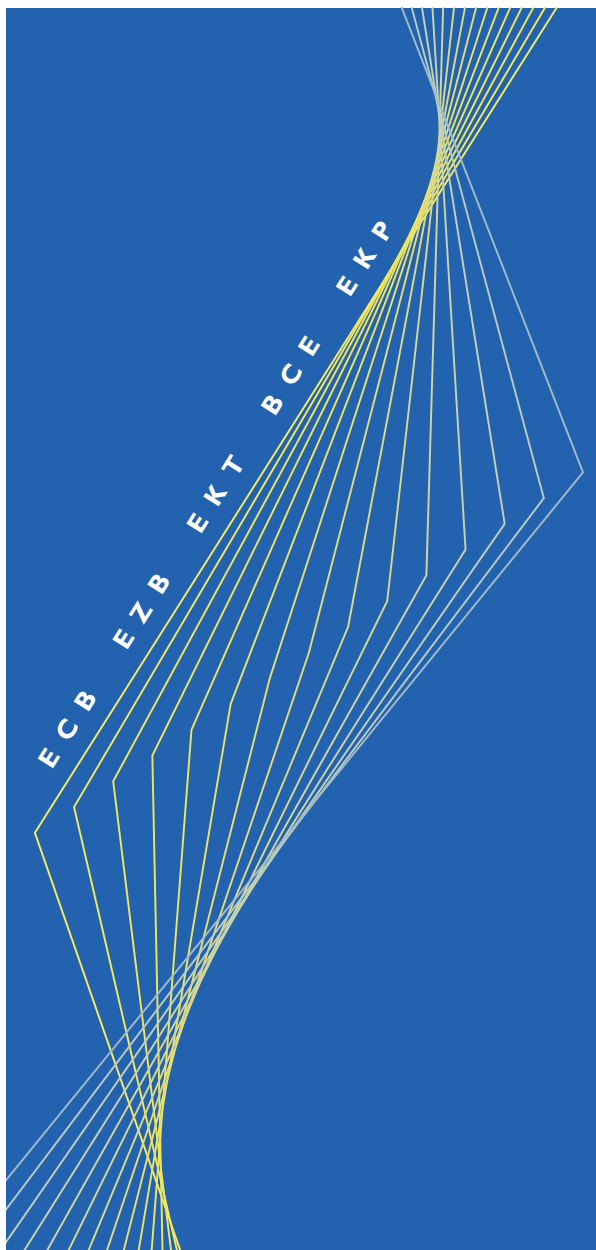




EUROPEAN CENTRAL BANK



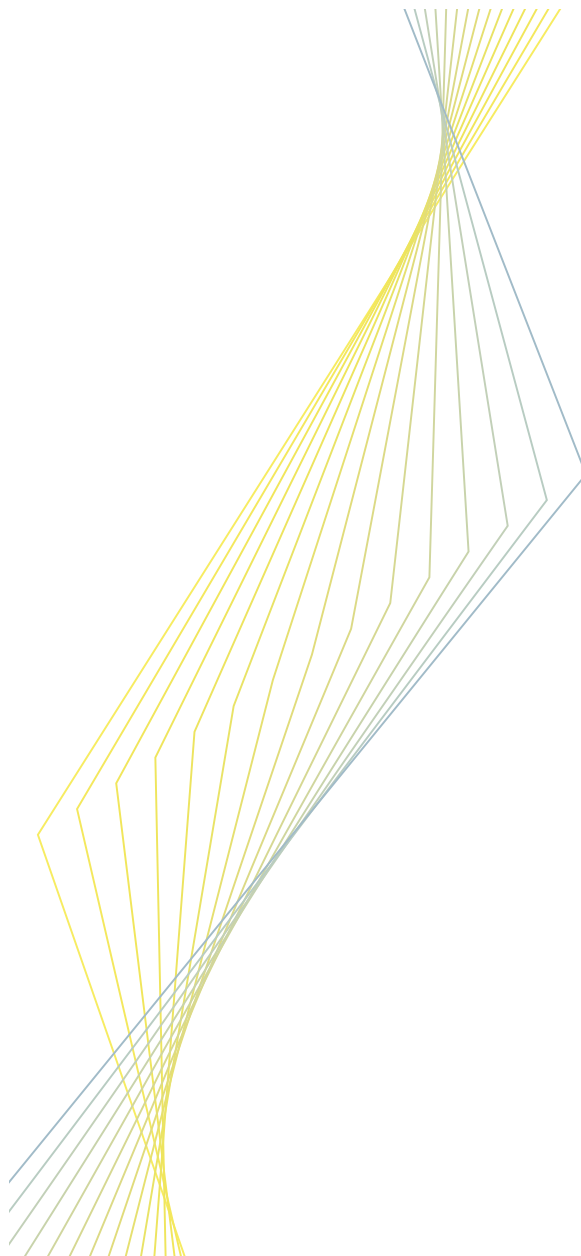
TARGET

Annual Report

2002



EUROPEAN CENTRAL BANK



TARGET
Annual Report

2002

© European Central Bank, 2003

Address	Kaiserstrasse 29 D-60311 Frankfurt am Main Germany
Postal address	Postfach 16 03 19 D-60066 Frankfurt am Main Germany
Telephone	+49 69 1344 0
Internet	http://www.ecb.int
Fax	+49 69 1344 6000
Telex	411 144 ecb d

This Bulletin was produced under the responsibility of the Executive Board of the ECB. Translations are prepared and published by the national central banks.

All rights reserved. Reproduction for educational and non-commercial purposes is permitted provided that the source is acknowledged.

As at March 2003.

ISSN 1725-4876 (print)

ISSN 1725-4884 (online)

Contents

Introduction	5
<hr/>	
Chapter I	
Business performance	6
1 Payment flows in TARGET	6
2 Size of TARGET payments	12
3 Fluctuations in TARGET payment flows	13
4 Cross-border intraday flows	15
5 CLS impact	17
<hr/>	
Chapter II	
Technical performance	19
1 TARGET availability	19
2 TARGET contingency measures	21
3 Interbank straight-through processing	22
4 Changes in the TARGET system	24
<hr/>	
Chapter III	
Developments	25
1 Relations with TARGET users	25
2 New policy framework for a TARGET compensation scheme	26
3 TARGET oversight	26
4 EU accession process	27
5 TARGET2	28

Annexes

1	TARGET statistics	30
2	Chronology of developments in TARGET	36
3	Organisation of TARGET	41
4	General terms and acronyms	47
5	Glossary	48
<hr/>		
	TARGET-related documents published by the ECB	56
<hr/>		

List of boxes, tables and charts

Boxes

Box 1:	Impact of RTGS ^{plus} on TARGET domestic traffic	10
Box 2:	TARGET long-term calendar applied in 2002	14
Box 3:	Continuous Linked Settlement (CLS) and TARGET	18
Box 4:	TARGET Information System (TIS)	20
Box 5:	Recommendations for CLS payments in euro	22
Box 6:	Connection of euro RTGS systems of non-euro area central banks to TARGET	44

Tables

Table 1:	TARGET payment flows	7
Table 2:	Average size of TARGET payments	12
Table 3:	Peak days in TARGET	15

Charts

Chart 1:	TARGET as a whole – value	7
Chart 2:	TARGET as a whole – volume	8
Chart 3:	TARGET domestic – value	9
Chart 4:	TARGET domestic – volume	9
Chart 5:	TARGET cross-border – value	10
Chart 6:	TARGET cross-border – volume	11
Chart 7:	TARGET cross-border intraday pattern – value and volume	16
Chart 8:	TARGET cross-border intraday pattern, cumulative – value and volume	16
Chart 9:	Euro liquidity absorption by CLS	17
Chart 10:	TARGET availability	20
Chart 11:	Percentage of rejections in TARGET	23
Chart 12:	Number of rejected payments in TARGET	23

Introduction

TARGET, the Trans-European Automated Real-time Gross settlement Express Transfer system, has been instrumental in achieving the integrated euro area money market, which in turn is a prerequisite for the single monetary policy. The TARGET system operated smoothly in 2002 and thus provided a reliable and safe mechanism for the efficient settlement of large-value payments in euro.

In 2002, TARGET processed a daily average of 253,016 transactions with a value of €1,552 billion. This represented a share in the traffic of all large-value payment systems in euro of almost 85% in terms of value and 59% in terms of volume. More than 40,000 banks and branches were addressable via TARGET.

The two most notable trends in TARGET in 2002 were: the continued rise in the use of TARGET for cross-border customer payments; and the decline in TARGET cross-border turnover triggered by a reduction in the daily value of cross-border interbank payments.

Continued efforts were made to further enhance the system. This process benefited largely from a regular and fruitful dialogue with TARGET users. One result was that TARGET contingency measures were improved. Regular trials were carried out in 2002 to ensure that TARGET contingency measures are operationally effective and could cope with user requirements, including those arising from the start of CLS operations in September 2002. Also, a new policy

framework for compensation in the event of TARGET malfunctions was elaborated during the year.

The above-mentioned activities as well as the newly developed framework for TARGET oversight, which the Governing Council of the ECB approved at the beginning of 2003, largely addressed those actions which the IMF recommended in its “Euro area: Report on the observance of standards and codes (ROSC)” in October 2001.¹

On 24 October 2002, the Governing Council took a strategic decision on the long-term evolution of the TARGET system in order to ensure TARGET’s ongoing enhancement with a view to meeting customers’ needs, guaranteeing the cost efficiency of the system and being prepared for EU enlargement.

This report describes the most relevant TARGET developments in 2002. Chapter 1 reviews the business performance of the system on the basis of TARGET payment flows, while Chapter 2 assesses the technical performance of TARGET. Chapter 3 provides an overview of developments in TARGET from an organisational and business perspective. In this chapter also, specific attention is given to the long-term evolution of TARGET. Finally, the annexes provide a selection of statistical data, a chronology of developments in TARGET, and an overview of its organisation and management structure.

¹ The “Euro area: Report on the observance of standards and codes” published by the IMF, Washington D.C., 2001.

Chapter I – Business performance

The steady increase in TARGET traffic since the start of TARGET operations continued into 2002.

TARGET remained the preferred system for the settlement of high-value payments in euro. In 2002, TARGET's share in the traffic of all large-value payment systems in euro taken together rose to 85% in terms of value and 59% in terms of volume. This reflects ongoing market consolidation, such as the closing-down of Euro Access Frankfurt (EAF) when the Deutsche Bundesbank launched its RTGS^{plus} system in November 2001. TARGET was also extensively used for the settlement of relatively low-value commercial payments; more than three out of four payments in TARGET were for amounts equal to or less than €50,000.

I Payment flows³ in TARGET

This chapter provides a description of the development of the payment flows in TARGET in 2002 in comparison with 2001. First, TARGET traffic as a whole is described. Then a distinction is made between TARGET domestic activities and TARGET cross-border activities.⁴ TARGET cross-border traffic is further broken down into interbank payments⁵ and customer payments. The figures are expressed as daily averages in order to even out the impact of differences in the number of business days.

TARGET traffic

In 2002, TARGET as a whole processed a daily average of 253,016 payments with a value of €1,552 billion.

On a daily average basis, TARGET turnover rose by 19%. This rise was due to the steady increase in TARGET domestic turnover (34%). In contrast, against the trend of previous years, the value of cross-border traffic decreased (4%), mainly because of the lower turnover of cross-border interbank payments (see Table I).

The share of domestic traffic in TARGET turnover grew to 69% (61% in 2001), the remainder being cross-border turnover.

In 2002, the two most notable trends in TARGET were: (i) the continued increase in cross-border customer payments, in particular in terms of volume; and (ii), the decline in cross-border turnover, triggered by a decrease in the overall value of cross-border interbank payments.

With regard to the participation structure, TARGET had 1,560 direct participants, while the number of indirect participants was 2,328.² At the same time, the overall number of banks addressable in TARGET (including branches and subsidiaries) reached more than 40,000 worldwide.

In volume terms, TARGET experienced a substantial increase as a whole (20%), as well as in both domestic and cross-border traffic (20% and 19% respectively).

TARGET's market share in the traffic of all large-value payment systems in euro grew to 85% (75% in 2001) in terms of value and 59% in terms of volume (52% in 2001). This confirms the market perception of TARGET as the core system for large-value payments in euro.

In 2002, TARGET was also used extensively for the settlement of relatively low-value

² This figure is based on a survey of direct and indirect participants in 2002. The figures given represent the status at end-2001. In recent TARGET Annual Reports the number of indirect participants were estimates.

³ The development of traffic flows in TARGET is based on the statistics reported by the NCBs. Unless otherwise specified, the source of the data is the Interlinking Statistics Database maintained at the ECB, and the analysis is restricted to payments sent. The times expressed in this chapter are Central European Time (C.E.T.). For more detailed information, please refer to the tables or charts provided in Statistical Annex I.

⁴ At present, only cross-border payments can be analysed by payment type (interbank or customer payments).

⁵ For reasons of simplicity, inter-NCB payments are included in the interbank figures in this report because they represent only 0.1% of the total turnover of cross-border payments.

Table I
TARGET payment flows

		2001	2002	change	2001	2002	change
		EUR billions			Number of payments		
				%			%
TARGET overall	Total	329,992	395,635	20	53,663,478	64,519,000	20
<i>of which:</i>	Daily average	1,299	1,552	19	211,274	253,016	20
Domestic	Total	201,390	271,914	35	42,164,099	50,785,315	20
	Daily average	793	1,066	34	166,000	199,158	20
Cross-border	Total	128,602	123,721	-4	11,499,379	13,733,685	19
<i>of which:</i>	Daily average	506	485	-4	45,273	53,858	19
Interbank	Total	124,084	118,434	-5	6,992,979	7,439,676	6
	Daily average	489	464	-5	27,531	29,175	6
Customer	Total	4,519	5,286	17	4,506,400	6,294,009	40
	Daily average	18	21	17	17,742	24,682	39

Source: ECB.

Note: In 2001: 254 operating days; in 2002: 255 operating days.

payments⁶ – 77% of all payments were for values equal to or less than €50,000, while for higher-value payments, ranging from €1 million to €1 billion, the share was 16%. Finally, TARGET payments with a value above €1 billion accounted for less than 0.1%.

TARGET flows remained concentrated in a few RTGS systems. Five RTGS systems processed as much as 84% (81% in 2001) of the TARGET total value and 83% (83% in 2001) of the TARGET total volume (see Statistical Annex I, Tables I.1 and I.2).

As was the case in previous years, the level of activity in TARGET was characterised by a

seasonal pattern (see Charts 1 and 2) with TARGET traffic declining during the third quarter of the year. Owing to seasonal holidays, the decrease was most evident in August. In contrast, the payment flows processed through TARGET increased substantially towards the end of the year. The peak daily average was recorded in December 2002⁷ (see Chart 1).

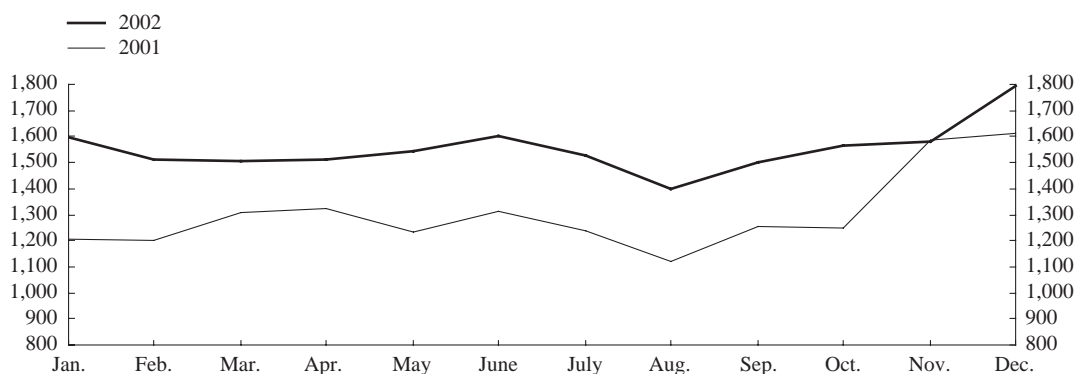
The reasons for the peak were the low number of working days in December

⁶ As in 2001, the average value of a single payment for TARGET as a whole was €6.1 million in 2002.

⁷ For December 2002 the daily average in TARGET as a whole was 274,631 payments totalling €1,793 billion.

Chart 1
TARGET as a whole – value

(EUR billions; daily averages per month)

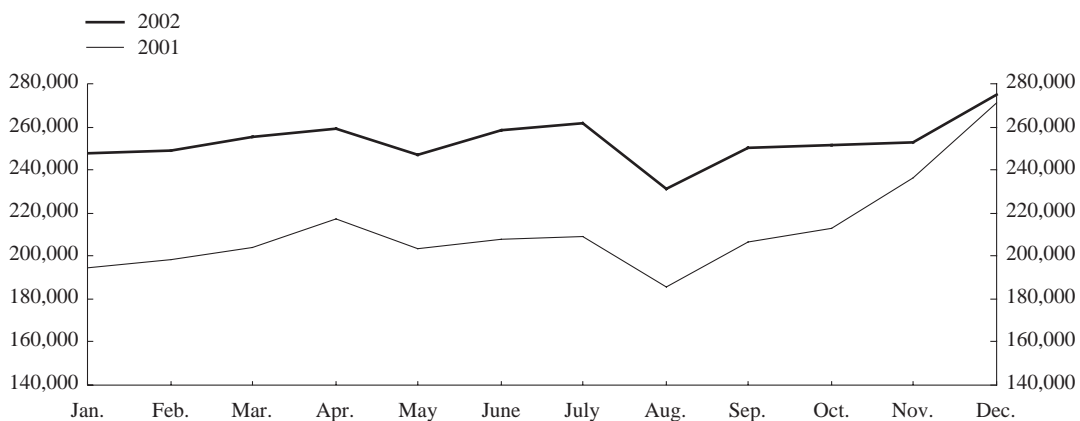


Source: ECB.

Chart 2

TARGET as a whole – volume

(daily averages per month)



Source: ECB.

compared with the other months and the higher number of transactions generally settled at the end of the year.

TARGET domestic

In 2002 TARGET processed a daily average of 199,158 domestic payments with a value of €1,066 billion. This corresponds to an increase of 34% in terms of value and 20% in terms of volume compared with 2001 (see Table I).

The significant higher turnover processed through TARGET at the domestic level stemmed mainly from the RTGS systems of France, Spain and Germany.

- In some countries, the settlement through TARGET of securities transactions whose cash leg was formerly settled in net settlement systems (NSSs) increased substantially in 2002, including the settlement of cash transactions related to the public debt.
- The closing-down of EAF and the launch of the RTGS^{plus} system, as well as the inclusion of the participants' liquidity transfers to and from their RTGS accounts⁸ in the statistical data, all contributed to the increase in the figures.

In 2002, domestic traffic represented 68.7% in terms of value and 78.7% in terms of volume of TARGET as a whole. Comparable figures for 2001 were 61.0% and 78.6% respectively.

To provide an indication of the different usage of TARGET across the EU, country comparisons were made (see Tables I.1 and I.2 in Statistical Annex I). As explained in section I of the Statistical Annex (see page 30), these comparisons should be read with caution.

In terms of volume, the local TARGET components in Germany and Italy processed more than two-thirds of all TARGET domestic payments. Almost 83% of the TARGET domestic turnover was processed in the local TARGET components in France, Germany and Spain. By contrast, the local TARGET components in Denmark, Finland, Luxembourg and Sweden together processed less than 2% of the value and less than 1% of the volume of TARGET domestic payments.

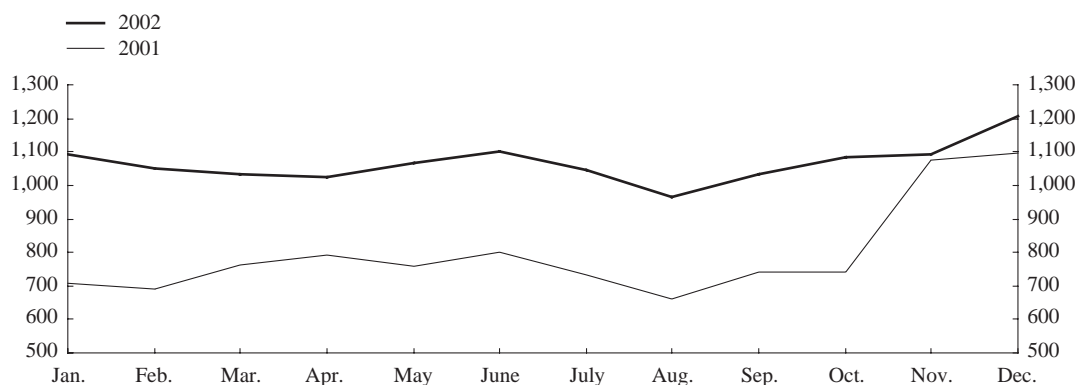
As mentioned above, the number of domestic payments processed in the local TARGET components in Germany and Italy was very high. At the same time, the average value of a

⁸ France, Germany and Spain.

Chart 3

TARGET domestic – value

(EUR billions; daily averages per month)

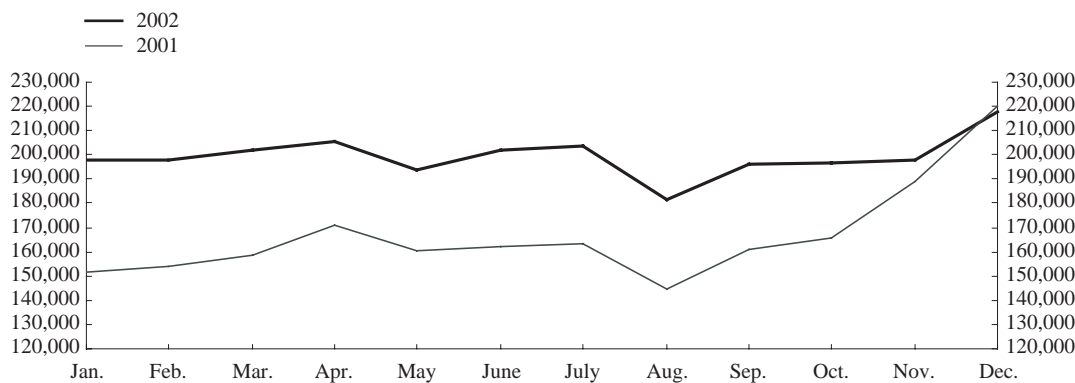


Source: ECB.

Chart 4

TARGET domestic – volume

(daily averages per month)



Source: ECB.

domestic TARGET payment in each of these local TARGET components was lower than, for instance, in France or Spain (€3.3 million in Germany and €2.0 million in Italy, against €33.9 million in France and €22.3 million in Spain)⁹. Thus, in Germany and in Italy, TARGET was used largely to process commercial payments at a domestic level. Likewise, several other local TARGET components¹⁰ processed many more domestic TARGET payments of a lower average value than in 2001.

The grouping of traffic figures for 2002¹¹ into value bands shows the continuous and

extensive use of TARGET for the processing of domestic low-value payments (65% of all payments are less than or equal to €50,000, while 11.2% are higher than €1 million). Less than 0.1% of TARGET domestic payments have a value above €1 billion.

⁹ The average value of a domestic TARGET payment was €5.4 million in 2002.

¹⁰ The TARGET components in Austria, Denmark, Luxembourg, the Netherlands, Portugal, Sweden and the United Kingdom.

¹¹ UK domestic figures were not included as these were not available per value bands.

Box I

Impact of RTGS^{plus} on TARGET domestic traffic

On 5 November 2001 the Deutsche Bundesbank shut down the hybrid system Euro Access Frankfurt (EAF) and launched a new RTGS system, “RTGS^{plus}”, as its TARGET component. This is a prominent example of the ongoing consolidation in the large-value payments market in the euro area.

With the closing-down of EAF, most of its traffic moved to RTGS^{plus}, as the increase in domestic TARGET traffic in Germany showed. This was also reflected in TARGET domestic traffic as a whole, which rose by 35% in terms of volume and 20% in terms of value when compared with 2001. If the increase in domestic traffic in Germany had been excluded, TARGET domestic traffic would have gone up by 5% in terms of volume and 9% in terms of value.

The growth in domestic traffic in the local TARGET component in Germany is also affected by the inclusion of participants’ liquidity transfers from their home accounts to their RTGS accounts and vice versa. Similar types of liquidity transfers exist in France and Spain.

TARGET cross-border

In 2002, TARGET processed a daily average of 53,858 cross-border payments with a daily average value of €485 billion. Compared with 2001, this represents a rise of 19% in the number of payments and a drop of 4% in TARGET cross-border values (see Table I).

The rise in cross-border volumes is in particular a result of the very high increase in cross-border customer payments (40% compared with 2001), reflecting the progressive migration of cross-border

commercial payments from correspondent banking to interbank systems such as TARGET.

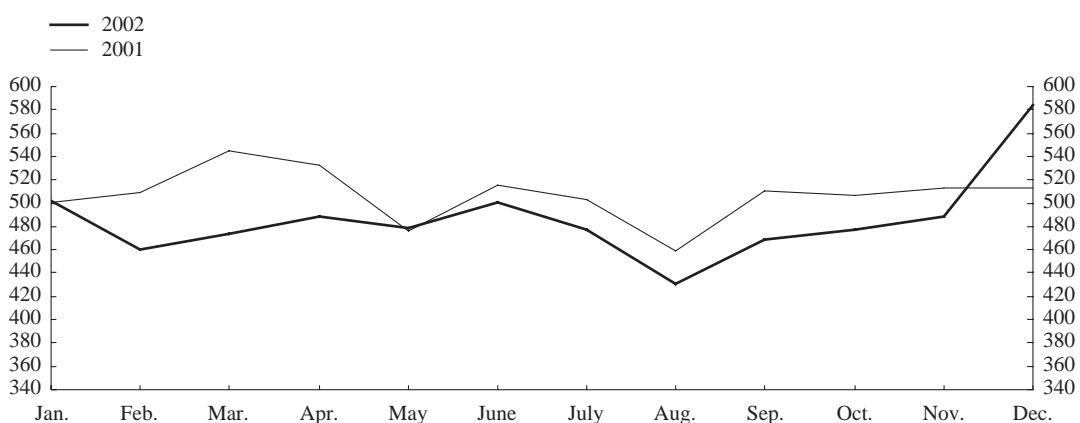
Against the trend of previous years, the value of TARGET cross-border payments declined. This was due to a lower turnover of cross-border interbank payments.

In 2002, the share of cross-border traffic in TARGET as a whole decreased and accounted for 31.3% in terms of value (39.0% in 2001) and 21.3% in terms of volume (21.4% in 2001).

Chart 5

TARGET cross-border – value

(EUR billions; daily averages per month)

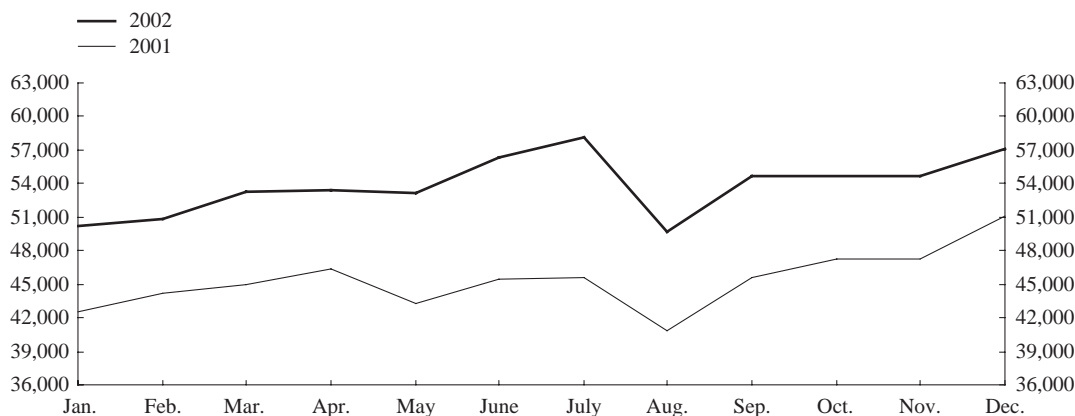


Source: ECB.

Chart 6

TARGET cross-border – volume

(daily averages per month)



Source: ECB.

In 2002, a large majority of local TARGET components processed a much higher daily average of cross-border payments than in the previous year. The ECB payment mechanism (EPM) more than doubled its daily volume because of the start of CLS operations, with all CLS payments being settled via EPM. The share of EPM's volume in TARGET cross-border traffic, however, remains less than 1%.

Analysis of the *intra*year development of TARGET cross-border traffic shows that the daily average turnover per month was in general lower and the daily average volume per month continuously higher than in 2001 (see Charts 5 and 6). Only in the last month of the year did TARGET cross-border values exceed the comparable figure for the previous year (14% higher than in December 2001).

At the end of the year, cross-border interbank traffic reversed the annual trend. Instead of higher volumes, the number of interbank payments diminished in November and December 2002 (9% compared with the daily average for 2002), whereas the daily average value of cross-border interbank payments increased by almost a quarter in

December 2002 compared with the daily average for the whole of 2002.

In 2002 *interbank payments* represented 96% of the total cross-border value and 54% of the volume. In 2001 these figures were 97% and 61% respectively.

Customer payments accounted for 4% of the total cross-border value and 46% in terms of volume. In 2001 the shares were 3% and 39% respectively.

Grouping of TARGET cross-border traffic figures in 2002¹² into value bands shows that the TARGET cross-border link is used extensively for the settlement of low-value payments (86% of customer payments and 32% of interbank payments are for values equal to or less than €50,000). 30% of interbank payments and 3% of customer payments are higher than €1 million. The share of TARGET cross-border payments with a value above €1 billion is less than 0.1%.

¹² UK cross-border figures are not included as these were not available per value bands.

2 Size of TARGET payments

The average value of individual transactions processed in TARGET as a whole levelled out at €6.1 million (see Table 2). The average value of domestic TARGET payments rose to €5.4 million, while the average value of cross-border payments declined to €9.0 million. In particular, the average value of cross-border customer transfers decreased by 16% compared with 2001.

The cross-border interbank payments had an average value of €16.0 million. A striking feature is the volatility of changes in the average value of interbank payments, which after a notable drop in the third quarter peaked in the last quarter.

The average values show that TARGET is the preferred system for the settlement of high-value cross-border payments.

In 2002, as in previous years, cross-border payments had a higher average value than

domestic payments. This was due to the large number of liquidity transfers and money-market transactions made across the system, especially by the major credit institutions. Since the introduction of the euro, most banks have centralised their liquidity management. Thus liquidity is distributed to branches of the credit institutions in the morning and any excess funds are returned in the evening. Similarly, banks make full use of the last hour of operations to balance liquidity surpluses or deficits in the money market, with the high average value of interbank payments settled in the last hour (between 5 and 6 p.m.) reflecting this (see Statistical Annex 2, Chart 2.2). At the cross-border level, the average value in the last hour peaked at €105 million per payment. The high number of lower-value payments released in the morning (between 7 and 10 a.m.) had the effect of lowering the average value to €7 million.

Table 2
Average size of TARGET payments

(EUR millions)

	2001				2002			
	1 Q	2 Q	3 Q	4 Q	1 Q	2 Q	3 Q	4 Q
TARGET overall	6.2	6.2	6.0	6.2	6.1	6.1	6.0	6.3
<i>of which:</i>								
Domestic	4.7	4.8	4.6	5.1	5.3	5.3	5.2	5.5
Cross-border	11.8	11.3	11.1	10.6	9.3	9.0	8.5	9.3
<i>of which:</i>								
Interbank	17.6	17.8	17.7	17.7	16.1	15.9	14.6	17.3
Customer	1.1	1.0	1.0	1.3	0.9	0.8	0.8	0.9

Source: ECB.

3 Fluctuations in TARGET payment flows¹³

Fluctuations in TARGET flows are triggered mainly by: (i) the settlement of periodical transactions (e.g. term deposits) at the end of each quarter, half-year or year; (ii) public holidays in the United States; (iii) TARGET holidays; and (iv) major public holidays (not TARGET holidays) celebrated simultaneously in several euro area countries.

Impact of periodical transactions

In 2002, traffic in TARGET increased on the last day of the month, quarter or half-year in terms of both value and volume compared with the TARGET daily average. The highest fluctuations due to periodical transactions were observed on the last day of the half-year, with a traffic increase of 32% in terms of value and 29% in terms of volume (see Table 3). Similarly, on the last days of the quarters, TARGET traffic grew by 20% in terms of value and 26% in terms of volume.

The highest fluctuation at the TARGET domestic level was also recorded on the last day of the half-year. In addition, TARGET domestic figures were significantly affected on the last day of the year and the quarters (compared with the daily average for 2002, by 18% in terms of value and 30% in terms of volume, and by 19% in value and 27% in volume respectively). At the cross-border level, the strongest fluctuation was also recorded on the last day of the half-year (29% in value and 34% in volume).

Impact of public holidays in the United States

On US public holidays, no EUR/USD foreign exchange transactions are settled. On these days, TARGET as a whole faced an average decrease of 25% in terms of value and 17% in terms of volume in 2002. An average rise of 12% and 11% respectively on the following business day compensated to some extent for this decrease.

As experienced in previous years, US public holidays affect in particular TARGET cross-border traffic. On average, cross-border traffic fell by 50% in terms of both value and volume on US holidays. On the next TARGET business day, cross-border values went up by 18% and the number of cross-border payments increased by 23%.

Public holidays in other countries, outside the euro area, continued to have little impact on TARGET activity. Neither national holidays in the United Kingdom nor Japanese public holidays had a significant effect on payment flows in TARGET.

The reduced TARGET traffic on US public holidays indicates the strong interdependence of TARGET and the settlement of the euro leg of EUR/USD foreign exchange transactions and related transactions, and that the bulk of foreign exchange transactions involving the euro are made against the US dollar.

Impact of TARGET holidays

In addition to Saturdays and Sundays, TARGET was closed on six days in 2002, and the latter are referred to as TARGET holidays¹⁴ (see Box 2). TARGET closing days are non-settlement days for the money market and the financial markets in euro, as well as for foreign exchange transactions involving the euro.

In 2002, on the *day before* a TARGET holiday, the average value and volume of TARGET payments increased by 6%, in domestic terms both rose by 5%, while cross-border traffic was 9% higher in terms of value and volume.

On the *business day following* a TARGET holiday, changes were more significant, partly because TARGET holidays fell on consecutive

¹³ Comparisons in this section – Fluctuations in TARGET payment flows – are made against the daily average for 2002.

¹⁴ TARGET holidays in 2002: New Year's Day, Good Friday, Easter Monday, Labour Day, Christmas Day and Boxing Day.

Box 2

TARGET long-term calendar applied in 2002

The definition of TARGET closing days determines the value dates of the euro in the financial markets. TARGET closing days are non-settlement days for the euro money market and for foreign exchange transactions involving the euro; no standing facilities are available at the NCBs, and the euro overnight index average (EONIA) is not published. Furthermore, the correspondent central banking model (CCBM) for the cross-border use of collateral is closed on these days.

On 14 December 2000 the Governing Council decided to establish a long-term calendar to be applied from 2002 until further notice. Such a calendar was deemed necessary as the frequent calendar changes and the existence of annual calendars introduced uncertainties into financial markets. Accordingly, TARGET is closed, in addition to Saturdays and Sundays, on New Year's Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December. On these days TARGET as a whole is closed, including all national components (i.e. the national RTGS systems).¹

¹ On 28 February 2002 the Governing Council of the ECB approved an exceptional derogation from the long-term calendar applicable in Greece for a three-year period on the basis of a limited adaptation. The Greek RTGS system (HERMES) will be operational on Catholic/Protestant Easter Fridays and Mondays which do not coincide with the Greek Orthodox Easter Fridays and Mondays, but only for a limited range of operations. Settlement services offered by HERMES on these days will only cover domestic customer payments of a retail nature, including the settlement of retail payment systems. No other types of payment, such as cross-border, interbank, money market, capital market or foreign exchange transactions, will be processed through HERMES on these days. The Bank of Greece will not normally offer access to standing facilities and this will only be granted if absolutely necessary, e.g. to avoid a failure in the settlement of an ancillary system. Following this three-year period, Greece's situation will be reassessed.

days (except 1 May), which meant there were two or more (when followed by weekends) non-business days together in 2002. On the first business day after a TARGET holiday, TARGET as a whole processed on average 19% more transactions with a 13% higher value. At the domestic level, this equals 20% higher volumes and 13% higher values, while in cross-border terms the rise was more moderate, with 12% in terms of volume and 14% in terms of value.

Impact of regional public holidays on TARGET

Public holidays which are observed in several euro area countries (e.g. Whit Monday, Ascension Day, Assumption Day and All Saints' Day) had a significant impact on TARGET payment flows. The average reduction on such days was 42% in terms of value and 59% in terms of volume. Obviously, domestic traffic was affected to a larger degree and its value fell by 51% and 67% in terms of volume. At the cross-border level, 37% fewer payments were processed with a 26% lower value.

However, such decreases were not followed by a significant rise in traffic on the day after the public holiday (as seen in TARGET after TARGET holidays). This can be attributed to the fact that TARGET is open on these national public holidays and thus all relevant transactions can be performed. Of course, there is also a general reduction in activity on these days and therefore no need for TARGET to catch up on the following business day.

A public holiday in a single country of the euro area had hardly any impact on TARGET flows in 2002. However, Germany's national day, 3 October,¹⁵ and a French national holiday, 8 May,¹⁶ were exceptions. TARGET turnover decreased by 11% in terms of value and 30% in terms of volume on 3 October. At the cross-border level, the German public holiday caused a reduction of 8% in terms of value and 5% in terms of volume. On the French national holiday, TARGET processed 5% fewer payments and the value declined by 11%. Cross-border turnover was reduced by 7% in volume and 16% in value.

¹⁵ German Unity Day.

¹⁶ Liberation Day.

Table 3
Peak days in TARGET

EUR billions	Peak days in TARGET 2001-2002			
	2001		2002	
TARGET as a whole	2,040	28 Dec.	2,172	28 June
domestic	1,480	28 Dec.	1,489	28 June
cross-border	751	29 June	689	29 Nov.
Number of payments				
TARGET as a whole	380,146	28 Dec.	371,758	28 June
domestic	318,173	28 Dec.	289,706	28 June
cross-border	63,159	20 Feb.	82,079	29 Nov.

Source: ECB.

Peak days in TARGET

In 2002, the highest volume and value on a single day in TARGET as a whole was recorded on 28 June, the last business day of the first half-year. On this day, TARGET processed a total of 371,758 payments with a total value of €2,172 billion (almost 119,000 payments and €620 billion above the TARGET daily average). This date was also the peak day for domestic traffic.

By contrast, cross-border flows peaked in terms of both volume and value on 29 November 2002, the day after a bank holiday in the US (Thanksgiving Day), to 82,079 payments and €689 billion respectively.

The lowest TARGET volume on a single day was recorded on 9 May (Ascension Day), when a total of 140,221 payments were processed (almost 113,000 payments below the daily average). In terms of value, the lowest day was 15 August (Assumption Day), with a total turnover of €961 billion (€591 billion below the daily average).

9 May also saw the lowest volume of TARGET domestic payments in a single day. In terms of value, the lowest day was 1 November (All Saints' Day), while TARGET cross-border flows experienced their lowest volume and value on 11 November (US public holiday – Veterans Day).

4 Cross-border intraday flows¹⁷

In 2002, the pattern of intraday flows in TARGET was similar to previous years (see Charts 7 and 8).

Generally, TARGET cross-border payments are submitted early, with nearly 50% of the volume processed in the first three hours of operations (between 7 and 10 a.m.). By 2 p.m. almost four out of five payments have been processed.

In terms of volume, as in the previous year, two peaks were visible during the average day: the first between 7 and 8 a.m. and the second between 9 and 10 a.m. These peaks were higher than in 2001.

Regarding the value of TARGET cross-border payments, the highest values were processed between 10 and midday and between 4 and 5 p.m. Compared with 2001, these two peaks were lower.

The significant volume in the morning seems to be related to the release of a high number of warehoused payments from previous dates. In 2002, TARGET processed a daily average of nearly 10,800 cross-border payments in the first hour of operations (equally distributed across interbank and customer

¹⁷ Statistics for the intraday flows at domestic level are currently not available.

payments). Compared with 2001, this represents an increase of 31.71% (49% more customer payments and 18% more interbank payments). At the customer payment cut-off time (5 p.m.) 99% of the total volume had already been processed.

submission of payments, liquidity is managed efficiently as the circulation of liquidity in a timely fashion reduces the amount which needs to be injected into TARGET whilst avoiding gridlock. Thus the early settlement of large-value payments in euro is facilitated.

In terms of value, 21% of the cross-border turnover was processed by 10 a.m., while 53% was processed by 1 p.m. At 5 p.m. 93% of the total value had already been processed.

The hourly average value of a cross-border interbank payment steadily increased through the day, from €6.2 million in the first hour to €107.3 million in the last hour of operations (see Statistical Annex 2, Chart 2.2). In the last hour the bulk of liquidity shifts between the financial counterparties takes place. Similarly,

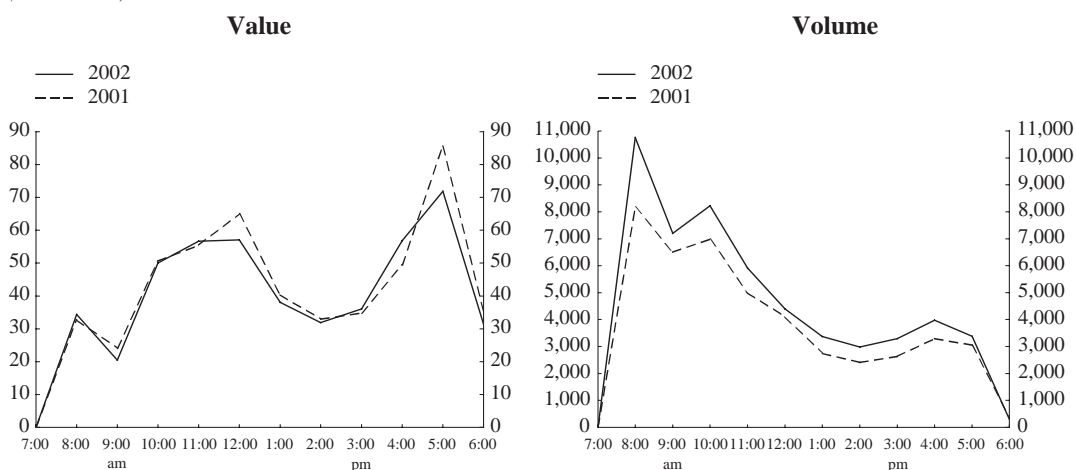
The analysis shows that credit institutions made TARGET payments early, as the guidelines issued by the European Banking Federation (EBF)¹⁸ propose. With this early

¹⁸ See EBF website www.fbe.be.

Chart 7

TARGET cross-border intraday pattern – value and volume

(EUR billions)

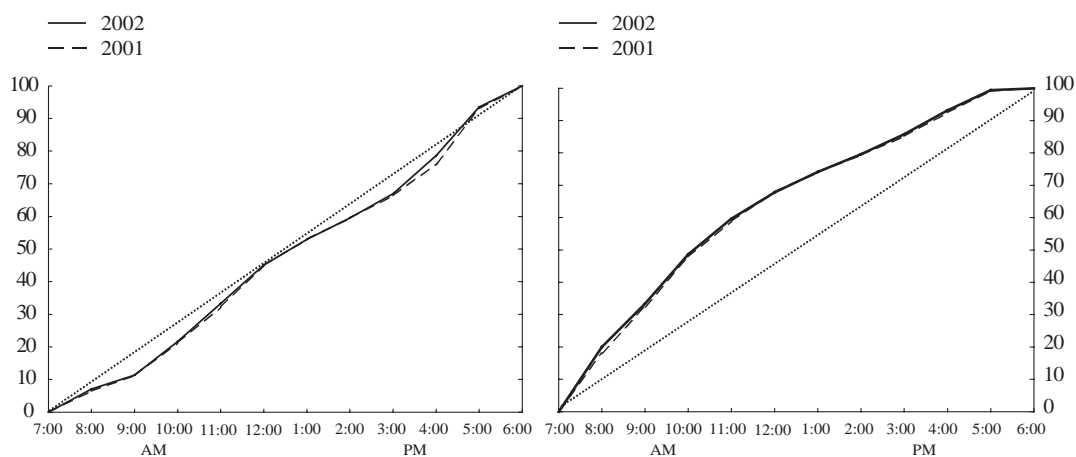


Source: ECB.

Chart 8

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

(%)



Source: ECB.

the average value of a cross-border customer payment grew from €0.4 million in the first three hours of operations, to €1.4 million in the hour just before the customer payment

cut-off time at 5 p.m. (see Statistical Annex 2, Chart 2.3). This suggests that these late high-value customer payments are mainly related to corporate cash management activities.

5 CLS impact

With the launch of CLS live operations in September 2002, TARGET started processing all CLS payments in euro (i.e. both so-called, pay-ins (funding payments) and pay-outs). Two major impacts on TARGET have been considered with regard to this event: possible liquidity accumulation in CLS Bank's (CLSB) account with the ECB (in EPM) and the potentially considerable impact on TARGET interbank payments due to settlement in CLS.

For 2002, a quantitative analysis of the issue has shown the following: out of the total forex trades settled via CLS, trades including the euro represented approximately 25% in terms of both volume and value. Out of the overall funding needs of the CLS system, the euro represented approximately 20%.¹⁹

During the fourth quarter of 2002, CLS daily average funding in euro reached €4 billion. The maximum funding amount was €8 billion (recorded on the first day following a US public holiday, when the volume and value of trades settled via CLS increased substantially and affected the funding amounts).

Chart 9 shows the cumulative amounts paid in for each of the five CLS funding deadlines. As expected, most funding takes place in the first two operational hours of CLS and TARGET (7-9 a.m. C.E.T). On average, 60% of the total daily funding is received by 9 a.m. C.E.T.

As far as liquidity is concerned, the CLS system has absorbed only relatively low amounts of euro liquidity (see Chart 9). The account balance on CLSB's account held at the ECB reflects this liquidity absorption. On average, the account balance remained below €1.5 billion between 7 and 9 a.m. and declined steadily thereafter.

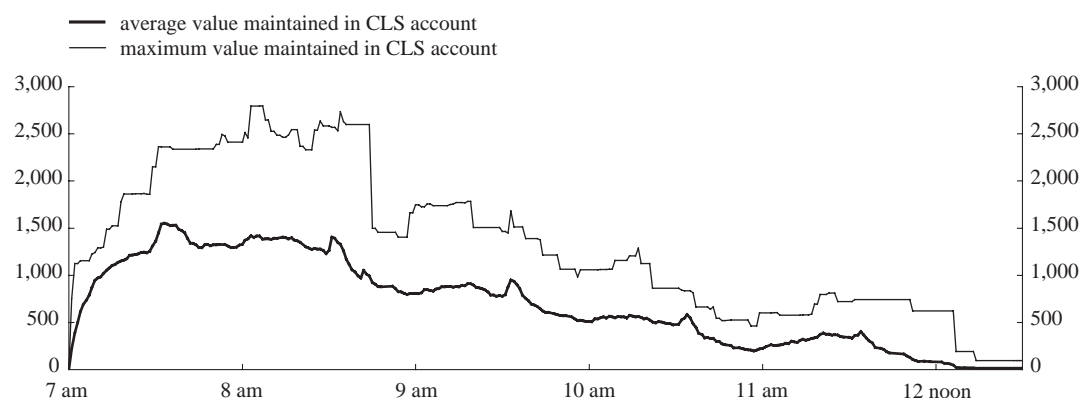
To date, CLS-related payments have had no significant impact in terms of values or volumes processed through TARGET.

¹⁹ In general, the net funding required by the CLS system rounds 10% of the overall value of forex trades settled in CLS (i.e., for a total of USD 250 billion countervalue of daily trades, total net funding (all currencies added) oscillates between USD 20-25 billion per day. The euro represents 20% of this amount (USD 4-5 billion).

Chart 9

Euro liquidity absorption by CLS

(value, EUR millions)



Source: ECB.

Box 3**Continuous Linked Settlement (CLS) and TARGET**

On 9 September 2002, CLS, a system designed for the settlement of foreign exchange (FX) transactions¹, started live operations. CLS largely eliminates FX settlement risk by settling the respective transactions in its books on a payment-versus-payment basis (PvP)². Remaining balances of the CLS Settlement Members in the books of CLSB are squared by pay-ins and pay-outs in central bank money for each of the eligible currencies.

For the euro, the squaring in central bank money is done via TARGET. For this purpose CLSB holds an account with the ECB and the CLS settlement members or their nostro agents hold an account in their respective national RTGS system. The banks fund a debit position in euro by transferring money from their RTGS account to the CLSB account held with the ECB and vice versa if CLSB has to fund a euro credit position of a bank.

¹ The eligible currencies that are currently settled are USD, EUR, JPY, GBP, CHF, CAD, AUD.

² For further information, see: "CLS – purpose, concept and implications", January 2003 issue of the ECB's Monthly Bulletin.

Chapter II – Technical performance

In 2002, the Eurosystem continued to improve TARGET availability and enhance TARGET contingency measures. TARGET availability is defined as the average of the availability of the RTGS systems belonging to TARGET.²⁰ Contingency measures ensure that, even if TARGET is not fully operational, systemically important payments (which if unprocessed or processed behind schedule might trigger systemic risk) could be processed in a timely manner.

Within the preparatory work undertaken for the start of CLS operations, TARGET contingency measures were repeatedly trialled in the live environment with the participation of credit institutions. These

exercises verified that TARGET contingency measures are operationally effective.

The rate of rejected payments at the cross-border level remained very low in 2002. This reflects the thorough adaptation and application of straight-through-processing (STP) standards by TARGET users, thus facilitating further automation of the processing of payment messages and reduction in the associated costs and risk.

The global TARGET maintenance release 2002 was successfully implemented in November and the Eurosystem started its preparations for the migration from SWIFT FIN to SWIFTNet FIN.

I TARGET availability

In 2002 the overall availability of TARGET was 99.77% compared with 99.75% in 2001 (see Chart 10).

A total of 108 incidents were recorded in TARGET as a whole in 2002 (115 incidents in 2001). Of these incidents, 72 had a real impact on TARGET availability.²¹ The two main causes of incidents in TARGET were problems in the system's connection to the SWIFT network and software/hardware component failures.

The start of CLS operations has introduced a new critical time frame into the TARGET day, as all CLS-related payments in euro are processed via TARGET. In 2002, the evaluation of TARGET early morning availability showed a slight reduction in the number and average duration of early incidents. The Eurosystem will continue to work on further improving the early availability, particularly between 7 and 9 a.m.

In 2002, five incidents noticeably affected the payment-processing capabilities of local TARGET components.

- On Monday 15 April 2002, the ECB experienced a problem with the link

between EPM and SWIFT, resulting in a delay in settlement of Euro 1 until 7 p.m. TARGET closing time was delayed until 7.30 p.m.

- On Friday 4 October 2002, the Bank of England faced a failure of its connection to SWIFT that led to a delay in the TARGET closing time until 6.30 p.m.
- On Monday 18 November 2002, a software bug caused a serious slowdown at the Bank of England which lasted almost 7 hours.
- On Thursday 5 December 2002, software problems occurred at the Deutsche Bundesbank which resulted in unavailability from 4.45 p.m. until 6.20 p.m. The TARGET closing time had to be delayed until 7.00 p.m.
- On Friday 20 December 2002, De Nederlandsche Bank lost communications between its RTGS system and SWIFT. The TARGET closing time was delayed until 8.00 p.m.

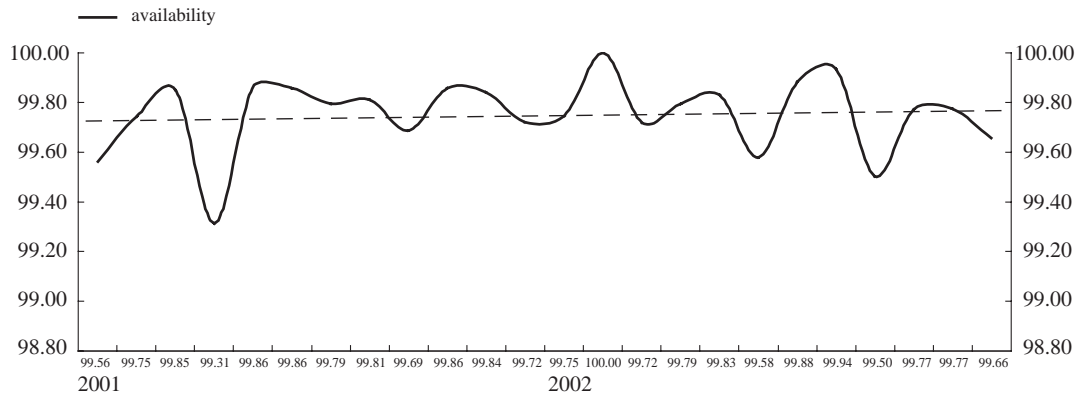
²⁰ The availability of individual systems is calculated as the ratio of time of being fully operational to TARGET operating time.

²¹ Incidents where the normal RTGS payment processing capabilities were reduced or interrupted for 20 minutes or longer.

Chart 10

TARGET availability

(%)



Source: ECB.

During the above-mentioned incidents, appropriate contingency measures ensured the successful processing of all critical payments. In addition, the standing facilities were available for TARGET participants to support their liquidity management if needed. Moreover, appropriate corrective measures have been implemented in order to prevent these kinds of interruption happening in future.

A labour conflict at Bank of Greece affected the Greek RTGS system during three consecutive days (from 10 to 12 June 2002).

Its RTGS system was not available for several hours on these days. However, transactions could be performed during the remaining operating hours.

To help the market cope with frictions arising from the unavailability of TARGET components, the TARGET Information System (TIS) provides up-to-date information on the national TARGET components. It shows the TARGET users whether TARGET is fully operational and, if not, states which component has failed and the estimated duration of this malfunction (see Box 4).

Box 4

TARGET Information System (TIS)

The TIS, which started operating on 23 October 2000, is a common information tool allowing all TARGET participants to get immediate standardised information on the operational status of the TARGET system.

The TIS 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. It is provided in addition to the communication channels which already exist at the domestic level. The information is input by the ECB and simultaneously communicated by Reuters, Telerate/Bridge and Bloomberg.¹ Thus, the information is accessible to those TARGET participants having access to those information services.

The Eurosystem is at present reviewing the TIS, taking into account the feedback and requirements received from the European banking community as well as the experience of providing this service for more than two years. TARGET users highly appreciate the system itself. Moreover, they contribute to the enhancements of the tool in order to better meet market information needs. As in the past, envisaged changes to the TIS will be announced to TARGET users in good time using the established communication channels.

¹ Reuters: page ECB46, Telerate/Bridge: pages 47556/47557, Bloomberg: page ECB17.

2 TARGET contingency measures

TARGET has been instrumental in achieving the integrated euro money market. It is the vehicle for processing systemically important and other large-value payments in euro. In particular, it processes all euro settlement payments for Euro1 and CLS. The Eurosystem is fully aware of this prominent role of TARGET as well as of the more demanding user requirements. Therefore, the Eurosystem attaches top priority to the operational effectiveness of its contingency measures in order to ensure the smooth processing of systemically important payments even if TARGET is not fully operational.

The Eurosystem has always required all local TARGET components to have both TARGET business continuity measures and TARGET contingency measures available. TARGET business continuity requires each national component to be able to switch to a secondary site and to continue operations normally from there within the shortest time possible, in the event of a failure occurring at the primary site. In addition, TARGET contingency measures ensure the processing of systemically important payments in the event of both primary and secondary sites being temporarily affected or the time needed to move from a primary to a secondary site being too long.

In 2002, in this context, the Eurosystem identified those types of payments which it considered as systemically important, i.e. payments which if unprocessed or processed behind schedule could trigger systemic risk. Dependent on whether this risk could be caused on a global scale or on a euro area scale, the Eurosystem further classifies such payments into “very critical payments” and “critical payments”. The identified payment types were categorised as follows:

Very critical payments:
CLS-related payments

Critical payments:
Monetary policy and intraday credit transactions, payments needed for settling in

systemically important payment systems (such as Euro1, PNS, SPI, POPS), as well as payments needed for settling in securities clearing and settlement systems.

The totality of these payments represents the minimum requirement that TARGET contingency measures have to be able to cope with. Such contingency payments are processed partially or totally outside the normal TARGET infrastructure using effective technical means and procedures.

Within the review of TARGET contingency measures, the Eurosystem addressed in particular those requirements arising from CLS operations. The CLS system needs to receive funding payments by certain intraday deadlines (see Box 3). If such payments are delayed, they could trigger systemic risk on a global scale, especially in the Asian-Pacific currencies.²² Thus, CLS-related contingency trials were arranged in order to verify the operability of TARGET contingency measures. These trials took place in the live environment with the participation of credit institutions. They proved that the business requirements imposed by CLS could be met operationally under contingency situations if strict deadlines were met as described in the “Recommendations for CLS payments in euro” (see Box 5). First live experience since CLS started live operations justified the confidence of the Eurosystem, the European banks and CLS in the TARGET contingency measures.

Due to the good experience gained by all involved parties and the positive feedback received from the European banking community, the Eurosystem established trialling as a general tool for the verification of TARGET contingency measures, TARGET business continuity measures, and the training of staff on a continuous basis.

²² Delays in the processing of CLS pay-in payments in euro could cause knock-on effects on other currency areas, in particular on the Asian-Pacific currencies, because due to the time difference these currencies are closer to their end-of-day.

Box 5

Recommendations for CLS payments in euro

The ECB published the “Recommendations for CLS payments in euro”¹ and the “Explanatory memorandum on the recommendations concerning CLS payments in euro” in February 2001. The objective of the recommendations is to ensure the processing of CLS euro payments even in contingencies. As late CLS payments could trigger systemic risk and knock-on effects on other currency areas, their timely processing is of utmost importance.

To make certain that TARGET contingency measures are operationally effective, the Eurosystem, in cooperation with a group of TARGET users (the ad hoc TARGET Contingency Group), has prepared these recommendations and an explanatory memorandum. The recommendations emphasise the need for banks to make their CLS payments as early as possible and, especially in contingency events, to reduce the number of payments (i.e. by aggregating). These practices create an environment, which, in case of need, allows TARGET contingency measures to be taken efficiently and in a timely way. The recommendations also concern other measures which enable operational problems to be overcome. In addition, the banks are invited to use alternative access points to TARGET in the event of problems in their primary RTGS systems.

The recommendations and the explanatory memorandum were endorsed by the TARGET working group (TWG) of the European Banking Federation (EBF) and have triggered similar considerations in other currency areas. The recommendations and the explanatory memorandum are available on the ECB website (www.ecb.int).

1 These recommendations do not give rise to any legally enforceable rights or obligations and are therefore not intended to supersede rules agreed in domestic systems or any legally binding bilateral agreements.

3 Interbank straight-through processing

Straight-through processing (STP) rules in TARGET are viewed as a way of facilitating further automation in the processing of payment messages, thus reducing the associated costs and risk. Since TARGET started operations it has allowed fully automated processing of cross-border payments between banks within the EU (i.e. from the debiting of the ordering bank’s account to the crediting of the receiving bank’s account).

To meet the demands placed by customers and regulators on banks for greater transparency, automation and thus lower costs in cross-border payments, the European banking community decided to move to a common framework for STP of payment messages between banks. As a result, and in order to overcome the limitations of the MT100,²³ the message types MT103 and MT103+ were implemented in November

2000. Several measures have been taken regarding the MT103 to ensure higher STP rates for the receiver’s applications, e.g. fields with instruction codes instead of free text. In accordance with the requirements of the European Banking Community, the MT103+, as a subset of the core MT103, limits the number of fields and the number of field options to those that cater for full STP. This fully STP-compliant format is validated on the SWIFT network to guarantee a correct straight-through processable message. Since November 2002, each intra-European MT103+ has been validated to ensure that it contains a correct IBAN.

At present, TARGET fully supports STP standards for the SWIFT message types MT103, MT103+, and MT202. This is reflected in the very low rate of rejected

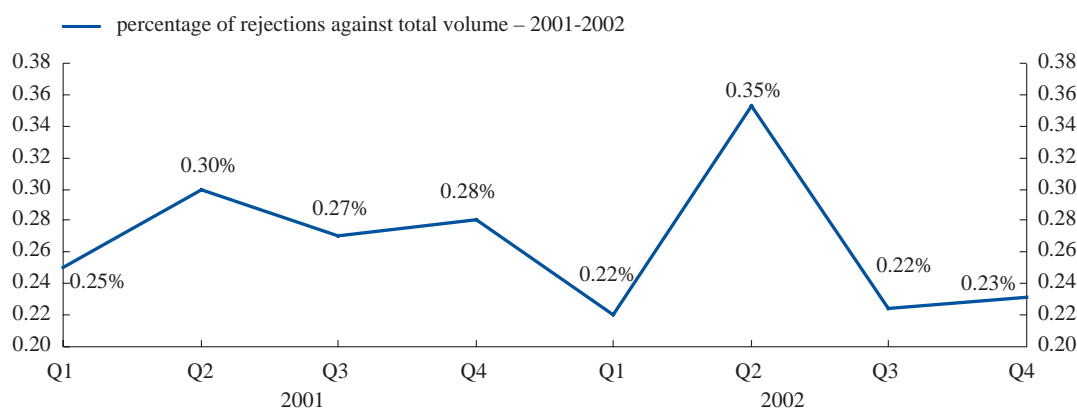
23 The MT 100 will be withdrawn by SWIFT in November 2003.

payments at the cross-border level. In 2002, this rate fell slightly to around 0.26% of the total number of TARGET payments sent (0.28% in 2001).²⁴ A survey of the Eurosystem showed that the main reason for rejections seems to be related to the fact that the addresses in the TARGET directory are updated only on a quarterly basis. SWIFT, in

close co-operation with the Eurosystem, is investigating the possibilities for accelerating the publication frequency and automating the update process.

²⁴ The peak in rejections recorded in the second quarter of 2002 was due to a temporary technical failure at the Deutsche Bundesbank on 14 June 2002.

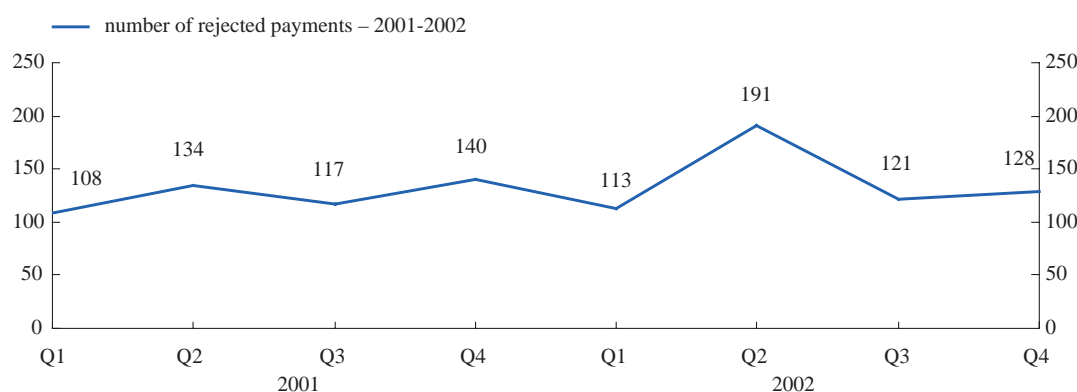
Chart 11
Percentage of rejections in TARGET



Source: ECB.

Chart 12
Number of rejected payments in TARGET

(daily averages on a quarterly basis)



Source: ECB.

4 Changes in the TARGET system

Prior to the implementation of the TARGET maintenance release 2002, several tests and trials were carried out during the second and third quarters of 2002 to ensure a smooth changeover. The release successfully went live on 18 November 2002.

The changes implemented by the TARGET release 2002 consisted mainly of the introduction of the mandatory validation that MT103+ customer transfers contain a correct IBAN. From June 2002 onwards, NCBs tested the new features of their system in co-operation with the ECB's "standard setting" test system (ITES)²⁵ for certification. Group trials were conducted in a number of sessions from end-June until mid-October. Various end-to-end trials took place in September and October to allow credit institutions to test the functionality of the TARGET release 2002 as well. Finally, all RTGS systems were fully certified to TARGET 2002 specifications before the new release went live.

During 2002, the Eurosystem started to prepare TARGET's migration from SWIFT FIN to SWIFTNet FIN. For TARGET a "phased approach" has been chosen. NCBs and the ECB will migrate at their own speed under an agreed common migration plan. The migration from FIN on X.25 technology to

FIN on IP network using SWIFTNet is mandatory for the entire SWIFT community, as SWIFT will end support for X.25 technology at the end of 2004. The implementation of SWIFTNet FIN is a technical migration. Although the FIN functionality and message standards remain untouched, migrating access to SWIFTNet FIN implies adaptations to the local SWIFT user's operational environment. This means bringing in IP connectivity instead of X.25 connectivity, upgrading local FIN interfaces, implementing the SWIFTNet Link and installing new network components.

Prior to the migration of a local TARGET component to SWIFTNet FIN, which started in the first quarter of 2003 and will last until the end of 2004, tests are being performed to ensure a smooth and successful migration. The first local TARGET components started their internal test activities in 2002 and testing in certification mode followed at the beginning of 2003. Furthermore, several RTGS systems have started with the necessary preparations for migration, such as the related adaptations of their local environment.

²⁵ *Interlinking Test Environment System.*

Chapter III – Developments

TARGET's performance and developments benefited from the very active and fruitful dialogue with TARGET users. In 2002, this dialogue was maintained at the national level and further intensified at the European level. Both facilitated continued progress towards integrated business practices in TARGET.

Co-operation with TARGET users is also reflected in the new policy framework for compensation in the event of a TARGET malfunctioning. The new regime is based on existing market practices and aims to offer compensation for certain damages in a swift and standardised manner.

At the beginning of 2003 the Governing Council approved an oversight framework

for TARGET. The actual implementation aims to ensure continued full compliance of TARGET with oversight principles and standards, notably the "Core Principles for Systemically Important Payment Systems", and applies the same oversight attention to TARGET as to any other systemically important interbank funds transfer systems processing the euro.

In 2002, the Governing Council took a strategic decision on the long-term evolution of the TARGET system in order to ensure that TARGET will continue to meet customers' future requirements and to accommodate the EU enlargement process.

I Relations with TARGET users

In 2002 the Eurosystem continued its regular dialogue with TARGET users.

Regular meetings were held at the national level with the respective TARGET user groups, whose input is contributed to the Eurosystem by the respective NCB. At ESCB level, two meetings of the Contact Group on Euro Payments Strategy (COGEPS) were held, which brought together senior representatives from the ESCB and market participants, thus providing a forum for strategic considerations. For instance, discussions were held on TARGET2 and market participants submitted their requirements in November 2002.

In addition, two joint meetings were organised between the two pan-European forums dealing with TARGET issues at a more business-oriented and operational level: namely the TARGET Management Working Group (TMWG) of the ESCB and the TARGET Working Group (TWG) of the

European Banking Community. Whenever deemed necessary, a subset of the joint TMWG/TWG may meet to prepare and discuss particular topics.

In addition, the chairman of the TMWG was regularly invited to participate (as an observer) in meetings organised by the TWG. Under a reciprocal arrangement, the chairman of the TWG is invited (also as an observer) to participate in TMWG meetings.

The dialogue with TARGET users ensured that both interlocutors have a reciprocal understanding of the system and the market requirements. The co-operation has proven to be very fruitful and beneficial for all parties in respect of the preparations and implementations for CLS operations, the strengthening of TARGET contingency measures, TARGET's single compensation offer and market demands on the current and future TARGET system.

2 New policy framework for a TARGET compensation scheme

In 2002, the Governing Council decided on the policy framework for the TARGET compensation scheme applicable in the event of a TARGET malfunctioning. The TARGET compensation scheme, for which implementation work is ongoing, will be an attractive, simple and standardised compensation offer by the ESCB, which largely follows market practices. It will also incorporate some of the features of the current TARGET reimbursement scheme. Consequently, the latter will be withdrawn.

The TARGET Compensation Scheme will apply to all national RTGS systems that are components of or connected to TARGET, and will be available for all TARGET participants (including TARGET participants of national RTGS systems of non-participating Member States) in relation to all TARGET payments (without distinguishing between domestic and cross-border payments). Unless

otherwise decided by the Governing Council, the TARGET Compensation Scheme will not apply where the TARGET malfunctioning is caused by external events beyond the control of the ESCB, or the failure of a third party other than the operator of the national TARGET component concerned. The TARGET compensation scheme will not cover consequential damages.

The compensation offer will consist of an interest compensation and/or an administration fee reimbursement. The interest compensation will be based on the EONIA rate which was applicable on the day of the TARGET malfunctioning. The administration fee will, in relation to each receiving participant, be EUR 100 for the first payment order not completed on the processing date and, in case of multiple payment adjustments, EUR 50 for the next four and EUR 25 from the sixth onwards.

3 TARGET oversight

Oversight is a general responsibility of central banks, which aim to ensure that the general organisation of payment flows within the economy is safe and efficient. An important element in payment systems' oversight policies is to ensure that interbank funds transfer systems, in particular those which are systemically important, are organised and function in a way which minimises systemic risks.

Oversight of payment systems is a relatively new activity that has developed mainly during the last ten years. At the beginning, oversight – as first recognised in Lamfalussy report²⁶ – focused more on systems run by the private sector. However, this has raised the concern that central banks would create an uneven playing field if they imposed obligations on private systems that they would not apply to systems operated by themselves.

The Eurosystem has taken these concerns into account. In its policy statement of June

2000 on “The role of the Eurosystem in the field of payment systems oversight”, it stated that “the oversight role of the Eurosystem covers payment and settlement systems which process the euro. With regard to the systems managed by the Eurosystem (e.g. TARGET), the minimum standards applied are at least the same as those applied to privately operated payment systems.” Furthermore, on 25 January 2001, the Governing Council adopted the “Core Principles for Systemically Important Payment Systems” as Eurosystem oversight minimum standards. The Core Principles Report also includes responsibilities of the central banks concerning the compliance of their own systems with the Core Principles. The proper fulfilment of these responsibilities presupposes that the same oversight attention is given to TARGET

26 “Report of the Committee on Interbank Netting Schemes of the Central Banks of the Group of Ten Countries”, BIS, 1990.

and to other systemically important interbank funds transfer systems processing the euro.

Against this background, the Eurosystem agreed to develop a credible and effective framework for the oversight of TARGET and all its components within the ESCB. In order to ensure coherence, this framework will be implemented in a consistent way throughout the ESCB.

According to the decision of the Governing Council on 9 January 2003 to establish an oversight framework for TARGET, the NCBs will be responsible for the oversight of their local TARGET components and the ECB will be responsible for the oversight of the ECB Payment Mechanism (EPM). The consistency and comparability of the outcome of the individual oversight activities will be ensured by the Payment Systems Policy Working Group (PSPWG), an ESCB working group, which acts in complete independence from the TARGET Management Working Group (TMWG), another ESCB working group, which is responsible for TARGET operations. Both working groups report to the Payment and Settlement Systems Committee (PSSC), which is in charge of assisting the Governing

Council in all payment systems-related matters.

The actual implementation of TARGET oversight will aim to ensure continued full compliance with the oversight principles and standards, notably the Core Principles and will (ultimately) provide the Governing Council with a precise picture of how TARGET complies with the Core Principles.

In 2002, two major activities were started which have been explicitly carried out within the context of this oversight function:

1. All domestic TARGET components (including the ECB Payment Mechanism) have been assessed against the Core Principles by the respective NCB/the ECB; the overall assessment is being continued.
2. The TARGET operators have started to redesign the TARGET risk management framework. In order to provide the system owner with an independent opinion on the adequateness and thoroughness of the new framework, the oversight function has evaluated the proposal and made recommendations for improvement.

4 EU accession process

On 24 October 2002, the Governing Council decided that acceding country central banks (ACCBs) will have the possibility – but not the obligation – to connect to TARGET as from the date of their joining the European Union (EU). Participation in TARGET will be compulsory only when they join EMU. A range of options for such connections, including scenarios avoiding the need for their own euro RTGS platforms, are being elaborated and discussed with the ACCBs.

Economic efficiency aspects, as well as the needs of the respective national banking communities, should play a key role for each ACCB in the decision-making process on whether to connect to TARGET before joining EMU and, if so, which technical option to choose. The ACCBs are themselves responsible for carrying out such a cost-benefit analysis, also taking into account the obligation that will apply in TARGET2 to phase out subsidies within a given time period (see below).

5 TARGET2

The present TARGET system is built on national real-time gross settlement (RTGS) systems that exist in each EU country. The approach followed the logic of minimum harmonisation and interconnection of existing infrastructures as the best way of ensuring that the system would be operational from the very start of Stage Three of EMU. However, in view of increasing financial integration within the euro area and given that the business needs of the users of TARGET are becoming even more similar, the system needs to be enhanced.

The main objective of the Eurosystem is to ensure that TARGET evolves towards a system that (i) better meets customers' needs by providing an extensively harmonised service level, (ii) guarantees cost efficiency and (iii) is prepared for swift adaptation to future developments, including the enlargement of the European Union (EU) and the Eurosystem. At the same time, NCBs will remain responsible for the accounts and business relations with the credit institutions.

Against this background, the Governing Council decided on 24 October 2002 on the long-term strategy for TARGET. The main principles and the basic structure of the next generation of the TARGET system (TARGET2) can be summarised as follows:

TARGET2 will continue to be a multiple-platform system, consisting of individual (tailor-made or cloned) platforms and, in the first three years of its operation, one shareable platform available to those central banks which decide to give up their individual platform. After that initial period, any central bank will be free either to maintain its individual platform,²⁷ or to join the already existing shareable platform, or to create another shareable platform with any other central bank that is willing to do so. This approach gives due consideration to the fact that cost-effectiveness would be difficult to preserve in a totally fragmented IT infrastructure, in particular in view of new Member States joining TARGET in the not-too-distant future.

As in the case of the present TARGET system, TARGET2 will be a system for the settlement of predominantly systemically relevant, large-value euro payments in central bank money. Nevertheless, as is the case at present, there will be no *de jure* or *de facto* limits set by the Eurosystem or the NCBs on any payments that users may wish to process in real time in central bank money.

TARGET2 will have a far more harmonised service level than the present system. There will be a broadly defined core service, which will include all those services and functions that are offered by all TARGET2 components. Nevertheless, central banks will have the possibility to provide some specific domestic services in addition to the core service. The service level of TARGET2 will be defined in close co-operation with the TARGET user community.

For the core service of TARGET2, there will be a single TARGET-wide price structure for domestic and cross-border TARGET transactions. The price structure could, nevertheless, provide for the graduation of prices according to the number of payments a participant sends or according to the timing of the payment. Additional services can continue to be priced separately and independently by each central bank.

TARGET2 will be based on the principle of cost-effectiveness, which implies that the single price structure is based on the most efficient RTGS system (i.e. the system with the lowest cost per item) and that, by the end of a four-year period after the start of TARGET2 operations, subsidies going beyond an acceptable public good factor²⁸ have to be phased out.²⁹

²⁷ Subject to the fulfilment of the cost recovery obligation as defined below.

²⁸ The public good factor will take due account of the positive externalities generated by TARGET, *inter alia*, in terms of reduction of systemic risk and will be determined by the Governing Council.

²⁹ Platforms which do not comply with this requirement will have to be given up.

Following the Governing Council decision on the long-term strategy for TARGET, the ECB published on 16 December a document entitled “TARGET2: principles and structure”, providing an overview and details of TARGET2. It considers the perimeter, business, service features and interfaces of the system and also addresses governance, financing and pricing issues. Finally, it describes the next steps towards the establishment of TARGET2. Interested parties were welcome to give their views on the best ways to implement the approach chosen

for TARGET2. Furthermore, TARGET users were invited to provide their business requirements for TARGET2 in terms of interfaces and communication standards as well as functionality and services.

On the basis of both the Governing Council decision and the views of TARGET users, the Eurosystem will establish a project plan for the next generation of TARGET. The new system is not expected to become operational before the second half of this decade.

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 RTGS systems – some NCBs included transactions related to intraday credit, liquidity transfers, central bank operations, and the settlement of ancillary systems, whilst others did not. Therefore, caution is recommended when comparing the number and value of domestic payments processed

by the different national TARGET components.³⁰

³⁰ In 2002 €32,947 billion representing 44,870 payments out of the total was related to liquidity transfers between the home accounts of the participants at the Deutsche Bundesbank and their RTGS^{plus} accounts. This kind of transaction did not exist in the ELS system. However, such transactions may also be included in the statistics of other countries in this table. The ECB is examining ways of improving the comparability of the payment statistics reported by the different NCBs and by the ECB.

Contents of the Statistical Annex

I Distribution of payment flows in TARGET

1.1 Distribution of payment flows in TARGET – 2001

1.2 Distribution of payment flows in TARGET – 2002

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

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

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

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

3 TARGET cross-border intraday pattern

3.1 Intraday pattern of interbank payments – value

3.2 Intraday pattern of customer payments – value

3.3 Intraday pattern of interbank payments – volume

3.4 Intraday pattern of customer payments – volume

3.5 Intraday pattern of interbank payments, cumulative – value and volume

3.6 Intraday pattern of customer payments, cumulative – value and volume

I Distribution of payment flows in TARGET

Table I.1
Distribution of payment flows in TARGET – 2001

	Total				Domestic				Cross-border			
	Value ¹⁾	%	Volume	%	Value ¹⁾	%	Volume	%	Value ¹⁾	%	Volume	%
ELLIPS (BE)	14,312.8	4.3	1,841,885	3.4	4,127.7	2.0	901,095	2.1	10,185.1	7.9	940,790	8.2
ELS ²⁾ (DE)	68,728.5	20.8	23,860,179	44.5	35,446.7	17.6	20,122,522	47.7	33,281.8	25.9	3,737,657	32.5
SLBE (ES)	53,221.2	16.1	2,670,431	5.0	48,255.5	24.0	2,358,053	5.6	4,965.7	3.9	312,378	2.7
TBF (FR)	87,572.7	26.5	3,801,334	7.1	68,465.1	34.0	2,452,784	5.8	19,107.6	14.9	1,348,550	11.7
IRIS (IE)	4,546.7	1.4	543,897	1.0	3,009.5	1.5	306,994	0.7	1,537.2	1.2	236,903	2.1
BI-REL (IT)	27,144.6	8.2	10,247,620	19.1	17,181.6	8.5	8,892,860	21.1	9,963.0	7.7	1,354,760	11.8
LIPS-Gross (LU)	4,436.4	1.3	294,186	0.5	1,232.0	0.6	62,336	0.1	3,204.4	2.5	231,850	2.0
TOP (NL)	21,193.3	6.4	3,863,980	7.2	9,325.1	4.6	3,356,196	8.0	11,868.2	9.2	507,784	4.4
ARTIS (AT)	4,981.2	1.5	1,869,192	3.5	2,461.9	1.2	1,433,286	3.4	2,519.3	2.0	435,906	3.8
SPGT (PT)	2,208.7	0.7	545,962	1.0	1,232.7	0.6	314,625	0.7	976.0	0.8	231,337	2.0
BOF-RTGS (FI)	3,582.6	1.1	294,935	0.5	2,312.3	1.1	190,566	0.5	1,270.3	1.0	104,369	0.9
EPM (ECB)	2,705.3	0.8	15,504	<0.1	-	<0.1	-	<0.1	2,705.3	2.1	15,504	0.1
DEBES ³⁾ (DK)	1,431.1	0.4	106,325	0.2	61.5	<0.1	6,635	<0.1	1,369.6	1.1	99,690	0.9
HERMES (GR)	2,448.1	0.7	1,060,374	2.0	1,407.0	0.7	836,361	2.0	1,041.1	0.8	224,013	1.9
Euro RIX (SE)	1,538.9	0.5	70,216	0.1	105.2	0.1	4,071	<0.1	1,433.7	1.1	66,145	0.6
CHAPS Euro (UK)	29,978.1	9.1	2,579,532	4.8	6,804.1	3.4	927,789	2.2	23,174.0	18.0	1,651,743	14.4

Source: ECB.

1) EUR billions.

2) RTGS^{plus}, since 5 November 2001.

3) KRONOS, since 11 November 2001.

Table I.2
Distribution of payment flows in TARGET – 2002

	Total				Domestic				Cross-border			
	Value ¹⁾	%	Volume	%	Value ¹⁾	%	Volume	%	Value ¹⁾	%	Volume	%
ELLIPS (BE)	13,339	3.4	1,731,435	2.7	3,844.2	1.4	858,174	1.7	9,494.7	7.7	873,261	6.4
RTGSplus (DE)	124,784	31.5	31,892,792	49.4	91,818.1	33.8	27,595,630	54.3	32,966.1	26.6	4,297,162	31.3
SLBE (ES)	63,444	16.0	3,085,706	4.8	58,898.3	21.7	2,644,216	5.2	4,545.9	3.7	441,490	3.2
TBF (FR)	90,877	23.0	3,814,367	5.9	73,298.6	27.0	2,164,206	4.3	17,577.9	14.2	1,650,161	12.0
IRIS (IE)	4,886	1.2	582,260	0.9	3,088.1	1.1	313,889	0.6	1,797.7	1.5	268,371	2.0
BI-REL (IT)	25,150	6.4	9,612,596	14.9	16,355.5	6.0	8,038,490	15.8	8,794.5	7.1	1,574,106	11.5
LIPS-Gross (LU)	4,427	1.1	347,506	0.5	1,229.8	0.5	81,749	0.2	3,197.4	2.6	265,757	1.9
TOP (NL)	21,080	5.3	4,563,454	7.1	9,599.7	3.5	4,002,184	7.9	11,480.3	9.3	561,270	4.1
ARTIS (AT)	4,811	1.2	2,608,179	4.0	2,342.4	0.9	2,144,792	4.2	2,468.1	2.0	463,387	3.4
SPGT (PT)	2,326	0.6	921,236	1.4	1,274.5	0.5	650,603	1.3	1,051.0	0.8	270,633	2.0
BOF-RTGS (FI)	3,260	0.8	260,386	0.4	2,002.5	0.7	143,004	0.3	1,257.5	1.0	117,382	0.9
EPM (ECB)	2,932	0.7	32,327	0.1	-	-	-	-	2,932.4	2.4	32,327	0.2
KRONOS (DK)	1,921	0.5	109,261	0.2	56.3	<0.1	10,377	<0.1	1,864.7	1.5	98,884	0.7
HERMES euro (GR)	2,683	0.7	1,209,903	1.9	1,425.3	0.5	901,343	1.8	1,257.9	1.0	308,560	2.2
Euro RIX (SE)	1,468	0.4	83,211	0.1	82.7	<0.1	8,715	<0.1	1,385.3	1.1	74,496	0.5
CHAPS Euro (UK)	28,247	7.1	3,664,381	5.7	6,597.7	2.4	1,227,943	2.4	21,649.2	17.5	2,436,438	17.7

Source: ECB.

1) 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

(EUR millions)

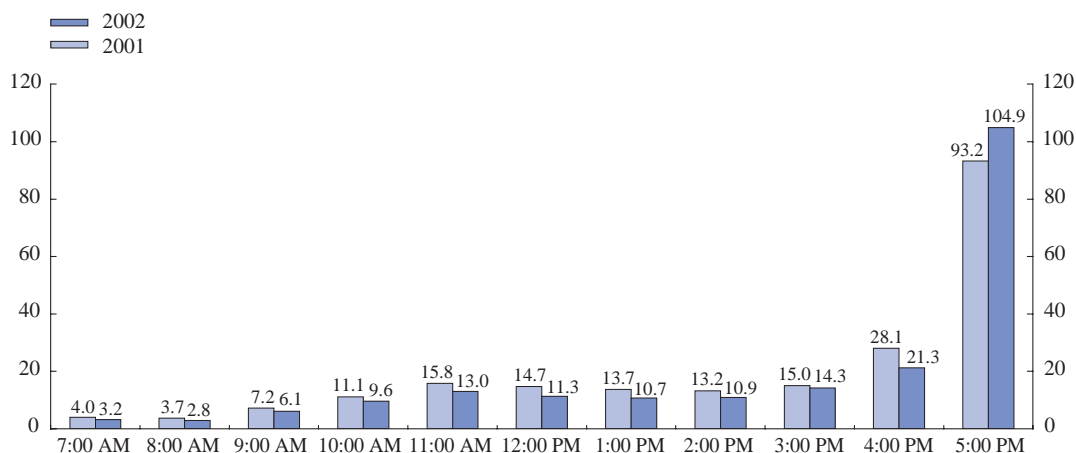


Chart 2.2

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

(EUR millions)

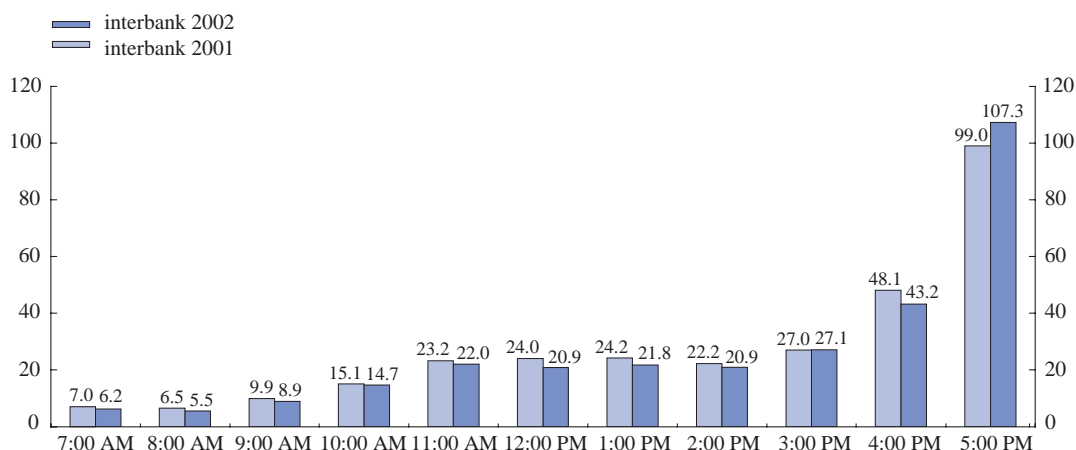
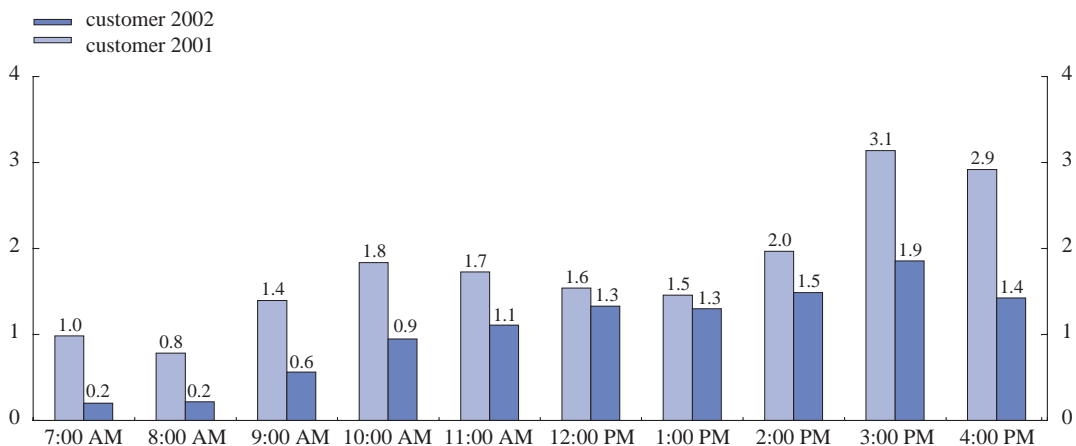


Chart 2.3

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

(EUR millions)



3 TARGET cross-border intraday pattern

Chart 3.1

Intraday pattern of interbank payments – value

(EUR billions)

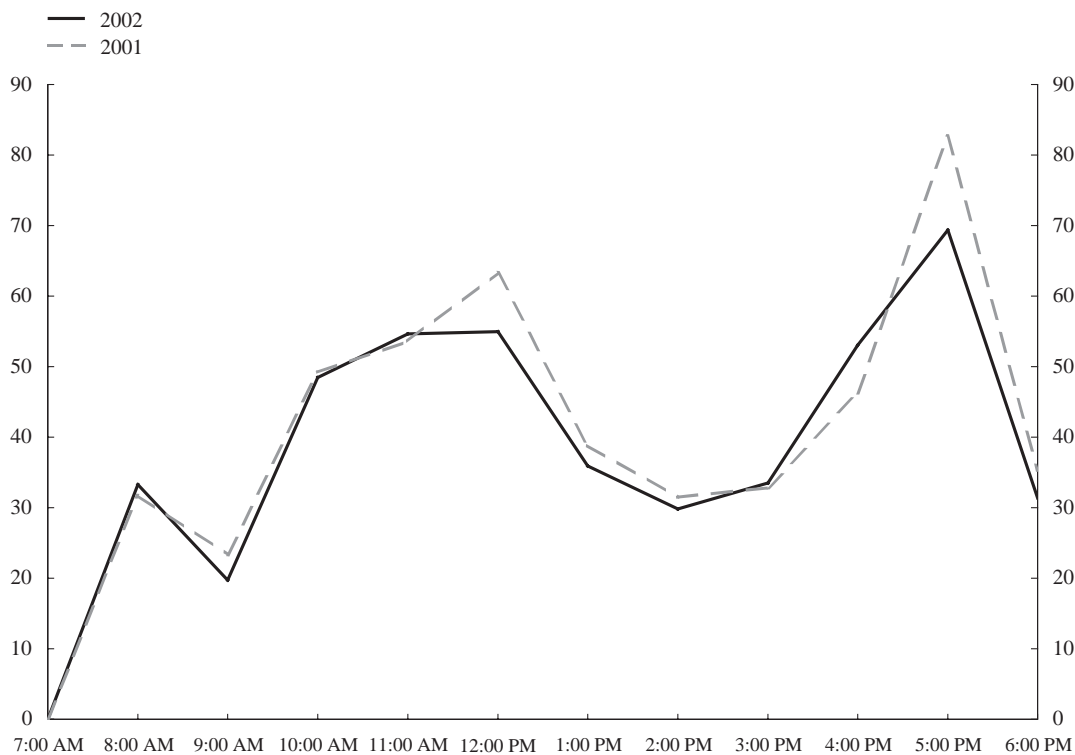


Chart 3.2

Intraday pattern of customer payments – value

(EUR billions)

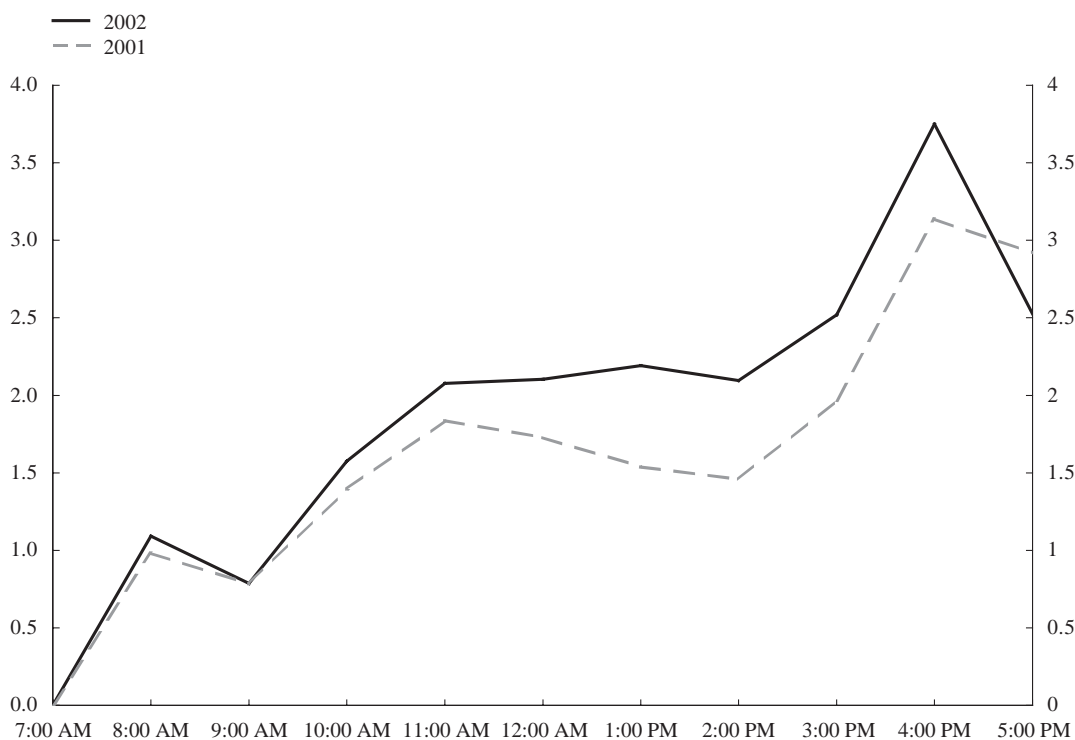


Chart 3.3
Intraday pattern of interbank payments – volume

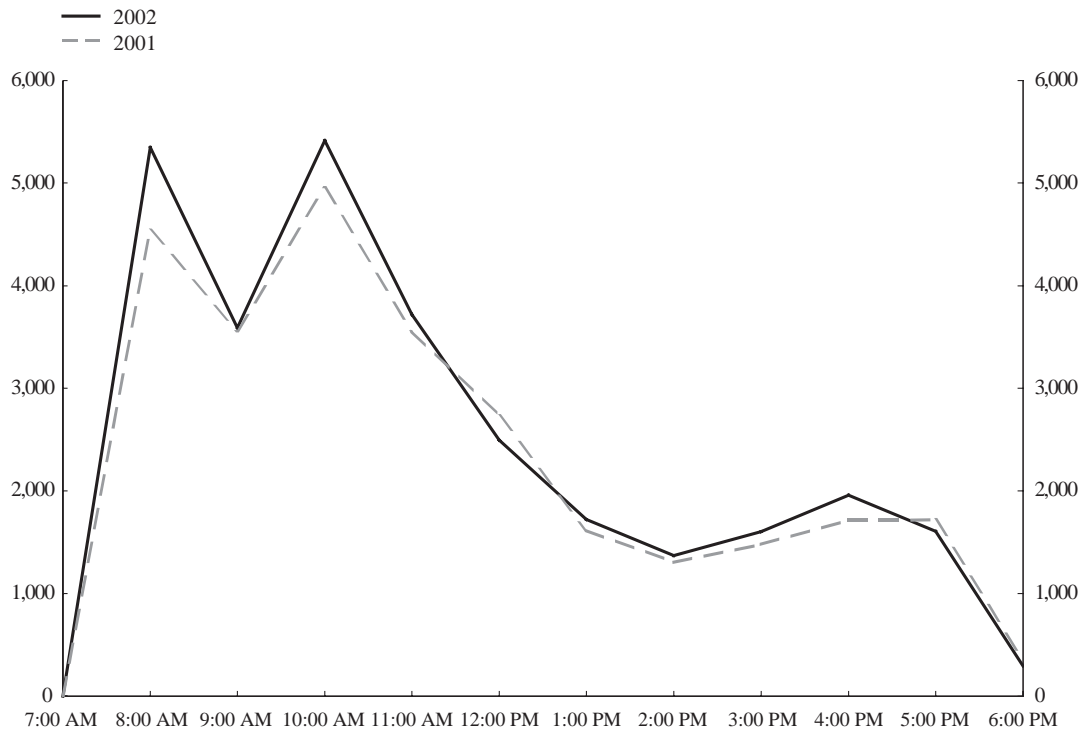


Chart 3.4
Intraday pattern of customer payments – volume

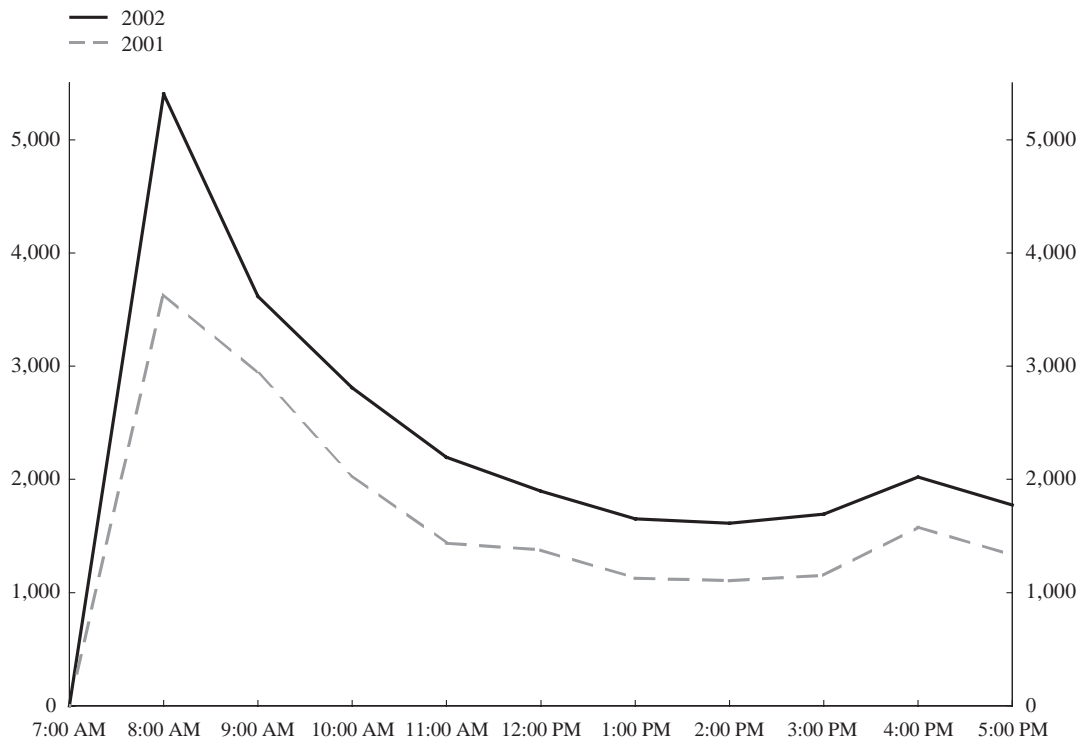


Chart 3.5

Intraday pattern of interbank payments, cumulative – value and volume

(%)

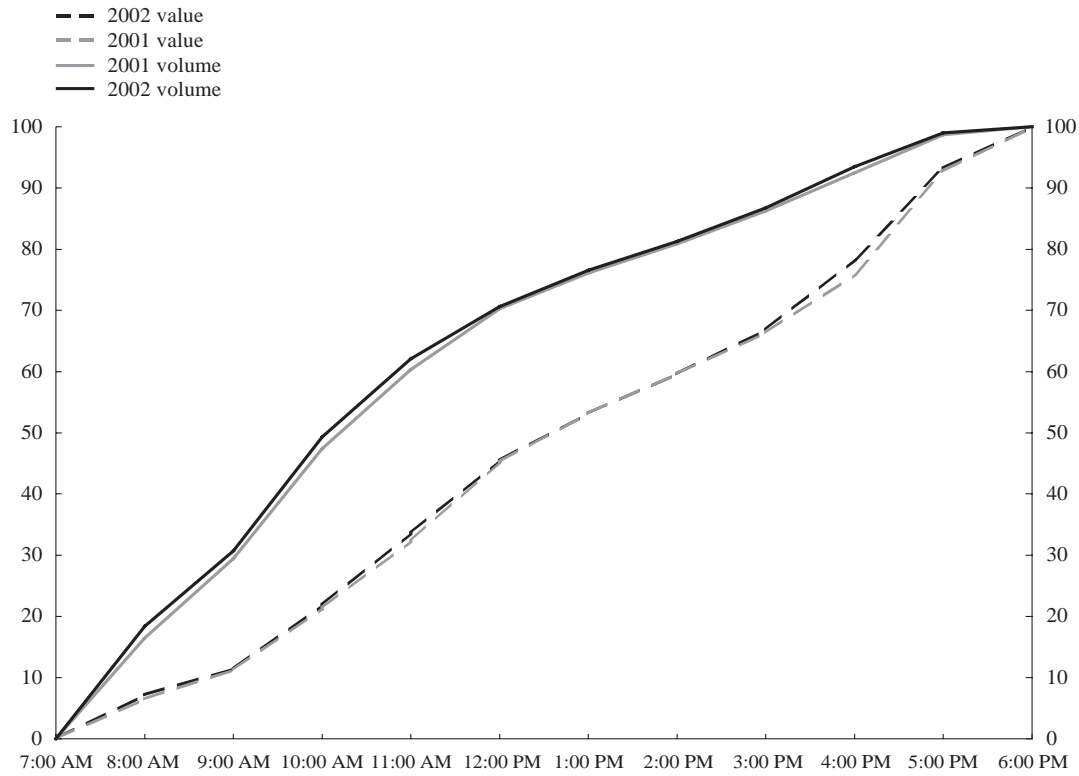
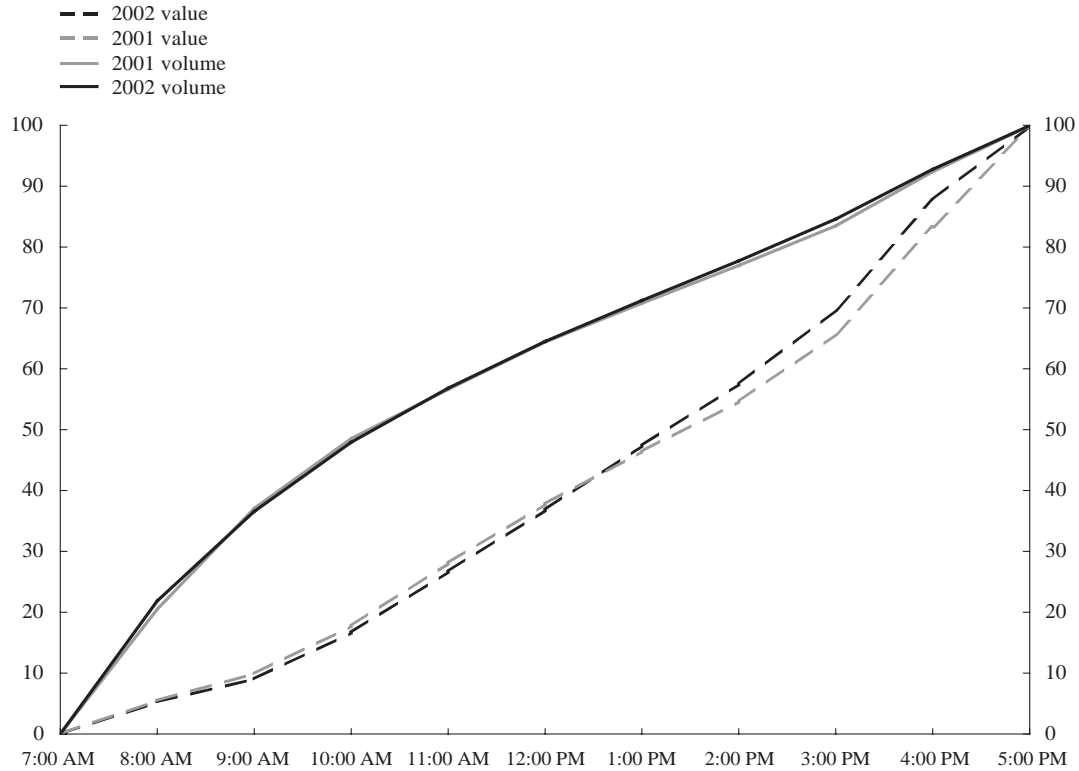


Chart 3.6

Intraday pattern of 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 EU central banks and the EMI in creating a new cross-border payment arrangement for Stage Three of Economic and Monetary Union (EMU). A system for Stage Three would be set up by linking the domestic real-time gross-settlement (RTGS) facilities. Only the NCBs would hold settlement accounts for 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. 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

Based on 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 Three of EMU” was published. In 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) may be connected to TARGET, but only to process euro. Any participant in any RTGS system connected to TARGET would be entitled to send payments via TARGET and would be obliged to accept any such

payment processed through TARGET. Domestic RTGS systems would retain their specific features insofar as this was compatible with the single monetary policy of the Eurosystem and 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 euro area 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: (i) avoiding unfair competition with the private sector, (ii) avoiding the subsidising of payments or certain kinds of payments; and (iii) avoiding 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 in the “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 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 as for monetary policy operations.

With regard to the provision of intraday credit in euro to non-euro area NCBs and to participants in RTGS systems of non-euro area countries, the EMI Council decided in December 1996 to prepare three mechanisms³¹ aimed 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 to the Governing Council.³²

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

With regard to operating time, it was decided that, in order 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. It was therefore decided, as a general rule, that TARGET would open at 7 a.m. and close at 6 p.m. C.E.T.³³

With regard to relations with other funds transfer systems, it was decided that all large-value NSSs would be required to settle in central bank money (i.e. through TARGET).

September 1997

A number of TARGET features were defined in more detail, in particular in the following areas: (i) operating days; (ii) pricing policies; (iii) the provision of intraday liquidity to non-euro area 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 an EMI report entitled “Second Progress Report on the TARGET Project”, and in the “Technical Annexes to the Second Progress Report on the TARGET Project”.

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

In the area of pricing policies, it was decided that a common transaction fee for cross-border TARGET transfers would be charged, based on the principle of full cost recovery and in line with EU competition policy. The pricing of domestic RTGS transfers in euro would continue to be determined at the national level, taking into account that the price of domestic and cross-border transfers in euro should be broadly similar. With regard to the cross-border leg, it was agreed that the single transaction fee would be set within the range €1.50 to €3.00. In addition, a price differentiation based on volume was anticipated.³⁴

31 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, and the size of the limit may 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; 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 apparent early enough for non-euro area NCBs to be able to offset their RTGS participants’ spillovers by borrowing euro in the money market while it was still open. (For details, see the report entitled “The single monetary policy in Stage Three – Specification of the operational framework”, EMI, January 1997.)

32 EMI Annual Report 1996, EMI, April 1997.

33 EMI Annual Report 1996, EMI, April 1997.

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

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

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

For the provision of settlement services to cross-border large-value NSSs, the EMI Council agreed on a method for the settlement of the future Euro Banking Association (EBA) clearing system within the euro area. 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. 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, depending on the number of transactions.³⁵ The way in which banks' customers would be charged for TARGET payments was to be left to the discretion of the commercial banks.

July 1998

The Governing Council decided to grant access to TARGET to NCBs and participants

in euro RTGS systems located in EU Member States outside the euro area. With regard to the availability of intraday liquidity to non-euro area NCBs and their RTGS participants, the ECB decided that at all times non-euro area NCBs would have to maintain an overall credit position vis-à-vis the other NCBs participating in or connected to TARGET taken as a whole. In order to ensure the availability of intraday liquidity in its euro RTGS system, each non-euro area NCB would have to make an intraday deposit with the Eurosystem.³⁶

November 1998

A number of TARGET features were defined in more detail, in particular in the following areas: (i) access to euro RTGS systems linked to TARGET; (ii) provision of intraday credit; (iii) central bank correspondent banking relations; and (iv) the legal framework for TARGET. These issues are addressed 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. However, certain other entities may also be admitted as participants in a national RTGS system subject to the approval of the relevant NCB.³⁷

Unlimited, but fully collateralised, intraday credit would be provided to RTGS participants fulfilling the general counterparty eligibility criteria of the ESCB.³⁸ Unlimited intraday credit could also be granted to

35 See also the annex entitled "Organisation of TARGET and its management structure" and the ECB's press release of 10 June 1998.

36 See also the annex entitled "Organisation of TARGET and its management structure" and the ECB's press release of 8 July 1998.

37 See also annex entitled "Organisation of TARGET and its management structure".

38 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.

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 was possible. At their own discretion, NCBs could decide to grant intraday credit to investment firms, on condition that these investment firms be subject to a formal spillover prevention arrangement. Any arrangement under which, in specific circumstances, the NCB granted intraday credit to organisations providing clearing or settlement services would have to be approved in advance by the Governing Council.

4 January 1999

TARGET successfully went live.³⁹ 15 national RTGS systems and the ECB Payment Mechanism (EPM) were linked together through TARGET.

However, since the banks needed some time to adapt to the new payment systems environment and to new treasury management practices, the ESCB provided an “extended service window” between 11 and 29 January 1999 by delaying the closing time of TARGET by one hour from 6 to 7 p.m. C.E.T. To avoid any abuse of this arrangement, a special fee of €15 was levied for each payment made during the extra hour. Since the banks gradually adjusted to a more efficient way of managing their liquidity, it did not prove necessary to continue to make use of the extended TARGET opening hours.⁴⁰

March 1999

With regard to TARGET operating days, in 1999 the system was supposed to remain closed only on New Year’s Day and Christmas Day. However, in order to safeguard the transition to the year 2000, the Governing Council decided that, by way of exception, TARGET would also remain closed on 31 December.⁴¹

July 1999

Due to rather low payment traffic on traditional public (or bank) holidays, and at the request of the European banking industry, the Governing Council decided to have six closing days in 2000 in addition to Saturdays and Sundays. These were New Year’s Day, Good Friday, Easter Monday, 1 May (Labour Day), Christmas Day and 26 December. These days were de facto non-settlement days for the money market and the financial markets in euro, as well as for foreign exchange transactions involving the euro. However, in some cases, in euro area countries in which one or other of these days was not a public holiday, the national RTGS system remained open for limited domestic payment activity.⁴²

May 2000

The Governing Council decided on the TARGET operating days for 2001. These were the same as for 2000, with the exception of one additional closing day on 31 December, introduced in order to safeguard the smooth transition of retail payment systems and internal bank systems to the euro banknotes and coins.⁴³

October 2000

A TARGET Information System (TIS) was introduced, providing users of TARGET with information on the status of the system.⁴⁴

November 2000

The TARGET 2000 upgrade went live successfully. It was the first common TARGET

³⁹ For an overview of TARGET developments in 1999, see ECB Annual Report 1999, ECB, April 2000.

⁴⁰ See also ECB’s press release of 11 January 1999 and ECB Monthly Bulletin, March 1999.

⁴¹ See also ECB’s press releases of 3 September 1998 and 31 March 1999.

⁴² See also ECB’s press release of 15 July 1999.

⁴³ See also ECB’s press release of 25 May 2000.

⁴⁴ See also Box 4.

software release since the system commenced live operations in January 1999. The upgraded software included the new common message format for customer payments, MT103, and the straight-through processing version, MT103+.

December 2000

A long-term calendar for TARGET operating days, applicable as from 2002 until further notice, was established. Accordingly, in addition to Saturdays and Sundays, TARGET will be closed on New Year's Day, Good Friday (Catholic/Protestant), Easter Monday (Catholic/Protestant), 1 May (Labour Day), Christmas Day and 26 December. On these closing days, TARGET as a whole, including all the national RTGS systems, will be closed. A long-term calendar was deemed necessary to eliminate uncertainty for financial markets and to avoid problems arising from different national TARGET operating days. On TARGET closing days, no standing facilities will be available at the NCBs. These days will not be settlement days for the euro money market or for foreign exchange transactions involving the euro. The EONIA will also not be published. Furthermore, the correspondent central banking model (CCBM) for the cross-border use of collateral will be closed on TARGET closing days.⁴⁵

January 2001

On 1 January 2001, Greece became the twelfth EU Member State to adopt the single currency. As a result, the Bank of Greece is a full member of the Eurosystem and participates in TARGET abiding by the same rules as the NCBs of the other participating Member States.⁴⁶

April 2001

In accordance with its policy of transparency through the publication of its legal instruments, the ECB published the Guideline of the ECB on TARGET (TARGET Guideline) in the Official Journal of the European Communities, L 140, 24/05/2001 (pp. 72 to 86). The document is also available on the ECB website (www.ecb.int). The TARGET Guideline, which came into force on 1 January 1999, sets out the legal framework for TARGET. It lays down the rules governing TARGET and its functions as they apply to the Eurosystem.

November 2001

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

The global TARGET 2001 maintenance release went live successfully on 19 November. The release consisted mainly of the introduction of the new SWIFT standards, the validation of negative PSMNs⁴⁷ and the introduction of a time indication (field 13c, debit stamp) to be transported through the Interlinking and to be made available to the credit institutions.

⁴⁵ See the ECB's press release of 14 December 2000.

⁴⁶ See the ECB's press release of 28 February 2002.

⁴⁷ A negative PSMN (Payment Settlement Message Notification) provides the rejection code (reason for the rejection).

3 Organisation of TARGET

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 large-value payments in euro. The system successfully commenced live operations on 4 January 1999.

The fourth indent of Article 105(2) of the Treaty establishing the European Community and the third indent of the Statute of ESCB and of the ECB explicitly empower the ECB and the NCBs to promote the smooth operation of payment systems, and Article 22 of the Statute of the ESCB and of the ECB entrusts the ECB and the NCBs with the provision of facilities to ensure efficient and sound clearing and payment systems within the Community and other countries.

Organisation

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

Legal framework

The rules governing TARGET and its functions are laid down in the Guideline of the European Central Bank on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET Guideline) and the sets of rules and procedures in national regulations and/or contractual provisions (national RTGS rules) applicable to each of the national RTGS systems and the EPM. The TARGET Guideline came into effect on 1 January 1999, the starting date of Stage Three of EMU. The ultimate decision-making body for TARGET matters is the Governing Council of the ECB, 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 of the participating Member States. It includes provisions on, inter alia, a number of minimum common features with which each national RTGS system participating 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 EU Member States, the TARGET Agreement provides a mechanism whereby non-euro area NCBs can connect to TARGET, must adhere to the rules and procedures referred to above and shall implement the modifications and specifications appropriate for the non-euro area NCBs.

On 26 April 2001, in accordance with its policy of transparency through the publication of its legal instruments, the ECB published the TARGET Guideline on its website. The document has also been published in the Official Journal of the European Communities, L 140, 24/05/2001 (pp. 72 to 86).

On 27 February 2002 the ECB published a guideline amending the TARGET Guideline. This document was also published in the Official Journal of the European Communities, L 67, 9 March 2002.

Participation in the system

Only supervised credit institutions as defined in the first indent of Article 1 of the First Banking Co-ordination Directive⁴⁸ and which are established in the European Economic Area (EEA) can be admitted as direct

⁴⁸ Incorporated into 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.

participants in a national RTGS system. In addition, by way of exception, the following entities may also be admitted as participants in a national RTGS system, subject to the approval of the relevant NCB:

- 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.

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.⁴⁹ However, remote participants can only participate in TARGET on the basis of available funds and cannot have recourse to intraday or overnight credit facilities.

Types of transactions handled

TARGET is available for all credit transfers in euro between and within the current EU Member States. TARGET 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 types of transactions handled by TARGET are as follows: (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) CLS payments in euro; and (iv) interbank and commercial payments in euro. It is mandatory for the first three types of transactions to be settled through TARGET.

Technical infrastructure

TARGET is a decentralised system consisting of one RTGS system in each EU Member State and the EPM. Only certain functions are performed centrally by the ECB. To enable the processing of cross-border payments within TARGET, i.e. processing payments 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. The TARGET directory lists all credit institutions which are addressable through TARGET; approximately 40,000 addressable banks and branches are currently provided.

In order to initiate a cross-border payment, the ordering TARGET participant simply sends the payment order to the national RTGS system in which it participates. Since domestic formats 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 the sending and receiving participants each use their own domestic format.⁵⁰

⁴⁹ Remote access to settlement facilities in TARGET is defined as the possibility for an institution established in one country within the EEA to become a direct participant in the RTGS system of another country and, for this purpose, to have a settlement account in euro in its own name with the central bank of the second country without necessarily having established a branch or subsidiary in that country.

⁵⁰ Information about the mapping of domestic payments messages to and from Interlinking formats can be obtained from the "Information guide for credit institutions using TARGET" as well as from the "TARGET Interlinking specifications" and the "TARGET Interlinking User requirements".

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 at the communication level).

The design of the messages exchanged via the TARGET system is based on the widely used SWIFT message standards MT100 and MT103 (STP and non-STP) for customer payments and MT202 for interbank payments. In order to avoid a merging of the payment data (e.g. amount, beneficiary, etc.) with 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 body of the message.

In accordance with the logic of RTGS system processing, the payment messages are processed individually, i.e. item by item on a continuous basis. The Interlinking system uses processing cycles, which are directly linked to each individual payment message. An open cycle can only be closed if the message initiating the settlement request of the sending NCB is answered with a positive notification by the receiving NCB. A cycle is usually completed within a couple of minutes, sometimes only a few seconds.

While the above-mentioned subsets of SWIFT message types are used for payment systems purposes, a specific “Interlinking design” has been created for Interlinking messages.⁵¹

Settlement procedures

TARGET is a real-time gross settlement (RTGS) system. Payments are settled individually on a continuous basis in central

bank money with intraday finality. TARGET thus provides for immediate and final settlement of all payments provided that there are sufficient funds or overdraft facilities available in the sending institution’s account with its NCB/the ECB.

To initiate a cross-border payment, the ordering credit institution sends a payment order to the local NCB/the ECB through the local RTGS system/the EPM. The sending NCB/the ECB validates the payment and checks that the receiving RTGS/the EPM is operational. The sending NCB/the ECB is entrusted with the task of: (i) converting, if necessary, the payment order into the message standards which are used by the Interlinking system; (ii) applying the additional security features used during communications between NCBs/the ECB; and (iii) sending the message through the Interlinking network to the receiving NCB/the ECB. Once the sending NCB/the ECB has debited the RTGS account of the sending credit institution and credited the payment to the Interlinking account of the receiving NCB/the ECB, the payment becomes irrevocable.⁵²

As soon as the receiving NCB/ECB receives the payment message, it checks the security features and verifies that the receiving bank, as specified in the payment order, is a participant in the domestic RTGS system/the EPM. If so, the receiving NCB/the ECB converts the message from the Interlinking standards into domestic standards if necessary, debits the Interlinking account of

⁵¹ 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 specific action on the part of the receiving NCB/ECB is required. Typical messages of this type include payment messages. Only payments denominated in euro can be processed via TARGET. Notification messages are replies to requests. The notifications can be either positive or negative. A notification message completes the communication cycle initiated by a request. Free format messages (IFFM) are plain-text messages containing information that might be useful either to all central banks (broadcast messages) or to one particular NCB/the ECB. Unlike request messages, an IFFM does not require a response in the form of a notification message. Statistical information messages (ISIM) contain statistical information on the Interlinking traffic between NCBs/the ECB.

⁵² For national RTGS systems which apply a blocking-of-funds procedure, the payment becomes irrevocable at the moment the blocking takes place.

the sending NCB/the ECB, credits the receiving bank's RTGS account and sends a positive notification to the sending NCB/the ECB. Finally, the receiving NCB/the ECB sends the payment information through the local RTGS system to the receiving bank. If the receiving bank is not a member of the RTGS system/the EPM, the receiving NCB/the ECB rejects the payment and asks the sending NCB/the ECB to re-credit the amount to the sending bank's account.

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

Liquidity

Since TARGET settles payments in central bank money with immediate finality, settlement risk and credit risk are 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 can always be certain that funds received through TARGET are unconditional and irrevocable. Thus, the receiving institution is not exposed to any 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 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 Eurosystem provides intraday credit free of charge. The overnight

Box 6

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 EU, i.e. across a wider area than that in which the single currency has been adopted. The specific situation with regard to the three EU countries which did not adopt the euro from the outset (Denmark, Sweden and the United Kingdom) arose because all EU NCBs had to start making preparations for TARGET before knowing whether they would be part of the euro area, and because of the limited time available for setting up the system. Thus the EMI Council agreed in 1995 that all EU NCBs should prepare themselves for connection to TARGET. It was indicated, however, that for those countries which did not adopt the euro from the outset, the connection would be subject to certain limitations and conditions, which would be decided by the Governing Council. The TARGET Agreement (and its transposition into national RTGS rules) provides a mechanism whereby non-euro area NCBs can connect to TARGET, but must adhere to the rules and procedures stipulated in the TARGET legal documentation and implement the modifications and specifications appropriate for the non-euro area NCBs. Via the TARGET Agreement any changes made to the TARGET Guideline are also directly applicable to the non-euro area NCBs (see the section entitled "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 good time, thus avoiding any need for overnight central bank credit in euro. This arrangement is a unique 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 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 central banks belonging to the Eurosystem and indicated that the facility offered to non-euro area central banks was an exception.

lending and deposit facilities allow for last-minute reactions to unexpected liquidity situations. However, all central bank credit must be fully collateralised, although 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 have to maintain, at all times, an overall credit position vis-à-vis the other NCBs participating in or connected to TARGET taken as a whole. In order to ensure the availability of intraday liquidity in their euro RTGS systems, non-euro area NCBs have to make intraday deposits with the ESCB. The provision of collateralised intraday credit in euro to participants in national euro RTGS systems is subject to the following conditions: (i) the maximum amount of intraday credit granted by the non-euro area NCB to any single participant in its respective national RTGS system will be €1 billion for 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 are allowed to make outgoing payments out of positive balances only (participants facing a debit position at the liquidity deadline must square their positions so 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 will 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 will 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 will 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.

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 participant 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 costs 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 so as not to distort the singleness of the money market.

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

Management structure

The management structure of TARGET can be divided into day-to-day management and activities aimed at assessing, reviewing and optimising the system.

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

Problems that cannot be addressed at the level of settlement managers are passed on to the TARGET crisis managers. This group is co-ordinated by the ECB Director General – Payment Systems, who will refer problems to the Executive Board of the ECB for presentation to the Governing Council as appropriate.

The ultimate decision-making body for all TARGET domestic and cross-border activities is the Governing Council. The Governing Council is assisted by the Payment and Settlement Systems Committee (PSSC) and its sub-group, the TARGET Management Working Group (TWMG). At this level, the performance of TARGET as well as possible enhancements with regard to technical characteristics and organisational features are assessed, reviewed and proposed. In this context, an active exchange of views and co-operation with the TARGET users plays an important role. In 2002, the ECB and the NCBs maintained a fruitful dialogue with TARGET users in regular meetings of the national TARGET user groups (see Chapter III, Section I). In addition, meetings were organised at the European level. The main aim of these meetings is to ensure the reciprocal understanding of the TARGET system and market requirements.

TARGET Oversight

Following the approval of the framework for the oversight of TARGET by the Governing Council, the Payment and Settlement Systems Committee (PSSC) has mandated the Payment Systems Policy Working Group (PSPWG) to assist in the oversight of the TARGET system as a whole. As such, the PSPWG is the co-ordination body for all TARGET oversight activities which are to be performed collectively at ESCB level. It provides the forum for the exchange of all information related to the TARGET system which is or could be relevant from an oversight perspective. Based on its mandate, the PSPWG is responsible for the preparation of policy proposals related to TARGET oversight which are to be submitted to the PSSC and, ultimately, to the Governing Council.

At this stage, the activities of the PSPWG focus on the evaluation of the current TARGET system against the Core Principles for Systemically Important Payment Systems, which were adopted by the Governing Council in January 2001 as the oversight minimum standards for the Eurosystem.

The PSPWG has, as a first step, started work on a methodology for TARGET oversight, which should explain how TARGET oversight will be structured and organised and be conducted at the national and ESCB level. In this respect, in order to ensure cross-country consistency, common requirements for TARGET oversight will be established, which all NCBs/the ECB will have to comply with. As a second step, the PSPWG will develop a TARGET oversight manual for the performance of TARGET oversight on a day-to-day basis.

4 General terms and acronyms

Countries		FIN copy	function of the SWIFT network whereby instructions may be copied and optionally authorised by a third party before being released to the beneficiary
AT	Austria		
BE	Belgium		
DE	Germany		
DK	Denmark	Forex (fx)	foreign exchange settlement
ES	Spain	IBAN	International Bank Account Number
FI	Finland		
FR	France	IFFM	Interlinking Free Format Message
GR	Greece	IMF	International Monetary Fund
IE	Ireland	ISIM	Interlinking Statistical Information Message
IT	Italy		
LU	Luxembourg	ITES	Interlinking Test Environment System
NL	Netherlands		
PT	Portugal	MAC	Message Authentication Code
SE	Sweden	MT 100	Message Types
UK	United Kingdom	103	
		103+	
		202	
Others		NCB	national central bank
		NSS	Net settlement system
BIC	Bank Identifier Code	PSMN	Payment Settlement Message Notification
BIS	Bank for International Settlements	PSMR	Payment Settlement Message Request
CCBM	Correspondent Central Banking Model	PvP	Payment-versus-Payment mechanism
CET	Central European Time	Repo	repurchase operations
CLS	Continuous Linked Settlement	ROSC	Report on the Observance of Standards and Codes
CPSS	Committee on Payment and Settlement Systems	RTGS	Real-Time Gross Settlement
EBA	European Banking Association	STP	Straight-Through Processing
EC	European Community	SWIFT	Society for Worldwide Interbank Financial Telecommunication
ECB	European Central Bank	SWIFTNet	store and forward messaging service for financial institutions on the SWIFTNet platform
EEA	European Economic Area	FIN	
EMI	European Monetary Institute	TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system
EMU	Economic and Monetary Union	TCP/IP	Transmission Control Protocol/Internet Protocol
EONIA	Euro Overnight Index Average	TIS	TARGET Information System
EPM	ECB Payment Mechanism		
ESCB	European System of Central Banks		
EU	European Union		
EUR	Euro		
Euro I	EU-wide payment system of the EBA		
FIN	financial application; store and forward messaging service on the SWIFT network		

5 Glossary

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

Bank identifier code (BIC): a universal means of identifying financial institutions in order to facilitate the automated processing of telecommunication messages in financial environments.

Business continuity: a payment system or securities settlement system arrangement 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 preventive measures and arrangements to deal with these events. See **TARGET contingency measures**.

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

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

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

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

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

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

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

Credit institution: an institution covered by the definition 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, as amended by Directive 2000/28/EC of the European Parliament and of the Council of 18 September 2000. Thus, a credit institution is: (i) an undertaking whose business is to receive deposits or other repayable funds from the public and to grant credit for its own account; or (ii) an undertaking or any other legal person, other than those under (i), which issues means of payment in the form of electronic money. “Electronic money” shall mean monetary value, as represented by a claim on the issuer, which is: (a) stored on an electronic device; (b) issued on receipt of funds of an amount not lower in value than the monetary value issued; and (c) accepted as a means of payment by undertakings other than the issuer.

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 as including the replacement cost risk and the 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 payment: a payment between counterparties located in different countries.

Cross-border settlement: a settlement which takes place in a country other than the country or countries in which one or both of the parties to the trade or transfer are located.

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

Daily processing: the complete cycle of processing tasks 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 (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 NCB and which are remunerated at a pre-specified interest rate.

Domestic payment: a payment between counterparties located in the same country.

Domestic settlement: a settlement which takes place in the country in which both counterparties to the trade or transfer are located.

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

Economic and Monetary Union (EMU): the Treaty describes the process of achieving EMU in the European Union (EU) in three stages. Stage One of EMU started in July 1990 and ended on 31 December 1993; it was mainly characterised by the dismantling of all internal barriers to the free movement of capital within the EU. Stage Two of EMU began on 1 January 1994. It provided for, inter alia, the establishment of the European Monetary Institute (EMI), the prohibition of financing of the public sector by the central banks, the prohibition of privileged access to financial institutions by the public sector and the avoidance of excessive government deficits. Stage Three started on 1 January 1999 with the transfer of monetary competence to the ECB and the introduction of the euro. The cash changeover on 1 January 2002 completed the set-up of EMU.

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

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

Final (finality): irrevocable and unconditional.

Final settlement: settlement which is irrevocable and unconditional.

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

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

Financial risk: 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 in 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 materialised.

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

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

Herstatt risk: see **foreign exchange settlement risk**.

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

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

Incident: a situation which prevents the system from functioning normally or causes substantial delays.

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

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

Intraday credit: see **daylight credit**.

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

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 also known as wholesale funds transfer systems.

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

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

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.

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

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

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

Obligation: a duty imposed by contract or by law.

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

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

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

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

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

Payment Settlement Message Notification (PSMN): the response to a PSMR (see below), which can be either positive or negative. A PSMN is normally positive (indicating that the beneficiary’s settlement account in the receiving NCB/the ECB’s books has been successfully credited). It may be negative, in which case it is returned to the sending central bank with an error code.

Payment Settlement Message Request (PSMR): the settlement of TARGET cross-border payments involves the exchange of PSMRs from the sending NCB/the ECB and PSMNs

(see above) from the receiving NCB/the ECB. The sender of the PSMR requests the receiver to process a payment; this message requires a positive or negative response from the receiver (PSMN).

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

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

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

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

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

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

Repurchase agreement: an agreement to sell an asset and to repurchase it at a specified price on a predetermined future date or on demand. Such an agreement is similar to collateralised borrowing, although it differs in that ownership of the securities is not retained by the seller. Repurchase agreements are included in M3 in cases where the seller is a monetary financial institution (MFI) and the counterparty is a non-MFI euro area resident.

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

Reserve requirement: the requirement for credit 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 items within the reserve base by the amount of those items on 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.

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

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

Settlement: an act which discharges obligations in respect of funds or securities transfers between two or more parties. 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 generation, confirmation, clearing and settlement of instructions.

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

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

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

TCP/IP (Transmission Control Protocol/Internet Protocol): a set of commonly used communications and addressing protocols; TCP/IP is the de facto set of communications standards of the internet.

TARGET availability: the ratio of time when TARGET is fully operational to TARGET operating time.

TARGET business continuity: the ability of each national TARGET component to switch to a remote secondary site, in the event of a failure at the primary site, to enable operations to continue normally within the shortest time possible.

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

TARGET cross-border: term used to define transactions processed via TARGET for which settlement takes place in an RTGS system other than the one in which the payment instruction was generated.

TARGET domestic: term used to define transactions processed via TARGET for which settlement takes place within a single national RTGS system.

TARGET market share: the percentage processed by TARGET of the large-value payments in euro exchanged via all euro large-value payment systems. The other systems are Euro I (EBA), PNS (Paris Net Settlement), SPI (Servicio de Pagos Interbancarios), and Pankkien Online Pikasiirrot ja Sekit-järjestelmä (POPS).

Transfer: operationally, the sending (or movement) of funds or securities or of rights relating to funds or securities from one party to another party by (i) 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

Below is a list of selected documents published by the ECB in which TARGET-related information can be found. The publications are available free of charge from the ECB's Press Division. Please submit orders in writing to the postal address given on the inside of the front cover.

For a complete list of documents published by the European Monetary Institute (EMI), please visit the ECB website (www.ecb.int).

The ECB's Annual Report

"Annual Report 1998", April 1999.

"Annual Report 1999", April 2000.

"Annual Report 2000", May 2001.

"Annual Report 2001", April 2002.

The ECB's Monthly Bulletin

TARGET payment flows and new developments are published in the Monthly Bulletin 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.

"The TARGET system: Payment flows in TARGET; Recommendations for CLS payments in euro; TARGET Annual Report", June 2001.

"The TARGET system: Payment flows in TARGET", September 2001.

"The TARGET system: Payment flows in TARGET; Compliance of TARGET with oversight standards; Impact on TARGET of the 11 September attacks in the United States", December 2001.

"The TARGET system: Payment flows in TARGET", March 2002.

"The TARGET system: Payment flows in TARGET; TARGET 2002 release; TARGET contingency end-to-end live trials", June 2002.

"The TARGET system: Payment flows in TARGET; TARGET 2002 release; Involvement of TARGET in CLS live trials; TARGET at SIBOS, Geneva", September 2002.

"The TARGET system: Payment flows in TARGET; Compensation regime; Long-term evolution of TARGET", December 2002.

Other TARGET-related articles published in the Monthly Bulletin:

- “TARGET and payments in euro”, November 1999.
 - “Recent developments in international co-operation; A new key component of international co-operation: standards and codes”, February 2002.
 - “The role of the Eurosystem in payment and clearing systems”, April 2002.
 - “CLS – purpose, concept and implications”, January 2003.
-

The TARGET Annual Report

- “TARGET Annual Report 2000”, May 2001.
Covering the main issues and developments for the years 1999 and 2000.
 - “TARGET Annual Report 2001”, April 2002.
 - “TARGET Annual Report 2002”, April 2003.
-

Other publications

- “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.
 - “Long-term calendar for TARGET closing days”, December 2000.
 - “Recommendations for CLS payments in euro”, February 2001.
 - “Explanatory memorandum on the recommendations concerning CLS payments in euro”, February 2001.
 - “Guideline of the European Central Bank on a Trans-European Automated Real-time Gross settlement Express Transfer system (ECB/2001/3)”, April 2001.
 - “Derogation for Greece from the long-term calendar for TARGET closing days”, February 2002.
 - “Guideline of the European Central Bank of 27 February 2002 amending Guideline ECB/2001/3 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET) ECB/2002/1”, March 2002.
 - “TARGET Minimum common performance features of RTGS systems within TARGET”, June 2002.
 - “TARGET Interlinking data dictionary”, June 2002.
 - “TARGET Interlinking specification”, June 2002.
 - “TARGET Interlinking user requirement”, June 2002.
 - “Payments and securities settlement systems in the European Union: Addendum incorporating 2000 figures”, July 2002.
 - “TARGET Interlinking Specification – November 2002 edition”, November 2002.
 - “TARGET Interlinking Data Dictionary – November 2002 edition”, November 2002.
 - “The long-term evolution of TARGET”, October 2002.
 - “Public consultation on TARGET2: principles and structure”, December 2002.
-

Information brochures

- “TARGET: facts, figures, future”, September 1999.
- “The ECB payment mechanism”, August 2000.
- “TARGET”, November 2001.