EUROPEAN CENTRAL BANK

TARGET ANNUAL REPORT 2004

EUROPEAN CENTRAL BANK

In 2005 all ECB publications will feature a motif taken from the €50 banknote.

TARGET ANNUAL REPORT 2004

Address
Kaiserstrasse 29
60311 Frankfurt am Main, Germany

Postal address
Postfach 16 03 19
60066 Frankfurt am Main, Germany

Telephone
+49 69 1344 0

Website
http://www.ecb.int

Fax
+49 69 1344 6000

Telex
411 144 ecb d

This Report was produced under the responsibility of the Executive Board of the ECB.

As at May 2005.

ISSN 1725-4876 (print)
ISSN 1725-4884 (online)

CONTENTS

INTRODUCTION

TARGET, the **T**rans-European **A**utomated **R**eal-time **G**ross settlement **E**xpress **T**ransfer system, is the RTGS (real-time gross settlement) system for the euro and, since it started live operations back in 1999, it has been the market's preferred system for large-value payments in euro, making it one of the world's biggest large-value payment systems.

About 10,500 banks use TARGET to initiate payments on their own or on their customers' behalf. More than 48,500 banks worldwide (and thus all the customers of these banks) are addressable in TARGET. Consequently, TARGET is instrumental in promoting the integrated euro area money market, which is a prerequisite for the effective conduct of the single monetary policy, and contributes to the integration of the euro financial markets.

Participants use TARGET to make large-value and time-critical payments, such as payments to facilitate settlements in other interbank funds transfer systems (e.g. CLS or EURO 1) and to settle money market, foreign exchange and securities transactions. It is also used for smaller-value customer payments.

In 2004 TARGET traffic increased in comparison with the previous year. TARGET processed more than 69 million transactions with a value of more than €444 trillion. This corresponds to a daily average of 267,234 payments with a total daily value of €1.7 trillion. TARGET therefore accounted for 88% in terms of the value and 58% in terms of the volume of traffic that flowed through all the large-value payment systems operating in euro.

Owing to TARGET's pivotal role in maintaining financial stability in the European Union (EU), the Eurosystem pays very close attention to the reliability and safety of TARGET. In 2004 the availability rate improved further, reaching 99.81%. To efficiently manage events that could potentially reduce the TARGET service level, the Eurosystem ensures that its business continuity and contingency measures are fully operable. The TARGET risk management framework ensures the secure processing of TARGET payments. Finally, the compliance of TARGET with the "Core Principles for Systemically Important Payment Systems"[1] is verified as part of the TARGET oversight.

On 24 October 2002 the Governing Council of the ECB decided on the long-term strategy for TARGET (TARGET2). With TARGET2, the Eurosystem aims to meet new demands from the users, including those from the ten new Member States that joined the EU on 1 May 2004. In December 2004 the Governing Council of the ECB approved the building of the Single Shared Platform for TARGET2 on the basis of the joint offer made by three central banks, namely the Banque de France, the Banca d'Italia and the Deutsche Bundesbank. In the meantime, all euro area central banks have confirmed their participation in TARGET2.

This report provides comprehensive information about TARGET performance and developments in 2004. Chapter I provides information on the payment business in TARGET. Chapter II describes the various measures in place to ensure the robustness and resiliency of the system, and elaborates on TARGET oversight. New developments in TARGET are outlined in Chapter III. 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 Report on "Core Principles for Systemically Important Payment Systems", Committee on Payment and Settlement Systems, Bank for International Settlements, January 2001.

CHAPTER I

PAYMENT BUSINESS

TARGET PAYMENT FLOWS CONTINUED TO GROW IN 2004

In the year under review, TARGET had a share of 88% in terms of value and 58% in terms of volume in all large-value payment systems operating in euro. The system is used for the settlement of large-value and time-critical payments, as well as the processing of a considerable number of relatively low-value commercial payments.

TARGET had 1,059 direct and 9.440 indirect participants.[2] The overall number of banks addressable in TARGET (including branches and subsidiaries) increased to 48,500 worldwide.

1 PAYMENTS IN TARGET[3]

DEVELOPMENT OF TARGET'S MARKET SHARE

As the following figures show, TARGET is the market's preferred system for the processing of large-value payments in euro. In 2004 TARGET's share of the traffic flowing through all large-value payment systems operating in euro rose slightly to 88% in value terms (compared with 87% in 2003) and 58% in volume terms (unchanged). The closing down of the Spanish large-value payment system, Servicio de Pagos Interbancarios (SPI), on 15 December 2004 confirmed the trend towards consolidation of the market of large-value payment systems.

Compared with the previous year, market traffic (i.e. all payments processed in large-value payment systems operating in euro) increased by 3% in terms of value and by 2% in terms of volume, exceeding the overall market development in both respects. This confirms that TARGET is the preferred system for the processing of large-value payments in euro.

TARGET TRAFFIC IN 2004

In 2004 TARGET as a whole processed a total of 69,213,486 payments with a total value of €444 trillion. This corresponds to a daily average of 267,234 payments with a total value of €1.7 trillion.

Average daily TARGET turnover rose by 4% in 2004 (after 6% in 2003). Intra-Member State traffic showed an increase of 3% (after 4% in

2 These figures are based on a survey of direct and indirect participants in 2004 and represent the status at end-2003.

3 This analysis 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 provided in Statistical Annex 1.

Table 1 TARGET payment flows

		2003	2004	Change	2003	2004	Change
		€ billions		%	Number of payments		%
TARGET overall	Total	420,749	443,993	6	66,608,000	69,213,486	4
	Daily average	1,650	1,714	4	261,208	267,234	2
of which:							
Intra-Member State	Total	283,871	297,857	5	51,354,924	52,368,115	2
	Daily average	1,113	1,150	3	201,392	202,193	0
Inter-Member State	Total	136,878	146,137	7	15,253,076	16,845,371	10
	Daily average	537	564	5	59,816	65,040	9
of which:							
Interbank	Total	130,634	139,016	6	7,848,527	8,185,586	4
	Daily average	512	537	5	30,779	31,605	3
Customer	Total	6,244	7,121	14	7,404,549	8,659,785	17
	Daily average	24	27	12	29,037	33,435	15

Source: ECB.
Note: There were 255 operating days in 2003 and 259 operating days in 2004.

Table 2 Change in TARGET payment flows

(% change)

	€ billions			Number of payments		
	TARGET overall	Intra-Member State	Inter-Member State	TARGET overall	Intra-Member State	Inter-Member State
2003 compared with 2002	6%	4%	11%	3%	1%	11%
2004 compared with 2003	4%	3%	5%	2%	0%	9%

Source: ECB.

Table 3 Payment value bands for TARGET as a whole

	TARGET overall			
	equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2003	64%	25%	11%	> 0.1%
2004	65%	23%	12%	> 0.1%

Source: ECB.

2003), while inter-Member State turnover grew by 5% (after 11% in 2003) (see Table 2). In volume terms, TARGET traffic grew by 2% (after 3% in 2003), with no change at the intra-Member State level (after 1% in 2003) and a 9% rise at the inter-Member State level (compared with 11% in 2003). As in 2003 growth in TARGET payment flows in 2004 was mainly attributable to a rise in inter-Member State traffic.

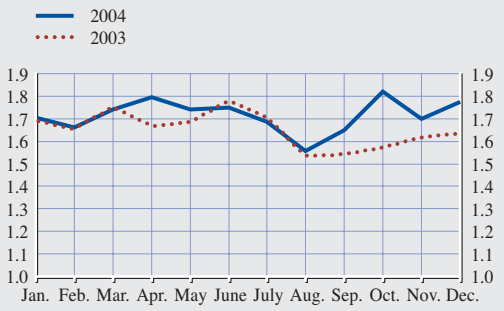
TARGET is primarily used to settle large-value payments. Nevertheless, 65% of TARGET payments were for values less than €50,000. Payments above €1 million only accounted for 12% of the traffic and payments above €1 billion for less than 0.1%.

In 2004 TARGET flows remained concentrated within a few RTGS systems. As in 2003 five RTGS systems processed as much as 83% of the TARGET total value and 82% of the TARGET total volume (see Statistical Annex 1, Tables 1.1 and 1.2).

An intra-year comparison shows that the level of activity in TARGET followed the usual trend: traffic levels were high in the first quarter, stable in the second quarter, declined in the third quarter and went up again in the final quarter. The generally low level of traffic in the third quarter was significant in August because of the decrease in activity during the

Chart I TARGET as a whole – value of payments

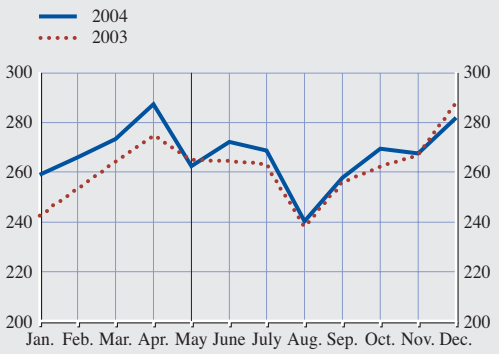
(daily averages per month, € trillions)



Source: ECB.

Chart 2 TARGET as a whole – volume of payments

(daily averages per month, thousands)



Source: ECB.

summer holidays (see Charts 1 and 2). On the basis of the daily averages of each month, it appears that TARGET processed the highest values in April and October while the highest volumes were processed in April and December.[4]

TARGET INTRA-MEMBER STATE PAYMENT FLOWS[5,6]

TARGET processed more than 52 million intra-Member State payments with a total value of €298 trillion in 2004. On a daily basis, an average of 202,193 payments with a total value of €1,150 billion was processed. Year-on year this corresponds to an increase of 3% in terms of value and no change in terms of volume (see Table 4).

In line the phenomenon generally observed in previous years, the value of intra-Member State payment flows increased significantly at the end of year. The decrease in 2003 was therefore rather atypical. Intra-Member State traffic represented 67% in terms of the value and 76% in terms of the volume of overall TARGET traffic.

An indication of the different usage of TARGET across countries is provided in Tables 1.1 and 1.2 of Statistical Annex 1.

The following observations can be made with regard to the concentration of intra-Member State payments in the different local TARGET components. In terms of volume, the German component processed more than half of intra-Member State payments. The German and Italian TARGET components combined processed more than two thirds of intra-Member State payments. Together, six national central banks (NCBs), namely the Banca d'Italia, the Banco de España, the Banque de France, De Nederlandsche Bank, the Deutsche Bundesbank and the Oesterreichische Nationalbank processed nine tenths of intra-Member State payments. In terms of value, approximately 83% of intra-Member State payments were settled in France, Germany and Spain.

4 The daily average number of payments processed in TARGET as a whole in April 2004 was 287,575 with a total value of €1,796 billion. In October 2004 it was 269,566 totalling €1,819 billion, while in December 2004 it was 281,953 totalling €1,774 billion.

5 At present, only inter-Member State payments can be analysed by payment type (i.e. interbank or customer payments).

6 The intra-Member State figures for Germany, Spain and France also include participants' liquidity transfers to and from their RTGS accounts.

Table 4 Change in TARGET intra-Member State payment flows

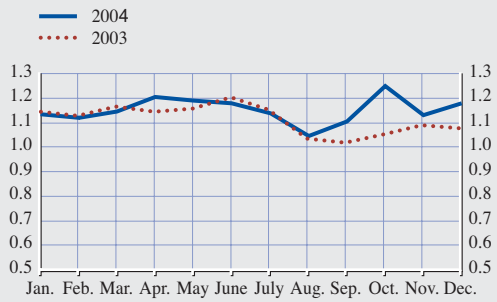
(% change)

	€ billions	Number of payments
	Intra-Member State	
2003 compared with 2002	4%	1%
2004 compared with 2003	3%	0%

Source: ECB.

Chart 3 TARGET intra-Member State payments – value

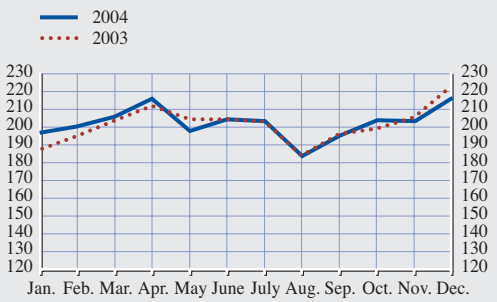
(daily averages per month, € trillions)



Source: ECB.

Chart 4 TARGET intra-Member State payments – volume

(daily averages per month, thousands)



Source: ECB.

In Germany and Italy, TARGET is extensively used to process low-value customer payments. This is why the average value of intra-Member State TARGET payments in these countries is much lower than the TARGET average (€2 million vis-à-vis €5.7 million at TARGET level). As regards France or Spain, such corporate payments would typically be processed outside TARGET. Logically, the average value of intra-Member State payments settled in TARGET is significantly higher (€42 million in France and €23 million in Spain).

The grouping of traffic figures for 2004 into value bands shows the continuous and extensive use of TARGET for the processing of low-value payments. The distribution of payments according to value bands was almost unchanged from 2003 (see Table 5).

TARGET INTER-MEMBER STATE TRAFFIC[7]

In 2004 TARGET processed a total of 16,845,371 inter-Member State payments with a total value of €146 trillion. The daily average amounted to 65,040 inter-Member State payments with a total value of €564 billion. Year on year this represents a rise of 5% in terms of volume and 9% in terms of value (see Table 6).

Both customer and interbank payments increased in value terms. The value of customer payments rose by 12%, while the growth in the respective volume was 15%. This indicates that there were more customer payments with a lower value settled in TARGET. In 2004 the

7 Inter-NCB payments are included in the interbank figures in this report because they represent only 0.1% of the total turnover inter-Member State payments.

Table 5 TARGET intra-Member State payment value bands

	TARGET intra-Member State			
	equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2003	65%	23%	12%	> 0.1%
2004	66%	23%	11%	> 0.1%

Source: ECB.

Table 6 Change in TARGET inter-Member State payment flows

(% change)

	€ billions			Number of payments		
	Inter-Member State					
	Overall	Customer payments	Interbank payments	Overall	Customer payments	Interbank payments
2003 compared with 2002	11%	17%	10%	11%	18%	5%
2004 compared with 2003	5%	12%	5%	9%	15%	3%

Source: ECB.

share of inter-Member State traffic in TARGET as a whole was unchanged compared with 2003 (33% in terms of value and 23% in terms of volume).

The intra-year development of TARGET inter-Member State traffic shows that much higher volumes were processed in 2004, especially during the first half of the year (see Charts 5 and 6). The usual August dip in value and volume was attributable to the summer holiday period.

In 2004 interbank payments represented 95% of the total value of inter-Member State payments and 49 % of the total volume, the remainder being customer payments. In 2003 these figures were 95% and 51% respectively, showing that the share of customer traffic in inter-Member State traffic continued to grow. 2004 is the first year that customer payments made up the majority of inter-Member State payments processed in TARGET.

The grouping of TARGET inter-Member State payment traffic[8] into value bands shows that TARGET was extensively used for the settlement of low-value payments. Compared with 2003, the distribution was almost unchanged.

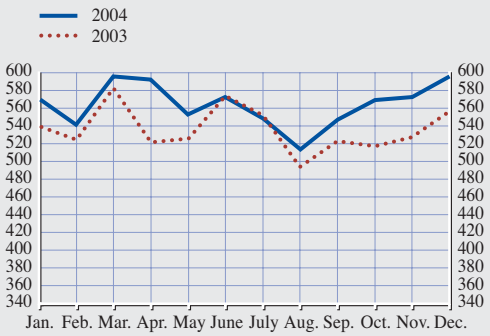
TREND IN THE AVERAGE VALUE OF TARGET PAYMENTS

The average value of individual transactions processed in TARGET as a whole increased by €0.1 million to €6.4 million (see Table 9). The average value of intra-Member State TARGET

8 UK inter-Member State figures were not included as these were not available according to value band.

Chart 5 TARGET inter-Member State payments – value

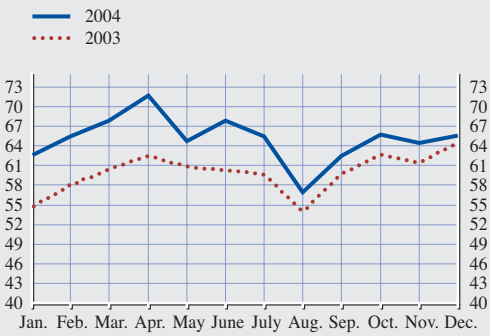
(daily averages per month, € billions)



Source: ECB.

Chart 6 TARGET inter-Member State payments – volume

(daily averages per month, thousands)



Source: ECB.

Table 7 TARGET inter-Member State customer payment value bands

	TARGET inter-Member State			
	Customer payments			
	equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2003	85%	12%	3%	< 0.1%
2004	85%	12%	3%	< 0.1%

Source: ECB.

Table 8 TARGET inter-Member State interbank payment value bands

	TARGET inter-Member State			
	Interbank payments			
	equal or less than €50,000	> €50,000 ≤ €1 million	> €1 million ≤ €1 billion	> €1 billion
2003	33%	38%	29%	< 0.1%
2004	39%	35%	26%	< 0.1%

Source: ECB.

payments rose by €0.2 million to €5.7 million but the average value of inter-Member State payments decreased by €0.3 million to €8.7 million.

The use of TARGET for intra-Member State payments varies considerably among the different local TARGET components. In some countries, TARGET is heavily used for low-value payments. RTGS systems that process high numbers of lower-value intra-Member State payments reduce the average value of intra-Member State payments for TARGET as a whole.

At the inter-Member State level, TARGET is typically used to process interbank payments related to money market transactions, securities settlement transactions, foreign exchange transactions and liquidity transfers resulting from the centralisation of liquidity management by multi-country banks. This explains the higher average value of interbank payments at the inter-Member State level.

Table 9 Average size of TARGET payments

(€ millions)

	2003					2004				
	Q1	Q2	Q3	Q4	Average	Q1	Q2	Q3	Q4	Average
TARGET overall	6.7	6.4	6.3	5.9	6.3	6.4	6.4	6.4	6.5	6.4
of which:										
Intra-Member State	5.9	5.7	5.5	5.1	5.5	5.6	5.8	5.6	5.7	5.7
Inter-Member State	9.6	8.9	9.1	8.5	9.0	8.7	8.4	8.7	8.9	8.7
of which:										
Interbank	17.4	16.0	16.7	16.4	16.6	16.7	16.7	17.1	17.4	17.0
Customer	0.9	0.8	0.9	0.8	0.8	0.8	0.8	0.8	0.9	0.8

Source: ECB.

Banks make full use of the last hour of operations to balance liquidity surpluses or deficits in the money market. This is reflected by the high average value of interbank payments settled in the last hour (between 5 and 6 p.m.) (see Statistical Annex 2, Chart 2.2).

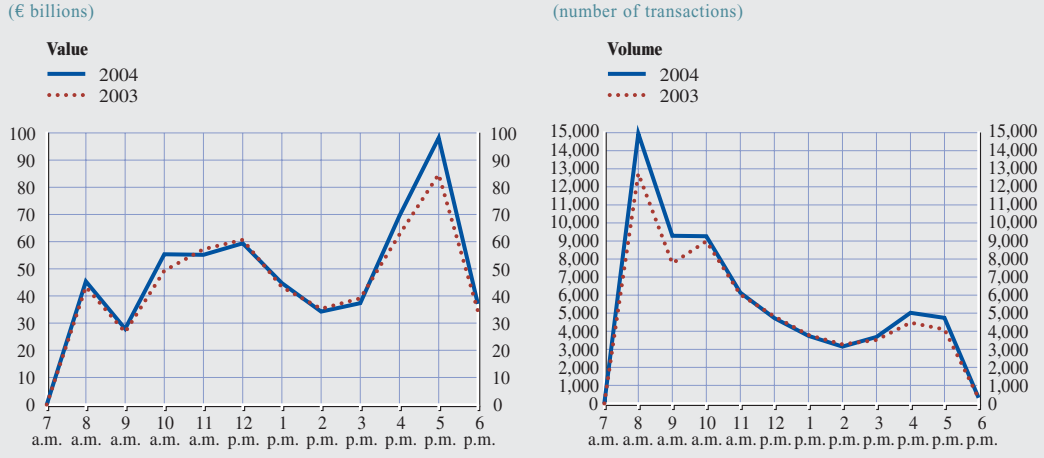
PATTERN OF INTER-MEMBER STATE INTRADAY FLOWS

In 2004 TARGET processed a daily average volume of nearly 15,000 inter-Member State payments in the first hour of operations (between 7 and 8 a.m.). Compared with 2003, this represents, as with the increase recorded for last year, an increase of 18% (31% more customer payments and 2% more interbank payments). More than 50% of the volume was processed in the first three hours of operations (between 7 and 10 a.m.). By 2 p.m. almost four out of five payments and at the customer payment cut-off time (5 p.m.) 99.5% of the total volume had already been processed. In terms of value, 23% of the inter-Member State turnover had been processed by 10 a.m. and 51% had been processed by 1 p.m. At 5 p.m. the ratio of processed payments was 93.1% of the total value (see Charts 7 and 8).

On an average day, the peak volume was processed between 7 and 10 a.m. and the peak value was processed between 4 and 5 p.m. Again, the peaks were more pronounced than in 2003. Overall, this means that the highest volume was processed at the beginning of the day, whereas the highest value was processed towards the end of the day. This is attributable to the fact that, in the morning, a high number of relatively low-value, "warehoused" payments from previous days is released. Towards the end of the day, liquidity management transfers, which are of a higher value, become predominant.

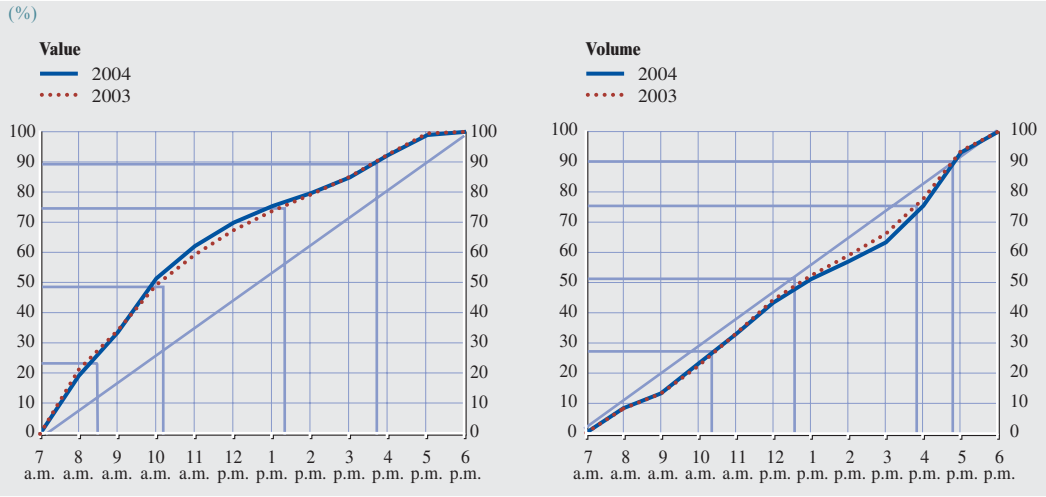
The hourly average value of an inter-Member State interbank payment steadily increased throughout the day, from €7.1 million in the first hour to €117.8 million in the last hour of operations (see Statistical Annex 2, Chart 2.2). The bulk of liquidity shifts between banks took place in the last hour. This means that average value of the payments is rather high. The average value of an inter-Member State customer payment rose from €0.2 million in the first two hours of operations to €1.7 million in the last two hours before the customer payment cut-off time at 5 p.m. (see Statistical Annex 2, Chart 2.3). This suggests that the late high-value customer payments were mainly related to the cash management activities of corporate treasuries.

Chart 7 TARGET inter-Member State intraday payment pattern – value and volume



Source: ECB.

Chart 8 TARGET inter-Member State intraday payment pattern – cumulative value and volume



Source: ECB.

As in 2004 the analysis of intraday flows shows that credit institutions made TARGET payments early in order to provide the interbank market with sufficient liquidity and to ensure the coverage and sending of subsequent payments. Owing to TARGET's immediate and final settlement of individual payments, the liquidity of incoming payments can be reused to make outgoing payments. Hence, this considerably reduces the overall liquidity needs. This is in line with the liquidity management guidelines issued by the European Banking Federation (EBF),[9] which have contributed a great deal to the achievement of this pattern.

2 FLUCTUATIONS IN TARGET PAYMENT FLOWS[10]

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; (iv) major public holidays (that are not TARGET holidays) celebrated simultaneously in several euro area countries.

IMPACT OF PERIODICAL TRANSACTIONS

In 2004 the largest fluctuation in overall TARGET flows stemming from periodical transactions was observed on the last day of the half-year, with a traffic increase of 45% in value terms and 34% in volume terms. On the last few days of each quarter, TARGET traffic grew on average by 22% in terms of value and 14% in terms of volume. The usual trend of high traffic at the end of each quarter was bucked at the end of the fourth quarter, with TARGET traffic dropping by 15% in value and 32% in volume (see Table 10). One reason for this is the limited market activity at the end of the year.

The largest fluctuation resulting from periodical transactions at the TARGET intra-Member State level was recorded on 30 June (the last day of the half-year), with a traffic increase of 49% in value and 35% in volume. TARGET intra-Member State figures were also significantly affected at the end of each quarter, showing growth of 25% in terms of value and 13% in terms of volume.

9 See the EBF's website (www.fbe.be).
10 Comparisons in this section are made with the daily average for 2004.

Table 10 Impact of periodical transactions on TARGET traffic

(% change on the last day of a quarter relative to 2004 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Q1 2004	30	34	21	24	25	22
Q2 2004	45	49	36	34	35	33
Q3 2004	30	32	26	28	28	28
Q4 2004	-15	-15	-15	-32	-36	-19
	22	25	17	14	13	16

Source: ECB.

Disregarding the fourth quarter, the growth rates would have been 38% and 29% respectively.

Likewise at the inter-Member State level, the greatest fluctuation attributable to periodical transactions was recorded on the last day of the half-year, with a rise of 36% in value and 34% in volume.

IMPACT OF PUBLIC HOLIDAYS IN THE UNITED STATES

On US public holidays, TARGET as a whole experienced an average decrease in traffic of 19% in value terms and 17% in volume terms (see Table 11). This, however, was to some extent compensated for by an average increase of 7% and 9% respectively on the following business days (see Table 12).

On US public holidays, no EUR/USD foreign exchange transactions or USD securities transactions are settled. In addition, CLS-related payments are lower as CLS does not settle USD on these days. The reduction in TARGET traffic on US public holidays indicates the strong interrelationship between TARGET and the US financial market, especially for inter-Member State traffic, which seems to be very dependent on foreign exchange and securities settlement transactions.

Table 11 TARGET traffic on US holidays

(% change on US holiday relative to 2004 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Martin Luther King's Day	-12	-9	-17	-10	-8	-18
Presidents Day	-4	5	-22	-7	-2	-24
Memorial Day	-44	-36	-59	-50	-49	-55
Independence Day	-12	-9	-19	-8	-4	-18
Labor Day	-19	-16	-24	-19	-15	-30
Columbus Day	-12	-7	-22	-12	-8	-24
Veterans Day	-34	-33	-36	-20	-16	-35
Thanksgiving Day	-14	-11	-21	-12	-8	-25
	-19	-15	-28	-17	-14	-29

Source: ECB.

Table 12 TARGET traffic on the business day after US holidays

(% change after a US holiday relative to 2004 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Martin Luther King's Day	26	29	20	15	11	28
Presidents Day	6	5	9	6	3	17
Memorial Day	10	11	7	20	13	45
Independence Day	9	3	21	6	2	18
Labor Day	1	-3	7	-5	-8	3
Columbus Day	1	-5	12	-2	-6	12
Veterans Day	0	-6	13	12	9	23
Thanksgiving Day	7	2	16	15	12	25
	7	5	13	9	4	21

Source: ECB.

Public holidays in other countries outside the euro area continued to have little impact on TARGET activity. For example, public holidays in the United Kingdom and Japan did not have a significant effect on TARGET payment flows.

IMPACT OF TARGET HOLIDAYS

TARGET holidays are non-settlement days for the euro money and financial markets, as well as for foreign exchange transactions involving the euro (see Box 1).

On the business day following a TARGET holiday, deviations from the average were less significant than last year since four out of six TARGET holidays fell on a weekend. The Easter weekend, when Good Friday and Easter Monday create a four day holiday period, did, however, show a considerable change. On the first business day after a TARGET holiday, TARGET as a whole processed on average 3% less transactions with a 6% higher value. At the intra-Member State level, the increase was 3% in terms of volume and 2% in terms of value, while at the inter-Member State level, traffic even dropped by 6% in volume terms and 1% in value terms (see Table 13).

Table 13 TARGET traffic on the business day after TARGET holidays

(% change after a TARGET holiday relative to 2004 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
New Year's Day	-7	-5	-26	-7	-12	-6
Easter Monday	35	15	32	25	34	18
Labour Day	-1	13	-9	-9	-3	5
Christmas Day	-1	-13	-21	-19	-6	-15
	6	2	-6	-3	3	1

Source: ECB.

Table 14 TARGET traffic on regional public holidays

(% change on a regional public holiday relative to 2004 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Epiphany	-26	-32	-13	-44	-45	-39
Whit Monday	-44	-36	-59	-50	-49	-55
Ascension Day	-21	-21	-23	-37	-42	-23
	-30	-30	-32	-44	-45	-39

Source: ECB.

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) also had a more significant impact on TARGET payment flows. Before such days, the impact on TARGET was very limited. On such days, the average decrease in payment flows was 30% in terms of value and 44% in terms of volume.

On average, such decreases were not followed by similar significant changes in the opposite direction on the day after the regional public holiday (see Table 15). This can be attributed to a general reduction in economic activity on these days, meaning that there was 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 2004.

PEAK DAYS IN TARGET

In 2004 the highest volume on a single day in TARGET as a whole was recorded on 20 December at 380,842 processed payments. The highest value on a single day in TARGET as a whole was recorded on 30 June, at a total of €2,484 billion.

Intra-Member State flows peaked in terms of volume at 288,415 payments on 20 December

Table 15 TARGET traffic on the business day after regional public holidays

(% change on a regional public holiday relative to 2004 daily average)

	Value			Volume		
	TARGET as a whole	Intra-Member State	Inter-Member State	TARGET as a whole	Intra-Member State	Inter-Member State
Epiphany	-5	-6	-3	-17	-17	-20
Whit Monday	10	11	7	20	13	45
Ascension Day	-2	-2	-3	0	0	-1
Assumption Day	-18	-21	-11	-6	-3	-14
	-4	-4	-3	-1	-2	3

Source: ECB.

Box 1

TARGET LONG-TERM CALENDAR APPLIED IN 2004

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. On these days, no standing facilities are available at the NCBs, the euro overnight index average (EONIA) is not published and the correspondent central banking model (CCBM) for the cross-border use of collateral does not operate.

To avoid frequent changes to TARGET closing days and thus the introduction of uncertainties into financial markets, a long-term calendar for TARGET closing days has been established and applied since 2002. TARGET as a whole (i.e. including all national components) 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.

2004. In terms of value, they peaked on 30 June (the last business day of the half-year) at a total of €1,715 billion.

Inter-Member State flows peaked in terms of volume at 94,299 payments, the highest ever, on 1 June 2004, the day after a bank holiday in the United States (Memorial Day). In terms of value, Inter-Member State flows peaked on 30 June at a total of €769 billion.

The lowest volume and value on a single day for TARGET as a whole was recorded on 31 May (Memorial Day in the United States), when a total of 133,080 payments were processed (50% below the daily average) with a total turnover of €962 billion (€791 billion below the daily average).

3 INTERBANK STRAIGHT-THROUGH PROCESSING (STP)

The launch of TARGET enabled fully automated straight-through processing of inter-Member State interbank payments in the European Union (i.e. from the debiting of the ordering bank's account through to the crediting of the receiving bank's account). STP rules in TARGET are viewed as a way of facilitating further automation of payment message processing, thus reducing the associated costs and risks.

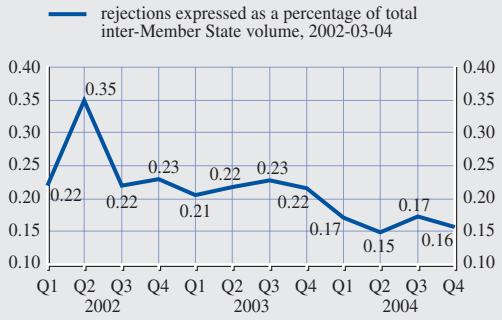
TARGET uses the relevant SWIFT message types (MT103, MT103+ and MT202), which have been tailored to STP practices. The very low rate of payments rejected at the inter-

Table 16 Peak days in TARGET

	2003		2004	
Value (€ billions)				
TARGET as a whole	2,333	30 June	2,484	30 June
Intra-Member State	1,536	30 June	1,715	30 June
Inter-Member State	798	30 June	769	30 June
Number of payments				
TARGET as a whole	363,835	30 June	380,842	20 Dec.
Intra-Member State	282,803	30 June	288,415	20 Dec.
Inter-Member State	87,900	28 Nov.	94,299	1 June

Source: ECB.

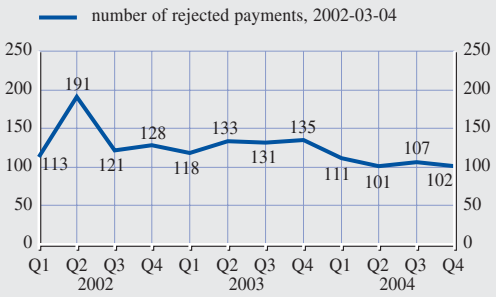
Chart 9 Rejections in TARGET expressed as a percentage of total inter-Member State volume



Source: ECB.

Chart 10 Number of payments rejected in TARGET (inter-Member State payments)

(daily averages on a quarterly basis)



Source: ECB.

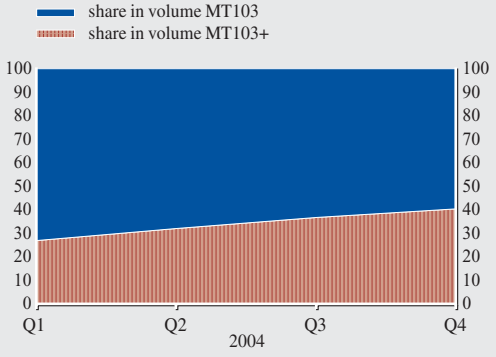
Member State level proves the readiness and capability of TARGET users to support STP. In 2004 the rejection rate was further reduced to around 0.16% (from 0.22% in 2003) of the total number of TARGET inter-Member State payments sent. This means that, on average, about 104 out of 65,000 inter-Member State payments per day had to be returned to the sending bank (see Charts 9 and 10).

Another indicator of the increased willingness of banks to support EU-wide STP is the use of the customer payment message type MT103+ in TARGET. The MT103+ was introduced by SWIFT in November 2000 and was immediately available in TARGET. The MT103+ is the STP-version of the MT103, which has been enhanced to comply with recent STP practices and to offer the recipient a higher level of assurance that the message could be processed without costly manual intervention. In particular, the MT103+ requires the International Bank Account Number (IBAN) of the beneficiary and the Bank Identifier Code (BIC) of the beneficiary's institution. European banks, which were under pressure from both public authorities and the competitive environment to reduce the price of cross-border retail transactions in euro, found the MT103+ a useful tool in their efforts to achieve STP. In 2004 the share of MT103+ in TARGET inter-Member State customer payments increased from 27% in the first quarter to 40% in the fourth quarter[11] (see Chart 11). In the first quarter of 2003, however, the share was only 5%. It will be interesting to monitor future developments in the share of MT103+ in TARGET to get an idea of the progress being made towards pan-European STP.

11 The International Bank Account Number (IBAN) was created to uniquely identify the account of a customer at a financial institution.

Chart 11 TARGET inter-Member State payment volume per customer message type

(%)



Source: ECB.

CHAPTER 2

ROBUSTNESS, RESILIENCY AND OVERSIGHT

TARGET is the RTGS system for the settlement of large-value payments in euro. Service interruptions, poor performance or a low security level in payment processing could have an immediate negative impact on the system's stability, on the euro area money market and ultimately on the single monetary policy. The Eurosystem therefore strives to ensure:

i) a very high operating level (in terms of TARGET availability) and short processing times (as measured by the business performance indicator for example);

ii) the secure processing of payments in TARGET (including protection against any type of threat); and

iii) compliance with the internationally agreed Core Principles for Systemically Important Payment Systems.

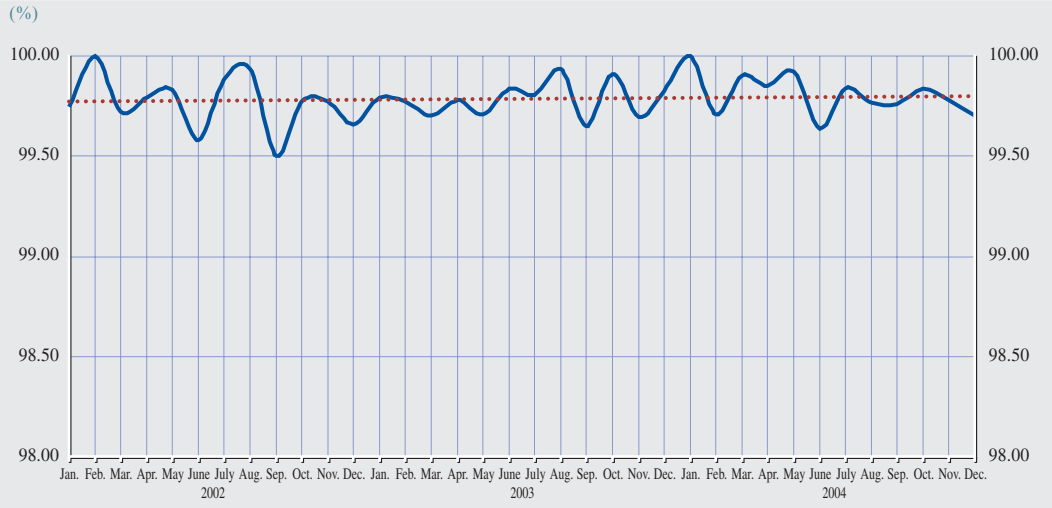
1 TARGET SERVICE LEVEL AND AVAILABILITY

The overall availability of TARGET was 99.81% in 2004 compared with 99.79% in 2003 (see Chart 12). In addition to the overall figure for TARGET, this report provides the availability figures for each local TARGET component in the Statistical Annex 4.

To give the user a good idea of the real-time processing capability of TARGET, the time needed to process a payment is measured. In the year under review, 95.87% of TARGET payments were processed in less than 5 minutes (95.78% in 2003), 3.53% were processed in 5 to 15 minutes (3.61% in 2003) and 0.31% in 15 to 30 minutes (0.32% in 2003). Only for 0.29% of payments did the processing time exceed 30 minutes (see Chart 13). This percentage is virtually the same as in 2003, and is the result of failures that occurred in some of the local TARGET components.

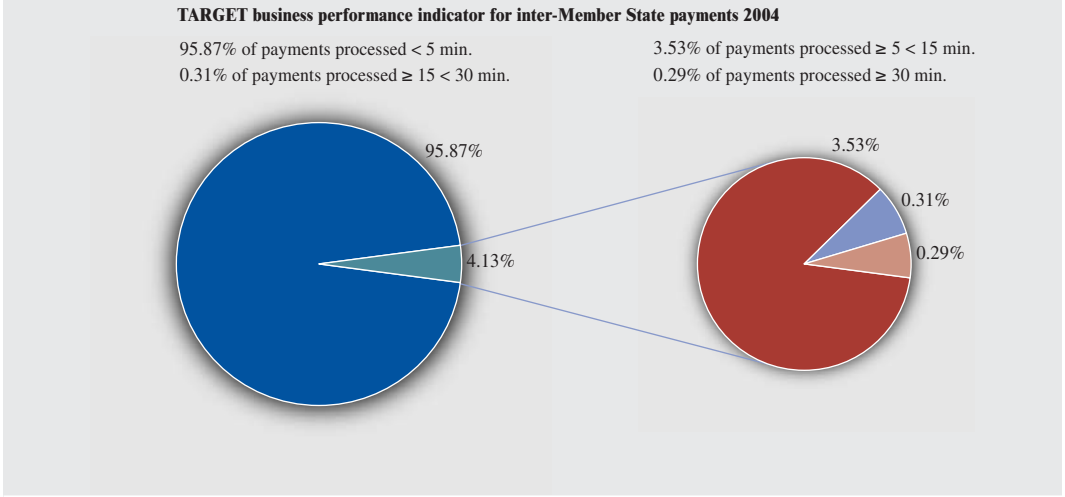
A total of 112 incidents were recorded within the local TARGET components in 2004. This represents an overall decrease of 25% in comparison with the 148 incidents recorded in 2003. The two main causes of incidents were still linked to the system's connection to the SWIFT network as well as to software/ hardware component failures. In 2004 two

Chart 12 TARGET availability



Source: ECB.

Chart 13 TARGET inter-Member State payment processing times



Source: ECB.

incidents had a severe impact on the payment processing capabilities of local TARGET components.

– On Monday 9 February, the Deutsche Bundesbank experienced a problem that meant the closing time of TARGET was delayed until 8.30 p.m. It also held up the application of the TARGET compensation scheme.

– On Monday 20 September, the Deutsche Bundesbank experienced a software problem, which led to a 30 minute delay in the closing time of TARGET.

During these incidents, appropriate contingency measures and well-trained staff ensured that all (very) critical payments were processed successfully. In addition, the Eurosystem's standing facilities were available to TARGET participants to support their liquidity management if necessary. Moreover, appropriate corrective measures were implemented in order to prevent these kinds of interruptions happening in the future.

In order to help users cope with TARGET incidents, the ECB publishes up-to-date information about the availability of all local TARGET components by means of the TARGET Information System (TIS) (see Box 2).

2 TARGET BUSINESS CONTINUITY AND CONTINGENCY MEASURES

TARGET and all its local components have both business continuity and contingency measures in place. TARGET business continuity requires each local component to be able to switch to a secondary site and to continue operations normally from there within the shortest time possible should a failure occur at the primary site. Contingency processing tools have been established to cope with temporary problems where a switch-over to a secondary site would take too long or where both sites would be temporarily affected. They were implemented when TARGET started up and have been further developed since then. The aim of the contingency measures is to

Box 2

TARGET INFORMATION SYSTEM (TIS)

The TARGET Information System is a common information tool enabling all TARGET participants to obtain immediate standardised information on the operational status of the TARGET system.

The TIS provides up-to-date information on the local 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 supplements the communication channels that 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 TARGET participants with access to these information services.

1 Reuters page ECB46; Telerate/Bridge pages 47556/47557; and Bloomberg page ECB17.

ensure that all payments needed to avoid systemic risk are processed, i.e. they cater for the processing of all (very) critical payments. Box 3 below looks at those TARGET payments considered to be systemically important.

Box 3

CONCEPT OF (VERY) CRITICAL PAYMENTS

From the wide range of payments processed in TARGET, the Eurosystem – with the support of the European banking industry – identified the types of payments it considered to be systemically important, i.e. payments that could trigger systemic risk, if unprocessed or processed behind schedule. Dependent on whether this risk could be caused on a global or a euro area scale, the Eurosystem, again with the support of the European banking industry, classified such payments further into "very critical payments" and "critical payments". The identified payment types were categorised as follows:

Very critical payments: CLS-related payments;

Critical payments: Payments related to monetary policy and intraday credit transactions, payments needed for settling in systemically important payment systems (such as Euro 1, PNS, SPI and POPS), as well as payments needed for settling in securities clearing and settlement systems. In addition, start/end-of-day liquidity transfers to/from EU countries which have not yet adopted the euro are considered as critical as well as intra-bank liquidity transfers equal to or above €100 million.

As a minimum, the TARGET contingency measures have to be able to cope with all these types of payments. Such contingency payments are processed either partially or totally outside the normal TARGET infrastructure using effective technical means and procedures.

As in previous years, regular trials were carried out, which verified both that TARGET business continuity and contingency measures are fully operational and that staff are famil ar with them. Credit institutions often participate in these trials.

In the reporting period, the Eurosystem, in cooperation with the banks, improved the management of incidents that might occur during the last two hours of TARGET business. This period is critical for the banks because of the settlement of the EURO 1 system, the cut-off for customer payments (5 p.m.) and the balancing of liquidity positions. Any operational disturbances could have a negative impact on liquidity distribution and thus the money market rates. In addition, poorly managed incidents at this critical time could affect the reliability of the system. In collaboration with the banks, the Eurosystem therefore drew up an incident management framework which addresses the needs of both the central banks and the banks. The core element of the new framework is that the possible actions of the Eurosystem are much more transparent for the banks. Should an incident occur, its possible impacts are more predictable for the TARGET users and the risk of erratic market reactions is reduced.

COOPERATION WITH TARGET USERS AND OTHER RTGS OPERATORS

TARGET business continuity and contingency measures form an important interface between TARGET and its users. Their effective functioning requires close cooperation and a sound understanding. In 2004 the Eurosystem continued its dialogue with TARGET users at both the national and the European level. As the above example on cooperation on incident management shows, this initiative was very fruitful and helped to strengthen further TARGET operations.

TARGET business continuity and contingency issues are not just an issue internal to the euro area, as settlement problems in currencies other than the euro might also have negative knock-on effects on the euro area. In particular, the globally acting CLS, has created a direct link between different currencies that, if not appropriately addressed, could potentially lead to contagion. In 2004 the operators of the RTGS systems of currencies eligible for CLS tested the communication channel that allows RTGS operators to communicate irrespective of time and language differences. Furthermore, to take account of the new currencies that became CLS eligible in 2004, the communication tool was extended to the respective RTGS systems.

CONTINUOUS LINKED SETTLEMENT

The Continuous Linked Settlement (CLS) is a system designed for the settlement of foreign exchange (FX) transactions.[12] CLS largely eliminates FX settlement risk by settling FX transactions in its books on a payment-versus-payment (PvP) basis. Remaining balances of the CLS settlement members in the books of CLS Bank (CLSB) are squared by pay-ins and pay-outs in central bank money for each of the eligible currencies.

The processing of CLS payments introduced a new criticality into TARGET as delays in their processing could cause systemic risk on a global scale. Although the TARGET contingency measures proved to be operationally capable of processing CLS payments in unusual circumstances, a framework of supporting business practices was required. In order to develop such a framework and to raise credit institutions' awareness of the issue, the ECB issued the recommendations for CLS payments in euro in February 2001. The objective of these recommendations was to ensure the processing of CLS euro payments, even in contingencies. As late CLS payments could trigger systemic risk and knock-on effects in other currency areas, their timely processing is of utmost importance. The recommendations and the

12 The eligible currencies that are currently settled are AUD, CAD, CHF, DKK, EUR, GBP, HKD, JPY, KOW, NOK, NZD, SEK, SGD, USD and ZAR.

explanatory memorandum are available on the ECB's website (www.ecb.int).

In 2004 euro area credit institutions closely followed the recommendations. This, together with the established and trialled contingency measures, enabled the smooth processing of CLS-related payments, even in the event of an incident in the early hours of TARGET operations, and prevented any incident in the euro area from spilling over to other currencies.

3 TARGET RISK MANAGEMENT

Security and operational reliability are two aspects of vital importance for the TARGET system. Towards the end of 2003, an assessment of the risk profile of the 16 TARGET components was conducted by operational staff from the relevant central banks on the basis of the new TARGET Risk Management Framework. This exercise involved checking the compliance of the individual TARGET components with benchmark security controls defined at the ESCB level. As a result of the security assessment it was concluded that the overall security situation in TARGET is satisfactory.

4 TARGET OVERSIGHT

The Eurosystem's TARGET oversight function pursues two major objectives. First, it has to verify that the TARGET system's present and future set-up and procedures are compatible with the "Core Principles for Systemically Important Payment Systems"[13], which were adopted by the Governing Council of the ECB in 2001 as the minimum common standards for its oversight policy on systemically important payment systems. Second, any case of non-compliance with the Core Principles has to be brought to the attention of the decision-making bodies of the ECB so that, when needed, measures are considered and implemented by the TARGET operation function to ensure full compliance with the Core Principles.

In 2004 the TARGET oversight function focused on two aspects: (i) the further implementation of the TARGET oversight framework at the local and the ESCB level; (ii) the conduct of several oversight activities, including the finalisation of the evaluation of all national RTGS systems participating in or being connected to TARGET against the Core Principles, the review of the status report on the TARGET risk situation, the assessment of the connection of the new Polish euro RTGS system, SORBNET-EURO, to TARGET, and clarifications and modifications to the Eurosystem's regime for the provision of legal opinions in TARGET.

IMPLEMENTATION OF THE TARGET OVERSIGHT FRAMEWORK

In 2004 the TARGET oversight function was further formalised and implemented on the basis of a structured methodology. This methodology focuses on common TARGET oversight requirements that all NCBs and the ECB should, as a minimum, fulfil in conducting TARGET oversight. The TARGET Oversight Guide – a comprehensive reference document for the NCBs and the ECB – helps to ensure a consistent performance of the TARGET oversight function across the ESCB.

TARGET OVERSIGHT ACTIVITIES

In May 2004 the ECB published its report on the "Assessment of euro large-value payment systems against the Core Principles". With regard to TARGET, this report concluded that all TARGET components achieve a high degree of compliance with the Core Principles.[14] It also identified, however, a few issues relating to business continuity arrangements and economic efficiency. As regards business continuity, the overseers' main concerns related to the fact that, for some local RTGS systems, the hot standby site is located less

13 Report by the Committee on Payment and Settlement Systems on "Core Principles for systemically important payment systems", Bank for International Settlements, January 2001.

14 Regarding the review of the non-TARGET euro large-value payment systems, the assessment by the Eurosystem oversight function did not reveal any major shortcomings.

than one kilometre away from the primary site. Furthermore, they see a need to simplify the system and backup procedures as well as to improve testing procedures. However, experience so far has shown that contingency arrangements can comfortably accommodate TARGET component failures of short duration. In terms of the concerns expressed by the overseers on the economic efficiency of the current TARGET system, it has been noted that all local RTGS systems apply the standard TARGET cost methodology as well as a formal pricing policy, but that cost recovery levels differ significantly.

Given that the TARGET risk management performed by the TARGET operation function is key to the safe and reliable operation of the TARGET system (cf. Core Principle VII) and that the safety and operational reliability of TARGET are also at the heart of the TARGET oversight function, the latter has analysed, from an oversight perspective, the status report on the TARGET risk situation prepared by the TARGET operation function. The overall results of this analysis were very positive.

In anticipation of the connection of the new Polish euro RTGS system, SORBNET-EURO, to TARGET via the Banca d'Italia and its BIREL system in early 2005, the TARGET oversight function performed an *ex ante* assessment of SORBNET-EURO against the Core Principles and evaluated the impact this would have on the compliance level of the BIREL system. It concluded that, from an oversight perspective, there are no deficiencies serious enough to hamper the connection of SORBNET-EURO to TARGET.

In preparation for strengthening the arrangements for ensuring the legal soundness of the TARGET system (cf. Core Principle I), the TARGET oversight function reviewed the Eurosystem's regime for the provision of legal opinions in TARGET. It clarified various requirements contained in the existing regime and suggested a number of measures which the TARGET operation function has implemented.

Last, but not least, as progress is made on the design of the TARGET2 system, the TARGET oversight function is planning to perform an *ex ante* assessment of the TARGET2 system in due course and intends to report on this activity in the next TARGET Annual Report.

CHAPTER 3

TARGET DEVELOPMENTS

In 2004 preparations for the new generation of TARGET, TARGET2, were ongoing. TARGET2 is scheduled to go live in 2007. Central banks and credit institutions will have to prepare thoroughly for this migration. The connection of Narodowy Bank Polski to TARGET was also prepared in 2004. In the meantime, the performance of the current system has to be maintained at a high level.

1 TECHNICAL DEVELOPMENTS IN THE CURRENT SYSTEM

In 2004 the NCBs had to run tests in preparation for the TARGET 2004 release, which was successfully implemented on 14 June 2004. This release took into account a change in the SWIFT validation rule, which came into force on the same day. The use of an IBAN for the beneficiary account in MT103+ messages is mandatory when both the sender and receiver banks are domiciled in a pre-defined list of countries. The change consisted in adding a further six countries to the list. Modifications in the SWIFT validation rule logically implied similar modifications for local TARGET components, which subsequently required appropriate testing.

2004 also saw the best part of the ESCB successfully migrated from SWIFT FIN to SWIFTNet FIN. The migration of FIN from X.25 technology to IP technology using SWIFTNet was mandatory for the entire SWIFT community, as SWIFT will end support for X.25 technology. The implementation of SWIFTNet FIN was a technical migration. For TARGET, a phased approach was chosen. The migration started in the first quarter of 2003 and was finished by the beginning of February 2005.

2 ENLARGEMENT OF THE EU

On 24 October 2002 the Governing Council of the ECB decided that, after joining the EU, the central banks of new Member States would be given the same rights and obligations with regard to TARGET connection as the current non-euro area NCBs. Different technical options for such connections, including variants avoiding the need for individual euro RTGS platforms, have been elaborated and presented to the central banks of the new Member States on a "no compulsion, no prohibition" basis. Only when the new Member State joins the euro area, will connection to TARGET become mandatory.

In 2004 Narodowy Bank Polski decided to connect to TARGET before Poland joins the euro area and prepared for a connection via one of the elaborated options. More specifically, Narodowy Bank Polski chose to connect its own national euro RTGS system (SORBNET-EURO) to TARGET via a bilateral link established with the Banca d'Italia. The connection of the SORBNET-EURO system to TARGET took place on 7 March 2005.

Narodowy Bank Polski's connection to TARGET is the first enlargement of the system since it was launched, which implies that, in addition to the operational preparations, the TARGET legal framework also had to undergo certain changes. Accordingly, the TARGET Guideline and the TARGET Agreement have been revised in order to cover the specificities of the type of connection chosen by Narodowy Bank Polski. Even though this option differs technically from other central banks connected via the Interlinking, Narodowy Bank Polski has become a full member of TARGET with all the associated rights and obligations.

Not seeing any business case for an early connection to TARGET as a non-euro area Member State, the other central banks of the new Member States do not yet envisage connecting to TARGET.

The new Member States will be able to use the single shared platform (SSP) of TARGET2, which is due to begin operations in January 2007, without a prior connection to the present TARGET system. However, since the

envisaged launch date for TARGET2 is a rather ambitious objective and TARGET access is mandatory for the new Member States that have adopted the euro, the Eurosystem and the central banks of the new Member States are preparing fallback solutions to bridge the possible period between joining the euro area and the availability date of TARGET2.

3 TARGET2

On 24 October 2002 the Governing Council of the ECB decided on the long-term strategy for TARGET (TARGET2). The decision was outlined in a press release published on the same day and envisaged a technical consolidation of the TARGET system, a single TARGET-wide pricing structure for intra-Member State and inter-Member State payments, and a harmonised level of service.

With TARGET2, the Eurosystem aims to meet new demands from the users, including those from the ten new Member States that joined the EU on 1 May 2004. On 16 December 2002, a public consultation was therefore launched on a document entitled "TARGET2: principles and structure" and a summary of the comments received was published on the ECB website on 13 July 2003.

On 28 July 2003, three central banks, namely the Banque de France, the Banca d'Italia, and the Deutsche Bundesbank, informed the President of the ECB of their readiness to jointly provide the basis for the Single Shared Platform (SSP) for TARGET2. On 16 December 2004, the Governing Council of the ECB approved the building of the SSP on the basis of the joint offer made by the three central banks and gave them responsibility for operating it.

In the meantime, all euro area central banks, as well as the Bank of England and Danmarks Nationalbank have confirmed their participation in the SSP for TARGET2. Sveriges Riksbank, however, has decided not connect to TARGET2 (the Swedish banks will seek other solutions for the settlement of their euro payments). The central banks of some New Member States central banks will only join when they adopt the euro. TARGET2 is expected to start operations in January 2007.

GOVERNANCE AND PROJECT ORGANISATION

A major area of work in 2004 was the development of the governance structure for TARGET2 and, on the basis of this, an effective project organisation for the next project phases (development, testing and migration). The Governing Council of the ECB approved internal rules concerning the common governance of TARGET2. These rules define the roles and responsibilities within the TARGET2 project of the Governing Council, the full group of euro area central banks and the three NCBs building and operating the system. The chosen governance structure and project organisation will ensure both the effective organisation of the work in each project phase and an appropriate level of continued involvement and control by all euro area central banks during the development and operation of TARGET2.

SERVICE LEVEL ISSUES

On 22 July 2004 the Governing Council of the ECB approved the version 1.13 of the General Functional Specifications (GFS) for TARGET2, which were prepared by the Eurosystem using the input received from the TARGET user community. The GFS describe the general features and functions of the system as well as its IT architecture. Based on the GFS, an initial version of the User Detailed Functional Specifications (UDFS) was made available to the user community in October 2004. Among other things, the UDFS provide the basis for adapting the internal system of each participant so that it can be connected to TARGET2.

TARGET2 will offer comprehensive liquidity management functions, provide a single interface for the connection of ancillary systems, and also offer features for managing

central bank accounts that are kept outside the RTGS system.

TARGET2 liquidity management functions will allow credit institutions to better control their euro liquidity. For example, a participant that uses several payment and securities settlement systems (SSSs) settling in central bank money will have the opportunity to settle all such positions from a single RTGS account in TARGET2. Furthermore, for RTGS accounts of euro area credit institutions held with euro area central banks, TARGET2 will offer an intraday liquidity pooling feature. It will enable TARGET2 euro area participants to group individual RTGS accounts held with different euro area central banks and pool the available intraday liquidity for the benefit of all members of the group of accounts. Each member of a group of accounts can thus make payments from its own account, up to the sum of available intraday liquidity on the accounts in the group. With this functionality, the banks will be able to better integrate their euro liquidity management. The Eurosystem is working towards the establishment of a robust legal framework, which is a precondition for offering this function.

In addition, TARGET2 will benefit its participants, including those that will not be allowed to use the liquidity pooling feature (i.e. RTGS accounts which are not held by euro area credit institutions with euro area central banks), in terms of consolidated account information. Whereas in the past, it has not been possible for an institution's head office to see the information being held across its various branches, with TARGET2 it will be able to monitor and process all its data automatically from a single location.

The Eurosystem consulted market participants who confirmed the need for the six settlement models (as defined in the GFS) offered by TARGET2 for the settlement of ancillary systems (i.e. two real-time and four batch models), because they all serve one or more business purposes. These models already represent a substantial harmonisation of current practices. In addition, the settlement of cash positions coming through ancillary systems into TARGET2 will take place directly in the participant's RTGS account, irrespective of the location of the ancillary system. This constitutes a major step towards the integration and harmonisation of market practices. Several other issues that will have an impact on ancillary systems' settlement (e.g. possible harmonisation of settlement times, analysis of the overall liquidity impact of the new arrangements in TARGET2, policy and strategic aspects that the different settlement models could raise, remote participants' access to liquidity, self-collateralisation, settlement finality, etc.) require further discussion and elaboration, which is scheduled for the first half of 2005. In particular, further investigation is required into issues related to the co-existence of SSSs that have adopted different settlement models (integrated, interfaced or pre-funded), as well as into the details of these individual models.

The Eurosystem considered the issue of the accounts at the central bank which can be kept outside the RTGS system ("home accounts"). Today such home accounts are primarily used by the participants to manage minimum reserves, standing facilities and local collateral as well as to settle cash withdrawals. They are also used to record the transactions of central bank customers that do not (or cannot) participate in the RTGS system. The Eurosystem agreed that transactions between market participants and transactions stemming from the settlement of ancillary systems, as well as payments related to open market operations should ultimately be settled on the RTGS accounts. However, for some types of transactions, the domestic set-up in some countries may not allow for an immediate shift of these operations to the SSP at the start of its operations. As a result, the Eurosystem agreed on a maximum transition period of four years (from the moment the NCB in question connects to TARGET2) for settling these payments on the RTGS accounts. To support

the policy on home accounts, a higher price than the normal TARGET2 price will be charged to payments made through home accounts that should ultimately be settled in the Payments Module (PM) of TARGET2. This will serve as an incentive to reduce the above-mentioned transition period. In the case of ancillary systems, it is expected that pan-European ancillary systems will move when, or soon after, all central banks have connected to TARGET2. The situation will be reassessed one year after the start of TARGET2.

PRICING POLICY

The Eurosystem is also developing a pricing scheme for the TARGET2 core service which will eliminate the current differences in pricing between intra-Member State and inter-Member State transactions. It includes an option to be decided on by the Governing Council of the ECB which would allow participants to choose between paying a single transaction fee or a lower transaction fee plus a periodical fee. It envisages the following main principles:

1. The scheme should permit the recovery of a very large part of the total TARGET2 costs;

2. The highest transaction fee should not exceed €0.80;

3. The lowest (marginal) transaction fee should reach €0.25 per transaction.

Some simulation exercises were carried out in order to verify that the above principles are compatible with the cost and volume estimates for TARGET2. Further details of the TARGET2 pricing scheme will be determined in 2005.

PROJECT PLAN

At the current stage of the project, the following main milestones are envisaged. Each one is subject to completion of the previous steps.

MIGRATION

The aim of the TARGET2 migration is to enable a smooth transition from the current TARGET system to the new TARGET2 system for all players (central banks, financial institutions and ancillary systems). It covers the coordination of all activities after the development of its technical components up until all central banks have moved to the SSP. In particular, it encompasses testing activities and the organisation of the changeover to TARGET2.

The Eurosystem assessed the advantages and disadvantages of a "big bang" migration against a phased migration by "country windows". In concrete terms, a big bang approach would mean that on the first day of operation of TARGET2, all central banks and TARGET users would have to migrate

Table 17 Milestones 2005-07

1.	End of April 2005	Finalisation of the User Detailed Functional Specifications (UDFS) document (Finalisation of the remaining open issues by November 2005)
2.	April 2005 to December 2005	Completion of the development of the SSP
3.	January 2006 to March 2006	SSP internal testing
4.	April 2006 to May 2006 (tentative)	Acceptance testing by the central banks
5.	June 2006 to December 2006 (tentative)	Customer testing for the first country window (TARGET users migrating in later windows might also take part in these tests)
6.	December 2006	Live trials / activities in the production environment
7.	January 2007	First country window to go live
8.	August 2006 to September 2007	Customer testing, live trials, etc. and other country windows to go live

Box 4

MAIN FEATURES OF TARGET2

TARGET2 will have a central technical infrastructure and its interface will be based on SWIFT standards and services. Each direct participant will be able to submit and receive payments on its own behalf or on behalf of other institutions via the payments interface, namely the Payment Module (PM). TARGET2 will offer flexible liquidity management tools, such as prioritisation of payments, liquidity reservation, definition of sender limits and active queue management. There will be three different payment priorities (normal, urgent and highly urgent) and it will be possible for participants to reserve liquidity for each category as well as to reserve liquidity for the settlement of ancillary systems. Participants will also be able to define bilateral and multilateral sender limits and to actively manage their payment queues (e.g. by changing the priority or the order of queued transactions). Furthermore, the increased time criticality of payments will be taken into account by enabling the submission of timed transactions, such as those needed in the context of CLS.

Via the Information and Control Module (ICM), direct TARGET2 participants will have access to comprehensive online information and easy-to-use control measures to suit to their individual business needs. In particular, the ICM will provide participants with access to the PM and the module for Static Data Management. Depending on whether the central bank in question decides to use the optional services available in TARGET2, participants will also have access to the Home Accounting Module (HAM) and the modules for Reserve Management and Standing Facilities.

TARGET2 will provide cash settlement services in central bank money for all kinds of ancillary systems (currently more than 100 individual systems), including retail payment systems, large-value payment systems, foreign exchange systems, money market systems, clearing houses and securities settlement systems (SSSs). Ancillary systems can connect to TARGET2 via the Ancillary System Interface (ASI). The resilience and business continuity concept of TARGET2 is based on a multi-region/multi-site architecture. For the payment processing and accounting services there will be two regions. In each region, there will be two distant sites. This will be combined with the principle of region rotation, in order to ensure the presence of skilled staff in both regions. As a result, TARGET2 will be based on a state-of-the-art business continuity concept in order to be able to cope with failures that require immediate on-site recovery, as well as with failures that require a switch to a different region. During the time needed for the activation of the alternate site/region, the Contingency Module (CM) can be used to settle systemically important payments (e.g. CLS, EURO1). The CM will be used by each central bank for its own credit institutions.

simultaneously to the SSP. From a "level playing-field" perspective, it would be preferable for all TARGET2 features to be available to all participants at the same time. However, migrating all users from all countries to the SSP at the same time would create an enormous project risk and would provide no flexibility in the organisation of the changeover.

For this reason, the Eurosystem opted for a country window approach, allowing TARGET users to migrate to the SSP in waves and on pre-defined dates. Each wave will consist of a

group of central banks and their respective national banking communities. The migration process will be spread over several months, during which both TARGET1 components and the SSP will co-exist. Such a phased migration will have to be organised in such a way that project risk is minimised. Within this framework, another important consideration will be to minimise level playing-field problems as well as costs for central banks and TARGET users. The migration period will be limited to a maximum of one year, while the working assumption (see Table 17) is that this time should be shorter. It should be noted that other payment systems-related projects of a similar size (e.g. CLS, SWIFTNet) also employed a phased migration to the new infrastructure.

The Eurosystem will define the country windows according to business needs. The pricing policy during the migration period will be determined after the country windows have been defined and will aim at ensuring maximum neutrality vis-à-vis the users.

The Eurosystem will continue its close cooperation with the TARGET user community during all phases of the project and will report regularly on the progress made. Additional information on the future TARGET2 services, pricing scheme, project plan and migration can be found in the "Progress Report on TARGET2" published on the ECB's website at www.ecb.int

ANNEXES

I TARGET STATISTICS

It should be noted that the statistics on intra-Member State 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 intra-Member State payments processed by the different national TARGET components. With the introduction of the successor system of TARGET, TARGET2, these restrictions will disappear.

CONTENTS OF THE STATISTICAL ANNEX

1. DISTRIBUTION OF PAYMENT FLOWS IN TARGET

Table 1.1 Distribution of payment flows in TARGET – 2003

	Total				Intra-Member State				Inter-Member State			
	Value[1]	%	Volume	%	Value[1]	%	Volume	%	Value[1])	%	Volume	%
ARTIS (AT)	5,177.3	1.2	2,380,100	3.7	2,374.1	0.8	1,880,998	3.8	2,803.2	2.1	499,102	3.4
ELLIPS (BE)	13,558.2	3.3	1,752,802	2.7	3,330.9	1.2	826,070	1.7	10,227.3	7.6	926,732	6.3
RTGSplus (DE)	128,543.7	30.9	32,792,174	51.1	92,710.6	32.9	28,194,981	57.0	35,833.1	26.7	4,597,193	31.2
KRONOS (DK)	3,207.5	0.8	102,560	0.2	41.8	<0.1	10,011	<0.1	3,165.7	2.4	92,549	0.6
SLBE (ES)	70,208.3	16.9	3,345,946	5.2	65,080.8	23.1	2,749,566	5.6	5,127.5	3.8	596,380	4.0
EPM (ECB)	4,023.8	1.0	41,103	0.1	0.0	-	0	-	4,023.8	3.0	41,103	0.3
BOF-RTGS (FI)	3,645.4	0.9	268,746	0.4	2,142.3	0.8	136,728	0.3	1,503.1	1.1	132,018	0.9
TBF (FR)	96,326.9	23.2	3,863,830	6.0	77,081.3	27.4	2,128,859	4.3	19,245.6	14.4	1,734,971	11.8
CHAPS Euro (UK)	31,180.4	7.5	4,292,282	6.7	7,362.4	2.6	1,387,507	2.8	23,818.0	17.8	2,904,775	19.7
HERMES euro (GR)	3,343.1	0.8	1,324,274	2.1	1,723.5	0.6	984,492	2.0	1,619.6	1.2	339,782	2.3
IRIS (IE)	5,502.1	1.3	802,875	1.3	3,359.7	1.2	469,482	0.9	2,142.4	1.6	333,393	2.3
BI-REL (IT)	24,760.7	6.0	9,423,103	14.7	16,303.1	5.8	7,704,057	15.6	8,457.6	6.3	1,719,046	11.7
LIPS-Gross (LU)	4,754.7	1.1	383,323	0.6	1,512.6	0.5	96,525	0.2	3,242.1	2.4	286,798	1.9
TOP (NL)	21,365.4	5.1	4,716,842	7.3	9,494.4	3.4	4,088,579	8.3	11,871.0	8.9	628,263	4.3
SPGT (PT)	3,254.8	0.8	1,021,046	1.6	1,279.8	0.5	686,489	1.4	1,975.0	1.5	334,557	2.3
Euro RIX (SE)	1,897.0	0.5	96,994	0.2	73.4	<0.1	10,580	<0.1	1,823.6	1.4	86,414	0.6
	415,572.0	100.0	64,227,900	100.0	281,496.6	100.0	49,473,926	100.0	134,075.4	100.0	14,753,974	100.0

Source: ECB.
1) EUR billions.

Table 1.2 Distribution of payment flows in TARGET – 2004

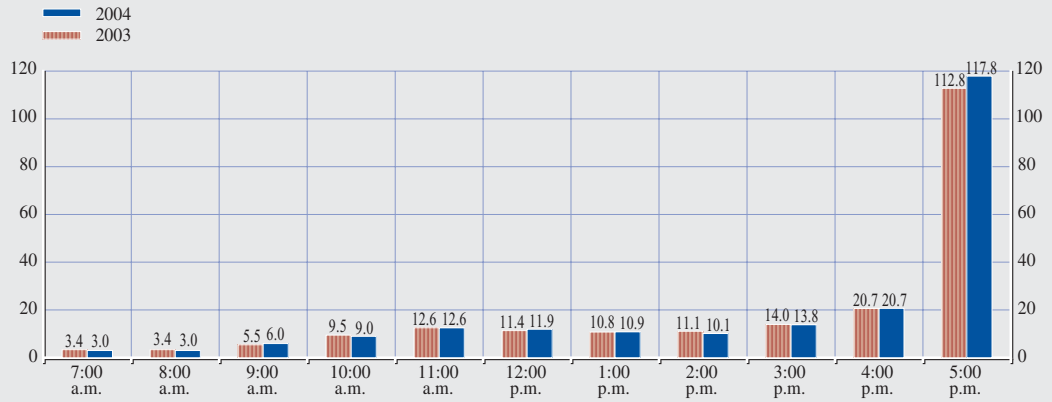
	Total				Intra-Member State				Inter-Member State			
	Value[1]	%	Volume	%	Value[1]	%	Volume	%	Value[1]	%	Volume	%
ARTIS (AT)	5,562.8	1.3	2,639,365	4.0	2,645	0.9	2,118,549	4.2	2,918	2.0	520,816	3.2
ELLIPS (BE)	14,675.6	3.3	1,786,328	2.7	3,307	1.1	823,766	1.6	11,369	7.9	962,562	5.9
RTGSplus (DE)	126,366.0	28.8	34,059,305	51.2	89,282	30.2	29,078,419	57.9	37,084	25.9	4,980,886	30.5
KRONOS (DK)	3,278.0	0.7	92,026	0.1	28	<0.1	8,202	<0.1	3,250	2.3	83,824	0.5
SLBE (ES)	74,472.7	17.0	3,723,908	5.6	68,628	23.2	3,009,043	6.0	5,845	4.1	714,865	4.4
EPM (ECB)	4,115.1	0.9	41,614	0.1	-	-	-	-	4,115	2.9	41,614	0.3
BOF-RTGS (FI)	3,142.9	0.7	288,477	0.4	1,541	0.5	147,452	0.3	1,602	1.1	141,025	0.9
TBF (FR)	108,409.7	24.7	4,002,886	6.0	87,514	29.6	2,090,483	4.2	20,895	14.6	1,912,403	11.7
CHAPS Euro (UK)	32,848.7	7.5	4,692,902	7.0	6,632	2.2	1,377,901	2.7	26,217	18.3	3,315,001	20.3
HERMES euro (GR)	3,596.8	0.8	1,364,090	2.0	1,575	0.5	1,024,108	2.0	2,021	1.4	339,982	2.1
IRIS (IE)	4,953.8	1.1	1,021,373	1.5	2,439	0.8	611,119	1.2	2,514	1.8	410,254	2.5
BI-REL (IT)	28,075.5	6.4	9,080,559	13.6	19,733	6.7	7,197,831	14.3	8,342	5.8	1,882,728	11.5
LIPS-Gross (LU)	5,499.1	1.3	446,445	0.7	2,258	0.8	89,128	0.2	3,241	2.3	357,317	2.2
TOP (NL)	23,597.5	5.4	4,766,045	7.2	10,719	3.6	3,978,033	7.9	12,879	9.0	788,012	4.8
SPGT (PT)	3,611.9	0.8	1,105,798	1.7	1,492	0.5	800,284	1.6	2,120	1.5	305,514	1.9
Euro RIX (SE)	1,787.0	0.4	102,365	0.2	64	<0.1	13,797	<0.1	1,723	1.2	88,568	0.5
	438,430.3	100.0	66,574,121	100.0	295,211.6	100.0	50,249,566	100.0	143,218.7	100.0	16,324,555	100.0

Source: ECB.
1) EUR billions.

2. AVERAGE VALUE OF A TARGET INTER-MEMBER STATE PAYMENT – INTRADAY PATTERN

Chart 2.1 Average value of a TARGET inter-Member State payment – intraday pattern

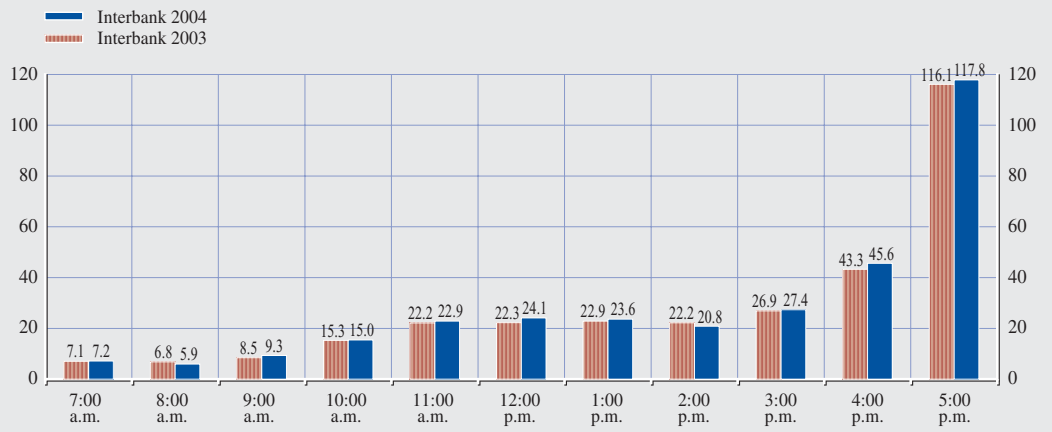
(EUR millions)



Source: ECB.

Chart 2.2 Average value of a TARGET inter-Member State interbank payment – intraday pattern

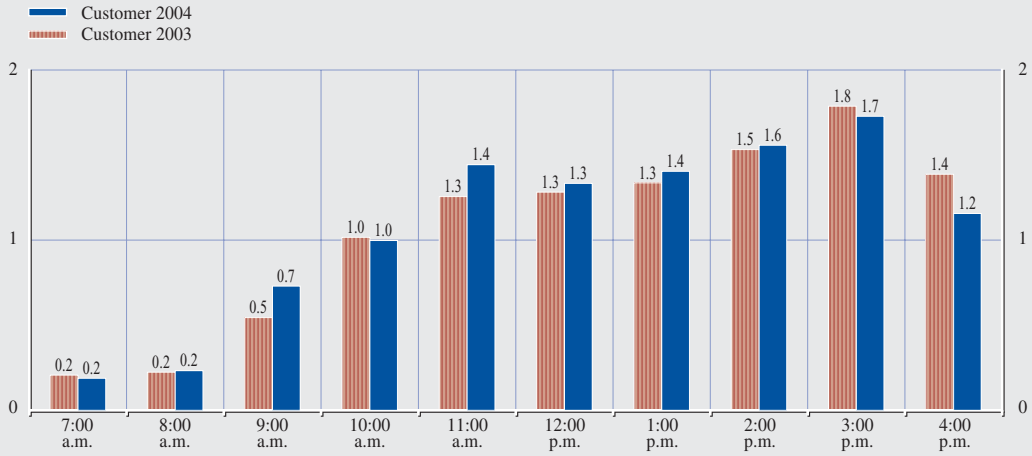
(EUR millions)



Source: ECB.

Chart 2.3 Average value of a TARGET inter-Member State customer payment – intraday pattern

(EUR millions)

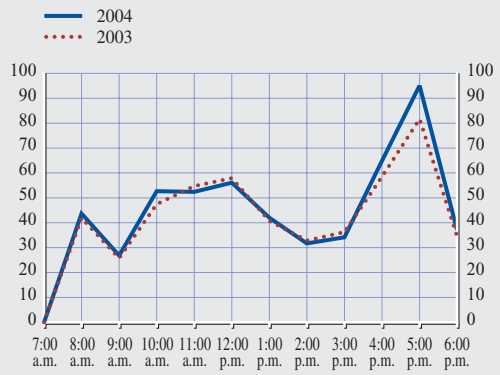


Source: ECB.

3. TARGET INTER-MEMBER STATE INTRADAY PATTERN

Chart 3.1 Intraday pattern of interbank payments – value

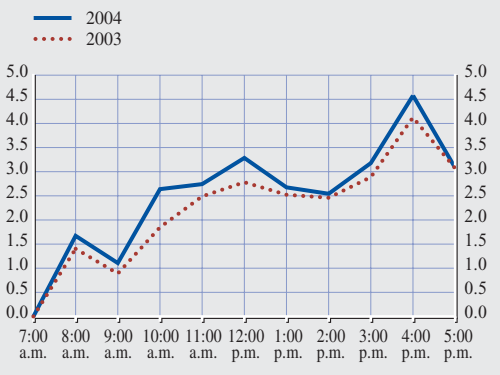
(EUR billions)



Source: ECB.

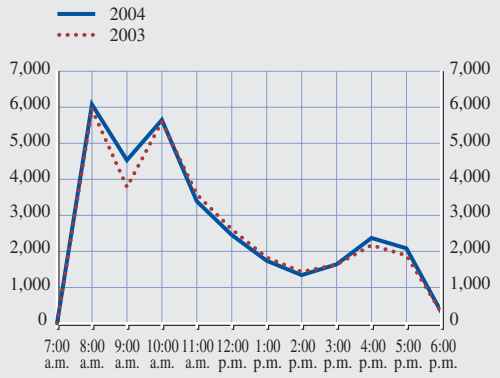
Chart 3.2 Intraday pattern of customer payments – value

(EUR billions)



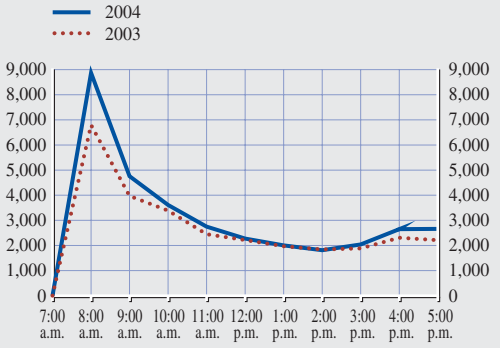
Source: ECB.

Chart 3.3 Intraday pattern of interbank payments – volume



Source: ECB.

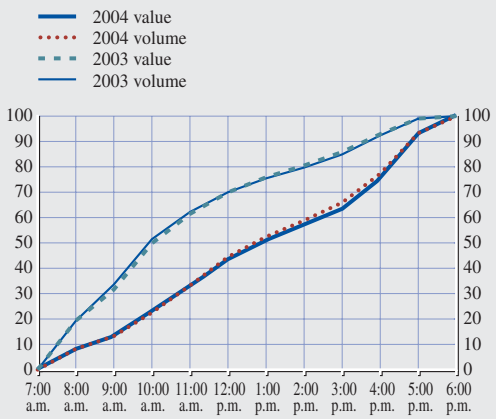
Chart 3.4 Intraday pattern of customer payments – volume



Source: ECB.

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

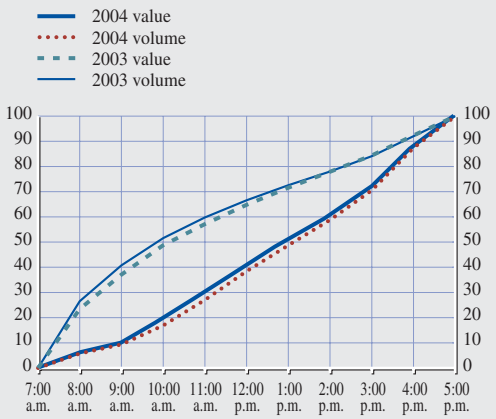
(%)



Source: ECB.

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

(%)



Source: ECB.

4. TARGET AVAILABILITY PER NCB AND THE EPM

Table

(in %)

Central Bank	2004												
	Jan.	Feb.	Mar.	Apr.	May.	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	total
AT	100.00	100.00	99.72	99.68	100.00	99.38	99.79	100.00	100.00	100.00	99.82	100.00	99.87
BE	100.00	99.73	100.00	99.67	100.00	99.66	99.49	100.00	100.00	100.00	100.00	100.00	99.88
DE	100.00	97.21	100.00	99.74	99.44	99.15	100.00	100.00	99.23	100.00	99.14	98.56	99.37
DK	100.00	100.00	100.00	99.28	100.00	100.00	100.00	100.00	98.94	100.00	100.00	100.00	99.85
ES	100.00	99.82	99.67	99.91	100.00	100.00	100.00	100.00	99.62	100.00	100.00	99.66	99.89
EU	100.00	99.52	99.33	100.00	100.00	99.73	99.35	99.15	99.26	98.87	99.59	98.98	99.48
FI	100.00	100.00	100.00	99.79	99.43	100.00	99.70	100.00	99.83	100.00	99.63	99.84	99.85
FR	100.00	100.00	100.00	99.56	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.76	99.94
GB	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.40	99.95
GR	100.00	99.52	100.00	100.00	100.00	100.00	99.04	100.00	100.00	100.00	99.07	100.00	99.80
IE	100.00	100.00	100.00	100.00	100.00	97.74	100.00	98.69	100.00	98.61	100.00	100.00	99.59
IT	100.00	99.59	100.00	100.00	100.00	99.54	100.00	99.84	100.00	100.00	100.00	100.00	99.91
LU	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.67	99.97
NL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	99.71	100.00	100.00	100.00	100.00	99.98
PT	100.00	100.00	99.65	100.00	100.00	100.00	100.00	99.49	100.00	100.00	99.18	100.00	99.86
SE	100.00	100.00	100.00	100.00	99.88	98.97	100.00	99.45	99.26	100.00	100.00	99.37	99.74
Overall Availability	100.00	99.71	99.90	99.85	99.92	99.64	99.84	99.77	99.76	99.84	99.78	99.70	99.81

Source: ECB.

2 STRUCTURAL 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 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 16 national RTGS systems, the EPM and the Interlinking mechanism. The Interlinking mechanism designates the infrastructure and procedures which link domestic RTGS systems and the EPM in order to enable the processing of inter-Member State payments within TARGET.

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 inter-member State 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.

The guideline of the European Central Bank amending Guideline ECB/2001/3 on a Trans-European Automated Real-time Gross settlement Express Transfer system (TARGET), as amended on 27 February 2002 (ECB/2003/6) was published on 4 April 2003. This document was also published in the official Journal of the European Union, L 113, 7 May 2003.

PARTICIPATION IN THE SYSTEM

Only supervised credit institutions as defined in the first indent of Article 1 of the First

Banking Co-ordination Directive[1] and which are established in the European Economic Area (EEA) can be admitted as direct 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 inter-member State TARGET service.

It is also possible for credit institutions to access TARGET remotely.[2] 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 of the participating EU Member States 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 intra-member State and inter-member State payments, i.e. no separate communication channel is required. The TARGET directory lists all credit institutions which are addressable through TARGET; approximately 48,500 addressable banks and branches are currently provided.

In order to initiate an inter-member State 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 intra-member State payments into the Interlinking format and

1 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.

2 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.

vice versa. This means that the sending and receiving participants each use their own intra-member State format.[3]

At the present time, the SWIFTNet 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 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.[4]

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 inter-member State 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 mechanism 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[5].

3 Information about the mapping of intra-member State 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".

4 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.

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

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 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, inter-member State 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 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 is €3 billion for Bank of England, €0.650 billion for Danmarks Nationalbank, €0.5 billion for Sveriges Riksbank, and €0.350 billion for National Bank of Poland; (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.

Box 5

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 2).

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.

PRICING

The price charged for inter-member State 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 digressive 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 inter-member State 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 intra-member State 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 intra-member State and inter-member State 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 intra-member State and inter-member State 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 Woking 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 2004, the ECB and the NCBs maintained a fruitful dialogue with TARGET users in regular meetings of the national TARGET user groups. 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

The Governing Council is the decision-making body of the Eurosystem and as such also the ultimate overseer of the TARGET system. In this task, the Governing Council is assisted and advised by the ESCB Payment and Settlement Systems Committee (PSSC). The PSSC has mandated the Payment Systems Policy Working Group (PSPWG) to assist in the oversight of the TARGET system as a whole. The PSPWG is the coordination body for all TARGET oversight activities which are to be performed collectively at the ESCB level. It provides a 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.

In 2004 TARGET oversight focused on two aspects: (i) the further implementation of the TARGET oversight framework at the local and the ESCB level; (ii) the conduct of several oversight activities including the finalisation of the evaluation of all national RTGS systems participating in or being connected to TARGET against the Core Principles, the review of the status report on the TARGET risk situation, the assessment of the connection of the new Polish euro RTGS system, SORBNET-EURO, to TARGET, and clarifications and modifications to the Eurosystem's regime for the provision of legal opinions in TARGET.

3 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 subsiding 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 mechanisms[6] 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.[7]

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.[8]

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

6 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.)

7 EMI Annual Report 1996, EMI, April 1997.

8 EMI Annual Report 1996, EMI, April 1997.

differentiation based on volume was anticipated.[9]

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.[10] 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.[11]

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.[12]

9 See also the EMI Annual Report 1997, EMI, May 1998.
10 See also the annex entitled "Organisation of TARGET and its management structure" and the ECB's press release of 10 June 1998.
11 See also the annex entitled "Organisation of TARGET and its management structure" and the ECB's press release of 8 July 1998.
12 See also annex entitled "Organisation of TARGET and its management structure".

Unlimited, but fully collateralised, intraday credit would be provided to RTGS participants fulfilling the general counterparty eligibility criteria of the ESCB.[13] Unlimited intraday credit could also be granted to treasury departments of central or regional governments active in the money markets and to public sector bodies authorised to hold accounts for customers, provided that no spillover to overnight credit 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.[14] 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.[15]

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.[16]

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.[17]

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.[18]

13 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.

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

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

16 See also ECB's press releases of 3 September 1998 and 31 March 1999.

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

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

OCTOBER 2000

A TARGET Information System (TIS) was introduced, providing users of TARGET with information on the status of the system.[19]

NOVEMBER 2000

The TARGET 2000 upgrade went live successfully. It was the first common TARGET software release since the system commenced live operations in January 1999. The upgraded software included the new common message format for customer payments, MT103, and the 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.[20]

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 member of the Eurosystem and participates in TARGET abiding by the same rules as the NCBs of the other participating Member States and the ECB.[21]

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 PSMNs[22] 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.

19 See also Box 4.
20 See the ECB's press release of 14 December 2000.
21 See the ECB's press release of 28 February 2002.
22 A negative PSMN (Payment Settlement Message Notification) provides the rejection code (reason for the rejection).

OCTOBER 2002

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

On 24 October, the Governing Council decided that acceding country central banks will have the possibility but not the obligation to connect to TARGET as from the date of their joining the European Union. Participation in TARGET will be compulsory only when they join EMU.

NOVEMBER 2002

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

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

DECEMBER 2002

The Eurosystem launched a public consultation on 16 December 2002 to collect the views of the entire community of TARGET users on the approach to be chosen for TARGET2 as well as on its service level.[23]

JANUARY 2003

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

JULY 2003

A summary of all the replies during the public consultation "TARGET2: principles and structure", together with the individual contributions, were made available on the ECB's website on 14 July 2003.[24] All respondents welcomed the Eurosystem's initiative to improve the functionality and performance of TARGET. The banking industry stressed the importance of users being involved in the TARGET2 project. In addition, the contributions received in the public consultation process have served as a basis for determining the core features and functions of TARGET2.

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

23 "TARGET2: principles and structure".
24 "Summary of comments received on TARGET2: principles and structure".

procedures are largely standardised in order to keep the administrative burden low.

NOVEMBER 2003

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

JUNE 2004

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

DECEMBER 2004

On 16 December 2004 the Governing Council of the ECB, accepted the offer made by three NCBs (the Deutsche Bundesbank, the Banque de France and the Banca d'Italia) and approved the building of a Single Shared Platform for TARGET2 operations. Further details on the characteristics of TARGET2 were made available in February 2005.

4 GENERAL TERMS AND ACRONYMS

Countries

AT	Austria
BE	Belgium
DE	Germany
DK	Denmark
ES	Spain
FI	Finland
FR	France
GR	Greece
IE	Ireland
IT	Italy
LU	Luxembourg
NL	Netherlands
PL	Poland
PT	Portugal
SE	Sweden
UK	United Kingdom

Others

ASI	Ancillary System Interface
BIC	Bank Identifier Code
BIS	Bank for International Settlements
CCBM	Correspondent Central Banking Model
CET	Central European Time
CLS	Continuous Linked Settlement
CM	Contingency Module
CPSS	Committee on Payment and Settlement Systems
EC	European Community
EBA	European Banking Association
ECB	European Central Bank
EEA	European Economic Area
EMI	European Monetary Institute
EMU	Economic and Monetary Union
EONIA	Euro Overnight Index Average
EPM	ECB Payment Mechanism
ESCB	European System of Central Banks
EU	European Union
EUR	Euro
Euro1	EU-wide payment system of the EBA
EUR	Euro
Euro1	EU-wide payment system of the EBA
FIN	financial application; store and forward messaging service on the SWIFT network
FIN copy	function of the SWIFT network whereby instructions may be copied and optionally authorised by a third party before being released to the beneficiary
Forex (FX)	foreign exchange settlement
GFS	General Functional Specifications
HAM	Home Accounting Module
IBAN	International Bank Account Number
IFFM	Interlinking Free Format Message
IMF	International Monetary Fund
ISIM	Interlinking Statistical Information Message
ITES	Interlinking Test Environment System
MAC	Message Authentication Code
MT100	Message Types
103	
103+	
202	
NCB	National Central Bank
NSS	Net settlement system
PM	Payment Module
PSMN	Payment Settlement Message Notification
PSMR	Payment Settlement Message Request
PvP	Payment-versus-Payment mechanism
Repo	repurchase operations
ROSC	Report on the Observance of Standards and Codes
RTGS	Real-Time Gross Settlement
SSP	Single Shared Platform
STP	Straight-Through Processing
SWIFT	Society for Worldwide Interbank Financial Telecommunication
SWIFTNet	store and forward messaging service
FIN	for financial institutions on the SWIFTNet platform

TARGET	Trans-European Automated Real-time Gross settlement Express Transfer system
TARGET2	Successor system of TARGET
TCP/IP	Transmission Control Protocol/ Internet Protocol
TIS	TARGET Information System
UDFS	User Detailed Functional Specifications

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

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

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

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

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

Daily processing: the complete cycle of processing tasks 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.

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.

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.

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

International bank account number (IBAN): the IBAN concept was developed by 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 inter-Member State 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 inter-Member State 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**.

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

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 will not settle an obligation at its full value when due but on some unspecified date 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 inter-member State 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 the seller does not retain ownership of the assets.

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

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

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

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

Systemically important payment system: a payment system is 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 opening 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 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 1 (EBA), PNS (Paris Net Settlement), SPI (Servicio de Pagos Interbancarios), and Pankkien On-line Pikasiirrot ja Sekit-järjestelmä (POPS).

Transfer: operationally, the sending (or movement) of funds or securities or of rights relating to funds or securities from one party to another party by (i) 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.
"Annual Report 2002", April 2003.
"Annual Report 2003", April 2004.
"Annual Report 2004", April 2005.

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.

"CLS – purpose, concept and implications", January 2003.
"The TARGET system: Payment flows in TARGET", March 2003.
"The TARGET system: Payment flows in TARGET; TARGET Information System (TIS); TARGET release 2003", June 2003.
"The TARGET system: Payment flows in TARGET; TARGET release 2003; TARGET at SIBOS, Singapore", September 2003.
"The TARGET system: Payment flows in TARGET; TARGET availability and business performance; TARGET release 2003", December 2003.
"The TARGET system: Payment flows in TARGET; TARGET intra-Member State; TARGET inter-Member State; TARGET availability and business performance", March 2004.
"The TARGET system: Payment flows in TARGET; TARGET intra-Member State; TARGET inter-Member State; TARGET availability and business performance", June 2004.
"The TARGET system: Payment flows in TARGET; TARGET intra-Member State; TARGET inter-Member State; TARGET availability and business performance; TARGET testing and new releases", September 2004.
"The TARGET system: Payment flows in TARGET; TARGET intra-Member State; TARGET inter-Member State; TARGET availability and business performance", December 2004.

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.
"Electronification of payments in Europe", May 2003.
"Future developments in the TARGET system", April 2004.

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", May 2002.
"TARGET Annual Report 2002", April 2003.
"TARGET Annual Report 2003", April 2004.

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.
"Terms and conditions governing the use of the EPM", April 2003.
"Guideline of the European Central Bank of 4 April 2003 amending Guideline ECB/2001/3 on TARGET, as amended on 27 February 2002 (ECB/2003/6)", April 2003.
"TARGET compensation claim form", June 2003.
"TARGET2: principles and structure – Call for contributions from interested parties and responses received", July 2003.
"Information guide for credit institutions using TARGET", July 2003.
"Payment and securities settlement systems in the European Union – Addendum incorporating 2002 figures", April 2004.
"Payment and securities settlement systems in the accession countries – Addendum incorporating 2002 figures", April 2004.
"TARGET compensation claim form", April 2004.
"The use of Central bank money for settling securities transactions", May 2004.
"Assessment of euro large-value payment systems against the Core Principles", May 2004.
"Progress Report on TARGET2", February 2005.
"Payment and securities settlement systems in the accession countries – Addendum incorporating 2003 figures", February 2005.

INFORMATION BROCHURES

"TARGET: facts, figures, future", September 1999.
"The ECB payment mechanism", August 2000.
"TARGET", November 2001.
"Brief overview of TARGET", August 2003.
"TARGET2: the payment system of the Eurosystem", November 2003.
"TARGET: the Trans-European Automated Real-time Gross settlement Express Transfer system – update 2003", November 2003.
"TARGET2 – the future TARGET system, brochure (update 2004)", September 2004.
"TARGET – the current system, brochure (update 2004)", September 2004.